

第 11 回会員総会シンポジウム：生命とは何か？死とは何か？：生物物理学からの考察

オーガナイザー：日本生物物理学会 理事会

日 時：9 月 25 日（木）12:45 ～ 13:55

場 所：2 階 K 会場（天平ホール）

演 者：水野大介（九大）、姫岡優介（東大）、宮田真人（大阪公立大）

モデレーター：小松崎民樹（北大）

司 会：永井健治（阪大）

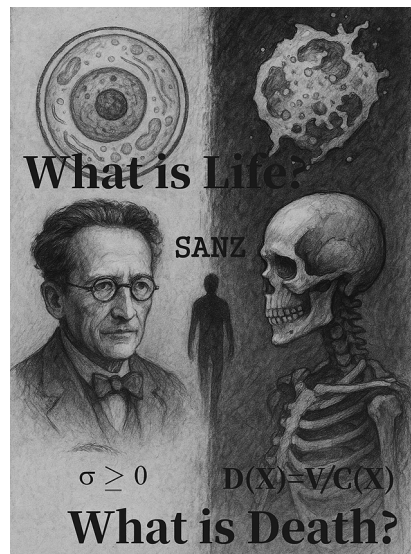
※このイベントは日本語で開催します。

* This event will be presented in Japanese language.

概 要：1944 年、物理学者エルヴィン・シュレーディンガー氏は『生命とは何か？（What is Life?）』の中で、生命を「秩序を秩序で維持する存在」、すなわち熱力学的な乱雑さ（エントロピー）に抗い、構造と情報を保つシステムとして捉え直した。この視点は現代の分子生物学の礎を築くとともに、生命の物理的本質に迫る問いを投げかけた。さらに 2003 年、金子邦彦氏は著書『生命とは何か』において、生命を単なる物質の集合ではなく、「多階層的な自己組織化と情報継承の動的過程」として理論的に定式化した。生命の自己複製・分化・進化を統一的に理解する枠組みが、そこで提案された。しかし、生命とは本当にそのように定義できるのか。逆に「死」とは何か、その境界はどこにあるのか。さらに、近年の合成生物学の発展に

より、人工的に「生きた細胞」をつくる試みが加速する中で、生命と死の概念そのものが揺らぎつつある。

そこで本シンポジウムでは、生物物理学、数理モデル、合成生物学といった異なる視点から「生命」「死」の本質に迫る。九州大学の水野大介氏が非平衡物理の視点から、生命の創発性を支える揺らぎと物性を、東京大学の姫岡優介氏が「死の相空間（SANZ）」という概念を通じて死の定量的理解を提示する。さらに、大阪公立大学の宮田真人氏が合成生物学の最前線から、人工生命の構築を通じた生命・死の再定義に挑む。これらの話題提供を起点に、北海道大学の小松崎民樹氏のファシリテートのもと、生命とは何か、死とは何か、そしてその境界をいかに捉えるべきかを多角的に議論する。生命の定義を再考し、次世代の生物物理学の可能性を切り拓く討論の場として、本シンポジウムを開催する。



一般社団法人日本生物物理学会 第 13 回 Biophysics and Physicobiology 論文賞受賞講演会
The 13th Award Seminar for outstanding Biophysics and Physicobiology paper

オーガナイザー：日本生物物理学会 Biophysics and Physicobiology 論文賞選考委員会

Organizers: Award committee for outstanding Biophysics and Physicobiology paper

日 時：9 月 24 日（水）15:10 ～ 18:10

場 所：2 階 K 会場（天平ホール）

形 式：講演会

第 13 回 Biophysics and Physicobiology 論文賞受賞者

小島慧一

Keiichi Kojima

岡山大・学術研究院医歯薬

Fac. Med. Dent. Pharm. Sci. Okayama Univ.

アニオンチャネルロドプシンの分子理解と改変

Molecular characterization and engineering of anion channelrhodopsins

Microbial rhodopsins are a family of photoreceptive proteins containing retinal as a chromophore and play crucial roles in the photoreception of microorganisms. Recently, they have become essential tools in optogenetics to regulate biological phenomena by light. In this symposium, we will introduce recent studies on the molecular diversity and structure–function relationships of rhodopsins, including anion channelrhodopsins, based on experimental and theoretical approaches, and discuss future perspectives.

辻村真樹

Masaki Tsujimura

理化学研究所 開拓研究所

Pioneering Research Institute, RIKEN

アニオンチャネルロドプシンの分子機構の理論解析

Theoretical insights into the molecular mechanism of anion channelrhodopsins

塚本 卓

Takashi Tsukamoto

北海道大学大学院先端生命科学研究院（北大院・先端生命）

Faculty of Advanced Life Science, Hokkaido University (Fac. Adv. Sci., Hokkaido Univ.)

アニオンチャネルロドプシンの実験的研究からわかった思いがけないこと

Unexpected Insights Gained from Experimental Studies of Anion Channelrhodopsins

一般社団法人日本生物物理学会 第 14 回 Biophysics and Physicobiology 論文賞受賞講演会
The 14th Award Seminar for outstanding Biophysics and Physicobiology paper

オーガナイザー：日本生物物理学会 Biophysics and Physicobiology 論文賞選考委員会

Organizers: Award committee for outstanding Biophysics and Physicobiology paper

日 時：9 月 24 日（水）15:10 ～ 18:10

場 所：2 階 K 会場（天平ホール）

形 式：講演会

第 14 回 Biophysics and Physicobiology 論文賞受賞者

関口武治

Takeharu Sekiguchi

東京科学大学 工学院 電気電子系

Dept. of EEE, Sch. of Eng., Inst. of Sci. Tokyo

蛍光ナノダイヤモンドを用いた細胞内部温度センサ

Fluorescent nanodiamonds as a robust temperature sensor inside a single cell

Diamond quantum sensors have been attracting great attention worldwide due to their potential sensitivity and their wide range of applications. Nitrogen-vacancy centers are fluorescent paramagnetic defects in diamond and serve as spin-based sensors to detect tiny signals such as temperature and magnetic field. The sensing is based on monitoring the fluorescence intensity from the diamond while applying microwave to cause electron paramagnetic resonance. Among a variety of applications, we have reported in 2018 a temperature sensing inside a single cell by using fluorescent nanodiamonds (FNDs). A single FND inside a single cell allowed temperature sensing with 1°C accuracy with robustness against various cellular environmental factors such as pH and viscosity. In the session, we'd also like to review further developments of diamond quantum sensors in particular as a high-sensitivity magnetometer for medical and other applications by using millimeter-scale diamonds. This work was supported by JSPS KAKENHI 26220602, by MEXT KAKENHI 15H05931, by JSPS Grant-in-Aid for JSPS Research Fellow A18J002870, and by MEXT Q-LEAP JPMXS0118067395.

波多野雄治

Yuji Hatano

東京科学大学 工学院 電気電子系

Dept. of EEE, Sch. of Eng., Inst. of Sci. Tokyo

ミリメートルスケールダイヤモンド量子センサの応用

Applications of millimeter-scale diamond quantum sensor

男女共同参画・若手支援委員会企画シンポジウム 自分推しキャリアを作ろう！アカデミアと企業で未来を描く

オーガナイザー：日本生物物理学会 男女共同参画・若手支援委員会

Organizers: Promotion of Gender Equality and Young Researchers Committee

日時：9月26日（金）11:40～13:10

会場：2階F会場

言語：日本語

昼食：お弁当とお茶を無料で提供いたします。ただし、数に限りがあります。

形式：パネルディスカッション

司会：藤原郁子（長岡技術科学大学）

発表者：石谷隆一郎（東京科学大学）、酒井崇匡（東京大学）、篠崎幹彦（三菱UFJキャピタル株式会社）、寺川まゆ（京都大学総合研究推進本部）

概要：近年、アカデミア（学術研究）と企業（産業界）の関係性は大きく変化しています。多くの大学ではURA（リサーチ・アドミニストレーター）の体制が整備され、産学連携による共同研究の促進や、大学発ベンチャー企業の増加といった動きが見られるようになりました。さらに、企業における博士号取得者の採用は増加傾向にあり、大学研究者を客員研究員や技術アドバイザーとして受け入れる企業も増えています。このように、研究・資金・人材といった多様な側面でアカデミアと企業の垣根が低くなる中で、双方の流動性が高まり、多様なキャリアパスの可能性が広がってきています。そこで本シンポジウムでは、アカデミアと企業の双方の視点と経験を共有することで、参加者の皆さまが自身のキャリアを振り返り、将来のキャリアアップを考える契機となる場を提供したいと考えています。

本シンポジウムでは、大学や企業での研究、ベンチャーキャピタル、URAなど多様なキャリアを歩まれた、様々な世代・性別の登壇者の皆さまに情報を提供していただき、パネルディスカッションを行います。それぞれの立場での経験や苦勞、感じたメリット・デメリットなどをざっくばらんに語っていただきながら、これらの知見を融合し、アカデミアと企業の垣根を越えた未来のキャリア形成について考えていきたいと思います。具体的には、以下の3つの観点を中心に議論を展開する予定です。

[1] 研究するならどっち？ 若手研究者への羅針盤：アカデミア vs 企業

[2] 大学研究者でも起業できる！ 大学発ベンチャー企業の実情

[3] アカデミア×企業の未来図 これから求められるものとは？

本シンポジウムでは、上記の3つの観点を軸に、パネルディスカッション形式で皆さまと共に議論を深めていきたいと考えています。アカデミアや企業の発展に貢献したいとお考えの研究者の方々はもちろん、今後のキャリア形成について考え始めている学生や若手研究者の皆さまのご参加も心より歓迎いたします。アカデミアと企業の特徴を活かしながら、自分推しのキャリア形成と一緒に考えていきましょう。

キャリア支援説明会

オーガナイザー：日本生物物理学会 男女共同参画・若手支援委員会

日時：9月24日（水）11:50～12:40

会場：2階G会場

形式：ランチョンセミナーと個別キャリア相談会

※このイベントは日本語で開催します。

* This event will be presented in Japanese language.

概要：若手研究者や学生の今後のキャリア構築の一助となるように、今年度も「キャリア支援説明会」を開催します。昨年の反響を受けて本年会は、(株)アカリクから講師を迎えて大学院生やポストドクター向けの就職支援活動セミナーを実施します。また、昨年度と同様に今年度も個別キャリア相談会を実施いたしますので、是非ご活用ください。博士課程出身のアカリク社員が何でも質問に答えます！

講師プロフィール

神中 俊明（かみなか としあき）

東京理科大学大学院理学研究科物理学専攻で博士（理学）を取得後、博士研究員を経て2018年10月より株式会社アカリクに所属しています。博士課程2年秋に所属研究室が解散した経験や博士研究員としての活動を元に現在、大学院生を始めとする研究に接する人のキャリア支援、キャリアガイダンス、ワークショップを行っています。研究を志すキャリアの見通しを良くし、研究環境をより良くすることが目標です。

アカリクについて

株式会社アカリクは「知恵の流通の最適化」を目指している企業です。大学院を経て企業へ就職を希望される方、ポストドクをはじめとするアカデミアの研究者の方のキャリア支援や、転職をされる方のサポートをしています。また、Cloud LaTeXの開発運営や、ジョブ型研究インターンシップの運営、キャリアガイダンス、FDセミナー等を通じて大学院生を始めとする研究者のキャリアがより良いものとなることを目指し、各種事業を展開しております。事業を通して研究者、大学院の環境、企業との関係をより良いものにしていきたいと考えています。

プログラム:理系大学院生や研究者の就活・転職について、「専門外就職」や「博士人材向け」の情報も交えてお話しいたします。

【Part 1】 11:50 ～ 12:15 理系大学院生（修士課程、博士課程）の就職活動スケジュール
最近の就職市場の変化は著しく、大学院生も例外ではありません。ここでは現在の産業界・アカデミアの就活スケジュール、博士課程の就活の特徴と注意点についてご説明します。また、アカリクで毎月実施しているアンケート調査を元に、現代の大学院生の就活進捗についてご紹介します。

【Part 2】 12:15 ～ 12:30 PD 以降の方の為の民間企業転職の手引き
博士人材は企業の採用対象として存在感を増してきています。一方で PD 以降の方の民間企業転職事情はあまり知られていません。本節では、転職活動の適切なタイミング、アカデミアから民間企業への転職事例をご紹介します。

【Part 3】 12:30 ～ 12:40 トランスファラブルスキルと「専門外就職」を知る
アカデミアで身に着けた技術や高度な専門知識が、民間で 100%活かせることは多くはありません。アカデミアでの活動をトランスファラブルスキルの形で棚卸しすることで、様々な分野での活躍可能性が見えてきます。本節では、研究生活で培われるトランスファラブルスキル、実際の専門外就職事例等についてお話しいたします。

個別キャリア相談会

就職活動・キャリアに関する悩みや不安を気軽にご相談ください。本大会では、現地（ポスター・企業展示会場）での相談会を開催いたします。就活ノウハウや企業での待遇面など、分からないことがあれば遠慮なくお尋ねください。

【ブースオープン時間】

9/24（水）10:00–18:00

9/25（木）10:00–18:00

9/26（金）10:00–15:00

※直接ブースにお越し下さい。空いている場合はすぐご案内できますが、混み合っている場合は、お手数ですが時間を空けて再度お越し下さい。

科学研究費助成事業について Reorganization of KAKENHI: Current Activities of JSPS

世話人：秋山修志（自然科学研究機構 分子科学研究所，日本学術振興会学術システム研究センター専門研究員）

Organizer：Shuji Akiyama (Institute for Molecular Science, NINS; Program Officer, Research Center for Science Systems, JSPS)

日時：9月26日（金）11:40～12:40

会場：2階G会場

形式：プレゼンテーション

※このイベントは日本語で開催します。

* This event will be presented in Japanese language.

概要：今、日本が将来にわたって卓越した研究成果を持続的に生み出し続け、世界の中で存在感を保持できるかが問われています。こうした中、科学技術・学術審議会において、学術研究への現代的要請として、「挑戦性・総合性・融合性・国際性」の四つを挙げ、科研費制度の抜本的改革が提言されました。これを踏まえ、文部科学省では「科研費改革の実施方針」を策定し、科研費の研究種目・枠組みの見直しや審査システムの見直し（「審査システム改革2018」）が行われ、平成30年度科研費（平成29年9月公募）において、新たな審査システムによる審査を実施しました。今回は、科研費制度の最近の主な変更点を中心に、制度の改善や充実を図った点等について、ご説明をいただきます。

1 日目 (9 月 24 日 (水)) / Day 1 (Sep. 24 Wed.)

9:00~11:30

K 会場 (天平ホール / Room K (Tempyo Hall))

1YK 日本生物物理学会若手奨励賞選考会

Early Research in Biophysics Award Candidate Presentations

オーガナイザー：男女共同参画・若手支援委員会

Organizer: Promotion of Gender Equality and Young Researchers Committee

Biophysical Society of Japan (BSJ) grants “Early Career Award in Biophysics” and “Early Career Presentation Award” to young BSJ members for their excellent presentations that show great potential to contribute to the progress of biophysics. In this 21th year, we received 44 highly qualified applications. After the first round of competitive screening based on submitted documents, the following ten applicants were selected as candidates for Early Career Award in Biophysics. In this symposium, each speaker will give a 10-minute presentation followed by a 3-minute discussion as the second round of screening. Up to five awardees of the Early Career Award in Biophysics will be selected. The best presenter will also be awarded IUPAB award from International Union of Pure and Applied Biophysics. The Early Career Presentation Award will be given to the rest of the excellent invited speakers. We welcome all the BSJ members to attend this symposium to foresee the future of biophysics in Japan through the speakers and their research.

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|------------------|--|
| 09:00
1YK0900 | <p>Subhan Hadi Kusuma 2Pos144</p> <p>Autonomous Multicolor Bioluminescence Imaging in Bacteria, Mammalian, and Plant Hosts</p> <p>Subhan Hadi Kusuma (<i>SANKEN, The University of Osaka</i>)</p> |
| 09:15
1YK0915 | <p>Yusuke Himeoka 2Pos192</p> <p>「細胞死」の理論</p> <p>Theoretical Basis for Cell Death</p> <p>○姫岡 優介¹, 堀口 修平^{2,3}, 小林 徹也^{1,3} (¹ 東京大学大学院理学系研究科生物普遍性研究機構, ² 金沢大学ナノ生命科学研究所, ³ 東京大学 生産技術研究所)</p> <p>Yusuke Himeoka¹, Shuhei A. Horiguchi^{2,3}, Tetsuya J. Kobayashi^{1,3} (¹ <i>Universal Biology Institute, The University of Tokyo</i>, ² <i>Nano Life Science Institute, Kanazawa University</i>, ³ <i>Institute of Industrial Science, The University of Tokyo</i>)</p> |
| 09:30
1YK0930 | <p>Yoshiko Nakagawa 1Pos214</p> <p>一分子蛍光イメージングを用いた分子シャペロンによるアミロイド脱凝集過程のメカニズムの解明</p> <p>Amyloid conformation-dependent disaggregation of chaperone revealed by single molecule fluorescent imaging</p> <p>○中川 幸姫¹, 玉井 真悟¹, 野村 高志¹, 中山 隆宏², 田中 元雅¹ (¹ 理研・脳神経科学研究センター, ² 金沢大学 ナノ生命科学研究所)</p> <p>Yoshiko Nakagawa¹, Shingo Tamai¹, Takashi Nomura¹, Takahiro Nakayama², Motomasa Tanaka¹ (¹ <i>RIKEN, CBS</i>, ² <i>WPI Nano Life Science Institute, Kanazawa University</i>)</p> |

- 09:45 Katsuhiko Minami 2Pos062
1YK0945 複製依存的ヒストン標識 (Repli-Histo 標識) を用いて明らかにする, ヒト生細胞内のユークロマチン・ヘテロクロマチンのふるまい
Replication-dependent histone (Repli-Histo) labeling dissects the physical properties of euchromatin/heterochromatin in living human cells
○南 克彦^{1,2}, 仲里 佳子^{1,2}, 井手 聖^{1,2}, 海津 一成^{3,4}, 東 光一^{2,5}, 田村 佐知子¹, 豊田 敦⁶, 高橋 恒一³, 黒川 顕^{2,5}, 前島 一博^{1,2} (¹ 遺伝研・ゲノムダイナミクス研究室,² 総研大・先端学術院,³ 理研 BDR・バイオコンピューティング研究チーム,⁴ 生命創成研究センター・細胞シミュレーション研究グループ,⁵ 遺伝研・ゲノム進化研究室,⁶ 遺伝研・先端ゲノミクス支援センター)
Katsuhiko Minami^{1,2}, Kako Nakazato^{1,2}, Satoru Ide^{1,2}, Kazunari Kaizu^{3,4}, Koichi Higashi^{2,5}, Sachiko Tamura¹, Atsushi Toyoda⁶, Koichi Takahashi³, Ken Kurokawa^{2,5}, Kazuhiro Maeshima^{1,2}
(¹Genome Dynamics Laboratory, NIG, ²SOKENDAI, ³Laboratory for Biologically Inspired Computing, RIKEN BDR, ⁴Cell Modeling and Simulation Group, ExCELLS, ⁵Genome Evolution Laboratory, NIG, ⁶Comparative Genomics Laboratory, NIG)
- 10:00 Takuya Ohmura 1Pos201
1YK1000 機械学習画像解析を活用した 3 次元バクテリアバイオフィルムの In vivo マイクロレオロジー計測
In vivo microrheological measurement for 3D bacterial biofilm with machine learning image analysis
Takuya Ohmura¹, Dominic J. Skinner², Konstantin Neuhaus^{3,4}, Gary P.T. Choi⁵, Jörn Dunkel⁶, Knut Drescher³ (¹RIES, Hokkaido Univ., ²Cent. Comput. Biol., Flatiron Instit., ³Biozentrum, Univ. of Basel, ⁴Dept. Phys., Univ. of Marburg, ⁵Dept. Math., Chinese Univ. of Hong Kong, ⁶Dept. Math., MIT)
- 10:15 Tomohiro Nobeyama 2Pos214
1YK1015 黄金の蝶々型ナノ粒子を用いた液液相分離液滴の生成消滅制御テクノロジー
Regulatory nanotechnology of liquid-liquid phase separated condensates formation/deformation dynamics by using gold nano-butterflies
○延山 知弘¹, 高田 耕児³, 村上 達也³, 山田 洋一², 白木 賢太郎² (¹ 京都大学高等研究院,² 筑波大学数理物質系理工学域,³ 富山県立大学大学院工学研究科)
Tomohiro Nobeyama¹, Koji Takata³, Tatsuya Murakami³, Yoichi Yamada², Kentaro Shiraki² (¹Institute for Advanced Study iCeMS, Kyoto University, ²Pure and Applied Physics, University of Tsukuba, ³Graduate School of Engineering, Toyama Prefectural University)
- 10:30 Naito Ishimoto 2Pos005
1YK1030 性纖毛 H-Pilin の構造が明らかにした TrhA pilin の環状化
Structural basis of the conjugation H-pilus reveals the cyclic nature of the TrhA pilin
○石本 直偉士^{1,2,3}, Wong Joshua², Heb Shan², Shirranc Sally⁴, Paramio Olivia², Seddon Chloe^{2,3}, Singha Nanki^{2,3}, Balsalobred Carlos⁵, Sonanie Ravi⁶, Clements Abigail³, Egelman Edward⁶, Frankel Gad², Beis Konstantinos^{2,3} (¹ 横浜市大・院生命医科,² インペリアル・カレッジ・ロンドン生命科学部,³ ハーヴェルリサーチコンプレックス ラザフォードアップルトン研究所,⁴ セント・アンドリュース大学 バイオメディカル・サイエンス・リサーチ・コンプレックス・マススペクトロメトリー&プロテオミクス,⁵ バルセロナ大学 遺伝学部,⁶ バージニア大学 生化学・分子遺伝学部)
Naito Ishimoto^{1,2,3}, Joshua Wong², Shan Heb², Sally Shirranc⁴, Olivia Paramio², Chloe Seddon^{2,3}, Nanki Singha^{2,3}, Carlos Balsalobred⁵, Ravi Sonanie⁶, Abigail Clements³, Edward Egelman⁶, Gad Frankel², Konstantinos Beis^{2,3} (¹Grad. Sch. Life Sci., Yokohama City Univ., ²Department of Life Sciences, Imperial College London, ³Rutherford Appleton Laboratory, Research Complex at Harwell, ⁴Biomedical Sciences Research Complex Mass Spectrometry & Proteomics Facility, University of St Andrews, ⁵Departament de Genètica, Universitat de Barcelona, ⁶Department of Biochemistry and Molecular Genetics, University of Virginia)

- 10:45 Rieko Sumiyoshi 1Pos077
 1YK1045 テザーの改変によるキネシン-1 モータードメインの基本的運動機構の解明
 Tether-dependent regulation reveals core motility mechanism of the kinesin-1 motor domain
 ○住吉 里英子¹, 山岸 雅彦^{1,2}, 矢島 潤一郎^{1,2,3} (¹東大・総合文化, ²東大・先進科学研, ³東大・生物普遍研)
Rieko Sumiyoshi¹, Masahiko Yamagishi^{1,2}, Junichiro Yajima^{1,2,3} (¹*Grad. Arts & Sci., Univ. Tokyo*, ²*Komaba Inst. Sci., Univ. Tokyo*, ³*RCCSB, UBI, Univ. Tokyo*)
- 11:00 Masahito Tanaka 1Pos094
 1YK1100 初期胚における一過的な核の物性変化と転写のバーストの促進
 Changes in the physical properties of early embryonic nuclei promote a transcriptional burst
 ○田中 真仁¹, 坂上 凜², 鷹巢 篤志², 宮川 靖基³, 渡邊 直子¹, Chen Yu-Chia⁴, Suzuki Aussie⁴, 宮本 圭^{2,3}, 島本 勇太^{1,5} (¹国立遺伝学研究所 物理細胞生物学研究室, ²近畿大学 生物理工学部, ³九州大学 農学部, ⁴ウィスコンシン大学マディソン校, ⁵総研大 遺伝学コース)
Masahito Tanaka¹, Rin Sakanoue², Atsushi Takasu², Yasuki Miyagawa³, Naoko Watanabe¹, Yu-Chia Chen⁴, Aussie Suzuki⁴, Kei Miyamoto^{2,3}, Yuta Shimamoto^{1,5} (¹*Laboratory of Physics and Cell Biology, National Institute of Genetics.*, ²*Graduate School of Biology-Oriented Science and Technology, Kindai University*, ³*Faculty of Agriculture, Kyushu University*, ⁴*McArdle Laboratory for Cancer Research, Department of Oncology, University of Wisconsin-Madison*, ⁵*Department of Genetics, Soken-dai University*)
- 11:15 Yuhei Hosokawa 2Pos133
 1YK1115 幅広い時間スケールでの時分割結晶構造解析により明らかになったクリプトクロムのシグナル伝達機構
 Cryptochrome signal transduction mechanism revealed by time-resolved crystallography across broad timescales
Yuhei Hosokawa^{1,2,3,4}, Po-Hsun Wang^{2,5}, Nicolas Caramello⁶, Mai Nakamura³, Sylvain Engilberge⁶, Antoine Royant⁶, Lars-Oliver Essen⁵, Ming-Daw Tsai², Junpei Yamamoto³, Manuel Maestre-Reyna^{1,2} (¹*Dept. Chem., National Taiwan Univ.*, ²*Inst. Biol. Chem., Academia Sinica*, ³*Grad. Sch. Eng. Sci., Osaka Univ.*, ⁴*PRI, RIKEN*, ⁵*Dept. Chem., Philipps Univ. Marburg*, ⁶*ESRF*)

1 日目 (9 月 24 日 (水)) / Day 1 (Sep. 24 Wed.)

1SAA 実験・分子シミュレーション・情報科学の融合による分子動態可視化
Molecular motions visualized by integration of experiments, simulation, and informatics

オーガナイザー：荳口 友隆 (慶應義塾大学), 井上 倫太郎 (京都大学)
Organizers: Tomotaka Oroguchi (Keio Univ.), Rintaro Inoue (Kyoto Univ.)

09:00~11:30

A 会場 (会議室 101+102) / Room A (Meeting Room 101+102)

Many molecules, including proteins, utilize molecular motions to express their functions, hence visualization of such motions is essential for understanding the mechanisms underlying their functionality. While integrating experimental data with molecular simulations offers a promising approach for such visualization, a gap remains: the difficulty of reproducing experimental data through simulations. This gap reduces the effectiveness of such integration. To address this issue, informatics approaches are gaining traction as powerful tools for bridging the gap. In this symposium, we present various integration strategies leveraging informatics, such as information geometry and machine learning, and discuss their potential for visualizing molecular motions.

はじめに
Opening Remarks

1SAA-1 Visualization of domain motion in multi-domain protein as studied by neutron scattering and molecular dynamics simulation
Rintaro Inoue (*Institute for Integrated Radiation and Nuclear Science, Kyoto University*)

1SAA-2 情報幾何学による実験データと MD の統合: 蛋白質構造アンサンブル可視化への適用
Visualization of protein conformational ensembles by integrating experiments and MD via information geometry
○荳口 友隆 (慶應大・理工・物理)
Tomotaka Oroguchi (*Dept. Phys., Keio Univ.*)

1SAA-3 高速原子間力顕微鏡データと分子シミュレーションの融合による生体分子の構造ダイナミクスのデータ同化解析
Data assimilation analysis of structural dynamics of biomolecules by combining HS-AFM data and molecular simulations
○湖上 壮太郎¹, 新稲 亮², 加藤 傑², 松永 康佑³, 高田 彰二⁴ (¹ 静県大・薬, ² 理研・BDR, ³ 埼玉大・理工, ⁴ 京大院・理)
Sotaro Fuchigami¹, Toru Niina², Suguru Kato², Yasuhiro Matsunaga³, Shoji Takada⁴ (¹ *Sch. Pharm. Sci., Univ. Shizuoka*, ² *RIKEN BDR*, ³ *Grad. Sch. Sci. & Eng., Saitama Univ.*, ⁴ *Grad. Sch. Sci., Kyoto Univ.*)

1SAA-4 クライオ電子顕微鏡単粒子画像からの 3D モデル直接推定によるタンパク質マルチコンフォメーション状態の解明
Uncovering Multiple Conformational States of Protein via Direct 3D Models Estimation from CryoEM single-particle images
○徳久 淳師 (理研 計算科学研究センター)
Atsushi Tokuhisa (*RIKEN Center for Computational Science*)

- 1SAA-5 SAXS/SANS と MD シミュレーションを用いた分子複合体の統合的構造モデリング
Integrative structural modeling of macromolecular complexes using SAXS/SANS and MD simulations
○松本 淳 (量子科学技術研究開発機構・量子生命科学研究所)
Atsushi Matsumoto (*iQLS, QST*)

おわりに
Closing Remarks

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- 1SBA AI や機械学習を活用した生物物理・シミュレーション研究の探究
Exploring Biophysics and Simulation Research Using AI and Machine Learning
オーガナイザー：宮下 尚之 (近畿大学), 米澤 康滋 (近畿大学)
Organizers: Naoyuki Miyashita (Kindai Univ.), **Yasushige Yonezawa** (Kindai Univ.)

09:00~11:30

B 会場 (会議室 103+104) / Room B (Meeting Room 103+104)

Recently, the application of AI and machine learning to life sciences has advanced significantly, with examples such as AlphaFold. This symposium will discuss the use of AI and machine learning in addressing various issues in biophysics, as well as their application to analytical simulation techniques and the development of new methodologies. In particular, the symposium will focus on how AI and machine learning can be utilized to analyze and understand the dynamics of biomolecular simulations.

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- 1SBA-1 タンパク質構造変化の AI ベースモーフィングと構造ダイナミクスの Transformer 解析
AI-based Morphing of Protein Structural Changes and Transformer-based Analysis of Conformational Dynamics
○宮下 尚之^{1,2}, 櫻山 佳広², 平澤 理音¹, 下河内 翔太², 塩田 優真², 清岡 亮太² (¹ 近畿大・生物理工,² 近畿大・院・生物理工)
Naoyuki Miyashita^{1,2}, **Yoshihiro Kashiama**², **Rin Hirasawa**¹, **Shota Shimogochi**², **Yuma Shiota**², **Ryota Kiyooka**² (¹*BOST, KINDAI Univ.*, ²*Grad. Sch. BOST, KINDAI Univ.*)
- 1SBA-2 CGBack：拡散モデルを用いたバックマッピングによる粗視化タンパク質シミュレーションからの原子レベル構造の大規模再構築
CGBack: Large Scale Reconstruction of Atomistic Detail from Coarse-Grained Protein Structures with a Diffusion Model
○ウガルテ ラ トレ ディエゴ レナト¹, 杉田 有治^{1,2} (¹*RIKEN R-CCS*, ²*RIKEN PRI*)
Diego Renato Ugarte La Torre¹, **Yuji Sugita**^{1,2} (¹*RIKEN R-CCS*, ²*RIKEN PRI*)
- 1SBA-3 Deciphering allosteric regulation in disease-associated proteins with MD simulation and deep learning
Yuko Tsuchiya (*AIRC, AIST*)
- 1SBA-4 機械学習を用いたタンパク質ダイナミクスや細胞ダイナミクスの次元縮約とデータ生成
Machine Learning-Based Dimensionality Reduction and Data Generation for Protein and Cellular Dynamics
○藤崎 弘士 (日医大)
Hiroshi Fujisaki (*Nippon Med. Sch.*)

- 1SBA-5 蛋白質 MD シミュレーションデータの動的特徴量とその時間依存性を精密に同時抽出する新規機械学習法
A novel machine learning method for the simultaneous and accurate extraction of dynamic features and time dependence from MD simulations
○米澤 康滋 (近畿大学 先端技術総合研究所)
Yasushige Yonezawa (*Kindai University Institute of Advanced Technology*)
- 1SBA-6 機械学習手法を用いたヘムタンパク質における配列構造機能相関の解析
Analysis of sequence-structure-function relationships in heme proteins by using machine learning methods
○近藤 寛子 (北見工大)
Hiroko X. Kondo (*Kitami Inst. Tech.*)
- 1SBA-7 大規模分子動力学計算・動的モンテカルロ法・機械学習を統合した不均一系における物質輸送の研究手法
Integration of large-scale MD calculation, dynamic MC method, and machine learning to study mass transport in heterogeneous systems
○永井 哲郎¹, 吉川 信明², 陣内 亮典², 木村 将之³, 岡崎 進⁴ (¹福岡大学理学部化学科, ²株式会社豊田中央研究所, ³トヨタ自動車株式会社, ⁴横浜市立大学生命ナノシステム科学研究科)
Tetsuro Nagai¹, Nobuaki Kikkawa², Ryosuke Jinnouchi², Masayuki Kimura³, Susumu Okazaki⁴
(¹Department of Chemistry, Faculty of Science, Fukuoka University, ²Toyota Central R&D Labs., Inc., ³Toyota Motor Corporation, ⁴Graduate School of Nanobioscience, Yokohama City University)
- 1SBA-8 疾患の複雑性を解読する：難病創薬のためのデータ駆動的アプローチ
Decoding Disease Complexity: Integrative Data-Driven Approaches for Rare Disease Drug Discovery
○夏目 やよい^{1,2} (¹医薬基盤・健康・栄養研究所, ²徳島大学 先端酵素学研究所)
Yayoi Natsume-Kitatani^{1,2} (¹National Institutes of Biomedical Innovation, Health and Nutrition, ²Institute of Advanced Medical Sciences, Tokushima University)
- おわりに
Closing Remarks

- 1SCA 光の螺旋性が拓くキラル物質科学の変革：超螺旋光を用いた生物物理学への新たな挑戦
Revolution of Chiral Materials Science using Helical Light Fields: New Challenges in Biophysics using Helical Light Fields

共催 学術変革領域研究 (A) 「キラル光物質科学」

オーガナイザー：細川 千絵 (大阪公立大学), 尾松 孝茂 (千葉大学)

Organizers: Chie Hosokawa (Osaka Metro. Univ.), Takashige Omatsu (Chiba Univ.)

09:00~11:30

C 会場 (会議室 105+106) / Room C (Meeting Room 105+106)

Chirality, in which objects cannot be superimposed on their mirror images, is very universal in biological sciences: for instance, the homochirality of biomolecules and cell chirality. Helical light fields, such as optical vortices possessing a helical wavefront, have demonstrated chiral crystallizations, and microfabrication of chiral materials through wavefront-sensitive light matter interactions. These demonstrations will offer potentially a new avenue in biophysics towards advanced tissue engineering with multiple helical fibers and light-induced chiral swarming of active matters. In this symposium, researchers in optics, materials science, and biophysics discuss the prospects of new challenges using helical light fields in biophysics.

はじめに
Opening Remarks

- 1SCA-1 生物物理学のための Structured Light
Structured light for biophysics
○尾松 孝茂 (千葉大学)
Takashige Omatsu (*Chiba University*)
- 1SCA-2 らせんの組織工学の創製
Development of Helical Tissue Engineering
○松崎 典弥 (大阪大学・大学院工学研究科)
Michiya Matsusaki (*The University of Osaka*)
- 1SCA-3 細胞内温度計測：蛍光性ナノ材料を用いた細胞機能の探索
Intracellular thermometry: Probing cell function with fluorescent nanomaterials
○原田 慶恵 (大阪大学ヒューマン・メタバース疾患研究拠点)
Yoshie Harada (*PRIME, The University of Osaka*)
- 1SCA-4 光渦/高速 AFM 複合機で光の螺旋性を可視化する
High-speed AFM combined with optical vortex visualizes optical helicity
○馬越 貴之 (阪大院工)
Takayuki Umakoshi (*Dept. Appl. Phys., Univ. Osaka*)
- 1SCA-5 液滴およびアミロイド線維形成に至るタンパク質の光捕捉ダイナミクス
Optical trapping dynamics of protein assembly into condensates and amyloid fibrils
○茶谷 絵理¹, 柚 佳祐^{1,2}, Chien Yi-Sian², 増原 宏² (¹神戸大・院理, ²台湾国立陽明交通大・理学院)
Eri Chatani¹, Keisuke Yuzu^{1,2}, Yi-Sian Chien², Hiroshi Masuhara² (¹*Grad. Sch. Sci., Kobe Univ.*, ²*Dept. Appl. Chem., National Yang Ming Chiao Tung Univ.*)
- 1SCA-6 紫外域における放射光キラル分光と生体分子の構造観測
Synchrotron radiation chiral spectroscopy in ultraviolet region and structural characterization of biomolecules
○松尾 光一 (放射光・広島大学)
Koichi Matsuo (*Res. Inst. Synchrotron Rad. Sci., Hiroshima Univ.*)
- 1SCA-7 集光フェムト秒光渦レーザーによる単一神経細胞の刺激
Single-neuron stimulation with a focused femtosecond optical vortex laser
○細川 千絵 (阪公大・院理)
Chie Hosokawa (*Grad. Sch. Sci., Osaka Metropolitan Univ.*)
- 1SCA-8 マウスノード不動繊毛は変形の向きを感知して左右軸を決定する
Immotile cilia mechanically sense the direction of fluid flow for left-right determination
○加藤 孝信 (東大・院医)
Takanobu Katoh (*Grad. Sch. Med., The Univ. of Tokyo*)

おわりに
Closing Remarks

1SDA 動的・高次構造の生物物理学: 計測から制御まで

Biophysics of dynamic supramolecular assemblies: measurement, investigation, and design

共催 JST さきがけ「細胞の動的・高次構造体」

オーガナイザー: 大出 真央 (大阪大学), 戸田 浩史 (筑波大学)

Organizers: Mao Oide (The Univ. of Osaka), Hirofumi Toda (Univ. of Tsukuba)

09:00~11:30

D 会場 (会議室 107+108) / Room D (Meeting Room 107+108)

Cells are composed of multiscale assemblies such as protein complexes, RNA-protein complexes, liquid droplets, and organelles. Tons of biomolecules orchestrate these structured components, dynamic supramolecular assemblies, to regulate pivotal functions in diverse biological processes. To understand the rich behaviors of cells based on the spatiotemporal dynamics of each supramolecular assembly, not only investigating such assemblies, but it is also important to develop measurement techniques and/or to design controllable systems. In this symposium, we will invite talented researchers from various relevant research fields and discuss cutting-edge research approaching to the dynamic function of supramolecular assemblies.

はじめに

Opening Remarks

1SDA-1

微細加工温度センサが導く単一細胞の独特な熱挙動

Unique thermal behaviors of single cells revealed by microfabricated thermometer

○猪股 直生 (東北大学)

Naoki Inomata (Tohoku University)

1SDA-2

天然変性タンパク質の凝集を決定する配列ルールの解読

Decoding Sequence Rules for Condensation of Disordered Proteins

○足立 景亮^{1,2}, 川口 喬吾^{2,3} (¹理研 iTHEMS, ²理研 PRI, ³東京大 理学系研究科 知の物理学研究センター)

Kyosuke Adachi^{1,2}, Kyogo Kawaguchi^{2,3} (¹RIKEN iTHEMS, ²RIKEN PRI, ³IPI, Grad. Sch. Sci., Univ. Tokyo)

1SDA-3

The cellular basis of long-term memory: L-LTP-dependent extension of endoplasmic reticulum into spines via septin 3

Natsumi Ageta-Ishihara (Fac. Sci., Toho Univ.)

1SDA-4

How does the nucleus move within 'super crowded' plant cells?

Hirotoyo Takatsuka^{1,2}, Toshiki Amari³ (¹Dept. Biol. Sci., NWU, ²JST・Presto, ³Div. Biol. Sci. Tech., Kanazawa Univ.)

1SDA-5

TIGR-Tas(タイガー-タス): Nop ドメインタンパク質群によるモジュラーな RNA 誘導性システム
TIGR-Tas: Modular RNA-guided systems with Nop domain-containing proteins

○齋藤 諒 (理研・開拓研究所 生命現象エンジニアリング理研 ECL 研究チーム)

Makoto Saito (RIKEN PRI Biophenomena Engineering RIKEN ECL Research Team)

1SDA-6

リボソーム液滴を標的とする新規抗菌ペプチド

A Novel Antimicrobial Peptide that Targets Liquid Ribosomal Condensates

○戸田 浩史 (筑波大学 国際統合睡眠医科学研究機構)

Hirofumi Toda (IHS, University of Tsukuba)

おわりに

Closing Remarks

1SEA クロマチンの物性とその制御

Chromatin structure: physical properties and regulation

共催 学術変革領域研究 (A) 「ゲノムモダリティ」

オーガナイザー：前島 一博（国立遺伝学研究所），西山 朋子（京都大学）

Organizers: Kazuhiro Maeshima (NIG), Tomoko Nishiyama (Kyoto Univ.)

09:00～11:30

E 会場（会議室 201）／Room E（Meeting Room 201）

Recent technology developments in imaging and genome sequencing have uncovered higher-order chromatin structures in the cell. However, their physical properties and regulation remain unclear. This symposium will explore the chromatin structure, its dynamics and regulations with cellular functions and diseases. It will also provide an interdisciplinary discussion of the chromatin structure from multiple viewpoints, including mathematics, biochemistry, cell biology, and bioinformatics.

はじめに

Opening Remarks

- 1SEA-1 コヒーシン HEAT サブユニット IDR のクロマチン高次構造形成における重要性
Impact of IDR in the HEAT repeat protein STAG in building higher-order chromatin structure
○西山 朋子（京大・院理学）
Tomoko Nishiyama (*Grad. Sch. Sci., Kyoto Univ.*)
- 1SEA-2 Repli-Histo 標識によって明らかにする生細胞におけるユークロマチンとヘテロクロマチンの物性
Replication-dependent histone labeling dissects the physical properties of euchromatin and heterochromatin in living human cells
○前島 一博^{1,2}（¹国立遺伝学研究所,²総研大）
Kazuhiro Maeshima^{1,2} (¹National Institute of Genetics, ²SOKENDAI)
- 1SEA-3 Physical modeling of chromatin dynamics
Soya Shinkai (*RIKEN BDR*)
- 1SEA-4 精子クロマチン凝縮過程の追跡
Tracking the Process of Sperm Chromatin Condensation
○岡田 由紀¹, 羽田 政司¹, 牧野 吉倫^{1,2}, 兼子 智^{1,3}（¹東京大学 定量生命科学研究所,²札幌厚生病院,³エスセッククリニック）
Yuki Okada¹, Masashi Hada¹, Yoshinori Makino^{1,2}, Satoru Kaneko^{1,3} (*Institute for Quantitative Biosciences, The University of Tokyo, ²Sapporo Kosei Hospital, ³SSET clinic*)
- 1SEA-5 Target-DNA searching process of a light-regulated transcription factor, Photozipper, observed by high-speed atomic force microscopy
Akihiro Tsuji¹, Hayato Yamashita¹, Osamu Hisatomi², Masayuki Abe¹ (*¹Grad. Sch. Eng. Sci., UOsaka, ²Grad. Sch. Sci., UOsaka*)
- 1SEA-6 核小体における DNA 二重らせん構造の力学的制御メカニズム
Mechano-regulation of DNA duplex structure in a nucleolus
○牧 功一郎^{1,2,3,4}, 福手 淳平^{1,3}, 安達 泰治^{1,2,3,4}（¹京都大学・医生物学研究所,²京都大学・院工学,³京都大学・院生命科学,⁴京都大学・院医学）
Koichiro Maki^{1,2,3,4}, Jumpei Fukute^{1,3}, Taiji Adachi^{1,2,3,4} (*Institute for Life and Medical Sciences, Kyoto University, ²Grad. Sch. Eng., Kyoto University, ³Grad. Sch. Biostudies, Kyoto University, ⁴Grad. Sch. Med., Kyoto University*)

おわりに
Closing Remarks

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- 1SFA 細胞外小胞を基軸とした生命の理解と操作ツール開発
Unveiling life by the function and modification of extracellular vesicles

共催 JST CREST 「細胞を遊ぶ」

オーガナイザー：末次 志郎（奈良先端科学技術大学院大学），
鈴木 健一（岐阜大学／国立がん研究センター）

Organizers: Shiro Suetsugu (NAIST), Ken-ichi GN Suzuki (Gifu Univ./NCC)

09:00～11:30

F 会場（会議室 202）／Room F（Meeting Room 202）

Extracellular vesicles (EVs) are abundantly secreted from almost all types of cells. However, the role and function of EVs have not been clarified yet. There are two major sources of EVs: the plasma membrane and the endosomes. The tiny and long plasma membrane protrusions are the direct source of the EVs. The intraluminal vesicles of the endosomes are also the source of the EVs. With the modification and engineering of these EVs, as well as artificial nanoparticles, a new concept of understanding life is emerging.

はじめに
Opening Remarks

- 1SFA-1 細胞膜由来の細胞外小胞を介した効率的タンパク質伝達
Efficient protein transfer through the protrusion-derived extracellular vesicles
○西村 珠子, 末次 志郎（奈良先端大・バイオ）
Tamako Nishimura, Shiro Suetsugu (NAIST)
- 1SFA-2 1 粒子追跡と超解像顕微鏡観察による細胞外小胞の結合・取り込み機構の解明
Mechanisms of extracellular vesicle binding and internalization uncovered by single-particle tracking and super-resolution microscopy
○鈴木 健一^{1,2}（¹岐阜大・糖鎖生命コア研, ²国立がん研セ）
Kenichi G. N. Suzuki^{1,2} (¹Gifu Univ.・iGCORE, ²NCCRI)
- 1SFA-3 大腸菌生細胞からのメンブレンベシクル創発：バイオポリマー合成が"引き金"
Controllable secretion of membrane vesicles (MVs) from viable *Escherichia coli* triggered by intracellular polymer accumulation
○高 相昊, 田口 精一（信州大・ARG 機構）
Sangho Koh, Seiichi Taguchi (Inst. ARG, Shinshu Univ.)
- 1SFA-4 細胞外小胞の物質送達機構の解明と薬物送達への応用
Analysis of intracellular trafficking of extracellular vesicles for drug delivery applications
○曾宮 正晴（大阪大学 産業科学研究所）
Masaharu Somiya (SANKEN, The University of Osaka)
- 1SFA-5 生物材料ナノマシーンによるゲノム編集送達
Genome Editing Delivery by Biomaterial Nanomachines
○堀田 秋津（京大・CiRA）
Akitsu Hotta (CiRA, Kyoto University)

- 1SFA-6 バーコード化細胞外小胞を活用した細胞外小胞研究の新展開
Barcoded Extracellular Vesicles for Next-generation Extracellular-vesicle Research
○小嶋 良輔 (東京大学 大学院医学系研究科)
Ryosuke Kojima (*Graduate School of Medicine, The University of Tokyo*)

おわりに
Closing Remarks

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- 1SGA タンパク質の量子―古典プロセス研究と生成的デザインによる新規機能性タンパク質開発
Integration of Quantum-Classical Mechanisms and Generative Design for the Development of
Novel Functional Proteins

共催 学術変革領域研究 (A) 「蛋白質新機能生成」／文部科学省・学際領域展開ハブ形成プログラム
「マルチスケール量子―古典生命インターフェース研究コンソーシアム」

オーガナイザー：井上 圭一 (東京大学), 久保 稔 (兵庫県立大学)
Organizers: Keiichi Inoue (*The Univ. of Tokyo*), **Minoru Kubo** (*Univ. of Hyogo*)

09:00~11:30

G 会場 (会議室 203) / Room G (Meeting Room 203)

Proteins have a wide range of highly efficient biological functions. However, their molecular mechanisms remain poorly understood, which makes the artificial design of new functional molecular tools challenging. In this symposium, cutting-edge research addressing this difficulty will be highlighted. A particular focus will be the fundamental studies on the functional mechanisms of photoreceptive proteins to understand the interface between the quantum mechanical light-associated events and the classical, macroscopic functional processes, paving the way for advancements in next-generation optogenetics. Additionally, innovative generative design approaches for creating novel functional molecular tools will be presented.

はじめに
Opening Remarks

- 1SGA-1 人工設計したタンパク質構造に機能を埋め込む試み
Embedding Functional Sites in De Novo Designed Protein Structures
○古賀 信康^{1,2} (¹ 阪大・蛋白研, ²ExCELLS, 自然科学研究機構)
Nobuyasu Koga^{1,2} (¹ASPiRE, IPR, Univ. Osaka, ²ExCELLS, NINS)
- 1SGA-2 Toward generative design of circadian clock modulators: Chemical and structural analyses of
mammalian CRY
Tsuyoshi Hirota (*ITbM, Nagoya Univ.*)
- 1SGA-3 DNA の光修復：分子進化とメカニズム進化
Light-Driven DNA Repair: Mechanistic Insights and Molecular Evolution
○久保 稔 (兵庫県立大学・院理)
Minoru Kubo (*Grad. Sch. Sci., Univ. Hyogo*)
- 1SGA-4 新奇イオン輸送型微生物ロドプシンを用いた光遺伝学ツールの探索と開発
Exploration and development of optogenetic tools based on novel ion-transporting microbial
rhodopsins
○井上 圭一 (東京大学物性研究所)
Keiichi Inoue (*ISSP, Univ. Tokyo*)

- 1SGA-5 高精度量子化学が解き明かす光生物学の分子メカニズム
Exploring Photobiology via High-Precision Quantum Chemistry
○藤本 和宏 (名大・ITbM)
Kazuhiro Fujimoto (*ITbM, Nagoya Univ.*)
- 1SGA-6 チャネルロドプシンの光感度に対する電気生理学的アプローチ
A new model of light sensitivity in Channelrhodopsins
○細島 頌子^{1,2} (¹名古屋工業大学大学院 工学研究科, ²オプトバイオテクノロジー研究センター)
Shoko Hososhima^{1,2} (¹*Graduate School of Engineering, Nagoya Institute of Technology*, ²*Opto Bio Technology Research Center, Nagoya Institute of Technology*)
- 1SGA-7 タンパク質の古典的機能動態を高速 AFM でとらえる
Visualizing Classical Functional Dynamics of Proteins by High-Speed AFM
○内橋 貴之 (名古屋大学)
Takayuki Uchihashi (*Nagoya University*)
- おわりに
Closing Remarks

- 1SHA 細胞の膜系と骨格系のメソスケール協同的組織化と機能：先端顕微鏡技術による解明
Mesoscale cooperative formation and function of cellular membranes and cytoskeleton revealed by advanced microscopy

共催 細胞膜研究フォーラム

オーガナイザー：楠見 明弘 (沖縄科学技術大学院大学), 山城 佐和子 (京都大学)

Organizers: Akihiro Kusumi (OIST), Sawako Yamashiro (Kyoto Univ.)

09:00～11:30

H 会場 (会議室 204) / Room H (Meeting Room 204)

Recently, various mesoscale (30–300 nm) structures in cellular membranes and the cytoskeleton have been identified as functional units. These mesoscale structures often cooperatively form and play essential roles in integrating diverse cellular functions and delicately tuning cell behavior. For example, neuronal synapses likely comprise distinct mesoscale subdomains that are cooperatively formed through liquid–liquid phase separation of multiple constituent proteins, interfacing with both the cytoskeleton and various membrane systems. Advanced biophysical microscopy techniques have immensely contributed to unveiling such mesoscale structures and their functions. This symposium will highlight the latest advances in this emerging field and discuss future perspectives.

- 1SHA-1 Force Transmission and Mechanical Memory at Integrin-Based Adhesions Revealed by Live-Cell Single-Molecule Imaging
Sawako Yamashiro^{1,2}, Ying Liu¹, David Rutkowski³, Dimitrios Vavylonis³, Naoki Watanabe^{1,2} (¹*Grad. Sch. Biostudies, Kyoto Univ.*, ²*Grad. Sch. Medicine, Kyoto Univ.*, ³*Dept. Physics, Lehigh Univ.*)
- 1SHA-2 Kindlin converts the talin•integrin slip bond under mechanical load to an ideal bond
Reinhard Faessler (*Max Planck Institute, Martinsried, Germany*)
- 1SHA-3 Deciphering the mechano-sensitive properties of the membrane periodic skeleton in neurons
Gregory Giannone¹, Zhou Xuesi¹, Théo Dudon¹, Jean-Baptiste Trebbia², Anna Brachet¹, Brahim Lounis² (¹*University Bordeaux, CNRS, Interdisciplinary Institute for Neuroscience, UMR 5297, Bordeaux, France*, ²*Laboratoire Photonique Numérique et Nanosciences (LP2N), Institut d'Optique Graduate School and CNRS, UMR 5298, Talence, France*)

- 1SHA-4 SuperPAINT ライブラリー：1 分子超解像観察のために系統的にデザインしたタグタンパク質と蛍光リガンドのペア
SuperPAINT Library: Systematically designed pairs of tag proteins and fluorescent ligands for single-molecule super-resolution imaging
○唐 博¹, 角山 貴昭¹, 王 茂基¹, Shinozaki Ryuto¹, Aladag Amine¹, 藤原 敬宏², 楠見 明弘¹ (¹ 沖縄科学技術大学院大学, ² 高等研究院 物質-細胞統合システム拠点 京都大学)
Bo Tang¹, Taka A. Tsunoyama¹, Maoji Wang¹, Ryuto Shinozaki¹, Amine Aladag¹, Takahiro K. Fujiwara², Akihiro Kusumi¹ (¹*Okinawa Institute of Science and Technology*, ²*Institute for Advanced Study, Institute for Integrated Cell-Material Sciences, Kyoto University*)
- 1SHA-5 細胞膜上で形成分解を繰り返す準安定ナノ液状シグナル統合プラットフォーム：iTRVZ によるガン増殖の促進
Metastable nano-liquid signal integration hub on the plasma membrane, iTRVZ, which enhances cancer development
○楠見 明弘 (沖縄科学技術大学院大学)
Akihiro Kusumi (*Okinawa Institute of Science and Technology Graduate University (OIST)*)

- 1SIA 発生, 老化, 病態における細胞骨格のダイナミクス
Cytoskeletal dynamics in development, aging and disease
オーガナイザー：島本 勇太 (国立遺伝学研究所), 宮崎 牧人 (理化学研究所)
Organizers: Yuta Shimamoto (NIG), Makito Miyazaki (RIKEN)

09:00~11:30

I 会場 (会議室 205) / Room I (Meeting Room 205)

The cytoskeleton, a dynamic network of protein filaments, mediates diverse intracellular motility and plays essential roles in cell physiology and genome stability. Cytoskeletal malfunctions are associated with diseases, congenital disorders and aging, with mechanisms that remain to be fully understood. This symposium highlights the frontiers of cytoskeletal research by bringing together leading experts in cell and developmental biology. Through interactions with biophysics, we aim to foster new ideas and explore novel approaches. We also encourage students and postdocs to present their work and engage with the forefront of this ever-evolving field.

はじめに Opening Remarks

- 1SIA-1 Lamins regulating nuclear stiffness, genome dynamics and early embryonic development
Yuta Shimamoto (*Nat'l Inst Genetics*)
- 1SIA-2 脳皮質発生におけるニューロン隘路遊走の細胞機構
The cellular mechanism and lifeling impact of neuronal migration in confined brain tissue
○見學 美根子^{1,2}, 中澤 直高¹, 張 喆菁², Grenici Gianluca³, Canela Andres⁴ (¹ 京都大・アイセムス, ² 京都大・院生命科学, ³ シンガポール大・MBI, ⁴ 京都大・放生研)
Minako Kengaku^{1,2}, Naotaka Nakazawa¹, Zhejing Zhang², Gianluca Grenici³, Andres Canela⁴ (¹*WPI-ICeMS, Kyoto Univ.*, ²*Grad. Sch. Biostudies, Kyoto Univ.*, ³*Mechanobiol. Inst., Natl. Univ. Singapore*, ⁴*Rad. Biol. Cent., Kyoto Univ.*)

- 1SIA-3 微小管によるメカノケミカルクロストークが細胞移動の方向性を制御する
 Mechano-chemical crosstalk induced by microtubules in directed cell migration
 ○西村 有香子¹, 近藤 龍樹¹, 折井 良太², 神原 丈敏³, 繁富 (栗林) 香織⁴, 岡田 康志^{3,5,6},
 谷本 博一², 茂木 文夫¹ (¹北大・遣制研, ²横浜市立大・理, ³理研・BDR, ⁴北大・大機構, ⁵東大・理, ⁶東大・医)
Yukako Nishimura¹, Tatsuki Kondo¹, Ryota Orii², Taketoshi Kambara³, Kaori Kuribayashi-Shigetomi⁴,
 Yasushi Okada^{3,5,6}, Hirokazu Tanimoto², Fumio Motegi¹ (¹*Inst. Gen. Med., Hokkaido Univ.*, ²*Dept. Sci.,
 Yokohama City Univ.*, ³*BDR, Riken*, ⁴*Inst. Adv. Grad. Edu., Hokkaido Univ.*, ⁵*Grad. Sch. Sci., Tokyo
 Univ.*, ⁶*Grad. Sch. Med., Tokyo Univ.*)
- 1SIA-4 加齢にともなう卵子の染色体数異常の細胞生物学的な原因
 Cell biological mechanisms of age-associated egg aneuploidy
 ○北島 智也 (理化学研究所生命機能科学研究センター)
Tomoya Kitajima (*RIKEN Biosystems Dynamics Research*)
- 1SIA-5 マウス Metaphase II 卵の紡錘体局在を細胞質流動から守るアクチン構造
 Cytoplasmic Flow-Resistant Spindle Positioning by Actin Structures in Mouse Metaphase II
 Oocytes
 ○大杉 美穂, 寺井 康德 (東大・理・生物科学専攻)
Miho Ohsugi, Kotoku Terai (*Dept. Biol. Sci., Grad. Sch. Sci., Univ. of Tokyo*)
- 1SIA-6 細胞骨格のエネルギー動態：アクチン線維構造から細胞分裂へ
 Energetics of the Cytoskeleton: From F-actin Architecture to Cell Division
 ○坂本 遼太^{1,2}, マレル マイケル^{2,3} (¹中央研究院・物理研, ²イエール大・生体医工, ³イエール
 大・物理)
Ryota Sakamoto^{1,2}, Michael Murrell^{2,3} (¹*Inst. Phys., Academia Sinica*, ²*Dept. Biomed. Engr., Yale Univ.*,
³*Dept. Phys., Yale Univ.*)
- 1SIA-7 アクチン重合の光操作で探る密度依存的な細胞骨格の機能制御
 Optogenetic control of actin network assembly reveals density-dependent functions of actin
 binding proteins
 ○宮崎 牧人^{1,2,3} (¹理研・IMS, ²理研・BDR, ³信州大・院総合医理工学)
Makito Miyazaki^{1,2,3} (¹*RIKEN IMS*, ²*RIKEN BDR*, ³*Grad. Sch. Med., Sci., & Tech., Shinshu Univ.*)

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- 1SJA タンパク質凝集体の構造, 病理, 計算をつなぐ研究の新展開
 New frontiers in research linking structure, pathology, and computation of protein aggregates
 オーガナイザー：田中 元雅 (理化学研究所), 中山 隆宏 (金沢大学)
Organizers: Motomasa Tanaka (RIKEN), Takahiro Nakayama (Kanazawa Univ.)

09:00~11:30

J 会場 (会議室 206) / Room J (Meeting Room 206)

Protein aggregates are involved in the pathogenesis of various human diseases, including Alzheimer's disease. Therefore, it is necessary to integrate structural, pathological, and computational analyses of protein aggregates to gain a deeper understanding of the nature of protein aggregates. In this symposium, we will have talks by leading researchers who are working to understand the structure, pathology, and computation of protein aggregates individually while also linking these findings. This research is expected to lead to the development of novel biophysical technologies and understanding of a wide range of biological phenomena.

はじめに
Opening Remarks

- 1SJA-1 小胞体関連分解におけるタンパク質の逆行輸送を促進する膜上ナノクラスター構造
A nanocluster mesh on ER membranes facilitates protein retrotranslocation in ERAD
○持田 啓佑^{1,2}, 梅田 健一³, 中戸川 仁¹, 古寺 哲幸³, 田中 元雅² (¹東京科学大・総合研究院, ²理研・脳神経科学, ³金沢大・ナノ生命科学)
Keisuke Mochida^{1,2}, Kenichi Umeda³, Hitoshi Nakatogawa¹, Noriyuki Kodera³, Motomasa Tanaka²
(¹IIR, Science Tokyo, ²CBS, Riken, ³NanoLSI, Kanazawa Univ.)
- 1SJA-2 高速 AFM によるアミロイドタンパク質の構造動態と凝集機構の解明
High-speed AFM visualization of structural dynamics and aggregation mechanisms in amyloidogenic proteins
○中山 隆宏 (金沢大学ナノ生命科学研究所)
Takahiro Watanabe-Nakayama (WPI-Nano Life Science Institute, Kanazawa University)
- 1SJA-3 α シヌクレイノパチーの病理とバイオマーカー (seed amplification assay)
Pathology and Biomarkers of Alpha-Synucleinopathies: Focus on Seed Amplification Assays
○奥住 文美 (順天堂大学神経学講座)
Ayami Okuzumi (Juntendo University, Department of Neurology)
- 1SJA-4 アミロイド繊維形成とアミノ酸残基レベルの自由エネルギーとの相関
Amyloid Fibril Formation Correlates with Residue-Level Free Energy Profiles
○藤浪 大輔¹, 林 成一郎², 伊藤 杏¹, 伊藤 創平¹, 神田 大輔³ (¹静岡県大・薬食生命, ²分子研, ³九大・生医研)
Daisuke Fujinami¹, Seiichiro Hayashi², An Ito¹, Sohei Ito¹, Daisuke Kohda³ (¹Grad. Sch. Integr. Pharm. Nutr. Sci., Univ. of Shizuoka, ²NINS, Institute for Molecular Science, ³MIB, Kyushu Univ.)
- 1SJA-5 Unveiling Protein Dynamics through Data Integration Simulations
Osamu Miyashita (RIKEN Center for Computational Science)
- 1SJA-6 プリオン株多様性の構造および分子基盤の解明
Structural and mechanistic basis for prion strain diversity
○田中 元雅 (国立研究開発法人理化学研究所 脳神経科学研究センター)
Motomasa Tanaka (RKEN Center for Brain Science)

2 日目 (9 月 25 日 (木)) / Day 2 (Sep. 25 Thu.)

- 2SAA 計算科学と情報科学の融合による実験データからの生体分子複合体の構造推定
Inferring Biomolecular Complex Structures Using Experimental Data

共催 富岳成果創出加速プログラム 「生体分子シミュレータを基にした大規模推論システムの開発と応用」

オーガナイザー：森 貴治 (東京理科大学), Tama Florence (名古屋大学)

Organizers: Takaharu Mori (Tokyo Univ. of Science), Florence Tama (Nagoya Univ.)

09:00~11:30

A 会場 (会議室 101+102) / Room A (Meeting Room 101+102)

This symposium focuses on cutting-edge methods for predicting the three-dimensional structures of biomolecular complexes using experimental data, including cryo-EM, high-speed AFM, and other advanced techniques. It aims to address challenges in integrating diverse datasets to develop accurate and reliable structural models. Researchers will present progress in computational approaches and their applications in understanding biomolecular mechanisms, fostering collaboration between experimental and computational fields. By bridging these disciplines, the symposium seeks to accelerate advancements in structural biology and contribute to a deeper understanding of complex biological systems, paving the way for novel scientific discoveries.

はじめに

Opening Remarks

- 2SAA-1 Integrative Structure Modeling of Protein Complexes Using Experimental Data with Errors and Noise
Takaharu Mori (*Tokyo University of Science*)
- 2SAA-2 ゲノム分子モデリングにおける統合的多階層手法
An Integrative Multi-Scale Approach to Genome Molecular Modeling
Giovanni Bruno Brandani (*Department of Biophysics, Graduate School of Science, Kyoto University*)
- 2SAA-3 Investigation of conformational landscape from single-particle cryoEM data via reference based approach
Mao Oide¹, Yuji Sugita^{2,3} (¹*IPR, Osaka Univ.*, ²*CPR, RIKEN*, ³*R-CCS, RIKEN*)
- 2SAA-4 生体分子の機能推定のための高速原子間力顕微鏡動画に基づく理論的考察
Theoretical considerations based on high-speed atomic force microscopy movies to estimate biomolecular functions
○炭竈 享司^{1,2} (¹京大・生命科学研究科, ²金沢大・ナノ生命科学研究所)
Takashi Sumikama^{1,2} (¹*Grad. Sch. Biostudies, Kyoto Univ.*, ²*Nano Life Sci. Inst., Kanazawa Univ.*)
- 2SAA-5 AFM 画像セグメンテーション誘導フレキシブルフィッティングによるオートファジー関連天然変性蛋白質構造の推論
Inferring autophagy-related intrinsically disordered protein structures using AFM image segmentation guided flexible fitting
○唐澤 直之¹, 石曾根 毅², 本間 さくら¹, 前島 遼太³, 古寺 哲幸⁴, 中村 和幸⁵, 松永 康佑^{1,6} (¹埼玉大・院理工, ²明大・研究知財, ³明大・院先端数理, ⁴金大・WPI-NanoLSI, ⁵明大・総合数理, ⁶理研・R-CCS)
Naoyuki Karasawa¹, Tsuyoshi Ishizone², Sakura Homma¹, Ryota Maejima³, Noriyuki Kodera⁴, Kazuyuki Nakamura⁵, Yasuhiro Matsunaga^{1,6} (¹*Grad. Sch. Sci. Eng., Saitama Univ.*, ²*Organ. Strateg. Coord. Res. Intellect. Prop., Meiji Univ.*, ³*Grad. Sch. Adv. Math. Sci., Meiji Univ.*, ⁴*WPI-NanoLSI, Kanazawa Univ.*, ⁵*Sch. Interdiscip. Math. Sci., Meiji Univ.*, ⁶*R-CCS, RIKEN*)
- 2SAA-6 Development of high performance coarse-grained molecular dynamics for large-scale biomolecular simulations
Jaewoon Jung^{1,2}, Cheng Tan¹, Yuji Sugita^{1,2} (¹*RIKEN R-CCS*, ²*RIKEN PRI*)
- 2SAA-7 Integrative modeling approaches to characterize the dynamics of biomolecules
Florence Tama^{1,2} (¹*Grad. Sch. Sci., Nagoya University*, ²*RIKEN Center for Computational Science*)

おわりに

Closing Remarks

2SBA 膜タンパク質を介したシグナル伝達
Signal transduction through membrane proteins

オーガナイザー：Tran Duy Phuoc (東京科学大学), 堂浦 智裕 (名古屋大学)
Organizers: Duy Phuoc Tran (Science Tokyo), Tomohiro Doura (Nagoya Univ.)

09:00~11:30

B 会場 (会議室 103+104) / Room B (Meeting Room 103+104)

Signal transduction through membrane proteins is a cornerstone of cellular communication, playing a critical role in regulating physiological processes across all living organisms. This symposium aims to explore the intricate mechanisms by which membrane proteins sense, transmit, and amplify signals in response to environmental or intracellular cues. Bringing together experts from structural biology, biochemistry, and computational modeling, we will discuss recent breakthroughs in understanding receptor activation, ion channel dynamics, and downstream signaling pathways. Emphasis will also be placed on emerging experimental techniques and advanced simulations, highlighting their impact on drug discovery and therapeutic interventions targeting membrane proteins.

はじめに
Opening Remarks

2SBA-1 Understanding Activation Mechanisms in GPCRs - 1) Biophysical studies 2) Computational Validation, and 3) Drug discovery strategies
Robert Scott Prosser¹, Akio Kitao², Duy Phuoc Tran², Adnan Sljoka³, David Young⁴ (¹*Chemistry & Biochemistry Departments, University of Toronto, Toronto, Ontario, Canada*, ²*School of Life Science and Technology, Tokyo Institute of Technology, Tokyo, Japan*, ³*RIKEN Center for Advanced Intelligence Project, Tokyo, Japan*, ⁴*KisoJi Biotechnology, Canada*)

2SBA-2 プロテアーゼ活性化受容体の活性化機構と G タンパク質結合の構造的基盤
Structural Basis of Activation Mechanism and G Protein Coupling in Protease-Activated Receptors
○浅田 秀基, 林 到炫, 足立 誠 (京都大学 大学院医学研究科)
Hidetsugu Asada, Dohyun Im, Makoto Adachi (*Kyoto University Graduate school of Medicine*)

2SBA-3 活性化時の構造変化に基づく GPCR の化学遺伝学的制御
Chemogenetic regulation of GPCRs based on structural changes upon activation
○堂浦 智裕 (名大・院工)
Tomohiro Doura (*Grad. Sch. Eng., Nagoya Uni.*)

2SBA-4 G タンパク質バイアスリガンドによるヒト GPR84 のシグナル伝達機構
Mechanism of human GPR84 signaling by G-protein biased ligands
Shota Suzuki¹, Duy Phuoc Tran², Koki Nishikawa³, Akio Kitao², Yoshinori Fujiyoshi¹ (¹*Adv. Res. Init., Science Tokyo*, ²*Sch. of Life Sci. and Tech., Science Tokyo*, ³*Joint Res. Crs. Adv. Biomol. Character., TUAC*)

2SBA-5 G タンパク質共役型受容体活性化・不活性化メカニズムのインシリコ研究
In silico investigation of the activation and inactivation mechanisms of G protein-coupled receptors
○北尾 彰朗 (東京科学大生命理工)
Akio Kitao (*Sch. Life Sci. Tech, Science Tokyo*)

2SBA-6 Probing Allosteric and biased signaling with rigidity theory, NMR, and geometric Monte-Carlo simulations in GPCRs
Adnan Sljoka (*RIKEN*)

2SCA 予知生合成科学：実験と計算を融合する生合成研究の新たな展開

Forecasting Biosynthesis: A New Frontier in Biosynthesis Research that Integrates Experiment and Computation

共催 学術変革領域研究 (A) 「予知生合成科学」

オーガナイザー：森脇 由隆（東京科学大学），佐藤 玄（東京大学）

Organizers: Yoshitaka Moriawaki (Science Tokyo), Hajime Sato (The Univ. of Tokyo)

09:00～11:30

C会場（会議室 105+106）／Room C（Meeting Room 105+106）

Recent advances in computational technology have made it possible not only to predict the function of biosynthetic genes, which serve as the blueprint for natural product chemistry, but also to artificially create them. In this session, we will report the latest research on extracting unknown useful information from the continuously accumulating genomic data and creating new substances using biosynthesis and chemical synthesis methods by integrating experiment and computation. We will also discuss the new developments in the relationship between recent advances in bioinformatics and biosynthesis research.

はじめに

Opening Remarks

2SCA-1 3次元立体構造を用いた酵素機能の予測：FUJISANの開発と応用
Predicting enzyme functions using 3D Structures: Development and application of FUJISAN
○藤田 卓, 寺田 透（東大・院農）

Suguru Fujita, Tohru Terada (*Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*)

2SCA-2 非生物学的化学反応を指向した酵素データベースの探索
Database Mining-driven Enzyme Discovery for Abiotic Chemical Transformations
○加藤 俊介（阪大・院工）

Shunsuke Kato (*Grad. Sch. Eng., UOsaka*)

2SCA-3 機械学習モデルによる新規酸素反応性 PLP 依存性酵素の発見
Machine learning-guided discovery of novel oxygen and PLP-dependent enzymes

○野口 智弘^{1,2}, 淡川 孝義¹, 齋藤 裕² (¹北里大院・未来工学, ²理研・環境資源科学研究センター)

Tomohiro Noguchi^{1,2}, Takayoshi Awakawa¹, Yutaka Saito² (¹Graduate School of Frontier Engineering, Kitasato Univ., ²CSRS, RIKEN)

2SCA-4 Transformer 言語モデルを用いた天然化合物生合成遺伝子クラスターの予測と設計に向けて
A transformer-based platform for the prediction and design of biosynthetic gene clusters

○梅村 舞子（京工繊大・院）

Maiko Umemura (*Appl. Biol., Kyoto Inst. Tech.*)

2SCA-5 人工設計タンパク質を利用した新規酵素機能改変戦略
Engineering by Proxy: A Novel Strategy for Enzyme Function Redesign Using Synthetic Designer Proteins

○田中 俊一（京都府立大学・院生命環境科学）

Shun-ichi Tanaka (*Grad. Sch. Life and Environ. Sci., Kyoto Pref. Univ.*)

2SCA-6 酵素反応の理論的予測と改良

Computational prediction and improvement of enzymatic reactions

○新井 宗仁^{1,2} (¹ 東大・総合文化・生命環境, ² 東大・理・物理)

Munchito Arai^{1,2} (¹*Dept. Life Sci., Univ. Tokyo*, ²*Dept. Phys., Univ. Tokyo*)

おわりに

Closing Remarks

2SDA 化学による細胞と異世界のマリアージュ～界面の概念拡張による生命世界の拡大

A marriage of cells with “another world” produced by chemistry – Augmentation of the world of life through the innovative concept of interface

オーガナイザー：岸村 顕広（九州大学），金原 数（東京科学大学）

Organizers: Akihiro Kishimura (Kyushu Univ.), Kazushi Kinbara (Science Tokyo)

09:00～11:30

D 会場（会議室 107+108）／Room D（Meeting Room 107+108）

To pioneer the next generation of biophysics, it is essential to expand our concept of the world of life. Therefore, in this symposium, we will focus on the cellular-level world and discuss the possibility of augmenting the world surrounding cells through innovative technologies based on chemistry and materials science. We invite up-and-coming chemists and material scientists who are developing innovative interfaces, particularly to measure and manipulate living cells, to propose new concepts of artificial cells, and to develop new approaches using synthetic molecules. We hope everyone will join the discussion, using their imagination to consider how cells might behave in ‘another world.’

はじめに

Opening Remarks

2SDA-1 液体足場：細胞の未知との遭遇

Fluid Scaffolds: An Encounter with the Unknown for Cells

○中西 淳（物質・材料研究機構）

Jun Nakanishi (NIMS)

2SDA-2 Design of non-sticking microdroplets toward single cell analysis

Mizuki Tenjimbayashi (National Institute for Materials Science)

2SDA-3 生体分子集合体の階層構造が導く非球形凝縮体の創生

Supramolecular Hierarchical Assembly Involving Peptides and Oligonucleotides Forming Non-Spherical Biomolecular Condensates

○菅井 祥加（東京科学大・総合研究院）

Hiroka Sugai (IIR, Science Tokyo)

- 2SDA-4 低分子コアセルベートの形成と内部環境や機能化に対する化学構造の影響
Impact of Molecular Structure on Low-Molecular-Weight Coacervates: Formation, Internal Environments, and Functionalization
○東 小百合^{1,2,3}, 藤本 竜太郎⁴, 廣澤 幸一朗^{5,6}, 金丸 恒大^{7,8}, 吉田 紀生⁷, 鈴木 健一^{5,6}, 池田 将^{2,3,4,5} (¹ 岐阜大・高等研究院, ² 岐阜大・院連創薬, ³ 岐阜大・COMIT, ⁴ 岐阜大・院自然科学技術, ⁵ 岐阜大・iGCORE, ⁶ 国立がん研・バイオイメージング, ⁷ 名古屋大・院情報学, ⁸ 京大・福井セ)
Sayuri Higashi^{1,2,3}, Ryutaro Fujimoto⁴, Koichiro Hirosawa^{5,6}, Kodai Kanemaru^{7,8}, Norio Yoshida⁷, Kenichi Suzuki^{5,6}, Masato Ikeda^{2,3,4,5} (*¹Inst. Adv. Study, Gifu Univ., ²Grad. Sch. Drug Disc. & Med. Info. Sci., Gifu Univ., ³COMIT, Gifu Univ., ⁴Dept. Life Sci. & Chem., Grad. Sch. Nat. Sci. & Technol., Gifu Univ., ⁵iGCORE, Gifu Univ., ⁶Div. Adv. Bioimaging, NCCRI, ⁷Dept. Complex Syst. Sci., Grad. Sch. Informatics, Nagoya Univ., ⁸FIFC, Kyoto Univ.*)
- 2SDA-5 コアセルベートによる革新的生体高分子送達
Innovative Delivery of Biomacromolecules via Coacervates
○川口 祥正 (京大化研)
Yoshimasa Kawaguchi (*Inst. Chem. Res*)
- おわりに
Closing Remarks

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- 2SEA 区画・領域依存的な生命現象とその可視化
Compartment- and Region-Dependent Biological Phenomena and Visualization
オーガナイザー：田上 俊輔 (理化学研究所), 大友 康平 (順天堂大学)
Organizers: Shunsuke Tagami (RIKEN), Kohei Otomo (Juntendo Univ.)

09:00~11:30

E 会場 (会議室 201) / Room E (Meeting Room 201)

This symposium will explore the spatial organization of biological systems and the visualization techniques that reveal their complexity. Topics will include molecular assemblies, organelles, membrane fusion, multicellular pattern formation, and large-scale imaging techniques for live and fixed samples. By integrating insights from biophysics, cell biology, and imaging technologies, we aim to uncover the fundamental principles governing compartmentalized biological processes. The symposium will provide a platform for discussing the latest advancements and future directions in understanding how spatial organization influences cellular and tissue functions.

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- はじめに
Opening Remarks
- 2SEA-1 生命の起源：ペプチド集合体・区画による RNA 合成の活性化
The origin of life: Enhancement of RNA synthesis by peptide aggregates and compartments
○田上 俊輔 (理化学研究所 IMS)
Shunsuke Tagami (*RIKEN IMS*)
- 2SEA-2 RNA が導く膜のない細胞内区画の形成：その機構と分子論的理解
RNA-Guided Formation of Membraneless Intracellular Compartments: Mechanisms and Molecular Insights
○山崎 智弘 (阪大・院生命機能)
Tomohiro Yamazaki (*Front. Biosci., The University of Osaka*)

- 2SEA-3 人工細胞回路による多細胞パターンのデザイン
Programming multicellular patterns with synthetic cell-cell communication
○戸田 聡 (大阪大・蛋白研)
Satoshi Toda (*IPR, Univ. Osaka*)
- 2SEA-4 植物に寄生するシストセンチュウは破壊者か？建築家か？
Cyst nematodes: Destroyers or Architects? ~Insights from the 3D structure of host plant tissues~
○大津 美奈 (奈良先端大・バイオ)
Mina Ohtsu (*NAIST, Bio.*)
- 2SEA-5 ライブイメージングのための透明化試薬の開発
Minimally invasive optical clearing media for live cell imaging ex vivo and in vivo
○稲垣 成矩 (九州大学 医学研究院)
Shigenori Inagaki (*Grad. Sch. Med. Sci., Kyushu Univ*)
- 2SEA-6 区画・領域依存的な生命現象を可視化する 3D 蛍光顕微鏡法の開発
Novel 3D Fluorescence Microscopy to Visualize Compartment- and Region-Dependent Biological Phenomena
○大友 康平^{1,2,3} (¹順天堂大・医, ²自然科学研究機構・生理研, ³自然科学研究機構・ExCELLS)
Kohei Otomo^{1,2,3} (¹*Sch. Med., Juntendo Univ.*, ²*NIPS, NINS*, ³*ExCELLS, NINS*)
- おわりに
Closing Remarks

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- 2SFA 力学が生みだす生体秩序
Self-transformation of living systems induced by mechanical forces
共催 学術変革領域研究 (A) 「生体秩序力学」
オーガナイザー：吉村 成弘 (京都大学), 柴田 達夫 (理化学研究所)
Organizers: Shige H. Yoshimura (Kyoto Univ.), Tatsuo Shibata (RIKEN)

09:00~11:30

F 会場 (会議室 202) / Room F (Meeting Room 202)

An embryo produces cells with specific fates, forms, and functions during development. These cells are self-organized into an ordered pattern through collective interactions of biomolecules and mechanical forces at various spatio-temporal scales. We aim at developing new paradigms of the fundamental design principles of biological systems through holistic understanding of how mechanical forces elicit self-organizing feedback leading to progressive self-tuning transformation of multicellular systems. In this symposium, recent advances in this field, as well as cutting-edge technologies needed to interrogate the mechanical processes and establish a unique model for multi-disciplinary research that harnesses expertise from biomedical sciences, engineering, mathematics, physics, and chemistry will be introduced.

はじめに
Opening Remarks

- 2SFA-1 In vitro における微小管の機械的適応
Mechanical adaptation of in vitro microtubules
○井上 大介 (九大院・芸工)
Daisuke Inoue (*Fac. Des., Kyushu Univ.*)

- 2SFA-2 CD44 を介した細胞集団内の力学ネットワーク感知と集団運動
CD44-Mediated Mechanical Network Sensing within Cell Populations and Collective Cell Migration
○柴田 桂太郎¹, 浅野 千帆莉¹, 石田 紘基², 堀井 拓登², 米村 重信¹ (¹徳島大・院医歯薬学, ²徳島大・医学部)
Keitaro Shibata¹, Chihori Asano¹, Koki Ishida², Takuto Hori², Shigenobu Yonemura¹ (¹*Grad. Sch. Biomed. Sci., Tokushima Univ.*, ²*Med. Faculty, Tokushima Univ.*)
- 2SFA-3 カルマンフィルタで上皮組織の力の時間変化を推定する
Kalman force inference for epithelial deformation: a force inference method for time-lapse movies
○萩田 豪士¹, 三好 建正², 柴田 達夫¹ (¹理研・BDR, ²理研・R-CCS)
Goshi Ogita¹, Takemasa Miyoshi², Tatsuo Shibata¹ (¹*BDR, RIKEN*, ²*R-CCS, RIKEN*)
- 2SFA-4 Mechanical Instability Induces Transition in Epithelial Layer Structure via Nucleation and Growth
Shuya Fukamachi¹, Datta Razib¹, Makiko Arai¹, Rei Yagasaki², Shuhei Horiguchi², Satoru Okuda²
(¹*Grad. Sch. NanoLS., Kanazawa Univ.*, ²*WPI-NanoLSI, Kanazawa Univ.*)
- 2SFA-5 変形可能細胞の数値モデルから迫る, 高密度細胞集団動態
Modeling Collective Dynamics in Densely Packed Deformable Cells
○斉藤 稔 (広島大・統合生命)
Nen Saito (*Grad. Sch. Integr. Sci. Life, Hiroshima Univ.*)
- 2SFA-6 メカノ勾配による Wnt モルフォゲンノイズ除去システムは組織パターン形成の頑強性を支える
“Mechano-gradients” drive morphogen-noise correction to ensure robust patterning
○青木 佳南, 石谷 太 (大阪大・微研・生体統御)
Kana Aoki, Tohru Ishitani (*Dept. of Homeostatic regulation, RIMD, Univ. Osaka*)
- 2SFA-7 軟骨細胞のカラム形成を介して骨形態形成を制御する力学場
Mechanical stress field regulating bone morphogenesis through chondrocyte column formation
○横山 優花¹, 亀尾 佳貴², 須長 純子³, 牧 功一郎^{3,4}, 安達 泰治^{3,4} (¹東京科学大・難治研, ²芝浦工大・工学, ³京大・医生研, ⁴京大・工学)
Yuka Yokoyama¹, Yoshitaka Kameo², Junko Sunaga³, Koichiro Maki^{3,4}, Taiji Adachi^{3,4} (¹*Med. Res. Lab., Science Tokyo*, ²*Col. Eng., Shibaura Inst. Tech.*, ³*Inst. Life Med. Sci., Kyoto Univ.*, ⁴*Grad. Sch. Eng., Kyoto Univ.*)

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- 2SGA 情報科学とイメージングで迫るバイオロジカルクラスターの実態
Exploring the reality of biological clusters through information science and advanced imaging
共催 学術変革領域研究 (A) 「クラスター細胞学」
オーガナイザー: 北村 朗 (北海道大学), 立川 正志 (横浜市立大学)
Organizers: Akira Kitamura (Hokkaido Univ.), Masashi Tachikawa (Yokohama City Univ.)

09:00~11:30

G 会場 (会議室 203) / Room G (Meeting Room 203)

Complex structures formed by the high-order assembly of multiple biomolecules play a role in biological functions. Although these protein complexes are traditionally called ‘aggregates’ or ‘phase-separated biomolecular condensates’, highly ordered and non-phase-separated supramolecular complexes are involved in various biological functions and show different biophysical properties from those of aggregates and condensates: we call the supramolecular complexes with biological significance in cells as ‘biological cluster’. However, the formation of biophysical characteristics of biological clusters remains elusive. In this symposium, we discuss cutting-edge information science and advanced imaging techniques to clarify their formation and functional characteristics.

はじめに

Opening Remarks

- 2SGA-1 走査型蛍光相関分光法により明らかとなったタンパク質凝集体内における低移動性 TDP-25
Scanning fluorescence correlation spectroscopy reveals slowly mobile TDP-25 within protein aggregates
○濱田 悠太¹, 北村 朗² (¹ 北大・院生命科学, ² 北大・院先端生命)
Yuta Hamada¹, Akira Kitamura² (¹*Grad. Sch. Sci. of Life Sci., Hokkaido Univ.*, ²*Fac. of Adv. Life Sci., Hokkaido Univ.*)
- 2SGA-2 平衡および非平衡条件におけるアミロイドβ凝集の分子動力学シミュレーション
Molecular dynamics simulation of amyloid-β aggregation under equilibrium and nonequilibrium conditions
○奥村 久士^{1,2,3} (¹ 生命創成探究センター, ² 分子科学研究所, ³ 総合研究大学院大学)
Hisashi Okumura^{1,2,3} (¹*Exploratory Research Center on Life and Living Systems*, ²*Institute for Molecular Science*, ³*SOKENDAI*)
- 2SGA-3 興奮性シナプス形成の開始誘導：ナノモラー濃度での SynGAP 液状凝縮体形成とそれが誘導する PSD95 と受容体のアセンブリー
Initiation of excitatory synapse formation: SynGAP LLPS at nanomolar concentrations induces PSD95 and receptor oligomer recruitment
Saahil Acharya¹, Taka A. Tsunoyama¹, Christian Hoffmann², Perez Gerard Aguilar², Irina Meshcheryakova¹, Aya Nakamura-Norimoto¹, Tara Mastro³, Ward G. Walkup IV³, Takahiro Fujiwara⁴, Mary B. Kennedy³, Dragomir Milovanovic², Akihiro Kusumi^{1,4} (¹*Membrane Cooperativity Unit, Okinawa Institute of Science and Technology Graduate University, Okinawa, Japan*, ²*Laboratory of Molecular Neuroscience, German Center for Neurodegenerative Diseases (DZNE), Berlin, Germany*, ³*Division of Biology and Biological Engineering, California Institute of Technology, Pasadena, California, U.S.A.*, ⁴*Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University, Kyoto, Japan*.)

2SGA-4 トランスクリプトームおよび画像解析による枯草菌の遊走コロニーの時空間プロファイリング
Multimodal Spatiotemporal Profiling of *Bacillus subtilis* Swarm Development via Integrated Transcriptomics and Microscopy

○納庄 一樹^{1,2,3}, Jeckel Hannah³, Neuhaus Konstantin³, Hastewell Alasdair⁴, Skinner Dominic⁴, Saha Dibya³, Netter Niklas³, Paczia Nicole⁵, Dunkel Jörn⁴, Drescher Knut³ (¹ 東京大学 大学院農学生命科学研究科 応用生命工学専攻, ² 東京大学 微生物科学イノベーション連携研究機構, ³ バーゼル大学 バイオセンター, ⁴ マサチューセッツ工科大学 数学科, ⁵ マックスプランク陸生微生物学研究所)

Kazuki Noshio^{1,2,3}, Hannah Jeckel³, Konstantin Neuhaus³, Alasdair Hastewell⁴, Dominic Skinner⁴, Dibya Saha³, Niklas Netter³, Nicole Paczia⁵, Jörn Dunkel⁴, Knut Drescher³ (¹ *Department of Biotechnology, Graduate School of Agricultural and Life Sciences, The University of Tokyo*, ² *Collaborative Research Institute for Innovative Microbiology, The University of Tokyo*, ³ *Biozentrum, University of Basel*, ⁴ *Department of Mathematics, Massachusetts Institute of Technology*, ⁵ *Max Planck Institute for Terrestrial Microbiology*)

2SGA-5 上皮の細胞間接着形成過程におけるダイナミクス
Dynamic processes of cell-cell adhesion in epithelial cells

○小田 裕香子 (京都大学)
Yukako Oda (*Kyoto University*)

2SGA-6 クライオ光電子相関顕微鏡の開発と現在の状況
Development and Current Status of Cryogenic Correlative Light and Electron Microscopy

○藤芳 暁 (Science Tokyo 物理)
Satoru Fujiyoshi (*Dept. Phys., Science Tokyo*)

おわりに
Closing Remarks

2SHA 鏡像生命の創成：創れるのか，創ってよいのか，創ってどうするのか？
Mirror-Life Synthesis: Its Possibility, Potential, and Problems

共催 石井石橋基金 慶應義塾大学若手研究者育成ものづくり特別事業「鏡像世界の構築から広がるマルチバース創成」

オーガナイザー：藤原 慶 (慶應義塾大学)，青木 航 (大阪大学)
Organizers: Kei Fujiwara (Keio Univ.), Wataru Aoki (The Univ. of Osaka)

09:00～11:30

H 会場 (会議室 204) / Room H (Meeting Room 204)

Recent technological advances in synthetic biology and enantiomeric synthesis of biomolecules (L-DNA/RNA, and D-proteins) have paved the way for the synthesis of mirror-image life that will be self-replicated entirely using enantiomer of the molecules in present living organisms. However, the ethical implications of such research have become increasingly prominent, as claimed by a recent opinion article in Science that warns the potential threats by the synthesis of mirror-life. This symposium brings together experts in synthetic biology, bioengineering, evolutionary biology, chiral biopolymer synthesis, ethics, and policy to discuss the feasibility, advantages, and evolutionary potential of creating mirror-image life.

はじめに
Opening Remarks

- 2SHA-1 試験管内自律的セントラルドグマへの挑戦と鏡像生命に向けた展望
Challenges to realizing in vitro autonomous central dogma and prospects for mirror life
○青木 航 (大阪大学)
Wataru Aoki (*The University of Osaka*)
- 2SHA-2 翻訳システムから考える鏡像生命創成への展望
Toward Mirror-Image Life: Insights from Translation Systems
○清水 義宏 (理研 BDR)
Yoshihiro Shimizu (*RIKEN, BDR*)
- 2SHA-3 タンパク質化学合成と In vitro セレクションによる鏡像抗体ミメティックの創成
Mirror-image Antibody Mimetic Generated via Chemical Protein Synthesis and mRNA Display
○林 剛介 (名大・院工)
Gosuke Hayashi (*Grad. Sch. Eng., Nagoya Univ.*)
- 2SHA-4 Perspective on the Evolution of Mirror-Life Based on Microbial Experimental Evolution
Chikara Furusawa^{1,2} (¹BDR, RIKEN, ²Univ. Biol. Inst., Univ. Tokyo)
- 2SHA-5 新興技術における「責任ある研究イノベーション (RRI)」のあり方を考える
Navigating the Future of Emerging Technologies: Responsible Research and Innovation (RRI)
○松尾 真紀子 (東大・公共政策)
Makiko Matsuo (*Grad. Sch. Public Policy, Univ. Tokyo*)

おわりに
Closing Remarks

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- 2SIA 蛋白質液-液相分離の設計と制御
Design and control of liquid-liquid phase separation of proteins
オーガナイザー：池田 恵介 (富山大学), 鎌形 清人 (岐阜大学)
Organizers: Keisuke Ikeda (*Univ. of Toyama*), **Kiyoto Kamagata** (*Gifu Univ.*)

09:00~11:30

I 会場 (会議室 205) / Room I (Meeting Room 205)

Intracellular proteins form condensed droplets by liquid-liquid phase separation via intermolecular interactions. It has become clear that these droplet formations play an important role in diverse biological processes as well as in diseases involving protein aggregation and amyloid formation. Therefore, exploring molecules that promote or inhibit protein phase separation, designing artificial systems that form phase-separated droplets, and developing technologies that control the droplets are required not only for elucidation of the mechanisms underlying the phase separation phenomenon, but also for drug discovery targeting droplet formation and protein aggregation. In the proposed symposium, five researchers working on the above issues will give lectures.

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- 2SIA-1 人工液-液相分離ペプチドのデザインと物性制御
Design and control of physicochemical properties of artificial liquid-liquid phase-separating peptides
○池田 恵介 (富山大・薬)
Keisuke Ikeda (*Fac. Pharm. Sci., Univ. Toyama*)

- 2SIA-2 ペプチドによる α -シヌクレインの液-液相分離誘導と物性制御
 Peptide-Mediated Modulation of α -Synuclein Liquid-Liquid Phase Separation and Its Biophysical Properties
 ○池之上 達哉 (大阪大・蛋白研)
Tatsuya Ikenoue (*IPR, Univ. Osaka*)
- 2SIA-3 酵母プリオン Sup35 配列由来のデザインタンパク質を用いた液-液相分離に影響を及ぼすアミノ酸の解析
 Analysis of amino acids affecting liquid-liquid phase separation using a design protein based on the yeast prion Sup35 sequence
 ○大橋 祐美子¹, 高畠 晴², 田口 英樹^{1,2} (¹ 科学大・研究院・細胞センター, ² 科学大・生命理工)
Yumiko Ohhashi¹, Haru Takabatake², Hideki Taguchi^{1,2} (¹*CBC, IIR, Science Tokyo*, ²*Sch. of Life Sci. Tech, Science Tokyo*)
- 2SIA-4 ALS 関連 FUS 変異体の相挙動に対する圧力・温度および低分子の影響
 Effects of pressure, temperature, and small molecules on phase behavior of amyotrophic lateral sclerosis-linked FUS variants
 ○北原 亮^{1,2} (¹ 立命館大・薬, ² 立命館大・院薬)
Ryo Kitahara^{1,2} (¹*Coll. Pharm. Sci., Ritsumeikan Univ.*, ²*Grad. Sch. Pharm., Ritsumeikan Univ.*)
- 2SIA-5 タンパク質液滴を測り、操り、創る
 Watching, manipulating, and creating protein droplets
 ○鎌形 清人 (岐阜大・工・化学生命工)
Kiyoto Kamagata (*Fac. Eng. & Grad. Sch. Eng., Gifu Univ.*)

2SJA 古くて新しいロドプシン研究最前線

Cutting Edge of Rhodopsin Research ~Where Tradition Meets Innovation~

オーガナイザー：片山 耕大 (名古屋工業大学), 加藤 英明 (東京大学)

Organizers: Kota Katayama (Nagoya Inst. of Tech.), Hideaki Kato (The Univ. of Tokyo)

09:00~11:30

J 会場 (会議室 206) / Room J (Meeting Room 206)

Optogenetics, a revolutionary technique using light to control cellular and physiological functions, has become a vital tool in neuroscience and cell biology. At its core is rhodopsin, a molecule of significant interest due to its central role in vision, sensing, and energy conversion. First identified in animals in the 19th century and in microbes in 1971, rhodopsins have also served as testing ground for cutting-edge experimental methods. This symposium will revisit fundamental and applied rhodopsin research, examining their functions, novel techniques, and potential applications while fostering discussions to drive future breakthroughs in rhodopsin-based technologies.

はじめに

Opening Remarks

2SJA-1 微生物ロドプシンにおけるプロトン移動の理論解析

Theoretical investigation of proton transfer in microbial rhodopsins

○辻村 真樹^{1,2}, 斉藤 圭亮¹, 石北 央¹ (¹ 東大・院工, ² 理研・開拓研究所)

Masaki Tsujimura^{1,2}, Keisuke Saito¹, Hiroshi Ishikita¹ (¹*Grad. Sch. Eng., Univ. Tokyo*, ²*PRI, RIKEN*)

- 2SJA-2 光駆動プロトンポンプロドプシンの新たな視点：プロトン輸送メカニズムとその方向性
New Insights into Light-Driven Proton Pump Rhodopsins: Proton Transfer Mechanism and Directionality
○潤井 泰斗 (阪大院理)
Taito Urui (*Grad. Sch. Sci., Univ. Osaka*)
- 2SJA-3 ウイルスヘリオロドプシン V2HeR3 のプロトン輸送メカニズム
Mechanism of Proton Transport in the Viral Heliorhodopsin V2HeR3
○水島 律¹, Nuemket Nipawan^{2,3}, Fangjia Luo³, 細島 頌子^{1,5}, D'Ascenzi Jacopo⁴, Oliveira Leonardo⁴, 大橋 沙也佳¹, 吉住 玲¹, Palombo Riccardo⁴, 角田 聡^{1,5}, 古谷 祐詞^{1,5}, Bèjà Oded⁶, Olivucci Massimo^{4,7}, 南後 恵理子^{3,8}, 片山 耕大^{1,5}, 神取 秀樹^{1,5} (¹名工大・院工, ²高輝度光科学研究センター, ³理研・SPRING-8, ⁴Univ. Siena, ⁵名工大・オプトバイオ, ⁶Technion-Israel Inst. Tech., ⁷Bowling Green State Univ., ⁸東北大・多元物質科学研究所)
Ritsu Mizutori¹, Nipawan Nuemket^{2,3}, Luo Fangjia³, Shoko Hososhima^{1,5}, Jacopo D'Ascenzi⁴, Leonardo Oliveira⁴, Sayaka Ohashi¹, Rei Abe-Yoshizumi¹, Riccardo Palombo⁴, Satoshi Tsunoda^{1,5}, Yuji Furutani^{1,5}, Oded Bèjà⁶, Massimo Olivucci^{4,7}, Eriko Nango^{3,8}, Kota Katayama^{1,5}, Hideki Kandori^{1,5} (¹Grad. Sch. Eng., Nagoya Inst. Tech., ²Japan Synchrotron Radiation Research. Inst., ³RIKEN SPRING-8, ⁴Univ. Siena, ⁵OptoBioTechnology Research Cent., ⁶Technion-Israel Inst. Tech., ⁷Bowling Green State Univ., ⁸Institute of Multidisciplinary Research for Advanced Materials, Tohoku Univ.)
- 2SJA-4 光応答性神経による括約筋の制御と貫通型消化管の進化的起源
Light-modulated neural control of sphincter regulation in the evolution of through-gut
Junko Yaguchi¹, Kazumi Sakai², Atsushi Horiuchi², Takashi Yamamoto³, Takahiro Yamashita², **Shunsuke Yaguchi**¹ (¹SMRC, Univ. Tsukuba, ²Grad. Sch. Sci., Univ. Kyoto, ³Genom. Edit. Innov. Cent., Hiroshima Univ.)
- 2SJA-5 メダカでは脳下垂体に発現する光受容体が紫外線受容によって色素沈着促進ホルモンの分泌を誘導する
A Photoreceptor Expressed in Pituitary Endocrine Cells Mediates UV-Induced Hormone Release That Enhances Pigmentation in Medaka
○神田 真司¹, 福田 彩華^{1,2}, 佐藤 恵太³ (¹東京大学大気海洋研究所, ²基礎生物学研究所神経行動学研究部門, ³岡山大学医歯薬学総合研究科)
Sinji Kanda¹, Ayaka Fukuda^{1,2}, Keita Sato³ (¹Atmosphere and Ocean Research Institute, The University of Tokyo, ²Division of Behavioral Neurobiology, National Institute for Basic Biology, ³Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama University)
- おわりに
Closing Remarks

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- 2SKA 日韓二国間シンポジウム：拡大する日韓生物物理研究のフロンティア
Korea-Japan Bilateral Symposium: Expanding Frontiers of Biophysics in Two Countries
オーガナイザー：高橋 聡 (東北大), Young-Ho Lee (Korea Basic Sci. Inst.)
Organizers: Satoshi Takahashi (Tohoku Univ.), Young-Ho Lee (Korea Basic Sci. Inst.)

09:00～11:30
K会場 (天平ホール) / Room K (Tempyo Hall)

The 2026 annual meeting of the Biophysical Society of Japan will be held in Busan, Korea as the joint meeting with the Federation of Korean Societies for Biomolecular and Biophysical Sciences. This bilateral symposium, which is the pre-event of the 2026 meeting, aims to promote collaboration among scientists in both countries by facilitating the exchange of the latest research in various fields of biophysics. We invite scientists to share their expectations for the future of Korea-Japan collaboration.

はじめに

Opening Remarks

- 2SKA-1 Assessing druggability based on the structural features of human leucyl-tRNA synthetase 2
Seonha Park¹, Byeongmin Shin¹, Ingyo Park¹, Kyuhyeon Bang¹, Sulhee Kim¹, Ina Yoon²,
Kwang Yeon Hwang¹ (¹*Department of Biotechnology, Korea University*, ²*College of Pharmacy, Yonsei University*)
- 2SKA-2 クライオ電子顕微鏡を用いた感染症治療薬・ワクチン開発の進展と日韓協力
Advancements in Therapeutic and Vaccine Development for Infectious Diseases Using Cryo-EM: A Potential Japan-Korea Collaboration
Katsumi Maenaka^{1,2} (¹*Facult. Pharm. Sci., Hokkaido Univ.*, ²*Facult. Pharm. Sci., Kyushu University*)
- 2SKA-3 Accurate Conformational Ensembles of Intrinsically Disordered Proteins using Reweighting based on NMR Chemical Shift
Juhyeong Jeon¹, Wonjin Yang¹, Jin Hae Kim², Young-Ho Lee³, **Wookyoung Yu**¹ (¹*Department of Brain Sciences, DGIST, Daegu, Republic of Korea*, ²*Department of New Biology, DGIST, Daegu, Republic of Korea*, ³*Research Center for Bioconvergence Analysis, Korea Basic Science Institute, Republic of Korea*)
- 2SKA-4 NMR を利用した天然変性タンパク質を標的とした創薬への挑戦
Challenges and perspectives in drug discovery and design against intrinsically disordered proteins by NMR
Hidekazu Hiroaki^{1,2,3} (¹*Grad. Sch. Pharm. Sci., Nagoya Univ.*, ²*BeCellBar, LLC.*, ³*COMIT, Nagoya Univ.*)
- 2SKA-5 Cellular Mechanobiology in Phagocytosis
Min Chanhyuk¹, Cho Hyeokjin², Yu Jeongmin¹, Park Daeho², **Lee Gwangrog**¹ (¹*Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST)*, ²*School of Life Sciences, Gwangju Institute of Science and Technology (GIST)*)
- 2SKA-6 Direct Visualization of Dynamics in Prokaryotic Motility Machinery
Takayuki Nishizaka¹, Masaki Mizutani¹, Daisuke Nakane² (¹*Gakushuin Univ.*, ²*Univ. Electro-Communications*)

おわりに

Closing Remarks

2SAP エピゲノブリッジ: クロマチン構造形成におけるエピゲノムの役割とその複製機構の分子・細胞スケールに渡る理解

EpigenoBridge: Toward Understanding the Epigenome's Role in Chromatin Structure Formation and Replication Mechanisms from the Molecular to the Cellular Scale

共催 学術変革領域研究 (B) 「エピゲノブリッジ」

オーガナイザー: 角南 智子 (QST), 寺川 剛 (京都大学)

Organizers: Tomoko Sunami (QST), Tsuyoshi Terakawa (Kyoto Univ.)

16:15~18:45

A 会場 (会議室 101+102) / Room A (Meeting Room 101+102)

Eukaryotic genomic DNA is intricately packaged into nucleosomes, forming a dynamic beads-on-a-string structure. Various chemical modifications of histones define the “epigenome,” guiding chromatin structure and thus determining gene expression and cell function. Despite their importance, the precise mechanisms by which the epigenome regulates chromatin architecture and influences cell function remain elusive. Moreover, how these epigenetic marks are maintained and transmitted across cell generations through DNA replication is still poorly understood. This symposium brings together leading experts to explore cutting-edge research on epigenome-mediated chromatin formation, its interplay with DNA replication, and potential approaches for its artificial manipulation.

はじめに

Opening Remarks

2SAP-1 クロマチン構造の力学的解析: 分子夾雑とエピゲノム継承の分子機構の理解に向けて
Mechanical Analysis of Chromatin by Optical Tweezers: Molecular Crowding and Inheritance of Epigenome

○角南 智子¹, Kumar Amarjeet¹, 日詰 光治², 河野 秀俊^{1,3} (¹QST・量子生命, ²埼玉医科大・医学部・中央研究施設, ³千葉大院・量子構造創薬センター)

Tomoko Sunami¹, Amarjeet Kumar¹, Kohji Hizume², Hidetoshi Kono^{1,3} (¹*iQLS, QST*, ²*BRC, Med, Saitama Med U*, ³*cQUEST, Chiba U*)

2SAP-2 Structure and dynamics of reconstituted chromatin with defined histone modification patterns
Yohsuke T Fukai¹, **Kyogo Kawaguchi**^{1,2} (¹*RIKEN PRI*, ²*Institute for Physics of Intelligence, Department of Physics, The University of Tokyo*)

2SAP-3 Cryo-EM analysis of basic chromatin architectures isolated from cells
Yoshimasa Takizawa^{1,2}, Haotong Zhuang^{1,2}, Takuro Shioi^{1,3}, Suguru Hatazawa¹, Yuki Kobayashi¹, Mitsuo Ogasawara¹, Yasuyuki Ohkawa⁴, Hitoshi Kurumizaka^{1,3,4} (¹*IQB, Univ.Tokyo*, ²*Grad. Sch. Fro. Sci., Univ.Tokyo*, ³*Grad. Sch. Sci., Univ. Tokyo*, ⁴*MIB, Kyushu Univ.*)

2SAP-4 化学触媒によるエピゲノム改変技術の開発
Development of epigenome modification technology by chemical catalysis
○川島 茂裕 (東京大学大学院薬学系研究科)
Shigehiro Kawashima (*Graduate School of Pharmaceutical Sciences, The University of Tokyo*)

2SAP-5 複製依存的ヒストン標識 (Repli-Histo 標識) を用いて明らかにする, ヒト生細胞内のユークロマチン・ヘテロクロマチンのふるまい
Replication-dependent histone (Repli-Histo) labeling dissects the physical properties of euchromatin/heterochromatin in living human cells
○南 克彦^{1,2}, 仲里 佳子^{1,2}, 井手 聖^{1,2}, 海津 一成^{3,4}, 東 光一^{2,5}, 田村 佐知子¹, 豊田 敦⁶, 高橋 恒一³, 黒川 顕^{2,5}, 前島 一博^{1,2} (¹ 遺伝研・ゲノムダイナミクス研究室, ² 総研大・先端学術院, ³ 理研 BDR・バイオコンピューティング研究チーム, ⁴ 生命創成研究センター・細胞シミュレーション研究グループ, ⁵ 遺伝研・ゲノム進化研究室, ⁶ 遺伝研・先端ゲノミクス支援センター)
Katsuhiko Minami^{1,2}, Kako Nakazato^{1,2}, Satoru Ide^{1,2}, Kazunari Kaizu^{3,4}, Koichi Higashi^{2,5}, Sachiko Tamura¹, Atsushi Toyoda⁶, Koichi Takahashi³, Ken Kurokawa^{2,5}, Kazuhiro Maeshima^{1,2}
(¹Genome Dynamics Laboratory, NIG, ²SOKENDAI, ³Laboratory for Biologically Inspired Computing, RIKEN BDR, ⁴Cell Modeling and Simulation Group, ExCELLS, ⁵Genome Evolution Laboratory, NIG, ⁶Comparative Genomics Laboratory, NIG)

おわりに
Closing Remarks

2SBP 動的溶液環境の観点から紐解く生体分子凝縮体
Understanding Biomolecular Condensation from the Perspective of Dynamic Solution Environments

オーガナイザー：関山 直孝 (京都大学), 中村 秀樹 (京都大学)
Organizers: Naotaka Sekiyama (Kyoto Univ.), Hideki Nakamura (Kyoto Univ.)

16:15~18:45
B 会場 (会議室 103+104) / Room B (Meeting Room 103+104)

Solution environments in living cells fluctuate spatiotemporally, influencing the formation of biomolecular condensates. This symposium will explore how dynamic changes in solution environments regulate liquid-liquid phase separation and amyloid fibril formation by modulating intermolecular interactions, as well as the subsequent effects on physiological functions and the formation of pathological aggregates. By integrating experimental, computational and theoretical approaches, we aim to uncover the intricate mechanisms underlying biomolecular condensate formation across scales, from microscopic molecular interactions to macroscopic biological outcomes.

2SBP-1 シナプス後肥厚タンパク質のリン酸化による凝縮体および受容体集合への影響：分子シミュレーションによる検討

Effects of phosphorylation of postsynaptic density proteins on condensates and receptor assembly studied by molecular simulations

○山田 莉彩, 高田 彰二 (京大・理・生物物理)

Risa Yamada, Shoji Takada (Dept. Biophys., Grad. Sch. Sci., Kyoto Univ.)

2SBP-2 Single-Molecule Studies of how Mug20-Rec25-Rec27 (MRR) Complex Mediates DNA Conformational Change and Biomolecular Condensates Formation

Hung-Wen Li¹, Chieh-Yu Tsai¹, Feng-Yu Wang², Ya-Ching Yang², Ya-Chen Gong³, Shyh-Chyang Luo³, Peter Chi² (¹Dept. Chemistry, National Taiwan Univ., ²Inst. Biochem. Sci., National Taiwan Univ., ³Dept. Materials Sci. Eng., National Taiwan Univ.)

2SBP-3 液体の積分方程式理論を用いた 4 残基ペプチドデータベースの構築
A Comprehensive Tetrapeptide Database Using Integral Equation Theory of Liquid

○金丸 恒太^{1,2}, 吉田 紀生² (¹ 京大・福井セ, ² 名大・院情報)

Kodai Kanemaru^{1,2}, Norio Yoshida² (¹FIFC, Kyoto Univ., ²Dept. Complex Syst. Sci., Grad. Sch. Informatics, Nagoya Univ.)

- 2SBP-4 アミロイド多型とその形成メカニズム
Amyloid polymorphism and formation mechanisms
○宗 正智, 菅瀬 謙治 (京大・院農)
Masatomo So, Kenji Sugase (*Grad. Sch. Agric., Kyoto Univ.*)
- 2SBP-5 動的溶液環境におけるアミロイドβタンパク質の分子集合
Molecular assembly of amyloid-β proteins in dynamic solution environments
○矢木 真穂^{1,2} (¹名古屋市大・院薬,²自然科学研究機構・生命創成探究セ)
Maho Yagi-Utsumi^{1,2} (¹*Grad. Sch. Pharm. Sci., Nagoya City Univ.*, ²*ExCELLS, Natl. Inst. Nat. Sci.*)
- 2SBP-6 動的細胞内環境における機能性アミロイド線維の可能性の探索
Investigating Neuronal Amyloid Fibrils with Potential Functional Roles in a Dynamic Intracellular Environment
○杉江 淳¹, 小坂 二郎² (¹京都工芸繊維大学,²東京科学大学)
Atsushi Sugie¹, **Jiro Osaka**² (¹*Kyoto Institute of Technology*, ²*Institute of Science Tokyo*)

- 2SCP 重力場における生命の適応進化戦略「細胞骨格ダイナミクス」「ホメオスタシス」から超高齢社会のQOLを考える～自己組織化・分子シャペロン・Hippo経路・可視化と意識的活動
Adaptive Evolutionary Strategy of Life in a Gravitational Field "Cytoskeletal Dynamics", "Mechanical Homeostasis" for Quality of Life in a Super-aging Society - Self-organization, Molecular Chaperones, Hippo Pathway, Visualization and Conscious Activity
オーガナイザー：跡見 順子 (帝京大学), 井上 大介 (九州大学)
Organizers: Yoriko Atomi (*Teikyo Univ.*), **Daisuke Inoue** (*Kyushu Univ.*)

16:15～18:45

C会場 (会議室 105+106) / Room C (Meeting Room 105+106)

Only intelligent human beings can apply the principles of life to their own existence and life to science themselves and present scientific strategies to revitalize the super-aging society. In this symposium, we aim to gain insight into the essence of "cytoskeletal dynamics" and "mechanical homeostasis" from key factors such as self-organization, molecular chaperones, Hippo pathways, visual understanding, and conscious activity, and to create a new field of biophysics through discussions that link the two horizontally and vertically.

はじめに Opening Remarks

- 2SCP-1 微小管ダイナミックインスタビリティ 3.1：高精度多次元解析がもたらした意外な高次機能の発見
Microtubule Dynamic Instability 3.1: From Imaging to Insight into Hidden Functions
○清末 優子 (関西医科大学 附属生命医学研究所 分子遺伝学部門)
Yuko Mimori-Kiyosue (*Department of Molecular Genetics, Institute of Biomedical Science, Kansai Medical University*)
- 2SCP-2 The Timing of the Acquisition of Eukaryotic Traits during Eukaryogenesis
Robert Charles Robinson (*Vidyasirimedhi Institute of Science and Technology (VISTEC) Thailand*)
- 2SCP-3 αB-クリスタリン, チューブリン/微小管のメカノシャペロン：階層的自己組織化とヒト特異性を活用したQOL戦略
αB-Crystallin, mechanochaperon for tubulin/microtubule: A QOL strategy that utilizes hierarchical self-organization and human specificity
○跡見 順子 (帝京大学先端総合研究機構)
Yoriko Atomi (*Teikyo University, ACRO*)

- 2SCP-4 再構成型ヒト翻訳・フォールディング連動システムを利用した変異β-アクチンの生合成における異常ステップの解析
A Reconstituted Human Translation/Folding Coupled System Defines the Defective Step in the Biogenesis of Mutated β-Actin Proteins
○町田 幸大 (兵庫県立大・院工・応用化学)
Kodai Machida (*Dept. of Appl. Chem., Grad. Sch. of Eng., Univ. of Hyogo*)
- 2SCP-5 量子ドットイメージングで観る細胞表面へのアミロイドβ凝集・沈着
Visualization of amyloid β aggregation and deposition on cell surface using quantum dot imaging
○倉賀野 正弘, 徳樂 清孝 (室工大・院工)
Masahiro Kuragano, Kiyotaka Tokuraku (*Grad. Sch. Eng., Muroran Inst. Tech.*)
- 2SCP-6 細胞外環境を感知する Hippo シグナル伝達経路の役割
Roles of the Hippo signaling pathway sensing the extracellular environment
○仁科 博史 (東京科学大学)
Hiroshi Nishina (*Institute of Science Tokyo*)
- 2SCP-7 The expression of the collagen chaperone Hsp47 is regulated by mechanical loading through the YAP/TEAD pathway
Ayano Kasai^{1,2}, Shinya Ito³, Ryo Ushioda^{1,2}, Kazuhiro Nagata^{1,2,4} (¹*Fac. Life Sci., Kyoto Sangyo Univ.*, ²*Inst. Protein Dynamics, Kyoto Sangyo Univ.*, ³*Ctr. Mol. Biol., Heidelberg Univ.*, ⁴*JT Biohistory Research Hall*)
- おわりに
Closing Remarks

- 2SDP 多細胞生物の解明に向けて：組織内で細胞の特徴を捉えるための多彩なアプローチ
Towards the elucidation of multicellular organisms: Diverse approaches to capturing the characteristics of cells within tissues
オーガナイザー：北條 望 (理化学研究所), 神谷 真子 (東京科学大学)
Organizers: Nozomi Hojo (RIKEN), Mako Kamiya (Science Tokyo)

16:15~18:45

D会場 (会議室 107+108) / Room D (Meeting Room 107+108)

Recent advances in single-cell analysis technologies have revealed that multicellular organisms are composed of diverse cell types, which work in coordination to regulate tissues. Unraveling the detailed mechanisms requires not only the identification of cell types but also the integrated analysis of information such as the spatial location, morphology, and functional activity of cells within three-dimensional biological tissues. This symposium aims to focus on research that captures the characteristics of cells within tissues using various methods, with the goal of achieving a comprehensive understanding of multicellular organisms. We hope to have active discussion on this topic with participants.

はじめに
Opening Remarks

- 2SDP-1 一細胞 3次元空間トランスクリプトーム解析を実現する新規細胞単離法
A novel single-cell isolation method enables single-cell 3D spatial transcriptomics
○北條 望, 城口 克之 (理研・BDR)
Nozomi Hojo, Katsuyuki Shiroguchi (*BDR, Riken*)

- 2SDP-2 線虫の全脳活動計測と遺伝子発現解析
Whole brain activity measurement and gene expression analysis of neurons in *Caenorhabditis elegans*
○豊島 有^{1,2}, 飯野 雄一¹, 楊 曉雄² (¹東大・院理・生物科学, ²東大・新領域・メディカル情報生命)
Yu Toyoshima^{1,2}, Yuichi Iino¹, Xiaoxiong Yang² (¹*Grad. Sch. of Sci., Univ. of Tokyo*, ²*Grad. Sch. of Front. Sci., Univ. of Tokyo*)
- 2SDP-3 Unraveling the Mechanisms of Collective Cell Migration in Epithelial Morphogenesis
Erina Kuranaga^{1,2} (¹*Grad Sch Pharmaceu Sci, Kyoto Univ*, ²*Grad Sch Life Sci, Tohoku Univ*)
- 2SDP-4 生きた動物内で標的 GPCR を細胞種選択的に制御する化学遺伝学的アプローチ
Chemogenetic strategy for controlling target GPCRs in a cell-type-specific manner in vivo
○清中 茂樹 (名大・院工)
Shigeki Kiyonaka (*Grad. Sch. Eng., Nagoya Univ.*)
- 2SDP-5 Functional Raman probes for multiplexed vibrational imaging
Mako Kamiya (*CLS, Science Tokyo*)
- おわりに
Closing Remarks

2SEP 生物物理からのアクティブマターへのアプローチ

Approaching Active Matter from Biophysics Perspective

オーガナイザー：川又 生吹 (京都大学), 早川 雅之 (京都工芸繊維大学)

Organizers: Ibuki Kawamata (Kyoto Univ.), Masayuki Hayakawa (Kyoto Institute of Technology)

16:15~18:45

E 会場 (会議室 201) / Room E (Meeting Room 201)

This symposium will focus on Active Matter, where the mechanism of active motion of a component is addressed, and further the interaction among them is of interest. Each component can be materialized in a variety of manners from natural organisms to artificially synthesized molecules. In the symposium, Active Matter will be discussed from a wide range of Biophysics, covering experimental research on cells, microorganism, droplets, molecular motors, colloids, and so on. Through the discussion of Active Matter, our symposium will provide insights into the origin and evolution of life, as well as the essence of emergence resulting from autonomy and complexity.

- 2SEP-1 アクティブに推進する生体分子エージェントとプログラムされた DNA 化学反応ネットワークの統合
Actively Gliding Biomolecular Agents Integrated with Programmed DNA Chemical Reaction Network
○川又 生吹 (京都大学)
Ibuki Kawamata (*Kyoto University*)
- 2SEP-2 光照射で駆動される DNA 流体による生命的な動き
Life-like motion of active DNA fluid driven by photo-irradiation
○鶴殿 寛岳¹, 野村 M. 慎一郎², 瀧ノ上 正浩¹ (¹東京科学大学 情報理工学院, ²東北大学大学院 工学研究科 ロボティクス専攻)
Hirotake Udono¹, M. Shin-ichiro Nomura², Takinoue Masahiro¹ (¹*Dept. Comp. Sci., Institute of Science Tokyo*, ²*Dept. Robotics, Sch. Eng., Tohoku University*)

- 2SEP-3 完全な運動一方向性のための DNA 人工分子モーターの構造改変
Geometry engineering of DNA artificial molecular motor for perfect unidirectionality
○原島 崇徳^{1,2}, 飯野 亮太^{1,2} (¹分子科学研究所, ²総合研究大学院大学)
Takanori Harashima^{1,2}, Ryota Iino^{1,2} (¹*Institute for Molecular Science*, ²*Graduate Institute for Advanced Studies, SOKENDAI*)
- 2SEP-4 非生物由来分子システムの自発的回帰性が駆動する生命性
"Life" Actuated by Autonomous Recursion of Non-Biological Molecular Systems
○松尾 宗征^{1,2} (¹広島大学, ²東京大学)
Muneyuki Matsuo^{1,2} (¹*Hiroshima University*, ²*The University of Tokyo*)
- 2SEP-5 アクティブマター研究としての単細胞の重力生物学
Gravitational biology of unicellular organisms as active matter research
○鹿毛 あずさ (室蘭工業大学)
Azusa Kage (*Muroran Institute of Technology*)
- 2SEP-6 磁場による遊泳バクテリア集団の秩序形成制御
Magnetically controlled self-organization of swimming bacteria
Kazusa Beppu¹, Joakim Stenhammar², Jaakko V. I. Timonen³ (¹*Dept. of Chem. Eng., Kyoto Univ.*, ²*Div. of Phys. Chem., Lund Univ.*, ³*Dept. of Appl. Phys., Aalto Univ. Sch. of Sci.*)
- 2SEP-7 走化性を示さない細胞性粘菌にみられる集団運動
Self-organized collective dynamics in *Dictyostelium* cells lacking chemotaxis
○早川 雅之^{1,2}, Bhattacharjee Biplab², 桑山 秀一³, 柴田 達夫² (¹京都工芸繊維大学・機械工学系, ²理研・生命機能科学研究センター, ³筑波大学・生命環境系)
Masayuki Hayakawa^{1,2}, Biplab Bhattacharjee², Hidekazu Kuwayama³, Tatsuo Shibata² (¹*Dept. of Mech. Eng., Kyoto Institute of Technology*, ²*RIKEN BDR*, ³*Life Environ. Sci., Univ. Tsukuba*)

- 2SFP スーパーコンピュータ「富岳」による創薬と医療の促進
Advancing drug discovery and healthcare through supercomputer Fugaku
共催 「富岳」成果創出加速プログラム 「「富岳」で目指すシミュレーション・AI 駆動型次世代医療・創薬」
オーガナイザー：荒木 望嗣 (京都大学), 寺山 慧 (横浜市立大学)
Organizers: Mitsugu Araki (Kyoto Univ.), Kei Terayama (Yokohama City Univ.)

16:15~18:45

F 会場 (会議室 202) / Room F (Meeting Room 202)

Drug discovery and medical technologies are being innovated by development of high performance computing (HPC). Large-scale molecular simulations performed on supercomputer Fugaku enable atomic-level observation of protein recognition processes of small-molecule ligands, peptides, antigens, and proteins, providing deeper insight into understanding pathogenesis mechanisms of many unexplained diseases and exploring drugs to control them. In this symposium, we will discuss about the forefront of next-generation molecular simulation and artificial intelligence (AI) techniques for drug discovery and medical treatment.

はじめに
Opening Remarks

- 2SFP-1 大規模 MD シミュレーションによる DHFR 阻害剤耐性メカニズムの微視的解析
Molecular Dynamics Simulation Unveils Multiple-Site Binding of Inhibitors with Reduced Activity on the Surface of Dihydrofolate Reductase
○荒木 望嗣, 奥野 恭史 (京大・院医)
Mitsugu Araki, Yasushi Okuno (*Grad. Sch. Med., Kyoto Univ.*)
- 2SFP-2 富岳を用いた大規模レプリカ交換 MD シミュレーションによる, ペプチド認識に関与するプロテインキナーゼの構造ダイナミクスの解明
Massive Replica-Exchange MD Simulations on Fugaku Reveal Conformational Features of Protein Kinases Relevant to Peptide Recognition
○信夫 愛 (大阪大学)
Ai Shinobu (*Osaka University*)
- 2SFP-3 In Silico Design of Inhibitors Targeting SARS-CoV-2 Non-Structural Proteins
Duy Tran, Akio Kitao (*School of Life Science and Technology, Institute of Science Tokyo*)
- 2SFP-4 スパコンによるマルチスケール解析でストレッチアクティベーションが心拍動と昆虫の羽ばたきになぜ必要かを解明する
Supercomputer-based multiscale analysis reveals why stretch activation is necessary for beating the heart and insects' wings
○鷺尾 巧^{1,2}, 久田 俊明¹ (¹UT-Heart 研究所, ² 東京大学)
Takumi Washio^{1,2}, Toshiaki Hisada¹ (¹UT-Heart Inc., ²University of Tokyo)
- 2SFP-5 結合自由エネルギー計算に基づくキナーゼ阻害剤の心筋イオンチャネル阻害活性の予測
Prediction of cardiac ion channel inhibitory activities of kinase inhibitors based on binding free energy calculation
○根上 樹, 寺田 透 (東大・院農)
Tatsuki Negami, Tohru Terada (*Grad. Sch. Agri. and Life Sci., Univ. Tokyo*)
- 2SFP-6 Enhancing Antibody Engineering with Automated Molecular Interaction Descriptors and Structure Modeling
Shuntaro Chiba¹, Tsutomu Yamane¹, Yasushi Okuno^{1,2}, Mitsunori Ikeguchi^{1,3}, Masateru Ohta¹ (¹R-CCS, *RIKEN*, ²Grad. Sch. Med., *Kyoto Univ.*, ³Grad. Sch. Med. Life Sci., *YCU*)
- 2SFP-7 分子生成 AI とシミュレーションの融合による創薬分子設計
Integrating Molecular Generative AI and Simulation for Drug Discovery
○寺山 慧 (横浜市大・院生命医科学)
Kei Terayama (*Grad.Sch.Med.Life.Sci, Yokohama City Univ.*)

おわりに
Closing Remarks

2SGP あらゆる地球環境で光合成を可能とする超分子構造制御
Supramolecular Complexes and Their Regulations to Enable Photosynthesis All Around the Globe

共催 学術変革領域研究 (A) 「光合成ユニバシティ」

オーガナイザー：斉藤 圭亮 (東京大学), 白井 剛 (長浜バイオ大学)

Organizers: Keisuke Saito (The Univ. of Tokyo), Tsuyoshi Shirai (Nagahama Inst. of Bio-Sci. Tech.)

16:15~18:45

G 会場 (会議室 203) / Room G (Meeting Room 203)

Photosynthetic organisms convert water and carbon dioxide into organic compounds using solar energy. They have adapted to diverse environments, sustaining life on Earth. The structure and function of the photosynthetic apparatus dynamically respond to environmental changes. The research project Photosynthetic Ubiquity, supported by a Grant-in-Aid for Transformative Research Areas (A) from JSPS, explores how supramolecular complexes regulate physiological functions based on spatiotemporal structural information. In this symposium, project members from structural biology, plant physiology, biochemistry, and bioinformatics will discuss molecular mechanisms underlying the adaptation of photosynthetic supramolecular complexes to various environments.

はじめに

Opening Remarks

2SGP-1 暗所従属栄養条件でのシアノバクテリアの微小進化

Microevolution of cyanobacteria in the dark heterotrophic conditions

○藤田 祐一 (名古屋大・院生命農)

Yuichi Fujita (*Grad. Sch. Bioagricultural Sci., Nagoya Univ.*)

2SGP-2 緑色硫黄細菌で見つかった嫌気的な非光化学的消光：その反応機構と生理的意義

Anaerobic non-photochemical quenching of photosynthetic green sulfur bacteria: Its reaction mechanism and physiological significance

○浅井 智広 (中央大・理工)

Chihiro Azai (*Fac. Sci. & Eng., Chuo Univ.*)

2SGP-3 時間分解蛍光分光法による光合成色素-タンパク質複合体の機能解明

Functions of photosynthetic pigment-protein complexes, revealed by time-resolved fluorescence spectroscopy

○秋本 誠志 (神戸大・院理)

Seiji Akimoto (*Grad. Sch. Sci., Kobe Univ.*)

2SGP-4 光合成タンパク質の分子構造と理論構造をつなぐ磁気構造

Linkage of the molecular and theoretical structures of photosynthetic proteins using magnetic spin configurations

○三野 広幸 (名古屋大学・院理)

Hiroyuki Mino (*Grad. Sch. Sci., Nagoya Univ.*)

2SGP-5 光捕集複合体の構造に基づいた海洋性大型緑藻のカルボニルカロテノイドによる緑色光吸収の分子メカニズム

Mechanism of green light absorption by carbonyl carotenoids of marine macroalgae based on the structure of light-harvesting complexes

○藤井 律子^{1,2} (¹大阪公立大学人工光合成研究センター, ²大阪公立大学理学研究科化学専攻)

Ritsuko Fujii^{1,2} (¹Research Center for Artificial Photosynthesis, Osaka Metropolitan University,

²Department of Chemistry, Graduate School of Science, Osaka Metropolitan University)

- 2SGP-6 光合成アンテナのデザインを目指して：in vitro 再構成光合成アンテナの構造解析
Toward the design of photosynthetic antennas: structural determination of in vitro reconstituted light-harvesting complex
○関 莊一郎¹, 川本 晃大^{1,2}, 宮田 知子^{3,4}, 難波 啓一^{3,4}, 藤井 律子⁵, 栗栖 源嗣^{1,2,4} (¹ 阪大・蛋白質研, ² 阪大・OTRI, ³ 阪大・生命機能, ⁴ 阪大・日本電子 YOKOGUSHI 協働研, ⁵ 阪公大・人工光合成研究センター)
Soichiro Seki¹, Akihiro Kawamoto^{1,2}, Tomoko Miyata^{3,4}, Keiichi Namba^{3,4}, Ritsuko Fujii⁵, Genji Kurisu^{1,2,4} (¹IPR, Osaka Univ., ²OTRI, Osaka Univ., ³Grad. Sch. Frontier Biosci., Osaka Univ., ⁴JEOL YOKOGUSHI Res. Alliance Labs., Osaka Univ., ⁵ReCAP, Osaka Metropol. Univ.)
- 2SGP-7 光センサータンパク質 RcaE における「水素結合のアクセプター」となるリシン
Deprotonated Lysine Serving as a “H-bond acceptor” in the Photoreceptor Protein RcaE
○三島 正規 (東京薬科大・薬学)
Masaki Misima (*Sch. Pharm., Tokyo Univ. Pharm. and Life Sci.*)
- 2SGP-8 AlphaFold と MD シミュレーションを活用したオートファジー駆動機構の解明
Elucidating the mechanism of autophagy utilizing AlphaFold prediction and MD simulations
○野田 展生^{1,2} (¹ 北大・遺制研, ² 微化研)
Nobuo N. Noda^{1,2} (¹IGM, Hokkaido Univ., ²Inst. Microbial Chem.)
- おわりに
Closing Remarks

2SHP メゾ複雑体の機能解明に向けた計算科学と実験科学の統合的アプローチ
Towards the Elucidation of Structure of Meso-entangled Bodies through the Integration of Computational and Experimental Approaches

共催 学術変革領域研究 (A) 「クロススケール新生物学」

オーガナイザー：西田 紀貴 (千葉大学), 笠原 健人 (大阪大学)

Organizers: Noritaka Nishida (Chiba Univ.), Kento Kasahara (The Univ. of Osaka)

16:15~18:45

H 会場 (会議室 204) / Room H (Meeting Room 204)

In cells, specific proteins form spatiotemporally regulated complexes, which we refer to as meso-entangled bodies, playing a vital role in maintaining normal cellular functions. To elucidate the structures of these protein complexes, cutting-edge experimental techniques such as cryo-EM, NMR, and X-ray crystallography, along with computational approaches like molecular dynamics simulations and AI-driven structure prediction, have made significant contributions. This symposium will present research that integrates these experimental and computational methods to deepen our understanding of the structural basis and biological functions of meso-entangled bodies.

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- 2SHP-1 FUS の液滴形成・成熟過程の in-cell NMR 解析
Structural insights into liquid-liquid phase separation (LLPS) mechanism of FUS using in-cell NMR
○西田 紀貴 (千葉大・院薬)
Noritaka Nishida (*Grad Sch Pharm Sci, Chiba Univ*)

- 2SHP-2 統合的時分割構造解析で捉えるシャペロンのフォールディング制御における速度論的特性
Kinetic Insights into Chaperone-Mediated Protein Folding from Integrative, Dynamic Structural Biology
○熊代 宗弘¹, 久米田 博之², 齋尾 智英¹ (¹徳大・酵素研, ²北大・先端生命)
Munehiro Kumashiro¹, Hiroyuki Kumeta², Tomohide Saio¹ (¹*Inst. Adv. Med. Sci., Tokushima Univ.*,
²*Fac. Adv. Life Sci., Hokkaido Univ.*)
- 2SHP-3 Modulation of Structure and Dynamics in Biomolecular Condensates Revealed by Large-Scale Molecular Dynamics Simulations
Cheng Tan, Yuji Sugita (*RIKEN Center for Computational Science*)
- 2SHP-4 PROTAC-induced Protein Structural Dynamics in Targeted Protein Degradation
Chia-en Chang, Kingsley Wu, Ta I David Tang (*University of California, Riverside*)
- 2SHP-5 Elucidation of the regulation of the Rac1/Cdc42 guanine nucleotide exchange factor DOCK6
Mutsuko Kukimoto-Niino (*RIKEN, Yokohama*)
- 2SHP-6 カーゴ受容体 ERGIC-53 によるカーゴ輸送のクライオ電顕構造解析
Cryo-EM analysis of cargo transport and release by a cargo receptor ERGIC-53
○渡部 聡, 本城 恵美, 稲葉 謙次 (九大・生医研)
Satoshi Watanabe, Emi Honjo, Kenji Inaba (*MIB, Kyushu Univ*)
- 2SHP-7 高速 AFM と cryo-EM による, CAMSAP2 によって誘導される微小管およびアスター構造形成過程の直接観察
Direct observation of CAMSAP2-induced microtubule and aster formation processes using high-speed AFM and cryo-EM
Tsuyoshi Imasaki¹, Ayhan Yurtsever², Ryota Kitano¹, Kien Xuan Ngo², Takaaki Kato¹, Hanjin Liu¹, Hideki Shigematsu³, Takeshi Fukuma², Ryo Nitta¹ (¹*Kobe University Graduate School of Medicine*,
²*WPI-NanoLSI*, ³*JASRI*)

おわりに

Closing Remarks

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- 2SIP 複雑な細胞機能を解き明かす：メカニズム解明と技術革新
Deciphering complex cellular functions: Mechanistic insights and technological innovations
オーガナイザー：出口 真次 (大阪大学), 木戸秋 悟 (九州大学)
Organizers: Shinji Deguchi (The Univ. of Osaka), Satoru Kidoaki (Kyushu Univ.)

16:15～18:45

I 会場 (会議室 205) / Room I (Meeting Room 205)

Cells exhibit a variety of complex functions that are vital for life, yet deciphering the mechanisms driving these processes remains a significant scientific challenge. This symposium will focus on recent progress in exploring cellular mechanisms, highlighting the connections between molecular interactions and cellular functions. The discussions will also focus on innovative methods, including advanced imaging and computational tools, that provide new perspectives on cell biology. By presenting these findings, the symposium aims to enhance our understanding of cellular processes and inspire further developments that integrate biological research with technological advancements.

はじめに
Opening Remarks

- 2SIP-1 ミスセンス変異モータータンパク質の機能評価に向けた力計測アプローチ
Functional Assessment of Missense Mutations in Motor Proteins via Force Measurements
○林 久美子 (東大・物性研)
Kumiko Hayashi (*ISSP, Univ. Tokyo*)
- 2SIP-2 Mechanisms of intracellular force transmission revealed by coiled-coil mechano-sensors
Takumi Saito (*Grad. Sch. of Engineering Science, The University of Osaka*)
- 2SIP-3 Alternative Force Transmission Mechanisms at Adherens Junctions with Potential Roles in Cancer Progression
Cristina Bertocchi^{1,2} (¹*Pontificia Universidad Católica de Chile*, ²*The University of Osaka*)
- 2SIP-4 A molecular basis for neuronal migration in confined spaces
Naotaka Nakazawa (*Kindai University*)
- 2SIP-5 突起形成による力不均衡がもたらすグリオーマの移動極性
Migratory polarity emerges from protrusion-mediated force imbalance in glioma cells
○作村 諭一^{1,2}, 田川 晴奈², 兼松 大介³, 勝間 亜沙子^{2,3}, 稲垣 直之², 金村 米博³ (¹ 奈良先端大・DSC, ² 奈良先端大・先端科学技術, ³ 大阪医療センター)
Yuichi Sakumura^{1,2}, Haruna Tagawa², Daisuke Kanematsu³, Asako Katsuma^{2,3}, Naoyuki Inagaki², Yonchiro Kanemura³ (¹*Data Science Center, Nara Inst. of Sci. and Tech.*, ²*Grad. Sch. Sci. and Tech., Nara Inst. of Sci. and Tech.*, ³*NHO Osaka National Hospital*)
- 2SIP-6 運動する細胞の応力ゆらぎ操作と計測
Dynamic Control and Analysis of Intracellular Stress Fluctuations during Cell Migration
○木戸秋 悟 (九大・先端研)
Satoru Kidoaki (*IMCE, Kyushu Univ.*)
- 2SIP-7 細胞内の中間スケールにおけるゆらぎ駆動力の定量解析
Probing mesoscale physical forces in cells
○出口 真次^{1,2}, 上田 唯花¹ (¹ 阪大・基礎工, ² 阪大・国際医工情報センター)
Shinji Deguchi^{1,2}, Yuika Ueda¹ (¹*Grad Sch Eng Sci, Univ Osaka*, ²*MEI-Center, Univ Osaka*)
- おわりに
Closing Remarks

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- 2SJP 日豪台三国間シンポジウム: 量子生命科学による最先端生体計測の新展開 (国際量子科学技術年記念シンポジウム)
Japan-Australia-Taiwan Trilateral Symposium: New Frontiers in Biological Measurement Enabled by Quantum Life Science (International Quantum Science and Technology Year Commemorative Symposium)
オーガナイザー: 石綿 整 (QST), David Simpson (The Univ. of Melbourne)
Organizers: Hitoshi Ishiwata (QST), David Simpson (The Univ. of Melbourne)

16:15~18:45

J 会場 (会議室 206) / Room J (Meeting Room 206)

Quantum life science is an emerging interdisciplinary field at the intersection of quantum physics and biology, focused on exploring fundamental life processes at the molecular level. By applying principles of quantum measurement and quantum bioengineering, this field aims to develop advanced techniques for quantifying intracellular nanoscale environments, including temperature, pH, diffusion, and redox activities. This innovative approach has the potential to transform our understanding of biological systems and drive significant advancements in genetics, molecular biology, medicine, and bioengineering.

はじめに

Opening Remarks

- 2SJP-1 Sub-micron imaging of neuronal action potentials by defect charge-state conversion in diamond
Daniel McCloskey^{1,2}, Kathryn Munro³, Nikolai Dontschuk¹, David Simpson^{1,2} (¹*Sch. of Phys., Univ. Melbourne*, ²*ARC CoE in Quantum Biotechnology*, ³*Dept. Anatomy & Physiology, Univ. Melbourne*)
- 2SJP-2 Computational 4D imaging for understanding pain-processing neural circuit
Takuma Sugi (*Grad. Sch. Integ. Sci. for Life, Hiroshima Univ.*)
- 2SJP-3 Quantum Sensing in Healthcare: Spin-Enhanced Immunoassays with Fluorescent Nanodiamonds
Huan-Cheng Chang (*Academia Sinica, Taiwan*)
- 2SJP-4 *Diamond quantum sensors for iron load quantification of ferritin proteins*
A. Simpson David (*School of Physics, University of Melbourne*)
- 2SJP-5 Interferometric Scattering Microscopy: Where Light Scatters and Life Reveals
Chia-Lung Hsieh (*Institute of Atomic and Molecular Sciences (IAMS), Academia Sinica*)
- 2SJP-6 ナノ量子センサが切り拓く細胞機能の新次元定量技術
Next-Generation Quantification of Cellular Functions Enabled by Nanoscale Quantum Sensors
○石綿 整^{1,2} (¹量子科学技術研究開発機構, 量子生命科学研究所, ²千葉大 量子生命構造創薬センター)
Hitoshi Ishiwata^{1,2} (¹*iQLS, QST*, ²*Chiba Univ. cQUEST*)
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2SKP 人工細胞そして生命－非生命の境界

Artificial cell and boundary between living and non-living matters

共催 JST CREST 「ゲノム合成」

オーガナイザー：野地 博行（東京大学），市橋 伯一（東京大学）

Organizers: Hiroyuki Noji (The Univ. of Tokyo), Norikazu Ichihashi (The Univ. of Tokyo)

16:15～18:45

K会場（天平ホール）／Room K（Tempyo Hall）

In recent years, the field of bottom-up construction of artificial cells as autonomously functioning molecular systems has advanced rapidly, bringing the realization of "living molecular systems" closer to reality. However, the boundary conditions that discriminate "living matters (life)" from "non-living matters (non-life)" remain unclear. This symposium aims to explore the factors that define the boundary between living- and non-living matters by integrating insights from cutting-edge artificial cell research with perspectives from researchers studying this boundary from different viewpoints.

はじめに
Opening Remarks

- 2SKP-1 小さいゲノムを持つ微生物から見る生命と非生命の境界
The Boundary Between Life and Non-Life Seen in Microorganisms with Small Genomes
○鈴木 志野 (理研・開拓研究所)
Shino Suzuki (*PRI, RIKEN*)
- 2SKP-2 ヌクレオサイトウイルス門の巨大ウイルスによる感染細胞に対する思いもよらぬ影響について
Giant viruses of the Phylum Nucleocytoviricota induce unexpected behaviors in infected host cells
○武村 政春, ベジワン (東京理科大・院理)
Masaharu Takemura, Jiwan Bae (*Grad. Sch. Sci., Tokyo Univ. Sci.*)
- 2SKP-3 Artificial cells with dissipative structures
Sakura Takada, Kei Fujiwara (*Dept. of Biosci. and Info., Keio Univ.*)
- 2SKP-4 LLPS ドロプレットを用いた自律成長型人工細胞モデル
Artificial protocell models based on LLPS droplet
○野地 博行, 皆川 慶嘉 (東京大学)
Hiroyuki Noji, Yoshihiro Minagawa (*University of Tokyo*)
- 2SKP-5 生物みたいに自己再生産できる人工システムを作りたい：現状と展望
Toward a self-regenerative in vitro central dogma; progress and future
○市橋 伯一 (東大総合文化)
Norikazu Ichihashi (*Grad. Sch. Arts Sci. Univ. Tokyo*)
- 2SKP-6 動的な人工細胞のための核酸ベースの知的な凝集体
Nucleic Acid-based Smart Condensates for Dynamic Artificial Cells
○瀧ノ上 正浩^{1,2,3} (¹東京科学大・情報理工, ²東京科学大・生命理工, ³東京科学大・自律システム材料科学研究センター)
Masahiro Takinoue^{1,2,3} (¹*Sch. Computing, Science Tokyo*, ²*Sch. Life Sci. Tech., Science Tokyo*, ³*ASMat, IIR, Science Tokyo*)
- 2SKP-7 細胞死の理論と「安定に機能する生化学システム」の珍しさ
A theory of cell death and the rarity of stably functioning biochemical systems
○姫岡 優介 (東京大学大学院理学系研究科生物普遍性研究機構)
Yusuke Himeoka (*Universal Biology Institute, The University of Tokyo*)
- おわりに
Closing Remarks

3日目 (9月26日 (金)) / Day 3 (Sep. 26 Fri.)

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- 3SAA ノルウェー・日本の二国間シンポジウム
Norway-Japan Bi-lateral Symposium
オーガナイザー：古池 美彦 (分子科学研究所)
Organizers: Yoshihiko Furuike (*IMS*)

09:00~11:30

A会場 (会議室 101+102) / Room A (Meeting Room 101+102)

What are the significances of sequence diversity and conformational polymorphism of proteins for biological phenomena? We will introduce cutting-edge research results from Norway and Japan to promote research exchange and future collaboration between the two countries.

- 3SAA-1 ストレスファイバ直線収縮が引き起こす魚類表皮ケラトサイトの細胞体回転
Cell body rotation by sequential linear contraction of stress fibers in a fish epidermal keratocyte
○沖村 千夏 (山口大・理)
Chika Okimura (*Dept. Biol., Yamaguchi Univ.*)
- 3SAA-2 Nanoscale motion tracing of spermatozoa
Jean-Claude Tinguely¹, Sunil Bhatt², Ankit Butola¹, Mona Nystadq^{3,4}, Dalip Singh Mehta²,
Krishna Agarwal¹ (¹*Institute of Physics and Technology, UiT The Arctic University of Norway, Tromsø, Norway*, ²*Department of Physics, Indian Institute of Technology Delhi, New Delhi, India*, ³*Department of Clinical Medicine, UiT The Arctic University of Norway, Tromsø, Norway*, ⁴*Department of Obstetrics and Gynecology, University Hospital of North Norway, Tromsø, Norway*)
- 3SAA-3 Statistical Physics Meets AlphaFold: Universal Folding–Function Scaling and Evolutionary Trends
Qianyuan Tang¹, Zecheng Zhang¹, Weitong Ren², Jun Wang³ (¹*Hong Kong Baptist University, HK SAR, China*, ²*Wenzhou Institute, Univ. Chin. Acad. Sci., China*, ³*Nanjing Univ, China*)
- 3SAA-4 Fluorescence and label-free microscopy to study keratocytes from Atlantic salmon
Deanna Lynn Wolfson, Dhivya B. Thiagarajan, Bilal M. Afzal, Marie Mikkelsen, Azeem Ahmad, Balpreet S. Ahluwalia, Roy A. Dalmo (*UiT The Arctic University of Norway*)
- 3SAA-5 古代地球における時計タンパク質 KaiC の構造的進化
Structural Evolution of Clock Protein KaiC on Ancient Earth
○古池 美彦 (分子科学研究所)
Yoshihiko Furuike (*Institute for Molecular Science*)
- 3SAA-6 NANOSPACER: Nanofluidics for single molecule metrology of extracellular vesicles, biomacromolecules and amyloids in solution
Oliver Vanderpoorten (*UiT The Arctic University of Norway*)
- おわりに
Closing Remarks
-

- 3SBA 生物発光における合成・定量計測・理論計算の融合研究
Bioluminescence Interdisciplinary Collaboration between Experimental and Theoretical Approach
オーガナイザー：樋山 みやび (群馬大学), 山本 典史 (千葉工業大学)
Organizers: Miyabi Hiyama (Gunma Univ.), Norifumi Yamamoto (Chiba Inst. of Tech.)

09:00~11:30

B 会場 (会議室 103+104) / Room B (Meeting Room 103+104)

Bioluminescence, the emission by a substrate and an enzyme, is extensively utilised for investigation of temporal changes in cell proliferation, observation of drug and cancer cell metastasis pathways, detection of microbial pollution in food hygiene testing, and so on. Because of their usefulness, protein mutants and substrate analogues for different bioluminescence colours have been developed as emission probes. However, the emission mechanism, which can explain the colour change and high quantum yield of wild substrates, remains unknown. To understand the bioluminescence mechanisms, the interdisciplinary collaboration of organic synthesis, quantitative measurements, quantum chemistry calculations, molecular dynamics simulations, and molecular biology is indispensable. In this symposium, we exchange information for the newest results for interdisciplinary collaboration between experimental and theoretical studies of bioluminescence.

はじめに

Opening Remarks

- 3SBA-1 生体内深部を観察可能な近赤外 in vivo 光イメージング材料
Innovation of NIR luciferin analogues using firefly bioluminescence for in vivo imaging
Nobuo Kitada^{1,2,3}, Genta Kamiya¹, Jumpei Hatakeyama¹, Ryohei Moriya⁴, Masahiro Kiyama⁵,
Satoshi Iwano⁵, Takashi Hirano¹, Shojiro Maki^{1,2,3} (¹*Grad. Sch. Info. Eng., UEC*, ²*Env. Saf. San. Mgmt. Ctr., UEC*, ³*CNBE, UEC*, ⁴*Fac. Sci., Kitasato Univ.*, ⁵*Tenure-Track Prom. Off., Univ. Miyazaki*)
- 3SBA-2 ホタル生物発光基質類似体の理論的研究
Theoretical study for firefly bioluminescence substrate analogs
○樋山 みやび (群馬大学)
Miyabi Hiyama (*Gunma University*)
- 3SBA-3 発光タンパク質イクオリンの時分割シリアルフェムト秒結晶構造解析
Time-resolved serial femtosecond crystallography of the bioluminescent protein Aequorin
○森口 舞子, 中津 亨 (和医大・薬)
Maiko Moriguchi, Toru Nakatsu (*Fac. Pharm. Sci., Wakayama Med. Univ.*)
- 3SBA-4 ハイブリッドQM/MM自由エネルギー法によるイクオリンの生物発光過程についての理論的研究
Theoretical study on the bioluminescent process of Aequorin by hybrid QM/MM free energy method
○安東 智大¹, 船橋 俊也², 中津 亨³, 林 重彦¹ (¹京大院理, ²京大院薬, ³和医大薬)
Tomohiro Ando¹, Toshiya Funahashi², Toru Nakatsu³, Shigehiko Hayashi¹ (¹*Grad. Sch. of Sci. Kyoto Univ.*, ²*Grad. Sch. of Pharm. Sci. Kyoto Univ.*, ³*Sch. of Pharm. Sci. Wakayama Med. Univ.*)
- 3SBA-5 古代のルシフェラーゼを復元する
Resurrecting the ancient luciferase
○大場 裕一 (中部大・応用生物)
Yuichi Oba (*Dept. Env. Biol., Chubu Univ.*)
- 3SBA-6 分子シミュレーションで探るホタルの太古の光
Molecular Simulations of the Ancient Glow of Fireflies
○山本 典史 (千葉工業大学)
Norifumi Yamamoto (*Chiba Tech*)

3SBA-7 ホシホウネンエソ発光器に局在する紫色素タンパク質の生化学的解析
Biochemical analysis of the purple pigment protein localized in the light organ of the hatchetfish
○水野 雅玖¹, 矢野 大地², 今井 日奈乃¹, バイティオ ジョゼ^{1,3}, 磯貝 泰弘⁴, 白井 剛⁵,
大場 裕一¹ (¹中部大・応用生物, ²和歌山高専・生物応用化学, ³サンパウロ大学, ⁴富山県立大・
工学・医薬品工学, ⁵長浜バイオ大・バイオサイエンス)
Gaku Mizuno¹, Daichi Yano², Hinano Imai¹, Jose Paitio^{1,3}, Yasuhiro Isogai⁴, Tsuyoshi Shirai⁵,
Yuichi Oba¹ (¹*Col. Biosci. Biotech., Chubu Univ.*, ²*Dep. Apl. Chem. Biochem., Nat. Ins. Tech. Wakayama*
Col., ³*Univ. Sao Paulo*, ⁴*Dep. Pharm. Eng., Toyama Pref. Univ.*, ⁵*Fac. Biosci., Nagahama Ins. Biosci.*
Tech.)

3SBA-8 全電子第一原理 GW Γ 法の開発
Development of all-electron first-principles GW Γ method
○野口 良史 (静岡大院・工)
Yoshifumi Noguchi (*Grad. Sch. Eng., Shizuoka Univ.*)

3SBA-9 半導体レーザーを用いたポータブルピコ秒パルス光源と生物物理への応用
Semiconductor laser based portable picosecond pulse light source for biophysics applications
○小林 真隆¹, 柴田 桂成^{1,2}, 中前 秀一¹, 金 昌秀^{1,3}, 伊藤 隆³, 樋山 みやび^{4,5}, 秋山 英文^{1,3} (¹東大
物性研, ²筑波大数理物質系, ³㈱ LDseed, ⁴群馬大院理工, ⁵群馬大食健康セ)
Masataka Kobayashi¹, Keisei Shibata^{1,2}, Hidekazu Nakamae¹, Changsu Kim^{1,3}, Takashi Ito³,
Miyabi Hiyama^{4,5}, Hidefumi Akiyama^{1,3} (¹*ISSP, Univ. of Tokyo*, ²*Grad. Sch. Pure and Appl. Sci, Univ. of*
Tsukuba, ³*LDseed Co., Ltd.*, ⁴*Grad. Sch. Sci. Tech., Gunma Univ.*, ⁵*Gunma Univ. Center for Food Science*
and Wellness)

おわりに
Closing Remarks

3SEA NMR の方法論開発と複雑な生体分子系への応用の新展開
Advances in NMR Methodologies and Applications to Complex Biological Systems/Landscapes
オーガナイザー：石井 佳誉 (東京科学大学), 松木 陽 (大阪大学)
Organizers: Yoshitaka Ishii (Science Tokyo), Yoh Matsuki (Univ. Osaka)

09:00~11:30

E 会場 (会議室 201) / Room E (Meeting Room 201)

This symposium highlights cutting-edge development of NMR technology, including ultra-high-field NMR (e.g., with ¹H frequencies exceeding 1 GHz) and hyperpolarization techniques, which enable the study of challenging biological targets, such as amyloid aggregates, glycolipids, high-molecular-weight proteins, and membrane-bound proteins, for structural biology. The program also highlights modern NMR methods/applications to characterize heterogeneous/complex proteins in motion and biological systems under conditions mimicking cells and tissues. Additionally, the symposium explores the integration of NMR with other complementary methods like cryo-electron microscopy (cryoEM) for structural/functional analyses.

はじめに
Opening Remarks

3SEA-1 Innovations in Sensitivity-Enhanced High-Dimensional Protein Solid-state NMR and
Applications to Amyloid Proteins
Yoshitaka Ishii (*Institute of Science Tokyo*)

- 3SEA-2 溶解 DNP-NMR 法を用いた蛋白質の相互作用, 構造動態解析法の開発
Development of protein interaction and structural dynamics studies using dissolved DNP and isotope-aided NMR
赤木 謙一, 池之上 達哉, ○宮ノ入 洋平 (阪大・蛋白研)
Ken-ichi Akagi, Tatsuya Ikenoue, **Yohei Miyanoiri** (*Inst. Prot. Res., Univ. Osaka*)
- 3SEA-3 固体 NMR を用いた微生物型ロドプシンの残基特異的な知見
Residue-specific insights on microbial rhodopsins using solid-state NMR
○川村 出 (横浜国大・院理工)
Izuru Kawamura (*Grad. Sch. Eng. Sci, Yokohama Natl. Univ.*)
- 3SEA-4 分子シャペロンを対象とした構造・キネティクス解析
Structural and kinetic insights into molecular chaperones
○齋尾 智英 (徳島大・先端酵素)
Tomohide Saio (*AMS, Tokushima Univ.*)
- 3SEA-5 大腸菌における内在性糖脂質 MPLase の機能的役割
Functional roles of the endogenous glycolipid MPLase in *Escherichia coli*
○野村 薫 (サントリー生科財団)
Kaoru Nomura (*Suntory Foundation for Life Sciences*)
- 3SEA-6 Methods and Instruments for High-Field MAS DNP toward Intracellular Structural Biology
Yoh Matsuki (*Inst. Prot. Res., Univ. Osaka*)
- おわりに
Closing Remarks

- 3SFA 学際研究で迫る生物物理的視点からの生命の起源研究
Interdisciplinary investigations into the biophysics of the origins of life
オーガナイザー: Tony Z. Jia (広島大学), 車 兪澈 (海洋研究開発機構)
Organizers: Tony Z. Jia (Hiroshima Univ.), Yutetsu Kuruma (JAMSTEC)

09:00~11:30

F 会場 (会議室 202) / Room F (Meeting Room 202)

The origins of life is an interdisciplinary field requiring collaboration and input from many disparate disciplines, including biophysics, chemistry, geology, and more. Each of these fields approaches the question of the origin of life with a different mindset, using different techniques and analyses. Only by combining ideas and research from multiple fields can we begin to approach answer such difficult questions. In this symposium, we highlight new research which combines biophysics with at least one other discipline to answer significant questions related to the origins and evolution of life both on Earth and elsewhere.

はじめに
Opening Remarks

- 3SFA-1 Enzymatic Condensates as self-regulating systems for metabolic efficiency
Paola Laurino^{1,2} (¹Okinawa Inst. of Sci. & Tech. Graduate Univ., ²Institute for Protein Research, Osaka Univ)

- 3SFA-2 生命における代謝経路選択と熱力学的制約
Thermodynamic constraints and the choice of metabolic pathways in life
○瀬戸 蘭美¹, 佐々木 里瑳¹, 大岡 英史², 中村 龍平^{2,3} (¹奈良女子大学, ²理化学研究所生体機能触媒研究チーム, ³東京科学大学地球生命研究所)
Mayumi Seto¹, Risa Sasaki¹, Hideshi Ooka², Ryuhei Nakamura^{2,3} (¹Nara Women's University, ²Biofunctional Catalyst Research Team, RIKEN Center for Sustainable Resource Scienc, ³Earth- Life Science Institute (ELSI), Institute of Science Tokyo)
- 3SFA-3 深海における人工細胞の生存可能性について
The Potential of Artificial Cells Functioning under *In Situ* Deep-Sea Conditions
○車 兪澈, 野牧 秀隆, 磯部 紀之, 松岡 大佑, 嶋根 康弘 (海洋研究開発機構)
Yutetsu Kuruma, Hidetaka Nomaki, Noriyuki Isobe, Daisuke Matsuoka, Yasuhiro Shimane (*Japan Agency for Marine-Earth Science and Technology*)
- 3SFA-4 貨幣分子間のカップリングにおける熱力学的制約
Thermodynamic constraint on the coupling of currency metabolites
○山岸 純平¹, 畠山 哲央² (¹理研・神戸 BDR, ²科学大・ELSI)
Junpei Yamagishi¹, Tetsuhiro S. Hatakeyama² (¹BDR, Riken, ²ELSI, Science Tokyo)
- 3SFA-5 電子が導いた生命の起源と生物最古の枝分かれ
Electrons and the origin of three divisions of life
○延 優 (海洋研究開発機構・超先鋭)
Masaru Konishi Nobu (*JAMSTEC*)
- 3SFA-6 超臨界 CO₂ による脱水反応を介した前生物的な核酸合成
Supercritical CO₂ promotes prebiotic nucleotide synthesis via dehydration condensation
○藤島 皓介¹, 田川 翔大朗², 森野 航平³ (¹東京科学大学 地球生命研究所, ²海洋研究開発機構 超先鋭研究開発プログラム, ³東京科学大学 生命理工学院)
Kosuke Fujishima¹, Shotaro Tagawa², Kohei Morino³ (¹Earth-Life Science Institute, Science Tokyo, ²Institute for Extra-cutting-edge Science and Technology Avant-garde Research Japan Agency for Marine-Earth Science and Technology, ³School of Life Science and Technology, Science Tokyo)

3SGA 計測科学 x 情報科学が切り開く生物学の地平線
Integrating Measurement and Information Science: Unlocking New Frontiers in Biology

共催 JST CREST 「革新的計測解析」

オーガナイザー：小松崎 民樹 (北海道大学)

Organizers: Tamiki Komatsuzaki (Hokkaido Univ.)

09:00~11:30

G 会場 (会議室 203) / Room G (Meeting Room 203)

Cutting-edge research, like AlphaFold, highlights the transformative role of information science in life sciences. The integration of measurement and information science is redefining how we approach data acquisition. Traditionally, efforts have focused on optimizing experimental conditions beforehand or analyzing data post-measurement. However, reinforcement learning now enables real-time optimization during measurements, drastically accelerating processes while maintaining mathematical accuracy. This symposium brings together experts from diverse fields, including biophysics and information science, to explore the forefront of measurement informatics in biology. Join us to discover how this interdisciplinary collaboration is reshaping the future of biological research and innovation.

はじめに
Opening Remarks

- 3SGA-1 計測インフォマティクスの発展と展開 ―情報計測から革新的計測解析へ―
Development and Evolution of Measurement Informatics - From Intelligent Measurement Analysis to Innovative Measurement and Analysis -
○鷲尾 隆 (関西大学ビジネスデータサイエンス学部)
Takashi Washio (*Faculty of Business Data Science, Kansai University*)
- 3SGA-2 血小板生物学 x 人工知能
Intelligent platelet biology
○合田 圭介^{1,2,3,4} (¹ 東京大学大学院理学系研究科化学専攻, ² カリフォルニア大学ロサンゼルス校工学部生体工学科, ³ 武漢大学工業科学研究院, ⁴ 東北大学国際放射光イノベーション・スマート研究センター)
Keisuke Goda^{1,2,3,4} (¹*Department of Chemistry, University of Tokyo*, ²*Department of Bioengineering, University of California, Los Angeles*, ³*Institute of Technological Sciences, Wuhan University*, ⁴*International Center for Synchrotron Radiation Innovation Smart, Tohoku University*)
- 3SGA-3 Theoretical Perspectives on the Hidden Structures in Biological Systems
Ayaka Sakata^{1,2} (¹*Dept. Infor. Sci. Ochanomizu Univ.*, ²*RIKEN AIP*)
- 3SGA-4 2 細胞計測技術を用いた免疫細胞とがん細胞の 1 細胞相互作用解析
Single-cell analysis of interactions between immune cells and cancer cells using dual-cell measurement technology
○山口 哲志 (大阪大学産業科学研究所)
Satoshi Yamaguchi (*SANKEN, Univ. of Osaka*)
- 3SGA-5 電圧マトリックスを用いたナノポア測定によるタンパク質混合物の識別
Voltage-Matrix Nanopore Profiling for the Discrimination of Protein Mixtures
Sotaro Uemura¹, Ryo Akita¹, Lysenko Artem¹, Keith Boroevich¹, Tatsuya Yokota², Daiki Kawai¹, Ryo Iizuka¹, Tatsuhiko Tsunoda¹ (¹*Grad. Sch. Sci., Univ. Tokyo*, ²*Dep. Comp. Sci, Nagoya Inst. Tech*)
- 3SGA-6 多階層マルチオミックスデータの統合理解に向けた挑戦：ラマンスペクトルとトランスクリプトームを用いたケーススタディ
Toward a Cross-Layer Understanding through Biological Multimodal Data: A Case Study Using Raman Spectroscopy and Transcriptomes
○渡邊 朋信^{1,2} (¹ 理化学研究所生命機能科学研究センター, ² 広島大学原爆放射線医科学研究所)
Tomonobu M Watanabe^{1,2} (¹*RIKEN BDR*, ²*RIRBM, Hiroshima University*)
- 3SGA-7 計測介入型 AI が拓く生物学の展開
Unveiling New Frontiers in Biology with Measurement-Intervening AI
○小松崎 民樹 (北大・電子研, 化学反応創成拠点)
Tamiki Komatsuzaki (*RIES, WPI-ICReDD, Hokkaido Univ.*)

3SHA 生命の高次元システムを予測と検証により合理的に理解する
Understanding the high-dimensional biological systems rationally through prediction and verification

共催 JST CREST 「予測数学基盤」

オーガナイザー：望月 敦史（京都大学），今吉 格（京都大学）

Organizers: Atsushi Mochizuki (Kyoto Univ.), Itaru Imayoshi (Kyoto Univ.)

09:00～11:30

H 会場（会議室 204）／Room H（Meeting Room 204）

It is thought that biological phenomena such as cell differentiation, homeostasis or intelligence arise from the dynamics of high-dimensional systems consisting of the interactions of numerous biomolecules. In recent years, there has been rapid development in three areas: 1) measurement technology that can capture the dynamics of multiple variables with sufficient time and spatial resolution, 2) information science and theoretical science that can not only interpret dynamics but also provide predictions and experimental guidelines, and 3) technology for dynamically manipulating biomolecules to provide feedback between measurement and prediction. In this symposium, we will invite researchers who have developed these new technologies and have achieved elucidation of the dynamics of high-dimensional biological systems to give presentations and hold discussions. We hope that this symposium will lead to increased interaction between different methods and open up new avenues for systems biology.

はじめに

Opening Remarks

- 3SHA-1 光遺伝学的手法を用いた神経幹細胞の新規転写制御メカニズムの同定
Uncovering Novel Transcriptional Regulatory Mechanisms of Neural Stem Cells Using Optogenetic Approaches
○今吉 格^{1,2} (¹京大・院生命科学, ²京大・医生研)
Itaru Imayoshi^{1,2} (¹Grad. Sch. Biostudies., Univ. Kyoto, ²LiMe., Univ. Kyoto)
- 3SHA-2 Nano-electrokinetics が隠れた転写動態と単一細胞の確率的挙動を結びつける
Nano-Electrokinetics Links Hidden Transcriptomic Dynamics to Stochastic Single-Cell Behavior
○新宅 博文^{1,2}, 塩見 晃史^{1,2}, 金子 泰洸^{1,2}, 峯岸 美紗^{1,2}, 鳥井 孝太郎^{1,2}, 土田 新² (¹京大・医生研, ²理研・開拓)
Hirofumi Shintaku^{1,2}, Akifumi Shiomi^{1,2}, Taikopaul Kaneko^{1,2}, Misa Minegishi^{1,2}, Kotaro Torii^{1,2}, Arata Tsuchida² (¹LiMe, Kyoto University, ²CPR, RIKEN)
- 3SHA-3 De co de, predict, and control biological systems through single-cell omics and modelling approaches
Kenji Kamimoto^{1,2,3} (¹Research Institute for Microbial Diseases, The University of Osaka, ²Premium Research Institute for Human Metaverse Medicine (WPI-PRIME), The University of Osaka, ³Bioinformatics Center, The University of Osaka)
- 3SHA-4 高速・広視野 Ca²⁺ イメージングが明らかにする大脳皮質の機能的ネットワーク構造
High-speed, Large-FOV Ca²⁺ Imaging Reveals Functional Cortical Network Architecture
○村山 正宜（理化学研究所 脳神経科学研究センター）
Masanori Murayama (RIKEN Center for Brain Science)

3SHA-5 ネットワークトポロジーに由来する生命機能と機能単位
Biological functions and functional modules originated in the topology of chemical reaction networks
○望月 敦史¹, 山内 悠平¹, 杉山 博紀², 後藤 祐平^{3,4}, 青木 一洋^{3,4,5} (¹ 京都大・医生研, ² 東京大・院工学, ³ 京都大・院生命科学, ⁴ 自然科学研究機構・基礎生物科学研究所, ⁵ 自然科学研究機構・生命創成探究センター)
Atsushi Mochizuki¹, Yuhei Yamauchi¹, Hironori Sugiyama², Yuhei Goto^{3,4}, Kazuhiro Aoki^{3,4,5} (¹LiMe, Kyoto Univ., ²Sch. Eng., Univ. Tokyo, ³Grad. Sch. Biostudies, Kyoto Univ., ⁴NIBB, NINS, ⁵ExCELLS, NINS)

おわりに
Closing Remarks

3SIA 人工細胞膜をつくる・つかう分子テクノロジー
Molecular technologies for creating and utilizing artificial cell membranes

オーガナイザー：安原 主馬（奈良先端科学技術大学院大学），森垣 憲一（神戸大学）
Organizers: Kazuma Yasuhara (NAIST), Kenichi Morigaki (Kobe Univ.)

09:00～11:30

I 会場（会議室 205）／Room I（Meeting Room 205）

The cell membrane performs complex functions through the supramolecular assembly of lipids and membrane proteins. Despite significant advances in molecular biology, complete understanding of the intricate design principles remains a challenge. Efforts to construct artificial cell membranes by the hybridization of synthetic and natural molecules provide a reconstructive approach to unravel the functional design principles. This symposium will explore cutting-edge molecular technologies, such as the creation of artificial membranes and membrane protein mimicking molecules, aiming to replicate the complex structures and functions observed in the natural cell membranes.

はじめに
Opening Remarks

3SIA-1 合成両親媒性高分子で膜活性ペプチドを真似る
Mimicking Membrane-Active Peptides with Synthetic Amphiphilic Polymers
○安原 主馬^{1,2,3,4} (¹ 奈良先端大院物質, ² 奈良先端大院デジタルグリーンイノベーションセンター, ³ 奈良先端大院データ駆動型サイエンス創造センター, ⁴ 奈良先端大院メディルクス研究センター)
Kazuma Yasuhara^{1,2,3,4} (¹Div. Mat. Sci., Grad. Sch. Sci. Tech., Nara Inst. Sci. Tech., ²Ctr. Digital Green-innovation, Nara Inst. Sci. Tech., ³Data Sci. Ctr., Nara Inst. Sci. Tech., ⁴Medilux Res. Ctr., Nara Inst. Sci. Tech.)

3SIA-2 ペプチドと脂質がもたらす膜相分離型ハイブリッド細胞膜とその応用
Peptide-Lipid Hybrid Vesicle with Phase-Separated Domains
○上田 一樹^{1,2} (¹ 都立大院 環境応用化学, ² 理研 CSRS)
Motoki Ueda^{1,2} (¹Dept. Appl. Chem., Tokyo Metropolitan Univ., ²RIKEN CSRS)

3SIA-3 次世代分子ロボティクスのための脂質膜通型 DNA デバイス
Lipid Membrane-Translocating DNA Devices for Next-Generation Molecular Robotics
○野村 慎一郎（東北大院工・ロボ）
Shin-ichiro M. Nomura (Dept. Robotics, Grad. Sch. Eng., Tohoku Univ.)

- 3SIA-4 触媒システムの構築に向けた赤血球ゴースト-金属化合物ハイブリッドの設計
Design of red blood cell ghost-metal compound hybrids for construction of catalytic systems
○越山 友美 (立命館大 生命科学)
Tomomi Koshiyama (*Coll. Life Sci., Ritsumeikan Univ.*)
- 3SIA-5 人工膜と蛍光 1 分子観察を用いた、膜分子の機能解析
Combining an artificial membrane and a single-molecule imaging technique to investigate the function of membrane protein
○笠井 倫志 (国立がん研究センター研究所)
Rinshi Kasai (*Natl. Cancer Ctr. Res. Inst.*)
- 3SIA-6 人工生体膜分子およびドメインの光操作
Optical Manipulation of Molecules and Domains in Biological Membranes Models
○谷本 泰士, 森山 俊哉, 増井 恭子, 細川 千絵 (阪公大・院理)
Yasushi Tanimoto, Shunya Moriyama, Kyoko Masui, Chie Hosokawa (*Grad. Sch. Sci., Osaka Metropolitan Univ.*)
- 3SIA-7 ペプチドナノディスクを用いたパターン化人工膜への膜タンパク質導入技術の開発
Reconstitution of membrane proteins in a micro-patterned model membrane using peptide nanodisc
○森垣 憲一^{1,2}, 小松 愛華², 肥塚 雅人², 杭田 美子², 谷本 泰士^{1,4}, 林 文夫³ (¹神戸大・バイオシグナル, ²神戸大・院農学, ³神戸大・院理学, ⁴大阪公立大・院理学)
Kenichi Morigaki^{1,2}, Aika Komatsu², Masato Koezuka², Fuko Kueda², Yasushi Tanimoto^{1,4}, Fumio Hayashi³ (¹Biosignal, Kobe Univ., ²Grad. Sch. Agri. Sci., Kobe Univ., ³Grad. Sch. Sci., Kobe Univ., ⁴Grad. Sch. Sci., Osaka Metropol. Univ.)

おわりに

Closing Remarks

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- 3SJA 時間タンパク質学: 生命現象の時間をタンパク質から理解する
Chronoproteiology: protein-driven understanding of biological time

共催 学術変革領域研究 (A) 「時間タンパク質学」

オーガナイザー: 大出 晃士 (東京大学), 原田 慶恵 (大阪大学)

Organizers: Koji Ode (The Univ. of Tokyo), Yoshie Harada (The Univ. of Osaka)

09:00~11:30

J 会場 (会議室 206) / Room J (Meeting Room 206)

Neuronal firing, circadian clocks, and circa-annual rhythms—life's phenomena span a vast range of time scales. “Chronoproteiology”, launched at 2024 as a KAKENHI Transformative Research Areas, seeks to understand how the biochemical and biophysical properties of specific proteins generate the distinct time information characteristic of each biological process. In this symposium, we will introduce ongoing efforts to elucidate the time scales—from minutes to years—and the protein properties that underlie them.

はじめに
Opening Remarks

- 3SJA-1 開花まで 120 年：タケにおける超長周期タイマーへの挑戦
120 years for flowering: Challenge to the ultra-long timer in bamboo
○村中 智明¹, 高橋 望², 遠藤 求², 久本 洋子³ (¹名古屋大・院生命農学, ²奈良先端大, ³東京大・院農学生命)
Tomoaki Muranaka¹, Nozomu Takahashi², Motomu Endo², Yoko Hisamoto³ (¹*Grad. Sch. Bio. Agri., Naoyga Univ.*, ²*Grad. Sch. Sci. Tech., NAIST*, ³*Grad. Sch. Agri., Univ. of Tokyo*)
- 3SJA-2 緑藻における転写非依存的な概日時計
Transcription-Independent Circadian Rhythms in Green Algae
○松尾 拓哉 (北里大学 理学部 生物科学科 分子生物学講座)
Takuya Matsuo (*Laboratory of Molecular Biology, Department of Biosciences, School of Science, Kitasato University*)
- 3SJA-3 Exploring the molecular origin of self-sustained circadian oscillator through clock protein evolution
Atsushi Mukaiyama (*Dept. of Biosci. and Biotech., Fukui Pref. Univ.*)
- 3SJA-4 シアノバクテリアの試験管内概日リズムに反応液の pH が与える影響
Effect of pH on the cyanobacterial circadian oscillator in vitro
○三輪 (伊藤) 久美子^{1,2}, 尾上 靖宏³, 近藤 孝男^{1,2}, 寺内 一姫³ (¹名古屋大・院理, ²名古屋大・高等研究院, ³立命館大・生命科学)
Kumiko Ito-Miwa^{1,2}, Yasuhiro Onoue³, Takao Kondo^{1,2}, Kazuki Terauchi³ (¹*Grad. Sch. Sci., Nagoya Univ.*, ²*IAR, Nagoya Univ.*, ³*Ritsumeikan Univ.*)
- 3SJA-5 概日リズムの温度補償および同期化に関わる波形歪み
Waveform distortion for temperature compensation and synchronization in circadian rhythms
Shingo Gibo^{1,3}, Teiji Kunihiro², Tetsuo Hatsuda¹, **Gen Kurosawa**¹ (¹*RIKEN iTHEMS*, ²*Yukawa Institute for Theoretical Physics, Kyoto University*, ³*Institute for Basic Science*)
- 3SJA-6 細胞内在性発熱による温度シグナリング機構
A thermal signaling mechanism driven by intracellular endogenous heat generation
中馬 俊祐¹, 原田 慶恵², 岡部 弘基¹ (¹東大・院薬, ²阪大・ヒューマン・メタバース疾患研究拠点)
Shunsuke Chuma¹, Yoshie Harada², **Kohki Okabe**¹ (¹*Graduate School of Pharmaceutical Sciences, The University of Tokyo*, ²*PRiMe, The University of Osaka*)
- 3SJA-7 反復刺激による神経オルガノイド回路組織の再編と機能性獲得
Repetitive Input Drives Network Refinement and Stimulus-Specific Output in Connected Neural Organoids
Yoshiho Ikeuchi^{1,2} (¹*Institute of Industrial Science, The University of Tokyo*, ²*Institute for AI and Beyond, The University of Tokyo*)

1日目 (9月24日(水)) / Day 1 (Sep. 24 Wed.)

1MSF ベシクルダイナミクスの最前線：先端イメージング，AI，メディカル応用
Unlocking Vesicle Dynamics: Advanced Imaging, AI, and Biomedical Applications

オーガナイザー：Seohyun Lee (東京大学)，樋口 秀男 (東北大学)

Organizers: Seohyun Lee (The Univ. of Tokyo), Hideo Higuchi (Tohoku Univ.)

18:50~20:30

F会場 (会議室 202) / Room F (Meeting Room 202)

This symposium introduces advanced analytical methods and imaging techniques to explore vesicle dynamics and their broad implications in biology and disease. Topics include cutting-edge approaches to vesicle transport analysis using advanced imaging techniques and artificial intelligence, comprehensive studies on microbial vesicles with potential applications in vaccine development, and pioneering efforts to understand molecular machinery through exosome engineering as well as synthetic vesicle membrane research. Notably, the symposium will highlight MINFLUX, a revolutionary super-resolution imaging technique recently published in *Science*, which enables nanometer-scale insights into molecular mechanisms within live cells. By integrating diverse biophysical perspectives with the latest techniques, this session seeks to enhance our understanding of vesicle dynamics and their implications in the biomedical field.

- 1MSF-1 AI 技術を活用した生細胞内小胞輸送の理解に向けて
AI-Powered Characterization of Vesicle Transport in Live-Cell Systems
○イソヒョン (東京大学)
Seohyun Lee (*The University of Tokyo*)
- 1MSF-2 High-precision tracking of kinesin-1 stepping inside cells using single- and dual-color MINFLUX nanoscopy
Takahiro Deguchi¹, Tobias Engelhardt², Nikolay Sergeev³, Malina Iwanski⁴, Roman Schmidt², Christopher Heidebrecht⁵, Savannah Cattarius⁵, Lukas Kapitein⁴, Timo Zimmermann¹, Jonas Ries³
(¹*European Molecular Biology Laboratory*, ²*Abberior Instruments GmbH*, ³*Max Perutz Labs, University of Vienna*, ⁴*Utrecht University*, ⁵*University of Heidelberg*)
- 1MSF-3 Structural analysis and advanced live imaging reveal vesicle dynamics of SID1-mediated uptake of large dsRNA molecules
Akira Takai^{1,2}, Kaoru Kumazaki³, Toshikuni Awazu^{2,4}, Taketoshi Kambara², Shunya Murakoshi³, Takafumi Kato⁵, Masahiro Hiraizumi⁶, Yoshiaki Kise³, Tsukasa Kusakizako³, Tomohiro Nishizawa⁷, Yasushi Okada^{1,2,4,8,9,10}, Osamu Nureki³ (¹*Grad. Sch. Med., Univ. Tokyo*, ²*BDR, RIKEN*, ³*Dept. Bio. Sci., Grad. Sch. Sci., Univ. Tokyo*, ⁴*Grad. Sch. Front. Biosci., Osaka Univ.*, ⁵*Dept. Biochem., Univ. Oxford*, ⁶*Grad. Sch. Eng., Univ. Tokyo*, ⁷*Grad. Sch. Med. Life Sci., Yokohama City Univ.*, ⁸*Dept. Phys., Grad. Sch. Sci., Univ. Tokyo*, ⁹*UBI, Grad. Sch. Sci., Univ. Tokyo*, ¹⁰*WPI-IRCn, IAS, Univ. Tokyo*)
- 1MSF-4 Bacterial Membrane Vesicles: Biology, Functions, and Medical Applications
Ryoma Nakao, Takehiro Yamaguchi, Kimihiro Abe, Yukihiro Akeda (*Dept. Bacteriol. I, Natl. Inst. Infect. Dis., JIHS*)
- 1MSF-5 Creation of biological phenomena using asymmetric vesicles
Koki Kamiya (*Grad. Sch. Sci. & Tech., Gunma Univ.*)

1MSG 若手の会が紡いだ生物物理学のフロンティア

Frontiers in Biophysics Spun by the Society of Young Scientists

オーガナイザー：柴垣 光希（北海道大学）、藤井 真子（神戸大学）

Organizers: Mitsuki Shibagaki (Hokkaido Univ.), Masako Fujii (Kobe Univ.)

18:50~20:30

G 会場（会議室 203）／Room G（Meeting Room 203）

The Society of Young Scientists has played an important role in training future generations in scientific research. In biophysics, the Society of Young Scientists in Biophysics started its activities before the foundation of the Biophysical Society of Japan and has produced many prominent researchers. This symposium aims to present the latest development of the Society of Young Scientists in Biophysics and the state-of-the-art science of young researchers who have been involved in the recent advances of this Society.

はじめに

Opening Remarks

- 1MSG-1 凝集傾向のある抗菌ペプチドの溶解化戦略およびその多様な多量体化特性の評価
Solubilization strategy of aggregation-prone antimicrobial peptides and evaluation of their diverse multimerization properties

Mitsuki Shibagaki, Jeremia Oktavian Chrisnanto, Kosuke Maeda, Tatsuya Arai, Dessalegn Abeje Tefera, Hiroyuki Kumeta, Fumi Hirai, Tomoyasu Aizawa (*Grad. Sch. Life Sci., Hokkaido Univ.*)

- 1MSG-2 分光研究から見てきたウイルスヘリオロドプシンの多様性
Diversity of Viral Heliorhodopsins Uncovered through Spectroscopic Analysis

○水鳥 律（名工大・院工）

Ritsu Mizutori (*Grad. Sch. Eng., Nagoya Inst. Tech.*)

- 1MSG-3 細菌アクチンの微小管化
Microtubulation of the bacterial actin

○高橋 大地^{1,2}, 沼本 修孝¹, 宮田 真人^{2,3}, 沈 建仁^{1,4}, Robert C. Robinson^{1,5} (¹岡山大・異分野基礎, ²大阪公大・院理, ³大阪公大・複合先端, ⁴岡山大・環境生命自然科学, ⁵ウィタヤシリメティ技大・生物工学)

Daichi Takahashi^{1,2}, Nobutaka Numoto¹, Makoto Miyata^{2,3}, Jian-Ren Shen^{1,4}, Robert C. Robinson^{1,5} (¹*RIIS, Okayama Univ.*, ²*Grad. Sch. Sci., Osaka Met. Univ.*, ³*OCARINA, Osaka Met. Univ.*, ⁴*Grad. Sch. Environ. Life. Nat. Sci. Tech., Okayama Univ.*, ⁵*Sch. Biol. Sci. Eng., Vidyasirimedhi Inst. Sci. Tech.*)

- 1MSG-4 葉緑体 ATP 合成酵素に特有の部位によるレドックス制御機構
Mechanism of redox regulation by region specific to chloroplast F₀F₁-ATP synthase

○秋山 健太郎¹, 若林 憲一², 久堀 徹³ (¹産業技術総合研究所, ²京都産業大学, ³総合研究大学院大学)

Kentaro Akiyama¹, Ken-ichi Wakabayashi², Toru Hisabori³ (¹*The National Institute of Advanced Industrial Science and Technology*, ²*Kyoto Sangyo University*, ³*The Graduate University for Advanced Studies*)

- 1MSG-5 構造解析および反応速度論を用いたアセト酢酸炭酸酵素 AAD の触媒機構の解明
Structural and kinetic insights into the catalytic mechanism of acetoacetate decarboxylase AAD

○石坂 優人^{1,2}, Rindfleisch Sören^{1,2}, Auer Florian^{1,2}, Gingeleit Lukas^{1,2}, 鄭 達翔³, Bielecki Michael⁴, Rabe von Pappenheim Fabian^{1,2}, Penka Elke^{1,2}, Kluger Ronald⁴, 坂田 絵理³, Tittmann Kai^{1,2} (¹ゲッティンゲン大・分子酵素学, ²MPI・複合科学, ³ゲッティンゲン大・聴覚神経科学, ⁴トロント大・化学)

Masato Ishizaka^{1,2}, Sören Rindfleisch^{1,2}, Florian Auer^{1,2}, Lukas Gingeleit^{1,2}, Tat Cheung Cheng³, Michael Bielecki⁴, Fabian Rabe von Pappenheim^{1,2}, Elke Penka^{1,2}, Ronald Kluger⁴, Eri Sakata³, Kai Tittmann^{1,2} (¹*Dept. Mol. Enzymol., Univ. Göttingen*, ²*Multidisciplinary Sci., MPI*, ³*Inst. Auditory Neurosci., Univ. Med. Center Göttingen*, ⁴*Dept. Chem., Univ. Toronto*)

- 1MSG-6 古細菌 SMC 複合体は DNA セグメント捕捉機構によって DNA 上を一方方向にトランスロケーションする
DNA Segment Capture Drives Unidirectional DNA Translocation of a Prokaryotic SMC Complex: A Multiscale Simulation Study
○山内 仁喬, ブランダーニ ジョバンニ, 寺川 剛, 高田 彰二 (京都大学・理学)
Masataka Yamauchi, Giovanni Brandani, Tsuyoshi Terakawa, Shoji Takada (*Dept. of Biophys., Kyoto Univ.*)
- 1MSG-7 データベース探索とドッキングシミュレーションを活用した、中鎖アルカン合成酵素の創出と機能解析
Creation of the medium-chain alkane producing enzyme by using the enzyme database search and the docking simulation
○工藤 恒, 近藤 昭彦, 蓮沼 誠久 (神戸大・先端バイオ)
Hisashi Kudo, Akihiko Kondo, Tomohisa Hasunuma (*Engineering Biology Research Center, Kobe Univ.*)
- おわりに
Closing Remarks

- 1MSH 日本タンパク質水素可視化最近の動き
Recent developments in protein hydrogen visualization in Japan
オーガナイザー：田中 伊知朗 (茨城大学), 栗原 和夫 (QST)
Organizers: Ichiro Tanaka (Ibaraki Univ.), Kazuo Kurihara (QST)

18:50~20:30

H 会場 (会議室 204) / Room H (Meeting Room 204)

Determining the positions of hydrogen atoms in biomolecules is an essential theme in life science. A groundbreaking neutron detector developed in Japan about 30 years ago has spread to research reactors around the world and has been of great help in determining hydrogen positions. Nowadays, neutron analysis technology is steadily improving thanks to the next generation of accelerator-based neutron sources in Japan and US. On the other hand, cryo-EM has also been attracting attention for its ability to obtain hydrogen position information, and we are now in an era where AI can predict the structure of biomolecules one after another. In addition to classical neutrons, we will consider future directions, including recent efforts to visualize hydrogen position information.

- 1MSH-1 導入と中性子回折装置を中心とした世界的現状
Introduction and current status of neutron diffractometers worldwide
○田中 伊知朗 (茨城大学)
Ichiro Tanaka (Ibaraki University)
- 1MSH-2 TOF 型単結晶中性子回折装置 iBIX の現状と将来計画
Current status and future prospects for TOF type single crystal neutron diffractometer iBIX
Katsuhiro Kusaka, Terutoshi Sakakura, Haruki Sugiyama (*NIAPC, CROSS*)
- 1MSH-3 Measurement of hydrogen properties using cryo-EM and ED
Koji Yonekura^{1,2} (¹*RIKEN SPring-8*, ²*IMRAM, Tohoku University*)
- 1MSH-4 中性子 D/H コントラスト結晶解析による鶏卵白リゾチームの水和構造の研究
Neutron D/H contrast crystallographic study of hydration structure of hen-egg-white lysozyme
○茶竹 俊行¹, 角南 智子², 藤原 悟², 田中 伊知朗³, 日下 勝弘⁴ (¹京大・複合研, ²QST, ³茨大・院理工, ⁴CROSS)
Toshiyuki Chatake¹, Tomoko Sunami², Satoru Fujiwara², Ichiro Tanaka³, Katsuhiro Kusaka⁴ (¹*KURNS*, ²*QST*, ³*Grad. Sch. Sci. Eng., Ibaraki Univ.*, ⁴*CROSS*)

- 1MSH-5 タンパク質の主鎖のやわらかさをデザインする。-中性子と ^{15}N NMR が示唆する主鎖ペプチド結合の部位特異的緩和の原理とその利用-
Designing main-chain flexibility of proteins. Principle of site-specific relaxation of peptide bonds and an application in protein design
○千葉 かおり (茨城高専)
Kaori Chiba (*National Institute of Technology, Ibaraki College*)
- 1MSH-6 単色法を用いたタンパク質用中性子回折装置の日本における現状と将来
Monochromatic Neutron Diffractometers for Protein Crystallography at Present and in the Future in Japan
○栗原 和男¹, 河野 史明¹, 清水 瑠美¹, 田村 格良², 大原 高志³, 茶竹 俊行⁴, 井上 倫太郎⁴, 平野 優^{1,5}, 玉田 太郎^{1,5} (¹QST・量生研, ²原子力機構・新試験研究炉, ³原子力機構・J-PARC セ, ⁴京大・複合研, ⁵千葉大・cQUEST)
Kazuo Kurihara¹, Fumiaki Kono¹, Rumi Shimizu¹, Itaru Tamura², Takashi Ohhara³, Toshiyuki Chatake⁴, Rintaro Inoue⁴, Yu Hirano^{1,5}, Taro Tamada^{1,5} (¹iQLS, QST, ²New Res. Reactor Promo. Office, JAEA, ³J-PARC Center, JAEA, ⁴KURNS, Kyoto Univ., ⁵cQUEST, Chiba Univ.)

1MSI タンパク質デザインへの誘い
Invitation to Protein Design

オーガナイザー：小杉 貴洋 (分子科学研究所), 新津 藍 (理化学研究所)
Organizers: Takahiro Kosugi (IMS), Ai Niitsu (RIKEN)

18:50~20:30

I会場 (会議室 205) / Room I (Meeting Room 205)

The field of protein design has been honored with the 2024 Nobel Prize in Chemistry, highlighting its transformative potential and the promising future. Now, the technology is expected to be of interest to many researchers and to be applied across a broad range of research fields. In this symposium, talented early-career researchers introduce their cutting-edge technologies, the latest advancements, and forthcoming challenges in protein design and its applied fields. We aim to provide useful information for researchers in diverse fields, enabling them to incorporate protein design technologies into their own research. Furthermore, we hope this symposium serves as a catalyst for innovations and increased excitement in protein design.

はじめに

Opening Remarks

- 1MSI-1 AI が導くバイオ分子デザイン：タンパク質と、その先へ
AI-guided biomolecule design: protein and beyond
○齋藤 裕 (北里大学・未来工)

Yutaka Saito (*Dept. Front. Eng., Kitasato Univ.*)

- 1MSI-2 進化的アルゴリズムとネットワーク理論を融合した酵素リデザイン法の開発
Development of enzyme redesign strategy combining evolutionary algorithm and network theory
○中野 祥吾 (静岡県大・食栄)

Shogo Nakano (*Grad. Div. Nut. Sci., Univ. Shizuoka*)

- 1MSI-3 Molecular Programming Using De Novo Designed Proteins

Zibo Chen (*School of Life Sciences, Westlake University*)

- 1MSI-4 A Rapid and Universal Pipeline for GPCR Structure Determination through In Silico Construct Optimization and de novo Protein Design

Hideaki Kato (*The University of Tokyo*)

おわりに

Closing Remarks

1MSJ ゲノム構造の原理を紐解く：理論と実験の融合

Elucidating the Principles of Genome Organization: Bringing Together Theory and Experiments

オーガナイザー：Giovanni Brandani (京都大学), 河野 秀俊 (QST)

Organizers: Giovanni Brandani (Kyoto Univ.), Hidetoshi Kono (QST)

18:50~20:30

J 会場 (会議室 206) / Room J (Meeting Room 206)

Functional genome organization emerges from a complex interplay of structural and dynamic factors across multiple scales. This symposium will bring together experimentalists and theoreticians to discuss key aspects of genome organization, including the action of SMC complexes, chromatin structure and dynamics, and 3D genome compartmentalization. By fostering interactions between theory and experiments, we aim to stimulate new insights, where experimental observations inspire theoretical models and computational predictions guide new experiments. This symposium includes contributions from diverse perspectives to advance our understanding of genome organization and create a dynamic exchange of ideas within this rapidly evolving field.

はじめに

Opening Remarks

1MSJ-1

生きたヒト細胞内の分裂期染色体の化学的・物理的性質

Chemical and physical properties of human mitotic chromosomes in living cells

○日比野 佳代 (阪大・蛋白研)

Kayo Hibino (*Inst. Protein Res., Univ. Osaka*)

1MSJ-2

DNA 複製動態から染色体の振る舞いを明らかにする

Deciphering the behavior of chromosomes through DNA replication dynamics

○平谷 伊智朗 (理化学研究所 生命機能科学研究センター)

Ichiro Hiratani (*RIKEN Center for Biosystems Dynamics Research*)

1MSJ-3

ヒトゲノムのデータ駆動的アノテーションを目指した大規模立体構造比較解析

Large-scale comparative analysis of the 3D genome structure for data-driven annotation of the human genome

○中戸 隆一郎 (東京大学定量生命科学研究所)

Ryuichiro Nakato (*Institute for Quantitative Biosciences, the University of Tokyo*)

1MSJ-4

Enhanced A/B Compartment Assignment: Improved Consistency, Orientation, and Resolution with HiC-SCA

○ジャスティン チャン スオン¹, 河野 秀俊^{1,2} (¹QST, ²千葉大学)

Justin Chan¹, Hidetoshi Kono^{1,2} (¹*iQLS, QST*, ²*Center of Quantum Life Science for Structural Therapeutics (cQUEST), Chiba University*)

1MSJ-5

コヒーシサブユニット Scc1 ヘリックス領域の構造機能解析

Structural and Functional Analysis of Conserved Helical Regions in the Cohesin Subunit Scc1

○木下 慶美, 西山 朋子 (京都大・院生物)

Yoshimi Kinoshita, Tomoko Nishiyama (*Grad. Sch. Sci., Kyoto University*)

1MSJ-6

Phase diagram approach to elucidate the organization principle of mitotic chromosome

Tetsuya Yamamoto (*ICReDD, Hokkaido Univ.*)

1MSJ-7

クロマチンドメインの生物種間サイズ分布を説明する普遍的な理論

A universal theory describes chromatin domain size distributions across species

○藤城 新 (京大・福井謙一)

Shin Fujishiro (*FIFC, Kyoto Univ.*)

おわりに

Closing Remarks

1日目（9月24日（水））／Day 1 (Sep. 24 Wed.)

1GA タンパク質：構造，機能
Protein: Structure, Function

座長：菅瀬 謙治（京都大学），加藤 英明（東京大学）

Session Chairs: Kenji Sugase (Kyoto Univ.), Hideaki Kato (Univ. Tokyo)

15:10～18:25

A会場（会議室 101+102）／Room A (Meeting Room 101+102)

- 1GA001 赤痢アメーバ由来 adenosine 5'-phosphosulfate kinase の構造解析
Structural analysis of adenosine 5'-phosphosulfate kinase from *Entamoeba histolytica*
○畑中 涼¹, 湯浅 日菜¹, 見市 文香², 岸川 淳一¹, 志波 智生¹ (¹ 京都工芸繊維大学大学院 工芸科学
学研究科 応用生物学専攻, ² 長崎大学 熱帯医学研究所)
Ryo Hatanaka¹, Hina Yuasa¹, Fumika Mi-ichi², Jyun-ichi Kishikawa¹, Tomoo Shiba¹ (¹ *Fac. Applied
Biol., Kyoto Inst. Tech.*, ² *Inst. Tropical Medicine, Nagasaki University*.)
- 1GA002 ペプチド結合の平面性の歪みを用いたタンパク質の原子座標データの一次スクリーニング
Primary screening of structural data obtained by electron microscopy using planar distortion of
peptidebonds
○國井 真帆¹, 茶竹 俊行², 大原 高志³, 千葉 おおり¹ (¹ 茨城高専, ² 京大 複合研, ³ 原科研 J-PARC
センター)
Mahan Kunii¹, Toshiyuki Chatake², Takashi Ohhara³, Kaori Chiba¹ (¹ *National Institute of Technology,
Ibaraki College*, ² *KURNS, Kyoto Univ.*, ³ *J-PARC, JAEA*)
- 1GA003 PRMT1 と基質 EWS の複合体構造から考察する基質認識機構
Substrate recognition mechanism considered from the complex structure of PRMT1 with
substrate EWS
○遠藤 伸幸¹, 藤間 祥子^{2,3}, 越村 日向子², 川本 晃大¹, 廣瀬 未果¹, 池上 暁子², 葛原 美和²,
大徳 浩照^{3,4}, 加香 孝一郎⁵, 加藤 貴之¹, 深水 昭吉^{3,4}, 上久保 裕生², 栗栖 源嗣¹ (¹ 阪大・蛋白研,
² 奈良先端大, ³ 革新的先端研究開発支援事業, ⁴ 筑波大・生存ダイナミクス研究センター, ⁵ 筑波
大・生命環境系)
Nobuyuki Endo¹, Sachiko Toma-Fukai^{2,3}, Hinako Koshimura², Akihiro Kawamoto¹, Mika Hirose¹,
Akiko Ikegami², Miwa Kuzuhara², Hiroaki Daitoku^{3,4}, Koichiro Kako⁵, Takayuki Kato¹,
Akiyoshi Fukamizu^{3,4}, Hironari Kamikubo², Genji Kurisu¹ (¹ *IPR, Univ. Osaka*, ² *NAIST*, ³ *AMED-CREST*,
⁴ *TARA*, ⁵ *LES. Univ. Tsukuba*)
- 1GA004 ダイズ由来メチオニン γ-リアーゼの基質侵入口ループ構造による酵素活性への影響
Effects on the enzymatic activity of the loop structures in methionine γ-lyase from *Glycine max*
○森田 宗¹, 牧野 晴菜¹, 井上 幹太¹, 横山 大輝², 大川 敦司², 手嶋 琢³, 岸川 淳一¹, 松井 健二³,
稲垣 賢二², 志波 智生¹ (¹ 京工繊大・院・応生, ² 岡山大・院・環境生命, ³ 山口大・院・創成科学)
Shu Morita¹, Haruna Makino¹, Kanta Inoue¹, Daiki Yokoyama², Atsushi Okawa², Taku Teshima³,
Jun-ichi Kishikawa¹, Kenji Matsui³, Kenji Inagaki², Tomoo Shiba¹ (¹ *Fac. Appl. Biol., Grad. Sch. Sci. and
Tech., Kyoto Inst. Tech.*, ² *Grad. Sch. Env. & Life Sci., Okayama Univ.*, ³ *Grad. Sch. Sci. & Tech.,
Yamaguchi Univ.*)

- 1GA005 天然変性タンパク質 FUS の分子動力学シミュレーションによる構造領域と天然変性領域の協調的な核酸結合機構の普遍性の解明
A Universal Mechanism of Nucleic Acid Binding by Protein Structured and Intrinsically Disordered Regions Revealed by Molecular Simulations
○木島 壮一郎, 北尾 彰朗 (東京科学大学生命理工学院)
Soichiro Kijima¹, Akio Kitao (*Inst. Sci. Tokyo, Sch. Life Sci. Tech.*)
- 1GA006 放線菌由来 L-メチオニン脱炭酸酵素 MetDC における Tyr421 の役割
Role of Tyr421 in L-Methionine Decarboxylase, MetDC, from *Kitasatospora aureofaciens*
○井上 幹太¹, 牧野 晴葉¹, 森田 宗¹, 茶堂 快渡¹, 大川 敦司², 稲垣 賢二², 岸川 淳一¹, 志波 智生¹
(¹ 京工繊大・院・応生, ² 岡山大・院・環境生命)
Kanta Inoue¹, Haruna Makino¹, Shu Morita¹, Kaito Chadou¹, Atsushi Okawa², Kenji Inagaki², Jun-ichi Kishikawa¹, Tomoo Shiba¹ (¹*Dept. Appl. Biol., Grad. Sch. Sci. and Tech., Kyoto Inst. of Tech.*, ²*Grad. Sch. Env. & Life Sci., Okayama Univ.*)
- 1GA007 *E. coli*-expressed Influenza H1N1 Receptor Binding Domain is immunogenic in mice and produces neutralizing antibodies against live virus
Le Ngoc Thao Tu¹, Md. Din Islam¹, Ching-yu Tseng², Wei-li Hsu^{2,3}, Toshio Yamazaki⁴, Trong Thang Ha^{1,5}, Allen Huynh¹, Yutaka Kuroda^{1,3} (¹*Dept. of Biotech and Life Sci., Grad. Sch. of Engr., TUAT*, ²*Grad. Inst. of Microbiol. & Public Health, Coll. Vet. Med., NCHU*, ³*GIR, TUAT*, ⁴*RIKEN Cent. for Biosyst. Dyn. Res.*, ⁵*Inst. Biotech & Food, CTU*)
- 1GA008 ペプチド結合型 GPCR に対する小分子化合物の異なる作用機構
Small chemical molecules exhibit distinct mechanisms of action towards a peptide-binding GPCR
○顾 羽中¹, 新開 有紗^{3,4}, 小林 和弘^{1,2}, 川上 耕季^{1,2}, 小島 朝翔⁶, 斉藤 毅^{4,5}, 加藤 英明^{1,2} (¹ 東京大学大学院理学系研究科, ² 東京大学先端科学技術センター, ³ 筑波大学院数理工学物質, ⁴ 筑波大睡眠研究機構(IIS), ⁵ 筑波大医学医療系, ⁶ 東京大学大学院総合文化研究科)
Yuzhong Gu¹, Arisa Shinkai^{3,4}, Kazuhiro Kobayashi^{1,2}, Kouki Kawakami^{1,2}, Asato Kojima⁶, Tsuyoshi Saitoh^{4,5}, Hideaki Kato^{1,2} (¹*Graduate School of Science, The University of Tokyo*, ²*Research Center for Advanced Science and Technology, The University of Tokyo*, ³*Graduate School of Pure and Applied Sciences, University of Tsukuba*, ⁴*International Institute for Integrative Sleep Medicine (WPI-IIS), University of Tsukuba*, ⁵*Institute of Medicine, University of Tsukuba*, ⁶*Graduate School of Arts and Sciences, The University of Tokyo*)
- 1GA009 M₂ および M₄ ムスカリン受容体のサブタイプ選択的活性化に関する赤外分光解析
Infrared Spectroscopic Insights into Subtype-Selective Activation of M₂ and M₄ Muscarinic Receptors
○水野 萌香¹, 杉浦 勇也¹, 井上 明俊², 寿野 千代², 寿野 良二², 神取 秀樹^{1,3}, 片山 耕大^{1,3} (¹ 名工大・院工, ² 関西医大・医, ³ 名工大・オプトバイオテクノロジー研究センター)
Moeka Mizuno¹, Yuya Sugiura¹, Akitoshi Inoue², Chiyo Suno², Ryoji Suno², Hideki Kandori^{1,3}, Kota Katayama^{1,3} (¹*Grad. Sch. Eng., Nagoya Inst. Tech.*, ²*Kansai Medical University. Medical.*, ³*OptoBioTechnology Research Center, Nagoya Inst. Tech.*)
- 1GA010 オスモライト添加による水のダイナミクス変化が α-アミラーゼ活性に及ぼす影響
Change in water dynamics by osmolytes affect the activity of α-amylase
○古川 幸佳¹, 城田 秀明², 菱田 真史¹ (¹ 東理大・院理学, ² 千葉大・院理学)
Sachika Furukawa¹, Hideaki Shirota², Mafumi Hishida¹ (¹*Grad. Sch. Sci., Univ. TUS*, ²*Grad. Sch. Sci., Univ. Chiba*)
- 1GA011 ラクダムシ由来甲虫型不凍タンパク質の発見と機能解析
Discovery and Functional Characterization of Beetle-type Antifreeze Proteins in Snakeflies
○内澤 風穂¹, 前田 皓丞¹, 津田 栄², 相沢 智康^{1,2}, 新井 達也^{1,2} (¹ 北大・理, ² 北大・先端生命)
Kaho Uchizawa¹, Kosuke Maeda¹, Sakae Tsuda², Tomoyasu Aizawa^{1,2}, Tatsuya Arai^{1,2} (¹*Sch. Sci., Hokkaido Univ.*, ²*Fac. Adv. Life Sci., Hokkaido Univ.*)

- 1GA012 複数のプロトン輸送ユニットを持った天然 F_0F_1 -ATP 合成酵素の探索
Exploring natural F_0F_1 -ATP synthase with multiple proton transport units
○片野 真熙¹, 丸井 里駆², 上野 博史¹, 野地 博行^{1,3} (¹ 東京大学工学系研究科応用化学専攻, ² 東京大学 大学院工学系研究科 バイオエンジニアリング専攻, ³ 東京大学プラネタリーヘルス研究機構)
Mahiro Katano¹, Riku Marui², Hiroshi Ueno¹, Hiroyuki Noji^{1,3} (¹*Department of Applied Chemistry, School of Engineering, University of Tokyo.*, ²*Department of Bioengineering School of Engineering, University of Tokyo.*, ³*Research Institute of Planetary Health (RIPH), The University of Tokyo*)
- 1GA013 脂質二重膜中でチャネル活性を有する両親媒性 β ヘリックスペプチドの会合状態の解析
Analysis of the association state of amphiphilic β -helix peptides with channel activity in lipid bilayers
○中嶋 悠人¹, 佐藤 大輔¹, 彭 祖癸², 栢森 史浩³, 臼井 健二³, 新津 藍⁴, 川野 竜司², 川村 出¹
(¹ 横浜国立大学 大学院理工学府, ² 東京農工大学 工学研究院, ³ 甲南大学 フロンティアサイエンス学部, ⁴ 理化学研究所 生命医科学研究センター)
Haruto Nakajima¹, Daisuke Sato¹, Zugui Peng², Fumihito Kayamori³, Kenji Usui³, Ai Niitsu⁴, Ryuji Kawano², Izuru Kawamura¹ (¹*Graduate School of Engineering Science, Yokohama National University.*, ²*Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology.*, ³*Faculty of Frontiers of Innovative Research in Science and Technology, Konan University.*, ⁴*Laboratory for Dynamic Biomolecule Design, Riken Center for Integrative Medical Science.*)

1GB タンパク質：物性、天然変性
Protein: Property, Intrinsic disorder

座長：櫻井 一正 (近畿大学), 西田 紀貴 (千葉大学)

Session Chairs: Kazumasa Sakurai (KINDAI Univ.), Noritaka Nishida (Chiba Univ.)

15:10~18:10

B 会場 (会議室 103+104) / Room B (Meeting Room 103+104)

- 1GB001 モルテングロビュール状態を介した同時翻訳的フォールディング経路の可視化
Visualizing co-translational folding pathway mediated by Molten-Globule (MG) state
○小西 雄一郎^{1,2}, 赤松 香奈子³, 丹澤 豪人¹, 加藤 貴之¹ (¹ 大阪大学・蛋白質研究所, ² 大阪大学・大学院生命機能研究科, ³ 大阪大学ワクチン開発拠点・先端モダリティ DDS 研究センター)
Yuichiro Konishi^{1,2}, Kanako Akamatsu³, Takehito Tanzawa¹, Takayuki Kato¹ (¹*Institute for Protein Research, The University of Osaka.*, ²*Graduate School Frontier Biosciences, The University of Osaka.*, ³*Center for Advanced Modalities and DDS, The University of Osaka.*)
- 1GB002 FUS-ALS 疾患型変異体の相分離や不可逆的凝集に対する ATP の抑制メカニズム
Mechanistic insights into ATP's inhibition of phase separation and aggregation of ALS-linked FUS variants, R495X and P525L
○北村 奎時¹, 津久井 一太¹, 荒山 みゆ², 大島 彩乃¹, 北沢 創一郎¹, 亀田 倫史³, 北原 亮^{1,2} (¹ 立命館大学・院薬学, ² 立命館大学・薬学部, ³ 産総研・人工知能研究センター)
Keiji Kitamura¹, Itta Tsukui¹, Miyu Arayama², Ayano Ohshima¹, Soichiro Kitazawa¹, Tomoshi Kameda³, Ryo Kitahara^{1,2} (¹*Grad. Sch. Pharm., Ritsumeikan Univ.*, ²*Col. Pharm., Ritsumeikan Univ.*, ³*Art. Int. Res. Ctr., AIST*)
- 1GB003 *Corynebacterium glutamicum* における反応サイクルと関連したクエン酸合成酵素の集合体形成メカニズム
Catalysis-dependent mechanism of citrate synthase condensation in *Corynebacterium glutamicum*
○長岡 誠¹, 西山 真^{1,2}, 古園 さおり^{1,2,3} (¹ 東大・院農生科, ² 東大・CRIIM, ³ 理研 CSRS)
Makoto Nagaoka¹, Makoto Nishiyama^{1,2}, Saori Kosono^{1,2,3} (¹*Grad. Sch. Agric. Life Sci., UTokyo.*, ²*CRIIM, UTokyo.*, ³*RIKEN CSRS*)

- 1GB004 **圧力ジャンプ分光法によるタンパク質液液相分離に関する速度論的解析**
Kinetic analysis for Protein liquid-liquid phase separation by pressure-jump spectroscopy
○白砂 雄太郎¹, 森下 愛大², 北村 奎時¹, 北原 亮^{1,2} (¹立命館大・院薬学, ²立命館大・薬学)
Yutaro Shiramasa¹, Manato Morishita², Keiji Kitamura¹, Ryo Kitahara^{1,2} (¹*Grad. Sch. Pharm. Sci., Univ. Ritsumeikan*, ²*Coll. Pharm. Sci., Univ. Ritsumeikan*)
- 1GB005 **sm-FRET および蛍光相関分光法による SARS-CoV-2 の N タンパク質リンカー領域の RNA への結合における役割の解明**
Roles of the linker region of the N protein of SARS-CoV-2 in the association to RNA by sm-FRET and fluorescence correlation spectroscopies
Shion Ishikawa^{1,2}, Takahiro Kimura^{1,2}, Takuya Katayama^{1,2}, Syamil MA Husna^{2,3}, Yuji Itoh^{1,2,3}, Satoshi Takahashi^{1,2,3} (¹*Graduate School of Life Sciences, Tohoku University*, ²*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University*, ³*Department of Chemistry, Graduate School of Science, Tohoku University*)
- 1GB006 **αB-クリスタリン及びその断片による α シヌクレイン液滴の老化の阻害**
αB-Crystallin and its fragment prevent aging of α-Synuclein droplets
○藤塚 健次¹, 柚 佳祐¹, 道上 佑希¹, Carver John A.², 茶谷 絵理¹ (¹神戸大院・理, ²Res. Sch. Chem., ANU.)
Kenji Fujitsuka¹, Keisuke Yuzu¹, Yuki Michiue¹, John A. Carver², Eri Chatani¹ (¹*Grad. Sch. Sci., Kobe Univ.*, ²*Res. Sch. Chem., ANU*.)
- 1GB007 **トランスサイレチン 49-127 断片が形成するプロトフィブリルの解析**
Characterization of Protofibril Formed by Transthyretin 49-127 Fragment
○益田 優月¹, 中尾 星哉¹, 柚 佳祐¹, 山本 直樹², 守島 健³, 井上 倫太郎³, 杉山 正明³, 茶谷 絵理¹ (¹神戸大・院理, ²自治医科大・医, ³京都大複合研)
Yuzuki Masuda¹, Seiya Nakao¹, Keisuke Yuzu¹, Naoki Yamamoto², Ken Morishima³, Rintaro Inoue³, Masaaki Sugiyama³, Eri Chatani¹ (¹*Grad. Sch. Sci, Kobe Univ.*, ²*Sch. Med., Jichi Med. Univ.*, ³*KURNS, Kyoto Univ.*)
- 1GB008 **アルキル化ペプチドによる液-液相分離液滴の分子取り込みの制御**
Controlling the molecular uptake of liquid-liquid phase separated droplets using Alkylated peptides
○山下 息吹 (富山大学 薬学部)
Ibuki Yamashita (Fac. Pharm. Sci., Univ. Toyama)
- 1GB009 **アコヤガイの貝殻に含まれる天然変性タンパク質 nacrein の構造ダイナミクス解析**
Structural dynamics of nacrein, an intrinsically disordered protein in a shell of *Pinctada fucata*
○浪川 勇人¹, 守島 健², 井上 倫太郎², 杉山 正明², 鈴木 道生¹ (¹東大院農, ²京大複合研)
Yuto Namikawa¹, Ken Morishima², Rintaro Inoue², Masaaki Sugiyama², Michio Suzuki¹ (¹*GSALS, KURNS*)
- 1GB010 **IDP 相分離液滴を用いたオリゴ DNA からの効率的なタンパク質発現系**
Oligo assembly enhanced by IDP droplet for efficient cell-free expression
○上野 大慈¹, 皆川 慶嘉¹, 野地 博行^{1,2} (¹東京大学・工学系・応用化学, ²東京大学プラネタリーヘルス研究機構)
Taiji Ueno¹, Yoshihiro Minagawa¹, Hiroyuki Noji^{1,2} (¹*Dept. Applied Chemistry, Sch. Eng., Univ. Tokyo.*, ²*Research Institute of Planetary Health (RIPH), Univ. Tokyo*)
- 1GB011 **TIA-1 における RRM 間および RRM-LCD 相互作用による相分離制御機構の解明**
Mechanistic analysis of TIA-1 phase separation driven by intramolecular RRM-RRM and RRM-LCD interactions
○近藤 千月¹, 桶 真一^{1,2,3,4}, 安田 恭大^{1,2,3}, 多根 奈津美¹, 磯 僚海¹, 荒木 優香¹ (¹広島大・院統合生命, ²広島大・核内クロマチン・ライブダイナミクスの数理研究拠点, ³広島大・持続可能性に寄与するキラルノット超物質拠点, ⁴明治大・先端数理科学インスティテュート)
Kazuki Kondo¹, Shinichi Tate^{1,2,3,4}, Kyota Yasuda^{1,2,3}, Natsumi Tane¹, Tomomi Iso¹, Yuka Araki¹ (¹*Grad. Sch. Sci., Univ. Hiroshima*, ²*RcMcD, Univ. Hiroshima*, ³*WIP-SKCM2, Univ. Hiroshima*, ⁴*MIMS, Univ. Meiji*)

- 1GB012 核小体タンパク質 Nopp140 のハイパーリン酸化は有糸分裂期脱凝集を加速させる
Hyperphosphorylation of nucleolar protein Nopp140 accelerates mitotic nucleolar disassembly
○嶋村 悠¹, 乗添 祐樹², 坂上 貴洋², 吉村 成弘¹ (¹ 京都大学生命科学研究科, ² 青山学院大学理工学部)
Hisashi Shimamura¹, Yuki Norizoe², Takahiro Sakaue², Shige H. Yoshimura¹ (¹ *Grad. Sch. Biostudies, Kyoto Univ.*, ² *Coll. Sci. Engr, Aoyama Gakuin Univ.*)

1GC タンパク質：計測，タンパク質工学，膜タンパク質，バイオエンジニアリング
Protein: Measurement, Engineering, Membrane proteins, Bioengineering

座長：古賀 信康（大阪大学），鎌形 清人（岐阜大学）

Session Chairs: Nobuyasu Koga (Osaka Univ.), Kiyoto Kamagata (Gifu Univ.)

15:10～18:25

C 会場（会議室 105+106）／Room C（Meeting Room 105+106）

- 1GC001 高速 AFM 観察による真菌機能性アミロイドの線維表面触媒による線維伸長機構の解明
High-speed atomic force microscopy reveals surface-catalyzed elongation mechanism of fungal functional amyloid
○高橋 尚央¹, 木村 竜也², 寺内 裕貴³, 吉見 啓^{4,5}, 中山 隆宏², 阿部 敬悦¹ (¹ 東北大院・農, ² 金沢大・ナノ生命科学研究所, ³ 山口大・中高温研, ⁴ 京大院・農, ⁵ 京大院・地環学)
Nao Takahashi¹, Tatsuya Kimura², Yuki Terauchi³, Akira Yoshimi^{4,5}, Takahiro Watanabe-Nakayama², Keietsu Abe¹ (¹ *Grad. Sch. Agri., Tohoku Univ.*, ² *WPI-NanoLSI, Kanazawa Univ.*, ³ *RCTMR, Yamaguchi Univ.*, ⁴ *Grad. Sch. Agri., Kyoto Univ.*, ⁵ *Grad. Sch. Glob. Env. Stud., Kyoto Univ.*)
- 1GC002 一分子蛍光顕微鏡と近接依存性標識による一細胞ミトコンドリアプロテオームの網羅的解析
Single-cell mitochondrial proteome profiling via combining single-molecule fluorescence microscopy and proximity labeling
○土田 美咲^{1,2}, カマルザマン ラティファ^{1,3}, 金 水縁¹, 谷口 雄一^{1,3,4} (¹ 京都大学 物質・細胞統合システム拠点 (iCeMS), ² 京都大学 農学部, ³ 大阪大学 生命機能研究科, ⁴ 京都大学大学院 生命科学研究科)
Misaki Tsuchida^{1,2}, Latiefa Kamarulzaman^{1,3}, Sooyeon Kim¹, Yuichi Taniguchi^{1,3,4} (¹ *Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University*, ² *Faculty of Agriculture, Kyoto University*, ³ *Graduate School of Frontier Biosciences, Osaka University*, ⁴ *Graduate School of Biostudies, Kyoto University*)
- 1GC003 構造的制約をタンパク質デザインで取り入れた進化モデルによる祖先ヌクレオソームの再構築
Reconstruction of ancestral nucleosomes using an evolutionary model that incorporates structural constraints through protein design
○林 泰瑠¹, 佐久間 航也², 寺川 剛¹, 高田 彰二¹ (¹ 京大・院理・生物物理, ² 名大・細胞生理学研究所センター)
Taiyo Hayashi¹, Koya Sakuma², Tsuyoshi Terakawa¹, Shoji Takada¹ (¹ *Dept. Biophys., Grad. Sch. Sci., Kyoto Univ.*, ² *CeSPL, Nagoya Univ.*)
- 1GC004 複雑狭窄部をもつ Epx4 ナノポアのペプチド識別能力の探索
Exploring the peptide discrimination capabilities of multiple constriction Epx4 nanopores
○伊集院 綾子¹, 内藤 航大², 田中 良和², 川野 竜司¹ (¹ 農工大・院生命工学, ² 東北大学・院生命科学研究科)
Ayako Ijuin¹, Kota Naito², Yoshikazu Tanaka², Ryuji Kawano¹ (¹ *Grad. Sch. Biotech and Life Sci., TUAT*, ² *Grad. Sch. Life Sci., Tohoku Univ.*)
- 1GC005 演題取り下げ Withdrawn

- 1GC006 **Minimal RNA polymerase reconstruction**
Riddhi Prashant Gondhalekar^{1,2}, Shunsuke Tagami³, Sota Yagi⁴, Kosuke Fujishima^{1,2,5} (¹*School of Life Science and Technology, Institute of Science Tokyo*, ²*Earth-Life Science Institute, Institute of Science Tokyo*, ³*RIKEN IMS*, ⁴*Faculty of Human Sciences, Waseda University*, ⁵*Graduate School of Media and Governance, Keio University*)
- 1GC007 **De novo ペプチドナノポアのキメラ化とセンシング精度向上に向けた改変**
 Chimeric integration of a *de novo* peptide nanopore and its sequence optimization for improving sensing resolution
 ○中田 彩夏¹, 内藤 航大², 田中 良和², 川野 竜司¹ (¹東京農工大・院生命工学, ²東北大学・院生命科学研究科)
Ayaka Nakada¹, Kota Naito², Yoshikazu Tanaka², Ryuji Kawano¹ (¹*Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology*, ²*Graduate School of Life Sciences, Tohoku University*.)
- 1GC008 **膜透過性ペプチドを介した汎用的なタンパク質輸送システムの開発**
 Development of a wide range of protein delivery systems mediated by cell-penetrating peptides
 ○三輪 明星, 神谷 厚輝 (群大・院理工)
Akari Miwa, Koki Kamiya (*Grad. Sch. Sci. & Tech., Gunma Univ.*)
- 1GC009 **酵素間相互作用の強化による二段階アルカン合成反応の効率化**
 Improving efficiency of two-step alkane synthesis reactions by enhancing enzyme interactions
 ○岡田 隼弥¹, 季高 駿士¹, 新井 宗仁^{1,2} (¹東大・総合文化・生命環境, ²東大・理・物理)
Shunya Okada¹, Shunji Suetaka¹, Munchito Arai^{1,2} (¹*Department of Life Sciences, The University of Tokyo*, ²*Department of Physics, The University of Tokyo*)
- 1GC010 **酵素を合理的に活性化する普遍的手法の開発**
 Development of a universal method to rationally activate enzymes
 ○渡辺 敦也¹, 季高 駿士¹, 新井 宗仁^{1,2} (¹東大・総合文化・生命環境, ²東大・理・物理)
Atsuya Watanabe¹, Shunji Suetaka¹, Munchito Arai^{1,2} (¹*Department of Life Sciences, The University of Tokyo*, ²*Department of Physics, The University of Tokyo*)
- 1GC011 **アゴニスト誘導コンフォメーションを捉えた TRPM8 の X 線 1 分子動態計測**
 Single-molecule X-ray analysis capturing the agonist-induced conformation of TRPM8
 ○町田 温登^{1,2}, 大久保 達成^{2,3}, 佐々木 大輔^{1,2}, 三尾 和弘^{2,3}, 佐々木 裕次^{1,2,4} (¹東京大・院新領域, ²産総研, ³横浜市大・院生命医, ⁴高輝度光科学研究センター)
Haruto Machida^{1,2}, Tatsunari Ohkubo^{2,3}, Daisuke Sasaki^{1,2}, Kazuhiro Mio^{2,3}, Yuji. C Sasaki^{1,2,4} (¹*Grad. Sch. Frontier Sci., Univ. Tokyo*, ²*Natl. Inst. Adv. Ind. Sci. & Technol.*, ³*Grad. Sch. Med. Life Sci., Yokohama City Univ.*, ⁴*JASRI*)
- 1GC012 **電気エネルギー依存性細胞死の電気回路モデルによる解析**
 Explaining Electrical Energy Dependent Cell Death Mechanisms Through Electrical Circuit-Based Modeling
 ○廣嶋 大輝, 田中 蒼大, 本村 英樹, 池田 善久, 神野 雅文 (愛媛大学大学院 理工学研究科)
Taiki Hirohata, Sota Tanaka, Hideki Motomura, Yoshihisa Ikeda, Masafumi Jinno (*Dept. of EEE, Grad. Sch. of Sci. and Eng., Ehime Univ.*)
- 1GC013 **新規高輝度蛍光 RNA アプタマーの取得とその特性解析**
 Isolation and characterization of novel bright fluorogenic RNA aptamers
 ○田山 智嵩, 伊藤 敬佑, 上村 想太郎, 飯塚 怜 (東大・院理・生科)
Tomotaka Tayama, Keisuke Ito, Sotaro Uemura, Ryo Iizuka (*Dept. Biol. Sci., Grad. Sch. Sci., The Univ. Tokyo*)

1GD 細胞生物学的課題, 神経・感覚
Cell biology, Neuroscience & Sensory systems

座長: 細川 千絵 (大阪公立大学), 角田 聡 (名古屋工業大学)

Session Chairs: Chie Hosokawa (Osaka Metropolitan Univ.), Satoshi Tsunoda (Nagoya Inst. Tech.)

15:10~18:10

D 会場 (会議室 107+108) / Room D (Meeting Room 107+108)

- 1GD001 線維芽細胞の外環境の弾性率に対する受動的応答と心筋細胞への能動的影響
Passive responses of fibroblasts to extracellular stiffness and their active influence on cardiomyocytes
○長井 新^{1,2}, 栗原 宙歩², 守山 裕大², 三井 敏之² (¹京大・院生命科学, ²青学大・院理工)
Arata Nagai^{1,2}, Hiromu Kuwabara², Yuuta Moriyama², Toshiyuki Mitsui² (¹Grad. Sch. Bio., Kyoto Univ., ²Grad. Sch. Sci. and Eng., Aoyamagakuin Univ.)
- 1GD002 三次元位置検出顕微鏡による繊毛虫テトラヒメナの遊泳および繊毛運動解析
Three-dimensional tracking of swimming and ciliary beating in *Tetrahymena*
○石井 裕人, 丸茂 哲聖, 山口 真, 山岸 雅彦, 矢島 潤一郎 (東京大学大学院総合文化研究科)
Hiroyo Ishii, Akisato Marumo, Shin Yamaguchi, Masahiko Yamagishi, Junichiro Yajima (Grad. Sch. of Arts and Sci., Univ. Tokyo)
- 1GD003 Modified model with myosin accumulation effect for mechanosensitive migration
Yuki Kimura¹, Chika Okimura², Yoshiaki Iwadata², Tatsunari Sakurai¹ (¹Dept. Math. Eng., Musashino Univ., ²Grad. Sch. Sci. & Tech. Innov., Yamaguchi Univ.)
- 1GD004 ドリル細菌は鞭毛フックの曲げ剛性を調節する
Bacteria capable of drill-like propulsion adjust bending stiffness of the flagellar hooks
○小倉 尚樹¹, 吉岡 青葉², 中根 大介², 村山 能宏¹ (¹農工大・院生体医用シス工, ²電通大・院基盤理工)
Naoki Ogura¹, Aoba Yoshioka², Daisuke Nakane², Yoshihiro Murayama¹ (¹Grad. Sch. Bio-Med. Sys. Eng., TUAT, ²Grad. Sch. Fund. Sci. & Eng., UEC)
- 1GD005 改良版 Vicsek モデルによるイエユウレイグモ初期胚の細胞集団運動のシミュレーションと解析
Simulation and Analysis of Collective Cell Migration in Early Embryos of *Pholcus phalangioides* Using a Modified Vicsek Model
○庄司 紘都 (同志社大学生命医科学部)
Hiroyo Shoji (Faculty of Life and Medical Sciences, Doshisha University)
- 1GD006 ヘリコバクターの多彩な移動戦略はドリル運動によって最適化される
Flagellar wrapping facilitates directional movement in *Helicobacter*
○横濱 さらら¹, 上村 直輝¹, 島田 佳季², 見理 剛³, 林原 絵美子³, 菅 哲朗², 中根 大介¹ (¹電通大院・基盤理工, ²電通大院・機械知能, ³感染研・細菌二部)
Sarara Yokohama¹, Naoki Uemura¹, Yoshiki Shimada², Tsuyoshi Kenri³, Emiko Rimbara³, Tetsuo Kan², Daisuke Nakane¹ (¹Dep. Eng. Sci., UEC, ²Dep. Mech. Intell. Syst., UEC, ³Dep. Bact. II, NIID)
- 1GD007 魚類表皮ケラトサイト集団同士の高速な融合は互いのアクトミオシンケーブルを消失させ合うことで実現する
Rapid Integration of Two Keratocyte Sheets by Disassembling Each Other's Actomyosin Cables
○清水 和真, 沖村 千夏, 岩楯 好昭 (山口大・院創成科学・生物)
Kazuma Shimizu, Chika Okimura, Yoshiaki Iwadata (Grad. Sch. Sci. Tech., Univ. Yamaguchi)

- 1GD008 MreB が合成細菌にスピロプラズマ運動能を発生させる方法を *in vivo* で可視化する
In vivo visualization of how MreBs drive *Spiroplasma* motility in minimal synthetic bacterium
 ○田中 芳樹¹, 木山 花², 水谷 雅希¹, 森本 雄祐³, 宮田 真人², 西坂 崇之¹ (¹学習院大・理・物理,
²阪大・院理,³九工大・情報工学)
Yoshiki Tanaka¹, Hana Kiyama², Masaki Mizutani¹, Yusuke V. Morimoto³, Makoto Miyata²,
 Takayuki Nishizaka¹ (¹Dept. Phys., Gakushuin Univ., ²Grad. Sch. Sci., Osaka Metropolitan Univ., ³Fac.
 Comp. Sci. and Sys. Eng., Kyushu Inst. Tech.)
- 1GD009 脂肪酸代謝酵素 HADH の核内機能において制御される線虫 *C.elegans* の温度順化現象の分子機
 構解析
 Molecular mechanism of temperature acclimation in *C. elegans* regulated by the nuclear
 function of fatty acid metabolizing enzyme HADH
 ○森 雪永¹, 福本 晃久¹, 岡畑 美咲¹, 三浦 徹¹, 水口 洋平², 豊田 敦², 太田 茜¹, 久原 篤^{1,3} (¹甲南
 大学 自然科学研究科生物学専攻 生体調節学 研究室, ²国立遺伝学研究所, ³PRIME, AMED)
Yukina Mori¹, Akihisa Fukumoto¹, Misaki Okahata¹, Toru Miura¹, Yohei Minakuchi², Atsushi Toyoda²,
 Akane Ohta¹, Atushi Kuhara^{1,3} (¹Laboratory of Molecular and Cellular Regulation Graduate school of
 Natural Science Konan University, ²National Institute of Genetics, Japan, ³PRIME, AMED)
- 1GD010 高速 AFM による分子間相互作用を介した CaMKII クラスターダイナミクスの観察
 High-speed AFM revealed dynamics of CaMKII clusters through intermolecular interactions
 ○鈴木 大晴¹, 炭竈 享司², 村越 秀治³, 柴田 幹大^{2,4} (¹金沢大・院ナノ生命, ²金沢大・WPI-
 NanoLSI, ³生理研・脳機能計測支援センター, ⁴金沢大・新学術創成)
Taisei Suzuki¹, Takashi Sumikama², Hideji Murakoshi³, Mikihiro Shibata^{2,4} (¹Grad. Sch. NanoLSI,
 Kanazawa Univ., ²WPI-NanoLSI, Kanazawa Univ., ³Supportive Center for Brain Research, NIPS,
⁴InFiniti, Kanazawa Univ.)
- 1GD011 高速 AFM による CaMKIIα/β ヘテロオリゴマーの構造と動態の観察
 Architecture and Dynamics of CaMKIIα/β heterooligomers revealed by High-Speed AFM
 ○松島 啓介¹, 炭竈 享司², 村越 秀治³, 柴田 幹大^{2,4} (¹金沢大・院数物, ²金沢大・WPI-nanoLSI,
³生理研・脳機能計測支援センター, ⁴金沢大・新学術創成)
Keisuke Matsushima¹, Takashi Sumikama², Hideji Murakoshi³, Mikihiro Shibata^{2,4} (¹Grad. Sch. Math.
 & Phys., Kanazawa Univ., ²WPI-NanoLSI, Kanazawa Univ., ³Supportive Center for Brain Research,
 National Institute for Physiological Sciences, ⁴InFiniti, Kanazawa Univ.)
- 1GD012 プラス帯電性ナノバブルが及ぼす神経細胞への影響
 Influence of positively charged nanobubbles to neurons
 ○劉 一帆¹, 大平 猛², 北方 恵美², 原田 慈久², 林 久美子² (¹東京大学 大学院新領域創成科学研究
 科, ²東京大学 物性研究所)
Yifan Liu¹, Takeshi Ohdaira², Emi Kitakata², Yoshihisa Harada², Kumiko Hayashi² (¹Graduate School of
 Frontier Science, The University of Tokyo, ²The Institute for Solid State Physics, The University of Tokyo)

1GE 分子モーター, 核酸: 結合タンパク質, ナノテクノロジー
 Molecular motor, Nucleic acid: binding protein, nanotechnology

座長: 横田 浩章 (光産業創成大学院大学), 坂上 貴洋 (青山学院大学)

Session Chairs: Hiroaki Yokota (Grad. Sch. New Photon. Indust.), Takahiro Sakaue (Aoyama Gakuin Univ.)

15:10~18:10

E 会場 (会議室 201) / Room E (Meeting Room 201)

- 1GE001 YY1 による DNA スーパークラスターの濃度依存的制御
 Concentration-dependent modulation of DNA superclusters by YY1
 ○晏 晞, 寺川 剛 (京都大学 大学院理学研究科)
Xi Yan, Tsuyoshi Terakawa (Graduate School of science, Kyoto University)

- 1GE002 一分子 FRET 分光法が示す SARS-CoV-2 のゲノム RNA の構造
Single molecule FRET spectroscopy reveals the structure of genomic RNA of SARS-CoV-2 virus
Takahiro Kimura^{1,2}, Takuya Katayama^{1,2}, Shinnosuke Saitou^{1,2}, Kamila Putridifa Priyambada¹, Yuuhei Yamano¹, Kazumitsu Onizuka^{1,3}, Fumi Nagatsugi^{1,3}, Shilpi Laha⁴, Athi N Naganathan⁴, Yuji Itoh^{1,2,3}, Satoshi Takahashi^{1,2,3} (¹IMRAM, Univ. Tohoku, ²Grad. Sch. Life Sci., Univ. Tohoku, ³Grad. Sch. Sci., Univ. Tohoku, ⁴IITM)
- 1GE003 シリカナノ液滴による DNA 情報処理系の 3D-固体材料化
3D-Solid Materialization of DNA Data Processing Systems by silica nano droplets
○呉松 健吾, 川野 竜司 (東京農工大学 工学部 生命工学科)
Kengo Kurematsu, Ryuji Kawano (*Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology (TUAT)*)
- 1GE004 異種ポリアミンによる協調/阻害効果: DNA 高次構造転移による遺伝子発現スイッチング制御
Cooperation/inhibition of polyamines on regulation of gene expression switching in relation to higher-order structural changes of DNA
○小川 遥士¹, 西尾 天志^{1,2}, 吉川 祐子¹, 剣持 貴弘¹, 吉川 研一¹ (¹同志社大・院生命医科学, ²産総研・モレキュラーバイオシステム)
Haruto Ogawa¹, Takashi Nishio^{1,2}, Yuko Yoshikawa¹, Takahiro Kenmotsu¹, Kenichi Yoshikawa¹ (¹Grad. Sch. Life and Med Sci., Doshisha Univ., ²MolBiS, AIST)
- 1GE005 *In silico* 解析による GTP 駆動型 F₁-ATPase の設計
Design of GTP-driven F₁-ATPase by *in silico* analysis
○大矢 辰哉¹, 小林 稜平¹, 上野 博史¹, 岡崎 圭一², 野地 博行^{1,3} (¹東大 院工 応化, ²分子科学研究 所, ³東大 プラネタリーヘルス研究機構)
Tatsuya Oya¹, Ryohei Kobayashi¹, Hiroshi Ueno¹, Kei-ichi Okazaki², Hiroyuki Noji^{1,3} (¹Grad. Eng. Appl. Chem., Univ. of Tokyo, ²Institute for Molecular Science, ³RIPH., Univ. of Tokyo)
- 1GE006 複数のプロトン駆動トルク発生ユニットを有する F₀F₁-ATP 合成酵素の設計手法の拡張
Attempt to extend the design strategy for F₀F₁-ATP synthase with multiple proton-driven torque-generating units
○丸井 里駆¹, 上野 博史¹, 野地 博行^{1,2} (¹東京大・院工学, ²東京大・プラネタリーヘルス研究機構)
Riku Marui¹, Hiroshi Ueno¹, Hiroyuki Noji^{1,2} (¹Grad. Sch. Eng., Univ. Tokyo, ²RIPH., Univ. Tokyo)
- 1GE007 axle-less F₁-ATPase の 1 分子回転観察によって発見された新たな回転中間体の解析
A new dwell-time discovery by single-molecule rotation assay of axle-less F₁-ATPase
○内山 友¹, 上野 博史¹, Sobti Meghna^{2,3}, Stewart Alastair G.^{2,3}, 野地 博行^{1,4} (¹東大・院工, ²Mol. Struct. & Comput. Biol. Div., VCCRI, NSW, Australia, ³St Vincent's Clin. Sch., Fac. Med., UNSW Sydney, NSW, Australia, ⁴東大・プラネタリーヘルス研究機構)
Tomo Uchiyama¹, Hiroshi Ueno¹, Meghna Sobti^{2,3}, Alastair G. Stewart^{2,3}, Hiroyuki Noji^{1,4} (¹Grad. Sch. Eng., The Univ. of Tokyo, ²Mol. Struct. & Comput. Biol. Div., VCCRI, NSW, Australia, ³St Vincent's Clin. Sch., Fac. Med., UNSW Sydney, NSW, Australia, ⁴Res. Inst. Planet. Health (RIPH), Univ. Tokyo)
- 1GE008 1 分子計測及び機械学習を用いた高活性 F₁-ATPase の探索
Exploration of high-speed F₁-ATPase with single-molecule assay and machine-learning
○三宅 皓大¹, 小林 稜平¹, 上野 博史¹, 田口 真衣¹, 齋藤 裕², 野地 博行^{1,3} (¹東大・工・応化, ²北里大・未来工・データサイエンス, ³東大・プラネタリーヘルス研究機構)
Kodai Miyake¹, Ryohei Kobayashi¹, Hiroshi Ueno¹, Mai Taguchi¹, Yutaka Saito², Hiroyuki Noji^{1,3} (¹Dep. Appl. Chem., Grad. Sch. Eng., Univ. Tokyo, ²Dep. Data Sci., Sch. Fro. Eng., Univ. Kitasato, ³RIPH, Univ. Tokyo)

- 1GE009 マイコバクテリア ATP 合成酵素における α サブユニット C 末端伸長による阻害メカニズムの解明
Revealing a Unique Inhibitory Mechanism of C-terminal Extension of α -Subunit in
Mycobacterial ATP Synthase
○田村 遼太¹, 渡邊 亮¹, Meghna Sobti^{2,3}, 上野 博史¹, Alastair Stewart^{2,3}, 野地 博行^{1,4} (¹ 東大・院
工学応化, ²Mol. Struct. & Comput. Biol. Div., VCCRI, NSW, Australia, ³St Vincent's Clin. Sch., Fac.
Med., UNSW Sydney, NSW, Australia, ⁴ 東大プラネタリー研究機構)
Ryota Tamura¹, Ryo Watanabe¹, Sobti Meghna^{2,3}, Hiroshi Ueno¹, Stewart Alastair^{2,3}, Hiroyuki Noji^{1,4}
(¹App. Chem., Grad. Sch. Eng., Univ. Tokyo, ²Mol. Struct. & Comput. Biol. Div., VCCRI, NSW, Australia,
³St Vincent's Clin. Sch., Fac. Med., UNSW Sydney, NSW, Australia, ⁴RIPH, Univ. Tokyo)
- 1GE010 計算機で設計したサプレッサー変異による疾患型 KIF1A キネシンの運動性能の改善と神経機能
の修復
Computationally identified suppressors rescue pathogenic mutations in KIF1A kinesin and
restore neurological function
○北 智輝¹, 丹羽 伸介^{1,2} (¹ 東北大・生命科学, ² 東北大・学際研)
Tomoki Kita¹, Shinsuke Niwa^{1,2} (¹Grad. Life. Sci., Tohoku Univ., ²FRIS, Tohoku Univ)
- 1GE011 全原子分子動力学シミュレーションによる F₁-ATPase の 40° サブステップ回転機構の解析
Investigating the 40° substep rotation mechanism of F₁-ATPase using all-atom MD simulations
○本橋 昌大^{1,2}, 宗行 英朗¹, 杉田 有治^{2,3} (¹ 中央大・院理工学, ² 理研・開拓研究所, ³ 理研・計算
科学研究センター)
Masahiro Motohashi^{1,2}, Eiro Muneyuki¹, Yuji Sugita^{2,3} (¹Grad. Sch. Sci. Eng., Univ. Chuo, ²RIKEN
Pioneering Research Institute, ³RIKEN Center for Computational Science)
- 1GE012 DNA オリガミ製ナノスプリングを用いた Kinesin-3 モータータンパク質 KIF1A の力計測
Force measurement of the kinesin-3 motor KIF1A using a programmable DNA origami
nanospring
○高松 宣道^{1,2}, 古元 礼子³, 有賀 隆行⁴, 岩城 光宏^{4,5,6}, 林 久美子² (¹ 東大・院新領域, ² 東大・物
性研, ³ 山口大・院医系, ⁴ 阪大・院生命機能, ⁵NICT・未来 ICT, ⁶ 阪大・IFReC)
Nobumichi Takamatsu^{1,2}, Hiroko Furumoto³, Takayuki Ariga⁴, Mitsuhiro Iwaki^{4,5,6}, Kumiko Hayashi²
(¹Grad. Sch. Frontier Sci., Univ. Tokyo, ²Inst. Solid State Phys., Univ. Tokyo, ³Grad. Sch. Med.,
Yamaguchi Univ., ⁴Grad. Sch. Frontier Biosci., Osaka Univ., ⁵Adv. ICT Res. Inst., NICT, ⁶IFReC, Osaka
Univ.)

1GF 生体膜・人工膜：構造、物性、ダイナミクス、情報伝達
Biological & Artificial membrane: Structure, Property, Dynamics, Signal transduction
座長：末次 志郎（奈良先端科学技術大学院大学）、渡邊 千穂（広島大学）
Session Chairs: Shiro Suetsugu (NAIST), Chiho Watanabe (Hiroshima Univ.)

15:10～18:10

F 会場（会議室 202）／Room F（Meeting Room 202）

- 1GF001 嗅覚受容体と温度感受性チャネル TRPV1 の細胞内クロストークの解析
Investigation of Crosstalk between Olfactory Receptors and TRPV1 Channels
○森山 さくら^{1,2}, 日沼 州司², 黒田 俊一^{1,2} (¹ 大阪大学大学院 生命機能研究科, ² 大阪大学 産業科
学研究科)
Sakura Moriyama^{1,2}, Shuji Hinuma², Shun'ichi Kuroda^{1,2} (¹Graduate School of Frontier Biosciences,
The University of Osaka, ²SANKEN, The University of Osaka)

- 1GF002 **超解像・1分子観察による細胞膜階層構造ドメイン形成機構の解明**
Mechanisms of hierarchical domain organization on cell membranes revealed by super-resolution and single-molecule imaging
○川合 登偉¹, 笠井 倫志², 廣澤 幸一朗^{2,3}, 藤原 敬宏⁴, 楠見 明弘⁵, 横田 康成⁶, 鈴木 健一^{1,2,3}
(¹ 岐阜大院・連農, ² 国立がん研究センター研究所, ³ 岐阜大・iGCORE, ⁴ 京都大・iCeMS, ⁵ 沖縄科学技術大学院大学, ⁶ 岐阜大・工)
Touji Kawai¹, Rinshi S. Kasai², Koichiro M. Hirose^{2,3}, Takahiro K. Fujiwara⁴, Akihiro Kusumi⁵, Yasunari Yokota⁶, Kenichi G. N. Suzuki^{1,2,3} (¹UGSAS, Gifu Univ., ²Natl. Cancer. Ctr. Res. Inst., ³iGCORE, Gifu Univ., ⁴iCeMS, Kyoto Univ., ⁵OIST, ⁶Dept. Eng., Gifu Univ)
- 1GF003 **Development of nanoforce polydiacetylene-based biosensors and tailoring their properties by integrating additives**
Fabiano Altieri^{1,2}, Kaori Sugihara^{2,3} (¹Graduate School of Engineering, University of Tokyo, ²Institute of Industrial Science, University of Tokyo, ³Department of Physical Chemistry, University of Geneva)
- 1GF004 **Synergistic Interaction between LL-37 and HNP-1 for Reducing Cytotoxicity on MDCK-I**
Jing Zhang¹, Yuge Hou¹, Takashi Yasuda², Siu Yu Angela Chow¹, Soshi Ito¹, Mizuho Otuska¹, Yoshiho Ikeuchi¹, Xiang Li², Kaori Sugihara¹ (¹The University of Tokyo, ²Hokkaido University)
- 1GF005 **蛍光脂質を用いた DHA 含有リン脂質の相分離膜に対する影響評価**
Evaluation of the Effects of DHA-Containing Phospholipids on Phase-Separated Membranes Using Fluorescent Derivatives of Phospholipids
○清水 浩太郎¹, 木下 祥尚², 松森 信明¹ (¹九大・院理, ²群大・院理工)
Kotaro Shimizu¹, Masanao Kinoshita², Nobuaki Matsumori¹ (¹Grad. Sch. Sci., Univ. Kyushu, ²Grad. Sch. Sci. & Tech., Univ. Gunma)
- 1GF006 **ミニマル合成細菌 JCVI-syn3B の膜電位計測**
Measurement of membrane potential in the minimal synthetic bacterium JCVI-syn3B
○金森 智士, 木山 花, 信元 健智, 宮田 真人 (大阪公立大・院理学)
Satoshi Kanamori, Hana Kiyama, Kenji Nobumoto, Makoto Miyata (Grad. Sch. Sci., OMU)
- 1GF007 **細胞膜の非対称性と不均一性**
Asymmetry and Heterogeneity in the Plasma Membrane
○山田 哲平¹, 篠田 渉² (¹岡山大・院環境生命自然, ²岡山大・異分野基礎研)
Tepei Yamada¹, Wataru Shinoda² (¹Grad. Sch. Env., Life, Sci. and Tech., Okayama Univ., ²Research Institute for Interdisciplinary Science, Okayama Univ.)
- 1GF008 **Single Amino Acid Drives LL-37/HNP1 Synergy: Unveiling Antimicrobial Peptide Interactions**
Ariane Schwitter¹, Kaori Sugihara² (¹Grad. Sch. Eng., Univ. Tokyo, ²Inst. Ind. Sci., Univ. Tokyo)
- 1GF009 **Bilayer lipid packing effects on the structure and electron transfer activity of cytochrome c oxidase**
Bon Leif Dominguez Amalla¹, Atsuhiko Shimada², Satoshi Nagao³, Hiroyuki Kumeta⁴, Takeshi Uchida^{1,5}, Koichiro Ishimori^{1,5} (¹Grad. Sch. of Chem. Sci. Eng., Hokkaido Univ., ²Fac. of Appl. Biol. Sci., Gifu Univ., ³JASRI, ⁴Fac. of Adv. Life Sci., Hokkaido Univ., ⁵Fac. of Sci., Hokkaido Univ.)
- 1GF010 **マイクロ流体デバイスで作製したリボソームの微小管重合による膜変形制御**
Liposomes synthesized by microfluidic devices change shape in response to microtubule polymerization
○西村 拓真, 石井 裕人, 佐藤 優成, 山岸 雅彦, 矢島 潤一郎 (東京大学・総合文化研究科)
Takuma Nishimura, Hiroto Ishii, Yusei Sato, Masahiko Yamagishi, Junichiro Yajima (Graduate School Art and Science, The University of Tokyo)
- 1GF011 **Machine Learning-Driven Functional Screening of Peptides Using Mechanochromic Lipid Sensors**
Jiali Chen, Kaori Sugihara (IIS., Univ. Tokyo)

- 1GF012 コレラ菌走化性受容体 Mlp24 による GABA および L-オルニチンのリガンド認識機構
Ligand recognition mechanisms of GABA and L-ornithine by the chemoreceptor Mlp24 in *Vibrio cholerae*
○飯田 莉梨香¹, 大森 楓河², 竹川 宜宏³, 西山 宗一郎⁴, 川岸 郁朗^{2,5,6}, 今田 勝巳³ (¹阪大・理,
²法政大・院理工,³阪大・院理,⁴新潟薬大・応用生命,⁵法政大・生命科学,⁶法政大・マイクロ・ナノテクセンター)
Ririka Iida¹, Fuga Omori², Norihiro Takekawa³, So-ichiro Nishiyama⁴, Ikuro Kawagishi^{2,5,6},
Katsumi Imada³ (¹Sch. Sci., Osaka Univ., ²Grad. Sch. Sci. and Engin., Hosei Univ., ³Grad. Sch. Sci.,
Osaka Univ., ⁴Dept. Appl Life Sci, Niigata Univ of Pharm and Appl Life Sci., ⁵Dept. Front Biosci., Hosei
Univ., ⁶Res. Cen. Micro-Nano Tech., Hosei Univ.)

1GG 生命の起源・進化, 理論生物学, バイオイメージング
Origin of life & Evolution, Theoretical biology, Bioimaging

座長: 市橋 伯一 (東京大学), 望月 敦史 (京都大学)

Session Chairs: Norikazu Ichihashi (Univ. Tokyo), Atsushi Mochizuki (Kyoto Univ.)

15:10~18:10

G 会場 (会議室 203) / Room G (Meeting Room 203)

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- 1GG001 Molecular Simulation of Prebiotically Plausible Interactions Between Amino Acids and Fatty Acid Membranes
Taren Ginter^{1,2}, Ryoji Abe^{1,2}, Masayuki Imai³, Akiko Baba³, Wataru Shinoda^{4,5}, Yusuke Miyazaki^{4,5},
Kosuke Fujishima^{1,6} (¹Earth-Life Science Institute, ²Institute of Science Tokyo, School of Life Science and
Technology, ³Tohoku University, Department of Physics, ⁴Okayama University, Research Institute for
Interdisciplinary Science, ⁵Okayama University, Department of Chemistry, ⁶Keio University, Graduate
School of Media and Governance)
- 1GG002 液液相分離系を反応場とした遺伝子の複雑化を伴う進化の実現
Evolution with genomic complexity acquisition under LLPS droplet as a reaction field
○佐々木 弥来¹, 皆川 慶嘉¹, 野地 博行^{1,2} (¹東京大・院工学,²東京大・プラネタリーヘルス研究
機構)
Mirai Sasaki¹, Yoshihiro Minagawa¹, Hiroyuki Noji^{1,2} (¹Grad. Sch. Eng., Univ. Tokyo, ²RIPH., Univ.
Tokyo)
- 1GG003 核酸分子と脂肪酸膜系の相互作用機構および脂肪酸膜系存在下での核酸分子の拡散挙動の全原子
分子動力学シミュレーションを用いた解析
Analysis of the interaction and diffusion behavior of nucleic acid molecules with the fatty acid
membrane system using AA-MD simulations
○安部 稜士¹, ギンター テーレン¹, 藤島 皓介^{1,2,3} (¹東京科学大学 生命理工学院, ²東京科学大学
地球生命研究所, ³慶應義塾大学大学院 政策・メディア研究科)
Ryoji Abe¹, Taren Ginter¹, Kosuke Fujishima^{1,2,3} (¹School of Life Science and Technology, Science
Tokyo., ²Earth-Life Science Institute, Science Tokyo., ³Graduate School of Media And Governance, Keio
University.)
- 1GG004 遺伝子間の量比保存関係を通じた遺伝的摂動効果のグローバルな波及
Global propagation of genetic perturbation effects through stoichiometry conservation
architecture
○千葉 元太¹, 亀井 健一郎¹, 小田 有沙^{1,2}, 太田 邦史^{1,2,3}, 若本 祐一^{1,2,3} (¹東大・院総合文化,²東
大・複雑系生命システム研究センター,³東大・生物普遍性研究機構)
Genta Chiba¹, Ken-ichiro F Kamei¹, Arisa H Oda^{1,2}, Kunihiko Ohta^{1,2,3}, Yuchi Wakamoto^{1,2,3} (¹Grad.
Sch. Arts Sci., Univ. Tokyo, ²Res. Cent. Complex Syst. Biol., Univ. Tokyo, ³UBI, Univ. Tokyo)

- 1GG005 生命システムにおける生体要素間相互作用の一般化勾配流モデルに基づく数値表現
Describing Interaction Dynamics in Living Systems via the Generalized Gradient Flow Model of Adaptive Components
○鈴木 龍之介^{1,2}, 安達 泰治^{1,2,3} (¹京大・医生研,²京大・院工,³京大・院生命)
Ryunosuke Suzuki^{1,2}, Taiji Adachi^{1,2,3} (¹LiMe, Kyoto Univ., ²Grad. Sch. Eng., Kyoto Univ., ³Grad. Sch. Life Sci., Kyoto Univ.)
- 1GG006 機械学習を用いた細胞形状情報とストレスファイバー形成機構を考慮した細胞の牽引力推定
Cell Morphology and Stress Fiber Formation Mechanisms-Informed Traction Force Microscopy Using Machine Learning
○藤原 弘貴¹, 藤川 良祐¹, 鈴木 文丈¹, 鈴木 健大^{1,2}, 作村 諭一^{1,2} (¹奈良先端大・院科学技術,²奈良先端大・データ駆動センター)
Koki Fujiwara¹, Ryosuke Fujikawa¹, Yukihiko Suzuki¹, Kenta T. Suzuki^{1,2}, Yuichi Sakumura^{1,2} (¹Grad. Sch. Sci. Tech., NAIST, ²DSC, NAIST)
- 1GG007 麻酔または光遺伝学制御による生きている線虫 *C. elegans* の赤外イメージング手法の開拓
Development of infrared imaging methods for a living nematode, *C. elegans*, using anesthetics or optogenetic control
○脇田 和佳¹, 伊藤 明子¹, 佐藤 龍², 錦野 達郎^{1,3}, 小柳 光正^{2,4}, 古谷 祐詞^{1,3} (¹名古屋工業大学大学院工学研究科,²大阪公立大学大学院理学研究科,³オプトバイオテクノロジー研究センター,⁴大阪公立大学複合先端研究センター)
Nodoka Wakita¹, Akiko Ito¹, Ryu Sato², Tatsuro Nishikino^{1,3}, Mitsumasa Koyanagi^{2,4}, Yuji Furutani^{1,3} (¹Graduate School of Engineering, Nagoya Institute of Technology, ²Graduate School of Science, Osaka Metropolitan University, ³Optobiotechnology Research Center, ⁴The OMU Advanced Research Institute for Natural Science and Technology, Osaka Metropolitan University)
- 1GG008 X線回折イメージング・トモグラフィーにおける三次元構造精密化手法の開発とデンプン粒子構造解析への応用
Development of structure refinement protocol for XDIT and its application to structure analysis of rice-starch
○原田 康生^{1,4}, 高山 裕貴^{2,4}, 中迫 雅由^{3,4} (¹慶應義塾大学 大学院理工学研究科,²東北大学 国際放射光イノベーション・スマート研究センター,³慶應義塾大学 理工学部 物理学科,⁴理化学研究所 放射光科学研究センター)
Kosei Harada^{1,4}, Yuki Takayama^{2,4}, Masayoshi Nakasako^{3,4} (¹Graduate School of Science and Technology, Keio University, ²International Center for Synchrotron Radiation Innovation Smart, Tohoku University, ³Department of Physics, Faculty of Science and Technology, Keio University, ⁴RIKEN SPring-8 Center)
- 1GG009 超解像顕微鏡による非凍結性低温環境下における不凍タンパク質の細胞部位特異的局在の解析
Subcellular Localization of Antifreeze Proteins in a Non-Freezing Cold Environment Revealed by Super-Resolution Microscopy
○前田 皓丞¹, 内澤 風穂¹, 津田 栄², 相沢 智康^{1,2}, 新井 達也^{1,2} (¹北海道大学 理学部,²北海道大学 先端生命科学研究院)
Kosuke Maeda¹, Kaho Uchizawa¹, Sakae Tsuda², Tomoyasu Aizawa^{1,2}, Tatsuya Arai^{1,2} (¹School of Science, Hokkaido University, ²Faculty of Advanced Life Science, Hokkaido University)
- 1GG010 蛍光ナノ粒子を用いた細胞質の特性計測
Probing cytoplasmic physics with Genetically Encoded Multimeric nanoparticles
○廣兼 空¹, 岡田 康志^{1,2,3} (¹東大・理,²東大・医,³理研 BDR)
Sora Hirokane¹, Yasushi Okada^{1,2,3} (¹Grad. Sch. Sci., Univ. Tokyo, ²Grad. Sch. Med., Univ. Tokyo, ³BDR, Riken)
- 1GG011 神経突起伸長過程におけるシナプス接着分子の蛍光 1 分子追跡による時空間動態解析
Spatiotemporal dynamics analysis of synaptic adhesion molecules during neurite outgrowth by single molecule fluorescence imaging
○佐々木 洗大, 並木 繁行, 浅沼 大祐, 廣瀬 謙造 (東大・院医)
Kodai Sasaki, Shigeyuki Namiki, Daisuke Asanuma, Kenzo Hirose (Grad. Sch. Med., Univ. Tokyo)

- 1GG012 トランススケール生細胞イメージングによる希少細胞融合現象から形成されるハイブリッド腫瘍細胞の動態解析
Visualizing rare cell fusion events leading to hybrid tumor cell formation using trans-scale live-cell imaging
○ラフィダー イッサティ^{1,2}, 福島 俊一², 垣塚 太志^{2,3}, 和沢 鉄一², 市村 垂生³, 熊ノ郷 淳⁴, 永井 健治^{2,3} (¹大阪大学薬学研究科, ²大阪大学産業科学研究所, ³大阪大学先導的学際研究機構, ⁴大阪大学大学院医学系研究科)
Izzati Rafidah^{1,2}, Shun-ichi Fukushima², Taishi Kakizuka^{2,3}, Tetsuichi Wazawa², Taro Ichimura³, Atsushi Kumanogoh⁴, Takeharu Nagai^{2,3} (¹The University of Osaka Graduate School of Pharmaceutical Sciences, ²SANKEN, The University of Osaka, ³OTRI, The University of Osaka, ⁴The University of Osaka Graduate School of Medicine)
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- 1GH 計算生物学: 分子シミュレーション, モデリング
Computational biology: Molecular simulation, Modeling
座長: 奥村 久士 (自然科学研究機構), 川口 一朋 (金沢大学)
Session Chairs: Hisashi Okumura (ExCELLS), Kazutomo Kawaguchi (Kanazawa Univ.)
15:10~18:10
H 会場 (会議室 204) / Room H (Meeting Room 204)
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- 1GH001 分子動力学シミュレーションとアンブレラサンプリングによる神経疾患関連フィラミン A 変異の構造解析
Molecular Dynamics and Umbrella Sampling Reveal Structural Changes in Filamin-A Mutants associated with Neurodegenerative disorders
○伊藤 翔太¹, 辻河 高陽², 佐橋 健太郎¹, 川崎 猛史^{3,4}, 榮 慶丈⁵, 勝野 雅央¹ (¹名古屋大学大学院医学系研究科 総合医学専攻 脳神経病態制御学 神経内科学分野, ²名古屋大学 環境医学研究所 発生遺伝分野, ³大阪大学 D3 センター 大規模計算科学研究部門, ⁴大阪大学大学院理学研究科 物理学専攻, ⁵一般財団法人 高度情報科学技術研究機構)
Shota Ito¹, Koyo Tsujikawa², Kentaro Sahashi¹, Takeshi Kawasaki^{3,4}, Yoshitake Sakae⁵, Masahisa Katsuno¹ (¹Department of Neurology, Nagoya University Graduate School of Medicine, ²Department of Genetics, Research Institute of Environmental Medicine, Nagoya University, ³D3 center, Osaka University, ⁴Department of Physics, Osaka University, ⁵Research Organization for Information Science and Technology)
- 1GH002 脂質漏洩下におけるナノディスク中の膜タンパク質の構造安定性
Effect of Lipid Leakage on the Structural Stability of Membrane Proteins in Nanodiscs
○井上 紗良, 森 貴治 (東理大院・理)
Sara Inoue, Takaharu Mori (Tokyo University of Science)
- 1GH003 AlphaFold で予測された多状態の強化サンプリングに基づくタンパク質の自由エネルギー計算手法の開発
Development of Free Energy Calculation Method Based on Enhanced Sampling of Various Protein Conformations Predicted by AlphaFold
○青木 斗真¹, 重田 育照², 原田 隆平² (¹筑波大学 生命環境学群, ²筑波大学 計算科学研究センター)
Toma Aoki¹, Yasuteru Shigeta², Ryuhei Harada² (¹School of Life and Environmental Sciences, University of Tsukuba, ²Center for Computational Sciences, University of Tsukuba)
- 1GH004 In silico study of transmembrane allosteric effect of CBD on CB1 receptor activation
Vi Toan Lam, Duy Phuoc Tran, Akio Kitao (Institute of Science Tokyo)

- 1GH005 Differences in Conformational Dynamics of Glycans on FcγRIIIb Revealed by Molecular Simulation
Yue Zhang¹, Hirokazu Yagi^{2,3}, Koichi Kato^{2,3}, Takumi Yamaguchi^{1,2,3} (¹*Sch. Materials Sci., JAIST*, ²*Grad. Sch. Pharm. Sci., Nagoya City Univ.*, ³*ExCELLS, NINS*)
- 1GH006 構造に基づく機構的理解：SAM を基質とする求核型・求電子型 PLP 酵素の比較
 Structure-Based Mechanistic Insights into Nucleophilic and Electrophilic PLP Enzymes Using SAM
 ○島田 和樹¹, 淡川 孝義², 寺田 透¹ (¹東大・院農,²理研・環境資源科学研究センター)
Kazuki Shimada¹, Takayoshi Awakawa², Tohru Terada¹ (¹*Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*, ²*CSRS, Riken*)
- 1GH007 Theoretical Study of Drug Resistance Caused by G13D and Q99L Secondary Mutations in KRAS G12C Against Sotorasib and Adagrasib
Riksa Meidy Karim, Kazutomo Kawaguchi, Hidemi Nagao (*Graduate School of Natural Science and Technology, Kanazawa University*)
- 1GH008 細胞スケールの生命現象の解明に向けた新規粗視化分子動力学法の開発
 Innovating Coarse-grained Molecular Dynamics Simulation: beyond Temporal/Spatial Limits
 ○手代木 陽介, 寺田 透 (東大・院農・応生工)
Yosuke Teshirogi, Tohru Terada (*Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*)
- 1GH009 血流中の酸素の拡散のシミュレーション
 Simulation of oxygen diffusion in blood flow
 ○山本 哲也^{1,2}, 野口 博司², Dmitry Fedosov³ (¹慶應大・院理工,²東大物性研,³FZ Jülich)
Tetsuya Yamamoto^{1,2}, Hiroshi Noguchi², Dmitry Fedosov³ (¹*Grad. Sch. Sci. and Tech., Keio Univ.*, ²*ISSP, Univ. Tokyo*, ³*FZ Jülich*)
- 1GH010 De Novo ATPase の触媒活性の合理的改善
 Rational Enhancement of De Novo ATPase Activity
 ○織田 拓也¹, 小杉 貴洋², 林 重彦¹ (¹京都大学大学院理学研究科,²分子科学研究所 協奏分子システム研究センター)
Takuya Orita¹, Takahiro Kosugi², Shigehiko Hayashi¹ (¹*Graduate School of Science, Kyoto University*, ²*Research Center of Integrative Molecular Systems, Institute for Molecular Science*)
- 1GH011 Mesoscale Modeling of Amyloid Formation in Heterogeneous Membraneless Organelles
Kento Fujita, Yusuke Takagi, Eiji Yamamoto (*Grad. Sci., Univ. Keio*)
- 1GH012 メロテルペノイドの生合成経路におけるプレニル基転移酵素 Fur7 の触媒機構の計算的研究
 Computational Study on the Catalytic Mechanism of Prenyltransferase Fur7 in the Biosynthetic Pathway of Meroterpenoids
 ○大村 拓登¹, 趙 凡¹, 森脇 由隆², 野口 智弘¹, 白石 太郎¹, 葛山 智久¹, 寺田 透¹ (¹東大・院農生工,²科学大・難治疾患研)
Takuto Ohmura¹, Fan Zhao¹, Yoshitaka Moriwaki², Tomohiro Noguchi¹, Taro Shiraishi¹, Tomohisa Kuzuyama¹, Tohru Terada¹ (¹*Dept. of Biotechnol., Grad. Sch. of Agri and Life Science., The Univ. of Tokyo*, ²*Med. Res. Lab., Inst. Integr. Res., Science Tokyo*.)

1GI 光生物学：光受容，光合成，生態/環境
 Photobiology: Photoreception, Photosynthesis, Ecology & Environment

座長：栗栖 源嗣 (大阪大学)，三野 広幸 (名古屋大学)

Session Chairs: Genji Kurisu (Osaka Univ.), Hiroyuki Mino (Nagoya Univ.)

15:10~18:10

I 会場 (会議室 205) / Room I (Meeting Room 205)

- 1GI001 紫外光吸収型色覚視物質の構造的洞察
Structural insights into UV sensitivity of mouse SWS1 opsin revealed by low-temperature FTIR spectroscopy
○水野 陽介¹, 新井 想空¹, 神取 秀樹^{1,2}, 片山 耕大^{1,2} (¹名工大 院工, ²名工大 オプトバイオテク ノロジー研究センター)
Yosuke Mizuno¹, Sora Arai¹, Hideki Kandori^{1,2}, Kota Katayama^{1,2} (¹Grad. Sch. Eng., Nagoya inst. Tech., ²OptoBio Technology Research Center, Nagoya inst. Tech.)
- 1GI002 Chrimson に近縁な新奇チャネルロドプシン HulaChrimson の青色シフト吸収スペクトルとその起源
HulaChrimson—a novel channelrhodopsin homologous to Chrimson with a distinctly blue-shifted absorption spectrum
Hiroyuki Takahashi¹, Shunki Takaramoto¹, Takashi Nagata¹, Shai Fainsod², Yoshitaka Kato¹, Andrey Rozenberg², Oded Bějá^{2,3}, Keiichi Inoue¹ (¹The Institute for Solid State Physics, The University of Tokyo., ²Faculty of Biology, Technion — Israel Institute of Technology., ³The Nancy and Stephen Grand Technion Energy Program (GTEP), Technion—Israel Institute of Technology.)
- 1GI003 キラル分光を用いた先祖型 Photoactive Yellow Protein 活性部位の構造解析
Structural analysis of the active site of ancestral photoactive yellow protein using chiral spectroscopy
○尾中 良充¹, Dohmen Rosalie², 藤澤 知績¹, Hoff Wouter D.², 海野 雅司¹ (¹佐賀大・院理工学, ²オクラホマ州立大)
Yoshimitsu Onaka¹, Rosalie Dohmen², Tomotsumi Fujisawa¹, Wouter D. Hoff², Masashi Unno¹ (¹Fuc. Sci. Eng., Saga Univ., ²Dep. Microbiol. Mol. Gen., Oklahoma State Univ.)
- 1GI004 新規チャネルロドプシン ChR024 の長波長光吸収メカニズムおよびイオン透過機構の構造基盤
Structural basis for the red-shifted absorption and the channel conducting mechanism of the novel channelrhodopsin ChR024
○竹野 有香¹, 渡部 誠也², 岸 孝一郎², 但馬 聖也³, 福田 昌弘³, 辻村 真樹⁴, 寶本 俊輝⁵, 伊藤 侑真⁶, 山下 陽⁶, 杉浦 雅大⁶, 金 穂香³, 片山 耕大⁶, 古谷 祐詞⁶, 神取 秀樹⁶, 石北 史^{3,4}, 井上 圭一⁵, 加藤 英明^{1,2,3} (¹東大・院理, ²東大・院総文, ³東大・先端研, ⁴東大・院工, ⁵東大・物性研, ⁶名工大・院工)
Yuka E. Takeno¹, Masaya Watanabe², Koichiro E. Kishi², Seiya Tajima³, Masahiro Fukuda³, Masaki Tsujimura⁴, Shunki Takaramoto⁵, Yuma Ito⁶, Yo Yamashita⁶, Masahiro Sugiura⁶, Suhyang Kim³, Kota Katayama⁶, Yuji Furutani⁶, Hideki Kandori⁶, Hiroshi Ishikita^{3,4}, Keiichi Inoue⁵, Hideaki E. Kato^{1,2,3} (¹Grad. Sch. Sci., Univ. Tokyo, ²Grad. Sch. Arts and Sci., Univ. Tokyo, ³RCAT, Univ. Tokyo, ⁴Grad. Sch. Eng., Univ. Tokyo, ⁵ISSP, Univ. Tokyo, ⁶Grad. Sch. Eng., Nagoya Inst. Tech.)
- 1GI005 L/M 錐体視物質の三次元構造から導く波長制御機構
Unveiling the spectral tuning mechanism through three-dimensional structures of red and green cone pigments
Sayaka Ohashi¹, Kota Katayama^{1,2}, Asato Kojima³, Masahiro Fukuda⁴, Xuchun Yang⁵, Ryoji Suno⁶, Yukihiko Sugita⁷, Nipawan Nuemket^{8,9}, Hiroo Imai¹⁰, So Iwata^{9,11}, Eriko Nango^{9,12}, Takuya Kobayashi⁶, Takeshi Noda⁷, Massimo Olivucci^{5,13}, Hideaki Kato^{3,4}, Hideaki Kandori^{1,2} (¹Life Science and Applied Chemistry, Nagoya Institute of Technology, ²OptoBioTechnology Research Center, ³The Graduate School of Arts and Sciences, The University of Tokyo, ⁴Research Center for Advanced Science and Technology, The University of Tokyo, ⁵University of Siena, ⁶Kansai Medical University, ⁷Institute for Life and Medical Sciences, Kyoto University, ⁸Japan Synchrotron Radiation Research Institute, ⁹RIKEN Spring-8 Center, ¹⁰Center for the Evolutionary Origins of Human Behavior, Kyoto University, ¹¹The Graduate School of Medicine, Kyoto University, ¹²Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, ¹³Bowling Green State University)

- 1GI006 ヘリオロドプシンの光反応ダイナミクスを決める SNaP bond の赤外分光法による水素結合解析
Direct detection of a crucial Hydrogen Bond in Heliorhodopsin, SNaP bond, using Low-Temperature IR Spectroscopy
○中村 敏規¹, Singh Manish¹, 神取 秀樹^{1,2}, 古谷 祐詞^{1,2} (1名古屋工業大学大学院工学研究科生命応用化学専攻, 2名古屋工業大学オプトバイオテクノロジー研究センター)
Toshiki Nakamura¹, Manish Singh¹, Hideki Kandori^{1,2}, Yuji Furutani^{1,2} (1Department of Life Science and Applied Chemistry, Nagoya Institute of Technology, Nagoya, Japan, 2OptoBioTechnology Research Center, Nagoya Institute of Technology, Nagoya, Japan)
- 1GI007 クラゲロドプシンにおける特異な構造変化が示す Gs タンパク質活性化の作用メカニズム
Distinct structural transition in jellyfish rhodopsin reveals the mechanistic basis for Gs protein activation
○犬飼 紫乃¹, 小柳 光正², 永田 崇³, 井上 圭一³, 寺北 明久², 神取 秀樹^{1,4}, 片山 耕大^{1,4} (1名工大・院工, 2大阪公大・院理, 3東大・物性研, 4名工大・オプトバイオテクノロジー研究センター)
Shino Inukai¹, Mitsumasa Koyanagi², Takashi Nagata³, Keiichi Inoue³, Akihisa Terakita², Hideki Kandori^{1,4}, Kota Katayama^{1,4} (1Grad. Sch. Eng., Nagoya Inst. Tech., 2Grad. Sch. Sci., Osaka Met. Univ., 3ISSP, The Univ. Tokyo., 4OptoBioTechnology Research Center, Nagoya Inst. Tech.)
- 1GI008 多周波 EPR による光化学系 II マンガンクラスター S₂g ~ 5 状態の構造と機能の解析
Role of S₂g ~ 5 state in photosystem II manganese cluster revealed by multifrequency EPR
○小崎 慎也¹, 中島 芳樹², 沈 建仁², 三野 広幸¹ (1名大・院理, 2岡山大学・異分野基礎研)
Shinya Kosaki¹, Yoshiki Nakajima², Jian-Ren Shen², Hiroyuki Mino¹ (1Grad. Sch. Sci., Nagoya Univ., 2Res. Inst. Interdiscip. Sci., Okayama Univ.)
- 1GI009 外向きプロトンポンプロドプシンにおける弱有機酸結合の研究
Study of weak organic acid binding on outward proton-pumping rhodopsin
○呂子琨¹, 宝本 俊輝², 井上 圭一^{1,2} (1東京大学 大学院新領域創成科学研究科 物質系専攻, 2東京大学 物性研究所)
Zikun Lyu¹, Shunki Takaramoto², Keiichi Inoue^{1,2} (1The Department of Advanced Materials Science, Graduate School of Frontier Sciences, The University of Tokyo, 2The Institute for Solid State Physics, University of Tokyo)
- 1GI010 内向きプロトンポンプロドプシン NsXeR の新しいプロトン移動メカニズム
A new proton transfer mechanism for inward proton pump rhodopsin NsXeR
○伊藤 侑真¹, 錦野 達郎^{1,2}, 神取 秀樹^{1,2}, 古谷 祐詞^{1,2} (1名工大・院工, 2名工大・オプトバイオ)
Yuma Ito¹, Tatsuro Nishikino^{1,2}, Hideki Kandori^{1,2}, Yuji Furutani^{1,2} (1Department of Life Science and Applied Chemistry, Nagoya institute of technology, 2OptoBioTechnology Research Center, Nagoya institute of technology)
- 1GI011 摂食による細菌のけいれん運動の制御
Controlling Bacterial Twitching Motility by Feeding
Shufeng Zhao¹, Corrado Salvatore², Nozomu Obana³, Andrew Utada⁴ (1Graduate School of Science and technology, University of Tsukuba, Japan, 2Department of Computer Engineering, Modelling, Electronics and Systems Engineering, University of Calabria, Italy, 3Institute of Medicine, University of Tsukuba, Japan, 4Institute of Life and Environment Science, Microbial research Center for Sustainability, and Tsukuba Institute for Advanced Research, University of Tsukuba, Japan)
- 1GI012 油水界面における生物膜の剪断駆動型不安定性
Shear-driven instability in biofilms at oil-water interfaces
Hongtao Zhang¹, Shufeng Zhao¹, Andrew Utada^{2,3,4} (1Graduate School of Life and Earth Sciences, Univ. Tsukuba, 2Institute of Life and Environment Science, Univ. Tsukuba, 3Microbial research Center for Sustainability, Univ. Tsukuba, 4Tsukuba Institute for Advanced Research, Univ. Tsukuba)

1GJ 合成生物学・人工細胞, 計測, その他

Synthetic biology & Artificial cells, Measurements, Miscellaneous topics

座長: 日比野 佳代 (大阪大学), 内橋 貴之 (名古屋大学)

Session Chairs: Kayo Hibino (Osaka Univ.), Takayuki Uchihashi (Nagoya Univ.)

15:10~18:10

J 会場 (会議室 206) / Room J (Meeting Room 206)

- 1GJ001 tRNA array 法による 21 種類の tRNA の in vitro 同時発現
Simultaneous in vitro expression of minimal 21 transfer RNAs by tRNA array method
○宮地 亮多¹, 益田 恵子², 清水 義宏², 市橋 伯一^{1,3,4} (¹東京大院 総合文化研究科 広域科学専攻, ²理研 BDR, ³東京大 先進科学研究機構, ⁴東京大 生物普遍性研究機構)
Ryota Miyachi¹, Keiko Masuda², Yoshihiro Shimizu², Norikazu Ichihashi^{1,3,4} (¹Grad. Sch. Arts Sci., Univ. Tokyo, ²Riken BDR, ³Komaba Institute for Sci., Univ. Tokyo, ⁴Research Center for Complex System Biology, Universal Biology Institute Univ. Tokyo)
- 1GJ002 Versatile control of a minimal synthetic bacterium JCVI-syn3B for morphology and fusion
Muhammad Algiffari¹, Hana Kiyama¹, Yoshiki Tanaka², Makoto Miyata^{1,3} (¹Grad. Sch. Sci., Osaka Metropolitan Univ., ²Dept. Phys., Gakushuin Univ., ³OCARINA, Osaka Metropolitan Univ.)
- 1GJ003 脂質小胞への改変型 β バレルナノポアの再構成手法と分子輸送の検討
Reconstitution method and molecular transport of modified β -barrel nanopore into lipid vesicles
○登坂 俊行, 神谷 厚輝 (群大・院理工)
Toshiyuki Tosaka, Koki Kamiya (Grad. Sch. Sci. & Tech., Gunma Univ.)
- 1GJ004 人工 DNA 皮質構造による GUV 膜における分子分布制御に向けて
Toward regulation of molecular distribution in giant unilamellar vesicles based on artificial DNA cortex
○吉永 琢朗, 佐藤 佑介 (九州工業大学 大学院 情報工学府)
Takuro Yoshinaga, Yusuke Sato (Graduate School of Computer Science and Systems Engineering, Kyushu Institute of Technology)
- 1GJ005 Design of bioluminescent biosensors via enzymatic kinetic contrast: Demonstration with a Cu²⁺ Sensor
Ti Wu^{1,2}, Hossain Md Nadim¹, Mitsuru Hattori¹, Takeharu Nagai^{1,2} (¹SANKEN, The University of Osaka, ²The Graduate School of Pharmaceutical Sciences, The University of Osaka)
- 1GJ006 蛍光ナノダイヤモンドを用いた細胞内温度と粒子拡散の同時計測による細胞内環境の解析
Analysis of the intracellular environment by simultaneous measurement of temperature and particle diffusion using fluorescent nanodiamonds
○加藤 祐基¹, 藤田 恵介², 外間 進悟³, 原田 慶恵^{2,4} (¹阪大理・生物, ²阪大 WPI-PRIME, ³京都工繊 分子化学, ⁴阪大 QIQB)
Yuki S. Kato¹, Keisuke Fujita², Shingo Sotoma³, Yoshie Harada^{2,4} (¹Sch. Sci., Univ. Osaka, ²WPI-PRIME, Univ. Osaka, ³Fac. Mol. Chem. Eng., Kyoto Inst. Tech., ⁴QIQB, Univ. Osaka)
- 1GJ007 液液相分離に基づいた新規マイクロリアクタの開発によるデジタル核酸検出の簡便化の実現
New Microreactors from Aqueous Two-Phase Emulsion for the Simplification of Digital Nucleic Acid Detection
○張 畢澄¹, 友原 貫志², 皆川 慶嘉¹, 野地 博行^{1,3} (¹東京大学大学院工学研究科応用化学専攻, ²Laboratoire Guillaiver, UMR7083 CNRS/ESPCI Paris, ³東京大学プラネタリーヘルス研究機構)
Bicheng Zhang¹, Kanji Tomohara², Yoshihiro Minigawa¹, Hiroyuki Noji^{1,3} (¹Graduate School of Engineering, The University of Tokyo, Tokyo, Japan, ²Laboratoire Guillaiver, UMR7083 CNRS/ESPCI Paris, ³Research Institute of Planetary Health (RIPH), The University of Tokyo)

- 1GJ008 **ハイスループットイメージングによる適応酵素 CheB 細胞内動態の解析**
 Quantification of CheB's behavior in a single cell by high throughput imaging
 ○黒木 陽一, 内田 裕美子, 石島 秋彦, 福岡 創 (阪大・院生命機能研究)
Yoichi Kuroki, Yumiko Uchida, Akihiko Ishijima, Hajime Fukuoka (*Grad. Sch. Front, Biosci., Univ. Osaka*)
- 1GJ009 **原子間力顕微鏡を用いたアフリカツメガエル初期胚の単一細胞力学マッピング測定**
 Mapping Single-Cell Mechanics in *Xenopus laevis* Embryos during Early Development Using Atomic Force Microscopy
 ○山本 実季¹, 小谷 崇博¹, 山元 孝佳², 道上 達男³, 岡嶋 孝治¹ (¹北海道大学・大学院情報科学
 院 / 研究院, ²東京学芸大学・教育学部, ³東京大学・大学院総合文化研究科)
Miki Yamamoto¹, Takahiro Kotani¹, Takayoshi Yamamoto², Tatsuo Michiue³, Takaharu Okajima¹
 (¹*Graduate School / Faculty of Information Science and Technology, Hokkaido University*, ²*Graduate School / Faculty of Education, Tokyo Gakugei University*, ³*Graduate School / Faculty of Arts and Sciences, The University of Tokyo*)
- 1GJ010 **生体内 3D 温度計測技術の開発と応用**
In vivo 3D thermometry by light-field fluorescent nanodiamond microscopy and deep learning
 ○中根 有梨奈¹, 前岡 遥花¹, 高橋 真奈美², 神長 輝一², 田桑 弘之², 白杵 深³, 五十嵐 龍治²,
 杉 拓磨¹ (¹広島大学大学院統合生命科学研究科, ²量子科学技術研究開発機構, ³静岡大学電子工
 学研究所)
Yurina Nakane¹, Haruka Maeoka¹, Manami Takahashi², Kiich Kaminaga², Hiroyuki Takuwa²,
 Shin Usuki³, Ryuji Igarashi², Takuma Sugi¹ (¹*Graduate School of Integrated Sciences for Life, Hiroshima University*, ²*National Institutes for Quantum and Radiological Science and Technology*, ³*Research Institute of Electronics, Shizuoka University*)
- 1GJ011 **Developing a label-free and non-destructive method to resolve single cell transition paths**
Tobias Frick^{1,2}, Katsuyuki Shiroguchi¹ (¹*RIKEN Center for Biosystems Dynamics Research (BDR)*,
²*Osaka University*)
- 1GJ012 **透過型電子顕微鏡によるヒドラとグリーンヒドラの組織構造比較研究**
 Transmission Electron Microscopy Comparative Study of Histological Structure of Hydra and Green Hydra
 ○梁瀬 智輝 (九工大・情報工)
Tomoki Yanase (*Information Engineering, Univ. Kyusyu kougyou*)

1 日目 (9 月 24 日 (水)) / Day 1 (Sep. 24 Wed.)

1EA 核酸：結合タンパク質，ナノテクノロジー
Nucleic acid: binding protein, nanotechnology

座長：西尾 天志 (産総研・モレキュラーバイオシステム)，Archer Richard James (東京科学大)
Session Chairs: Takashi Nishio (MolBis, AIST), Richard James Archer (Inst. Sci. Tokyo)

18:50~20:30

A 会場 (会議室 101+102) / Room A (Meeting Room 101+102)

- 1EA001 細胞サイズ液滴内における DNA 高次構造変化と局在・液滴物性の相関
Higher-order structure of DNA confined in cell-size droplets modulates its localization and droplet material properties
○西尾 天志 (産総研・モレキュラーバイオシステム)
Takashi Nishio (MolBis, AIST)
- 1EA002 Nuclease-induced stepwise photodropping (NISP) to investigate single-stranded DNA degradation behaviors of exonucleases and endonucleases
Hsiufang Fan (National Sun Yat-sen University, Kaohsiung, Taiwan)
- 1EA003 Modulation of RNA transcription through DNA condensates reactions' encapsulation as a model for Chromatin micro rheology studies
Nathan Evangelista¹, Takahiko Chimura², Masahiro Takinoue^{1,2,3} (¹Dept. of Life Sci. and Tech., Inst. of Science Tokyo, ²Dept. of Comp. Sci., Inst. of Science Tokyo, ³Research Center for Autonomous Systems Materialogy (ASMat), Inst. of Integrated Research (IIR), Inst. of Science Tokyo)
- 1EA004 Dynamic assembly of complex hierarchical DNA polymer networks by biomolecular active agents
Farhana Afroze¹, Richard James Archer^{2,6}, Mahammad Mustakim³, Rakesh Das⁴, Arif Md. Rashedul Kabir¹, Yuuto Miura¹, Rubaya Rashid⁵, Tetsuya Hiraiwa³, Shin-ichiro M. Nomura², Shogo Hamada^{6,7}, Akira Kakugo^{1,5} (¹Department of Chemistry, Hokkaido University, Sapporo, Japan., ²Department of Robotics, Tohoku University, Sendai, Japan., ³Institute of Physics, Academia Sinica, Taipei, Taiwan, ⁴Max Planck, Institute for the Physics of Complex Systems, Dresden, Germany., ⁵Department of Physics and Astronomy, Kyoto University, Kyoto, Japan., ⁶Department of Computer Science, Institute of Science Tokyo, Yokohama, Japan., ⁷Biomolecular Design Institute, CBI Research Institute, Tokyo, Japan.)

1EB バイオイメージング，計測
Bioimaging, Measurement

座長：山崎 健 (金沢大・ナノ生命科学研究所)，楊 倬皓 (東大・先端研)
Session Chairs: Takeru Yamazaki (WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa Univ.), Zhuohao Yang (RCAST, Univ. Tokyo)

18:50~20:30

B 会場 (会議室 103+104) / Room B (Meeting Room 103+104)

- 1EB001 FLIM による温度測定のために粘度応答を抑制した赤色蛍光温度計
Red Fluorescent Thermometer with Suppressed Viscosity Response for FLIM-based Thermometry
○山崎 健¹, 山澤 徳志子², 平田 修造³, 新井 敏¹ (¹ 金沢大・ナノ生命科学研究所, ² 東京慈恵医大・基盤研究施設, ³ 東京電通大・院情報理工)
Takeru Yamazaki¹, Toshiko Yamazawa², Syuzo Hirata³, Satoshi Arai¹ (¹WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa Univ., ²Core Research Facilities, The Jikei Univ. Sch. of Med., ³Dept. of Eng. Sci., Univ. of Electro-Commun.)
- 1EB002 The maturation state of dengue virus particles affects their structural dynamics and nanomechanical properties
Steven John McArthur, Kenichi Umeda, Noriyuki Kodera (*Nano Life Science Inst., Kanazawa Univ.*)
- 1EB003 Comprehensive profiling of single-cell proteome based on 3D single-molecule imaging
Latifa Kamarulzaman^{1,2}, Sooyeon Kim¹, Takuya Hidaka⁴, Yuichi Taniguchi^{1,2,3} (¹Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University, ²Graduate School of Frontier Biosciences, The University of Osaka, ³Graduate School of Biostudies, Kyoto University, ⁴Institute of Molecular Biotechnology of the Austrian Academy of Sciences (IMBA), Vienna BioCenter (VBC))
- 1EB004 Single aptamer-modified DNA origami nanopore for specific chemical detection
Hiromu Akai, Kan Shoji (*Nagaoka University of Technology*)
- 1EB005 Pixel-Wise Deconvolution of Antibody Binding Kinetics Enables Visualization of Instantaneous Secretion Dynamics
Zhuohao Yang¹, Takashi Kamatani², Mai Yamagishi³, Nobutake Suzuki¹, Yuto Kurisu⁴, Takashi Funatsu^{1,5}, Yasuyuki Ozeki¹, Yoshitaka Shirasaki¹ (¹RCAST, Univ. Tokyo, ²Inst. Integrated Res., Inst. Sci. Tokyo, ³Live Cell Diagnosis, Ltd., ⁴Grad. Sch. Pharm. Sci., Univ. Tokyo, ⁵Grad. Sch. Integrated Sci. for Life, Hiroshima Univ.)

1EC 細胞生物学的課題, 分子モーター, 非平衡
Cell biology, Molecular motor, Nonequilibrium

座長: 藤瀬 賢志郎 (金沢大・医薬保健研究域・医), 新谷 正嶺 (中部大学 生命健康科学部 生命医科学科)
Session Chairs: Kenshiro Fujise (Dept. FSIR, Faculty of Medicine, Kanazawa Univ.),

Seine A. Shintani (Department of Biomedical Sciences, College of Life and Health Sciences, Chubu University)

18:50~20:30

C 会場 (会議室 105+106) / Room C (Meeting Room 105+106)

- 1EC001 細胞内再構成アプローチによるドーパミンシナプス小胞の形成機構の解析
Distinct synaptic vesicle populations in dopaminergic neurons: insights into organization and sorting by *in cellulo* reconstitution assay
○藤瀬 賢志郎¹, ニーシャ モハド ラフィク², ピエトロ デカミリ³, 齋藤 敦¹ (¹ 金沢大・医薬保健研究域・医, ² テュービンゲン大・学際的生理学, ³ イェール大・医・神経科学)
Kenshiro Fujise¹, Nisha Mohd Rafiq², Pietro De Camilli³, Atsushi Saito¹ (¹Dept. FSIR, Faculty of Medicine, Kanazawa Univ., ²IFIB, Univ Tübingen, Germany, ³Dept Neurosci, YSM, Yale Univ, USA)
- 1EC002 「遅い」キネシンから「速い」キネシンへのギアチェンジにより実現される高速・高効率な軸索輸送メカニズム
Gear change to go through: Cooperation of two different kinesins enables fast and efficient axonal transport
○岩崎 奏子^{1,2}, 岩城 光宏^{2,3}, 岡田 康志^{1,2} (¹ 東京大・院医学, ² 理研 生命機能科学研究センター, ³ 情報通信研究機構)
Kanako Iwasaki^{1,2}, Mitsuhiro Iwaki^{2,3}, Yasushi Okada^{1,2} (¹Grad. Sch. Med., Univ. Tokyo, ²BDR, Riken, ³NICT)

- 1EC003 **がん細胞の増殖と免疫逃避を担う、液状ナノ信号プラットフォームの発見**
 Nano-liquid signaling platform responsible for both cancer cell growth and immune evasion
Taka-aki Tsunoyama¹, Christian Hoffmann², Daiki Sasaki¹, Bo Tang¹, Koichiro M Hirose³,
 Yuri L Nemoto⁴, Rinshi S Kasai⁵, Takahiro K Fujiwara⁶, Kenichi GN Suzuki^{3,5,6}, Reinhard Fässler⁷,
 Hiroki Ishikawa¹, Dragomir Milovanovic², Akihiro Kusumi^{1,6} (¹OIST, ²DZNE, ³iGCORE, Gifu Univ.,
⁴Biosig. Res. Cent., Kobe Univ., ⁵Div. Adv. Bioimag., Natl. Cancer Cent. Res. Inst., ⁶WPI-iCeMS, Kyoto
 Univ., ⁷Max Planck Inst. Biochem.)
- 1EC004 **拍動心筋サルコメアに潜む秩序とカオスの動的恒常性**
 Localized Chaos within Periodic Beating of Cardiomyocyte Sarcomeres: Evidence for Chaordic
 Homeodynamics
 ○新谷 正嶺^{1,2,3} (¹ 中部大学 生命健康科学部 生命医科学科, ² 中部大学 AI 数理データサイエンス
 センター, ³ 名古屋大学 高等研究院)
Seine A. Shintani^{1,2,3} (¹Department of Biomedical Sciences, College of Life and Health Sciences, Chubu
 University, ²Center for Mathematical Science and Artificial Intelligence, Chubu University, ³Institute for
 Advanced Research, Nagoya University)

1ED **生体膜, 合成生物学, 理論生物学**
 Biological membrane, Synthetic biology, Theoretical biology

座長: 栗栖 実 (東北大・院理物理), 木幡 愛 (科学大・生命理工)
 Session Chairs: Minoru Kurisu (Dept. Physics, Grad. Sch. Sci., Tohoku Univ.),
 Ai Kohata (Sch. Life Science and Technology, Science Tokyo)

18:50~20:30

D 会場 (会議室 107+108) / Room D (Meeting Room 107+108)

- 1ED001 **浸透圧を利用して出芽型分裂するベシクル系の開発**
 Osmotic spawning vesicle
 ○栗栖 実, 今井 正幸 (東北大・院理物理)
Minoru Kurisu, Masayuki Imai (Dept. Physics, Grad. Sch. Sci., Tohoku Univ.)
- 1ED002 **PDA-Based Microfluidic Sensor for pathogenic bacteria Detection**
Bratati Das, Kaori Sugihara (Institute of Industrial Science, The university of Tokyo)
- 1ED003 **グラフによる生態系の定常分布と応答の表現**
 Diagrammatic expressions for steady-state distribution and static responses in population
 dynamics
 ○片山 康矢, 永山 龍那, 伊藤 創祐 (東大理)
Koya Katayama, Ryuna Nagayama, Sosuke Ito (Dept. of Phys., U Tokyo)
- 1ED004 **界面活性剤の自己集合化による水面に浮かぶ油滴の自律的な振動**
 Spontaneous oscillation of oil droplets on water surface by self-assembly of surfactants
 ○木幡 愛¹, 山田 雄平², 前田 真吾^{2,3}, 金原 数^{1,2} (¹ 科学大・生命理工, ² 科学大・総合・自律シス
 テム材料科学研究センター, ³ 科学大・工)
Ai Kohata¹, Yuhei Yamada², Shingo Maeda^{2,3}, Kazushi Kinbara^{1,2} (¹Sch. Life Science and Technology,
 Science Tokyo, ²ASMat, IIR, Science Tokyo, ³Sch. Mechanical Engineering, Science Tokyo)

1EE 計算生物学: 分子シミュレーション, モデリング
Computational biology: Molecular simulation and modeling

座長: ジェラン ムハマド ディルガンタラ (医薬基盤・健康・栄養研究所 AI健康・医薬研究センター),
Fan Shujie (Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences)

Session Chairs: Jelang Muhammad Dirgantara (Laboratory of In Silico Design, Artificial Intelligence Center
for Health and Biomedical Research, National Institutes of Biomedical Innovation, Health and
Nutrition, Osaka, Japan),
Shujie Fan (Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences)

18:50~20:30

E会場 (会議室 201) / Room E (Meeting Room 201)

- 1EE001 親和性を越えて: ペプチドの親和性と生物学的機能との関係性の解明
To Affinity and Beyond: Investigating the Relationship Between Peptide Affinity and Biological Functions
Jelang Muhammad Dirgantara¹, Takuto Nogimori², Kazuma Kiyotani³, Takuya Yamamoto²,
Suyong Re¹ (¹Laboratory of In Silico Design, Artificial Intelligence Center for Health and Biomedical
Research, National Institutes of Biomedical Innovation, Health and Nutrition, Osaka, Japan, ²Laboratory
of Precision Immunology, Center for Intractable Diseases and ImmunoGenomics, National Institutes of
Biomedical Innovation, Health and Nutrition, Osaka, Japan, ³Laboratory of Immunogenomics, Center
for Intractable Diseases and ImmunoGenomics, National Institute of Biomedical Innovation, Health and
Nutrition, Osaka, Japan)
- 1EE002 Bayesian Inference of the Transport Mechanism of the Zn²⁺/H⁺ Antiporter YjiP from Microscale
Thermophoresis and Simulations
Shujie Fan¹, David L. Stokes³, Oliver Beckstein² (¹Institute of Organic Chemistry and Biochemistry,
Czech Academy of Sciences, ²Dept. of Physics, Arizona State University, ³Dept. of Cell Biology, NYU
School of Medicine)
- 1EE003 An Integrative Computational Framework Using Sequence, Structural, and Functional Analyses
to Predict Novel Pathogenic Troponin C Mutants
Pooja Pradipta Bandyopadhyay (School of Computational and Integrative Sciences, Jawaharlal Nehru
University, New Delhi- 110067)
- 1EE004 演題取り下げ Withdrawn
- 1EE005 Learning Transcription Machinery from Minimal Model, Molecular Dynamics, Genome Profiling,
and Directed Evolution
Carmen Masri¹, Biao Wan², Liqiang Dai², Chao E³, **Jin Yu**¹ (¹Department of Physics and Astronomy,
University of California-Irvine, USA, ²Wenzhou Institute, UCAS, Wenzhou, Zhejiang, China, ³Beijing
Computational Science Research Center, Beijing, China)

3 日目（9 月 26 日（金））／Day 3（Sep. 26 Fri.）

3HL

オーガナイザー：上久保 裕生（奈良先端科学技術大学院大学）、安原 主馬（奈良先端科学技術大学院大学）、
末次 志郎（奈良先端科学技術大学院大学）、作村 諭一（奈良先端科学技術大学院大学）

Organizers: Hironari Kamikubo (NAIST), Kazuma Yasuhara (NAIST), Shiro Suetsugu (NAIST),
Yuichi Sakumura (NAIST)

09:00～11:45

D 会場（会議室 107+108）／Room D（Meeting Room 107+108）

- 3HL0900 NARAKITA 放置竹林拡大問題解決プロジェクト～竹コンポスト開発への道のり～
NARAKITA Project to Address the Expansion Abandoned Bamboo Forests: The Road to
Bamboo Compost Development
老本 蓮叶, 谷 明琉乃, 田口 主馬, ○仲村 慶大, 山本 優果, 河野 友乃助, 武内 菜穂子（奈良県立奈良
北高等学校）
Rento Oimoto, Aruno Tani, Kazuma Taguchi, **Keita Nakamura**, Yuka Yamamoto, Yunosuke Kono,
Nahoko Takeuchi (*Nara Prefectural Narakita Senior High School*)
- 3HL0915 チャコウラナメクジのカフェインに対する忌避反応を用いた作物への食害防除
Prevention of crop damage using *Ambigolimax valentianus*' repellent reaction to caffeine
○高原 佑真, 飯沼 快友, 塩見 岳（奈良県立奈良北高等学校）
Yuma Takahara, Kaito Iinuma, Gaku Shiomi (*Nara Prefectural Narakita Senior High School*)
- 3HL0930 奈良学園の里山における地下水と植生の関係
Investigation the relationship between the distribution of the groundwater and the ground
vegetation at satoyama in Naragakuen High School
○手塚 陽琉, 安田 悠人, 畠 隆喜, 西田 有希（奈良学園高等学校）
Ataru Tezuka, Haruto Yasuda, Takayoshi Hazama, Yuki Nishida (*Naragakuen High School*)
- 3HL0945 深部静脈血栓症の発生病因子の定量的評価
Quantitative Evaluation of Risk Factors for Deep Vein Thrombosis
○高瀬 祐理菜（西大和学園高等学校）
Yurina Takase (*Nishiyamato Gakuen High School*)
- 3HL1000 プラナリアの再生における活性酸素の二面的機能の評価
Evaluation of the Dual Functions of Reactive Oxygen Species in Planarian Regeneration
○高島 柚衣, 山田 壮真, 王 銳瑾萱（西大和学園高等学校）
Yui Takashima, Soma Yamada, Ruikinshinn Ou (*Nishiyamato Gakuen High School*)
- 3HL1015 学校設備を用いた酵母菌 (*Saccharomyces cerevisiae*) のコールドスリープ条件の検討
Investigation of conditions for the freeze tolerance of *Saccharomyces cerevisiae* using school
facilities
○高木 宏輔, 辻 翔成, 錦 一磨, 濱田 勝太, 阮 曉米（西大和学園高等学校）
Kosuke Takagi, Shosei Tsuji, Kazuma Nishiki, Shota Hamada, Xiaomi Ruan (*Nishiyamato Gakuen High School*)
- 3HL1030 葛乳酸菌と植物性ミルクでヨーグルトをつくる ～完全なゲル化を達成する条件の検討～
Make yogurt with kudzu lactobacillus and plant milk～Investigation of conditions to achieve
complete gelation～
○奥田 桃加, 川崎 愛花里, 川本 紗弥（奈良県立青翔高等学校）
Momoka Okuda, Akari Kawasaki, Saya Kawamoto (*Nara Prefectural Seisho Senior High School*)

- 3HL1045 ヤマトマナの高亜鉛化
The increasing zinc content of Yamatomana and the number of days of zinc treatment
○島村 冴矢, 阪口 裕哉, 吉川 英里, 田邊 あゆ美 (奈良県立青翔高等学校)
Saya Shimamura, Yuya Sakaguchi, Eri Yoshikawa, Ayumi Tanabe (*Nara Prefectural Seisho Senior High School*)
- 3HL1100 アンモニア中のバクテリアの行動の観察
Observation of Bacterial Behavior in Ammonia
○幸田 稜平, 本道 主樹, 濱田 理公, 中田 俊壺 (石川県立小松高等学校)
Ryohei Kouta, Kazuki Hondou, Riku Hamada, Shunichi Nakada (*Komatsu high school*)
- 3HL1115 タンパク質の主鎖原子の温度因子が高いとペプチド結合が歪みすぎてしまう？
When the temperature factor of the main chain atoms in a protein molecule is high, does the peptide bond become more twisted?
○島田 明星¹, 國井 真帆¹, 茶竹 俊行², 大原 高志³, 千葉 かおり¹ (¹茨城高専, ²京大 複合研, ³原科研 J-PARC センター)
Akari Shimada¹, Mahan Kunii¹, Toshiyuki Chatake², Takashi Ohhara³, Kaori Chiba¹ (*¹Indust. Eng. Natl. Inst. Tech, Ibaraki Coll. Japan, ²KURNS, Kyoto Univ., ³J-PARC, JAEA*)
- 3HL1130 β バレル型タンパク質の生合成におけるループの DGG 配列がもつ折り目効果
ORIME effect of the DGG sequence on the loop in the biosynthesis of β-barrel proteins
○田上 大輝¹, 大島 広夢¹, 星野 大², 鈴木 喜大³, 千葉 かおり¹ (¹茨城高専, ²京大・薬, ³農研機構)
Daiki Tagami¹, Hiromu Ohshima¹, Masaru Hoshino², Nobuhiro Suzuki³, Kaori Chiba¹ (*¹Indust. Eng. Natl. Inst. Tech, Ibaraki Coll., ²Pharm., Kyoto Univ., ³NARO*)

1 日目 (9 月 24 日 (水)) / Day 1 (Sep. 24 Wed.) 13:00 ~ 15:00

01A. タンパク質：構造 / 01A. Protein: Structure

- 1Pos001 Mutation Effect of Terpene Cyclase CotB2 Revealed by Ambient Temperature Crystallography
Atika Nur Rochmah¹, Takaaki Fujiwara¹, Tomohiko Kuzuyama², Eriko Nango¹ (¹*Grad. Sch. Sci., Univ Tohoku*, ²*Grad. Sch. Agr. Life. Sci., Univ. Tokyo*)
- 1Pos002 クライオ電子顕微鏡を用いたヒトパネキシン 3 チャンネルの脂質ナノディスク中での構造解析
Cryo-EM structure of human Pannexin-3 in lipid nanodiscs
Shota Kawaguchi¹, Shota Suzuki², Koki Nishikawa³, Yoshinori Fujiyoshi², Atsunori Oshima^{1,4} (¹*Grad. Sch. PharmSci., Nagoya Univ.*, ²*CeSPL, Inst. Integrated Research, Inst. Science Tokyo*, ³*Tokyo Univ. Agri. and Tech.*, ⁴*CeSPI, Nagoya Univ.*)
- 1Pos003 生細胞内での近接ラベリング法で検出された RAF 複合体の分子構成
Molecular composition of RAF kinase complexes in living cells revealed by proximity labeling
Kenji Okamoto, Yasushi Sako (*RIKEN PRI*)
- 1Pos004 Structural rearrangement of DNMT3B driven by histone modifications stimulates its DNA methylation activity
Cho Chao-Cheng¹, Chu Woei-Chyn², **Hanna S. Yuan**¹ (¹*Academia Sinica*, ²*National Yang Ming Chiao Tung University*)
- 1Pos005 Structural insight into the mechanism of amyloid fibril formation by hen egg-white lysozyme
Haruka Kawabata¹, Yan Li^{2,3}, Haruka Umezawa¹, Yuxi Lin², Naito Ishimoto¹, Yunseok Heo², Jae-Hyun Park^{1,4}, Jeremy R.H. Tame¹, Young-Ho Lee^{2,5,6,7,8}, Sam-Yong Park¹ (¹*Graduate School of Medical Life Science, Yokohama City University*, ²*Biopharmaceutical Research Center, Korea Basic Science Institute (KBSI)*, ³*Research Institute of Biomedical and Health Science, Konkuk University*, ⁴*Department of Molecular Cell Biology, Sungkyunkwan University*, ⁵*Bio-Analytical Science, University of Science and Technology (UST)*, ⁶*Graduate School of Analytical Science and Technology, Chungnam National University*, ⁷*Department of Systems Biotechnology, Chung-Ang University (CAU)*, ⁸*Frontier Research Institute for Interdisciplinary Sciences (FRIS)*)
- 1Pos006 集光アンテナ複合体であるフィコビリソームの高分解能構造解析に向けた取り組み
Approaches to high-resolution structural analysis of the phycobilisome, a photosynthetic light-harvesting antenna complex
Yuya Fujita^{1,2}, Soichiro Seki², Akihiro Kawamoto^{1,2}, Yuu Hirose³, Genji Kurisu^{1,2} (¹*The University of Osaka, Grad. Sch. Engineering, Japan*, ²*The University of Osaka, Institute for Protein Research (IPR), Japan*, ³*Toyohashi University of Technology, Grad. Sch. Engineering, Applied chemistry and Life science, Japan*)
- 1Pos007 Co-crystal structure of a human 8-oxoguanine DNA glycosylase with photocaged substrate toward time-resolved crystallography
Momoko Yumita¹, Tomoki Imura¹, Yuhei Hosokawa², Kai-Chun Yang², Hsuan-Yu Shih², Manuel Maestre-Reyna², Junpei Yamamoto¹ (¹*Graduate School of Engineering Science, Osaka University Department of Chemistry*, ²*National Taiwan University*)
- 1Pos008 Structural basis for the mechanisms of complex assembly by the Influenza A virus nucleoprotein and importin
Haruka Umezawa (*Yokohama City Univ., Medical Life Science, Drug Design Lab.*)
- 1Pos009 巨大マルチドメインタンパク質の構造予測
Structure prediction of large multidomain proteins
Ryota Kobayashi¹, Suguru Fujita¹, Yoshitaka Moriwaki², Tohru Terada¹ (¹*Grad. Sch. Agri. and Life Sci., Univ. Tokyo*, ²*Med. Res. Lab., Inst. Integr. Res., Science Tokyo*)

- 1Pos010 Improved Resolution of *Enterococcus hirae* V-ATPase by cryo-EM: Structural Insights into the Full Complex
Yuan-E Lee¹, Raymond N. Burton-Smith^{1,2}, Akihiro Otomo^{2,3}, Kano Suzuki⁴, Tsukasa Nakamura⁵, Toshio Moriya⁵, Takeshi Murata⁴, Ryota Iino^{2,3}, Kazuyoshi Murata^{1,2} (¹ExCELLS/NIPS, Okazaki, ²SOKENDAI, Okazaki, ³IMS, Okazaki, ⁴Chiba University, Chiba, ⁵KEK, Tsukuba)
- 1Pos011 Crystal structure elucidation of *Rubricoccus marinus* halorhodopsin
Naithok Khachuk Debbarma¹, Takaaki Fujiwara^{1,2}, Eriko Nango^{1,2} (¹Grad. Sch. Life Sci., Univ. Tohoku, ²IMRAM, Univ. Tohoku)

01B. タンパク質：物性（安定性、折れたたみなど） / 01B. Protein: Physical property

- 1Pos012 Kinetic Analysis of heparin-induced fibrillation of α -synuclein
Takashi Ohgita, Norihiro Namba, Nao Minami, Hiroyuki Saito (Kyoto Pharm. Univ.)
- 1Pos013 Rose Bengal を用いたタンパク質凝集プロセスの評価
 Evaluation of Protein Aggregation Process Using Rose Bengal
Gen Takebe¹, Shigetoshi Okazaki¹, Heidi Ottevaere² (¹Hamamatsu Photonics K.K., ²Department of Applied Physics and Photonics, Vrije Universiteit Brussel)
- 1Pos014 残基間距離と局所環境の相関によるアデニル酸キナーゼのアロステリックコミュニケーション経路の同定
 Allosteric communication pathway within adenylate kinase elucidated by correlation between interresidue distances and local environments
Shinichi Kurino, Tomoki P. Terada (Dept. Appl. Phys., Grad. Sch. Eng., Nagoya Univ.)
- 1Pos015 VCD を用いたスパイクタンパク質フラグメントのアミロイド多形性および超分子キラリティの解析
 Amyloid Polymorphism and Supramolecular Chirality in Spike Protein Fragment as Studied by Vibrational Circular Dichroism
Shunsaku Nagai¹, Hisako Sato², Izuru Kawamura¹ (¹Grad. Sch. Sci., Yokohama Natl Univ., ²Sch. Sci., Univ. Ehime)
- 1Pos016 フッ素化アミノ酸を用いた膜貫通イオンチャネルの設計と特性評価
 Design and characterization of transmembrane ion-channel peptide containing fluorinated amino acids
Keiya Saito¹, Daisuke Sato², Peng Zugui³, Ai Niitsu⁴, Ryuji Kawano³, Izuru Kawamura¹ (¹Grad. Sch. Eng. Sci., Yokohama Natl. Univ., ²Inst. Sci. Eng., Ibaraki Univ., ³Inst. Eng., Tokyo Univ. of Agri. & Tech., ⁴Yokohama Inst., Riken)
- 1Pos017 Gum Ghatti の乳化微粒子構造の解析
 Structural Analysis of Emulsified Nanoparticles of Gum Ghatti
Kento Yonezawa^{1,2}, Sawa Fusamae², Yuya Iwao², Ryuki Iida², Shoma Igarashi², Naoya Sagawa³, Keigo Kinoshita³, Yoichi Yamazaki², Sachiko Toma², Hironari Kamikubo^{1,2} (¹NAIST, CDG, ²NAIST, M.S., ³San-Ei Gen F.F.I., inc.)
- 1Pos018 エピガロカテキンガレートが LDL の物性に与える影響
 Effect of the binding of epigallocatechin gallate to LDL on physical properties of LDLs
Seiji Takeda, Moeke Kitagawa, Naoya Ishihara, Takahisa Hiruma (Faculty Pharm. Sci. Hokkaido Univ. Sci.)
- 1Pos019 シアノバクテリアの概日リズムを司る Kai 時計タンパク質の会合解離挙動
 Association-dissociation behavior of Kai-clock proteins regulating cyanobacterial circadian rhythm
Ken Morishima, Ritsuki Sakamoto, Rintaro Inoue, Masaaki Sugiyama (KURNS, Kyoto Univ.)

- 1Pos020 Molecular Dynamics Study on the Taste-Recognition Mechanism of Human Taste Receptor Heterodimers
Yu Yamamori, Rikuri Morita, Yasuteru Shigeta, Ryuhei Harada (*center of computational science, University of Tsukuba*)
- 1Pos021 Structural and functional characterization of novel ice-binding protein isoforms discovered via genome and transcriptome analyses
Tatsuya Arai^{1,2}, Kaho Uchizawa², Kosuke Maeda², Sakae Tsuda¹, Tomoyasu Aizawa^{1,2} (¹*Faculty of Advanced Life Science, Hokkaido University*, ²*School of Science, Hokkaido University*)
- 1Pos022 Effect of phospholipid composition on binding behavior of α -synuclein to lipid membranes
Norihiro Namba, Shiori Ariyoshi, Honori Shiroshita, Takashi Ohgita, Hiroyuki Saito (*Kyoto Pharm. Univ.*)
- 1Pos023 KaiC のリン酸化率に依存した KaiC-KaiA 結合強度の変化
 Phosphorylation-Level-Dependent Changes in KaiC–KaiA Binding Strength
Arisa Nakao¹, Risako Aoyama¹, Yoichi Yamazaki¹, Shuji Akiyama^{2,3}, Kento Yonezawa^{1,4}, Hironari Kamikubo^{1,4} (¹*NAIST, MS*, ²*CIMos, IMS*, ³*SOKENDAI*, ⁴*NAIST, CDG*)
- 1Pos024 Biochemical assay development for kinetic analysis of ATPase cycle of KaiC
Yasuhiro Onoue¹, Yoshihiko Furuie^{1,2}, Shuji Akiyama^{1,2} (¹*Institute for Molecular Science, NINS*, ²*The Graduate University for Advanced Studies (SOKENDAI)*)
- 1Pos025 トリプシン様蛋白質分解酵素のプロペプチド領域による酵素活性阻害機構
 Mechanism of Enzyme Activity Inhibition by the Propeptide Region of a Trypsin-Like Protease
Orika Ashida¹, Nana Sakata¹, Kairi Ogawa¹, Miki Matsuzaki¹, Mitsuhiro Miyazawa², Shigeru Shimamoto¹, Yuji Hidaka¹ (¹*Grad. Sch. Sci. Eng., Univ. Kindai*, ²*PrevenTec Inc.*)
- 1Pos026 メダカ由来プロスタグランジン結合蛋白質とリボフラビンの相互作用解析
 Interaction analysis of medaka prostaglandin binding protein with riboflavin
Kazuki Mitani¹, Koichi Uegaki², Shigeru Shimamoto¹ (¹*Faculty of Science and Engineering, Kindai University*, ²*Faculty of Agriculture, Kindai University*)
- 1Pos027 リポカリン型プロスタグランジン D 合成酵素の系統解析
 Phylogenetic and Functional Analysis of Lipocalin-type Prostaglandin D Synthase
Kodai Nakamoto, Chinatsu Noma, Kei Iida, Shigeru Shimamoto (*Faculty of Science and Engineering, Kindai University*)

- 1Pos028 マルチドメインタンパク質のダイナミクスを特徴づける粗視化アプローチ
 A coarse-grained approach to characterizing the dynamics of multi-domain proteins
Chigusa Kobayashi¹, Yuji Sugita^{1,2} (¹*RIKEN R-CCS*, ²*RIKEN PRI*)
- 1Pos029 リン酸結合タンパクを含む液滴チャンバーアレイにより高感度で検出する F₁-ATPase および PPase からの無機リン酸解離
 Highly sensitive detection of phosphate released from F₁-ATPase and PPase using phosphate-binding protein in droplet chamber arrays
Waren Imaoka¹, Tomohiro Aoyama¹, Yoshihiro Minagawa², Hiroshi Ueno², Nobukiyo Tanaka¹, Hiroyuki Noji², Tomoko Msaik¹ (¹*Dept. Appl. Biol. Sci., Tokyo Univ. Sci.*, ²*Dept. Appl. Chem., Univ. Tokyo*)
- 1Pos030 細胞内タンパク質結晶生成過程とその可視化
 The process of intracellular protein crystal formation and its visualization
Etsuko Tokunaga, Yasufumi Umena (*NUSR, Univ. Nagoya*)

- 1Pos031 MD シミュレーションとニューラルネットワークを組み合わせたタンパク質の高速 AFM 画像解析
Analysis of HS-AFM images of proteins combining MD simulation and Neural Network
Katsuki Sato¹, Yui Kanaoka², Tomoya Tsukazaki³, Takayuki Uchihashi², Takaharu Mori¹ (¹*Tokyo University of Science*, ²*Nagoya University*, ³*Nara Institute of Science and Technology*)
- 1Pos032 デキストラン結合酵素グルカンスクラーゼはデキストラン-ポリエチレングリコール混合系での液滴形成を誘導する
Dextran-Binding Enzyme Glucanase Induces Droplet Formation in Dextran- Polyethylene Glycol Mixtures
Mikage Iwakiri, Hideyuki Komatsu (*Department of Bioscience and Bioinformatics, Faculty of Systems Engineering and Computer Science, Kyushu Institute of Technology*)
- 1Pos033 ロボット機構学に基づくタンパク質の内部運動特性予測のための計算フレームワークの開発
Development of a Computational Framework for Predicting the Internal Motion Properties of Proteins Based on Robot Kinematics
Keisuke Arikawa (*Fcl. Eng., Kanagawa Inst. of Tech.*)

01E. タンパク質：タンパク質工学／進化工学／01E. Protein: Engineering

- 1Pos034 多様なカーゴ分子を媒介とした非ウイルス性タンパク質カプシドの試験管内形成と形態制御
In vitro assembly of a nonviral protein capsid and its morphological control mediated by versatile cargos
Kenya Tajima¹, Yusuke Sakai^{2,3}, Naohiro Terasaka¹ (¹*Earth-Life Science Institution, Institute of Future Science, Institute of Science Tokyo*, ²*RIKEN Center for Biosystems Dynamics Research*, ³*Institute for Quantitative Biosciences, The University of Tokyo*)
- 1Pos035 Model screening of an epitope-tag peptide from a random library consisting of a reduced set of amino acids using PL display
Shingo Ueno, Fumi Toshioka, Takanori Ichiki (*iCONM, Kawasaki Inst. Industry. Promo.*)
- 1Pos036 分子進化によるウイルス模倣粒子の構造多様化と機能化
Functionalization and structural diversification of artificial nucleocapsids by laboratory evolution
Naohiro Terasaka (*Earth-Life Sci. Inst., Inst. Future Sci., Inst. Sci. Tokyo*)
- 1Pos037 細胞内タンパク質結晶エンジニアリングによる刺激応答固相転移
Engineering in-cell protein crystals for the stimuli-responsive solid-solid phase transitions
Kosuke Kikuchi¹, Misaki Nagama¹, Junko Tanaka¹, Haonan Kong¹, Satoshi Abe², Takafumi Ueno^{1,3} (¹*Sch. of Life Sci. and Tech., Science Tokyo*, ²*Grad. Sch. of Life and Env. Sci., KPU*, ³*IIR-ASMat, Science Tokyo*)
- 1Pos038 アクティブ・ラーニングによる ATP 合成酵素の阻害タンパク質 IF₁ の再設計
Redesign of the inhibitor protein IF₁ for ATP synthase via an active-learning framework
Ryohei Kobayashi^{1,2}, Constantin Guyot^{2,3}, Jun Ohnuki^{2,3}, Hiroyuki Noji^{1,4}, Kei-ichi Okazaki^{2,3} (¹*Dep. Appl. Chem., Grad. Sch. Eng., Univ. Tokyo*, ²*Institute for Molecular Science*, ³*SOKENDAI*, ⁴*RIPH, Univ. Tokyo*)

01F. タンパク質：天然変性／01F. Protein: Intrinsic disorder

- 1Pos039 高速 AFM・生化学手法による E6AP/E6/p53 複合体の構造動態の統合的解析
Integrated analysis of structural dynamics of E6AP/E6/p53 complex by HS-AFM and biochemical methods
Soma Yamamoto^{1,2}, Holger Flechsig³, Hiroki Konno³ (¹*Grad. Sch. of Nat. Sci. & Technol., Kanazawa Univ.*, ²*WISE Program for Nano-Precision Medicine, Science, and Technology, Kanazawa Univ.*, ³*WPI Nano Life Sci. Inst. (WPI-Nano LSI), Kanazawa Univ.*)

- 1Pos040 MAP7 は微小管結合を介して FUS の相分離を制御する：ALS 関連変異体との相互作用比較からの示唆
MAP7 Regulates FUS Condensate Formation via Microtubule Binding: Insights from ALS-Linked Mutant Interactome Analysis
Kyota Yasuda^{1,5,7}, Hyun-woo Rhee^{4,7}, Tomonobu Watanabe^{1,2,3}, Shin-ichi Tate^{1,5,6,7} (¹*Grad. Sch. Int. Sci. Life., Univ. Hiroshima*, ²*Res. Int. Radiation. Bio. Med., Univ. Hiroshima*, ³*BDR, RIKEN*, ⁴*Chem., SNU*, ⁵*RcMcD, Univ. Hiroshima*, ⁶*MIMS, Univ. Meiji*, ⁷*WPI-SKCM2*)
- 1Pos041 高速原子間力顕微鏡を用いたヒストンテール動態モニタリング
Histone tail dynamics monitoring using high-speed atomic force microscopy
Ryota Imada¹, Quynh Pham², Yusuke Miyanari³, Shoko Sato⁴, Hitoshi Kurumizaka⁴, Mikihiro Shibata^{3,5} (¹*Grad. Sch. Math. & Phys., Kanazawa Univ.*, ²*Grad. Sch. NanoLS, Kanazawa Univ.*, ³*WPI-NanoLSI, Kanazawa Univ.*, ⁴*Institute for Quantitative Biosciences, Tokyo Univ.*, ⁵*InFiniti, Kanazawa Univ.*)
- 1Pos042 酵母プリオン Sup35 の液滴形成過程の高速 AFM 観察
High-speed AFM observation of the droplet formation process of yeast prion Sup35
Aya Ogino¹, Yumiko Ohhashi², Hideki Taguchi², Hiroki Konno³ (¹*Grad. Sch. of Nat. Sci. & Technol., Kanazawa Univ.*, ²*Inst. of Integ. Res., Science Tokyo.*, ³*WPI Nano Life Sci. Inst. (WPI-Nano LSI), Kanazawa Univ.*)

02. ヘムタンパク質／02. Heme proteins

- 1Pos043 単結晶およびシリカゲル中機能解析でヘモグロビンのアロステリック平衡を読み解く
Deciphering hemoglobin allosteric equilibria through functional analysis in single crystals and silica gels
Naoya Shibayama (*Div. Biophys., Jichi Med. Univ.*)
- 1Pos044 ウシ心筋シトクロム酸化酵素の核 DNA 由来サブユニットにより形成される疎水性チャネルの構造解析
Structural analysis of a hydrophobic channel formed by nuclear DNA-coded subunit of bovine heart cytochrome c oxidase
Kazumasa Muramoto, Kyoko Shinzawa-Itoh (*Grad. Sch. Sci., Univ. Hyogo*)

03. 膜タンパク質／03. Membrane proteins

- 1Pos045 海洋性ビブリオ菌におけるプロトン駆動べん毛モーターのストマチン様タンパク質 Flil と MotAB 固定子複合体の相互作用
Association of stomatin-like protein Flil and MotAB stator complex of proton-driven flagellar motor in marine *Vibrio*
Michio Homma^{1,2}, Kazuki Yokoyama³, Norihiro Takekawa⁴, Tatsuro Nishikino⁵, Hajime Nakatani¹, Seiji Kojima³ (¹*Dep. Biomol. Eng., Grad. Sch. Eng., Nagoya Univ.*, ²*Dep. of Physics, Grad. Sch. Sci., Nagoya Univ.*, ³*Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ.*, ⁴*Dep. Macromol. Sci., Grad. Sch. Sci., Osaka Univ.*, ⁵*Dep. Life Sci. Appl. Chem., Nagoya Inst. Tech.*)
- 1Pos046 ATR-FTIR による環状ヌクレオチド依存性カリウムチャネル SthK のリガンド選択の分子機構研究
Investigation of molecular mechanisms of ligand selection in a cyclic nucleotide dependent potassium channel SthK by using ATR-FTIR
Taisei Maeda¹, Tatsuro Nishikino^{1,2}, Hiroki Ogasawara³, Hiroto Fukuda³, Yuji Furutani^{1,2} (¹*Graduate School of Engineering, Nagoya Institute of Technology*, ²*Optobiotechnology Research Center*, ³*Nagoya Institute of Technology*)

- 1Pos047 Visualization and analysis of P-glycoprotein dynamics by using HS-AFM
Visualization and analysis of P-glycoprotein dynamics by using HS-AFM
Yui Kanaoka¹, Takeshi Murata², Takayuki Uchihashi^{1,3} (¹*Grad. Sch. Sci., Univ. Nagoya*, ²*Grad. Sch. Sci., Univ. Chiba*, ³*ExCELLS*)
- 1Pos048 異種タンパク質結合 OmpG ナノポアの開閉挙動観察
Observation of gating behavior of OmpG nanopore conjugating other protein
Kazuha Endo, Koki Kamiya (*Grad. Sch. Sci. & Tech., Gunma univ.*)

04. DNA・DNA 結合タンパク質／04. DNA & DNA binding proteins

- 1Pos049 近接した標的 DNA 配列のタンデムリピートに集積する Dof 転写因子の 1 分子観察
Single-molecule observation of Dof transcription factor accumulating to neighboring tandem repeats of target DNA sequences
Hayato Yamashita¹, Akihiro Tsuji¹, Hirotake Furihata², Zhangliang Zhu^{2,3}, Takuya Miyakawa^{2,3}, Masayuki Abe¹ (¹*Grad. Sch. Eng. Sci., Univ. Osaka*, ²*Grad. Sch. Agr. Sci., Univ. Tokyo*, ³*Grad. Sch. Bio., Kyoto Univ.*)
- 1Pos050 UvrD ヘリカーゼの野生型と C 末端欠変異体間の DNA を介した相互作用
DNA-mediated interaction between wild-type and C-terminal deletion mutants of UvrD helicase
Hiroaki Yokota (*Grad. Sch. New Photon. Indust.*)
- 1Pos051 液液相分離により形成するナノスケール凝縮体の蛍光寿命相関解析
Fluorescence lifetime correlation analysis on nanoscale liquid condensates formed through liquid-liquid phase separation
Rene Toyama, Miyuki Sakaguchi, Shoichi Yamaguchi, Takuhiro Otsu (*Grad. Sch. Sci. Eng., Saitama Univ.*)

05. RNA・RNA 結合タンパク質／05. RNA & RNA binding proteins

- 1Pos052 Folding of Frameshift-Stimulating RNA Pseudoknots Is Modulated by the Upstream Structures
Jin-Der Wen (*National Taiwan University*)

06. DNA/RNA ナノテクノロジー／06. DNA/RNA nanotechnology

- 1Pos053 自己複製を目指した成長する DNA 液滴の設計
Design of Growing DNA Droplets Toward Self-Replication
Yusei Kudo¹, Tomoya Maruyama³, Masahiro Takinoue^{1,2,3} (¹*Sch. of Computer Science, Institute of Science Tokyo*, ²*Sch. of Life Science and Technology, Institute of Science Tokyo*, ³*Research Center for Autonomous Systems Materialogy (ASMat), Institute of Integrated Research, Institute of Science Tokyo*)
- 1Pos054 miRNA の濃度を認識する DNA 液滴コンピュータ構築を目指した化学反応シミュレーション
Chemical reaction simulation for development of DNA droplet computers which recognize concentration of miRNAs
Chisa Kato¹, Yuko Yoshida¹, Masahiro Takinoue^{1,2,3} (¹*Sch. Comp. Sci., Inst. Sci. Tokyo*, ²*Sch. Life Sci. Tech., Inst. Sci. Tokyo*, ³*ASMat, Inst. Sci. Tokyo*)

- 1Pos055 自動分注ロボットと機械学習を用いた DNA 論理回路の自動設計
Automated design of DNA logic circuits using automated pipetting robots and machine learning
Yuko Yoshida¹, Kanta Takagi¹, Masahiro Takinoue^{1,2,3} (¹*School of Computer Science, Institute of Science Tokyo*, ²*School of Life Science and Technology, Institute of Science Tokyo*, ³*Research Center for Autonomous Systems Materialogy (ASMat), Institute of Science Tokyo*)
- 1Pos056 DNA ナノミウラ折り：力学的に変形可能なナノ折り紙構造
DNA-Based Miura-ori: A Mechanically transformable Nano-Origami Architecture
Daisuke Ishikawa¹, Ibuki Kawamata², Masahiko Hara³, Masashi Ikeuchi¹ (¹*LBB, Science Tokyo*, ²*Grad. Sch. Sci., Kyoto Univ.*, ³*Sch. Mater. Chem. Technol., Tokyo Tech*)

07. 核酸：その他／07. Nucleic acid: Others

- 1Pos057 CRISPR Cas13a システムを用いた *Salmonella* RNA のデジタル検出
Digital Detection of *Salmonella* RNA with CRISPR Cas13a system
Svitlana Kovalchuk¹, Yoshihiro Minagawa¹, Hiroyuki Noji^{1,2} (¹*Graduate School of Engineering, The University of Tokyo*, ²*Research Institute of Planetary Health (RIPH), The University of Tokyo*)
- 1Pos058 静電相互作用により誘起された不均一な DNA 溶液中の力の伝播
Force propagation in heterogeneous DNA solution induced by electrostatic interactions
Miku Nakao¹, Saki Matsuyama¹, Akinori Miyamoto², Yoshihiro Murayama^{1,2} (¹*Dep. Biomedical Engineering., Grad. Sch. Engineering., Tokyo University of Agriculture and Technology*, ²*Dep. Applied Physics., Grad. Sch. Engineering., Tokyo University of Agriculture and Technology*)

08. クロマチン・染色体／08. Chromatin & Chromosomes

- 1Pos059 分子動力学シミュレーションを用いたインターカレーションした DNA とヌクレオソームの構造ダイナミクス解析
The conformation and dynamics of intercalated DNA and nucleosome analyzed by molecular dynamics simulation
Hisashi Ishida¹, Hidetoshi Kono^{1,2} (¹*Inst. Quantum Life Science, QST*, ²*cQUEST, Chiba Univ.*)
- 1Pos060 Unveiling the centromere/kinetochore structure in chicken DT40 cells using expansion microscopy and fluorescence correlation spectroscopy
Yasuhiro Hirano^{1,2}, Akira Kitamura³, Toru Hirota², Tatsuo Fukagawa¹ (¹*Graduate School of Frontier Biosciences, The University of Osaka*, ²*Cancer Institute of JFCR*, ³*Faculty of Advanced Life Science, Hokkaido University*)
- 1Pos061 凝縮体形成と共役した転写動態の粒子ベース反応動力学モデリング
Particle-based modeling of reactive dynamics of transcription coupled with condensate formation
Daiki Sugata, Shoji Takada (*Grad. Sch. Biol., Univ. Kyoto*)

09. 電子状態／09. Electronic

- 1Pos062 エネルギー準位統計によるペプチドの分類
Classification of peptides by energy level statistics
Masanori Yamanaka (*CST, Nihon Univ.*)

10. 水・水和／電解質／10. Water & Hydration & Electrolyte

- 1Pos063 物理学の知識を組み込んだ AI 創薬の開発
Development of drug discovery AI incorporating physics-based knowledge
Yuuka Ogawa¹, Tatsuki Kawauchi², Tomohiko Hayashi² (¹*Faculty of Engineering, Niigata Univ.*, ²*Grad. Sch. Sci. and Tech., Niigata Univ.*)
- 1Pos064 トレハロース水溶液を用いた AQP 過剰発現 CHO 細胞の凍結保存
Cryopreservation of AQP4-overexpressing CHO cells using trehalose aqueous solution
Sumire Matsuo¹, Masato Yasui², Youichiro Abe², Tsutomu Uchida³ (¹*Graduate school of engineering, Hokkaido University*, ²*School of Medicine, Keio University*, ³*Faculty of Engineering, Hokkaido University*)

12. 発生・分化／12. Development & Differentiation

- 1Pos065 人工ヒト胚モデルにおける細胞移動とパターン形成
Cell Migration and Pattern Formation in Engineered Human Embryo Models
Kiyoshi Ohnuma¹, Chihiro Takeuchi¹, Hazuki Tsuboi¹, Ryo Kojima¹, Tsuji Shota¹, Emilio Macias Estrada Raul¹, Hayashi Yohei², Miyu Mori¹ (¹*Nagaoka University of Technology*, ²*RIKEN*)
- 1Pos066 画像からの細胞間力の推定と多細胞形態形成
Image-based force inference of pairwise cell-cell interactions for multicellular morphogenesis
Hiroshi Koyama^{1,2}, Toshihiko Fujimori^{1,2} (¹*Div. Embryology, NIBB*, ²*SOKENDAI (Graduate University for Advanced Studies)*)

13. 筋肉（筋蛋白質・収縮）／13. Muscle

- 1Pos067 ミオシン頭部の 1 分子実験と筋繊維実験の両方を再現する計算モデルの構築
Construction of a simulation model which reproduces both of the single molecule experiment of myosin head and the muscle fiber experiment
Kenshiro Kaneko, Tomoki P. Terada (*Dept. Appl. Phys., Grad. Sch. Eng., Nagoya Univ.*)
- 1Pos068 ファシンにより形成されたアクチン束の崩壊過程ダイナミクスのリアルタイム観察
Real-Time observation of the Disassembly of Fascin-Mediated Actin Bundles
Masayuki Hoshida^{1,2}, Takumi Toji², Tatsuya Iwata³, Noriko Takeuchi¹, Hajime Honda², Ikuko Fujiwara² (¹*School of Health Sciences, Kitasato University*, ²*Materials Sci. & Bioeng., Nagaoka Univ. of Tech.*, ³*Faculty of Pharmaceutical Sciences, Toho University*)

14. 分子モーター／14. Molecular motor

- 1Pos069 バクテリア鞭毛モーターにおける MotAB の駆動機構：理論モデルによるアプローチ
Exploring the Driving Mechanism of MotAB in the Bacterial Flagellar Motor via Theoretical Modeling
Shintaro Kubo^{1,2}, Yasushi Okada³, Shoji Takada⁴ (¹*Wako, RIKEN*, ²*Dept. of Applied Chem., the Univ. of Tokyo*, ³*Dept. of Med., the Univ. of Tokyo*, ⁴*Grad. Sch. Sci., Kyoto Univ.*)

- 1Pos070 ADP-Pi ミオシン S1 と F-actin 間駆動力の物理原理について
On the physical principle of the driving force between myosin S1 with ADP-Pi and F-actin
Makoto Suzuki (*Tohoku University*)
- 1Pos071 キネシン 1 の協調的運動における情報ラチェット機構
Information ratchet mechanism for the coordinated unidirectional movement of kinesin-1
Michio Tomishige¹, Hiroshi Isojima², Kohei Matsuzaki¹ (¹*Dept. Phys. Sci., Aoyama Gakuin Univ.*,
²*Dept. Appl. Phys., Univ. Tokyo*)
- 1Pos072 動的水チャンネルを介したべん毛モーターの回転運動の全原子分子動力学解析
All-atom molecular dynamics analysis of rotational motion of flagellar motor mediated by
dynamic water channels
Yukinari Kamiyama, Takumi Matsumoto, Tsubasa Nakai, Mitsunori Takano (*Grad. Sch. Adv. Sci. &
Eng., Waseda Univ.*)
- 1Pos073 DNA 人工分子モーターの合理的性能向上
Rational performance improvement of DNA artificial molecular motor
Takanori Harashima^{1,2}, Akihiro Otomo^{1,2}, Ryota Iino^{1,2} (¹*Institute for Molecular Science*, ²*Graduate
Institute for Advanced Studies, SOKENDAI*)
- 1Pos074 Modulating potential alignment to enhance molecular motor speed
Akihiro Fukuda, Yohei Nakayama, Shoichi Toyabe (*Grad. Sch. Eng., Tohoku Univ.*)
- 1Pos075 Rhodamine-Phalloidin によって可視化されたアクチンフィラメントの構造多型性は、リン酸お
よび ATP + ミオシン II によって抑制される
Structural polymorphism of actin filaments revealed by Rhodamine Phalloidin is suppressed by
phosphate and ATP + myosin II
Kenta Toshino, Taro Q.P. Uyeda (*Dept. Pure. & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*)
- 1Pos076 最高速 AFM によって明らかになった回転子のない F₁-ATPase の化学-力学カップリング
Chemomechanical coupling in rotor-less F₁-ATPase revealed by high-speed atomic force
microscopy
Shingo Fukuda¹, Akihiro Otomo^{2,3}, Ryota Iino^{2,3}, Toshio Ando¹ (¹*WPI NanoLSI, Kanazawa Univ.*, ²*Inst.
for Mol. Sci., NINS*, ³*SOKENDAI*)
- 1Pos077 テザーの改変によるキネシン-1 モータードメインの基本的運動機構の解明
Tether-dependent regulation reveals core motility mechanism of the kinesin-1 motor domain
Rieko Sumiyoshi¹, Masahiko Yamagishi^{1,2}, Junichiro Yajima^{1,2,3} (¹*Grad. Arts & Sci., Univ. Tokyo*,
²*Komaba Inst. Sci., Univ. Tokyo*, ³*RCCSB, UBI, Univ. Tokyo*)
- 1Pos078 C.elegans キネシン BMK-1 と有糸分裂キネシン Eg5 阻害剤の生化学的特性と相互作用
Biochemical Characterization and Interaction of *C.elegans* kinesin BMK-1 with Mitotic Kinesin
Eg5 Inhibitors
Fofou Yonta Tostani, Shunsuke Kumagai, Nur Fatin Liyana Binti Salwadi, Shinsaku Maruta (*Grad.Sch.,
Soka Univ.Tokyo*)
- 1Pos079 KIF6 による鞭毛運動とエネルギー調節の分子メカニズム
KIF6's Role in Ciliary Motility and Energy Regulation
Tsukasa Makino¹, Chizuru Ito², Takeshi Masuda³, Kazuho Ikeda¹, Daisuke Takao^{1,4}, Yasushi Okada^{1,5},
Kiyotaka Toshimori², Masahide Kikkawa¹ (¹*Univ. Tokyo*, ²*Chiba Univ.*, ³*Keio Univ.*, ⁴*Huazhong
Agricultural Univ.*, ⁵*RIKEN BDR*)

15A. 細胞生物学的課題：接着／15A. Cell biology: Adhesion

- 1Pos080 歯周病菌の線毛の先端蛋白質 FimD の X 線結晶構造解析
Structure of FimD, a tip protein of the pill of gum disease bacterium *Porphyromonas gingivalis*
Norihiro Takekawa, Yusuke Ando, Rei Kojima, Katsumi Imada (*Grad. Sch. Sci., Osaka Univ.*)

- 1Pos081 細胞形態切り替え材料による細胞周期の進行速度操作への試み
Modulating Cell Cycle Progression by Dynamic Control of Cell Shape Using Stimuli-Responsive Substrates
Sayaka Masaike, Satoru Kidoaki (*IMCE, Univ. Kyushu*)

15B. 細胞生物学的課題：運動／15B. Cell biology: Motility

- 1Pos082 巨大繊毛虫 *Spirostomum ambiguum* の細胞伸長に関わる表層微小管束間の滑り運動
Active sliding between microtubule ribbons extending from the ciliary basal bodies elongates the giant ciliate *Spirostomum ambiguum*
Kosuke Nakamura¹, Seiji Sonobe¹, **Kazuhiro Oiwa**^{1,2} (¹*Grad. Sch. Sci., Univ. Hyogo*, ²*Adv. ICT Res. Inst., NICT, Kobe*)
- 1Pos083 時間情報を用いたアメーバ細胞の牽引力場測定
Inference of cellular traction forces using temporal information
Kazuko Hamaoka, Hirokazu Tanimoto (*Grad. Sch. Nanobiosci., Yokohama City Univ.*)
- 1Pos084 CheY Phosphorylation-Mediated Turning Enables Polarity Alignment at the Swarming Front in *Vibrio alginolyticus*
Kakeru Sumitomo, Ikuro Kawagishi, Masatoshi Nishikawa (*Grad. Sch. Sci., Univ. Hosei*)
- 1Pos085 Mechanosensitive adhesion complexes that lead to complex cell crawling behaviors in a one-dimensional track.
Hsuan-Yi Chen (*National Central University*)
- 1Pos086 制御された局所外力印加により明らかにする細胞境界の変形と分子応答の因果関係
Reveal the causal relationship between tissue deformation and molecular response through optical manipulation
Kenji Nishizawa¹, Shao-Zhen Lin³, Claire Chardès², Jean-François Rupprecht³, Pierre-François Lenne² (¹*Graduate School of Engineering, Tohoku University*, ²*CNRS, Centre de Physique Théorique*, ³*CNRS, The Institute of Developmental Biology of Marseille*.)
- 1Pos087 リアルタイムフィードバック機構を用いたサブストレイトの硬さによる機械刺激への拍動応答
Modulation of Beating Response to Mechanical Stimulation by Substrate Stiffness Using Real-Time Feedback Control
Ayaka Namiki, Arisa Mizutani, Yuuta Moriyama, Toshiyuki Mitsui (*Dept. Phys. Sch. Sci., Aoyamagakuin Univ.*)
- 1Pos088 Integrative Spatiotemporal Analysis of Collective Cell Migration and ERK Dynamics in Epithelial MDCK Wound Healing
Lisna Hidayati¹, Kazuhiro Aoki², Yuichi Sakumura¹ (¹*Graduate School of Science and Technology, Nara Institute of Science and Technology*, ²*Graduate School of Biostudies, Kyoto University*)

15C. 細胞生物学的課題：細胞骨格・膜骨格／15C. Cell biology: Cytoskeleton & Membrane skeleton

- 1Pos089 破骨細胞融合における membrane-cortex attachment と BAR タンパク質の機械的制御
Mechanical control of cell-cell fusion during osteoclastogenesis by membrane-cortex attachment and BAR proteins
Yuri L. Nemoto^{1,2}, Yumeng Wan², Tsukasa Oikawa³, Kazunori Takano⁴, Takahiro K. Fujiwara⁵, Kazuya Tsujita^{1,2}, Toshiki Itoh^{1,2} (¹*Biosignal Research Center, Kobe University*, ²*Kobe University Graduate School of Medicine*, ³*Graduate School of Medicine, Hokkaido University*, ⁴*Graduate School of Science, Chiba University*, ⁵*Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University*)

- 1Pos090 幅広い細胞種に適応した中心体単離手法の開発
Development of centrosome isolation methods adaptable to various cell types
Momoko Miyazawa, Shohei Yamamoto, Daiju Kitagawa (*Grad. Pharm., Univ. Tokyo*)
- 1Pos091 TIRF 解析によるアクチン重合ダイナミクスにおける His161 の役割解明
Elucidating the role of His161 in actin polymerization dynamics using TIRF analysis
Kota Onozato¹, Mitsusada Iwasa², Shuichi Takeda², Toshiro Oda³, Hajime Honda¹, Ikuko Fujiwara¹
(¹*Materials Sci. & Bioeng., Nagaoka Univ. of Tech.*, ²*Grad. Sch. Info., Nagoya Univ.*, ³*Faculty of Health and Welfare, Tokai Gakuin University*)
- 1Pos092 アクチン重合制御における古細菌ゲルゾリン各ドメインの TIRF および構造解析による機能解明
Dissecting Domain Functions of Archaeal Gelsolin in Actin Assembly by TIRF and Structural Analyses
Houryou Mizuki¹, Shuichi Takeda^{2,3}, Robert Robinson^{3,4}, Ikuko Fujiwara¹ (¹*Materials Sci. & Bioeng., Nagaoka Univ. of Tech.*, ²*Grad. Sch. Info., Nagoya Univ.*, ³*RIIS, Okayama Univ.*, ⁴*VISTEC, Thailand.*)
- 1Pos093 TIRF 顕微鏡と構造解析により明らかになった Cytochalasin D のアクチンフィラメント作用機構
Cytochalasin D Inhibits Actin Dynamics through Transient Capping and Severing
Takahiro Mitani¹, Shuichi Takeda², Toshiro Oda³, Akihiro Narita⁴, Yuichiro Maeda², Hajime Honda¹, Ikuko Fujiwara¹ (¹*Materials Sci. & Bioeng., Nagaoka Univ. of Tech.*, ²*Grad. Sch. Info., Nagoya Univ.*, ³*Fac. Health & Welf., Tokai-gakuin Univ.*, ⁴*Grad. Sch. Sci., Nagoya Univ.*)
- 1Pos094 初期胚における一過的な核の物性変化と転写のバーストの促進
Changes in the physical properties of early embryonic nuclei promote a transcriptional burst
Masahito Tanaka¹, Rin Sakanoue², Atsushi Takasu², Yasuki Miyagawa³, Naoko Watanabe¹, Yu-Chia Chen⁴, Aussie Suzuki⁴, Kei Miyamoto^{2,3}, Yuta Shimamoto^{1,5} (¹*Laboratory of Physics and Cell Biology, National Institute of Genetics.*, ²*Graduate School of Biology-Oriented Science and Technology, Kindai University*, ³*Faculty of Agriculture, Kyushu University*, ⁴*McArdle Laboratory for Cancer Research, Department of Oncology, University of Wisconsin-Madison*, ⁵*Department of Genetics, Sokenkai University*)

15D. 細胞生物学的課題：情報伝達・細胞膜／15D. Cell biology: Signal transduction & Cell membrane

- 1Pos095 The mechanical properties of cells grown at the interface of ferroelectric domain walls
Alexis Borowiak, Takeshi Shimi, Yohei Kono, Takeshi Fukuma (*NanoLSI, Kanazawa University*)
- 1Pos096 1 分子 SuperPAINT 法による細胞膜全体にわたる動的ナノスケール不均一性の可視化
SuperPAINT visualization of dynamic nanoscale heterogeneity of the entire plasma membrane
Maoji Wang¹, Bo Tang¹, Takahiro Fujiwara², Taka-Aki Tsunoyama¹, Akihiro Kusumi¹ (¹*Okinawa Institute of Science and Technology*, ²*Institute for Integrated Cell-Material Sciences, Kyoto University*)
- 1Pos097 大腸菌細胞内 Ca²⁺恒常性の再検討
A reconsideration of intracellular Ca²⁺ homeostasis in *Escherichia coli*
Takemasa Nakamura¹, Hiroyuki Noji^{1,2}, Kazuhito Tabata^{1,2} (¹*Department of Applied Chemistry, School of Engineering, University of Tokyo*, ²*Research Institute of Planetary Health (RIPH), The University of Tokyo*)
- 1Pos098 抑制性シナプス形成の開始機構：ゲフリンと Ena/VASP の共凝縮体形成によるアクチン重合
Initiators for inhibitory synapse formation: actin polymerization induced by co-condensation of gephyrin and Ena/VASP family proteins
Amine Aladag¹, Taka-Aki Tsunoyama¹, Irina Meshcheryakova¹, Maoji Wang¹, Jun-Seok Lee¹, Bo Tang¹, Hiroko Hijikata³, Takahiro K Fujiwara³, Sawako Yamashiro², Akihiro Kusumi¹ (¹*Okinawa Institute of Science and Technology*, ²*Kyoto University Graduate School of Biostudies*, ³*Kyoto University Institute for Integrated Cell-Material Sciences, KUIAS*)

- 1Pos099 ホスホリパーゼ D によるミリストイル化タンパク質の拡散および Ras/PIP3 ドメインの制御
Phospholipase D regulates on-membrane diffusivity of a myristoylated protein and defines the Ras/PIP3 patch territory
Gen Honda^{1,2}, Satoshi Sawai^{1,3}, Miho Yanagisawa^{1,2,3} (¹*Department of Basic Science, Graduate School of Arts and Sciences, University of Tokyo*, ²*Komaba Institute for Science, Graduate School of Arts and Sciences, University of Tokyo*, ³*Research Center for Complex Systems Biology, Graduate School of Arts and Sciences, University of Tokyo*)
- 1Pos100 Two distinct regulatory mechanisms limiting macrophage phagocytosis: membrane backtracking and inhibition of phagocytosis initiation
Dan Horonushi¹, Souta Suzuki¹, Maiha Ando¹, Haruka Yuki¹, Shinya Kato¹, Kenji Yasuda^{1,2} (¹*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, ²*Dept. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*)
- 1Pos101 神経細胞による心筋細胞集団間の興奮伝導接続
Excitatory Connection Between Cardiomyocyte Populations Mediated by Neurons
Ayuri Sakaguchi, Kentaro Kito, Tomoyuki Kaneko (*LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ., Tokyo, Japan*)
- 1Pos102 複数微粒子貪食数に対する細胞膜最大伸長量の応答変化計測からの最大貪食機能の解明
Determining Maximum Macrophage Phagocytosis by Measuring Membrane Extension Response During Sequential Particle Uptake
Shinya Kato¹, Dan Horonushi¹, Haruka Yuki¹, Kei Shibata², Syunya Morikawa², Kenji Yasuda^{1,2} (¹*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, ²*Dept. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*)
- 1Pos103 オプソニン化マイクロニードルに対するマクロファージ応答の極性を明らかにする貪食膜伸長と細胞運動の相関解析
Coupled coordination of phagocytic membrane extension and cell migration reveals polarity in macrophage response to opsonized microneedles
Haruka Yuki¹, Dan Horonushi¹, Maiha Ando¹, Shinya Kato¹, Kenji Yasuda^{1,2} (¹*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, ²*Dept. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*)
- 1Pos104 単一細胞レベルにおける直線状心筋細胞ネットワークの伝導速度
Conduction Velocity of Linear Cardiomyocyte Networks at single-cell level
Shinnosuke Mori, Tomoyuki Kaneko (*LaRC, FB, Hosei Univ.*)

16A. 生体膜・人工膜：構造・物性／16A. Biological & Artificial membrane: Structure & Property

- 1Pos105 環境応答性蛍光色素によるモデル脂質膜とタウタンパク質の相互作用解析
Interactions between Lipid Membranes and Tau Protein Probed by Environment-Sensitive Fluorescent Probes
Chiho Watanabe (*Grad. Sch. Int. Sci. Life, Hiroshima Univ.*)
- 1Pos106 Computational studies of the disruption mechanism of pathogenic bacterial membrane by cocoglucoside from coconut oil
Phonphiphat Bamrung (*คณะวิทยาศาสตร์ มหาวิทยาลัยเกษตรศาสตร์*)
- 1Pos107 人工甘味料スクラロースによる DPPC モデル生体膜における指組ゲル相形成
The artificial sweetener sucralose induces the formation of an interdigitate gel phase in DPPC model biomembranes
Emika Matsumoto¹, Michael Postrado², **Hiroshi Takahashi**² (¹*Sch. Sci. Tech. Gunma Univ.*, ²*Grad. Sch. Sci. Tech. Gunma Univ.*)

- 1Pos108 2本のうち1本の疎水鎖末端を部分フッ素化したリン脂質が膜タンパク質バクテリオロドプシン(bR)の四次構造と光サイクルに及ぼす影響
Quaternary structure and photocycle of bR in bilayers composed of phospholipids with a single partially fluorinated hydrophobic chain
Ai Nakagawara¹, Takafumi Shimoaka¹, Toshiyuki Takagi², Hiroshi Takahashi¹, Takashi Kikukawa³, Hideki Amii^{1,4}, Masashi Sonoyama^{1,4,5} (¹*Grad. Sch. Sci. & Tech., Gunma Univ.*, ²*AIST*, ³*Fac. Adv. Life Sci., Hokkaido Univ.*, ⁴*GLAR, Gunma Univ.*, ⁵*GUCFW, Gunma Univ.*)

16B. 生体膜・人工膜：ダイナミクス／16B. Biological & Artificial membrane: Dynamics

- 1Pos109 表層糖鎖が関与する細菌の細胞外膜小胞形成
Involvement of the surface carbohydrates in bacterial membrane vesicle formation
Jun Kawamoto¹, Taiku Tsudzuki¹, Tomoya Imai², Takuya Ogawa¹, Tatsuo Kurihara¹ (¹*Institute for Chemical Research, Kyoto University*, ²*Research Institution for Sustainable Humanosphere*)
- 1Pos110 Giant Plasma Membrane Vesicle の膜粘度測定
Viscosity of Giant Plasma Membrane Vesicles
Tatsuya Itoi (*Dept. of Physics, Tohoku University*)
- 1Pos111 自動化技術による膜粘度の顕微鏡画像データ解析の精度向上
Improving accuracy of microscopic image data analysis for membrane viscosity measurement using automation technique
Kenya Haga, Yuka Sakuma, Masayuki Imai (*Grad. Sch. Sci., Tohoku Univ.*)
- 1Pos112 パターン化人工膜と光ピンセットによる人工生体膜分子の時空間操作
Spatiotemporal Manipulation of Membrane Molecules in Artificial Membranes Using Membrane Patterning and Optical Tweezers
Yasushi Tanimoto¹, Shunya Moriyama¹, Kyoko Masui¹, Fumio Hayashi², Kenichi Morigaki^{3,4}, Chie Hosokawa¹ (¹*Grad. Sch. Sci., Osaka Metropolitan Univ.*, ²*Grad. Sch. Sci., Kobe Univ.*, ³*Biosignal Res. Center, Kobe Univ.*, ⁴*Grad. Sch. Agri., Kobe Univ.*)

16C. 生体膜・人工膜：興奮・チャネル／16C. Biological & Artificial membrane: Excitation & Channels

- 1Pos113 電位依存性プロトンチャネル活性化のN末端制御
N-terminal control of voltage-gated proton channels
Ryuya Nawata, **Akira Kawanabe**, Yuichiro Fujiwara (*Grad. Sch. Biomed. Health Sci., Hiroshima Univ.*)
- 1Pos114 高速原子間力顕微鏡による非競合阻害剤結合状態のAMPA受容体ナノダイナミクスの解明
High-speed atomic force microscopy reveals nano-dynamics of AMPARs with the non-competitive inhibitors
Keisuke Sato¹, Yimeng Zhao², Motoyuki Hattori², Mikihiro Shibata^{3,4} (¹*Grad. Sch. NanoLS., Kanazawa Univ.*, ²*Sch. Life Sci., Fudan Univ.*, ³*WPI-NanoLSI, Kanazawa Univ.*, ⁴*InFiniti, Kanazawa Univ.*)
- 1Pos115 油中水滴接触膜を用いた膜張力定量下でのアクアポリンの水透過性測定
Measuring aquaporin water permeability using pressure-determined droplet interface bilayers with defined membrane tension
Misuzu Ueki, Takahisa Maki, **Masayuki Iwamoto** (*Dep. Mol. Neurosci., Facul. Med. Sci., Univ. Fukui*)

16D. 生体膜・人工膜：輸送・情報伝達／16D. Biological & Artificial membrane: Transport & Signal transduction

- 1Pos116 Ion translocation mechanism of Na⁺-pumping NADH-quinone oxidoreductase from molecular dynamics simulations
Takehito Seki^{1,2}, Moe Ishikawa-Fukuda^{3,4}, Jun-ichi Kishikawa⁵, Masatoshi Murai³, Takahiro Masuya³, Hideto Miyoshi³, Danielle McFee⁴, Blanca Barquera⁴, Kei-ichi Okazaki^{1,2} (¹*SOKENDAI*, ²*Institute for Molecular Science*, ³*Graduate School of Agriculture, Kyoto University*, ⁴*Department of Biological Science, Rensselaer Polytechnic Institute*, ⁵*Department of Applied Biology, Kyoto Institution of Technology*)
- 1Pos117 糖脂質 MPLase が関与する膜タンパク質輸送機構の物理化学的解析
 Exploring the Role of a Glycolipid MPLase in Membrane Protein Transport through Physicochemical Studies
Shoko Mori¹, Kaoru Nomura¹, Kohki Fujikawa¹, Tsukiho Osawa¹, Ken-ichi Nishiyama², Keiko Shimamoto^{1,3} (¹*Bioorg. Res. Inst., Suntory Fdn. Life Sci.*, ²*Fac. Agric., Iwate Univ.*, ³*Grad. Sch. Sci., Osaka Univ.*)

17. 化学受容／17. Chemoreception

- 1Pos118 コレラ菌アミノ酸走性受容体の広範かつ特異的な検知プロファイル
 The versatile and specific sensing profiles of *Vibrio cholerae* amino-acid chemoreceptors
So-ichiro Nishiyama¹, June Minaki¹, Taisei Kumakura¹, Yuta Nogami¹, Fuga Omori^{2,3}, Katsumi Imada⁴, Ikuro Kawagishi^{2,3} (¹*Fac. App. Life Sci., Niigata Univ. Pharm. Med. Life Sci.*, ²*Grad. Sch. Sci. and Engin., Hosei Univ.*, ³*Res. Cen. Micro-Nano Tech., Hosei Univ.*, ⁴*Dep. MacroMol. Grad. Sch. Sci., Osaka Univ.*)

18. 神経・感覚（細胞・膜タンパク質・分子）／18. Neuroscience & Sensory systems

- 1Pos119 Abnormal differentiation of olfactory sensory neurons in ATF5 upstream open reading frame mutant mice
Haruo Nakano, Sanetoki Koide, Shuya Yoshida, Mariko Umemura, Shigeru Takahashi, Yuji Takahashi, Yasuhiro Shinkai (*Environ. Biol., Life Sci., Tokyo Univ. Pharm. Life Sci.*)
- 1Pos120 飢餓状態における線虫 *C. elegans* の低温耐性獲得機構と人工進化解析による新規因子の探索
 Mechanism of acquisition of cold tolerance in *C. elegans* during starvation and search for novel factors by artificial evolution analysis
Seiya Kamino¹, Miina Fuzisawa¹, Atsushi Doi², Hideki Doi², Akane Ohta¹, Atsushi Kuhara^{1,3} (¹*Institute for Integrative Neurobiology, Konan University*, ²*Kinki University · School of Agriculture Medical Institute of Bioregulation*, ³*PRIME, AMED*)
- 1Pos121 *C. elegans* の低温耐性に関わる転写伸長因子 TCEB の機能細胞の絞り込み
 Narrowing down the functional cells of TCEB, a transcription elongation factor involved in cold tolerance in *C. elegans*
Sho Yabuuchi^{1,2}, Hiroaki Teranishi^{1,2}, Toshihiro Iseki^{1,2}, Natsune Takagaki^{1,2}, Yohei Minakuchi³, Atsushi Toyoda³, Akane Ohta^{1,2}, Atsushi Kuhara^{1,2,4} (¹*Dept. Biol. Grad. Sch. Sci. Konan Univ.*, ²*Inst. of Integral NeuroBiol. Konan Univ.*, ³*National Institute of Genetics, Japan*, ⁴*PRIME AMED*)

- 1Pos122 カエル神経筋接合部シナプスにおけるカゼインキナーゼ阻害剤の効果: 単発刺激放出の抑制と連続刺激での放出増大短期可塑性の強化
Investigation of effect of a casein kinase 2 inhibitor at the frog NMJ: EPP was reduced and short-term plasticity was intensified
Naoya Suzuki (*Grad.Sch.Sci., Nagoya Univ.*)
- 1Pos123 Thermosensory signal processing by multiple thermoreceptors within a single thermosensory neuron in *C. elegans*
Nanako Kanamura^{1,2}, Akane Ohta^{1,2}, Yuki Sato^{1,2}, Akira Kawanabe³, Yuichiro Fujiwara^{3,4}, Atsushi Kuhara^{1,2,5} (¹*Graduate School of Natural Science, Konan University, Kobe, Japan*, ²*Institute for Integrative Neurobiology, Konan University, Kobe, Japan*, ³*Faculty of Medicine, Kagawa University, Kagawa*, ⁴*Graduate School of Biomedical and Health Sciences (Medical), Hiroshima University, Hiroshima, Japan*, ⁵*PRIME, AMED*)

21A. 光生物：視覚・光受容／21A. Photobiology: Vision & Photoreception

- 1Pos124 クロライドイオンを対イオンとしてもつサンゴオプシンの分光研究
Spectroscopic studies of a coral opsin with chloride ion as a counterion
Yuri Tominaga¹, Shino Inukai¹, Yusuke Sakai², Mitsumasa Koyanagi², Akihisa Terakita², Hideki Kandori^{1,3}, Kota Katayama^{1,3} (¹*Grad. Sch. Eng., Nagoya Inst. Tech.*, ²*Grad. Sch. Sci., Osaka Met. Univ.*, ³*OptoBio Technology Center, Nagoya Inst. Tech.*)
- 1Pos125 アプソモナドが持つ新奇紫外・青色光受容アニオンチャネルロドプシン ApuRs の分光学的特性
Spectroscopic characterization of ApuRs, novel UV- and blue-absorbing anion channel rhodopsins from Apusomonads
Takashi Nagata¹, Luis Javier Galindo², Shunki Takaramoto¹, Andrey Rozenberg³, Hiroto Takahashi¹, Oded Bèjà³, Keiichi Inoue¹ (¹*Inst. Solid State Phys., Univ. Tokyo*, ²*Inst. Water Res., Univ. Granada, Spain*, ³*Faculty Biol., Technion – Israel Inst. Tech., Haifa, Israel*)
- 1Pos126 固体 NMR によるヘリオロドプシンのアミノ酸残基特異的なダイナミクスとプロトン化状態の解析
Residue-Specific Characterization of Heliorhodopsin Dynamics and Protonation States by solid-state NMR
Yuki Samatsu¹, Sari Kumagai¹, Kota Katayama², Hideki Kandori², Izuru Kawamura¹ (¹*Grad. Sch. Eng. Sci., Yokohama Natl. Univ.*, ²*Grad. Sch. Eng., Nagoya Inst. Tech.*)
- 1Pos127 Time-resolved crystallography reveals structural transitions of a bifunctional cryptochrome bearing a light-harvesting antenna chromophore
Junpei Yamamoto¹, Wei-Ting Lin², Meng-lao Fong², Kai-Chun Yang², Hikaru Saito¹, Yuhei Hosokawa², Manuel Maestre-Reyna² (¹*Grad. Sch.Eng.Sci., Univ. Osaka*, ²*Dep. Chem., National Taiwan Univ.*)
- 1Pos128 短波長シフトした光駆動内向きプロトンポンプロドプシンの波長制御機構の研究
Study on the color-tuning mechanism of a blue-shifted light-driven inward proton-pumping rhodopsin
Yoshitaka Kato¹, Borja Aldeguer-Riquelme², Oded Bèjà^{3,4}, Josefa Antón², Keiichi Inoue¹ (¹*ISSP, Univ. Tokyo*, ²*Department of Physiology, Genetics and Microbiology, University of Alicante*, ³*Faculty of Biology, Technion—Israel Institute of Technology*, ⁴*The Nancy and Stephen Grand Technion Energy Program, Technion—Israel Institute of Technology*)

- 1Pos129 無脊椎動物由来繊維毛型オプシンの G タンパク質共役特異性の解析
G protein-coupling specificity of ciliary opsins in invertebrates
Kazuki Ohmichi¹, Tomoki Kawaguchi¹, Keita Sato², Hideyo Ohuchi², Hisao Tsukamoto¹ (¹*Grad. Sch. Sci. Kobe Univ.*, ²*Okayama Univ.*)
- 1Pos130 自動化プラットフォームを用いたロドプシン吸収波長変異体の効率的作製
Automated System for High-Throughput Production of Spectral-Tuning Rhodopsin Variants
Masae Konno, Takashi Nagata, Keiichi Inoue (*JSSP, Univ. Tokyo*)
- 1Pos131 Expression analysis of heliorhodopsin genes in actinomycetes
Rei Abe-Yoshizumi¹, Hideki Kandori^{1,2} (¹*Grad. Sch. Eng., Nagoya Inst. Tech.*, ²*OptoBio., Nagoya Inst. Tech.*)
- 1Pos132 *Stretomyces alkaliphilus* 由来ヘリオロドプシンは、固相培養で発現する
Heliorhodopsin from *Stretomyces alkaliphilus* is expressed in solid phase culture
Koyo Yamada¹, Rei Abe-Yoshizumi¹, Tatsuro Nishikino^{1,2}, Hideki Kandori^{1,2} (¹*Grad. Sch. of Eng., Nagoya Inst. of Tech.*, ²*OptoBio Tech. Res. Cent., Nagoya Inst. of Tech.*)
- 1Pos133 中温性細菌 *Modestobacter muralis* 由来のロドプシンの発現と光反応
Expression and photoreaction of rhodopsin from the mesothermal bacterium *Modestobacter muralis*
Haruna Matsumura¹, Shota Takahashi¹, Takafumi Shimoaka¹, Fumio Hayashi², Takashi Kikukawa³, Masashi Sonoyama^{1,4,5} (¹*Grad. Sch. Sci. Tech., Gunma Univ.*, ²*Ctr. Inst. Analysis, Gunma Univ.*, ³*Fac. Adv. Life. Sci., Hokkaido Univ.*, ⁴*GLAR, Gunma Univ.*, ⁵*GUCFW, Gunma Univ.*)

21B. 光生物：光合成／21B. Photobiology: Photosynthesis

- 1Pos134 最先端の蛍光顕微分光法による細胞内の多様な光合成超複合体を観る
Capturing *in vivo* dynamic photosynthetic supercomplexes using state-of-the-art fluorescence excitation-emission microscopy
Xianjun Zhang^{1,2}, Ryutaro Tokutsu³, Jun Minagawa⁴, Shen Ye¹, Yutaka Shibata¹ (¹*Tohoku University*, ²*Massachusetts Institute of Technology*, ³*School of Veterinary Science, Kitasato University*, ⁴*National Institute for Basic Biology*)
- 1Pos135 光化学系 II 結晶を用いた Mn₄CaO₅ クラスターの構築機構の時間分解赤外分光解析
Time-resolved infrared study of the photoassembly process of the Mn₄CaO₅ cluster using photosystem II crystals
Yuki Kato¹, Kazuki Ogura¹, Yoshiki Nakajima², Jian-Ren Shen², Takumi Noguchi¹ (¹*Grad. Sch. Sci., Nagoya Univ.*, ²*Res. Inst. Interdiscip. Sci., Okayama Univ.*)
- 1Pos136 Spectral Shifts in Chromophore Absorption Wavelengths Caused by Three Linkers in the Phycobilisome Rod of *Synechocystis* PCC 6803
Hiroto Kikuchi (*Dept. Phys., Sch. Med., Nippon Med. Sch.*)
- 1Pos137 紅色光合成細菌 *Phaeospirillum molischianum* の LH2 タンパク質の再構築：カロテノイドと界面活性剤の影響
Reconstruction of LH2 protein from a purple photosynthetic bacterium *Phaeospirillum molischianum*: effects of carotenoids and detergents
Taiga Miura, Yoshitaka Saga (*Grad. Sch. Sci. Eng. Kindai Univ.*)
- 1Pos138 光合成酸素発生系における翻訳後アミノ酸修飾によるシステインスルホン酸配位子の形成
Formation of a cysteine sulfonate ligand via post-translational modification in the photosynthetic oxygen-evolving complex
Kazuha Nakamura¹, Takehiro Suzuki², Hatsune Mizue¹, Tomomi Kitajima-Ihara¹, Minako Hirano¹, Yuki Kato¹, Naoshi Dohmae², Takumi Noguchi¹ (¹*Grad. Sch. Sci., Nagoya Univ.*, ²*RIKEN, CSRS*)

- 1Pos139 遠赤色利用可能な光化学系 II の光捕集機能におけるカロテノイドの役割
Light-harvesting functions of carotenoids in the far-red light utilizing photosystemII from *Acaryochloris marina*
Vasco Joris¹, Naoki Suenaga², Miki Bando-Uotani^{1,3}, Kyoko Shinzawa-Ito⁴, Natsuko Inoue-Kashino⁴, Yasuhiro Kashino⁴, Keisuke Kawakami⁵, Koji Yonekura⁵, **Daisuke Kosumi**⁶ (¹Grad. Sch. Sci. and Tech., Kumamoto Univ., ²Facul. Sci., Kumamoto Univ., ³Dev. Tech., Kumamoto Univ., ⁴Grad. Sch. Sci, Hyogo Univ., ⁵RIKEN, SPring-8, ⁶IINa, Kumamoto Univ.)
- 1Pos140 光化学系 I 超複合体の高分解能 AFM 観察
High-resolution AFM imaging of photosystem I supercomplex in thylakoid membrane
Azusa Owada¹, **Daisuke Yamamoto**² (¹WDB Co., LTD., ²Fac. Sci., Fukuoka Univ.)
- 1Pos141 光合成酸素発生系における脂肪族アミノ酸の非天然カルボキシラート配位子への翻訳後変換
Post-translational conversion of aliphatic amino acids to non-natural carboxylate ligands in the photosynthetic oxygen-evolving complex
Hatsune Mizue¹, Takehiro Suzuki², Takumi Matsubara¹, Tomomi Kitajima-Ihara¹, Minako Hirano¹, Yuichiro Shimada¹, Yuki Kato¹, Naoshi Dohmae², Takumi Noguchi¹ (¹Department of Physics, Graduate School of Science, Nagoya University, ²Biomolecular Characterization Unit, RIKEN Center for Sustainable Resource Science)

21C. 光生物：光遺伝学・光制御／21C. Photobiology: Optogenetics & Optical control

- 1Pos142 カリウムチャネルロドプシン B1ChR2 の K⁺選択性メカニズムの解明と応用に向けて
Towards a mechanistic understanding and application of K⁺ selectivity of potassium channelrhodopsin B1ChR2
Ryotaro Shimamura¹, Shoko Hososhima^{1,2}, Hideki Kandori^{1,2}, Satoshi Tsunoda^{1,2} (¹Grad. School of Engineering, Nagoya Institute of Technology, ²Opto Bio Technology Research Center)
- 1Pos143 PYP を用いた光可逆的タンパク質性液液相分離形成の解析
Analysis of photo-reversible proteinaceous liquid-liquid phase separation formation using PYP
Yoichi Yamazaki¹, Ranmaru Shirahama¹, Kento Yonezawa^{1,2}, Hironari Kamikubo^{1,2} (¹NAIST MS, ²NAIST CDG)
- 1Pos144 Disordering of cell membrane lipids induced by THz irradiation
Hiromichi Hoshina (RIKEN RAP)
- 1Pos145 H⁺輸送活性の低いナトリウムポンプロドプシンにおけるプロトン化レチナール塩基周辺の水素結合ネットワーク
Hydrogen-Bonding Network Around the Protonated Retinal Schiff Base in a Sodium-Pumping Rhodopsin with Low H⁺ Transport Activity
Hiroyuki Takizuka¹, Yuma Ito¹, Akiko Ito¹, Hideki Kandori^{1,2}, Yuji Furutani^{1,2} (¹Graduate School of Engineering, Nagoya Institute of Technology, ²Optobiotechnology Research Center, Nagoya Institute of Technology)
- 1Pos146 チャネルロドプシン GtCCR3 の波長制御とチャネル開閉機構
Color tuning and channel gating mechanism of cation-channelrhodopsin GtCCR3
Jinichiro Tabe¹, Shoko Hososhima^{1,2}, Hideki Kandori^{1,2}, Satoshi Tsunoda^{1,2} (¹Graduate School of Engineering, Nagoya Institute of Technology, ²Opto Bio Technology Research Center)

- 1Pos147 Unveiling Calcium's Role in the Emergence of Molecular Chirality
Chen Chen¹, Ruiqin Yi², Tony Z. Jia³ (¹Biofunctional Catalyst Research Team, RIKEN Center for Sustainable Resource Science (CSRS), ²Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, ³Earth-Life Science Institute, Institute of Future Science, Institute of Science Tokyo)
- 1Pos148 緑藻類の光応答に及ぼす細胞数と細胞分化の影響
Effects of cell number and cell differentiation on the photo-response of green algae
Daito Seito, Yoshihiro Murayama (Tokyo University of Agriculture and Technology, Faculty of engineering, Department of Biomedical Engineering)
- 1Pos149 最小ゲノム細菌の実験室適応進化
Adaptive laboratory evolution of minimal genome bacterium
Masaki Mizutani¹, Minoru Moriyama², Ryuichi Koga², Takema Fukatsu^{2,3,4}, Shigeyuki Kakizawa² (¹Faculty of Science, Gakushuin University, ²Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), ³Graduate School of Science, University of Tokyo, ⁴Graduate School of Life and Environmental Sciences, University of Tsukuba)
- 1Pos150 短いランダムな RNA 集団に創発する遺伝の解析
Exploring emergent heritability in short random RNA pools
Jiro Kakizaki¹, Alike Andjani Widada¹, Norikazu Ichihashi², Ryo Mizuuchi¹ (¹Fac. Sci. Eng., Waseda Univ., ²Grad. Sch. Arts and Sci. Univ. Tokyo)

- 1Pos151 膜結合アクチンネットワークによる人工細胞の形態変化
Morphological modification of artificial cell encapsulating membrane-bound actomyosin system
Yusei Sato^{1,2}, Rieko Sumiyoshi², Masahiko Yamagishi², Takeshi Haraguchi³, Kyohei Matsuda², Suguru Sato³, Kohji Ito³, Junichiro Yajima² (¹X-star, JAMSTEC, ²Dep. of Life Sci., Grad. Sch. of Arts and Sci., The Univ. of Tokyo, ³Dep. of Biology, Grad. Sch. of Sci., Chiba Uni.)
- 1Pos152 DNA で操る合成細胞のアクチン骨格：DNA とタンパク質の橋渡しによる機能拡張
DNA-Regulatable Actin Cytoskeleton in Synthetic Cells: Bridging DNA and Proteins toward Enhanced Functionality
Daichi Nakajima¹, Keita Abe¹, Satoshi Murata¹, Shinichiro M. Nomura¹, Hideaki Matsubayashi² (¹Department of Robotics, Graduate School of Engineering, Tohoku University, ²Frontier Research Institute for Interdisciplinary Sciences, Tohoku University)
- 1Pos153 人工分子の化学修飾による微小管のプログラム可能な配列制御
Programmable Microtubule Arrangement via Synthetic Molecular Modification
Kenta Tamaki¹, Hiroto Morita¹, Ryota Iino², Takayuki Uchihashi¹ (¹Grad. Sch. of Sci., Nagoya Univ., ²IMS, NINS)
- 1Pos154 翻訳因子の持続的な再生産による *in vitro* 自己増殖系の構築
Sustainable regeneration of translation factors toward *in vitro* self-regeneration
Kentaro Shoji¹, Katsumi Hagino¹, Norikazu Ichihashi^{1,2,3} (¹Department of Life Science, Graduate School of Arts and Science, The University of Tokyo, ²Komaba Institute for Sciences, University of Tokyo, ³Universal Biology Institute, University of Tokyo)
- 1Pos155 A Hybrid *In Silico/In-Cell* Controller for Robust Optimization of Microbial Bioprocesses
Katsuyuki Kunida^{1,2}, Tomoki Ohkubo², Yuichi Sakumura² (¹Department of Computational Biology, School of Medicine, Fujita Health University, ²Data-Driven Biology, Division of Biological Science, Nara Institute of Science and Technology)

- 1Pos156 生体制御モジュールを用いたリボソームの人工制御
Artificial regulation of ribosomes using the trans-acting engineered regulatory module
Maho Fujino, Yoshikazu Tanaka, Takeshi Yokoyama (*Grad. Sch. Life Sci., Tohoku Univ.*)
- 1Pos157 マイクロ流路内での水/水相分離が創り出す細胞サイズ液滴の規則配列
Spontaneous generation of linearly-arranged uniform microdroplets through phase separation in microfluidic channel
Mayu Shono¹, Ken Hirano², Akihisa Shioi³, Kenichi Yoshikawa⁴ (¹*Komaba Institute for Science, Graduate School of Arts and Sciences*, ²*Health and Medical Research Institute, National Institute of Industrial Science and Technology (AIST)*, ³*Department of Chemical Engineering and Materials Science, Doshisha University*, ⁴*Faculty of Life and Medical Sciences, Doshisha University*)
- 1Pos158 多細胞様液滴による翻訳と共役した RNA ゲノム複製の空間的分離
Multicell-like communicating droplets enabling spatial control of translation-coupled genomic RNA replication
Hidekazu Sono¹, Keiji Murayama², Kensuke Ueda³, Norikazu Ichihashi^{3,4,5}, Ryo Mizuuchi^{1,6} (¹*Dept. Elect. Eng. & Biosci., Fac. Sci. & Eng., Waseda Univ.*, ²*Dept. Biomol. Eng., Grad. Sch. Eng., Nagoya Univ.*, ³*Komaba Inst. for Sci., Univ. Tokyo*, ⁴*Dept. Life Sci., Grad. Sch. Arts & Sci., Univ. Tokyo*, ⁵*Universal Biol. Inst., Univ. Tokyo*, ⁶*FOREST, JST*)
- 1Pos159 Organization of multicellular-like liposome structures with specific shapes
Shun Okada, Kan Shoji (*Nagaoka University of Technology*)

26A. 計算生物学: 生命情報学 / 26A. Computational biology: Bioinformatics

- 1Pos160 構造揺らぎを想定した変異体タンパク質のアンサンブルドッキングによる相互作用解析
Interaction analysis by ensemble docking of mutant proteins assuming structural fluctuations
Nobuyuki Uchikoga¹, Yuri Matsuzaki² (¹*Dept. Network Design, Sch. Interdisip. Math. Sci., Meiji Univ.*, ²*Acad. Leadership, Sci. Tokyo*)
- 1Pos161 Towards automation in HS-AFM data analysis and interpretation
Romain Amyot, Holger Flechsig (*NanoLSI, Kanazawa University*)
- 1Pos162 乳がん組織における TP53 ホットスポット変異と発現変動の関連機構
Association between TP53 hotspot mutations and expression alterations in breast cancer tissues
Takaharu Naito, Takanori Sasaki (*Fac. Adv. Math. Sci., Meiji Univ.*)
- 1Pos163 RNA-seq を用いた相関分析による転移性乳がんの miRNA 予後予測因子の選出
Selection of miRNA Prognostic Factors for Metastatic Breast Cancer by Correlation Analysis Using RNA-seq
Sota Kageyama, Takanori Sasaki (*I. Fac. Adv. Math. Sci., Meiji Univ.*)
- 1Pos164 内分泌療法による乳がんの予後に関する効果修飾遺伝子と PPI network 領域の予測
Prediction of effect modifiers and PPI network regions involved in endocrine therapy-induced breast cancer prognosis
Shoya Oba, Takanori Sasaki (*I. Fac. Adv. Math. Sci., Meiji Univ.*)
- 1Pos165 大規模なデータセットで学習した事前学習モデルを利用したタンパク質・リガンド結合親和性の予測
Predicting protein-ligand binding affinity using pre-trained models on large-scale dataset
Sei Inoue, Tohru Terada (*Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*)
- 1Pos166 蛋白質リガンド相互作用の pIC50 の機械学習予測
pIC50 Prediction Using Protein-Ligand Interactions
Shuji Endo, Masanori Yamanaka (*Grad. Sch. Sci. & Tech., Nihon Univ.*)

- 1Pos167 深層学習モデル gr Predictor を用いたタンパク質 2 量体界面の水和分布予測
Predicting the Hydration Structures at the Protein-Protein Interfaces of Dimers using a Deep-Learning Model "gr Predictor"
Yuki Ito, **Takashi Yoshidome** (*Dep. of Appl. Phys., Tohoku Univ.*)
- 1Pos168 Analysis of water dynamics around antifreeze proteins by molecular dynamics simulations
Nao Abe¹, Simon Hikiri², Takuya Takahashi² (¹*Grad. Sch. Life Sci., Ritsumeikan Univ.*, ²*Coll. Life Sci., Ritsumeikan Univ.*)
- 1Pos169 QM/MM Study of the Reaction Mechanism of a SAM-Dependent 3-Amino-3-Carboxypropyl Transferase in Nocardicin Biosynthesis
Masayuki Karasawa¹, Takayoshi Awakawa², Takahiro Mori^{3,4,5}, Ikuro Abe^{3,4}, Tohru Terada^{1,4} (¹*Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*, ²*RIKEN Cent. Sustain. Res. Sci. (CSRS)*, ³*Grad. Sch. of Pharm. Sci., Univ. of Tokyo*, ⁴*Collab. Res. Inst. Innov. Microbiol. (CRIIM)*, ⁵*JST PRESTO*)
- 1Pos170 Elucidating the Binding Pathway of Abltide to Abl Kinase through Enhanced 2D Replica Exchange Molecular Dynamics Simulations
Yichao Wu, Ai Shinobu (*Premium Research Institute for Human Metaverse Medicine (WPI-PRIME), The University of Osaka*)
- 1Pos171 Free energy analysis of drug inclusion in polymeric micelles using molecular dynamics simulation
Mai Ukawa¹, Simon Hikiri², Takuya Takahashi² (¹*Grad. Sch. Life Sci., Ritsumeikan Univ.*, ²*Coll. Life Sci., Ritsumeikan Univ.*)
- 1Pos172 BEMM-GEN: A Toolkit for Generating a Biomolecular Environment-Mimicking Model for Molecular Dynamics Simulation
Takunori Yasuda, Rikuri Morita, Yasuteru Shigeta, **Ryuhei Harada** (*CCS, Univ. of Tsukuba*)
- 1Pos173 Effects of Phosphorylation in the Naturally-Denatured Region of TGIF-1 on Functional Regulation
Madoka Nakatani¹, Simon Hikiri², Junichi Higo³, Takuya Takahashi² (¹*Grad. Sch. Life Sci., Ritsumeikan Univ.*, ²*Coll. Life Sci., Ritsumeikan Univ.*, ³*Grad. Sch. Info. Sci., Univ. Hyogo*)
- 1Pos174 Binding Free Energy Analysis of PD-L1 and Macrocyclic Peptide Inhibitors
Hyunji Kim¹, Simon Hikiri², Takuya Takahashi² (¹*Grad. Sch. Life Sci., Ritsumeikan Univ.*, ²*Coll. Life Sci., Ritsumeikan Univ.*)
- 1Pos175 Elucidation of the binding mechanism between botulinum toxin and antibodies through binding free energy analysis
Yuka Maeda¹, Simon Hikiri², Takuya Takahashi² (¹*Grad. Sch. Life Sci., Ritsumeikan Univ.*, ²*Coll. Life Sci., Ritsumeikan Univ.*)
- 1Pos176 アクチンの分子揺らぎに内在する複数の機能運動
Multiple functional motions of actin are embedded in its intrinsic molecular fluctuation
Ryotaro Koike¹, Kei Moritsugu², Motonori Ota¹ (¹*Grad. Sch. Info., Nagoya Univ.*, ²*Grad. Sch. Sci., Osaka Metro. Univ.*)
- 1Pos177 MD シミュレーションを用いた膜の伝熱性解析
Analysis of the Thermal Insulation Properties of Lipid Bilayers Using Molecular Dynamics (MD) Simulations
Ayaka Kiyota¹, Yuichi Togashi^{1,2} (¹*Grad. Sch. Life Sci., Ritsumeikan Univ.*, ²*RIKEN*)
- 1Pos178 Molecular Simulation Study on the Conformational Dynamics and Activation Pathway of Melanopsin
Ruisi Zou¹, Kohe Obayashi², Hisao Tsukamoto², Toshifumi Mori^{1,3} (¹*Grad. Sch. Integr. Sci. & Eng., Univ. Kyushu*, ²*Grad. Sch. Sci., Kobe Univ.*, ³*Inst. Mater. Chem. & Eng., Kyushu Univ.*)

- 1Pos179 Investigating Protein Condensation and Ion Contributions with Explicit Solvent Coarse-Grained Models
Yangyang Zhang¹, Cheng Tan¹, Yuji Sugita^{1,2} (¹*RIKEN R-CCS, Kobe, Japan*, ²*RIKEN PRI, Wako, Japan*)
- 1Pos180 Neuropsin (KLK8)の触媒活性に対する金属添加効果の計算化学的検討
Effect of metal ion addition on the catalytic activity of Neuropsin (KLK8): a computational study
Masami Lintuluoto¹, Mari Fujimoto¹, Humika Nakamura¹, Souma Kai¹, Yoshifumi Fukunishi², Hideki Tamura³, Jua Mikael Lintuluoto⁴ (¹*Graduate School of Life and Environmental Sciences, Kyoto Prefectural University*, ²*Cellular and Molecular Biotechnology Research Institute, National Institute of Advanced Industrial Science and Technology (AIST)*, ³*Laboratory of Biofunctional Science, Hoshi University School of Pharmacy and Pharmaceutical Sciences*, ⁴*Graduate School of engineering, Kyoto University*.)
- 1Pos181 分子動力学シミュレーションを用いた多剤排出輸送体 MdfA の基質特異性と排出機構の解析
Analysis of substrate specificity and efflux mechanism of the multidrug transporter MdfA using MD simulations
Hodaka Tanabe, Tohru Terada (*Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci., Univ of Tokyo*)
- 1Pos182 阻害剤の柔軟性がレセプタータンパク質への結合に与える影響の拡張アンサンブルによる検証
Verification of the effect of ligand and receptor flexibility on inhibitory activity by generalized-ensemble algorithms
Suzuka Saitou¹, Simon Hikiri², Junichi Higo³, Takuya Takahashi² (¹*Grad. Sch. Life Sci., Ritsumeikan Univ.*, ²*Coll. Life Sci., Ritsumeikan Univ.*, ³*Grad. Sch. Info Sci., Hyogo Univ.*)
- 1Pos183 計算化学を用いた 2-オキソグルタル酸依存性ジオキシゲナーゼによるオロバンコール環拡大反応の触媒機構の解明
Computational study on the catalytic mechanism of 2-oxoglutarate-dependent dioxygenase in the ring expansion of orobanchol
Hanting Jiang¹, Takatoshi Wakabayashi², Hajime Sato¹, Yoshitaka Moriwaki^{1,4}, Masato Homma³, Yukihiko Sugimoto³, Tohru Terada¹ (¹*Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*, ²*Dept. of Appl. Biol. Chem., Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*, ³*Dept. of Biochem., Grad. Sch. of Agri. and Life Sci., Kove Univ.*, ⁴*Med. Res. Inst., Inst. of Integr. Res., Science Tokyo.*)
- 1Pos184 薬剤設計のための AQP7 チャネルへの阻害剤侵入に関するインシリコ解析
In silico analysis of inhibitor intrusion into the AQP7 channel for efficient drug design
Koryo Obata¹, Yasuteru Shigeta², Ryuhei Harada² (¹*Grad. Sch. degree programs in life and earth sciences, University of Tsukuba*, ²*Center for Computational sciences, University of Tsukuba*)
- 1Pos185 分子動力学を用いた 超音波誘導性の piezo 1 立体構造変化解析
Analysis of ultrasound-induced structure changes in piezo1 using Molecular Dynamics
Yoshio Nakano, Kazuki Arita, Satoka Kasai, Kazumi Yoshizawa, Tsugumi Yamauchi, Daisuke Yamada, Akiyoshi Saitoh, Satoru Miyazaki (*Fac. Pharm. Tokyo Univ. Sci.*)
- 1Pos186 分子動力学計算による脂質スクランブラーゼ Atg9 の開閉運動における脂質及び水分子の挙動解析
Lipid and Water Dynamics during the Functional Cycle of the Lipid Scramblase Atg9: A Molecular Dynamics Study
Ayaka Shimbo, Takaharu Mori (*Grad. Sci., Tokyo Univ. of Sci.*)
- 1Pos187 拡散モデルによる全原子シミュレーションからの粗視化力場の学習
Learning coarse-grained force fields from all-atom simulations via diffusion models
Ryounosuke Kouriki, Tsuyoshi Terakawa (*Dept. Biophys., Grad. Sch. Sci., Kyoto Univ.*)
- 1Pos188 AlphaFold と MD シミュレーションによるコラーゲン三重らせん構造の解析
Structural Analysis of Collagen Triple Helices Using AlphaFold and Molecular Dynamics Simulations
Rikuto Noguchi¹, Taiyo Eguchi¹, Aimi Yamashita¹, Kohsuke Adachi², Masato Kinoshita³, Yuuta Moriyama¹, Toshiyuki Mitsui¹ (¹*Grad. Sch. Sci. and Eng., Aoyamagakuin Univ.*, ²*Fac. Agr. and Mar. Sci., Kochi Univ.*, ³*Grad. Sch. Agr., Kyoto Univ.*)

26C. 計算生物学：生体モデリングとシミュレーション／
26C. Computational biology: Biological modeling and simulation

- 1Pos189 細胞の剥離を含む頂点モデルにおける破壊パターンの解析
Analysis of fracture patterns in a vertex model including detachment of cells
Nozomi Fujita¹, Yuichi Togashi^{1,2} (¹Grad. Sch. Life Sci., Ritsumeikan Univ., ²BDR, RIKEN)
- 1Pos190 粗視化格子モデルによるタンパク質の進化とアロステリック制御
Coarse-Grained Lattice Modeling of Protein Evolution and Allostery
Jin Kousaka^{1,2}, Radek Erban³, Yuichi Togashi¹ (¹Graduate School of Life Sciences, Ritsumeikan University, ²Kobe Inst., Riken, ³Mathematical Institute University of Oxford)
- 1Pos191 Boosting weak signals with incorrect ligands in the sensory system
Yan-Ru Chen (*Department of Physics, National Central University*)

27. 数理生物学・理論生物学／27. Mathematical & Theoretical biology

- 1Pos192 グリオブラストーマ細胞の移動メカニズムを解明するための数理モデリングと解析
Mathematical modeling and analysis to elucidate the migration mechanism of glioblastoma cells
Hauna Tagawa¹, Daisuke Kanematsu², Asako Katsuma², Yonehiro Kanemura², Yuichi Sakumura¹
(¹Graduate School of Science and Technology, Nara Institute of Science and Technology, ²National Hospital Organization Osaka National Hospital)
- 1Pos193 Modeling hysteresis in protrusion mechanics during neuronal polarization
Akane Uchida, Naoyuki Inagaki, Yuichi Sakumura (*Graduate School of Science and Technology, Nara Institute of Science and Technology*)
- 1Pos194 シグナル伝達系における時間符号化の進化
Evolution of temporal encoding in signaling network
Thoma Itoh^{1,2}, Yohei Kondo³, Kazuhiro Aoki⁴, Nen Saito² (¹Dept. Basic Biol., Grad. Sch. Life Sci., SOKENDAI, ²Grad. Sch. Integrated Sciences for Life, Univ. Hiroshima, ³Grad. Sch. Med., Univ. Nagoya, ⁴Grad. Sch. Biostudies., Univ. Kyoto)
- 1Pos195 Mathematical Modeling and Simulation of Epithelial Wound Closure Dominated by Fingering Instability
Hikaru Emoto, Nen Saito (*Graduate School of Integrated Sciences for Life, Hiroshima University*)
- 1Pos196 Mechanical balance of adhesions mediates chiral collective rotation induced by cell chirality
Ryohei Nishizawa^{1,2}, Tomoki Ishibashi¹, Goshi Ogita¹, Tatsuo Shibata^{1,2} (¹BDR, Riken, ²Grad Sch. of FBS., Osaka Univ.)

28. 生態／環境／28. Ecology & Environment

- 1Pos197 Multiphase chemistry of bio-related molecules in microdroplets studied aerosol optical tweezers
Yuan-Pin Chang (*Dept. of Chem., National Sun Yat-sen Univ., Taiwan*)

29. 非平衡・生体リズム／29. Nonequilibrium state & Biological rhythm

- 1Pos198 非平衡ナノ逆ミセルのテラヘルツ振動凝縮
Terahertz vibrational condensation in out-of-equilibrium nanoscale reverse micelles
Hiroshi Murakami (*QST*)

- 1Pos199 ナノ内視鏡 AFM 法を用いた上皮間葉転換による細胞内核膜硬さ変化測定
Nanoendoscopy-AFM based nanomechanical measurements reveal changes in nuclear elasticity during epithelial-mesenchymal transition
Takehiko Ichikawa¹, Yohei Kono, Makiko Kudo, Takeshi Shimi, Takeshi Fukuma (*NanoLSI, Kanazawa Univ.*)
- 1Pos200 ナノスケール構造・化学変化ダイナミクス分析のための高速 AFM・顕微ラマン複合装置
High-speed AFM/micro-Raman multimodal system for studying nanoscale conformational and chemical dynamics
Keishi Yang¹, Feng-Yueh Zhan², Verma Prabhat¹, Takayuki Uchihashi^{2,3}, Takayuki Umakoshi^{1,4} (¹*Grad. Sch. Eng., Univ. Osaka*, ²*Grad. Sch. Sci., Univ. Nagoya*, ³*ExCELLS*, ⁴*Inst. Adv. Co-creation Studies, Univ. Osaka*)
- 1Pos201 機械学習画像解析を活用した 3 次元バクテリアバイオフィルムの In vivo マイクロレオロジー計測
In vivo microrheological measurement for 3D bacterial biofilm with machine learning image analysis
Takuya Ohmura¹, Dominic J. Skinner², Konstantin Neuhaus^{3,4}, Gary P.T. Choi⁵, Jörn Dunkel⁶, Knut Drescher³ (¹*RIES, Hokkaido Univ.*, ²*Cent. Comput. Biol., Flatiron Instit.*, ³*Biozentrum, Univ. of Basel*, ⁴*Dept. Phys., Univ. of Marburg*, ⁵*Dept. Math., Chinese Univ. of Hong Kong*, ⁶*Dept. Math., MIT*)
- 1Pos202 レーザーマニピュレーション法を用いた超微量ナノポア計測の開発
The development of the ultralow concentration detection using laser manipulation method and nanopore sensing
Masaya Yokono (*Nagaoka Univ. of Tech.*)
- 1Pos203 酸化物/a-Si:H 積層薄膜による光触媒の作製とフラバン分子を用いた水素生成量の検出システム
Fabrication of photocatalysts based on oxide/a-Si:H stacked thin films and detection system of hydrogen production using flavan molecules
Yuki Sato¹, Kohei Saito¹, Akiko Hinoguchi¹, Hiroshi Masumoto², Yutaka Tsujiuchi^{1,2} (¹*Mat. Sci., Akita UNIV.*, ²*FRIS, Tohoku UNIV.*)
- 1Pos204 ゲル, 紫外可視光変換物質, FLAVAN 分子, 半導体, を用いた光照射ダイオード特性制御システム
Light irradiation diode characteristic control system using gels, UV-Visible light converting materials, FLAVAN molecules, semiconductors
Yutaka Tsujiuchi^{1,2}, Hiroshi Masumoto², Yuto Takayama¹, Kohei Saito¹, Akiko Hinoguchi¹ (¹*Mat. Sci., Akita UNIV.*, ²*FRIS, Tohoku UNIV.*)
- 1Pos205 分子混雑効果が誘起する HIV-1 グアニン四重鎖 RNA の構造不均一性の単一分子レベルの解析
Analysis of structural heterogeneity in HIV-1 G-quadruplex RNA induced by molecular crowding at the single-molecule level
Miyuki Sakaguchi¹, Atsuki Harada¹, Kunihiro Ishii^{2,3}, Tahei Tahara^{2,3}, Takuhiro Otsu¹, Shoichi Yamaguchi¹ (¹*Grad. Sch. Sci. Eng., Saitama Univ.*, ²*Molecular Spectroscopy Lab., RIKEN*, ³*RIKEN Center for Advanced Photonics*)
- 1Pos206 Single power-law rheology of crowded cytoplasm in living cells
Hiroyuki Ebata, **Daisuke Mizuno** (*Department of Physics, Kyushu University*)

- 1Pos207 抗血清由来プローブを使った IRIS 多色超解像顕微鏡法による内在性の分子複合体の構成
The composition of endogenous molecular complexes by IRIS, multiplexed super-resolution imaging using antiserum-derived probes
Tai Kiuchi¹, Ryouhei Kobayashi², Shuichiro Ogawa¹, Louis Elverston², Dimitrios Vavylonis³, Naoki Watanabe² (¹*Grad. Sch. Med., Kyoto Univ.*, ²*Grad. Sch. Bio., Kyoto Univ.*, ³*Dept. Phys., Lehigh Univ.*)
- 1Pos208 Fluorescence lifetime imaging for quantification of subcellular GTP/GDP ratios in mammalian cells
Loan Thi Ngoc Nguyen¹, Cong Quang Vu², Satoshi Arai^{1,2} (¹*Div. NanoLSI, Univ. Kanazawa*, ²*WPI-NanoLSI, Univ. Kanazawa*)
- 1Pos209 Development of Organelle Heating Technology to Study the Spatiotemporal Dynamics of HSP Expression
Hettimudalige Dilini Nisansala¹, B.M.K.D. Basnayake¹, Takeru Yamazaki², Kayoko Nomura², Satoshi Arai^{1,2} (¹*Grad. Sch. of Frontier Science Initiative, Division of Nano Life Science, Kanazawa University*, ²*WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University*)
- 1Pos210 酵素のナノスケール運動観察を目指したラベルフリー高精度一分子イメージングシステムの開発
Label-free high-precision single-molecule imaging system for nanoscale enzyme motion
Masato Sawa¹, Yasushi Okada^{1,2,3,4,5} (¹*Grad. Sch. Sci., Univ. Tokyo*, ²*Grad. Sch. Med., Univ. Tokyo*, ³*Kobe Inst., Riken*, ⁴*WPI-IRCIN, Univ. Tokyo*, ⁵*UBI, Univ. Tokyo*)
- 1Pos211 EMCCD の高精度ノイズモデルを用いた機械学習による細胞の高倍率生物発光イメージングのためのデノイジング
Denoising for high-magnification bioluminescence imaging of cells through machine learning with precise noise modeling of EMCCD
Tetsuichi Wazawa¹, Haiyang Jiang², Ryohei Ozaki-Noma¹, Yinqiang Zheng², Imari Sato³, Takeharu Nagai¹ (¹*SANKEN, Univ of Osaka*, ²*AI Center, Univ of Tokyo*, ³*Digital Content and Media Sciences Research, NII*)
- 1Pos212 高速 AFM を用いた PfDYN2 の膜構造認識に基づくマラリア原虫分裂機構の探究
Investigation of Plasmodium division mechanisms based on membrane recognition by PfDYN2 using high-speed AFM
Hirona Osaka¹, Hiroshi Yamada², Kohji Takei², Takayuki Uchihashi^{1,3} (¹*Grad. Phys. Sci., Univ. Nagoya*, ²*Grad. Sch. Med., Dent. and Pharm. Sci., Okayama Univ.*, ³*ExCELLS*)
- 1Pos213 ミオシン分子に結合したアクチン線維の超解像顕微鏡解析
Super-resolution images of actin filaments bound to myosin molecules using a microscope with a home-built illumination system
Daichi Kobayashi, Taiki Tsujimoto, Kuniyuki Hatori (*Graduate School of Science and Engineering, Yamagata University*)
- 1Pos214 一分子蛍光イメージングを用いた分子シャペロンによるアミロイド脱凝集過程のメカニズムの解明
Amyloid conformation-dependent disaggregation of chaperone revealed by single molecule fluorescent imaging
Yoshiko Nakagawa¹, Shingo Tamai¹, Takashi Nomura¹, Takahiro Nakayama², Motomasa Tanaka¹ (¹*RIKEN, CBS*, ²*WPI Nano Life Science Institute, Kanazawa University*)
- 1Pos215 温度ジャンプ高速原子間力顕微鏡の開発と性能評価
Development and characterization of a temperature jump high-speed atomic force microscopy
Mai Tambo, Ayumi Sumino (*Grad. Sch. of biostudies, Kyoto univ.*)

32. バイオエンジニアリング／32. Bioengineering

- 1Pos216 Load-induced remodeling of mechanosensing proteins in suspended cell sheets
Madoka Suzuki¹, Keiko Kawauchi², Hiroaki Machiyama³, Hiroaki Hirata⁴, Shin'ichi Ishiwata⁵, Hideaki Fujita⁶ (¹*Inst. Protein Res., Univ. Osaka*, ²*Fac. Front. Innov. Res. Sci. Technol., Konan Univ.*, ³*Dept. Immunol., Tokyo Med. Univ.*, ⁴*Dept. Life Sci. Biotechnol., Kanazawa Inst. Technol.*, ⁵*Fac. Sci. Eng., Waseda Univ.*, ⁶*Res. Inst. Radiation Biol. Med., Hiroshima Univ.*)
- 1Pos217 金ナノ粒子を用いる酸化還元蛋白質の電子移動制御と電気バイオものづくり
 Efficacy of uncapped gold nanoparticles for electron transfer to redox proteins and its application for bioproduction
Yasuhiro Mie¹, Chitose Mikami¹, Kentaro Akiyama², Yoshiaki Yasutake¹ (¹*Biomanufacturing Production Res. Ctr., AIST*, ²*Molecular Biosystems Res. Inst., AIST*)
- 1Pos218 ARTIFICIAL CONTROL OF A HIGHLY ACTIVATED PLASTIC DEGRADING ENZYME BY PHOTOCROMIC NANODEVICES
Ateke Yanick Besong, Shota Nishida, Shinsaku Maruta (*Grad.Sch.Sci.Eng., Soka Univ.*)

34. Miscellaneous topics その他／34. Miscellaneous topics

- 1Pos219 異常拡散系の初期通過問題における系の総数依存性とその役割
 The role of population for first passage time problem with anomalous diffusion
Yuta Sakamoto, Takahiro Sakaue (*Aoyama Gakuin University*)
- 1Pos220 2点 MSD 解析の基礎と応用
 Two-Point MSD Analysis for Eliminating External Motion
Naoya Katayama, Takahiro Sakaue (*Dept. of Phys. Aoyama Gakuin Univ.*)

2日目 (9月25日(木)) / Day 2 (Sep. 25 Thu.) 14:00 ~ 16:00

01A. タンパク質：構造／01A. Protein: Structure

- 2Pos001 マウスノロウイルスカプシドと細胞レセプター sCD300lf の結合様式の解明
 Elucidation of the binding mechanism between murine norovirus capsid and sCD300lf receptor
Kentaro Hiraka^{1,2}, Reiko Todaka³, Kei Haga³, Kazuhiko Katayama³, Kazuyoshi Murata^{1,2} (¹*ExCELLS, NINS*, ²*NIPS, NINS*, ³*Grad. Sch. Infection Control Sci., Kitasato Univ.*)
- 2Pos002 細菌の細胞分裂に関与するタンパク質 FtsZ の構造遷移機構の解析
 Structural transition mechanism of Bacterial cell division protein FtsZ
Kodai Yamamoto¹, Taichi Takasawa¹, Takumi Oshiro¹, Yoshio Kodera^{1,2}, Go Watanabe³, Takashi Matsui^{1,2} (¹*Grad. Sch. Sci., Kitasato Univ.*, ²*Center for Disease Proteomics, Sch. Sci., Kitasato Univ.*, ³*Sch. of Front. Eng., Kitasato Univ.*)
- 2Pos003 溶液 NMR による自然免疫シグナルタンパク質 MyD88 の多量化および相互作用解析
 NMR analysis of the interactions of the MyD88 TIR domain in innate immune signaling
Shiho Nukui, Yudai Ito, Kazuki Kasai, Hidehito Tochio (*Dept. of Biol. Sci., Grad. Sch. of Sci., Kyoto Univ.*)

- 2Pos004 **ATR-FTIR 分光法によるアデノシン A2a 受容体のリガンド誘起構造変化解析**
Ligand-induced conformational changes in the adenosine A2a receptor probed by ATR-FTIR spectroscopy
Shuma Tajima¹, Kento Watanabe¹, Shota Nakamura², Mika Hirose², Akitoshi Inoue³, Takayuki Kato², Ryoji Suno³, Hideki Kandon^{1,4}, Kota Katayama^{1,4} (¹Nagoya Institute of Technology Graduate School of Engineering, ²Institute for Protein Research, Osaka University, ³Kansai Medical University, ⁴Nagoya Institute of Technology OptoBioTechnology Research Center)
- 2Pos005 **性繊維 H-Pilus の構造が明らかにした TrhA pilin の環状化**
Structural basis of the conjugation H-pilus reveals the cyclic nature of the TrhA pilin
Naito Ishimoto^{1,2,3}, Joshua Wong², Shan Heb², Sally Shirranc⁴, Olivia Paramio², Chloe Seddon^{2,3}, Nanki Singha^{2,3}, Carlos Balsalobred⁵, Ravi Sonanie⁶, Abigail Clements³, Edward Egelman⁶, Gad Frankel², Konstantinos Beis^{2,3} (¹Grad. Sch. Life Sci., Yokohama City Univ., ²Department of Life Sciences, Imperial College London, ³Rutherford Appleton Laboratory, Research Complex at Harwell, ⁴Biomedical Sciences Research Complex Mass Spectrometry & Proteomics Facility, University of St Andrews, ⁵Department de Genètica, Universitat de Barcelona, ⁶Department of Biochemistry and Molecular Genetics, University of Virginia)
- 2Pos006 **Structural insights into calcium selectivity of channelrhodopsin CapChR2**
Jie Ma¹, Masahiro Fukuda², Seiwa Nakamura³, Seiya Tajima¹, Koichiro Kishi³, Suhyang Kim², Hideaki Kato^{1,2,3} (¹Graduate School of Science, The University of Tokyo, ²Research Center for Advanced Science and Technology, The University of Tokyo, ³Graduate School of Arts and Sciences, The University of Tokyo)
- 2Pos007 **非準等価ウイルスカプシドにおけるサブユニット形状の幾何学的制約**
Geometric Constraints on Subunit Shapes in Non-Quasi-Equivalence Viral Capsids
Sakura Homma¹, Seri Nishimoto², Tomoya Tendo³, Kanata Warisaya², Hiroki Minami², Issei Tanaka², Ryuya Toyooka³, Takashi Horiyama⁴, Tomohiro Tachi³, Yasuhiro Matsunaga^{1,5} (¹Grad. Sch. Sci. & Eng., Saitama Univ., ²Grad. Sch. Eng., Univ. Tokyo, ³Grad. Sch. Arts & Sci., Univ. Tokyo, ⁴Grad. Sch. Fac. Inf. Sci. & Tech., Hokkaido Univ., ⁵RIKEN)
- 2Pos008 **Universal scaling laws linking Dynamics and Folding revealed by AlphaFold Database**
Zecheng Zhang¹, Qianyuan Tang¹, Weitong Ren², Jun Wang³ (¹Hong Kong Baptist University, HKSAR, China, ²Wenzhou Institute, Univ. Chin. Acad. Sci., China, ³Nanjing University, China)
- 2Pos009 **クライオ電子顕微鏡を用いた V-ATPase の構造機能解析**
Structural and Functional Analysis of V-ATPase Using Cryo-Electron Microscopy
Fuka Ueda¹, Yui Nishida¹, Atsuki Nakano¹, Atsuko Nakanishi², Kaoru Mitsuoka³, Ken Yokoyama¹ (¹Grad.Sch. Life Sci., Kyoto Sangyo Univ., ²IPR, Osaka Univ., ³Research Center for Ultra-High Voltage Electron Microscopy, Osaka Univ.)
- 2Pos010 **酵母プリオンタンパク質の構造・細胞表現系相関解析**
Structural and Phenotypic Correlation Analysis of Yeast Prion Proteins
Takashi Nomura¹, David Boyer², Yusuke Komi¹, Atsushi Yamagata³, Mikako Shirouzu³, Carlos Bustamante⁴, David Eisenberg², Motomasa Tanaka^{1,5} (¹Wako Inst., Riken, ²Dept. Bio. Chem., UCLA, ³Yokohama Inst., Riken, ⁴QB3, UC Berkeley, ⁵Dept. Life Sci. & Tech., TMDU)
- 2Pos011 **放線菌由来新規プレニル基転移酵素の構造-機能相関の解明**
Structure-function relationship of novel prenyltransferase from *Streptomyces* sp. KS84
Takumi Oshiro¹, Shuta Uehara¹, Yoshikazu Tanaka², Takuya Ito³, Yoshio Kodera^{1,4}, Takashi Matsui^{1,4} (¹Grad. Sch. Sci., Kitasato Univ., ²Grad. Sch. Life Sci., Tohoku Univ., ³Fac. of Pharm., Osaka Ohtani Univ., ⁴Center for Disease Proteomics, Sch. Sci., Kitasato Univ.)
- 2Pos012 **Protein Language Models Capture Evolutionary Trends via Embedding Variation**
Yuxiang Zheng, Zecheng Zhang, Qian-Yuan Tang (Hong Kong Baptist Univ)

01B. タンパク質：物性（安定性、折れたたみなど）／01B. Protein: Physical property

- 2Pos013 時間分解真空紫外円二色性による SDS ミセル結合過程における β -ラクトグロブリンの構造ダイナミクス観測
Observing structural dynamics of β -Lactoglobulin Binding to SDS Micelle by Time-Resolved Vacuum-Ultraviolet Circular Dichroism
Satoshi Hashimoto¹, Koichi Matsuo^{1,2} (¹*Grad. Sch. Adv. Sci. Eng., Hiroshima Univ.*, ²*HiSOR*)
- 2Pos014 ペプチド結合の折り目効果の強化による黄色蛍光タンパク質 Venus の収量増加の試み
Attempts to increase the yield of the yellow fluorescent protein Venus by enhancing the ORIME effect of a peptide bond
Erika Gunji¹, Manami Suwa¹, Masaru Hoshino², Nobuhiro Suzuki³, Kaori Chiba¹ (¹*Indust. Eng. Natl. Inst. Tech, Ibaraki Coll. Japan*, ²*Kyoto Univ. Pharm.*, ³*NARO*)
- 2Pos015 トリプシン様蛋白分解酵素のプロ領域による立体構造形成の解明
Propeptide-Mediated Folding of a Trypsin-Like Protease
Kairi Ogawa¹, Nana Sakata¹, Orika Ashida¹, Mitsuhiro Miyazawa², Shigeru Shimamoto¹, Yuji Hidaka¹ (¹*Grad. Sch. Sci. Eng., Univ. Kindai*, ²*PrevenTec Inc.*)
- 2Pos016 変性状態下における BDPA の non-local 相互作用とフォールディング機構の再検討
Revisiting the Folding Mechanism of BDPA through non-local interactions in the Denatured State
Seiichi Hayashi¹, Saeko Yanaka^{1,2,3}, Maho Yagi^{1,2,4}, Yukiko Isono^{1,2}, Koichi Kato^{1,2,4}, Kunihiro Kuwajima⁵ (¹*Institute for Molecular Science, National Institutes of Natural Sciences*, ²*Exploratory Research Center on Life and Living Systems, National Institutes of Natural Sciences*, ³*Materials and Structures Laboratory at Institute of Integrated Research, Institute of Science Tokyo*, ⁴*Graduate School of Pharmaceutical Sciences, Nagoya City University*, ⁵*Department of Physics, School of Science, University of Tokyo*)
- 2Pos017 構造に基づく単純な統計力学モデルを用いた骨形成タンパク質 2 のフォールディング反応過程の予測
Prediction of the folding process of bone morphogenetic protein 2 using a simple structure-based statistical mechanical model
Yusaku Hirata¹, Koji Ooka², Munchito Arai^{1,2,3} (¹*Department of Physics, The University of Tokyo*, ²*College Arts and Sciences, The University of Tokyo*, ³*Department of Life Sciences, The University of Tokyo*)
- 2Pos018 RNA によるタウ凝集の速度論的解析
Kinetics of RNA-induced Tau Aggregation
Hiyori Araki, Hide Miyaguchi, Hideyuki Komatsu (*Department of Bioscience and Bioinformatics, Faculty of Systems Engineering and Computer Science, Kyushu Institute of Technology*)
- 2Pos019 がん抑制タンパク質 p53 のアセンブリ形態制御法の確立
Control of the assembly morphology of the tumor suppressor protein p53
Emi Hibino¹, Reiji Hijikata¹, Haruna Yoshida¹, Hidekazu Hiroaki^{1,2,3} (¹*Grad. Sch. Pharm. Sci., Nagoya Univ.*, ²*BeCellBar*, ³*COMIT*)

01C. タンパク質：機能（反応機構、生物活性など）／01C. Protein: Function

- 2Pos020 Molecular Shape Evolution of the Clock Protein KaiC
Shuji Akiyama^{1,2}, Yoshihiko Furuike^{1,2} (¹*NINS, IMS*, ²*SOKENDAI*)
- 2Pos021 オワンクラゲ由来蛍光タンパク質における二量体形成の比較
Comparison of Dimerization Behavior of Fluorescent Proteins from the Jellyfish *Aequorea Victoria*
Yuna Kinoshita, Haruko Hosoi (*Grad. Sch. Sci., Toho Univ.*)

- 2Pos022 グライコプロテオミクスのための O-glycoprotease IMPa 活性部位付近の相互作用解析
Analysis around the Active Site of O-glycoprotease IMPa for Glycoproteomics
Hiromitsu Shimoyama, Tomoaki Tamano, Issaku Yamada (*The Noguchi Institute*)
- 2Pos023 Functional and Structural Analyses on Clock Protein KaiC to Identify the Essential Step for the Temperature Compensation
Kanta Kondo^{1,2}, Yoshihiko Furuike^{1,2}, Kota Horiuchi^{1,2}, Yasuhiro Onoue², Shuji Akiyama^{1,2}
(¹SOKENDAI, ²IMS)
- 2Pos024 シトクロム P450 還元酵素におけるフラビン補因子の還元によるアロステリック応答の分子動力学解析
Molecular dynamics analysis of the allosteric response to reduction of flavin cofactors in cytochrome P450 reductase
Mikuru Iijima, Mitsunori Takano (*Grad. Sch. of Adv. Sci. & Eng., Waseda Univ.*)
- 2Pos025 一本鎖抗体の活性に対する大腸菌外膜タンパク質 OmpF の効果
Effect of Escherichia coli outer membrane protein, OmpF, on the activity of single-chain variable fragments
Keiko Okano, Anna Ogi, Takao Izuka, Toshiyuki Okano (*Department of Electrical Engineering and Bioscience, School of Advanced Science and Engineering, Waseda University*)
- 2Pos026 時計タンパク質 KaiC における第三の周期調節部位
The third period-regulating site in the clock protein of KaiC
Kota Horiuchi^{1,2}, Yoshihiko Furuike^{1,2}, Kumiko Ito-miwa³, Shuji Akiyama^{1,2} (¹Institute for Molecular Science, ²SOKENDAI, ³Nagoya University)
- 2Pos027 Time-Resolved Study of Light Intensity-Dependent Clustering Dynamics of TePixD
Chihiro Aramoto¹, Yusuke Masuda¹, Shunro Tokonami², Masahide Terazima¹, Yusuke Nakasone¹
(¹Grad. Sch. Sci., Kyoto University, ²Grad. Sch. Sci., Gakushuin University)
- 2Pos028 細菌膜内切断プロテアーゼ RseP の基質結合構造と光架橋解析から提案する基質ドッキング機構
Substrate docking mechanism of intramembrane protease RseP revealed by the substrate-bound cryoEM structure and photocrosslinking analysis
Yosuke Shimizu¹, Tatsuya Kobayashi¹, Kikuko Asahi², Terukazu Nogi², Yoshinori Akiyama¹,
Yohei Hizukuri¹ (¹Inst. Life Med. Sci., Kyoto Univ., ²Grad. Sch. Med. Life Sci., Yokohama City Univ.)

01D. タンパク質：計測・解析の方法論／01D. Protein: Measurement & Analysis

- 2Pos029 ナノ秒蛍光相関分光法を用いたタンパク質と RNA の高速ダイナミクスの観測
Ultrafast dynamics of protein and RNA investigated by nanosecond fluorescence correlation spectroscopy
Yuji Itoh^{1,2}, Yutaka Sano^{1,2}, Ibuki Soshino^{1,2}, Shrutarshi Mitra^{1,2}, Divya Rajendran³,
Athen N. Naganathan³, Satoshi Takahashi^{1,2} (¹Grad. Sch. Sci., Tohoku Univ., ²IMRAM, ³IIT Madras)
- 2Pos030 酸化 LDL の高感度検出を目指したバイオセンサーの合成研究
Synthetic study of biosensors for measurement of oxidized LDL
Takahisa Hiruma, Ryota Kumakura, Seiji Takeda (*Pharm. Sci., Hokkaido Univ. of Sci.*)
- 2Pos031 酵素反応を用いたタンパク質の部位特異的蛍光色素ラベル化法の開発
Development of site-specific fluorophore labeling to target protein by using enzymatic reactions
Ai Hanano^{1,2}, Saori Kanbayashi¹, Cassidy Schmitt¹, Hiroyuki Oikawa³, Tateki Suzuki⁴,
Takao Hashiguchi⁴, Yuji Itoh^{1,2}, Satoshi Takahashi^{1,2} (¹Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, ²Graduate School of Life Sciences, Tohoku University, ³Molcure Inc, ⁴Institute for Life and Medical Sciences, Kyoto University)
- 2Pos032 分子動力学計算とニューラルネットワークの連携による生体分子小角散乱プロファイルの解析
Interpretation of small-angle scattering profiles of biomolecules by molecular dynamics simulation and neural networks
Masahiro Shimizu (*KURNS, Kyoto Univ.*)

- 2Pos033 AlphaFold3 を用いた AFM 画像から 3 次元立体構造の高速な再構築手法
Rapid Reconstruction of Atomic 3D Configurations from an AFM image by AlphaFold3
Tsuyoshi Kawai, Yasuhiro Matsunaga (*Grad. School. Sci. Eng., Univ. Saitama*)

01E. タンパク質：タンパク質工学／進化学／01E. Protein: Engineering

- 2Pos034 The development of AMP-based antibiotics for drug-resistant Gram-negative bacteria
Wei Chun Weng, Kaori Sugihara (*Institute of Industrial Science, The University of Tokyo*)
- 2Pos035 Development of red-color fluorescence lifetime biosensors for quantification of ATP levels in living cells
Tri Minh Phan¹, B.M.K.D Basnayake¹, Quang Vu Cong², Satoshi Arai^{1,2} (¹*Graduate School of Frontier Science Initiative, Division of Nano Life Science, Kanazawa University*, ²*WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University*)
- 2Pos036 タンパク質工学を利用した人工セルロソームの構築とセルロース分解の効率化
Construction of an artificial cellulosome using protein engineering toward improvement of cellulose degradation
Momoka Takazawa, Koki Kamiya (*Grad. Sch. Sci. & Tech., Gunma Univ.*)
- 2Pos037 De novo design of sensor proteins: calcium-binding protein
Rie Tatsumi, Nobuyasu Koga (*IPR, Univ. Osaka*)
- 2Pos038 遺伝子にコードされた蛍光バイオセンサーのためのモジュール型設計戦略：VEGF 検出への応用
Modular design strategy for genetically-encoded fluorescent biosensors: Application to VEGF Detection
Momoko Oya^{1,2}, Ryohei Ozaki-Noma¹, Tetsuichi Wazawa¹, Kazunori Sugiura¹, Mitsuru Hattori¹, Masataka Michigami³, Daisuke Fujiwara³, Ikuo Fujii³, Takeharu Nagai¹ (¹*SANKEN, The Univ. of Osaka*, ²*Grad. Sch. Pharm. Sci., The Univ. of Osaka*, ³*Grad. Sch. Sci., Osaka Metropolitan Univ.*)

01F. タンパク質：天然変性／01F. Protein: Intrinsic disorder

- 2Pos039 FUS タンパク質の天然変性領域と RNA の相互作用機構の解明
Unveiling the Interaction Mechanism between a FUS Intrinsically Disordered Region and RNA by Molecular Dynamics Simulation
Yoshie Iijima, Soichiro Kijima, PhuocDuy Tran, Akio Kitao (*Grad. Sch. Life Sci. and Tech., Science Tokyo*)
- 2Pos040 TIA1 の自己集合における核酸の寄与の解明
Investigating the contribution of nucleic acids to the self-assembly of TIA1
Anupap Chaujaroensuk¹, Naotaka Sekiyama¹, Aya Ogino², Hiroki Konno³, Hidehito Tochio¹ (¹*Grad. Sch. Sci., Kyoto Univ.*, ²*Grad. Sch. of Nat. Sci. & Technol., Kanazawa Univ.*, ³*WPI Nano Life Sci. Inst. (WPI-Nano LSI), Kanazawa Univ.*)
- 2Pos041 実験とシミュレーションによる Hero 蛋白質のヘリックス形成の研究
The α -Helix Formation of Hero Proteins Studied by Experiments and Simulations
Takao Yoda¹, Ai Niitsu², Cheng Tan³, Naoya Tochio², Haeri Im^{3,4}, Takanori Kigawa², Jaewoon Jung^{3,4}, Yuji Sugita^{3,4} (¹*Nagahama Institute of Bio-Science and Technology*, ²*RIKEN IMS*, ³*RIKEN R-CCS*, ⁴*RIKEN PRI*)
- 2Pos042 超音波照射を用いた夾雑環境下における α -シヌクレインシードの高感度検出
Ultrasonic Cavitation Enhances Selective Detection of α -Synuclein Amyloid Fibrils from a Crowded Environment
Tomoki Ota, Kichitaro Nakajima, Keiichi Yamaguchi, Yuji Goto, Hirotsugu Ogi (*Grad. Sch. Eng., Osaka Univ.*)

02. ヘムタンパク質／02. Heme proteins

- 2Pos043 脱窒タンパク質超分子複合体の可溶化条件の最適化
Optimization of Solubilization Conditions for supramolecular complex of denitrification proteins
Sara Tanibayashi (*Grad. Sch. Sci., Univ. Hyogo*)
- 2Pos044 オリゴマー型アロステリック蛋白質の機能に於ける両親媒性溶質の影響 - 疎水性相互作用の役割
Effect of Amphipathic Solutes on the Function of an Oligomeric Allosteric Protein - Role of Hydrophobic Interactions
Antonio Tsuneshige^{1,2}, Takehiko Haga² (¹*Frontier Bioscience, HOSEI UNIVERSITY*, ²*Micro-Nano Tech. Ctr., HOSEI UNIVERSITY*)

03. 膜タンパク質／03. Membrane proteins

- 2Pos045 オレキシン受容体 2 の C 末端 IDR と受容体コアドメインとの分子内相互作用に関する溶液 NMR 解析
Solution NMR Analysis of the Intramolecular Interaction between the C-terminal IDR and the Receptor Core Domain of Orexin Receptor 2
Riki Kato¹, Yuki Kanazaki¹, Ken-Ichi Akagi², Yohei Miyanoiri², Kayo Imamura¹, Hidehito Tochio¹
(¹*Grad. Sch. Sci., Univ. Kyoto*, ²*Inst. Protein Research, Univ. Osaka*)
- 2Pos046 抗体を用いた膜結合型 CLIC1 を標的としたモノクローナル抗体の作製と機能解析
Development of Monoclonal Antibodies Specifically Targeting Membrane-bound CLIC1 and Their Functional Characterization
Kazuki Imai^{1,2}, Ayana Yamagishi^{1,2}, Masumi Iljima³, Chikashi Nakamura^{1,2} (¹*Grad. Sch. Eng., Tokyo Univ. Agric. Technol.*, ²*CMB, AIST*, ³*Fac. Appl. BioSci., Tokyo Univ. of Agri.*)
- 2Pos047 多剤排出トランスポーター EmrE の pH 依存的基質結合駆動力変換には Asp84 が関与する
Asp84 Is Involved in the pH-Dependent Driving Force Conversion for Substrate Binding in the Multidrug Efflux Transporter EmrE
Kazumi Shimono¹, Daisuke Takahashi¹, Shuichi Miyamoto¹, Seiji Miyauchi² (¹*Fac. Pharm. Sci., Sojo Univ.*, ²*Fac. Pharm. Sci., Toho Univ.*)
- 2Pos048 Allosteric Effects of Sodium Binding on the κ -Opioid Receptor Revealed by FTIR Spectroscopy
Ryo Nishikawa¹, Seiya Iwata¹, Shun Yokoi², Ryoji Suno³, Chiyo Suno-Ikeda³, Ayori Mitsutake², Takuya Kobayashi³, Hideki Kandori^{1,4}, **Kota Katayama**^{1,4} (¹*Grad. Sch. Engi. Univ. Nagoya Inst.*, ²*Grad. Sch. Phys. Univ. Meiji*, ³*Grad. Sch. Med. Univ. Kansai. Med.*, ⁴*OptBioTech. Res. Cent. Univ. Nagoya Inst.*)

04. DNA・DNA 結合タンパク質／04. DNA & DNA binding proteins

- 2Pos049 分子動力学シミュレーションを用いた CRISPR Type I-C における DNA 切断前後のダイナミクスの違い
Molecular dynamics simulation study of the differences in dynamics before and after DNA cleavage in CRISPR Type I-C
Ryusei Haruna¹, Yoshihiro Kashiyama¹, Ryota Kiyooka¹, Shota Shimogoochi¹, Naoyuki Miyashita^{1,2}
(¹*Grad. Sch. BOST, KINDAI Univ.*, ²*BOST KINDAI Univ.*)

- 2Pos050 Advancing Biophysical Protein-DNA Interaction and Dynamics Studies Through Enhanced Sampling
Mohamed Marzouk Sobaih, Ai Shinobu (*Premium Research Institute for Human Metaverse Medicine (WPI-PRIME), The University of Osaka*)
- 2Pos051 高速 AFM を用いた ATP 依存的な Smc5/6 の構造ダイナミクスの可視化
 ATP dependent dynamics of Smc5/6 by high-speed atomic force microscopy
Kenichi Umeda^{1,2}, Yumiko Kurokawa³, Yasuto Murayama³, Noriyuki Kodera¹ (¹*Nano Life Science Institute, Kanazawa University*, ²*PRESTO/JST*, ³*Department of Chromosome Science, National Institute of Genetics*)

05. RNA・RNA 結合タンパク質／05. RNA & RNA binding proteins

- 2Pos052 NMR による α -シヌクレインと G4RNA の相互作用メカニズム解析
 NMR study of the interaction between α -Synuclein and G4RNA
Yiran Chen¹, Yasushi Yabuki², Norifumi Shioda², Hidehito Tochio¹ (¹*Grad. Sch. Sci., Univ. Kyoto*, ²*IMEG, Univ. Kumamoto*)
- 2Pos053 Valosin-containing protein behaved like an ATPase for FUS granules
Hitomi Kimura^{1,2}, Shin-ichi Tate^{1,2,3}, Kyota Yasuda^{1,2,3} (¹*Department of Mathematical and Life Sciences, Graduate School of Integrated Sciences for Life, Hiroshima University*, ²*International Institute for Sustainability with Knotted Chiral Meta Matter*, ³*Research Center for the Mathematics on Chromatin Live Dynamics*)

06. DNA/RNA ナノテクノロジー／06. DNA/RNA nanotechnology

- 2Pos054 DNA 液滴の個数制御された分裂を実現する酵素カスケード反応
 Enzymatic cascade reactions for number-controlled division of DNA droplets
Tatsumi Sakuma¹, Tomoya Maruyama², Masahiro Takinoue^{1,2,3} (¹*Department of Life Science and Technology, Institute of Science Tokyo*, ²*Research Center for Autonomous Systems Materialogy, Institute of Integrated Research, Institute of Science Tokyo*, ³*Department of Computer Science, Institute of Science Tokyo*)
- 2Pos055 核酸増幅システムの特性検証
 Characterization of Responsive Nucleic Acid Amplification systems
Ken Komiya¹, Chizuru Noda¹, Takashi Nakakuki² (¹*X-star, JAMSTEC*, ²*Faculty of Comp. Sci. & Sys. Engi., Kyutech*)
- 2Pos056 酵素反応によって活性化された DNA 凝集体
 Active DNA condensates coupled with enzymatic reactions
Tomoya Maruyama¹, Masahiro Takinoue^{1,2} (¹*Research Center for Autonomous Systems Materialogy, Institute of Integrated Research, Institute of Science Tokyo*, ²*Department of Computer Science, Institute of Science Tokyo*)
- 2Pos057 PEG-mediated regulation of DNA droplets: Stabilization with bulk PEG and transition to vesicle-like structures via DNA-PEG conjugates
Naoki Yoshida¹, Mayu Shono², Kenichi Yoshikawa³, Masahiro Takinoue^{1,4,5} (¹*Sch. Life Sci. & Tech., Science Tokyo*, ²*Grad. Sch. Art. & Sci., Univ. Tokyo*, ³*Self-organization Sci. Res. Ctr., Doshisha Univ.*, ⁴*Sch. Comp., Science Tokyo*, ⁵*ASMat, IIR, Science Tokyo*)

07. 核酸：その他／07. Nucleic acid: Others

- 2Pos058 サブテラヘルツ波照射が DNA 塩基対の形成に与える影響の溶液 NMR 研究
Investigation of sub-terahertz irradiation effects on DNA base pair formation by solution NMR
Yuji Tokunaga¹, Koh Takeuchi¹, Hiromichi Hoshina², Masahiko Imashimizu³ (¹*Grad. Sch. Pharm. Sci., UTokyo*, ²*RIKEN Center for Advanced Photonics*, ³*CMB, AIST*)
- 2Pos059 ポリアミンによる遺伝子発現活性の温度依存性
Temperature dependence of gene expression activity in the presence of polyamines
Shotaro Kato¹, Takashi Nishio^{1,2}, Yuko Yoshikawa¹, Koichiro Sadakane¹, Kenichi Yoshikawa¹ (¹*Grad. Sch. Life and Med Sci., Doshisha Univ.*, ²*MolBis, AIST*)

08. クロマチン・染色体／08. Chromatin & Chromosomes

- 2Pos060 Hi-C コンタクトマップのスペクトル分解解析
Spectral decomposition analysis of Hi-C contact maps
Ai Ito, Takahiro Sakaue (*Aoyama Gakuin University*)
- 2Pos061 クロマチンドメインの熱力学的サイズ制限について
Thermodynamic size limits in chromatin domains
Fujishiro Shin (*FIFC, Kyoto Univ.*)
- 2Pos062 複製依存的ヒストン標識 (Repli-Histo 標識) を用いて明らかにする、ヒト生細胞内のユークロマチン・ヘテロクロマチンのふるまい
Replication-dependent histone (Repli-Histo) labeling dissects the physical properties of euchromatin/heterochromatin in living human cells
Katsuhiko Minami^{1,2}, Kako Nakazato^{1,2}, Satoru Ide^{1,2}, Kazunari Kaizu^{3,4}, Koichi Higashi^{2,5}, Sachiko Tamura¹, Atsushi Toyoda⁶, Koichi Takahashi³, Ken Kurokawa^{2,5}, Kazuhiro Maeshima^{1,2}
(¹*Genome Dynamics Laboratory, NIG*, ²*SOKENDAI*, ³*Laboratory for Biologically Inspired Computing, RIKEN BDR*, ⁴*Cell Modeling and Simulation Group, ExCELLS*, ⁵*Genome Evolution Laboratory, NIG*, ⁶*Comparative Genomics Laboratory, NIG*)

10. 水・水和／電解質／10. Water & Hydration & Electrolyte

- 2Pos063 水中でのタンパク質分子間結合の高速計算に向けた GBSA 陰溶媒モデルの精査
Scrutiny of GBSA implicit solvent model for fast simulation of protein-protein binding in water
Fangqian Wei, Yukinari Kamiyama, Wataru Moriya, Mitsunori Takano (*Grad. Sch. of Adv. Sci. & Eng., Waseda Univ.*)
- 2Pos064 長距離静電相互作用のカットオフ計算で生じる水の層状構造：格子スピン模型による検証
The electrostatic problem of water revisited: Strange layer structure emerging from the truncated long-range interactions
Yoshiteru Yonetani (*National Institutes for Quantum Science and Technology (QST)*)
- 2Pos065 機械学習による過冷却水のローカル構造と水素結合エネルギーの解析
Machine-Learning Analysis of Local Structural Motifs and Hydrogen-Bond Energetics in Supercooled Water
Taku Mizukami¹, Nguyen Viet Cuong³, Dam Hieu Chi² (¹*Japan Advanced Institute of Science and Technology, Materials Science*, ²*Japan Advanced Institute of Science and Technology, Knowledge Science*, ³*HPC Systems*)

11. 分子遺伝・遺伝情報制御／11. Molecular genetics & Gene expression

- 2Pos066 **Atoh1** 依存的な遺伝子ネットワーク構築に向けたドライ解析
In silico prediction of *Atoh1*-dependent gene networks using target genes of *lin-32*, a homolog of *Atoh1*, in *Caenorhabditis elegans*
Saki Imamura¹, Sayaka Hori² (¹Graduate School of Humanities and Sciences, Nara Women's University, ²Faculty Division of Natural Sciences, Nara Women's University)

12. 発生・分化／12. Development & Differentiation

- 2Pos067 高速 AFM による Afamin–Wnt3a 相互作用と動態の解明
 Unveiling Afamin–Wnt3a interactions and dynamics using high-speed AFM
Hikaru Ichida¹, Kosuke Mizuno^{1,3}, Amyot Romain², Flechsig Holger², Satoshi Toda³, Noriyuki Kodera² (¹Grad. Sch. NanoLS, Kanazawa Univ, ²WPI-NanoLSI, Kanazawa Univ., ³Institute for Protein Research, Osaka Univ.)
- 2Pos068 神経分化における細胞内の発熱が関与する転写機構の解明
 Elucidation of the Transcriptional Mechanisms Involving Intracellular Heat Generation in Neural Differentiation
Yukiho Shimazaki^{1,2}, Kohki Okabe³, Yoshie Harada^{4,5} (¹Grad. Sch. Sci., Univ. Osaka, ²IPR, Univ. Osaka, ³Grad. Sch. Pharm. Sci., Univ. Tokyo, ⁴WPI-PRIME, Univ. Osaka, ⁵QIQB, Univ. Osaka)
- 2Pos069 赤血球可視化ゼブラフィッシュを用いた血液循環における物理量評価
 Quantitative Analysis of Hemodynamic Parameters in Blood Circulation Using Red Blood Cell-Visualized Zebrafish
Yusei Inoue, Mana Okada, Toshiyuki Mitsui, Yuuta Moriyama (Grad. Sch. Sci. and Eng., Aoyamagakuin Univ)

13. 筋肉（筋蛋白質・収縮）／13. Muscle

- 2Pos070 重合阻害物質を用いた短いアクチンフィラメントの構造解析
 Structural analysis of short actin filaments using polymerization inhibitors
Yuta Arimura, Takuo Yasunaga (Grad. Sch. Comp. Sci. & Eng., Kyutech)

14. 分子モーター／14. Molecular motor

- 2Pos071 アミロライド誘導体フェナミルがビブリオ菌べん毛モーター固定子のナトリウムイオン輸送を阻害する分子機構
 Inhibition mechanism of phenamil, an amiloride derivative of sodium channel inhibitor, for the rotation of the *Vibrio* flagellar stator
Tatsuro Nishikino^{1,2}, Norihiro Takekawa³, Jun-ichi Kishikawa⁴, Mika Hirose⁵, Seiji Kojima⁶, Michio Homma⁷, Takayuki Kato⁵, Katsumi Imada³ (¹Dep. of Life Sci. and Applied Chem., Nagoya Inst. of Tech., ²OptoBioTech. Res. Cent., Nagoya Inst. of Tech., ³Dept. of Macromol. Sci., Grad. Sch. of Sci., Osaka Univ., ⁴Dep. of Applied Bio., Kyoto Inst. of Tech., ⁵Inst. for Protein Res., Univ. of Osaka, ⁶Dep. of Bio. Sci., Grad. Sch. of Sci., Nagoya Univ., ⁷Dep. of Biomole. Eng., Grad. Sch. of Eng., Nagoya Univ)

- 2Pos072 Design and Development of a Novel Photoswitchable Inhibitor Targeting Mitotic Kinesin Eg5
Nur Fatin Liyana Binti Salwadi¹, Islam Md Alradzi², Shinsaku Maruta² (¹*Grad. Sch. Sci. Eng., Soka Univ.*, ²*Sch. Sci. Eng., Soka Univ.*)
- 2Pos073 Loop-tethered kinesin-14 reveals factors underlying motility and directionality
Taisei Sano, Rieko Sumiyoshi, Masahiko Yamagishi, Junichiro Yajima (*Grad. Arts & Sci., Univ. Tokyo*)
- 2Pos074 混雑環境下におけるキネシンの動態解析のためのマイクロレオロジー計測
Micro-rheology measurement for dynamic analysis of kinesin in crowded environments
Gai Ohashi¹, Takeshi Yokoyama², Takayuki Ariga¹ (¹*Graduate School of Frontier Biosciences, Osaka University*, ²*Graduate school of life science, Tohoku University*)
- 2Pos075 変異体解析による海洋性ビブリオ菌側ベン毛固定子 MotA/MotB 複合体活性化の探求
Mutational analysis to explore activation of the *Vibrio alginolyticus* lateral flagellar stator, MotA/MotB complex
Kazuki Yokoyama¹, Michio Homma², Norihiro Takekawa³, Seiji Kojima¹ (¹*Grad. Sch. Sci., Nagoya Univ.*, ²*Grad. Sch. Eng.*, ³*Grad. Sch. Sci.*)
- 2Pos076 細菌ベン毛モーターにおける固定子 MotB の N 末端へのタンパク質融合はローター-固定子相互作用を阻害する
Inhibition of rotor-stator interaction by protein fusion to the N-terminus of the stator protein MotB in the bacterial flagellar motor
Yumiko Uchida, Akihiko Ishijima, Hajime Fukuoka (*Grad. Sch. Front. Biosci., Univ. Osaka*)
- 2Pos077 バクテリアベン毛モーターの回転データにおける揺らぎ評価手法の開発
Development of a method for evaluating fluctuations in rotational data of bacterial flagellar motors
Kenta Takemori, Yusuke V. Morimoto (*Grad. Sch. Comput. Sci. and Syst. Eng., Kyushu Inst. Tech.*)
- 2Pos078 微小管 C 末端 Tail の伸長と単量体 KIF1A の微小管結合の分子動力学解析
Molecular Dynamics Analysis on the Extension of C-terminal Tail of Tubulin and Monomeric KIF1A Binding to Microtubule
Koki Adachi, Mitsunori Takano (*Grad. Sch. of Adv. Sci. & Eng., Waseda Univ.*)
- 2Pos079 Unveiling the N-type ATPase: A Hidden Player in the Rotary ATPase Family
Hiroshi Ueno, Atsuki Nakano, Tatsuaki Matsui, Hiroyuki Noji (*Grad. Sch. Eng., Univ. Tokyo*)
- 2Pos080 ミオシンの 2D 投影像の深層学習による構造分類に関する研究
Deep Learning-Based Structural Classification of Myosin from 2D Projection Images
Hikaru Iwasaki, Hitomi Wada, Takuo Yasunaga (*Grad. School. Comp. Sci. Syst., KIT*)

15A. 細胞生物学的課題：接着／15A. Cell biology: Adhesion

- 2Pos081 蛍光顕微鏡と AFM を併用した細胞-基質接着間構造の解析
Analysis of cell-substrate adhesion structures by combined fluorescence microscopy and atomic force microscopy
Shun Sato, Shinji Deguchi (*Grad. Sch. Eng. Sci., The Univ. of Osaka*)
- 2Pos082 高速原子間力顕微鏡を用いた液中における Notch レセプターと Delta リガンドの構造解析
Structural analysis of Notch receptor and Delta ligand in solution using high-speed atomic force microscopy
Shigetaka Nishiguchi (*Kansai Center, National Institute of Advanced Industrial Science and Technology*)

- 2Pos083 微小管結合 RhoGEF である GEF-H1 の *in vitro* 動態解析
In vitro kinetic analysis of microtubule-binding RhoGEF, GEF-H1
Tatsuki Kondo¹, Yukako Nishimura¹, Taketoshi Kambara², Kaori Kuribayashi-Shigetomi³,
 Yasushi Okada^{2,4,5}, Fumio Motegi¹ (¹*Inst. Gen. Med., Hokkaido Univ.*, ²*RIKEN, BDR*, ³*Inst. Adv. Grad. Edu., Hokkaido Univ.*, ⁴*Grad. Sch. Sci., Tokyo Univ.*, ⁵*Grad. Sch. Med., Tokyo Univ.*)
- 2Pos084 細菌べん毛モーターにおける固定子ユニットへの FliL 結合の定量化
 Characterising the stoichiometry of FliL binding to stator units in bacterial flagellar motors
Momoka Kumagai¹, Tomoya Shoji¹, Tsubasa Ishida², Naoki Hidaka², Yong-Suk Che⁴, Yumiko Uchida⁴,
 Hajime Fukuoka⁴, Akihiko Ishijima⁴, Yoshiyuki Sowa^{1,2,3} (¹*Grad. Frontier Biosci., Hosei Univ.*, ²*Res. Cent. Micro-nano Tech., Hosei Univ.*, ³*Dept. Frontier Biosci., Hosei Univ.*, ⁴*Grad. Frontier Biosci., Osaka Univ.*)
- 2Pos085 単一微生物の活発な運動を追跡するための広視野顕微鏡法
 Wide-field microscopy for tracking active locomotion of single microorganisms
Kaname Kuroda, Seiichiro Kinoshita, Masayoshi Nishiyama (*Grad. Sch. Sci. Eng., Kindai Univ.*)
- 2Pos086 多孔質培地中における周毛性細菌の運動性
 Motility of peritrichous bacteria in porous media
Naoki Kanda, Shuichi Nakamura (*Grad. Sch. Eng., Tohoku Univ.*)
- 2Pos087 サルモネラにおける cAMP 濃度と運動能の相関の計測
 Measurement of the correlation between cAMP levels and motility in *Salmonella* cells
Keisuke Sakai, Yusuke V. Morimoto (*Grad. Sch. Comp. Sci. and Syst. Eng., Kyushu Inst. Tech.*)
- 2Pos088 高圧力下にある哺乳類精子細胞の鞭毛運動の直接観察
 Direct observation of flagellar motility in mammalian sperm cells at high pressure
 Koji Matsuura¹, Yuka Asano¹, Masatoshi Morimatsu², Yuhkoh Satoh³, Toshiki Yagi⁴, Keiji Naruse²,
Masayoshi Nishiyama⁵ (¹*Okayama Univ. Sci.*, ²*Grad. Sch. Med. Dent. Pharm. Sci., Okayama Univ.*, ³*Gunma Univ.*, ⁴*Pref. Univ. Hiroshima*, ⁵*KINDAI Univ.*)
- 2Pos089 イオンチャネル領域に変異を持つキメラ固定子複合体 PomA/PotB の機能解析
 Mutational analysis of the ion channel region of PomA/PotB, a chimeric stator of bacterial flagellar motor
Kaito Nagano (*Grad.Sch.Sci.,Osaka Univ.*)

15C. 細胞生物学的課題：細胞骨格・膜骨格／15C. Cell biology: Cytoskeleton & Membrane skeleton

- 2Pos090 *Spiroplasma* 由来の MreB を発現した Syn3B 破砕液を内包したリポソームの形態変化
 Deformation of Liposomes by Encapsulation of Syn3B expressing *Spiroplasma* MreB
Ikuko Fujiwara¹, Takahiro Mitani¹, Taiki Nishimura¹, Hana Kiyama², Ali Ahsan², Mone Mimura²,
 Satoshi Kanamori², Hideaki Matsubayashi³, Masahito Hayashi⁴, Kingo Takiguchi⁵, Makoto Miyata²
 (¹*Materials Sci. & Bioeng., Nagaoka Univ. of Tech.*, ²*Grad. Sch. Sci., OMU*, ³*FRIS, Tohoku Univ.*, ⁴*UBI, UTokyo*, ⁵*Grad. Sch., Nagoya Univ.*)
- 2Pos091 Regulation of Epithelial Homeostasis by Stretch and Cell Density
Rosario Ibanez¹, Honghan Li², Shinji Deguchi¹ (¹*Osaka University, Graduate School of Engineering Sciences, Deguchi Laboratory*, ²*University of Science and Technology Liaoning, School of Computer Science and Software Engineering*)
- 2Pos092 直接の力学摂動に対する微小管とアクチン骨格の構造応答
 Structural response of microtubule and actin cytoskeletons to direct intracellular load
Ryota Orii, Hirokazu Tanimoto (*Yokohama City Univ.*)

- 2Pos093 機械的ストレス下における微小管束の粘弾性応答
Viscoelastic Behavior of Microtubule Bundles Under Mechanical Stress
Syeda Rubaiya Nasrin¹, Marie Tani¹, Gadiel Saper², Masatoshi Ichikawa¹, Ibuki Kawamata¹, Henry Hess², Akira Kakugo¹ (¹*Grad. Sch. Sci., Kyoto Univ.*, ²*Dept. Biomed. Engg. Columbia Univ.*)
- 2Pos094 Actin Network Morphogenesis: From Spots to Rings and Interconnected Bundles
Vivek Semwal, Biplab Bhattacharjee, Tatsuo Shibata (*RIKEN Center for Biosystems Dynamics Research Laboratory for Physical Biology*)
- 2Pos095 電子顕微鏡による細胞性粘菌の多細胞体における細胞間構造の可視化
Intercellular structures in the multicellular body of *Dictyostelium discoideum* visualized by electron microscopy
Yuki Gomibuchi, Yusuke V. Morimoto, Takuo Yasunaga (*Grad. Sch Comp. Sci and Sys. Eng., Kyushu Inst. Tech.*)

15D. 細胞生物学的課題：情報伝達・細胞膜／15D. Cell biology: Signal transduction & Cell membrane

- 2Pos096 膜リモデリングを介した TRPV4-GPCR のクロストーク
TRPV4–GPCR crosstalk mediated by membrane remodeling
Masataka Yanagawa^{1,2}, Kota Shimizume¹, Ryoji Kise¹, Asuka Inoue^{1,3} (¹*Grad. Sch. Pharm., Kyoto Univ.*, ²*Riken, CPR*, ³*Grad. Sch. Pharm., Tohoku Univ.*)
- 2Pos097 ATP 濃度は CBASS 応答の活性化と抑制を調節する
ATP levels modulate the activation and suppression of CBASS responses
Yoshiaki Kinoshita, Rikiya Watanabe (*RIKEN, PRI*)
- 2Pos098 Thermal regulation on EML4-ALK condensates dynamics and signaling activation
Chongxia Zhong¹, Josephina Sampson², Richard Bayliss², Madoka Suzuki¹ (¹*Inst. Protein Res., Univ. Osaka*, ²*2. Astbury Ctr. Struct. Mol. Biol., Univ. Leeds, UK*)
- 2Pos099 細胞膜脂質による上皮成長因子受容体の活性制御機構の解析
Bilateral regulation of EGFR activity and local PI(4,5)P₂ dynamics in mammalian cells observed with single-molecule microscopy
Mitsuhiro Abe¹, Masataka Yanagawa^{1,2}, Yasushi Sako¹ (¹*RIKEN PRI*, ²*Grad. Sch. Pharm. Sci., Kyoto Uni.*)
- 2Pos100 2 回の忌避刺激に対する大腸菌忌避応答と受容体脱メチル化酵素 CheB 動態
Repellent response of *Escherichia coli* to twice repellent stimuli and kinetics of the receptor demethylase CheB
Yugo Tomoda, Yoichi Kuroki, Yumiko Uchida, Akihiko Ishijima, **Hajime Fukuoka** (*Grad. Sch. Front. Biosci., Univ. Osaka*)
- 2Pos101 心筋細胞集団間の線維芽細胞接続における心筋細胞同期
Synchronization of Cardiomyocytes in Fibroblasts Connections between Cardiomyocyte Clusters
Mayu Yamada, Tomoyuki Kaneko (*LaRC.FB.Hosei Univ.*)
- 2Pos102 溶液中の細胞性粘菌多細胞体への薬物添加
Drug addition to multicellular bodies of *Dictyostelium discoideum* in solution
Sotaro Fukuda¹, Tomohiro Shima², Yusuke V. Morimoto³ (¹*Grad. Sch. Comput. Sci. Syst. and Eng., Kyushu Inst. Tech.*, ²*Grad. Sch. Sci, Univ. Tokyo*, ³*Grad. Sch. Comput. Sci. Syst. and Eng, Kyushu Inst. Tech*)
- 2Pos103 海洋性バクテリア *Vibrio alginolyticus* の情報伝達タンパク質 CheY 動態の 1 細胞観察
Observation of CheY-GFP dynamics in a single *Vibrio alginolyticus* cell
Eito Kawamura, Ryoya Takase, Yumiko Uchida, Akihiko Ishijima, Hajime Fukuoka (*Grad. Sch. Front. Biosci., Univ. Osaka*)

- 2Pos104 心筋細胞クラスターサイズによる薬剤応答の違いの解析
Effect of Cardiomyocyte Cluster Size on Drug Response
Chinatsu Fujita, Kentaro Kito, Tomoyuki Kaneko (*LaRC.FB.Hosei Univ*)
- 2Pos105 細胞性粘菌における新規細胞巨大化法による細胞内高分解能計測
High-resolution intracellular measurements using a novel cell enlargement method in *Dictyostelium discoideum*
Yukihisa Hayashida¹, Yuki Gomibuti², Chikoo Oosawa², Takuo Yasunaga², Yusuke V Morimoto²
(¹Grad. Sch. Comp. Sci. and Sys. Eng., Kyushu Inst. Tech., ²Dept. Phys. and Info. Eng., Fac. Comp. Sci. and Sys. Eng., Kyushu Inst. Tech)

16A. 生体膜・人工膜：構造・物性／16A. Biological & Artificial membrane: Structure & Property

- 2Pos106 スフィンゴミエリンのナノドメイン形成に対するコレステロールの影響
Cholesterol assists gel-like nanodomain formation of biologically relevant sphingomyelins
Masanao Kinoshita¹, Koki Yamane², Nobuaki Matsumori² (¹Grad. Sch. Sci. Tech., Gunma Univ., ²Grad. Sch. Sci. Tech., Kyushu Univ.)
- 2Pos107 DPPH アッセイとハイパースペクトル顕微鏡を用いた炎症性腸疾患に対する抗酸化ナノザイムの評価
Evaluation of Antioxidant Nanozymes for Inflammatory Bowel Disease Using DPPH Assay and Hyperspectral Microscopy
Ami Saito (*Institute of Industrial Science, The University of Tokyo*)
- 2Pos108 アシル鎖長の異なるスフィンゴミエリンは脂質ラフト様秩序膜ドメイン内で異なるナノドメインを形成する
Sphingomyelins with varying acyl chain lengths form segregated nanodomains within lipid raft-like ordered membrane domains
Akane Nakamoto¹, Masanao Kinoshita², Nobuaki Matsumori¹ (¹Grad. Sch. Sci., Kyushu Univ., ²Grad. Sch. Sci. & Tech., Gunma Univ.)
- 2Pos109 パターン化モデル膜における電気泳動を用いた膜タンパク質の分離
Separation of membrane proteins by electrophoresis in a patterned model membrane
Keigo Kitayama¹, Kenichi Morigaki² (¹Grad. Sch. Agr., Kobe University, ²Biosignal Research Center, Kobe University)
- 2Pos110 両親媒性モデルペプチド 18A の改変による脂質膜曲率を認識するペプチドの開発
Development of curvature sensitive peptides based on the amphipathic model peptide 18A
Kazuna Ikeuchi, Keisuke Ikeda, Hiroyuki Nako, Minoru Nakano (*Fac. Pharm. Sci. Univ. Toyama*)

16B. 生体膜・人工膜：ダイナミクス／16B. Biological & Artificial membrane: Dynamics

- 2Pos111 F₁F₀-ATP 合成酵素の複合体状態によるミトコンドリア形態と機能の制御機構
Regulatory mechanism of mitochondrial dynamics and function via the complex state of F₁F₀-ATP synthase
Aoi Ichikawa¹, Takaya Ishihara^{1,2}, Naotada Ishihara¹ (¹Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., ²Dept. Life Sci., Faculty of Med., Shimane Univ.)
- 2Pos112 長さ分布を調製したアクチン封入リポソームの形態変化
Morphological changes in actin-encapsulated liposomes with adjusted length distribution
Yuki Mizutani, Mahito Kikumoto, Ken Bessho, Kingo Takiguchi (*Grad. Sch. Sci., Univ. Nagoya*)
- 2Pos113 脂質二重膜小胞の安定性に対するアクチンの影響
Effect of Actin on the Stability of Lipid Bilayer Vesicles
Ken Bessho, Mahito Kikumoto, Yuki Mizutani, Kingo Takiguchi (*Grad. Sch. Sci., Nagoya Univ.*)

- 2Pos114 Reconstitution of actin cytoskeleton into artificial membranes
Yosuke Senju^{1,2}, Feng-Ching Tsai³, Zack Jarin⁴, Ilpo Vattulainen¹, Gregory Voth⁴, Patricia Bassereau³, Pekka Lappalainen¹ (¹*Univ. Helsinki*, ²*Okayama Univ.*, ³*Institut Curie*, ⁴*Univ. Chicago*)

16C. 生体膜・人工膜：興奮・チャネル／16C. Biological & Artificial membrane: Excitation & Channels

- 2Pos115 細胞質側とペリプラズム側の張力センサーの異なる役割により明らかになった MscL の非対称な機械刺激感受性
 Asymmetric Mechanosensitivity of MscL Channel Revealed by Differential Roles of Cytoplasmic and Periplasmic Tension Sensors
Takeshi Nomura¹, Yasuyuki Sawada², Masahiro Sokabe³ (¹*Sch. Human Sci. Environ., Univ. Hyogo*, ²*Institute of Materials Innovation, Nagoya Univ.*, ³*Human Information Systems Labs, Kanazawa Institute of Technology*)
- 2Pos116 点突然変異によるクラミドモナス TRP チャネル TRP11 の機能解析
 Functional analysis of a TRP channel in Chlamydomonas, TRP11, by point mutagenesis
Takanao Miyake, Miyu Kimura, Kenjiro Yoshimura (*Col. Sys. Engineer. Sci., Grad. Sch. Engineer. Sci., Shibaura Inst. Technol.*)
- 2Pos117 MscL での二箇所での張力感受：F7 と F78 の間にある機能的関連性
 Dual-Site Tension Sensing in MscL: Functional Link Between F7 and F78
Yasuyuki Sawada¹, Takeshi Nomura², Masahiro Sokabe³ (¹*Inst. Materials, InFuS, Nagoya Univ.*, ²*Sch. Human Sci and Env., Univ. Hyogo*, ³*Human Information Systems Labs, Kanazawa Inst. Tech.*)

16D. 生体膜・人工膜：輸送・情報伝達／16D. Biological & Artificial membrane: Transport & Signal transduction

- 2Pos118 DNA チャネル内部の官能基修飾とイオン輸送特性の相関の分子論的解析
 Molecular analysis of the correlation between functional group modifications inside DNA channels and ion transport properties
Taichi Hirano^{1,2}, Hiromu Akai³, Yusuke Sato⁴, Kan Shoji³, Takuya Mabuchi^{1,2} (¹*Graduate School of Engineering, Tohoku University*, ²*Institute of Fluid Science, Tohoku University*, ³*Department of Mechanical Engineering, Nagaoka University of Technology*, ⁴*Department of Intelligent and Control Systems, Kyushu Institute of Technology*)

17. 化学受容／17. Chemoreception

- 2Pos119 ストレス応答センサーキナーゼ BaeS のマルチリガンド認識機構
 Multiple ligand recognition mechanisms of the membrane stress sensor kinase BaeS
Hirotaka Tajima^{1,2}, Riku Takei³, Kentaro Yamamoto⁴, Ikuro Kawagishi^{1,2,3} (¹*Dept. Frontier Biosci., Hosei Univ.*, ²*Res. Cen. Micro-Nano Tech., Hosei Univ.*, ³*Grad. Sch. Sci. Eng., Hosei Univ.*, ⁴*Dept. Mycobacteriol., Lepr. Res. Ctr., NIID*)

18. 神経・感覚（細胞・膜タンパク質・分子）／18. Neuroscience & Sensory systems

- 2Pos120 動物と植物間で保存された miRNA 合成分子に関わる遺伝子によって制御される温度耐性機構
Temperature tolerance regulated by a miRNA processing molecule conserved between animals and plants
Sakura Sengoku^{1,2}, Akane Ohta^{1,2}, Teruaki Taji³, Atsushi Kuhara^{1,2,4} (¹*Graduate School of Natural Science, Konan University*, ²*Institute for Integrative Neurobiology, Konan University*, ³*Department of Bioscience, Tokyo University of Agriculture*, ⁴*AMED-PRIME, Japan Agency for Medical Research and Development*)
- 2Pos121 神経ネットワークを構成する細胞数がバースト発火に与える影響
Effect of Number of Cells in Neural Network on Burst Firing
Takumi Yamaguchi, Kentaro Kito, Tomoyuki Kaneko (*FB, Grad. Sch. Sci. & Eng., Hosei Univ.*)

19. 神経回路・脳の情報処理／19. Neuronal circuit & Information processing

- 2Pos122 方位選択性を備えた深層ニューラルネットワークモデルによるハーマン格子錯視の定量解析
Quantitative analysis of the Hermann grid illusion using a minimal deep neural network with orientation-specific edge detection
Masayo Inoue¹, Izumi Ohzawa^{2,3}, Kazufumi Hosoda^{2,3,4} (¹*Grad. Sch. Eng., Kyutech*, ²*Grad. Sch. Frontier Biosciences, Osaka Univ.*, ³*CiNet, NICT*, ⁴*Kobe Univ. Grad. Sch. Health Sciences*)
- 2Pos123 ミミズ古典的条件づけの神経メカニズムの解明
Molecular mechanism of associative learning in earthworm, *Eisenia fetida*
Yoshihiro Kitamura¹, Sukehiro Kabayama² (¹*Dept. Math. Sci. Phys., Col. Sci. Eng., Kanto Gakuin Univ.*, ²*Appl. Matl. Life. Sci., Grad. Sch. Eng., Kanto Gakuin Univ.*)

20. 行動／20. Behavior

- 2Pos124 牧羊犬はどのように羊を追立てるのか？：視覚情報に基づく誘導方法
How Do Shepherd Dogs Herd Sheep? – A Visual Perception-Based Guiding Rule
Kosuke Miyoshi¹, Nen Saito^{1,2} (¹*Graduate School of Integrated Science for Life, Hiroshima University*, ²*Exploratory Research Center on Life and Living Systems, National Institutes of Natural Sciences*)

21A. 光生物：視覚・光受容／21A. Photobiology: Vision & Photoreception

- 2Pos125 発光プローブを用いた哺乳類メラノプシンとアレスチンとの相互作用解析
Analyses of the interaction between mammalian melanopsin and arrestin using bystander BRET probes
Kento Takano, Hisao Tsukamoto (*Grad. Sch. Sci., Kobe Univ.*)
- 2Pos126 光依存的シグナル伝達に関与する新奇ロドプシンの分子特性
Molecular properties of novel microbial rhodopsins with a photosensory function in light-dependent signal transduction
Qianfan Zhou, Masae Konno, Keiichi Inoue (*ISSP, Univ. Tokyo*)

- 2Pos127 PYP と PBP の光依存的多量化反応における PBPC 末端領域の寄与
Contribution of the PBP C-terminal region to the light-dependent multimerization reaction of PYP and PBP
Yusuke Kuwahara¹, Youichi Yamazaki¹, Kento Yonezawa^{1,2}, Sachiko Toma-Fukai¹, Hironari Kamikubo^{1,2} (¹NAIST, MS, ²NAIST, CDG)
- 2Pos128 ラマン分光およびアミノ酸置換体を用いたシアノバクテリオクロム RcaE の光変換機構の研究
Photoconversion mechanism of cyanobacteriochrome RcaE studied by Raman spectroscopy and Mutagenesis
Taisei Koga¹, Masako Hamada², Yuu Hirose², Tomotsumi Fujisawa¹, Masashi Unno¹ (¹Fac. Sci. Eng., Saga Univ., ²Dept. Appl. Che. Life Sci. Toyohashi Univ. of Tech.)
- 2Pos129 真骨魚類が特異的に持つ緑感受性ピノプシンの解析
Characterization of the unique green-sensitive pinopsin found in teleost fish
Chihiro Fujiyabu¹, Gyoja Fuji², Keita Sato³, Emi Kawano-Yamashita⁴, Hideyo Ohuchi³, Takehiro Kusakabe², **Takahiro Yamashita**¹ (¹Grad. Sch. Sci., Kyoto Univ., ²Grad. Sch. Nat. Sci., Konan Univ., ³Fac. Med., Dent. & Pharm. Sci., Okayama Univ., ⁴Fac. Sci., Nara Women's Univ.)
- 2Pos130 ラマン分光法によるセンサリーロドプシン II (*Natronomonas pharaonis* 由来) の O 中間体の発色団構造の特定
Retinal Chromophore Configuration in the O Intermediate of Sensory Rhodopsin II from *Natronomonas pharaonis*
Tomotsumi Fujisawa¹, Nozomi Tanaka¹, Jun Tamogami², Masashi Unno¹ (¹Fac. Sci. Eng., Saga Univ., ²Coll. Pharm. Sci., Matsuyama Univ.)
- 2Pos131 無脊椎動物の非視覚オプシン・アルスロプシンの分子特性の多様性
Molecular diversity of protostome non-visual opsin arthropsin
Kazumi Sakai¹, Kengo Fujii¹, Chihiro Fujiyabu¹, Yasuhiro Shiga², Takahiro Yamashita¹ (¹Grad. Sch. Sci., Kyoto Univ., ²Tokyo Univ. of Pharm. and Life Sci.)
- 2Pos132 可視光感受性を示す甲殻類由来 Opn5 の分子機能解析
Molecular characterization of visible-light sensitive Opn5 from crustaceans
Kuto Takahashi¹, Yuya Nagata¹, Keita Sato², Kohei Obayashi³, Hisao Tsukamoto³, Hideyo Ohuchi², Takahiro Yamashita⁴, Yuki Sudo², Keiichi Kojima² (¹Grad. Sch. Med. Dent. & Pharm. Sci., Okayama Univ., ²Fac. Med, Dent & Pharm Sci., Okayama Univ., ³Grad. Sch. Sci., Kobe Univ., ⁴Grad. Sch. Sci., Kyoto Univ.)
- 2Pos133 幅広い時間スケールでの時分割結晶構造解析により明らかになったクリプトクロムのシグナル伝達機構
Cryptochrome signal transduction mechanism revealed by time-resolved crystallography across broad timescales
Yuhei Hosokawa^{1,2,3,4}, Po-Hsun Wang^{2,5}, Nicolas Caramello⁶, Mai Nakamura³, Sylvain Engilberge⁶, Antoine Royant⁶, Lars-Oliver Essen⁵, Ming-Daw Tsai², Junpei Yamamoto³, Manuel Maestre-Reyna^{1,2} (¹Dept. Chem., National Taiwan Univ., ²Inst. Biol. Chem., Academia Sinica, ³Grad. Sch. Eng. Sci., Osaka Univ., ⁴PRI, RIKEN, ⁵Dept. Chem., Philipps Univ. Marburg, ⁶ESRF)

21B. 光生物：光合成／21B. Photobiology: Photosynthesis

- 2Pos134 緑色硫黄細菌の光合成反応中心複合体のカロテノイド配糖体を介する三重項エネルギー移動
Energy transfer pathway forming triplet-excited state of carotenoid in the photosynthetic reaction center of green sulfur bacteria
Tomomi Inagaki¹, Masatoshi Kida², Daisuke Kosumi³, Chihiro Azai⁴ (¹Graduate School of Life Sciences, Ritsumeikan University, ²Graduate School of Science and Technology, Kumamoto University, ³Institute of Industrial Nanomaterials, Kumamoto University, ⁴Faculty of Science and Engineering, Chuo University)

- 2Pos135 Evaluating the mobility of LHCII in plant thylakoid membrane using high-speed AFM
Nami Yamano, Yudai Nishitani, Daisuke Yamamoto (*Fukuoka University*)
- 2Pos136 モデル植物苔類ゼニゴケ由来の光化学系Ⅱ二量体のクライオ電子顕微鏡単粒子構造解析
 Cyro-EM structures of dimeric PSI-LHCI supercomplex from the model organism *Marchantia polymorpha*
Pi-Cheng Tsai¹, Romain La Rocca¹, Hiroyasu Motose², Jian-Ren Shen¹, Fusamichi Akita¹ (¹*Adv. Res., Univ. Okayama*, ²*Grad. Sch. Envir. Life, Nat. Sci. & Tech., Univ. Okayama*)
- 2Pos137 光化学系ⅡのMn高親和性サイトの配位環境
 Coordination environment of Mn high-affinity site in Photosystem II
Naohiko Nakamura, Shinya Kosaki, Hiroyuki Mino (*Grad. Sch. Sci., Univ. Nagoya*)
- 2Pos138 The most stable LH1-RC architecture from a thermophilic purple sulfur bacterium, *Caldichromatium japonicum*
Yukihiro Kimura¹, Mohit. K. Saini², Endang R. Purba³, Malgorzata Hall³, Shinji Takenaka¹, Vera Thiel⁴, Bruno M. Humbel⁵, Michael T. Madigan⁶, Zheng-Yu Wang-Otomo⁷, Kazutoshi Tani⁸
 (¹*Grad. Sch. Agric., Kobe Univ.*, ²*Inst. Microbiol., Centre Algatech*, ³*Sci. Imag. Sec., OIST*, ⁴*Leibniz Inst., DSMZ*, ⁵*Provost Office, OIST*, ⁶*Dept. Microbiol., Southern Illinois Univ.*, ⁷*Fac. Sci., Ibaraki Univ.*, ⁸*Cent. Comp. Sci, Univ. Tsukuba*)
- 2Pos139 Spectroscopic characterization of the light-harvesting 1 reaction center complexes from psychrophilic photosynthetic purple bacteria
Kazuki Inada¹, Seiji Akimoto², Michael T. Madigan³, Zheng-Yu Wang-Otomo⁴, Yukihiro Kimura¹
 (¹*Grad. Sch. Agric., Kobe Univ.*, ²*Grad. Sch. Sci., Kobe Univ.*, ³*Dept. Microbiol., Southern Illinois Univ.*, ⁴*Fac. Sci., Ibaraki Univ.*)
- 2Pos140 Spectroscopic and structural characterization of purple bacterial LH1-RC complexes containing bacteriochlorophyll b
Kouta Hirose¹, Kaisei Mori¹, Shinji Takenaka¹, Michael T. Madigan², Zheng-Yu Wang-Otomo³, Kazutoshi Tani⁴, Yukihiro Kimura¹ (¹*Grad. Sch. Agric., Kobe Univ.*, ²*Sch. Biol. Sci., Southern Illinois Univ.*, ³*Fac. Sci., Ibaraki Univ.*, ⁴*Cent. Comp. Sci., Univ. Tsukuba*)

21C. 光生物：光遺伝学・光制御／21C. Photobiology: Optogenetics & Optical control

- 2Pos141 赤色光に応答するアニオンチャネルロドプシンのイオン輸送機構
 Ion transport mechanism of channel rhodopsin in response to red light
Keito Minamisawa¹, Shoko Hososhima^{1,2}, Satoshi Tsunoda^{1,2}, Hideki Kandori^{1,2} (*¹Graduate School of Engineering, Nagoya Institute of Technology*, *²Opto Bio Technology Research Center, Nagoya Institute of Technology*)
- 2Pos142 新規内向きプロトンポンプ, PhXeR の分光学的解析
 Spectroscopic Analysis of a Novel Inward Proton Pump, PhXeR
Nanako Hattori¹, Yuma Ito¹, Yuji Furutani^{1,2}, Tatsuro Nishikino^{1,2}, Hideki Kandori^{1,2} (*¹Department of Life Science and Applied Chemistry, Nagoya institute of technology*, *²OptoBioTechnology Research Center, Nagoya institute of technology*)
- 2Pos143 Photoregulation of Ras Function Using Photoresponsive Protein
Nobuyuki Nishibe¹, Zhang Ziyun², Kazunori Kondo¹, Shinsaku Maruta^{1,2} (*¹Department of Science and Engineering for Sustainable Innovation, Faculty of Science and Engineering, Soka University*, *²Department of Biosciences, Graduate School of Science and Engineering, Soka University*)
- 2Pos144 Autonomous Multicolor Bioluminescence Imaging in Bacteria, Mammalian, and Plant Hosts
Subhan Hadi Kusuma (*SANKEN, The University of Osaka*)

- 2Pos145 Na⁺ポンプからCl⁻ポンプに変異させた光駆動イオンポンプロドプシンの時間分解赤外分光に関する研究
Time-resolved FTIR study of light-driven ion pump rhodopsin mutants converted from Na⁺ to Cl⁻ pump
Masahiro Yamamoto¹, Yuma Ito¹, Tatsuya Sakamoto¹, Hideki Kandori^{1,2}, Yuji Furutani^{1,2} (¹Grad. Sch. Eng., Nagoya Institute of Technology, ²OptoBioTechnology Research Center, Nagoya Institute of Technology)
- 2Pos146 環状ヌクレオチド依存性チャネルを用いた光活性化アデニル酸シクラーゼの活性測定系の開発
Development of a system to measure activity of photoactivated adenylyl cyclase using cyclic nucleotide-gated channels
Shunsuke Kiguchi¹, Kosei Higuchi¹, Koshiro Morita¹, Mami Asakura^{1,2}, Toru Ide¹, Minako Hirano¹ (¹Graduate School of Interdisciplinary Science and Engineering in Health Systems, Okayama University, ²Dept. of Comp. Tech. Soln., Okayama Univ.)

23. 生命の起源・進化／23. Origin of life & Evolution

- 2Pos147 Structural and functional analysis of Heimdallarchaeaota tubulin reveals the origin of eukaryotic microtubules
Linh Tran¹, Makito Miyazaki^{1,2,3}, Samson Ali⁴, Akihiro Narita⁵, Robert Robinson^{4,6} (¹Center for Integrative Medical Sciences, RIKEN, ²Center for Biosystems Dynamics Research, RIKEN, ³Graduate School of Medicine, Science and Technology, Shinshu University, ⁴Research Institute for Interdisciplinary Science, Okayama University, ⁵Division of Biological Science, Graduate School of Science, Nagoya University, ⁶School of Bio-molecular Science and Engineering (BSE), Vidyasirimedhi Institute of Science and Technology (VISTEC).)
- 2Pos148 古生代ミオグロビンによる高酸素環境への適応
Adaptation of Paleozoic Myoglobins to the Oxygenized Environments
Yasuhiro Isogai¹, Antonio Tsuneshige², Hiroshi Imamura³, Tsuyoshi Shirai³ (¹Dept. Pharm. Engin., Toyama Pref. Uni., ²Dept. Frontier Biosci., Micro-Nano Tech. Res. Center, Hosei Uni., ³Dept. Frontier Bio-Sci., Nagahama Inst. Bio-Sci. Tech.)
- 2Pos149 数千種の細菌における走化性遺伝子群の組み合わせ進化ダイナミクス
Combinatorial evolutionary dynamics of chemotaxis genes across thousands of bacterial species
Takao Suzuki (Juntendo Univ. Grad. Sch. Med.)

24. 合成生物学・人工細胞／24. Synthetic biology & Artificial cells

- 2Pos150 PURE system 内における翻訳阻害効果の解消
Relieving Translation Repression Caused by Inhibitory DNA Sequences in the PURE System
Akari Sakurai (Graduate School of Arts and Sciences, The University of Tokyo)
- 2Pos151 タンパク質集積による脂質-タンパク質非対称膜小胞内膜での効率的な酵素反応
Protein accumulation enhances enzymatic reactions on inner leaflet of asymmetric lipid-protein vesicles
Masato Suzuki, Koki Kamiya (Grad. Sch. Sci. & Tech., Gunma Univ.)
- 2Pos152 組織再構築を目指したリポソーム内細胞培養系の開発
Development of Cell Culture System in Liposomes for Tissue Reconstruction
Reika Hibi¹, Masahito Hayashi^{1,2}, Tomoyuki Kaneko¹ (¹Dept. FB., Hosei Univ., ²Dept. Biotech. Life Sci., Tokyo Univ. Agri. Tech.)

- 2Pos153 ポリリン酸-塩水溶液の液-液相分離における一価イオンの影響
Monovalent Ion Effect on Liquid-Liquid Phase Separation of Aqueous Polyphosphate-Salt Mixtures
Tomohiro Furuki^{1,2}, Azusa Togo³, Hatsuho Usuda⁴, Tomohiro Nobeyama^{2,5}, Atsushi Hirano⁴, Kentaro Shiraki² (¹*Dept. Life Sci. Tech., Sci. Tokyo*, ²*Pure and Appl. Sci., Univ. Tsukuba*, ³*ISC, AIST*, ⁴*NMRI, AIST*, ⁵*WPI-iCeMS, Kyoto Univ.*)
- 2Pos154 Retrofitting of antibiotic target sites on ribosomes: A synthetic approach to reveal the molecular basis of antimicrobial resistance
Ryo Muramatsu, Yoshikazu Tanaka, Takeshi Yokoyama (*Grad. Sch. Life Sci., Univ. Tohoku*)
- 2Pos155 細胞サイズ空間への閉じ込めがもたらすタンパク質の遅い拡散と反応拡散波による緩和効果
Enhanced repulsive interactions suppress protein diffusion in membrane-confined systems, alleviated by propagating protein waves
Hiroki Sakuta^{1,2}, Sakura Takada³, Naoya Yanagisawa², Tatsuro Oda⁴, Koichi Mayumi⁴, Koichiro Sadakane⁵, Kei Fujiwara³, Miho Yanagisawa^{1,2,6} (¹*Univ. Biol. Inst., Univ. Tokyo*, ²*Grad. Sch. Arts Sci., Univ. Tokyo*, ³*Dept. Biosci. and Info., Keio Univ.*, ⁴*Inst. Solid State Phys., Univ. Tokyo*, ⁵*Facul. Life Med. Sci., Doshisha Univ.*, ⁶*Dept. Phys., Grad. Sch. Sci., Univ. Tokyo*)
- 2Pos156 クラミドモナス封入リボソームの遊泳速度決定要因の解析と光スイッチング
Analysis of Swimming Velocity Determinants and Optical Switching of Chlamydomonas-Encapsulated Liposomes
Koichiro Akiyama¹, Sota Hamaguchi², Hiromasa Shiraiwa¹, Shunsuke Shiomi¹, Daiki Matsunaga², Masahito Hayashi^{1,3}, Tomoyuki Kaneko¹ (¹*Grad. Sch. Eng. Sci., Univ. Hosei*, ²*Grad. Sch. Sci. Eng., Univ. Osaka*, ³*Dept. Biotech. Life Sci., Tokyo Univ. Agri. Tech.*)
- 2Pos157 細菌べん毛とRbodyにより誘導されるリボソームの能動的変形
Active deformation of liposomes induced by bacterial flagella and R-bodies
Yuto Kobashigawa¹, Tsubasa Ishida³, Naoki Hidaka², Masahito Hayashi^{2,4}, Yoshiyuki Sowa^{1,2,3} (¹*Grad. Frontier Biosci., Univ. Hosei*, ²*Dept. Frontier Biosci., Univ. Hosei*, ³*Res. Cent. Micro-nano Tech., Univ. Hosei*, ⁴*Dept. Biotech. Life Sci., Tokyo Univ. Agri. Tech.*)
- 2Pos158 異なるリボソーム表面で作動する DNA 回路をつなぐ「DNA シナプス」
"DNA Synapse" Wiring DNA Circuits Operating on Separate Liposome Surfaces
Masahito Hayashi, Taro Toyota (*Grad. Sch. Arts Sci., Univ. Tokyo*)

26A. 計算生物学: 生命情報学 / 26A. Computational biology: Bioinformatics

- 2Pos159 Pfam ドメイン AlphaFold 構造の特徴探索
Features of Pfam domain in Alpha Fold DB
Yamato Nakaya, Ryotaro Koike, Motonori Ota (*Graduate School of Informatics, Nagoya University*)
- 2Pos160 タンパク質参照構造との立体構造比較に基づくタンパク質と結合分子の変形構造のモデリング
Deformation Modeling of Proteins and Ligands Based on Structural Comparison with Reference Protein Structures
Takeshi Kawabata, Kengo Kinoshita (*Grad. Sch. Info. Sci., Tohoku Univ.*)
- 2Pos161 水和構造を考慮したタンパク質-基質結合親和性予測機械学習モデル
Machine learning prediction model of protein-ligand binding affinity considering hydration structures
Yukihide Yoshimura, Hazime Satou, Terada Tohru (*Graduate School of Agricultural and Life Science, The University of Tokyo*)

- 2Pos162 AlphaFold3 の予測構造に基づく Type-51 R-body 構造変化機構の解明
Mechanism of Type-51 R-body conformational change based on structural predictions using AlphaFold3
Hiroaki Oheda¹, Toru Ekimoto¹, Tsutomu Yamane², Kosuke Kikuchi³, Koki Date³, Takafumi Ueno³, Mitsunori Ikeguchi^{1,2} (¹*Yokohama City University, Graduate School of Medical Life Science*, ²*RIKEN, Center for Computational Science*, ³*Institute of Science Tokyo, School of Life Science and Technology*)
- 2Pos163 深層学習でリガンド結合状態の RNA 構造を生成する
Generate RNA Conformations in Ligand-binding States with Deep Learning
Ikuo Kurisaki¹, Michiaki Hamada^{2,3,4} (¹*Waseda Research Institute for Science and Engineering, Waseda University*, ²*Faculty of Science and Technology, Waseda University*, ³*AIST-Waseda University Computational Bio Big-Data Open Innovation Laboratory*, ⁴*Graduate School of Medicine, Nippon Medical School*)
- 2Pos164 インシリコ解析による RseP 阻害剤候補のスクリーニングと構造予測をベースとした基質選択の分子基盤の解明
In Silico Screening of RseP Inhibitor Candidates and Elucidation of the molecular basis of substrate selectivity by Structure Prediction
Remii Takahashi¹, Hiroaki Oheda¹, Masao Inoue¹, Toru Ekimoto¹, Tsutomu Yamane², Yohei Hizukuri³, Terukazu Nogi¹, Yoshinori Akiyama³, Mitsunori Ikeguchi^{1,2} (¹*Yokohama City University, Graduate School of Medical Life Science*, ²*RIKEN Center for Computational Science*, ³*Institute for Life and Medical Sciences, Kyoto University*)
- 2Pos165 ESM 埋め込みのアテンションプーリングを用いたタンパク質機能同一性予測
Protein Functional Identity Prediction Using Attention-Pooling of ESM Embeddings
Kotaro Ukai, Tohru Terada, Suguru Fujita (*Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*)
- 2Pos166 AlphaFold3 versus AlphaFold2 in Sampling Alternative Conformational States of Transporter Proteins
Jun Ohnuki, Kei-ichi Okazaki (*Institute for Molecular Science*)

26B. 計算生物学: 分子シミュレーション / 26B. Computational biology: Molecular simulation

- 2Pos167 インフルエンザウイルス・ノイラミニダーゼの薬剤耐性機構に関する理論的研究: 酵素反応の自由エネルギープロファイル解析
Computational study of the drug resistance mechanism of influenza virus neuraminidase: Free energy profile analysis of enzyme reaction
Ryotaro Katsumata¹, Manabu Igarashi², Norifumi Yamamoto¹ (¹*Chiba Tech*, ²*Hokkaido University*)
- 2Pos168 ネットワーク解析による 3α-HSD の二量体間における信号伝達機構の解明
Signal transduction mechanism between the subunits of 3α-HSD by network analysis
Naoya Hirooka¹, Niino Yoshiki², Kahoru Amakawa², Daiki Suzuki², Masayuki Oda¹, Juha Lintuluoto³, Masami Lintuluoto¹ (¹*Grad. Sch. Life and Env. Sci., Univ. Kyoto Prefectural*, ²*Fac. Life and Env., Univ. Kyoto Prefectural*, ³*Grad. Sch. Eng., Univ. Kyoto*)
- 2Pos169 Prediction of Cross-Species Binding Affinities of GPCR-Targeting Drugs
Ruigeng Ji¹, Masaru Ihara², Han Zhang³, Tohru Terada¹ (¹*Grad. Sch. Agr. Life Sci., Univ. Tokyo*, ²*Fac. Agr. Mar. Sci., Kochi Univ.*, ³*School of Environmental Science and Technology, Dalian University of Technology*)
- 2Pos170 FtsZ 重合ダイナミクスの 10 分規模にわたるメソスコピック反応動力学シミュレーション
Mesoscopic Reactive Dynamics Simulation of FtsZ Polymerization Dynamics on the order of 10 minutes
Yoshiki Bessho, Shoji Takada (*Grad. Sch. Sci., Kyoto Univ.*)

- 2Pos171 全ての側鎖の動きを含めた AI を用いたタンパク質の構造変化モーフィング手法の開発: MOVE-DM 3.0
Development of a Protein Structural Change Morphing method with All Side-Chain Consideration using an AI-based approach: MOVE-DM 3.0
Yoshihiro Kashiya¹, Shota Shimogochi¹, Yuma Shiota¹, Kazuya Iwano¹, Ryota Kiyooka¹, Naoyuki Miyashita^{1,2} (¹*Grad. Sch. of BOST, KINDAI Univ.*, ²*BOST, KINDAI Univ.*)
- 2Pos172 Aβ 凝集における相互作用ダイナミクスの解明: Aβ40/Aβ42 各種会合状態の比較
Unraveling the Role of Interaction Dynamics in Aβ Aggregation: A Comparative Study of Aβ40/Aβ42 Monomers, Homodimers, and Heterodimers
Ayumu Koike, Norifumi Yamamoto (*ChibaTech*)
- 2Pos173 pH 一定の分子動力学シミュレーション由来のトラジェクトリデータに基づく結合自由エネルギー計算: FabI 酵素での検証
Binding free energy calculation based on constant-pH molecular dynamics simulation-derived trajectory: application to FabI enzyme
Shin-ichi Fujiwara (*Fac. Med., Tottori Univ.*)
- 2Pos174 分子シミュレーションを用いた PET トレーサー PBB3 と TMEM 繊維の結合と安定性
Binding and Stability of PET Tracer PBB3 with TMEM Fibrils using molecular simulations
Nanami Matsumoto¹, Yoshitaka Tadokoro¹, Naoyuki Miyashita^{1,2} (¹*Grad. Sch. of BOST, KINDAI Univ.*, ²*BOST, KINDAI Univ.*)
- 2Pos175 Markov state Model に基づいた環状ペプチド膜透過過程の多次元の反応座標における速度論的な解析
Kinetic analysis of membrane permeation processes of cyclic peptides on multiple reaction coordinates based on the Markov state model
Masatake Sugita^{1,2}, Kci Terakura¹, Takuya Fujie^{1,2}, Keisuke Yanagisawa^{1,2}, Yutaka Akiyama^{1,2} (¹*Sch. Computing, Science Tokyo*, ²*MIDL, Science Tokyo*)
- 2Pos176 Molecular dynamics simulations of peptide aggregation properties
Joe Mori^{1,2}, Satoru G Itoh^{1,2,3}, Hisashi Okumura^{1,2,3} (¹*SOKENDAI*, ²*IMS*, ³*ExCELLS*)
- 2Pos177 Implementation of Modeling Employing Limited Data in GENESIS
Azuki Mizutani¹, Alberto Perez², Yuji Sugita^{1,3} (¹*Riken, PRI*, ²*Dept. of Chem., Univ. Florida*, ³*Riken, R-CCS*)
- 2Pos178 メチル化ヒストン断片と LEDGF の結合安定性に関する分子動力学シミュレーション
Molecular dynamics simulations of the binding stability of methylated histone fragments to LEDGF
Hinako X. Suzuki⁴, Hisashi Okumura^{2,3,4}, **Satoru Itoh**^{1,2,3} (¹*IMS*, ²*ExCELLS*, ³*SOKENDAI*, ⁴*Dept. Sci., Shinshu Univ.*)
- 2Pos179 Atomic-Level Analysis of pH-Dependent Switchable Binding in Ipilimumab-CTLA-4 Complex for Designing Therapeutic Antibodies
Wanda Destiarani^{1,2}, Kowit Hengphasatporn², Yasuteru Shigeta², Ryuhei Harada² (¹*Grad. Sch. Sci. Tech., Univ. Tsukuba*, ²*CCS, Univ. Tsukuba*)
- 2Pos180 タンパク質の形状を考慮した粗視化モデル分子動力学シミュレーションを用いた ECMO 中空糸膜モデル中の血漿と酸素・二酸化炭素の浸透機構
Permeation Mechanism of Plasma, O₂ and CO₂ in ECMO Hollow Fiber Membrane model Using CG MD Simulation Considering Protein Shape
Ryota Shibasaki¹, Makoto Hukuda^{1,2}, Naoyuki Miyashita^{1,2} (¹*Grad. Sch. BOST, KINDAI Univ.*, ²*BOST, KINDAI Univ.*)
- 2Pos181 N 結合型糖鎖修飾による Neuropsin (KLK8) の触媒活性の調節機構
Modulation of enzymatic activity in Neuropsin (KLK8) by N-glycosylation
Mai Fujiwara¹, Masami Lintuluoto¹, Yoshifumi Fukunishi², Hideki Tamura³, Juha Lintuluoto⁴ (¹*Grad. Sch. Life and Env. Sci., Univ. Kyoto Pref.*, ²*CMB, AIST*, ³*Lab. Biofunct. Sci., Univ. Hoshi Sch. of Pharm. Sci.*, ⁴*Grad. Sch. Eng., Univ. Kyoto*)
- 2Pos182 Theoretical study of competitively ligands binding to AMP-activated protein kinase
Taiga Murakami, Kazutomo Kawaguchi, Hidemi Nagao (*Grad. Sch. Natu. Sci. Tech., Univ. Kanazawa*)

- 2Pos183 分子シミュレーションを用いた p53N 末端天然変性領域の結合におけるリン酸化と結合相手の影響
Investigating Binding Modes of p53 N-terminal IDR by dPaCS-MD: Impact of Phosphorylation and Partners
Yoshito Hasegawa, Duy Phuoc Tran, Akio Kitao (*Life Science and Technology, Science Tokyo Univ.*)
- 2Pos184 KaiC におけるリン酸化状態変化により誘起されるアロステリック応答の全原子分子動力学解析
All-atom molecular dynamics analysis of allosteric response in KaiC induced by phosphorylation state change
Riki Ueno¹, Yudai Terui¹, Koki Adachi¹, Toshifumi Mori², Shuji Akiyama^{3,4}, Mistunori Takano¹ (¹*Grad. Sch. Adv. Sci. Eng., Waseda Univ.*, ²*Inst. Mat. Chem. Eng., Kyushu Univ.*, ³*CIMOS, IMS, NINS*, ⁴*SOKENDAI*)
- 2Pos185 フラグメント分子動力学を用いたニューロセルピン新規阻害剤の研究開発
Development of Novel Inhibitors for Neuroserpin Using Fragment Molecular Dynamics
Nanase Sakashita¹, Hiroto Terada¹, Daiki Akai¹, Bunzo Mikami^{2,3}, Maki Onda¹, Kei Moritsugu¹ (¹*Grad. Sch. Sci. OMU*, ²*RISH Kyoto Univ.*, ³*IAE Kyoto Univ.*)
- 2Pos186 部位選択的 Gaussian accelerated Molecular Dynamics の開発
Development of site-selective Gaussian accelerated Molecular Dynamics
Hiraku Oshima (*Grad. Sch. Sci., Univ. Hyogo*)
- 2Pos187 gREST-ABMD 法によるマルチスケールな自由エネルギー地形探索
New enhanced conformational sampling method for multi-scale molecular dynamics simulations
Shingo Ito¹, Hiraku Oshima², Yuji Sugita^{1,3} (¹*RIKEN Center for Computational Science*, ²*Graduate School of Life Science, University of Hyogo*, ³*Cluster for Pioneering Research, RIKEN*)

26C. 計算生物学：生体モデリングとシミュレーション／
26C. Computational biology: Biological modeling and simulation

- 2Pos188 Predicting structural and functional properties of albumins from pets and economic animals by molecular modeling and machine learning
Darunee Traiphon (*Grad. Sch. Sci., Univ. Kasetsart*)
- 2Pos189 シミュレーションによる細菌べん毛周辺の正電荷分布の動態解析
Analysis of the Dynamics of Charged Particle Distributions near a Bacterial Flagellum
Suguru Ushioda, Masashi Tachikawa (*Grad. Sch. Nanobio., Yokohama City Univ.*)
- 2Pos190 Cryo-EM and MDSPACE Reveal Continuous Conformational Heterogeneity in Glutamate Dehydrogenase
Tingting Wang¹, Osamu Miyashita¹, Hideki Shigematsu², Masaki Yamamoto³, Florence Tama^{1,4} (¹*R-CCS, RIKEN*, ²*JASRI, SPring-8*, ³*RIKEN SPring-8 Center*, ⁴*Department of Physics and ITbM, Nagoya Univ.*)
- 2Pos191 A tension gradient in a nonconserved cell membrane generates a divergent pattern of cell shape and motility
Valentina Tyukosova¹, Satoru Okuda² (¹*Kanazawa University, Division of Nano Life Science*, ²*Kanazawa University, Nano Life Science Institute*)

27. 数理生物学・理論生物学／27. Mathematical & Theoretical biology

- 2Pos192 「細胞死」の理論
Theoretical Basis for Cell Death
Yusuke Himeoka¹, Shuhei A. Horiguchi^{2,3}, Tetsuya J. Kobayashi^{1,3} (¹*Universal Biology Institute, The University of Tokyo*, ²*Nano Life Science Institute, Kanazawa University*, ³*Institute of Industrial Science, The University of Tokyo*)

- 2Pos193 物理と生物の統一理論；公平な増幅と崩壊による自律的最適化
A Unified Theory of Biology and Physics; Self-Optimization by Martingale Turnover with Amplification
Tomoyuki Yamaguchi (*Research Institute, Nozaki Tokushukai Hospital*)
- 2Pos194 脱分化の力学系モデリング
Dynamical Systems Modeling of Dedifferentiation
Kansuke Sasamori¹, Yusuke Himeoka¹, Chikara Furusawa^{1,2} (¹*Sch. Sci., Univ. Tokyo*, ²*BDR, Riken*)
- 2Pos195 空間変化を伴う反応拡散系
Reaction-diffusion system with spatial deformation
Naoto Yonekura, Shinji Deguchi (*Grad. Sch. Eng. Sci., Univ. Osaka*)

28. 生態／環境／28. Ecology & Environment

- 2Pos196 Changes of microbial interactions among core members are one of major driving force to induce community succession
Reika Mimoto¹, Takashi Okada², Yasuhisa Saito³, Hiroyuki Futamata^{1,4,5} (¹*Grad. Sch. Integr. Sci. Tech., Shizuoka Univ.*, ²*Inst. Med. Biol. Kyoto Univ.*, ³*Grad. Sch. Sci. Eng. Shimane Univ.*, ⁴*Grad. Sch. Sci. Tech. Shizuoka Univ.*, ⁵*Res. Inst. Green Sci. Tech., Shizuoka Univ.*)

29. 非平衡・生体リズム／29. Nonequilibrium state & Biological rhythm

- 2Pos197 Effects of combined period-modulating mutations on circadian rhythm in a cyanobacterial clock protein system
Eri Hiraiwa, Yuji Nishimura, Kosuke Maki (*Grad. Sch. Sci., Univ. Nagoya*)

30. 計測／30. Measurements

- 2Pos198 Polydiacetylene biosensor detecting different binding affinities
Niklas Urs Brenner, Kaori Sugihara (*Institute of Industrial Science, The University of Tokyo*)
- 2Pos199 Selective IR measurement of only the chromophore part in fluorescent proteins by resonance IR method
Konoka Mifune¹, Hirona Takahashi^{1,2}, Minoru Yamakawa¹, Makoto Sakai^{1,2} (¹*Graduate school of Science and Engineering, Okayama University of Science*, ²*Faculty of Science, Okayama University of Science*)
- 2Pos200 Direct observation of single integrin-mediated forces on soft substrates using a DNA-based force sensor
Hiroki Fukunaga¹, Hitomi Matsubara², Yoshihiko Kobayashi³, Fumiko Toyoshima³, Mitsuhiro Iwaki^{1,4,5,6} (¹*Adv ICT Res Inst, NICT*, ²*IMS, RIKEN*, ³*IIR, Science Tokyo*, ⁴*IFReC, Osaka Univ.*, ⁵*FBS, Osaka Univ.*, ⁶*BDR, RIKEN*)
- 2Pos201 低温ラマン光学活性分光装置の開発及び光受容タンパク質への応用
Development of low-temperature Raman optical activity spectrometer and its application to photoreceptor proteins
Naoya Sasaki, Tomotsumi Fujisawa, Masashi Unno (*Fac. Sci. Eng., Saga Univ.*)

- 2Pos202 **Analysis of *Alcanivorax borkumensis* biofilm on binary oil mixtures**
Rei Shimizu¹, Shufeng Zhao¹, Tatsuya Yamamoto³, Andrew S. Utada^{2,3,4} (¹*Grad. Sch. of Sci. and Tech., Univ. of Tsukuba*, ²*Faculty of Life and Environmental Sci., Univ. of Tsukuba*, ³*Microbial Research Center for Sustainability (MiCS), Univ. of Tsukuba*, ⁴*Tsukuba Inst. for Advanced Research, Univ. of Tsukuba*)
- 2Pos203 **光ファイバ型蛍光相関分光法によるヒト血清中の細胞外小胞の定量計測**
Measurement of extracellular vesicles in human serum using fiber-optic fluorescent correlation spectroscopy
Johtaro Yamamoto (*Health & Med. Res. Inst., AIST*)
- 2Pos204 **ソリッドステートナノポアによる tRNA の柔軟性の評価**
Flexibility Evaluation of tRNA by Solid State Nanopore
Gaku Ogino¹, Kazuki Nagashima¹, Hikaru Nozawa¹, Artem Lysenko¹, Tatsuhiko Tsunoda¹, Tsutomu Suzuki², Sotaro Uemura¹ (¹*Graduate School of Science, The University of Tokyo*, ²*Graduate School of Engineering, The University of Tokyo*)
- 2Pos205 **Contactless Stiffness Measurement of Biomolecular Condensates through Acoustic Trapping**
Kichitaro Nakajima, Hirotsugu Ogi (*Graduate School of Engineering, Osaka University*)

31. バイオイメージング／31. Bioimaging

- 2Pos206 **癌の生体ナノイメージングを指向した遠赤発光性白金ナノクラスターバイオナノプローブの開発**
Far red-emitting Pt nanoclusters based bio-nanoprobes for *in vivo* tumor-targeted imaging
Shin-ichi Tanaka^{1,2}, Hiroki Wadati^{3,4}, Kazuhisa Sato^{5,6} (¹*National Institute of Technology (KOSEN), Kure College*, ²*NHO Kure Medical Center and Chugoku Cancer Center*, ³*Department of Material Science, Graduate School of Science, University of Hyogo*, ⁴*Institute of Laser Engineering, Osaka University*, ⁵*Research Center for Ultra-High Voltage Electron Microscopy, Osaka University*, ⁶*Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University*)
- 2Pos207 **ルーピング期心臓形成にエタノールが与える影響の SS-OCT 観測**
Swept-source OCT analysis of ethanol effects on embryonic heart looping
Aimi Yamashita, Taiyo Eguchi, Rikuto Noguchi, Ryuichiro Yamazaki, Yuuta Moriyama, Toshiyuki Mitsui (*Dept. Phys. Sch. Sci., Aoyamagakuin Univ.*)
- 2Pos208 **Recent Updates to Post-acquisition Super Resolution for Cryo-electron Microscopy**
Ray Burton-Smith, Kazuyoshi Murata (*National Institute of Physiological Sciences*)
- 2Pos209 **生体分子機能の増強に向けた分子局所加温技術の開発**
Development of Molecular Heating Technology toward the Enhancement of Biomolecular Functions
Yuya Matsuda¹, Kayoko Nomura², Cong Quang Vu², Takeru Yamazaki², Satoshi Arai^{1,2} (¹*Division of Nano Life Science, Kanazawa University*, ²*WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University*)
- 2Pos210 **Ensemble of Deep Neural Network Models for Drug Screening Using 3D Images of *Drosophila* Larvae**
Md Al Mehedi Hasan¹, Jean-Emmanuel Clement², Walker Peterson³, Tsubasa Kobayashi³, Soichiro Hata⁴, Takuya Otsuka⁴, Koji Tabata^{1,2}, Masahiro Sonoshita⁴, Keisuke Goda^{3,5}, Tamiki Komatsuzaki^{1,2} (¹*Research Institute for Electronic Science, Hokkaido University, Sapporo, Japan*, ²*Institute for Chemical Reaction Design and Discovery, Hokkaido University, Sapporo, Japan*, ³*Department of Chemistry, Graduate School of Science, The University of Tokyo, Tokyo, Japan*, ⁴*Institute for Genetic Medicine, Hokkaido University, Sapporo, Japan*, ⁵*Department of Bioengineering, University of California, Los Angeles, California 90095, USA*)

- 2Pos211 オプティカル光熱赤外分光法 (O-PTIR) の液-液相分離分析への応用可能性についての考察
Consideration of the applicability of optical photothermal infrared spectroscopy (O-PTIR) to liquid-liquid phase separation analysis
Naoki Baden (*Nihon Thermal Consulting Co.*)
- 2Pos212 生物発光による多色同時観察法の開発
A method for simultaneous observation of multiple bioluminescence colors
Mitsuru Hattori¹, Tetsuichi Wazawa¹, Yuki Hiruta², Takeharu Nagai¹ (¹*SANKEN, The University of Osaka*, ²*Faculty of Science and Technology, Keio University*)
- 2Pos213 Development of X-ray fluorescence microscope toward non-destructive nanoscale investigation of phase-separated structures in cell nucleus
Yosuke Tomioka¹, Yukako Oma¹, Masahiko Harata^{1,2}, Yuki Takayama^{1,2} (¹*Graduate School of Agricultural Science, Tohoku University*, ²*International Center for Synchrotron Radiation Innovation Smart, Tohoku University*)
- 2Pos214 黄金の蝶々型ナノ粒子を用いた液液相分離液滴の生成消滅制御テクノロジー
Regulatory nanotechnology of liquid-liquid phase separated condensates formation/deformation dynamics by using gold nano-butterflies
Tomohiro Nobeyama¹, Koji Takata³, Tatsuya Murakami³, Yoichi Yamada², Kentaro Shiraki² (¹*Institute for Advanced Study iCeMS, Kyoto University*, ²*Pure and Applied Physics, University of Tsukuba*, ³*Graduate School of Engineering, Toyama Prefectural University*)
- 2Pos215 発蛍光プローブを用いた入れ替わり可能なタンパク質ラベル化システムの開発
Development of Exchangeable Protein Labeling System Using Fluorogenic Probe
Masafumi Minoshima¹, Shahi Imam Reja², Kohei Iijima¹, Kazuya Kikuchi^{1,2} (¹*Grad. Sch. Eng. The University of Osaka*, ²*IFReC, The University of Osaka*)

32. バイオエンジニアリング／32. Bioengineering

- 2Pos216 CaM-M13 システムを用いたイオンによる生体分子機械の組み立て制御
Controlling the Assembly of Biomolecular Machines by Ions Using the CaM-M13 System
Ziyan Zhang¹, Nobuyuki Nishibe¹, Shinsaku Maruta^{1,2} (¹*Grad. Sch. Sci., Univ. Soka*, ²*Sch. Sci., Univ. Soka*)
- 2Pos217 大気圧プラズマによるマウス筋芽細胞 C2C12 の成長促進
Growth promotion of murine myoblast cells C2C12 by non-thermal atmospheric pressure plasma exposure
Takeru Kobayashi, **Miho Tsuji**, Kumagai Shinya (*Meijo University*)
- 2Pos218 An enzyme discovery approach based on microbial growth in water-in-oil microdroplets
Fumika Hemmi, Kazuma Kouno, Sotaro Uemura, **Ryo Iizuka** (*Dept. Biol. Sci., Grad. Sch. Sci., The Univ. Tokyo*)

34. Miscellaneous topics その他／34. Miscellaneous topics

- 2Pos219 インクジェットパターン植菌法による大腸菌のコロニー成長の評価
Evaluation of microbial colony growth of *Escherichia coli* inoculated via bioprinting
Mikiko Tsudome^{1,2}, Shigeru Deguchi¹, Yutetsu Kuruma^{1,2} (¹*Jamstec*, ²*Yokohama City Univ.*)
- 2Pos220 膜のゆらぎを制御した膜面上の相分離
Phase separation on a membrane surface with controlled membrane fluctuations
Naoki Iso¹, Takahiro Sakaue¹, Shunsuke Yamazaki², Tsutomu Hamada² (¹*Department of Physical Sciences, Aoyama Gakuin University*, ²*School of Materials Science, Japan Advanced Institute of Science and Technology*)

01A. タンパク質：構造 / 01A. Protein: Structure

- 3Pos001 ミオシン II の化学反応と力学反応との共役の分子メカニズムに関する進捗報告
Progress report on the molecular mechanism of the conjugation of chemical and mechanical reactions of myosin II
Riho Sato, Takuo Yasunaga (*Grad. Sch. Comput. Sci. Syst. and Eng, Kyushu Inst. Tech*)
- 3Pos002 ファージの宿主認識の構造解析
Structural analysis of phage host recognition
Shuji Kanamaru (*Department of Life Science and Technology, Institute of Science Tokyo*)
- 3Pos003 HOIL-1L による HOIP の活性制御機構の構造生物学的解析
Structural biology of the regulation of HOIP activity by HOIL-1L
Marina Koga¹, Kazuki Kasai², Kayo Imamura¹, Kazuhiro Iwai³, Takayuki Kato⁴, Mika Hirose⁴, Keiichi Namba², Tomoko Miyata², Rie Motohashi¹, Hidehito Tochio¹ (¹*Grad. Sch. of Sci., Kyoto Univ.*, ²*Grad. Sch. of Fro., Osaka Univ.*, ³*Grad. Sch. of Med., Kyoto Univ.*, ⁴*inst. for pro., Osaka Univ.*)
- 3Pos004 AcrB による薬剤排出の分子基盤の解析
Analysis of the molecular basis of drug efflux by AcrB
Wataru Sakaguchi¹, Yuto Muto¹, Atsuki Nakano¹, Kaoru Mitsuoka², Ken Yokoyama¹ (¹*Department of Molecular Biosciences, Kyoto Sangyo University*, ²*Research Center for Ultra-High Voltage Electron Microscopy, Osaka University*)
- 3Pos005 Liposome に再構成した LRRC8A の構造解析
Structural analysis of LRRC8A reconstituted into liposome
Ryuga Teramura¹, Atsuki Nakano¹, Kaoru Mitsuoka², Ken Yokoyama¹ (¹*Life, Sci., KSU*, ²*Research Center, Univ. Osaka*)
- 3Pos006 ウシ心筋ミトコンドリアの SMP における ATP 合成酵素のオリゴマー構造
Structure of ATP synthase oligomer in SMP membranes of bovine heart mitochondria
Atsuki Nakano¹, **Katsuya Matsuki**¹, Shunsuke Akisada¹, Kaoru Mitsuoka², Ken Yokoyama¹ (¹*Department of Molecular Biosciences, Kyoto Sangyo University*, ²*Research Center for Ultra-High Voltage Electron Microscopy, Osaka University*)
- 3Pos007 人工赤色蛋白質 AzamiRed1.0 に復帰変異を導入した変異体シリーズの構造と分光学的性質
Structures and spectroscopic properties of a series of revertant mutant proteins of AzamiRed1.0, an engineered red fluorescent protein
Isamu Nagatomi¹, Hiromi Imamura², Norihiro Takekawa¹, Katsumi Imada¹ (¹*Grad. Sch. Sci., Osaka Univ.*, ²*Grad. Sch. Biost., Kyoto Univ.*)
- 3Pos008 HeLa S3 細胞内のヒト UCHL3 の立体構造解析
In-cell NMR study of human UCHL3 in HeLa S3 cells
Hikari Sato¹, Moeke Nagamine¹, Yui Akai¹, Shigeharu Kubota¹, Hiroki Miyata¹, Haruka Sugawara¹, Kohsuke Inomata^{1,2,3}, Teppei Ikeya¹, Yutaka Ito¹ (¹*Department of Chemistry, Tokyo Metropolitan University*, ²*Institute for Molecular Science, National Institutes of Natural Sciences*, ³*Okazaki Collaborative Platform, National Institutes of Natural Sciences*)
- 3Pos009 分子クラウディング環境下での蛋白質の立体構造
Protein 3D structures under macromolecular crowding environment
Shuto Kubo, Seito Kato, Ryouma Tagishi, Akio Horikawa, Sayeesh P.M., Kousuke Inomata, Teppei Ikeya, Yutaka Ito (*Department of Chemistry, Tokyo Metropolitan University*)

- 3Pos010 Cryo-EM structure of a putative bicarbonate channel PtBEST1 from diatom *Phaeodactylum tricornutum*
Hiroyasu Koteishi¹, Akihiro Kawamoto¹, Ginga Shimakawa³, Hiroaki Matsui², Yoshinori Tsuji², Yusuke Matsuda², Genji Kurisu¹ (¹IPR, Osaka Univ., ²Dept. Biosci., Sch. Biol & Environ. Sci., Kwansei Gakuin Univ., ³Grad. Sch., Agri. Sci., Kobe Univ.)
- 3Pos011 Structural analysis of Ib mutants by cryo-electron microscopy to reveal the membrane pore formation process of Ib
Ren Nakanishi (*kyoto sangyo university*)

01B. タンパク質：物性（安定性、折れたたみなど）／01B. Protein: Physical property

- 3Pos012 分子動力学シミュレーションを用いた IL3Rα N 末端領域の構造揺らぎが IL-3 結合親和性に与える影響評価
Molecular dynamics simulation for IL-3/IL3Rα complexes to verify the effects of fluctuations of IL3Rα N-terminal domain on affinity
Toshiaki Ueda¹, Aiko Hasegawa², Yozo Nakazawa^{1,2}, Koji Umezawa¹ (¹Grad. Sch. of Sci. & Tech., Shinshu Univ., ²Sch. of Med., Shinshu Univ.)
- 3Pos013 分泌発現量に関わる α 接合因子プレプロリーダー配列の動的構造特性
Dynamical structural property of α-mating factor pre-pro-leader sequence and relationship with the expression yield
Kazumasa Sakurai (*Inst. Adv. Tech., Kindai Univ.*)
- 3Pos014 The relationship between initial structure and polymorphism of amyloid fibrils from SARS-CoV-2 spike peptide
Manami Yamaguchi¹, Emi Hibino¹, Natsuko Goda¹, Takeshi Tenno^{1,2}, Hidekazu Hiroaki^{1,2,3} (¹Grad. Sch. Pharm. Sci., Nagoya Univ., ²BeCellBar, LLC, ³COMIT)
- 3Pos015 GFPuv の発色団形成反応におけるカルボニル基の役割
Role of carbonyl groups in the chromophore formation of GFPuv
Tomoya Adachi¹, Masaru Hoshino², Kaori Chiba¹ (¹Indust. Eng. Natl. Inst. Tech, Ibaraki Coll. Japan, ²Kyoto Univ. Pharm.)
- 3Pos016 GFP 様タンパク質 mCherry が分子の内部にもつ酸性アミノ酸の役割
Role of acidic Amino Acids inside the molecule of GFP-like Proteins
Pattarisa Rerganan¹, Masaru Hoshino², Nobuhiro Suzuki³, Kaori Chiba¹ (¹Indust. Eng. Natl. Inst. Tech, Ibaraki Coll. Japan, ²Kyoto Univ. Pharm., ³NARO)
- 3Pos017 E222DGFPuv は中性 pH で acidic form の発色団のみを持つ
E222DGFPuv has only chromophores in acidic form at neutral pH
Yutsuki Mimura¹, Masaru Hoshino², Kaori Chiba¹ (¹Indust. Eng. Natl. Inst. Tech, Ibaraki Coll. Japan, ²Kyoto Univ. Pharm.)
- 3Pos018 タンパク質をモデルとした生物の超高圧力耐性のラマン分光研究
Raman Spectroscopic Study on Ultra-High Pressure Resistance in Small Organisms Using Proteins as a Model
Kantaro Iwasa¹, Toshiki Nakao¹, Minoru Kato^{1,2} (¹Grad. Sch. of Life Sci. Univ. Ritsumei, ²Col. of Life Sci. Univ. Ritsumei)

- 3Pos019 部位特異的変異体を用いた α -イソプロピルリンゴ酸合成酵素(IPMS)のロイシン認識メカニズムの解明
Elucidation of the leucine recognition mechanism of α -isopropylmalate synthase (IPMS) using site-directed mutants
Hanane Nakamura¹, Yuto Miura¹, Hana Kitazume¹, Kanon Sugao², Yoko Akazawa³, Shigeru Shimamoto⁴, Takayuki Ohnuma², Atsushi Kurata², Koichi Uegaki² (¹*Grad.Sch.Agric.Kindai univ.*, ²*Agric.Kindai univ.*, ³*AIST*, ⁴*Fac.Sci. & Eng.Kindai univ*)
- 3Pos020 α -イソプロピルリンゴ酸合成酵素のロイシン感受性とリンカードメインの構造変化
Leucine Sensitivity and Structural Changes in the Linker Domain of α -Isopropylmalate Synthase
Yuto Miura¹, Hanane Nakamura¹, Hana Kitadume¹, Kanon Sugao², Yoko Akazawa³, Kazuki Mitani⁴, Shigeru Shimamoto⁴, Kazuki Kawahara^{5,6}, Hiroya Oki⁷ (¹*Grad. Sch. Agric., Kindai Univ.*, ²*Agric., Kindai Univ.*, ³*AIST*, ⁴*Fac. Sci. & Eng., Kindai Univ.*, ⁵*Grad. Sch. Pharm. Sci., Osaka Univ.*, ⁶*CiDER, Osaka Univ.*, ⁷*Res. Inst. Microbial Dis., Osaka Univ.*)
- 3Pos021 均一基質バインダーのダイナミクスと進化
Dynamics and Evolution of Uniform Substrate Binder
Yusran Abdillah Muthahari¹, Yovin Sugijo¹, Paola Laurino^{1,2} (¹*Protein Engineering and Evolution Unit, Okinawa Institute of Science and Technology*, ²*Institute for Protein Research, Osaka University*)
- 3Pos022 ヘイムダルアクチンは短いフィラメントを形成し，骨格筋トロポミオシントロポニン複合体と共沈する
Heimdall actin forms short filaments and coprecipitates with the muscle tropomyosin-troponin complexes
Kaoru Takahashi¹, Tomoharu Matsumoto², Akihiro Narita², Taro Q.P. Uyeda¹ (¹*Dept. Pure. & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, ²*Dept. Physics, Grad. Sch. of Science, Nagoya Univ.*)
- 3Pos023 EPR 法による南極海および深海細菌由来無機ピロフォスファターゼの低温適応機構の解明
EPR Spectroscopy Reveals the Cold Adaptation Mechanism for Di-Mn²⁺ Inorganic Pyrophosphatase
Ren Sugawara, Yuri Kusu, Kantaro Sakamoto, **Masaki Horitani** (*Fac. Agri., Saga Univ.*)
- 3Pos024 ヒト H 鎖フェリチン内部に形成される鉄コアに対するリン酸の影響
Effect of phosphate on the iron core formed in human H-ferritin
Katsuaki Hanabusa¹, Takumi Kuwata², Haruki Sakakibara¹, Kazuo Fujiwara¹, Masamichi Ikeguchi^{1,2} (¹*Department of Biosciences., Graduate School of Science and Engineering, Soka University*, ²*Department of Science and Engineering for Sustainable Innovation, Soka University*)
- 3Pos025 NMR による Ubiquitin C-terminal Hydrolase (UCHL3)のユビキチンとの相互作用とダイナミクス解析
NMR analysis of the intermolecular interaction between Ubiquitin C-terminal Hydrolase (UCHL3) and ubiquitin, and their molecular dynamics
Shigeharu Kubota, Hiroki Miyata, Haruka Sugawara, Yutaka Ito, Teppei Ikeya (*Department of Chemistry, Tokyo Metropolitan University*)
- 3Pos026 Purification and functional analysis of Loki archaea actin
Haruka Tatsuta¹, Gaku Sakai¹, Yuta Yanase¹, Tomoharu Matsumoto², Akihiro Narita², Taro Uyeda¹ (¹*Grad. Sch. Adv. Sci. Eng., Univ. Waseda*, ²*Grad. Sch. Sci., Univ. Nagoya*)

- 3Pos027 A high-performance software suite for 3D reconstruction from single-particle X-ray scattering
Wenyang Zhao¹, Osamu Miyashita¹, Florence Tama^{1,2,3} (¹*RIKEN Center for Computational Science*,
²*Institute of Transformative Bio-Molecules, Nagoya University*, ³*Graduate School of Science, Nagoya University*)
- 3Pos028 CaMKII と GluN2B ペプチドの結合を可視化する高速 AFM 基板の開発
Development of a HS-AFM substrate to visualize the binding between CaMKII and GluN2B peptides
Kodai Hasegawa¹, Taiki Kobayashi², Hiroki Konno^{3,4}, Yusuke Miyanari^{3,4}, Mikihiro Shibata^{3,4}
(¹*Grad.Sch.NanoLSI, Kanazawa Univ.*, ²*Sch.Math.&Phys., Kanazawa Univ.*, ³*WPI-NanoLSI, Kanazawa Univ.*, ⁴*InFiniti, Kanazawa Univ.*)
- 3Pos029 高速 AFM 用超微小カンチレバーの変位検出レーザーの自動位置アライメント
Automatic position alignment of the deflection detection laser to ultra-small high-speed AFM cantilever
Taiyo Ogawa¹, Noriyuki Kodera², Kenichi Umeda² (¹*Grad.Sch.Math. & Phys., Kanazawa Univ.*, ²*WPI-NanoLSI, Kanazawa Univ.*)
- 3Pos030 蛍光明滅を併用した TDP-43-核酸相互作用の定量性向上
Improving quantitative detection of TDP-43-nucleic acid interactions by combining fluorescence blinking analysis
Haruki Kawai¹, Akira Kitamura² (¹*Grad. Sch. of Life Sci., Hokkaido Univ.*, ²*Fac. of Adv. Life Sci., Hokkaido Univ.*)
- 3Pos031 磁気コンパスの機構解明に向けた共焦点顕微鏡による FAD-Trp 系の蛍光測定
Fluorescence measurement of the FAD-Trp system by confocal microscopy to elucidate the mechanism of the magnetic compass
Akihiro Tateno¹, Toru Kondo^{1,2} (¹*ExCELLS*, ²*NIBB*)

- 3Pos032 Tag/Catcher システムを用いたタンパク質構造体への異種タンパク質の取り込みの検討
Incorporation of heterologous proteins into protein structures using the Tag/Catcher system
Yume Kosuge, Koki Kamiya (*Grad. Sch. Sci. & Tech., Gunma Univ.*)
- 3Pos033 耐熱性酵素を用いた無細胞アルカン合成
Cell-free alkane synthesis using thermostable enzymes
Kaisei Nagao¹, Shunji Suetaka¹, Munchito Arai^{1,2} (¹*Dept. Life Sci., Univ. Tokyo*, ²*Dept. Phys., Univ. Tokyo*)
- 3Pos034 大腸菌における翻訳促進ペプチドの機械学習による予測と実証
Machine learning-guided identification and validation of translation-enhancing peptides in *Escherichia coli*
Chie Motono¹, Yokoyama Gentaro², Hideo Nakano³, Teruyo Ojima-Kato³, Michiaki Hamada² (¹*Cellular and Molecular Biotechnology Research Institute, AIST*, ²*Graduate School of Advanced Science and Engineering, Waseda University*, ³*Graduate School of Bioagricultural Sciences, Nagoya University*)
- 3Pos035 タンパク質ファミリー 2 種の配列を深層学習により混合させた新規タンパク質の特性
Deep Learning-Guided Generation of "Marble-Type" Hybrid Transcription Factors Bridging Two Subfamilies
Michio Aiko, Atsushi Minami, Sota Okuda, Kazumasa Ohtake, **Daisuke Kiga** (*Waseda U, Dept. Elect Eng and Biosci*)
- 3Pos036 A platform for developing thermogenetic tools to control protein function
Quang Cong Vu, Satoshi Arai (*WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University*)

01F. タンパク質：天然変性／01F. Protein: Intrinsic disorder

- 3Pos037 SOS1 天然変性領域(IDR)の GRB2 との多価相互作用と液液相分離形成機構の溶液 NMR 解析
NMR analysis of the multivalent interaction between SOS1 intrinsically disordered region and GRB2 and its liquid-liquid phase separation
Rina Kamimura¹, Sangya Yu¹, Maho Watanabe¹, Toshifumi Hayashi¹, Haruka Sugawara¹, Tsutomu Mikawa², Yutaka Ito¹, Teppei Ikeya¹ (¹*Department of Chemistry, Graduate School of Science, Tokyo Metropolitan University*, ²*RIKEN Center for Biosystems Dynamics Research*)
- 3Pos038 Kinetic Study on LLPS of Pbp1 by Combining Stopped-Flow and Transient Grating Methods
Ryo Taniguchi, Masahide Terazima, Yusuke Nakasone (*Grad. Sch. Sci., Kyoto Univ.*)
- 3Pos039 SAXS-guided prediction of animal-like cryptochrome from green alga *Chlamydomonas reinhardtii* structure via coarse-grained MD simulations
Petlada Rattanasombat¹, Osamu Miyashita², Tsubura Yoshi³, Sachiko Yanagisawa³, Minoru Kubo³, Florence Tama^{1,2,4} (¹*Graduate School of Science, Nagoya University*, ²*RIKEN Center for Computational Science*, ³*Graduate School of Science, University of Hyogo, Ako-gun, Hyogo, Japan*, ⁴*Institute of Transformative Bio-Molecules, Nagoya University*)
- 3Pos040 高速 A F M による結核菌休眠制御タンパク質 MDP1 のサブ分子観察
Sub-molecular imaging of MDP1, a dormancy-regulating intrinsically disordered protein in *Mycobacterium tuberculosis*, by high-speed AFM
Yuna Goto¹, Kaho Nakamoto¹, Kenichi Umeda², Akihito Nishiyama³, Sohkiichi Matsumoto³, Noriyuki Kodera² (¹*Grad. Sch. Math. & Phys., Kanazawa Univ.*, ²*WPI-NanoLSI, Kanazawa Univ.*, ³*Dept. Bacteriol., Niigata Univ. Sch. Med.*)

02. ヘムタンパク質／02. Heme proteins

- 3Pos041 Modification of intramolecular electron transfer membrane protein for photo-induced iron reduction
Kanta Kondo¹, Hiroshi Sugimoto^{2,3}, Kimura Tetsunari^{1,4} (¹*Dept. of Chem., Grad Sch. of Sci., Kobe Univ.*, ²*Spring-8Cent., RIKEN*, ³*Dept. of Life Sci., Grad Sch. of Sci., Hyogo Prefectural Uni.*, ⁴*Research Cent. for Molecular Photo Sci., Kobe Uni.*)
- 3Pos042 Analysis of the Transport Mechanism in the ABC transporter Based on Spectroscopic Tracking of Heme
Kaito Nakagawa¹, Yoshitsugu Shiro², Hiroshi Sugimoto^{2,3}, Tetsunari Kimura^{1,4} (¹*Dept. of Chem., Grad. Sch. of Sci., Kobe Univ.*, ²*Dept. of Life Sci., Grad. Sch. of Sci., Univ. of Hyogo*, ³*Spring-8 Cent., RIKEN*, ⁴*Mol. Photo. Res. Cent., Kobe Univ.*)

03. 膜タンパク質／03. Membrane proteins

- 3Pos043 QM/MM シミュレーションを用いたハロロドプシンの光活性化状態に関する理論的研究
Theoretical studies on halorhodopsin photoactivation using QM/MM simulations
Tomo Ejiri, Shigehiko Hayashi (*Grad. Sci., Univ. Kyoto*)
- 3Pos044 全長構造から読み解く KcsA の構造ダイナミクスと機能
Structural dynamics and function of KcsA revealed by the full-length structures
Kotaku Yano¹, Hiroko Takazaki², Hirofumi Shimizu³, Takuo Yasunaga¹ (¹*Grad. Sch. Comp. Sci. and Sys. Eng. Kyushu Inst. Tech.*, ²*IPR, Osaka University*, ³*University of Fukui*)

- 3Pos045 脂質過酸化能の評価に向けた BRIL 融合型シトクロム b561D2 のナノディスク化
Preparation of BRIL-fused cytochrome b561D2 in nanodisc to evaluate its peroxidation activity for lipid membrane
Haruka Yoshimura¹, Motonari Tsubaki¹, Hisroshi Sugimoto^{2,3}, Tetsunari Kimura^{1,4} (¹*Graduate School of Science, Kobe University*, ²*Spring-8 Center, RIKEN*, ³*Graduate School of Science, University of Hyogo*, ⁴*Molecular PhotoScience Research Center, Kobe University*)
- 3Pos046 Affinity between of the ABC transporter BhuUV and the periplasmic binding protein BhuT, investigated by biolayer interferometry
Yusei Toyoda¹, Yoshitsugu Shiro², Hiroshi Sugimoto^{2,3}, Tetsunari Kimura^{1,4} (¹*Dept. of Chem., Grad. Sch. of Sci., Kobe Univ.*, ²*Dept. of Life Sci., Grad. Sch. of Sci., Univ. of Hyogo*, ³*Spring-8 Cent., RIKEN*, ⁴*Mol. Photo. Res. Cent., Kobe Univ.*)

04. DNA・DNA 結合タンパク質／04. DNA & DNA binding proteins

- 3Pos047 Molecular Simulations Reveal Phase Separation Mechanisms of Pluripotency Transcription Factor Combinations
Samuel Blazquez Fernandez, Yutaka Murata, Shoji Takada, Tsuyoshi Terakawa (*Department of Biophysics, Graduate School of Science, Kyoto University, Kyoto, Japan*)
- 3Pos048 高速 AFM による形状測定とナノ力学測定を用いた DNA-MDP1 複合体の薬剤応答解析
Structural and nano-mechanical analysis of drug effects on DNA-MDP1 complexes using high-speed AFM
Kaho Nakamoto¹, Yuna Goto¹, Kenichi Umeda², Akihito Nishiyama³, Sohkiichi Matsumoto³, Noriyuki Kodera² (¹*Grad. Sch. Math. & Phys., Kanazawa Univ.*, ²*WPI-NanoLSI, Kanazawa Univ.*, ³*Dept. Bacteriol., Niigata Univ. Sch. Med.*)
- 3Pos049 Slippage Dynamics of Trinucleotide Hairpins and Their Disruption of the Genome-Maintaining Function of Human Replication Protein A (hRPA)
I-Ren Lee, Yu-Chi Kuang, Cheng-Wei Ni, Szu-Yu Chen (*Department of Chemistry, National Taiwan Normal University*)

05. RNA・RNA 結合タンパク質／05. RNA & RNA binding proteins

- 3Pos050 グルタミン tRNA 合成酵素の分子機構に関する理論的研究
Theoretical study on a molecular mechanism of the glutamyl-tRNA synthetase
Ayaka Matsuyama¹, Masahiko Taguchi², Shigehiko Hayashi¹ (¹*Grad. Sch. Sci., Kyoto Univ.*, ²*IMRAM, Tohoku Univ.*)

06. DNA/RNA ナノテクノロジー／06. DNA/RNA nanotechnology

- 3Pos051 紫外線損傷 DNA の低分子化合物による光修復
Photorepair of UV-damaged DNA by small molecules
Tatsuya Iwata, Rina Fuchigami, Risa Inomata, Manato Okabe, Yumika Ochiai, Fumio Takahashi, Mineo Iseki (*Fac. Phar. Sci., Toho Univ.*)
- 3Pos052 A Systematic Approach for Integrating DNA Aptamers and DNA-Responsive Nanosystems via Strand Displacement Reactions
Satofumi Kato¹, Masahiro Takinoue², Hiroaki Onoe¹ (¹*Graduate School of Science and Technology, Keio University*, ²*Department of Computer Science, Institute of Science Tokyo*)

- 3Pos053 Self-limited assembly of shape-adjustable DNA origami modules into desired polygonal shapes
Ayu Sakamoto, **Yuki Suzuki** (*Grad. Sch. Eng., Mie Univ.*)

07. 核酸：その他／07. Nucleic acid: Others

- 3Pos054 DNA 超らせん構造のねじれと伸長による力学的制御
Mechanical control of DNA supercoils by torsion and extension
Shinnosuke Inui, Anzu Kawamura, Yoshihiro Murayama (*Department of Biomedical Engineering, Faculty of Engineering, Tokyo University of Agriculture and Technology*)

08. クロマチン・染色体／08. Chromatin & Chromosomes

- 3Pos055 ESR 分光学で捉えた液液相分離中のヘテロクロマチンタンパク質 1(HP1)のダイナミクス
Dynamics of heterochromatin protein 1 (HP1) during phase separation, as studied by ESR spectroscopy
Isao Suetake², Kazunobu Sato¹, Toshiki Takei³, Tomoaki Sugishiata³, Yuichi Mishima³, Yoh Matuski³, Toshimichi Fujiwara³, Takeji Takui¹, Makoto Miyata¹, Hironobu Hojo³, **Toshiaki Arata**^{1,3} (¹*Grad. Sch. Sci., Osaka Met. Univ.*, ²*Grad. Sch. Home Economics, Kobe Women's Univ.*, ³*Inst. Protein Res., Univ. Osaka*)
- 3Pos056 Mechanical Insights into Nucleosome Remodeling by divalent Cations: A Single-molecule study
Amarjeet Kumar¹, Tomoko Sunami¹, Shoko Sato², Hitoshi Kurumizaka², Hidetoshi Kono^{1,3} (¹*Inst. Quant. Life Sci., Nat. Inst. Quant. Sci. Tech., Chiba, Japan*, ²*Inst. Quant. BioSci., Univ. of Tokyo, Tokyo, Japan*, ³*Cent. Quant Life Sci. Str. Therap., Chiba Univ., Chiba, Japan*)
- 3Pos057 ヌクレオソーム DNA 引き剥がしダイナミクスの解読：ナノポアが明らかにするヒストン N 末端テイルの役割
Decoding Nucleosomal DNA Unwrapping Dynamics: The Role of Histone N-Terminal Tails Revealed by Nanopores
Satoshi Ogihara¹, Hikaru Nozawa¹, Takumi Oishi², Fritz Nagae³, Munetaka Akatsu², Shoji Takada³, Hitoshi Kurumizaka², Sotaro Uemura¹ (¹*Department of Biological Sciences, Graduate School of Science, The University of Tokyo*, ²*Institute for Quantitative Biosciences, The University of Tokyo*, ³*Department of Biophysics, Graduate School of Science, Kyoto University*)

10. 水・水和／電解質／10. Water & Hydration & Electrolyte

- 3Pos058 回折 X 線明減法を用いた不凍液中の再結晶過程に伴う水分子動態解析
Molecular dynamics analysis of the recrystallization behavior of water in antifreeze solutions by Diffracted X-ray Blinking
Daisuke Sasaki¹, Umena Yasufumi², Yuji C. Sasaki¹ (¹*Department of Advanced Materials Science, Graduate School of Frontier Sciences, The University of Tokyo*, ²*Synchrotron Radiation Research Center, Nagoya University*)
- 3Pos059 サブテラヘルツ波照射による DNA 塩基対形成の非熱的促進
Non-thermal acceleration of DNA base-pair rearrangement using sub-THz irradiation
Masahiko Imashimizu, Johtaro Yamamoto, Tomoya Inose (*AIST*)

12. 発生・分化 / 12. Development & Differentiation

- 3Pos060 ショウジョウバエ胚の後腸の捻転と伸長は異なる集団細胞移動によって独立して制御される
Distinct collective cell behaviors independently regulate the rotation and elongation of the embryonic gut in *Drosophila*
Mikiko Inaki^{1,2}, Satoru Okuda³, Kenji Matsuno² (¹Grad. Sch. Sci., Univ. Hyogo, ²Grad. Sch. Sci., Univ. Osaka, ³Nano LSI, Kanazawa Univ.)
- 3Pos061 細胞性粘菌における細胞分化・脱分化と細胞内 Ca²⁺動態の相関分析
Correlative analysis of intracellular Ca²⁺ dynamics with cell differentiation and dedifferentiation in *Dictyostelium*
Rintaro Aono, Yusuke V. Morimoto (*Grad. Sch. Comput. Sci. Syst. and Eng. Kyushu Inst. Tech.*)
- 3Pos062 人工ヒト胚モデルにおけるサイズ依存的なパターン形成：胚葉形成のダイナミクスに関する考察
Size-Dependent Pattern Formation in Engineered Human Embryo Models: Insights into Gastrulation Dynamics
Miyu Mori¹, Hazuki Tuboi¹, Ryo Kojima¹, Chihiro Takeuchi¹, Yohei Hayashi², Kiyoshi Ohnuma¹
(¹Nagaoka University of Technology, ²BioResource Research Center, RIKEN)

13. 筋肉（筋蛋白質・収縮） / 13. Muscle

- 3Pos063 昆虫飛翔筋の回転平均化された 2 次元 X 線回折像からサルコメアの 3 次元構造を復元する
Restoration of the 3D structure of insect flight muscle from a rotationally averaged 2D X-ray diffraction pattern
Hiroyuki Iwamoto (*SPRING-8 · JASRI*)

14. 分子モーター / 14. Molecular motor

- 3Pos064 Cilia-like Beating of Clamped Microtubules Driven by Kinesin Motors
Jane Wanja Karanja, Douglas K. Ng'ang'a, Takahiro Nitta (*Applied Physics Course, Faculty of Engineering, Gifu University, Gifu 501-1193, Japan*)
- 3Pos065 Buckling and Trajectory Deflections of Microtubules Driven by Kinesin Motors
Douglas Kagoiya Ng'ang'a, Takahiro Nitta (*Applied Physics Course, Faculty of Engineering, Gifu University*)
- 3Pos066 Cryo-EM visualization of the conformational states of G_i-ATPase, a rotary motor driving *Mycoplasma mobile* gliding
Takuma Toyonaga¹, Daisuke Unabara¹, Tasuku Hamaguchi¹, Koji Yonekura^{1,2} (¹IMRAM, Tohoku Univ., ²RIKEN SPRING-8 Center)
- 3Pos067 Development of gold nanoparticle-based optical switches for reversible artificial muscles driven by kinesin motor proteins
Kensei Hori¹, Taiyo Sato¹, Yuich Hiratsuka², Keisuke Morishima⁴, Takahiro Nitta³ (¹Grad. Sch. Nat. Sci. & Tech., Univ. Gifu, ²JAIST, ³Univ. Gifu, ⁴Univ. Osaka)
- 3Pos068 二重オプトジェネティックツールによるキネシン 14 のアンカー位置制御を介した微小管運動方向の光制御
Light-controlled directional reversal of microtubule motility via dual optogenetic switches regulating kinesin-14 anchoring
Masahiko Yamagishi^{1,2}, Junichiro Yajima^{1,2,3} (¹Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, ²Komaba Institute for Science, The University of Tokyo, ³Research Center for Complex Systems Biology, Universal Biology Institute, The University of Tokyo)

- 3Pos069 LOV トロポニンによるアクチオシンの光制御
Light control of myosin-actin based motility by LOV-Troponin
Koki Yasuda (*JAIST*)
- 3Pos070 脂質二重膜中で機能する ATP 合成酵素のクライオ電子顕微鏡構造解析
Cryo-EM structures of ATP synthases functioning in lipid bilayers
Atsuki Nakano¹, Jun-Ichi Kishikawa², Christoph Gerle⁵, Hideki Shigematsu⁴, Kaoru Mitsuoka³, Ken Yokoyama¹ (¹*Fac. of Life Sci., Kyoto Sangyo Univ.*, ²*Applied Biology, Kyoto Institute of Technology*, ³*Research Center for Ultra-High Voltage Electron Microscopy, Osaka University*, ⁴*JASRI*, ⁵*RIKEN SPring-8 Center*)
- 3Pos071 骨格筋の収縮原理を細胞外で模倣したアクチオシンーフィブリンゲル混合アクチュエータ
Actomyosin-fibrin gel composite actuator mimicking contraction mechanism of skeletal muscle extracellularly
Takuro Kawasumi¹, Koki Yoshida², Yuichi Hiratsuka³, Hiroaki Onoe¹ (¹*Keio University*, ²*Shibaura Institute of Technology*, ³*Japan Advanced Institute of Science and Technology*)
- 3Pos072 情報熱力学による F₁-ATPase 内の相互作用の実験的評価
Experimental evaluation of interactions within F₁-ATPase based on information thermodynamics
Ken Takagi¹, Yohei Nakayama¹, Chun-Biu Li², Stefano Bo³, Takahiro Sagawa⁴, Shoichi Toyabe¹ (¹*Department of Applied Physics, Tohoku University, Japan*, ²*Department of Mathematics, Stockholm University, Sweden*, ³*Department of Physics, King's College London, United Kingdom*, ⁴*Department of Applied Physics, The University of Tokyo, Japan*)
- 3Pos073 *Enterococcus hirae* V-ATPase の Na⁺能動輸送を支える α サブユニットの 2 つのハーフチャネルの非対称な Na⁺結合親和性
Asymmetric Na⁺ binding affinities of two half-channels in α-subunit support active Na⁺ transport of *Enterococcus hirae* V-ATPase
Akihiro Otomo^{1,2}, Yuan-E Lee^{3,4}, Juliette Lahore⁵, Raymond Burton-Smith^{2,3,4}, Kano Suzuki⁶, Takeshi Murata⁶, Kazuhoshi Murata^{2,3,4}, Ryota Iino^{1,2} (¹*Institute for Molecular Science*, ²*SOKENDAI*, ³*ExCELLS*, ⁴*National Institute for Physiological Sciences*, ⁵*Chmie ParisTech*, ⁶*Grad. Sch. Sci., Univ. Chiba*)
- 3Pos074 Elucidating Dynein Velocity Enhancement via Binding Affinity Modulation
Haruki Kawase^{1,2}, Kenta Ishibashi², Akane Furuta², Ken'ya Furuta^{1,2} (¹*The university of Osaka*, ²*National institute of information and communications technology*)

15A. 細胞生物学的課題：接着／15A. Cell biology: Adhesion

- 3Pos075 アクチン架橋タンパク質による細胞間境界の力安定性維持機構
Actin Crosslinking Proteins Maintain Force Stability at Cell-Cell Boundaries
Hiroki Katsuta¹, Satoru Okuda², Nobutomo Fujimoto³, Duc Doan Manh¹, Hiroaki Hirata⁴, Keiji Naruse¹ (¹*Faculty of Med. Dent. and Pharm Sci., Okayama Univ.*, ²*Nano LSI, Kanazawa Univ.*, ³*Dept. Med., Okayama Univ.*, ⁴*Dept. Life Sci. and Biotech., KIT*)
- 3Pos076 Scale-dependent mechanobiological responses of focal adhesions
Gento Takeshima, Takumi Saito, Shinji Deguchi (*Grad. Sch. Eng. Sci. Univ. Osaka*)
- 3Pos077 歯周病菌の Fim 線毛先端タンパク質 FimE の C 末端領域の構造
Structure of the C-terminal region of FimE, a tip protein of the Fim pili from *Porphyromonas gingivalis*
Hikaru Tanizaki¹, Norihiro Takekawa², Katsumi Imada² (¹*Sch. Sci., Osaka Univ.*, ²*Grad. Sch. Sci., Osaka Univ.*)

15B. 細胞生物学的課題：運動／15B. Cell biology: Motility

- 3Pos078 Light-Guided Actin Dynamics Drives Protocell Migration
Hideaki Matsubayashi¹, Shiva Razavi², Daichi Nakajima³, Hideki Nakamura⁴, Tomoaki Matsuura⁵, Shin-ichiro Nomura³, Takanari Inoue² (¹*Frontier Research Institute for Interdisciplinary Sciences (FRIS), Tohoku University*, ²*School of Medicine, Johns Hopkins University*, ³*Graduate School of Engineering, Tohoku University*, ⁴*Hakubi Center for Advanced Research, Kyoto University*, ⁵*Earth-Life Science Institute, Science Tokyo*)
- 3Pos079 Elucidating the role of *Spiroplasma* fibril protein using synthetic bacterium, JCVI syn3
Ali Ahsan, Hana Kiyama, Makoto Miyata (*Grad. Sch. Sci., Osaka Metropolitan Uni.*)
- 3Pos080 Manipulation of rotational direction of the archaeal flagella motor in *Halobacterium salinarum* by light modulation
Junpei Sega¹, Masaki Mizutani¹, Daisuke Nakane², Takayuki Nishizaka¹ (¹*Gakushuin University*, ²*University of Electro-Communications*)
- 3Pos081 クラミドモナス鞭毛におけるマスティゴネマ線維の構造と機能
 Strucutre and function of mastigoneme filaments in *Chlamydomonas cilium*
Toshiki Yagi, Ryuta Yoshizawa, Kakeru Komori (*Dept. Life and Env. Sci., Pref. Univ. Hiroshima*)
- 3Pos082 マイクロ構造体を用いた運動性を持つ微生物の運動方向の操作
 Manipulation of the direction of movement of motile microbes using microstructures
Masaru Kojima¹, Mitsuhiro Horade² (¹*Grad. Sch. Eng.Sci., The Univ. of Osaka*, ²*Fac. of Sci. and Eng., Setsunan Univ.*)
- 3Pos083 機械的な力の付加による細胞集団運動の変化から機械走性メカニズムに迫る
 Approaching the Mechanism of Mechanotaxis via Collective Cell Migration Induced by Mechanical Force Loading
Chihori Asano¹, Keitaro Shibata², Shigenobu Yonemura² (¹*Grad. Sch. Med., Tokushima Univ.*, ²*Grad. Sch. Biomed. Sci., Tokushima Univ.*)
- 3Pos084 Phototaxis and light-driven accumulation in wild isolates of *Heterosigma akashiwo*
Naoki Uemura¹, Shoko Ueki², Daisuke Nakane¹ (¹*Dept. Eng. Sci., Univ. Electro-Communications*, ²*Inst. Plant Sci. Res., Univ. Okayama*)

15C. 細胞生物学的課題：細胞骨格・膜骨格／15C. Cell biology: Cytoskeleton & Membrane skeleton

- 3Pos085 Dynamic response of keratin assemblies to thermal stress in mutant keratinocytes implicated in Epidermolysis bullosa simplex
Doyin Rachael Abiola¹, Tetsuya Kitaguchi², Birgitte E. Lane³, Madoka Suzuki¹ (¹*Inst. Protein Res., Univ. Osaka*, ²*Inst. Integr. Res., Sci. Tokyo*, ³*SRIS, Singapore*)
- 3Pos086 植物左右ねじれ伸長創発メカニズムの解明
 Elucidating the mechanisms of plant chiral growth
Eiki Meguro¹, Masayoshi Nakamura², Toshifumi Mori³ (¹*Grad. Sch. Sci., Nagoya Univ.*, ²*Grad. Sch. Sci. and Eng., Saitama Univ.*, ³*Institute for Materials Chemistry and Engineering, Kyushu Univ.*)
- 3Pos087 出芽酵母アクチンフィラメントの in situ 構造解析に向けた取り組み
 Towards in situ Structural Analysis of Actin Filaments in Budding Yeast
Hiroko Takazaki¹, Kana Shimamoto^{1,2}, Stephen Mwaniki¹, Misaki Arie¹, Akira Shinohara¹, Takayuki Kato¹ (¹*IPR., Univ. Osaka*, ²*Grad. Sch. Sci., Univ. Osaka*)
- 3Pos088 ケモメカニカルモデルによる焦点接着斑とアクトミオシン動態の解析
 Chemomechanical Model of Focal Adhesion-Actomyosin Dynamics
Eiji Matsumoto, Shinji Deguchi (*Graduate School of Engineering Science, The University of Osaka*)

- 3Pos089 分子シャペロン α B-クリスタリンはチューブリン凝集を抑え微小管会合活性を維持する
The molecular chaperone α B-crystallin delays thermal aggregation of tubulin and maintains microtubule polymerization activity
Shinya Horinouchi^{1,2}, Daisuke Inoue³, Shohei Yamamoto⁴, Eri Fujita⁵, Miho Shimizu², Toshiyuki Watanabe¹, Yoriko Atomi² (¹*Grad. Sch. of Eng., Tokyo Univ. Agric. and Technol.*, ²*ACRO, Teikyo Univ.*, ³*Faculty of Design, Kyushu Univ.*, ⁴*Grad. Sch. of Pharmaceutical Sci., The University of Tokyo*, ⁵*Faculty of Medical Tech., Teikyo Univ.*)
- 3Pos090 生細胞内における力伝播
Force propagation inside a living cell
Ayama Tokuyasu, Hirokazu Tanimoto (*Graduate School of Nanobioscience., Univ. Yokohama city*)

15D. 細胞生物学的課題：情報伝達・細胞膜／15D. Cell biology: Signal transduction & Cell membrane

- 3Pos091 High Hydrostatic Pressure Regulates the TGF- β Signaling Pathway
Xinxuan Li (*Okayama University*)
- 3Pos092 大腸菌のアレイプリンキングにおける活性伝搬の役割
The role of signal transduction in *E. coli* array blinking
Kaho Yoshinari, Yong-Suk Che, Akihiko Ishijima, Hajime Fukuoka, Yumiko Uchida (*Grad. Sch. Frontier Biosci. Univ. Osaka*)
- 3Pos093 大腸菌の走光性情報伝達の FRET 解析
Investigation of blue light-induced phototaxis in *Escherichia coli* using FRET
Satomi Itoki¹, Naoki Hidaka³, Ikuro Kawagishi^{1,2,3}, Yoshiyuki Sowa^{1,2,3} (¹*Grad. Frontier Biosci., Hosei Univ.*, ²*Res. Cent. Micro-nano Tech., Hosei Univ.*, ³*Dept. Frontier Biosci., Hosei Univ.*)
- 3Pos094 環状心筋細胞ネットワーク中の伝導障害部位による伝導変化
Conduction Changes at Sites of Conduction Defects in Circular Cardiomyocyte Network
Moeno Furuya¹, Momo Akada², Tomoyuki Kaneko^{1,2} (¹*FB, Hosei Univ.*, ²*FB, Grad. Sch. Sci. & Eng., Hosei Univ.*)
- 3Pos095 近赤外線レーザー光による周期刺激に対する心筋細胞の応答
Cyclic responses of cardiomyocytes induced by periodic near-infrared laser stimulation
Kanan Tominaga, Takaaki Nishikawa, Tomoyuki Kaneko (*LaRC, FB, Hosei Univ.*)
- 3Pos096 心筋細胞と線維芽細胞を縞状に配置した心筋梗塞線維化モデル心筋細胞ネットワーク
Fibrotic heart model cardiomyocyte network with stripes of cardiomyocytes and fibroblasts
Yuna Honda, Kentaro Kito, **Tomoyuki Kaneko** (*LaRC, FB, Hosei Univ.*)
- 3Pos097 環状心筋細胞ネットワークにおける発火起点からの細胞外電位の振幅の変化
Variation of Extracellular Potential Amplitude in Circular Cardiomyocyte Network from Active Firing Origin
Momo Akada, Kentaro Kito, Tomoyuki Kaneko (*FB, Grad. Sch. Sci. & Eng., Hosei Univ.*)
- 3Pos098 高フレーム撮影による 2 つの心筋細胞の拍動同期解析
Analysis of two Cardiomyocytes beating synchronization with high-frame-rate imaging
Sasa Shimizu, Tomoyuki Kaneko (*LaRC, FB, Hosei Univ.*)
- 3Pos099 近赤外線レーザー照射による心筋細胞の FPD 評価
Variation in Field Potential Duration of cardiomyocytes induced by near-infrared laser irradiation
Yuka Motoyama, Tomoyuki Kaneko (*FB, Hosei Univ.*)
- 3Pos100 Single-molecule imaging analysis of mutual inhibition and positive feedback for Ras excitability in eukaryotic migrating cells
Satomi Matsuoka, Koji Iwamoto, Masahiro Ueda (*Grad. Sch. Frontier Biosciences, Univ. Osaka*)

16A. 生体膜・人工膜：構造・物性／16A. Biological & Artificial membrane: Structure & Property

- 3Pos101 脂質凝集体の脂質分子パッキングに対するスクラロースとスクロースの効果の比較
Comparison of the effects of sucralose and sucrose on the lipid molecular packing in lipid aggregates
Yuki Homma, Hiroshi Takahashi (*Grad. sch. Sci. Tech. Gunma Univ.*)
- 3Pos102 ハイドロゲルで被覆されたモデル生体膜アレイ
Model membrane array sealed with a hydrogel layer
Masako Fujii¹, Kenichi Morigaki^{1,2} (¹*Grad. of Agri. Sci., Kobe Univ.*, ²*Biosignal Res. Ctr., Kobe Univ.*)
- 3Pos103 バイオフィルム脱離因子 Dspl が関連する膜リモデリングは緑膿菌バイオフィルムにおける細胞外小胞形成を誘発する
Membrane remodeling by a biofilm dispersion factor Dspl enhances vesicle formation in *Pseudomonas aeruginosa* biofilms
Mizuki Kanno¹, Hiroyuki Futamata^{1,2,3}, Yosuke Tashiro^{1,2} (¹*Grad. Sch. Sci. Tech., Shizuoka Univ.*, ²*Grad. Sch. Integr. Sci. Tech., Shizuoka Univ.*, ³*Res. Inst. Green Sci. Tech., Shizuoka Univ.*)
- 3Pos104 人工膜とナノ空間を用いた生体分子・膜小胞解析技術の開発
Analyzing biomolecules and vesicles using model membranes and nanometric gap junction
Yu Yoshimura¹, Nanami Nagatsuka¹, Taisei Higashihara¹, Rinshi S. Kasai², Kenichi G.N. Suzuki^{2,3}, Kenichi Morigaki⁴ (¹*Grad. Sch. Agri., Kobe Univ.*, ²*National Cancer Center Japan*, ³*iGCORE., Gifu Univ.*, ⁴*Biosignal Research Center, Kobe Univ.*)
- 3Pos105 粗視化分子動カモデルによる SARS-CoV-2 エンベロープ膜の構造と形成の探索
Exploring SARS-CoV-2 envelope structure and formation by coarse-grained molecular dynamics simulation
Ryo Urano, Wataru Shinoda (*Okayama Univ. RIIS*)

16B. 生体膜・人工膜：ダイナミクス／16B. Biological & Artificial membrane: Dynamics

- 3Pos106 Curcumin and its derivatives modulate membrane domains and induce IL-6 receptor shedding in monocytes
Toshiyuki Murai¹, Yoshikazu Masaki², Kazuma Yasuhara² (¹*Grad. Sch. Med., Osaka Univ.*, ²*Grad. Sch. Sci. Tech., NAIST*)
- 3Pos107 微細穴にマニピレートしたヒト培養細胞と基板支持脂質膜間の脂質移行の促進
Enhanced Lipid Transfer Between Micropore-Manipulated Human Cells and Supported Lipid Bilayers
Asahi Gono¹, Takayuki Nakaya², Reibun Sakane², Naoki Shimura², Takashi Okuno^{3,4} (¹*Grad. Sch. Sci., Univ. Yamagata*, ²*Orbray CO., Ltd.*, ³*Fac. Sci., Univ. Yamagata*, ⁴*CID, Univ. Yamagata*)
- 3Pos108 反応拡散方程式に基づく真核細胞の小胞体におけるタンパク質ドメイン形成に関する数値モデル
Modeling the formation of protein domains on the endoplasmic reticulum in eukaryotic cells with reaction-diffusion equations
Tomoyo Nishigaki, Masashi Tachikawa (*Grad. Sch. of Nanobiosci., Yokohama City Univ.*)
- 3Pos109 無細胞合成されたタンパク質における疎水領域の長さでアミノ酸配列が引き起こすリポソームのエンドサイトーシス様の分裂
Endocytosis-like fission of liposomes induced by the length of hydrophobic domains in cell-free synthesized proteins
Aika Yamamoto, Yuki Nagai, Koki Kamiya (*Grad. Sch. Sci. & Tech., Gunma Univ.*)

16C. 生体膜・人工膜：興奮・チャネル／16C. Biological & Artificial membrane: Excitation & Channels

- 3Pos110 Development of a simple method for the reconstitution of ion channels using agarose gel beads
Mami Asakura^{1,2}, Kohta Takagi³, Miho Ohnishi³, Minako Hirano², Toru Ide² (¹*Dept. of Comp. Tech. Soln., Okayama Univ.*, ²*Grad. Sch. Health Sys., Okayama Univ.*, ³*Fac. Eng., Okayama Univ.*)
- 3Pos111 脂質-オレオシン非対称膜小胞の内膜湾曲による機械刺激依存性チャネルを介した物質輸送
 Molecular transportation via mechanosensitive channel in response to membrane curvature of the asymmetric lipid-oleosin vesicles
Kotaro Baba, Koki Kamiya (*Grad. Sch. Sci & Tech, Gunma Univ.*)

16D. 生体膜・人工膜：輸送・情報伝達／16D. Biological & Artificial membrane: Transport & Signal transduction

- 3Pos112 脂質膜で隔てられた DNA 振動子の結合に関する研究
 Coupling of DNA oscillators separated by lipid membranes
Kazumo Takahashi¹, Keita Abe¹, Hideaki Matsubayashi², Shinichiro Nomura¹, Ibuki Kawamata³, Satoshi Murata¹ (¹*Department of Robotics, Graduate School of Engineering, Tohoku University*, ²*Frontier Research Institute for Interdisciplinary Sciences, Tohoku University*, ³*Division of Physics, Graduate School of Science, Kyoto University*)
- 3Pos113 Membrane Translocation of Nucleic Acids via Cholesterol-modified DNA Hybridization
Rinka Aoki, Satoshi Murata, Hideaki Matsubayashi, Keita Abe, Shin-ichiro M. Nomura (*Grad. Sch. Eng., Univ. Tohoku*)

17. 化学受容／17. Chemoreception

- 3Pos114 コレラ菌セロトニン走性受容体の同定および機能解析
 Identification and characterization of the serotonin chemoreceptor in *Vibrio cholerae*
Fuga Omori¹, Sotaro Asaoka¹, Hirotaka Tajima^{2,3}, Ikuro Kawagishi^{1,2,3} (¹*Grad. Sch. Sci. and Engin., Hosei Univ.*, ²*Fac. of Biosci. and Appl. Chem., Hosei Univ.*, ³*Res. Cent. for Micro-Nano Tech., Hosei Univ.*)

18. 神経・感覚（細胞・膜タンパク質・分子）／18. Neuroscience & Sensory systems

- 3Pos115 GPCR-mediated signaling in heat tolerance of *C. elegans*
Shiori Mototake^{1,2}, Yuki Sato^{1,2}, Kohei Ohnishi^{1,2,3}, Tohru Miura^{1,2,3}, Akane Ohta^{1,2,3}, Atsushi Kuhara^{1,2,3,4} (¹*Dept. Biol., Facul. Sci & Engineer. Konan Univ.*, ²*Dept. Biol. Grad. Sch. Sci. Konan Univ.*, ³*Inst. of Integral NeuroBiol. Konan Univ.*, ⁴*PRIME AMED*)
- 3Pos116 培地中 Na⁺上昇による神経活動変化
 Neural Activity by Increasing Concentration of Sodium Ion in Culture Medium
Kaito Watanabe¹, Takumi Yamaguchi², Tomoyuki Kaneko^{1,2} (¹*LaRC.FB.Hosei Univ.*, ²*LaRC.FB.Grab.Sch.Sci.&Eng.,Hosei Univ.*)

- 3Pos117 The synaptic vesicle cluster restricts the diffusion of cytosolic α -Synuclein via boundary confinement

Kye Kudo¹, Adekunle T. Bademosi¹, S. Sean Millard², Frédéric A. Meunier^{1,2} (¹*Queensland Brain Institute, The University of Queensland*, ²*School of Biomedical Sciences, Faculty of Medicine, The University of Queensland*)

19. 神経回路・脳の情報処理 / 19. Neuronal circuit & Information processing

- 3Pos118 ヨーロッパモノアラガイの味覚嫌悪学習に関係する CGC の mGluR を介した抑制作用
Metabotropic glutamate receptor-mediated inhibition of CGCs associated with conditioned taste aversion memory in *Lymnaea*

Yoshimasa Komatsuzaki¹, Samui Chiba¹, Ayaka Itoh², Ken Lukowiak³, Minoru Saito² (¹*Grad. Sch. Sci. and Tech, Nihon Univ.*, ²*Grad. Sch. Integ. Basic. Sci., Nihon Univ.*, ³*Univ of Calgary, Calgary*)

- 3Pos119 mGluR1 と GHS-R1a のクロストークによる小脳シナプス可塑性の制御
Cross-talk between mGluR1 and GHS-R1a signaling modulates cerebellar synaptic plasticity
Moritoshi Hirono¹, Boyang Zhang¹, Hiroshi Hosoda², Masanori Nakata¹ (¹*Dept. Physiol., Wakayama Med. Univ.*, ²*Dept. Mol. Pathophysiol., Shinshu Univ.*)

20. 行動 / 20. Behavior

- 3Pos120 流れ刺激に対するハルテリアの逃避遊泳行動
Flow-induced escape behavior of *Halteria* sp.

Koki Kanda¹, Yukinori Nishigami^{1,2}, Takuya Ohmura^{1,2}, Katsuhiko Sato³, Toshiyuki Nakagaki^{1,2}
(¹*Graduate School of Life Science, Hokkaido University*, ²*Research Institute for Electronic Science, Hokkaido University*, ³*Faculty of Science, University of Toyama*)

21A. 光生物：視覚・光受容 / 21A. Photobiology: Vision & Photoreception

- 3Pos121 Uncovering light-sensitive mechanism of non-visual opsins
Seiwa Nakamura¹, Asato Kojima¹, Kazuhiro Kobayashi², Masahiro Fukuda², Koki Kawakami², Suhyang Kim², Takashi Nagata³, Kota Katayama^{4,5}, Hideki Kandori^{4,5}, Keiichi Inoue³, Hideaki E. Kato^{2,6}
(¹*Grad. Sch. Art. Sci., Univ. Tokyo*, ²*RCAST, Univ. Tokyo*, ³*ISSP, Univ. Tokyo*, ⁴*Life Sci. Appl. Chem., Grad. Sch. Eng., Nagoya Inst. Tech.*, ⁵*OptoBio Tech. Res. Cent.*, ⁶*Grad. Sch. of Sci, Univ. Tokyo*)

- 3Pos122 A Structural Approach to the Potassium-Selective Channelrhodopsin HcKCR1 for Its Development as an Optogenetic Tool
Seiya Tajima¹, Seiwa Nakamura², YoungJu Jo^{3,4}, Joseph J. Noh^{3,5}, Peter Y. Wang³, Antonia Drinnenberg³, Chelsea Li³, Masatoshi Inoue³, Masaki Tsujimura⁶, Eamon F. X. Byrne³, Thanh-Nga C. Shenoy³, Sung-Soo Jang⁷, Ki Eun Pyo³, Nadya Andini³, Jenny Shi³, Kishandra A. Patron³, Joseph M. Paggi⁸, Masahiro Fukuda¹, Yuma Ito⁹, Masahiro Sugiura⁹, Kota Katayama^{9,10}, Yuji Furutani^{9,10}, Hisako Ikeda¹, Charu Ramakrishnan¹¹, Linlin Z. Fan³, Sean Quirin³, Hiroshi Ishikita^{1,6}, John R. Huguenard⁷, Hideki Kandori^{9,10}, Ron O. Dror^{5,8,12}, Yoon Seok Kim³, Karl Deisseroth^{3,11,13}, Hideaki E. Kato^{1,2,14} (¹RCAST, Univ. Tokyo, ²Grad. Sch. Arts. Sci., Univ. Tokyo, ³Dept. Bioeng., Stanford Univ., ⁴Dept. Appl. Phys., Stanford Univ., ⁵Biophys. Prog., Stanford Univ., ⁶Grad. Sch. Eng., Univ. Tokyo, ⁷Dept. Neurol. & Neurol. Sci., Stanford Univ., ⁸Dept. Comput. Sci., Stanford Univ., ⁹Dept. Life Sci. & Appl. Chem., Nagoya Inst. Technol., ¹⁰OptoBioTechnology Research Center, Nagoya Inst. Technol., ¹¹CNC Prog., Stanford Univ., ¹²Inst. Comput. Math. Eng., Stanford Univ., ¹³Dept. Psychiatry & Behav. Sci., Stanford Univ., ¹⁴Grad. Sch. Sci., Univ. Tokyo)
- 3Pos123 低温ラマン分光法による Cl⁻ポンプロドプシン(*Mastigocladopsis repens* 由来)の発色団構造変化の解明
 Cryogenic Raman Study of Chromophore Structural Changes during the Photocycle of a Light-Driven Cl⁻ Pump from *Mastigocladopsis repens*
Kana Miyazaki¹, Takashi Kikukawa², Masashi Unno¹, Tomotsumi Fujisawa¹ (¹Fac. Sci. Eng., Saga Univ., ²Fac. Adv. Life Sci., Hokkaido Univ.)
- 3Pos124 細胞性粘菌の発生と細胞骨格に対するレチナールの影響
 Effect of retinal on development and cytoskeleton in *D. discoideum*
Shuhei Tsuchihashi¹, Kazuki Akiyama¹, Yusuke V. Morimoto² (¹Grad. Sch. Comput. Sci. Syst. and Eng., Kyushu Inst. Tech., ²Grad. Sch. Comput. Sci. Syst. and Eng., Kyushu Inst. Tech.)
- 3Pos125 有機溶媒中における微生物ロドプシンの物理化学的特性の解析
 Comparative analysis of the physicochemical properties of microbial rhodopsins in organic solvents
Miyu Inokuchi¹, Keiichi Kojima², Yuki Sudo² (¹Grad. Sch. Med. Dent. & Pharm. Sci., Okayama Univ., ²Fac. Med, Dent & Pharm Sci., Okayama Univ.)
- 3Pos126 微生物ロドプシンによる光駆動型有機アニオン輸送の発見
 Discovery of light-powered organic anion transport by microbial rhodopsins
 Simiao Shen¹, Kaisei Ohno², Takashi Tsukamoto^{1,2,3}, Kwang-Hwan Jung⁴, Yuki Sudo⁵, **Takashi Kikukawa**^{1,2,3} (¹Grad. Sch. Life Sci., Hokkaido Univ., ²Sch. Sci., Hokkaido Univ., ³Fac. Adv. Life Sci., Hokkaido Univ., ⁴Dept. Life Sci. & Bionano Cent., Sogang Univ., ⁵Fac. Med., Dent. & Pharm. Sci., Okayama Univ.)
- 3Pos127 一分子蛍光 in situ hybridization 法によるメダカ組織におけるオプシン発現細胞の解析
 Single-Molecule FISH Analysis of Opsin-Expressing Cells in Medaka
Keita Sato, Hideyo Ohuchi (Fac. Med, Dent & Pharm Sci., Okayama Univ.)
- 3Pos128 Light Intensity-Dependent Reaction Dynamics of the Photoresponsive Enzyme MsLadC
Dai Takeuchi, Masahide Terazima, Yusuke Nakasone (Grad. Sch. Sci., Kyoto Univ.)
- 3Pos129 センサリーロドプシン II (SRII) からトランスデューサー (HtrII) への情報伝達におけるシグナリング中間体の同定
 Identification of signaling states of sensory rhodopsin II (SRII) in the signal transduction to its cognate transducer protein (HtrII)
Jun Tamogami¹, Miki Takeguchi¹, Risa Matsunami-Nakamura¹, Takashi Kikukawa², Naoki Kamo², Toshifumi Nara¹ (¹College Pharm. Sci., Matsuyama Univ., ²Fac. Adv. Life Sci., Hokkaido Univ.)

- 3Pos130 高速原子間力顕微鏡を用いた植物光合成膜におけるタンパク質複合体のダイナミクス解析
Analysis of protein complex dynamics in plant photosynthetic membranes by high-speed atomic force microscopy
Yudai Nishitani, Daisuke Yamamoto (*Fac. Sci., Fukuoka Univ.*)
- 3Pos131 機械学習を用いた光合成タンパク質複合体における環境適応アミノ酸残基の推定
Estimating environmentally adaptive residues in photosynthetic complexes using machine learning
Atsushi Hijikata¹, Ryuhei Minei², Satoshi Omori², Yuko Tsuchiya³, Tsuyoshi Shirai² (¹*Tokyo Univ. of Pharm. Life Sci.*, ²*Nagahama Inst. Bio-Sci. Tech.*, ³*AIST*)
- 3Pos132 暗発酵および光発酵による最適化
Optimization by dark and photo fermentation
Masahiro Hibino, Kousei Miyamoto (*Div. Sust. Enviro. Eng., Muroran Inst. Tech.*)
- 3Pos133 光合成タンパク質超複合体の空間分解分光にむけた超解像吸収顕微鏡の開発
Super-resolution absorption microscopy toward spatially-resolved spectroscopy of photosynthetic protein supercomplexes
Yoshihiro Tojo^{1,2}, Tomomi Inagaki³, Chihiro Azai⁴, Toru Kondo^{2,5} (¹*Dept. of Life Sci. Tech., Science Tokyo*, ²*NIBB*, ³*Grad. Sch. of Life Sciences, Ritsumeikan Univ.*, ⁴*Grad. Sch. of Sci. Eng., Chuo Univ.*, ⁵*ExCELLS*)
- 3Pos134 網羅的単一分子分光を用いた光阻害修復途上光化学系IIの観測
Observation of photosystem II under repair from photoinhibition by exhaustive single-molecule spectroscopy
Kyosuke Watanabe, Shen Ye, Yutaka Shibata (*Graduate school of science, Tohoku Univ.*)
- 3Pos135 Localization of auxiliary proteins of LHC assembly during its insertion into thylakoid membrane
Yuiki Shimamura¹, Hiroshi Kuroda², Yuichiro Takahashi², Shen Ye³, Yutaka Shibata³ (¹*Grad. Sch. Sci., Tohoku Univ.*, ²*Research Institute for Interdisciplinary Science, Okayama University*, ³*Grad. Sch. Sci., Tohoku Univ.*)
- 3Pos136 重合脂質膜鑄型法による再構成チラコイド膜のタンパク質込み合いの評価
Evaluation of protein crowding in reconstituted thylakoid membrane supported by polymerized lipid membranes
Hayata Sakai¹, Koki Takagi², Kenichi Morigaki³, Shen Ye¹, Yutaka Shibata¹ (¹*Graduate School of Science Tohoku Univ.*, ²*Agricultural Science, Graduate School of Kobe Univ.*, ³*Graduate School of Biosignal Reserch Center Kobe Univ.*)
- 3Pos137 一分子時間分解蛍光分光測定による光合成光捕集アンテナ複合体のエネルギー移動解析
Single-molecule time-resolved fluorescence spectroscopy of energy transfer in photosynthetic antenna complex
Shinnosuke Masuda^{1,2,3}, Mai Watanabe⁴, Toru Kondo^{1,2,3} (¹*SOKENDAI*, ²*NIBB*, ³*ExCELLS*, ⁴*Dept. of Science, Tokyo Metropolitan Univ.*)

- 3Pos138 *Oscillatoria acuminata* 由来の光活性化アデニル酸シクラーゼの C 末端領域による活性制御機構の解明
The role of the C-terminal region in regulating the activity of the photoactivated adenylyl cyclase from *Oscillatoria acuminata*
Reito Yasui¹, Masahiko Taguchi^{2,3}, Syun Sakuraba^{4,5}, Masumi Takebe⁶, Saiko Akizuki¹, Mami Asakura^{1,7}, Akiya Hukuda², Eriko Nango^{2,3,8}, Hidetoshi Kono^{4,5}, Toru Ide¹, Minako Hirano¹
(¹Graduate School of Interdisciplinary Science and Engineering in Health Systems, Okayama University, ²Graduate School of Science, Tohoku University, ³Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, ⁴Institute for Quantum Life Science, National Institutes for Quantum Science and Technology, ⁵Center of Quantum Life Science for Structural Therapeutics, Chiba University, ⁶Hamamatsu Photonics K.K., ⁷Dept. of Comp. Tech. Soln., Okayama Univ., ⁸International Center for Synchrotron Radiation Innovation Smart, Tohoku University)
- 3Pos139 光活性化アデニル酸シクラーゼの活性調節機構の解明
Regulatory mechanism of photoactivated adenylyl cyclase activity
Hinase Kondo¹, Masahiko Taguchi^{2,3}, Syun Sakuraba^{4,5}, Masumi Takebe⁶, Koki Shimomae¹, Mei Kawamoto¹, Mami Asakura^{1,7}, Akiya Hukuda², Eriko Nango^{2,3,8}, Hidetoshi Kono^{4,5}, Toru Ide¹, Minako Hirano¹ (¹Grad. Sch. Health Sys., Okayama Univ., ²Graduate School of Science, Tohoku Univ., ³IMRAM, Tohoku Univ., ⁴iQLS, QST, ⁵cQUEST, Chiba Univ., ⁶Hamamatsu Photonics K.K., ⁷Dept. of Comp. Tech. Soln., Okayama Univ., ⁸SRIS, Tohoku Univ.)
- 3Pos140 リジン主鎖同位体標識ロドプシンの赤外分光解析
FTIR Analysis of microbial rhodopsins with ¹⁵N-labeled lysine backbone
Mako Ooka¹, Tatsuro Nishikino^{1,2}, Teppei Sugimoto¹, Yuma Ito¹, Yuji Furutani^{1,2}, Hideki Kandori^{1,2}
(¹Graduation school of Engineering, Nagoya institute of technology, ²OptoBio Technology Research Center, Nagoya institute of technology)
- 3Pos141 低温赤外分光法によるウイルス由来カチオンチャネルロドプシンの構造解析
Structural analysis of viral cation channelrhodopsin using low-temperature FTIR spectroscopy
Mako Aoyama¹, Kota Katayama^{1,2}, Hideki Kandori^{1,2} (¹Grad. Sch. Eng., Nagoya Inst. Tech., ²Nagoya Inst. Tech., OptoBioTechnology Research Center)
- 3Pos142 短波長応答チャネルロドプシン KnChR の分子機能
Unraveling the Functional Mechanism of KnChR: A Short-Wavelength Absorbing Cation Channelrhodopsin
Satoshi Tsunoda^{1,2}, Koki Natsume¹, Yuzhu Wang³, Tatsuki Tanaka³, Shoko Hososhima^{1,2}, Wataru Shihoya⁴, Osamu Nureki³, Hideki Kandori^{1,2} (¹Grad. Sch. Eng., Nagoya Institute of Technology, ²OptoBio Technology Research Center, Nagoya Institute of Technology, ³Grad. Sch. Sci., The University of Tokyo, ⁴Keio University School of Medicine)
- 3Pos143 Photocontrol of GTPase Cycle of the small G-protein H-Ras using its regulator RASGRF1 with photochromic molecular devices
Isra Lilatul, Nobuyuki Nishibe, Shinsaku Maruta (Grad.Sch.Sci.Eng., Univ.Soka)

23. 生命の起源・進化／23. Origin of life & Evolution

- 3Pos144 ペプチド液滴による原始的な自己区画の確立
Establishment of Primitive Self-Compartments with Peptide-Droplets
Yota Tabata, Tomoyuki Kaneko (FB, Grad. Sch. Sci. & Eng., Hosei Univ.)

- 3Pos145 ベイズ学習と統計力学による進化の理論：タンパク質を例に
An Evolutionary Theory Based on Bayesian Learning and Statistical Mechanics: The Case of Proteins
Tomoei Takahashi¹, George Chikenji², Kei Tokita³, Yoshiyuki Kabashima¹ (¹*Inst. for Physics of Intelligence, Grad. Sch. of Sci., The Univ. of Tokyo*, ²*Grad. Sch. of Eng., Nagoya Univ.*, ³*Grad. Sch. of Inf., Nagoya Univ.*)
- 3Pos146 微生物進化実験を用いた進化可能性ランドスケープと増殖－死滅トレードオフの定量
Quantifying Evolutionary Landscapes and the Growth–Death Trade-off in Microbial Experimental Evolution
Atsushi Shibai¹, Riku Kamiura¹, Shumpei Sato¹, Shigeyuki Kakizawa³, **Chikara Furusawa**^{1,2} (¹*BDR, RIKEN*, ²*UBI, Univ. Tokyo*, ³*AIST*)

24. 合成生物学・人工細胞 / 24. Synthetic biology & Artificial cells

- 3Pos147 ミニマル合成細菌 syn3B のゲノムサイレンシング
Silencing a genome of minimal synthetic bacterium syn3B
Hana Kiyama¹, Sohkiichi Matsumoto², Makoto Miyata^{1,3} (¹*Grad. Sch. Sci., Osaka Metropolitan Univ.*, ²*Grad. Sch. Med., Niigata Univ.*, ³*OCARINA, Osaka Metropolitan Univ.*)
- 3Pos148 ミニマル合成細菌 syn3B のゾンビと生き返り
Zombie cells and revival of minimal synthetic bacterium syn3B
Nanase Oda¹, Hana Kiyama¹, Yuhei O Tahara^{1,2}, Masaki Mizutani³, Shigeyuki Kakizawa⁴, Makoto Miyata^{1,5} (¹*Grad. Sch. Sci., Osaka Metropolitan Univ.*, ²*Grad. Sch. Eng., Osaka Metropolitan Univ.*, ³*Dept. Phys., Gakushuin Univ.*, ⁴*MolBiS, AIST*, ⁵*OCARINA, Osaka Metropolitan Univ.*)
- 3Pos149 Myosin distribution and the deformation and behavior of the droplets formed by phase separation
Tatsuyuki Waizumi¹, Hiroki Sakuta², Mahito Kikumoto¹, Kanta Tsumoto³, Kingo Takiguchi¹, Kenichi Yoshikawa⁴ (¹*Grad. sch. Sci., Univ. Nagoya*, ²*Grad. Sch. Arts and Sci., Univ. Tokyo*, ³*Grad. Sch. Eng., Univ. Mie*, ⁴*Sci Ctr. Self-Organization., Univ. Doshisha*)
- 3Pos150 Scalable preparation of GUVs using freeze-dried gelatin gel
Takumi Furusawa¹, Keita Abe¹, Hideaki Matsubayashi², Satoshi Murata¹, Shin-Ichiro Nomura¹, Richard James Archer³ (¹*Department of Robotics, Graduate School of Engineering, Tohoku University*, ²*Frontier Research Institute for Interdisciplinary Sciences, Tohoku University*, ³*Department of Computer Science, School of Computing, Institute of Science Tokyo*)
- 3Pos151 巨大リボソーム内でのクラミドモナスの片腕変異株の運動解析
Motion Analysis of Uniflagellate *Chlamydomonas* Mutants inside Giant Liposomes
Yuka Matsukawa¹, Koichiro Akiyama², Masahito Hayashi³, Tomoyuki Kaneko^{1,2} (¹*LaRC, FB, Hosei Univ.*, ²*LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ.*, ³*Dept. Biotech. Life Sci., Tokyo Univ. Agri. Tech.*)
- 3Pos152 クラミドモナス封入リボソームの運動能力の解明に向けた微小物質の共封入
Co-encapsulation of Micro-objects in *Chlamydomonas*-Encapsulated Liposomes for Motility Characterization
Hiromasa Shiraiwa¹, Koichiro Akiyama¹, Shunsuke Shiomi¹, Masahito Hayashi^{1,2}, Tomoyuki Kaneko¹ (¹*LaRC, FB, Grad. Sch. Sci. & Eng., Hosei Univ.*, ²*Dept. Biotech. Life Sci., Tokyo Univ. Agri. Tech.*)
- 3Pos153 リン脂質添加による細胞モデル液滴の界面張力変化
Interfacial Tension Changes of Cell-Mimicking Droplets Induced by Phospholipid Addition
Sota Miura, Koichiro Sadakane (*Grad. Sch. Life and Med Sci., Doshisha Univ.*)
- 3Pos154 Insights into Gel-in-Giant Unilamellar Vesicle System as Artificial Cell Model
Wancheng Zhang¹, Aileen Cooney², Lorenzo Di Michele³, Yuval Elani², Tomoaki Matsuura¹ (¹*Earth-Life Science Institute, Institute of Science Tokyo*, ²*Department of Chemical Engineering, Imperial College London*, ³*Department of Chemical Engineering and Biotechnology, University of Cambridge*)

- 3Pos155 PEG/DEX 系における相分離に対するリン脂質・界面活性剤等の影響：光散乱測定を用いた解明
Effects of Phospholipids, Surfactants, etc. on Phase Separation in PEG/DEX Systems:
Elucidation Using Light Scattering
Ryuya Bamba, Koichiro Sadakane (*Grad. Sch. Life and Med Sci., Doshisha Univ.,*)

25. ゲノム生物学／25. Genome biology

- 3Pos156 膜タンパク質の膜—内外領域における同義コドン使用頻度解析：原核—真核生物の比較
Synonymous Codon Usage Comparison in Membrane Protein Inner/Extra transmembrane
Regions Between Prokaryotes and Eukaryotes
Riki Haida¹, Makiko Suwa^{1,2}, Kenji Etchuya² (¹*Biological Science Course, Graduate School of Science and Engineering, Aoyama Gakuin University, Kanagawa, Japan,* ²*Chem. Biological Science Course, Department. Science and Engineering, Aoyama Gakuin University, Kanagawa, Japan*)

26A. 計算生物学: 生命情報学／26A. Computational biology: Bioinformatics

- 3Pos157 Evaluating Protein Generative AI for Exploring Uncharted Sequence Space
Hafumi Nishi^{1,2,3} (¹*Grad. Sch. Info. Sci., Tohoku Univ.,* ²*Fac. Core. Res. Ochanomizu Univ.,* ³*ToMMo, Tohoku Univ.*)
- 3Pos158 Structure prediction of protein complexes using cross-linking mass-spectrometry data with the estimated error rate
Hiroto Matsubara, Takaharu Mori (*Tokyo University of Science*)
- 3Pos159 EpiLoop: 説明可能なグラフ・トランスフォーマーによる細胞特異的クロマチンループのストライプ型／ドット型識別と分類
EpiLoop: explainable graph transformer for identifying and classifying cell-specific chromatin loops into stripe or dot structures
Bingxin Xie^{1,2}, Yuichi Taniguchi^{1,2,3} (¹*Grad. Sch. Biostudies, Kyoto Univ.,* ²*iCeMS, Kyoto Univ.,* ³*Inst. for Advanced Study, Kyoto Univ.*)
- 3Pos160 金属イオン結合部位を予測する機械学習モデルの開発
Development of Machine Learning Models for Predicting Metal Ion-binding Sites
Yamato Maehara, **Masafumi Shionyu** (*Grad. Sch. Biosci. Nagahama Inst. Bio-Sci. and Tech.*)
- 3Pos161 アルツハイマー病特異的タウ線維構造の Inverse folding
Inverse folding of Alzheimer disease-specific tau filaments
Motoharu Tajitsu¹, Maria Kano², Taeko Kimura², Sakura Homma¹, Taisuke Tomita², Yasuhiro Matsunaga^{1,3} (¹*Grad. Sch. Sci. Eng., Saitama Univ.,* ²*Grad. Sch. Pharm. Sci., Tokyo Univ.,* ³*RIKEN*)
- 3Pos162 環境変化と損傷に対するロバストネスの進化
Evolution of Robustness to Environmental Change and Damage
Mao Sakae (*Ritsumeikan LifeScience*)
- 3Pos163 The Impact of Environmental Factors on the Predatory Behavior of Marine Organisms
Haruki Kawakami (*Ritsumeikan university*)
- 3Pos164 深層学習を用いた筋小胞体形態と Ca²⁺濃度の関係の解析
Analysis of the relationship between sarcoplasmic reticulum morphology and Ca²⁺ concentration using deep learning
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- 3Pos165 スクレオチド三リン酸の長時間結合は細胞質中の蛋白質間相互作用を抑制する
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Isseki Yu¹, Michael Feig², Yuji Sugita³ (¹*Maebashi Institute of Technology*, ²*Michigan State Univ.*, ³*Riken*)
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Ayato Mizuno¹, Tomoki Nakayoshi^{1,2}, Koichi Kato^{1,3}, Akifumi Oda^{1,4} (¹*Grad. Sch. Pharm., Meijo Univ.*, ²*Inst. Adv. Res., Nagoya Univ.*, ³*Fac. Pharm. Sci., Shonan Univ. Med. Sci.*, ⁴*Inst. Protein Res., Osaka Univ.*)
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Charu Datt^{1,3}, Jonathan Bauermann^{2,3}, Nazmi Burak Budanur³, Frank Julicher³ (¹*Department of Mechanical Engineering, Keio University*, ²*Department of Physics, Harvard University*, ³*Max Planck Institute for the Physics of Complex Systems, Dresden*)
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Aoki, Kana (青木 佳南)	2SFA-6	Asano, Yuka (浅野 友香)	2Pos088
Aoki, Kazuhiro (青木 一洋)	3SHA-5	Asanuma, Daisuke (浅沼 大祐)	1GG011
	1Pos088	Asaoka, Sotaro (浅岡 草太郎)	3Pos114
	1Pos194	Ashida, Orika (芦田 織歌)	1Pos025
Aoki, Rinka (青木 凜夏)	3Pos113		2Pos015
Aoki, Toma (青木 斗真)	1GH003	Atomi, Yoriko (跡見 順子)	2SCP-3
Aoki, Wataru (青木 航)	2SHA-1		3Pos089
Aono, Rintaro (青野 麟太郎)	3Pos061	Auer, Florian (Auer Florian)	1MSG-5
Aoyama, Mako (青山 真子)	3Pos141	Awakawa, Takayoshi (淡川 孝義)	2SCA-3
Aoyama, Risako (青山 理紗子)	1Pos023		1GH006
Aoyama, Tomohiro (青山 知裕)	1Pos029		1Pos169
Arai, Makiko (荒井 万喜子)	2SFA-4	Awazu, Toshikuni (栗津 敏邦)	1MSF-3
Arai, Munchito (新井 宗仁)	2SCA-6	Azai, Chihiro (浅井 智広)	2SGP-2
	1GC009		2Pos134
	1GC010		3Pos133
	2Pos017	Baba, Akiko (馬場 晶子)	1GG001
	3Pos033	Baba, Kotaro (馬場 康太郎)	3Pos111
Arai, Satoshi	1Pos208	Bademosi, Adekunle T.	3Pos117
	1Pos209	Baden, Naoki (馬殿 直樹)	2Pos211
	2Pos035	Bae, Jiwan (ペ ジワン)	2SKP-2
	3Pos036	Balsalobred, Carlos (Balsalobred Carlos)	2Pos005
Arai, Satoshi (新井 敏)	1EB001		<u>1YK1030</u>
	2Pos209	Bamba, Ryuya (馬場 琉矢)	3Pos155
Arai, Sora (新井 想空)	1GI001	Bamrung, Phonphiphat	1Pos106
Arai, Tatsuya (新井 達也)	1MSG-1	Bando-Uotani, Miki (板東 (魚谷) 末季)	1Pos139
	1GA011	Bang, Kyuhyeon	2SKA-1
	1GG009	Barquera, Blanca (Barquera Blanca)	1Pos116
	1Pos021	Basnayake, B.M.K.D	2Pos035
Araki, Hiyori (荒木 陽好)	2Pos018	Basnayake, B.M.K.D.	1Pos209
Araki, Mitsugu (荒木 望嗣)	2SFP-1	Bassereau, Patricia	2Pos114
Araki, Yuka (荒木 優香)	1GB011	Bauermann, Jonathan	3Pos218
Aramoto, Chihiro (荒本 智大)	2Pos027	Bayliss, Richard (ベイリス リチャード)	2Pos098
Arata, Toshiaki (荒田 敏昭)	3Pos055	Beckstein, Oliver	1EE002
Arayama, Miyu (荒山 みゆ)	1GB002	Beis, Konstantinos (Beis Konstantinos)	2Pos005
Archer, Richard James	1EA004		<u>1YK1030</u>
Archer, Richard James (アーチャー ジェームズリ チャード)	3Pos150	Beppu, Kazusa (別府 航早)	2SEP-6
Arie, Misaki (有江 弥咲)	3Pos087	Bertocchi, Cristina	2SIP-3
Ariga, Takayuki (有賀 隆行)	1GE012	Bessho, Ken (別所 賢)	2Pos112
	2Pos074		2Pos113
Arikawa, Keisuke (有川 敬輔)	1Pos033	Bessho, Yoshiki (別所 芳樹)	2Pos170
Arimura, Yuta (有村 悠太)	2Pos070	Bhatt, Sunil	3SAA-2
Arita, Kazuki (有田 和生)	1Pos185	Bhattacharjee, Biplab	2Pos094
		Bhattacharjee, Biplab (Bhattacharjee Biplab)	2SEP-7

Bielecki, Michael (Bielecki Michael)	1MSG-5	Chen, Chen (陳 辰)	1Pos147
Binti Salwadi, Nur Fatin Liyana	1Pos078	Chen, Hsuan-Yi (陳 宣毅)	1Pos085
	2Pos072	Chen, Jiali (陳 佳麗)	1GF011
Blazquez Fernandez, Samuel	3Pos047	Chen, Szu-Yu (陳 思妤)	3Pos049
Bo, Stefano	3Pos072	Chen, Yan-Ru (陳 彥茹)	1Pos191
Boroevich, Keith	3SGA-5	Chen, Yiran (陳 伊然)	2Pos052
Borowiak, Alexis	1Pos095	Chen, Yu-Chia (Chen Yu-Chia)	1Pos094
Boyer, David (Boyer David)	2Pos010		<u>1YK1100</u>
Brachet, Anna	1SHA-3	Chen, Zibo	1MSI-3
Brandani, Giovanni (ブランドーニ ジョバンニ)	1MSG-6	Cheng, Tat Cheung (鄭 達翔)	1MSG-5
	2SAA-2	Chi, Dam Hieu (ダム ヒョウチ)	2Pos065
Brandani, Giovanni Bruno	2Pos198	Chi, Peter (冀 宏源)	2SBP-2
Brenner, Niklas Urs	2Pos218	Chiba, Genta (千葉 元太)	1GG004
Budanur, Nazmi Burak	2Pos208	Chiba, Kaori (千葉 かおり)	1MSH-5
Burton-Smith, Ray			1GA002
Burton-Smith, Raymond (Burton-Smith Raymond)	3Pos073		3HL1115
	1Pos010		3HL1130
Burton-Smith, Raymond N. (Burton-Smith Raymond N.)	2Pos010		2Pos014
	2Pos016		3Pos015
Bustamante, Carlos (Bustamante Carlos)	3SAA-2		3Pos016
Butola, Ankit	3Pos122	Chiba, Samui (千葉 祥生)	3Pos017
Byrne, Eamon F. X.	1GI002	Chiba, Shuntaro (千葉 峻太郎)	3Pos118
Béjà, Oded	2SJA-3	Chien, Yi-Sian (Chien Yi-Sian)	2SFP-6
Béjà, Oded (Béjà Oded)	1Pos125	Chikenji, George (千見寺 淨慈)	1SCA-5
	1Pos128	Chimura, Takahiko	3Pos145
C. Sasaki, Yuji (佐々木 裕次)	3Pos058	Choi, Gary P.T.	1EA003
Camilli, Pietro De (ピエトロ デカミリ)	1EC001		1Pos201
Canela, Andres (Canela Andres)	1SIA-2		<u>1YK1000</u>
Caramello, Nicolas	2Pos133	Chow, Siu Yu Angela	1GF004
	<u>1YK1115</u>	Chrisnanto, Jeremia Oktavian	1MSG-1
Carver, John A. (Carver John A.)	1GB006	Chuma, Shunsuke (中馬 俊祐)	3SJA-6
Cattarius, Savannah	1MSF-2	Clement, Jean-Emmanuel	2Pos210
Chadou, Kaito (茶堂 快渡)	1GA006	Clements, Abigail (Clements Abigail)	2Pos005
Chan, Feng-Yueh	3Pos213		<u>1YK1030</u>
Chan, Justin (ジャスティン チャン スオン)	1MSJ-4	Cong, Quang Vu	2Pos035
Chang, Chia-en	2SHP-4	Cooney, Aileen (Cooney Aileen)	3Pos154
Chang, Huan-Cheng (張 煥正)	2SJP-3	Cree, Ben	3Pos180
Chang, Yuan-Pin	1Pos197	Cuong, Nguyen Viet (グエン ヴィエット クーン)	
Chanhuk, Min	2SKA-5		2Pos065
Chao-Cheng, Cho	1Pos004	D'Ascenzi, Jacopo (D'Ascenzi Jacopo)	2SJA-3
Chardès, Claire (Chardès Claire)	1Pos086	Dacho, Park	2SKA-5
Chatake, Toshiyuki (茶竹 俊行)	1MSH-4	Dai, Liqiang (戴 立強)	1EE005
	1MSH-6	Daitoku, Hiroaki (大徳 浩照)	1GA003
	1GA002	Dalmo, Roy A.	3SAA-4
	3HL1115	Das, Bratati	1ED002
Chatani, Eri (茶谷 絵理)	1SCA-5	Das, Rakesh	1EA004
	1GB006	Date, Koki (伊達 弘貴)	2Pos162
	1GB007	Datt, Charu	3Pos218
Chauyjarosuk, Anupap (Chauyjarosuk Anupap)	2Pos040	David, A. Simpson	2SJP-4
	2Pos084	Debbarma, Naithok Khachuk	1Pos011
Che, Yong-Suk (蔡 榮淑)	3Pos092	Deguchi, Shigeru (出口 茂)	2Pos219
		Deguchi, Shinji (出口 真次)	2SIP-7
			2Pos081

	2Pos091	Faessler, Reinhard	1SHA-2
	2Pos195	Fainsod, Shai	1GI002
	3Pos076	Fan, Hsiufang (范秀芳)	1EA002
	3Pos088	Fan, Linlin Z.	3Pos122
Deguchi, Takahiro (出口隆宏)	1MSF-2	Fan, Shujie	1EE002
Deisseroth, Karl	3Pos122	Fangjia, Luo (Fangjia Luo)	2SJA-3
Destiarani, Wanda	2Pos179	Fedosov, Dmitry (Dmitry Fedosov)	1GH009
Dilini Nisansala, Hettimudalige	1Pos209	Feig, Michael (フェイグマイケル)	3Pos165
Diogo, Figueiredo (ディオゴフィグイレド)	3Pos202	Flechsigt, Holger	1Pos161
Do, Thanh Tuan	3Pos219	Flechsigt, Holger (Holger Flechsigt)	1Pos039
Dohmae, Naoshi (堂前直)	1Pos138	Fong, Meng-lao (Fong Meng-lao)	1Pos127
	1Pos141	Frankel, Gad (Frankel Gad)	2Pos005
Dohmen, Rosalie (Dohmen Rosalie)	1GI003		<u>1YK1030</u>
Doi, Atsushi (土井淳)	1Pos120	Frick, Tobias (Frick Tobias)	1GJ011
Doi, Hideki (土井英樹)	1Pos120	Fuchigami, Rina (渕上里奈)	3Pos051
Dontschuk, Nikolai	2SJP-1	Fuchigami, Sotaro (渕上壮太郎)	1SAA-3
Doura, Tomohiro (堂浦智裕)	2SBA-3	Fuji, Gyoja (行者路)	2Pos129
Drescher, Knut	1Pos201	Fujie, Takuya (藤江拓哉)	2Pos175
	<u>1YK1000</u>	Fujii, Ikuo (藤井郁雄)	2Pos038
Drescher, Knut (Drescher Knut)	2SGA-4	Fujii, Kengo (藤井研吾)	2Pos131
Drinnenberg, Antonia	3Pos122	Fujii, Masako (藤井真子)	3Pos102
Dror, Ron O.	3Pos122	Fujii, Ritsuko (藤井律子)	2SGP-5
Duan, Lian	1EE004		2SGP-6
Dudon, Théo	1SHA-3	Fujikawa, Kohki (藤川絃樹)	1Pos117
Dunkel, Jörn	1Pos201	Fujikawa, Ryosuke (藤川良祐)	1GG006
	<u>1YK1000</u>	Fujimaki, Shun (藤巻竣)	3Pos183
Dunkel, Jörn (Dunkel Jörn)	2SGA-4	Fujimori, Toshihiko (藤森俊彦)	1Pos066
E, Chao (鄂超)	1EE005	Fujimoto, Kazuhiro (藤本和宏)	1SGA-5
Ebata, Hiroyuki	1Pos206	Fujimoto, Kazuhiro J.	3Pos180
Egelman, Edward (Egelman Edward)	2Pos005	Fujimoto, Mari (藤本麻里)	1Pos180
	<u>1YK1030</u>	Fujimoto, Nobutomo (藤本信智)	3Pos075
Eguchi, Taiyo (江口太陽)	1Pos188	Fujimoto, Ryutaro (藤本竜太郎)	2SDA-4
	2Pos207	Fujinami, Daisuke (藤浪大輔)	1SJA-4
Eisenberg, David (Eisenberg David)	2Pos010	Fujino, Maho (藤野真帆)	1Pos156
Ejiri, Tomo (江尻智森)	3Pos043	Fujisaki, Hiroshi (藤崎弘士)	1SBA-4
Ekimoto, Toru (浴本亨)	2Pos162	Fujisawa, Tomotsumi (藤澤知績)	1GI003
	2Pos164		2Pos128
Elani, Yuval (Elani Yuval)	3Pos154		2Pos130
Elverston, Louis	1Pos207		2Pos201
Emoto, Hikaru (江本光)	1Pos195		3Pos123
Endo, Kazuha (遠藤多葉)	1Pos048	Fujise, Kenshiro (藤瀬賢志郎)	1EC001
Endo, Motomu (遠藤求)	3SJA-1	Fujishima, Kosuke	1GC006
Endo, Nobuyuki (遠藤伸幸)	1GA003	Fujishima, Kosuke (藤島皓介)	3SFA-6
Endo, Shuji (遠藤修仁)	1Pos166		1GG001
Engelhardt, Tobias	1MSF-2		1GG003
Engilberge, Sylvain	2Pos133	Fujishiro, Shin (藤城新)	1MSJ-7
	<u>1YK1115</u>	Fujita, Chinatsu (藤田千夏)	2Pos104
Erban, Radek	1Pos190	Fujita, Eri (藤田恵理)	3Pos089
Essen, Lars-Oliver	2Pos133	Fujita, Hideaki (藤田英明)	1Pos216
	<u>1YK1115</u>	Fujita, Keisuke (藤田恵介)	1GJ006
Etchuya, Kenji (越中谷賢治)	3Pos156		3Pos208
	3Pos164	Fujita, Kento (藤田健人)	1GH011
Evangelista, Nathan	1EA003		3Pos179

Fujita, Nozomi (藤田 希実)	1Pos189	Fukuma, Takeshi (福間 剛士)	2SHP-7
Fujita, Suguru (藤田 卓)	2SCA-1		1Pos199
	1Pos009	Fukumoto, Akihisa (福本 晃久)	1GD009
Fujita, Yuichi (藤田 祐一)	2Pos165	Fukunaga, Hiroki (福永 裕樹)	2Pos200
Fujita, Yuya (藤田 雄也)	2SGP-1	Fukunishi, Yoshifumi (福西 快文)	1Pos180
Fujitsuka, Kenji (藤塚 健次)	1Pos006		2Pos181
Fujiwara, Daisuke (藤原 大佑)	1GB006	Fukuoka, Hajime (福岡 創)	1GJ008
Fujiwara, Ikuko (藤原 郁子)	2Pos038		2Pos076
	1Pos068		2Pos084
	1Pos091		2Pos100
	1Pos092		2Pos103
	1Pos093		3Pos092
	2Pos090	Fukushima, Shun-ichi (福島 俊一)	1GG012
Fujiwara, Kazuo (藤原 和夫)	3Pos024	Fukute, Jumpei (福手 淳平)	1SEA-6
Fujiwara, Kei (藤原 慶)	2SKP-3	Funahashi, Toshiya (船橋 俊也)	3SBA-4
	2Pos155	Funatsu, Takashi (船津 高志)	1EB005
Fujiwara, Koki (藤原 弘貴)	1GG006		3Pos203
Fujiwara, Mai (藤原 麻衣)	2Pos181	Furihata, Hirotake (降旗 大岳)	1Pos049
Fujiwara, Satoru (藤原 悟)	1MSH-4	Furuike, Yoshihiko (古池 美彦)	3SAA-5
Fujiwara, Shin-ichi (藤原 伸一)	2Pos173		1Pos024
Fujiwara, Takaaki (藤原 孝彰)	1Pos001		2Pos020
	1Pos011		2Pos023
Fujiwara, Takahiro	2SGA-3		2Pos026
Fujiwara, Takahiro (藤原 敬宏)	1Pos096	Furukawa, Sachika (古川 幸佳)	1GA010
Fujiwara, Takahiro K	1Pos098	Furuki, Tomohiro (古木 智大)	2Pos153
Fujiwara, Takahiro K (藤原 敬宏)	1EC003	Furumoto, Hiroko (古元 礼子)	1GE012
Fujiwara, Takahiro K. (藤原 敬宏)	1SHA-4	Furusawa, Chikara (古澤 力)	2SHA-4
	1GF002		2Pos194
	1Pos089		3Pos146
Fujiwara, Yuichiro (藤原 祐一郎)	1Pos113		3Pos190
	1Pos123		3Pos192
Fujiyabu, Chihiro (藤藪 千尋)	2Pos129	Furusawa, Takumi (古澤 拓実)	3Pos150
	2Pos131	Furuta, Akane (古田 茜)	3Pos074
Fujiyoshi, Satoru (藤芳 暁)	2SGA-6	Furuta, Ken'ya (古田 健也)	3Pos074
Fujiyoshi, Yoshinori (藤吉 好則)	2SBA-4	Furutani, Yuji (古谷 祐詞)	2SJA-3
	1Pos002		1GG007
Fujiwara, Toshimichi (藤原 敏道)	3Pos055		1GI004
Fukagawa, Tatsuo (深川 竜郎)	1Pos060		1GI006
Fukai, Yohsuke T	2SAP-2		1GI010
Fukamachi, Shuya (深町 崇耶)	2SFA-4		1Pos046
Fukamizu, Akiyoshi (深水 昭吉)	1GA003		1Pos145
Fukatsu, Takema (深津 武馬)	1Pos149		2Pos142
Fukuda, Akihiro (福田 朗大)	1Pos074		2Pos145
Fukuda, Ayaka (福田 彩華)	2SJA-5		3Pos122
Fukuda, Hiroto (福田 大士)	1Pos046	Furutani, Yuji (古谷 裕司)	3Pos140
Fukuda, Masahiro	3Pos122	Furuya, Moeno (古谷 萌乃)	3Pos094
Fukuda, Masahiro (福田 昌弘)	1GI004	Fusamae, Sawa (房前 佐和)	1Pos017
	1GI005	Futamata, Hiroyuki (二又 裕之)	2Pos196
	2Pos006		3Pos103
	3Pos121	Fuzisawa, Miina (藤沢 みいな)	1Pos120
Fukuda, Shingo (福田 真悟)	1Pos076	Fässler, Reinhard	1EC003
Fukuda, Sotaro (福田 颯太郎)	2Pos102	Galindo, Luis Javier (Galindo Luis Javier)	1Pos125
Fukuma, Takeshi	1Pos095	Ganser, Christian	3Pos213

Gentaro, Yokoyama (横山 源太朗)	3Pos034	1Pos020
Gerle, Christoph (ゲーレ クリストフ)	3Pos070	1Pos172
Giannone, Gregory	1SHA-3	1Pos184
Gibo, Shingo (儀保 伸吾)	3SJA-5	2Pos179
Gingeleit, Lukas (Gingeleit Lukas)	1MSG-5	1SCA-3
Ginter, Taren (ギンター テーレン)	1GG001	3SJA-6
	1GG003	1GJ006
Goda, Keisuke	2Pos210	2Pos068
Goda, Keisuke (合田 圭介)	3SGA-2	3Pos200
Goda, Natsuko (合田 名都子)	3Pos014	3Pos208
Gomibuchi, Yuki (五味渕 由貴)	2Pos095	1GD012
Gomibuti, Yuki (五味渕 由貴)	2Pos105	1Pos151
Gondhalekar, Riddhi Prashant	1GC006	2SEP-3
Gong, Ya-Chen (龔 亞晨)	2SBP-2	1Pos073
Gono, Asahi (郷野 朝日)	3Pos107	2Pos213
Goto, Yuhei (後藤 祐平)	3SHA-5	2Pos049
Goto, Yuji (後藤 祐兄)	2Pos042	2Pos210
Goto, Yuna (後藤 優菜)	3Pos040	3Pos012
	3Pos048	3Pos028
Grenci, Gianluca (Grenci Gianluca)	1SIA-2	2Pos183
Gu, Yuzhong (顾 羽中)	1GA008	2Pos031
Gunji, Erika (軍司 絵里佳)	2Pos014	2Pos013
Guyot, Constantin (Guyot Constantin)	1Pos038	2SGA-4
Gwangrog, Lee	2SKA-5	1MSG-7
Ha, Trong Thang	1GA007	2Pos210
Hada, Masashi (羽田 政司)	1SEA-4	3SBA-1
Haga, Kei (芳賀 慧)	2Pos001	3SFA-4
Haga, Kenya (芳賀 健也)	1Pos111	1GA001
Haga, Takehiko (芳賀 剛彦)	2Pos044	2SAP-3
Hagai, Masaya	3Pos180	1Pos213
Hagino, Katsumi (萩野 勝己)	1Pos154	3SJA-5
Hagiri, Yuki (羽切 夕貴)	1GC005	1GJ005
Haida, Riki (灰田 吏毅)	3Pos156	2Pos038
Hall, Malgorzata (Hall Malgorzata)	2Pos138	2Pos212
Hamada, Masako (濱田 雅子)	2Pos128	3Pos202
Hamada, Michiaki (浜田 道昭)	2Pos163	1Pos114
	3Pos034	2Pos142
Hamada, Riku (濱田 理公)	3HL1100	2SEP-7
Hamada, Shogo	1EA004	1Pos133
Hamada, Shogo (浜田 省吾)	3Pos217	3SIA-7
Hamada, Shota (濱田 勝太)	3HL1015	1Pos112
Hamada, Tsutomu (濱田 勉)	2Pos220	2SHA-3
Hamada, Yuta (濱田 悠太)	2SGA-1	2SIP-1
Hamaguchi, Sota (濱口 蒼太)	2Pos156	1GD012
Hamaguchi, Tasuku (濱口 祐)	3Pos066	1GE012
Hamaoka, Kazuko (浜岡 加寿子)	1Pos083	3Pos180
Hanabusa, Katsuaki (英 克明)	3Pos024	2Pos090
Hanano, Ai (花野 愛)	2Pos031	2Pos152
Hara, Masahiko (原 正彦)	1Pos056	2Pos156
Harada, Atsuki (原田 淳生)	1Pos205	2Pos157
Harada, Kosei (原田 康生)	1GG008	2Pos158
Harada, Ryuhei	1EE004	3Pos151
Harada, Ryuhei (原田 隆平)	1GH003	3Pos152
Harada, Yoshie (原田 慶恵)		
Harada, Yoshihisa (原田 慈久)		
Haraguchi, Takeshi (原口 武士)		
Harashima, Takanori (原島 崇徳)		
Harata, Masahiko (原田 昌彦)		
Haruna, Ryusei (春名 竜征)		
Hasan, Md Al Mehedi		
Hasegawa, Aiko (長谷川 藍子)		
Hasegawa, Kodai (長谷川 航大)		
Hasegawa, Yoshito (長谷川 義人)		
Hashiguchi, Takao (橋口 隆生)		
Hashimoto, Satoshi (橋本 聡)		
Hastewell, Alasdair (Hastewell Alasdair)		
Hasunuma, Tomohisa (連沼 誠久)		
Hata, Soichiro		
Hatakeyama, Jumpei		
Hatakeyama, Tetsuhiro S. (畠山 哲央)		
Hatanaka, Ryo (畑中 涼)		
Hatazawa, Suguru (畠澤 卓)		
Hatori, Kuniyuki (羽鳥 晋由)		
Hatsuda, Tetsuo (初田 哲男)		
Hattori, Mitsuru (服部 満)		
Hattori, Motoyuki (服部 素之)		
Hattori, Nanako (服部 七奈子)		
Hayakawa, Masayuki (早川 雅之)		
Hayashi, Fumio (林 史夫)		
Hayashi, Fumio (林 文夫)		
Hayashi, Gosuke (林 剛介)		
Hayashi, Kumiko (林 久美子)		
Hayashi, Manami		
Hayashi, Masahito (林 真人)		

Hirota, Tsuyoshi (廣田 毅)	1SGA-2	1Pos102
Hiruma, Takahisa (比留間 貴久)	1Pos018	1Pos103
Hiruta, Yuki (蛭田 勇樹)	2Pos030	1Pos068
Hisabori, Toru (久堀 徹)	2Pos212	1Pos144
Hisada, Toshiaki (久田 俊明)	1MSG-4	2Pos058
Hisamoto, Yoko (久本 洋子)	2SFP-4	3HL1130
Hisatomi, Osamu (久富 修)	3SJA-1	2Pos014
Hisham, Dokainish	1SEA-5	3Pos015
Hishida, Atsuki (菱田 温規)	3Pos181	3Pos016
Hishida, Mafumi (菱田 真史)	3Pos192	3Pos017
Hiyama, Miyabi (樋山 みやび)	1GA010	3Pos119
Hizukuri, Yohei (檜作 洋平)	3SBA-2	2Pos122
Hizume, Kohji (日詰 光治)	3SBA-9	2Pos021
Hoff, Wouter D. (Hoff Wouter D.)	2Pos028	1SCA-7
Hoffmann, Christian	2Pos164	3SIA-6
Hojo, Hironobu (北條 裕信)	2SAP-1	1Pos112
Hojo, Nozomi (北條 望)	1GI003	1Pos007
Holger, Flechsig (Holger Flechsig)	2SGA-3	1Pos127
Homma, Masato (本間 大翔)	1EC003	2Pos133
Homma, Michio (本間 道夫)	3Pos055	1YK1115
Homma, Sakura (本間 さくら)	2SDP-1	1SGA-6
Homma, Yuki (本間 優葵)	2Pos067	2SJA-3
Hommma, Michio (本間 道夫)	1Pos183	1Pos142
Honda, Gen (本田 玄)	1Pos045	1Pos146
Honda, Hajime (本多 元)	2Pos071	2Pos141
Honda, Naoki (本田 直樹)	2SAA-5	3Pos142
Honda, Yuna (本田 裕奈)	2Pos007	1SFA-5
Hondou, Kazuki (本道 主樹)	3Pos161	1GF004
Honjo, Emi (本城 恵美)	3Pos101	2SJP-5
Horade, Mitsuihiro (洞出 光洋)	2Pos075	1GA007
Hori, Kensei (堀 兼誠)	1Pos099	3Pos122
Hori, Sayaka (堀 沙耶香)	1Pos068	3Pos138
Horiguchi, Shuhei (堀口 修平)	1Pos091	3Pos139
Horiguchi, Shuhei A. (堀口 修平)	1Pos093	2Pos180
Horii, Takuto (堀井 拓登)	3Pos191	2Pos138
Horikawa, Akio (堀川 皓央)	3Pos096	1GB005
Horinouchi, Shinya (堀ノ内 慎哉)	3HL1100	1GA007
Horitani, Masaki (堀谷 正樹)	2SHP-6	2SKA-1
Horiuchi, Atsushi	3Pos082	2SKA-5
Horiuchi, Kota (堀内 滉太)	3Pos067	2Pos091
Horiyama, Takashi (堀山 貴史)	2Pos066	2Pos067
Horonushi, Dan (襲主 暖)	2SFA-4	2SKP-5
	2Pos192	1GJ001
	<u>1YK0915</u>	1Pos150
	2SFA-2	1Pos154
	3Pos009	1Pos158
	3Pos089	2Pos111
	3Pos023	2Pos093
	2SJA-4	3Pos195
	2Pos023	1Pos199
	2Pos026	1Pos035
	2Pos007	1GG012
	1Pos100	3Pos211
Hoshida, Masayuki (星田 政行)		
Hoshina, Hiromichi (保科 宏道)		
Hoshino, Masaru (星野 大)		
Hosoda, Hiroshi (細田 洋司)		
Hosoda, Kazufumi (細田 一史)		
Hosoi, Haruko (細井 晴子)		
Hosokawa, Chie (細川 千絵)		
Hosokawa, Yuhei (細川 雄平)		
Hososhima, Shoko (細島 頌子)		
Hotta, Akitsu (堀田 秋津)		
Hou, Yuge		
Hsieh, Chia-Lung (謝 佳龍)		
Hsu, Wei-li		
Huguenard, John R.		
Hukuda, Akiya (福田 諒哉)		
Hukuda, Makoto (福田 誠)		
Humbel, Bruno M. (Humbel Bruno M.)		
Husna, Syamil MA		
Huynh, Allen		
Hwang, Kwang Yeon		
Hyeokjin, Cho		
Ibanez, Rosario (Ibanez Rosario)		
Ichida, Hikaru (市田 光)		
Ichihashi, Norikazu (市橋 伯一)		
Ichikawa, Aoi (市川 葵)		
Ichikawa, Masatoshi		
Ichikawa, Masatoshi (市川 正敏)		
Ichikawa, Takehiko (市川 杜彦)		
Ichiki, Takanori (一木 隆範)		
Ichimura, Taro (市村 垂生)		

Ide, Satoru (井手 聖)	2SAP-5	Im, Haeri (Im Haeri)	2Pos041
	2Pos062	Imada, Katsumi (今田 勝巳)	1GF012
	<u>1YK0945</u>		1Pos080
Ide, Toru (井出 徹)	2Pos146		1Pos118
	3Pos110		2Pos071
	3Pos138		3Pos007
	3Pos139		3Pos077
Igarashi, Manabu (五十嵐 学)	2Pos167	Imada, Ryota (今田 涼太)	1Pos041
Igarashi, Ryuji (五十嵐 龍治)	1GJ010	Imai, Hinano (今井 日奈乃)	3SBA-7
Igarashi, Shoma (五十嵐 将真)	1Pos017	Imai, Hiroo (今井 啓雄)	1GI005
Ihara, Masaru (井原 賢)	2Pos169	Imai, Kazuki (今井 翔月)	2Pos046
Iida, Kei (飯田 慶)	1Pos027	Imai, Masayuki (今井 正幸)	1GG001
Iida, Ririka (飯田 莉梨香)	1GF012		1ED001
Iida, Ryuki (飯田 龍暉)	1Pos017		1Pos111
Iijima, Kohei (飯嶋 航平)	2Pos215	Imai, Tomoya (今井 友也)	1Pos109
Iijima, Mikuru (飯島 美来)	2Pos024	Imamura, Hiromi (今村 博臣)	3Pos007
Iijima, Yoshie (飯島 良江)	2Pos039	Imamura, Hiroshi (今村 比呂志)	2Pos148
Iino, Ryota (飯野 亮太)	2SEP-3	Imamura, Kayo (今村 香代)	2Pos045
	1Pos010		3Pos003
	1Pos073	Imamura, Saki (今村 咲稀)	2Pos066
	1Pos076	Imaoka, Waren (今岡 和蓮)	1Pos029
	1Pos153	Imasaki, Tsuyoshi (今崎 剛)	2SHP-7
	3Pos073	Imashimizu, Masahiko (今清水 正彦)	2Pos058
Iino, Yuichi (飯野 雄一)	2SDP-2		3Pos059
Iinuma, Kaito (飯沼 快友)	3HL0915	Imayoshi, Itaru (今吉 格)	3SHA-1
Iizuka, Ryo (飯塚 怜)	3SGA-5	Imura, Tomoki (居村 知己)	1Pos007
	1GC013	Inaba, Kenji (稲葉 謙次)	2SHP-6
	2Pos218	Inada, Kazuki (稲田 一輝)	2Pos139
Ijuin, Ayako (伊集院 綾子)	1GC004	Inagaki, Kenji (稲垣 賢二)	1GA004
Ikeda, Hisako (池田 寿子)	3Pos122		1GA006
Ikeda, Kazuho (池田 一穂)	1Pos079	Inagaki, Naoyuki (稲垣 直之)	2SIP-5
Ikeda, Keisuke (池田 恵介)	2SIA-1		1Pos193
	2Pos110	Inagaki, Shigenori (稲垣 成矩)	2SEA-5
Ikeda, Masato (池田 将)	2SDA-4	Inagaki, Tomomi (稲垣 知実)	2Pos134
Ikeda, Takuma (池田 拓真)	3Pos186		3Pos133
Ikeda, Yoshihisa (池田 善久)	1GC012	Inaki, Mikiko (稲木 美紀子)	3Pos060
Ikegami, Akiko (池上 暁子)	1GA003	Inokuchi, Miyu (井口 未唯)	3Pos125
Ikeguchi, Masamichi (池口 雅道)	3Pos024	Inomata, Kohsuke (猪股 晃介)	3Pos008
Ikeguchi, Mitsunori (池口 満徳)	2SFP-6	Inomata, Kousuke (猪股 晃介)	3Pos009
	2Pos162	Inomata, Naoki (猪股 直生)	1SDA-1
	2Pos164	Inomata, Risa (猪股 璃咲)	3Pos051
Ikenoue, Tatsuya (池之上 達哉)	2SIA-2	Inose, Tomoya (猪瀬 智也)	3Pos059
	3SEA-2	Inoue, Akitoshi (井上 明俊)	1GA009
	2Pos110		2Pos004
Ikeuchi, Kazuna (池内 一奈)	1Pos056	Inoue, Asuka (井上 飛鳥)	2Pos096
Ikeuchi, Masashi (池内 真志)	3SJA-7	Inoue, Daisuke (井上 大介)	2SFA-1
Ikeuchi, Yoshiho	1GF004		3Pos089
Ikeya, Teppei (池谷 鉄兵)	3Pos008	Inoue, Kanta (井上 幹太)	1GA004
	3Pos009		1GA006
	3Pos025	Inoue, Keiichi (井上 圭一)	1SGA-4
	3Pos037		1GI002
Iijima, Masumi (飯嶋 益巳)	2Pos046		1GI004
Im, Dohyun (林 到炫)	2SBA-2		1GI007

	1GI009	Ishimoto, Naito (石本 直偉士)	1Pos005
	1Pos125		2Pos005
	1Pos128		1YK1030
	1Pos130	Ishino, Shuichi (石野 秀一)	3Pos216
	2Pos126	Ishitani, Tohru (石谷 太)	2SFA-6
	3Pos121	Ishiwata, Hitoshi (石綿 整)	2SJP-6
Inoue, Masao (井上 雅郎)	2Pos164	Ishiwata, Shin'ichi (石渡 信一)	2Pos216
Inoue, Masatoshi (井上 昌俊)	3Pos122	Ishizaka, Masato (石坂 優人)	1MSG-5
Inoue, Masayo (井上 雅世)	2Pos122	Ishizone, Tsuyoshi (石曾根 毅)	2SAA-5
Inoue, Motoki (井上 元基)	3Pos185	Islam, Md. Din	1GA007
Inoue, Rintaro	1SAA-1	Iso, Naoki (磯 尚樹)	2Pos220
Inoue, Rintaro (井上 倫太郎)	1MSH-6	Iso, Tomomi (磯 僚海)	1GB011
	1GB007	Isobe, Noriyuki (磯部 紀之)	3SFA-3
	1GB009	Isogai, Yasuhiro (磯貝 泰弘)	3SBA-7
	1Pos019		2Pos148
Inoue, Sara (井上 紗良)	1GH002	Isojima, Hiroshi (磯島 広)	1Pos071
Inoue, Sei (井上 静)	1Pos165	Isono, Yukiko (磯野 裕貴子)	2Pos016
Inoue, Takanari (井上 尊生)	3Pos078	Itami, Kenichiro	3Pos180
Inoue, Yusei (井上 悠聖)	2Pos069	Ito, Ai (伊藤 愛)	2Pos060
Inoue-Kashino, Natsuko (井上 (葉子野) 名津子)		Ito, Akiko (伊藤 明子)	1GG007
	1Pos139		1Pos145
Inui, Shinnosuke (乾 慎之介)	3Pos054	Ito, An (伊藤 杏)	1SJA-4
Inukai, Shino (犬飼 紫乃)	1GI007	Ito, Chizuru (伊藤 千鶴)	1Pos079
	1Pos124	Ito, Keisuke (伊藤 敬佑)	1GC013
Iseki, Mineo (伊関 峰生)	3Pos051	Ito, Kohji (伊藤 光二)	1Pos151
Iseki, Toshihiro (井関 敏啓)	1Pos121	Ito, Shingo (伊東 真吾)	2Pos187
Ishibashi, Kenta (石橋 健太)	3Pos074	Ito, Shinya (伊藤 進也)	2SCP-7
Ishibashi, Tomoki (石橋 朋樹)	1Pos196	Ito, Shota (伊藤 翔太)	1GH001
Ishida, Hisashi (石田 恒)	1Pos059	Ito, Sohei (伊藤 創平)	1SJA-4
Ishida, Koki (石田 紘基)	2SFA-2	Ito, Soshi	1GF004
Ishida, Tsubasa (石田 翼)	2Pos084	Ito, Sosuke (伊藤 創祐)	1ED003
	2Pos157	Ito, Takashi (伊藤 隆)	3SBA-9
	2Pos111	Ito, Takuya (伊藤 卓也)	2Pos011
Ishihara, Naotada (石原 直忠)	1Pos018	Ito, Yudai (伊藤 悠大)	2Pos003
Ishihara, Naoya (石原 尚弥)	2Pos111	Ito, Yuki (伊藤 祐希)	1Pos167
Ishihara, Takaya (石原 孝也)	1GD002	Ito, Yuma (伊藤 侑真)	1GI004
Ishii, Hiroto (石井 裕人)	1GF010		1GI010
	1Pos205		1Pos145
Ishii, Kunihiko (石井 邦彦)	3SEA-1		2Pos142
Ishii, Yoshitaka (石井 佳誉)	1GJ008		2Pos145
Ishijima, Akihiko (石島 秋彦)	2Pos076		3Pos122
	2Pos084		3Pos140
	2Pos100	Ito, Yutaka (伊藤 隆)	3Pos008
	2Pos103		3Pos009
	3Pos092		3Pos025
Ishikawa, Daisuke (石川 大輔)	1Pos056		3Pos037
Ishikawa, Hiroki (石川 裕規)	1EC003	Ito-Miwa, Kumiko (三輪 (伊藤) 久美子)	3SJA-4
Ishikawa, Shion (石川 史恩)	1GB005	Ito-miwa, Kumiko (伊藤 (三輪) 久美子)	2Pos026
Ishikawa-Fukuda, Moe (石川 萌)	1Pos116	Itoh, Ayaka (伊藤 綾香)	3Pos118
Ishikita, Hiroshi (石北 央)	2SJA-1	Itoh, Ryuhei (伊藤 龍平)	3Pos195
	1GI004	Itoh, Satoru (伊藤 暁)	2Pos178
	3Pos122	Itoh, Satoru G (伊藤 暁)	2Pos176
Ishimori, Koichiro (石森 浩一郎)	1GF009	Itoh, Thoma (伊藤 冬馬)	1Pos194

Itoh, Toshiki (伊藤 俊樹)	1Pos089	Kageyama, Sota (影山 颯大)	1Pos163
Itoh, Yuji (伊藤 優志)	1GB005	Kai, Souma (甲斐 壮馬)	1Pos180
	1GE002	Kaizu, Kazunari (海津 一成)	2SAP-5
	2Pos029		2Pos062
	2Pos031		1YK0945
Itoi, Tatsuya (糸井 達哉)	1Pos110	Kakizaki, Jiro (柿崎 二郎)	1Pos150
Itoki, Satomi (糸木 智美)	3Pos093	Kakizawa, Shigeyuki (柿澤 茂行)	1Pos149
Iwadate, Yoshiaki (岩楯 好昭)	1GD003		3Pos146
	1GD007		3Pos148
Iwai, Kazuhiro (岩井 一宏)	3Pos003	Kakizuka, Taishi (垣塚 太志)	1GG012
Iwaki, Mitsuhiro (岩城 光宏)	1GE012		3Pos211
	1EC002	Kako, Koichiro (加香 孝一郎)	1GA003
	2Pos200	Kakugo, Akira	1EA004
Iwakiri, Mikage (岩切 海景)	1Pos032		2Pos093
Iwamoto, Hiroyuki (岩本 裕之)	3Pos063	Kakugo, Akira (角五 彰)	3Pos195
Iwamoto, Koji (岩本 浩司)	3Pos100	Kamagata, Kiyoto (鎌形 清人)	2SIA-5
Iwamoto, Masayuki (岩本 真幸)	1Pos115	Kamarulzaman, Latiefa (カマルザマン ラティファ)	1GC002
Iwano, Kazuya (岩野 和哉)	2Pos171		1EB003
Iwano, Satoshi	3SBA-1	Kamatani, Takashi (鎌谷 高志)	1EB005
Iwanski, Malina	1MSF-2	Kambara, Taketoshi (神原 丈敏)	1SIA-3
Iwao, Yuya (巖 祐哉)	1Pos017		1MSF-3
Iwasa, Kantaro (岩佐 寛太郎)	3Pos018		2Pos083
Iwasa, Mitsusada (岩佐 真貴)	1Pos091	Kameda, Tomoshi (亀田 倫史)	1GB002
Iwasaki, Hikaru (岩崎 光)	2Pos080	Kamei, Ken-ichiro F (亀井 健一郎)	1GG004
Iwasaki, Kanako (岩崎 奏子)	1EC002	Kameo, Yoshitaka (亀尾 佳貴)	2SFA-7
Iwata, Seiya	2Pos048	Kamikouchi, Azusa	3Pos176
Iwata, So (岩田 想)	1GI005	Kamikubo, Hironari (上久保 裕生)	1GA003
Iwata, Tatsuya (岩田 達也)	1Pos068		1Pos017
	3Pos051		1Pos023
Iyoda, Yudai (伊與田 裕大)	3Pos190	Kamimoto, Kenji (神元 健児)	1Pos143
Izuka, Takao (猪塚 昂生)	2Pos025	Kamimura, Rina (神村 理菜)	2Pos127
Jang, Sung-Soo	3Pos122	Kaminaga, Kiich (神長 輝一)	3SHA-3
Jarin, Zack	2Pos114	Kamino, Seiya (神野 靖也)	3Pos037
Jeckel, Hannah (Jeckel Hannah)	2SGA-4	Kamiura, Riku (上浦 六十)	1GJ010
Jeon, Juhyeong	2SKA-3	Kamiya, Genta	1Pos120
Jeongmin, Yu	2SKA-5	Kamiya, Koki (神谷 厚輝)	3Pos146
Ji, Ruigeng (紀 瑞賡)	2Pos169		3SBA-1
Jia, Tony Z. (ジャー トニーズイ)	1Pos147		1MSF-5
Jiang, Haiyang (Jiang Haiyang)	1Pos211		1GC008
Jiang, Hanting (蒋 瀚霆)	1Pos183		1GJ003
Jinno, Masafumi (神野 雅文)	1GC012		1Pos048
Jinnouchi, Ryosuke (陣内 亮典)	1SBA-7	Kamiya, Mako (神谷 真子)	2Pos036
Jo, YoungJu	3Pos122	Kamiyama, Yukinari (神山 幸成)	2Pos151
Joris, Vasco (Joris Vasco)	1Pos139		3Pos032
Julicher, Frank	3Pos218		3Pos109
Jung, Jaewoon (Jung Jaewoon)	2Pos041		3Pos111
Jung, Jaewoon (鄭 載運)	2SAA-6		2SDP-5
Jung, Kwang-Hwan (Jung Kwang-Hwan)	3Pos126		1Pos072
Kabashima, Yoshiyuki (樺島 祥介)	3Pos145	Kamo, Naoki (加茂 直樹)	2Pos063
Kabayama, Sukehiro (樺山 資大)	2Pos123	Kan, Tetsuo (菅 哲朗)	3Pos129
Kabir, Arif Md. Rashedul	1EA004	Kanamamaru, Shuji (金丸 周司)	1GD006
Kadowaki, Reo (門脇 怜央)	3Pos166		3Pos002
Kage, Azusa (鹿毛 あずさ)	2SEP-5		

Kanamori, Satoshi (金森 サトシ)	2Pos090		3Pos151
Kanamori, Satoshi (金森 智士)	1GF006		3Pos152
Kanamura, Nanako (金村 菜々子)	1Pos123	Kanemaru, Kodai (金丸 恒大)	2SDA-4
Kanaoka, Yui (金岡 優依)	1Pos031		2SBP-3
	1Pos047	Kanematsu, Daisuke (兼松 大介)	2SIP-5
Kanazaki, Yuki (金崎 優樹)	2Pos045		1Pos192
Kanbayashi, Saori (上林 さおり)	2Pos031	Kanemura, Yonehiro (金村 米博)	2SIP-5
Kanda, Koki (神田 幸輝)	3Pos120		1Pos192
Kanda, Naoki (神田 直紀)	2Pos086	Kanno, Mizuki (菅野 美月)	3Pos103
Kanda, Sinji (神田 真司)	2SJA-5	Kano, Maria (鹿野 真吏亜)	3Pos161
Kandori, Hideki	2Pos048	Kapitein, Lukas	1MSF-2
Kandori, Hideki (神取 秀樹)	2SJA-3	Karanja, Jane Wanja	3Pos064
	1GA009	Karasawa, Masayuki (唐澤 昌之)	1Pos169
	1GI001	Karasawa, Naoyuki (唐澤 直之)	2SAA-5
	1GI004	Karim, Riksa Meidy	1GH007
	1GI005	Kasai, Ayano (葛西 綾乃)	2SCP-7
	1GI006	Kasai, Kazuki (笠井 一希)	2Pos003
	1GI007		3Pos003
	1GI010	Kasai, Rinshi (笠井 倫志)	3SIA-5
	1Pos124	Kasai, Rinshi S (笠井 倫志)	1EC003
	1Pos126	Kasai, Rinshi S. (笠井 倫志)	1GF002
	1Pos131		3Pos104
	1Pos132	Kasai, Satoka (笠井 智香)	1Pos185
	1Pos142	Kashino, Yasuhiro (菓子野 康弘)	1Pos139
	1Pos145	Kashiyama, Yoshihiro (桧山 佳広)	1SBA-1
	1Pos146		2Pos049
	2Pos004		2Pos171
	2Pos141	Katano, Mahiro (片野 真熙)	1GA012
	2Pos142	Katayama, Kazuhiko (片山 和彦)	2Pos001
	2Pos145	Katayama, Kota	2Pos048
	3Pos121	Katayama, Kota (片山 耕大)	2SJA-3
	3Pos122		1GA009
	3Pos140		1GI001
	3Pos141		1GI004
	3Pos142		1GI005
Kaneko, Kenshiro (金子 健史朗)	1Pos067		1GI007
Kaneko, Satoru (兼子 智)	1SEA-4		1Pos124
Kaneko, Taikopaul (金子 泰洗ポール)	3SHA-2		1Pos126
Kaneko, Tomoyuki (金子 智行)	1Pos101		2Pos004
	1Pos104		3Pos121
	2Pos101		3Pos122
	2Pos104		3Pos141
	2Pos121	Katayama, Koya (片山 康矢)	1ED003
	2Pos152	Katayama, Naoya (片山 直哉)	1Pos220
	2Pos156	Katayama, Takuya (片山 拓也)	1GB005
	3Pos094		1GE002
	3Pos095	Kato, Chisa (加藤 千紗)	1Pos054
	3Pos096	Kato, Hideaki (加藤 英明)	1MSI-4
	3Pos097		1GA008
	3Pos098		1GI005
	3Pos099		2Pos006
	3Pos116	Kato, Hideaki E. (加藤 加藤)	3Pos122
	3Pos144	Kato, Hideaki E. (加藤 英明)	1GI004

Kato, Koichi (加藤 晃一)	3Pos121	Kawahara, Kazuki (河原 和樹)	3Pos020
	1GH005	Kawai, Daiki (川井 大輝)	3SGA-5
	2Pos016	Kawai, Haruki (川合 春輝)	3Pos030
Kato, Koichi (加藤 紘一)	3Pos170	Kawai, Toui (川合 登偉)	1GF002
Kato, Minoru (加藤 稔)	3Pos018	Kawai, Tsuyoshi (川合 毅)	2Pos033
Kato, Riki (加藤 利樹)	2Pos045	Kawakami, Haruki (川上 陽輝)	3Pos163
Kato, Satofumi (加藤 智史)	3Pos052	Kawakami, Keisuke (川上 恵典)	1Pos139
Kato, Seito (加藤 聖人)	3Pos009	Kawakami, Koki (川上 耕季)	3Pos121
Kato, Shinya (加藤 真也)	1Pos100	Kawakami, Kouki (川上 耕季)	1GA008
	1Pos102	Kawamata, Ibuki	2Pos093
Kato, Shotaro (加藤 笙太郎)	2Pos059	Kawamata, Ibuki (川又 生吹)	2SEP-1
Kato, Shunsuke (加藤 俊介)	2SCA-2		1Pos056
Kato, Sinya (加藤 真也)	1Pos103		3Pos112
Kato, Suguru (加藤 傑)	1SAA-3		3Pos195
Kato, Takaaki (加藤 克彬)	2SHP-7	Kawamoto, Akihiro (川本 晃大)	2SGP-6
Kato, Takafumi (加藤 孝郁)	1MSF-3		1GA003
Kato, Takayuki (加藤 貴之)	1GA003		1Pos006
	1GB001		3Pos010
	2Pos004	Kawamoto, Jun (川本 純)	1Pos109
	2Pos071	Kawamoto, Mei (川本 芽生)	3Pos139
	3Pos003	Kawamoto, Saya (川本 紗弥)	3HL1030
	3Pos087	Kawamura, Anzu (河村 あんず)	3Pos054
Kato, Yoshitaka (加藤 善隆)	1Pos128	Kawamura, Eito (河村 叡人)	2Pos103
Kato, Yoshitaka (加藤 義隆)	1GI002	Kawamura, Izuru (川村 出)	3SEA-3
Kato, Yuki (加藤 祐樹)	1Pos135		1GA013
	1Pos138		1Pos015
	1Pos141		1Pos016
Kato, Yuki S. (加藤 祐基)	1GJ006		1Pos126
Katoh, Kaoru (加藤 薫)	3Pos212	Kawanabe, Akira (川鍋 陽)	1Pos113
Katoh, Takanobu (加藤 孝信)	1SCA-8		1Pos123
Katsuma, Asako (勝間 亜沙子)	2SIP-5	Kawano, Ryuji (川野 竜司)	1GA013
	1Pos192		1GC004
Katsumata, Ryotaro (勝又 僚汰朗)	2Pos167		1GC005
Katsuno, Masahisa (勝野 雅史)	1GH001		1GC007
Katsuta, Hiroki (勝田 紘基)	3Pos075		1GE003
Kawabata, Haruka (川端 悠)	1Pos005		1Pos016
Kawabata, Takeshi (川端 猛)	2Pos160	Kawano-Yamashita, Emi (川野 (山下) 絵美)	2Pos129
Kawagishi, Ikuro (川岸 郁朗)	1GF012	Kawasaki, Akari (川崎 愛花里)	3HL1030
	1Pos084	Kawasaki, Takeshi (川崎 猛史)	1GH001
	1Pos118	Kawase, Haruki (川瀬 陽輝)	3Pos074
	2Pos119	Kawashima, Shigehiro (川島 茂裕)	2SAP-4
	3Pos093	Kawasumi, Takuro (川澄 琢朗)	3Pos071
	3Pos114	Kawauchi, Keiko (川内 敬子)	1Pos216
	3Pos219	Kawauchi, Tatsuki (河内 達輝)	1Pos063
Kawagoe, Soichiro	1GH007	Kayamori, Fumihiro (栢森 史浩)	1GA013
Kawaguchi, Kazutomo	3Pos168	Kengaku, Mineko (見學 美根子)	1SIA-2
	2Pos182	Kenmotsu, Takahiro (剣持 貴弘)	1GE004
Kawaguchi, Kazutomo (川口 一朋)	3Pos167	Kennedy, Mary B.	2SGA-3
	2SAP-2	Kenri, Tsuyoshi (見理 剛)	1GD006
Kawaguchi, Kyogo	1SDA-2	Kida, Masatoshi (木田 雅俊)	2Pos134
Kawaguchi, Kyogo (川口 喬吾)	1Pos002	Kidoaki, Satoru (木戸秋 悟)	2SIP-6
Kawaguchi, Shota (川口 翔大)	1Pos129		1Pos081
Kawaguchi, Tomoki (川口 倫輝)	2SDA-5		3Pos035
Kawaguchi, Yoshimasa (川口 祥正)		Kiga, Daisuke (木質 大介)	

Kigawa, Takanori (木川 隆則)	2Pos041	Kise, Ryoji (木瀬 亮次)	2Pos096
Kiguchi, Shunsuke (木口 峻輔)	2Pos146	Kise, Yoshiaki (木瀬 孔明)	1MSF-3
Kijima, Soichiro (木島 壮一郎)	1GA005	Kishi, Koichiro (岸 孝一郎)	2Pos006
Kijima, Soichiro (木島 壮一郎)	2Pos039	Kishi, Koichiro E. (岸 孝一郎)	1GI004
Kikkawa, Masahide (吉川 雅英)	1Pos079	Kishikawa, Jun-Ichi (岸川 淳一)	3Pos070
Kikkawa, Nobuaki (吉川 信明)	1SBA-7	Kishikawa, Jun-ichi (岸川 淳一)	1GA004
Kikuchi, Hiroto (菊地 浩人)	1Pos136		1GA006
Kikuchi, Kazuya (菊地 和也)	2Pos215		1Pos116
Kikuchi, Kosuke (菊池 幸祐)	1Pos037		2Pos071
	2Pos162	Kishikawa, Jyun-ichi (岸川 淳一)	1GA001
Kikukawa, Takashi (菊川 峰志)	1Pos133	Kita, Tomoki (北 智輝)	1GE010
	3Pos123	Kitada, Nobuo	3SBA-1
	3Pos126	Kitadume, Hana (北詰 花菜)	3Pos020
	3Pos129	Kitagawa, Daiju (北川 大樹)	1Pos090
Kikukawa, Takashi (菊川 隆志)	1Pos108	Kitagawa, Moeko (北川 萌子)	1Pos018
Kikumoto, Mahito (菊本 真人)	2Pos112	Kitaguchi, Tetsuya	3Pos085
	2Pos113	Kitahara, Ryo (北原 亮)	2SIA-4
	3Pos149		1GB002
Kim, Changsu (金 昌秀)	3SBA-9		1GB004
Kim, Hyunji (Kim Hyunji)	1Pos174	Kitajima, Rei (北嶋 嶺)	3Pos175
Kim, Jin Hae	2SKA-3	Kitajima, Tomoya (北島 智也)	1SIA-4
Kim, Sooyeon (金 水縁)	1GC002	Kitajima-Ihara, Tomomi (北島(井原) 智美)	1Pos138
	1EB003		1Pos141
Kim, Suhyang (金 穗香)	1GI004	Kitakata, Emi (北方 恵美)	1GD012
	2Pos006	Kitamura, Akira (北村 朗)	2SGA-1
	3Pos121		1Pos060
Kim, Sulhee	2SKA-1		3Pos030
Kim, Yoon Seok	3Pos122	Kitamura, Keiji (北村 奎時)	1GB002
Kimura, Hitomi (木村 仁美)	2Pos053		1GB004
Kimura, Masayuki (木村 将之)	1SBA-7	Kitamura, Yoshiichiro (北村 美一郎)	2Pos123
Kimura, Miyu (木村 妃佑)	2Pos116	Kitano, Ryota (北野 良太)	2SHP-7
Kimura, Taeko (木村 妙子)	3Pos161	Kitao, Akio	2SBA-1
Kimura, Takahiro (木村 貴洋)	1GB005		1GH004
	1GE002	Kitao, Akio (北尾 彰朗)	2SBA-4
Kimura, Tatsuya (木村 竜也)	1GC001		2SBA-5
Kimura, Tetsunari (木村 哲也)	3Pos045		2SFP-3
Kimura, Tetsunari (木村 哲就)	3Pos042		1GA005
	3Pos046		2Pos183
Kimura, Yuki (木村 友字己)	1GD003	Kitao, Akio (北尾 彰郎)	2Pos039
Kimura, Yukihiro (木村 行宏)	2Pos138	Kitayama, Keigo (北山 慧悟)	2Pos109
	2Pos139	Kitazawa, Soichiro (北沢 創一郎)	1GB002
	2Pos140	Kitazume, Hana (北詰 花菜)	3Pos019
Kinbara, Kazushi (金原 数)	1ED004	Kito, Kentaro (鬼頭 健太郎)	1Pos101
Kinoshita, Keigo (木下 圭剛)	1Pos017		2Pos104
Kinoshita, Kengo (木下 賢吾)	2Pos160		2Pos121
Kinoshita, Masanao (木下 祥尚)	1GF005		3Pos096
	2Pos106		3Pos097
	2Pos108	Kiuchi, Tai (木内 泰)	1Pos207
Kinoshita, Masato (木下 政人)	1Pos188	Kiyama, Hana (木山 花)	1GD008
Kinoshita, Seiichiro (木下 誠一郎)	2Pos085		1GF006
Kinoshita, Yoshimi (木下 慶美)	1MSJ-5		1GJ002
Kinoshita, Yuna (木ノ下 佑奈)	2Pos021		2Pos090
Kinosita, Yoshiaki (木下 佳昭)	2Pos097		3Pos079

Kiyama, Masahiro	3Pos147	Koike, Ryotaro (小池 亮太郎)	1Pos176
Kiyonaka, Shigeki (清中 茂樹)	3Pos148		2Pos159
Kiyooka, Ryota (清岡 亮太)	3SBA-1	Kojima, Asato (小島 朝翔)	1GA008
	2SDP-4		1GI005
	1SBA-1		3Pos121
	2Pos049	Kojima, Keiichi (小島 慧一)	2Pos132
	2Pos171		3Pos125
Kiyota, Ayaka (清田 彩香)	1Pos177	Kojima, Masaru (小嶋 勝)	3Pos082
Kiyotani, Kazuma (清谷 一馬)	1EE001	Kojima, Rei (小島 嶺)	1Pos080
Kluger, Ronald (Kluger Ronald)	1MSG-5	Kojima, Ryo (小島 凌)	1Pos065
Kobashigawa, Yuto (小橋川 雄斗)	2Pos157		3Pos062
Kobayashi, Chigusa (小林 千草)	1Pos028	Kojima, Ryosuke (小嶋 良輔)	1SFA-6
Kobayashi, Daichi (小林 大地)	1Pos213	Kojima, Seiji (小嶋 誠司)	1Pos045
Kobayashi, Kazuhiro (小林 和弘)	1GA008		2Pos071
	3Pos121		2Pos075
Kobayashi, Masataka (小林 真隆)	3SBA-9	Komatsu, Aika (小松 愛華)	3SIA-7
Kobayashi, Ryohei (小林 稜平)	1GE005	Komatsu, Hideyuki (小松 英幸)	1Pos032
	1GE008		2Pos018
	1Pos038	Komatsuzaki, Tamiki	2Pos210
Kobayashi, Ryota (小林 亮太)	1Pos009	Komatsuzaki, Tamiki (小松崎 民樹)	3SGA-7
Kobayashi, Ryouhei (小林 亮平)	1Pos207	Komatsuzaki, Yoshimasa (小松崎 良将)	3Pos118
Kobayashi, Taiki (小林 大葵)	3Pos028	Komi, Yusuke (小見 悠介)	2Pos010
Kobayashi, Takeru (小林 丈流)	2Pos217	Komiya, Ken (小宮 健)	2Pos055
Kobayashi, Takuya	2Pos048	Komori, Kakeru (古森 翔)	3Pos081
Kobayashi, Takuya (小林 拓也)	1GI005	Kondo, Akihiko (近藤 昭彦)	1MSG-7
Kobayashi, Tatsuya (小林 達也)	2Pos028	Kondo, Hinase (金堂 陽生)	3Pos139
Kobayashi, Tetsuya J. (小林 徹也)	2Pos192	Kondo, Hiroko X. (近藤 寛子)	1SBA-6
	<u>1YK0915</u>	Kondo, Kanta (近藤 勘太)	3Pos041
Kobayashi, Tsubasa	2Pos210	Kondo, Kanta (近藤 貫太)	2Pos023
Kobayashi, Yoshihiko (小林 芳彦)	2Pos200	Kondo, Kazuki (近藤 千月)	1GB011
Kobayashi, Yuki (小林 由紀)	2SAP-3	Kondo, Kazunori (近藤 和典)	2Pos143
Kodera, Noriyuki (古寺 哲幸)	1SJA-1	Kondo, Naoshi (近藤 直)	3Pos206
	2SAA-5	Kondo, Takao (近藤 孝男)	3SJA-4
	1EB002	Kondo, Tatsuki (近藤 龍樹)	1SIA-3
	2Pos051		2Pos083
	2Pos067	Kondo, Toru (近藤 徹)	3Pos031
	3Pos029		3Pos133
	3Pos040		3Pos137
	3Pos048	Kondo, Yohei (近藤 洋平)	1Pos194
	3Pos207		3Pos191
Kodera, Yoshio (小寺 義男)	2Pos002	Kong, Haonan (孔 浩南)	1Pos037
	2Pos011	Kongchu, Natthanan	3Pos172
Koezuka, Masato (肥塚 雅人)	3SIA-7	Konishi, Yuichiro (小西 雄一朗)	1GB001
Koga, Marina (古閑 万里渚)	3Pos003	Konno, Hiroki (紺野 宏記)	1Pos039
Koga, Nobuyasu (古賀 信康)	1SGA-1		1Pos042
	2Pos037		2Pos040
	1Pos149		3Pos028
Koga, Ryuichi (古賀 隆一)	2Pos128	Konno, Masae (今野 雅恵)	1Pos130
Koga, Taisei (古賀 大聖)	1SFA-3		2Pos126
Koh, Sangho (高 相昊)	1ED004	Kono, Fumiaki (河野 史明)	1MSH-6
Kohata, Ai (木幡 愛)	1SJA-4	Kono, Hidetoshi	3Pos056
Kohda, Daisuke (神田 大輔)	1Pos119	Kono, Hidetoshi (河野 秀俊)	2SAP-1
Koide, Sanetoki (小出 真蒔)	2Pos172		1MSJ-4
Koike, Ayumu (小池 歩)			

	1Pos059	Kumanogoh, Atsushi (熊ノ郷 淳)	1GG012
	3Pos138	Kumar, Amarjeet	3Pos056
	3Pos139	Kumar, Amarjeet (Kumar Amarjeet)	2SAP-1
Kono, Hideya	3Pos180	Kumashiro, Munchiro (熊代 宗弘)	2SHP-2
Kono, Yohei	1Pos095	Kumazaki, Kaoru (熊崎 薫)	1MSF-3
Kono, Yohei (河野 洋平)	1Pos199	Kumeta, Hiroyuki	3Pos219
Kono, Yunosuke (河野 友乃助)	3HL0900	Kumeta, Hiroyuki (久米田 博之)	2SHP-2
Kosaki, Shinya (小崎 慎也)	1GI008		1MSG-1
	2Pos137		1GF009
Koshimura, Hinako (越村 日向子)	1GA003	Kunida, Katsuyuki (国田 勝行)	1Pos155
Koshiyama, Tomomi (越山 友美)	3SIA-4	Kunihiro, Teiji (国広 悌二)	3SJA-5
Kosono, Saori (古園 さおり)	1GB003	Kunii, Mahan (國井 真帆)	1GA002
Kosuge, Yume (小菅 友萌)	3Pos032		3HL1115
Kosugi, Takahiro (小杉 貴洋)	1GH010	Kuragano, Masahiro (倉賀野 正弘)	2SCP-5
Kosumi, Daisuke (小澄 大輔)	1Pos139	Kuranaga, Erina (倉永 英里奈)	2SDP-3
	2Pos134	Kurata, Atsushi (倉田 淳志)	3Pos019
Kotani, Takahiro (小谷 崇博)	1GJ009	Kurematsu, Kengo (呉松 健吾)	1GE003
Koteishi, Hiroyasu (小手石 泰康)	3Pos010	Kuribayashi-Shigetomi, Kaori (栗林-繁富 香織)	
Kouno, Kazuma (神野 和磨)	2Pos218		2Pos083
Kouriki, Ryounosuke (神力 亮之介)	1Pos187	Kuribayashi-Shigetomi, Kaori (繁富 (栗林) 香織)	
Kousaka, Jin (高坂 仁)	1Pos190		1SIA-3
Kouta, Ryohei (幸田 稜平)	3HL1100	Kurihara, Kazuo (栗原 和男)	1MSH-6
Kovalchuk, Svitlana (コヴァルチュク スヴィトラナ)	1Pos057	Kurihara, Tatsuo (栗原 達夫)	1Pos109
	1Pos066	Kurino, Shinichi (栗野 真一)	1Pos014
Koyama, Hiroshi (小山 宏史)	1GG007	Kurisaki, Ikuo (栗崎 以久男)	2Pos163
Koyanagi, Mitsumasa (小柳 光正)	1GI007	Kurisu, Genji (栗栖 源嗣)	2SGP-6
	1Pos124		1GA003
Kuang, Yu-Chi (匡 玉琪)	3Pos049		1Pos006
Kubo, Minoru	3Pos039		3Pos010
Kubo, Minoru (久保 稔)	1SGA-3	Kurisu, Minoru (栗栖 実)	3Pos177
Kubo, Shintaroh (久保 進太郎)	1Pos069	Kurisu, Yuto (栗栖 悠斗)	1ED001
Kubo, Shuto (久保 柊人)	3Pos009	Kuroda, Hiroshi (黒田 洋詩)	1EB005
Kubota, Ryusei (窪田 隆正)	3Pos194	Kuroda, Kaname (黒田 要)	3Pos135
Kubota, Shigeharu (窪田 滋春)	3Pos008	Kuroda, Shun'ichi (黒田 俊一)	2Pos085
	3Pos025	Kuroda, Yutaka	1GF001
Kudo, Hisashi (工藤 恒)	1MSG-7	Kuroda, Yutaka	1GA007
Kudo, Kye (工藤 海)	3Pos117	Kurokawa, Ken (黒川 顕)	2SAP-5
Kudo, Makiko (工藤 麻希子)	1Pos199		2Pos062
Kudo, Yusei (工藤 悠世)	1Pos053		<u>1YK0945</u>
Kueda, Fuko (杭田 美子)	3SIA-7	Kurokawa, Yumiko (黒川 裕美子)	2Pos051
Kuhara, Atsushi (久原 篤)	1Pos120	Kuroki, Yoichi (黒木 陽一)	1GJ008
	1Pos121		2Pos100
	1Pos123	Kurosawa, Gen (黒澤 元)	3SJA-5
	2Pos120	Kuruma, Yutetsu (車 兪澈)	3SFA-3
	3Pos115		2Pos219
	1GD009	Kurumizaka, Hitoshi	3Pos056
Kuhara, Atushi (久原 篤)	2SHP-5	Kurumizaka, Hitoshi (胡桃坂 仁志)	2SAP-3
Kukimoto-Niino, Mutsuko (柊元(新野) 睦子)	2Pos084		1Pos041
Kumagai, Momoka (熊谷 桃花)	1Pos126		3Pos057
Kumagai, Sari (熊谷 咲里)	1Pos078	Kusaka, Katsuhiro	1MSH-2
Kumagai, Shunsuke	2Pos030	Kusaka, Katsuhiro (日下 勝弘)	1MSH-4
Kumakura, Ryota (熊倉 綾汰)	1Pos118	Kusakabe, Takehiro (日下部 岳広)	2Pos129
Kumakura, Taisei (熊倉 大誠)		Kusakizako, Tsukasa (草木迫 司)	1MSF-3

Kusu, Yuri (嘉数 百合)	3Pos023				2Pos181
Kusuma, Subhan Hadi	2Pos144			Liu, Hanjin	2SHP-7
	1YK0900			Liu, Lin (劉 琳)	3Pos198
Kusumi, Akihiro	2SGA-3			Liu, Yifan (劉 一帆)	1GD012
	1Pos098			Liu, Ying (劉 穎)	1SHA-1
Kusumi, Akihiro (楠見 明弘)	1SHA-4			Lounis, Brahim	1SHA-3
	1SHA-5			Lukowiak, Ken	3Pos118
	1GF002			Luo, Shyh-Chyang (羅 世強)	2SBP-2
	1EC003			Lysenko, Artem (Lysenko Artem)	2Pos204
	1Pos096			Lyu, Zikun (呂 子琨)	1GI009
	1GD001			M. Loh, YuMin	3Pos176
Kuwabara, Hiromu (栞原 宙歩)	2Pos127			Ma, Jie (馬 潔)	2Pos006
Kuwahara, Yusuke (栞原 裕介)	2Pos016			Mabuchi, Takuya (馬渕 拓哉)	2Pos118
Kuwajima, Kunihiro (桑島 邦博)	3Pos024			Machida, Haruto (町田 温登)	1GC011
Kuwata, Takumi (桑田 巧)	2SEP-7			Machida, Kodai (町田 幸大)	2SCP-4
Kuwayama, Hidekazu (桑山 秀一)	1GA003			Machiyama, Hiroaki (町山 裕亮)	1Pos216
Kuzuhara, Miwa (葛原 美和)	1Pos001			Madigan, Michael T. (Madigan Michael T.)	2Pos138
Kuzuyama, Tomohiko (葛山 智久)	1GH012				2Pos139
Kuzuyama, Tomohisa (葛山 智久)	2Pos136				2Pos140
La Rocca, Romain (ラ・ラカ ローマン)	1GE002			Maeda, Kosuke (前田 皓丞)	1MSG-1
Laha, Shilpi (Laha Shilpi)	3Pos073				1GA011
Lahore, Juliette (Lahore Juliette)	1GH004				1GG009
Lam, Vi Toan	3Pos085				1Pos021
Lane, Birgitte E.	2Pos114			Maeda, Shingo (前田 真吾)	1ED004
Lappalainen, Pekka	3SFA-1			Maeda, Taisei (前田 大晴)	1Pos046
Laurino, Paola	3Pos021			Maeda, Yuka (前田 有香)	1Pos175
Laurino, Paola (螺烏涅移之 端和羅)	3Pos049			Maehara, Yamato (前原 大和)	3Pos160
Lee, I-Ren (李 以仁)	1Pos098			Maejima, Ryota (前島 遼太)	2SAA-5
Lee, Jun-Seok	1MSF-1			Maenaka, Katsumi	2SKA-2
Lee, Seohyun (イ ソ ヒ ヨ ン)	2SKA-3			Maesaka, Haruka (前岡 遥花)	1GJ010
Lee, Young-Ho	1Pos005			Maeshima, Kazuhiro (前島 一博)	1SEA-2
	3Pos220				2SAP-5
	1Pos010				2Pos062
	3Pos073				<u>1YK0945</u>
Lenne, Pierre-François (Lenne Pierre-François)	1Pos086			Maestre-Reyna, Manuel	2Pos133
Li, Chelsea	3Pos122				<u>1YK1115</u>
Li, Chun-Biu	3Pos072			Maestre-Reyna, Manuel (Maestre-Reyna Manuel)	1Pos007
Li, Honghan	2Pos091				1Pos127
Li, Hung-Wen (李 弘文)	2SBP-2			Maki, Koichiro (牧 功一郎)	1SEA-6
Li, Xiang	1GF004				2SFA-7
Li, Xinxuan (LI XINXUAN)	3Pos091			Maki, Kosuke (横 互介)	2Pos197
Li, Yan	1Pos005			Maki, Shojiro	3SBA-1
Lilatul, Isra	3Pos143			Maki, Takahisa (真木 孝尚)	1Pos115
Lin, Shao-Zhen (Lin Shao-Zhen)	1Pos086			Makino, Haruna (牧野 晴菜)	1GA004
Lin, Wei-Ting (Lin Wei-Ting)	1Pos127				1GA006
Lin, Yuxi	1Pos005				1Pos079
	3Pos220			Makino, Tsukasa (牧野 司)	1SEA-4
Lintuluoro, Jua Mikael (リントウルオト ユハ ル)	ミカエ			Makino, Yoshinori (牧野 吉倫)	3Pos075
Lintuluoto, Juha (リントウルオト ユハ)	2Pos168			Manh, Duc Doan	1GA012
	2Pos181			Marui, Riku (丸井 里駆)	1GE006
Lintuluoto, Masami (リントウルオト 正美)	1Pos180			Marumo, Akisato (丸茂 哲聖)	1GD002
	2Pos168			Maruta, Shinsaku	1Pos078

	1Pos218	Matsumoto, Nanami (松本 七海)	2Pos174
	3Pos143	Matsumoto, Sohkiichi (松本 壮吉)	3Pos040
Maruta, Shinsaku (丸田 晋策)	2Pos072		3Pos048
	2Pos143		3Pos147
	2Pos216	Matsumoto, Takumi (松本 拓己)	1Pos072
Maruyama, Tomoya (丸山 智也)	1Pos053	Matsumoto, Tomoharu (松本 友治)	3Pos022
	2Pos054		3Pos026
	2Pos056	Matsumura, Haruna (松村 晴奈)	1Pos133
Masahiro, Takinoue (瀧ノ上 正浩)	2SEP-2	Matsunaga, Daiki (松永 大樹)	2Pos156
Masaike, Sayaka (政池 彩雅)	1Pos081	Matsunaga, Yasuhiro (松永 康佑)	1SAA-3
Masaike, Tomoko (政池 知子)	1Pos029		2SAA-5
Masaki, Yoshikazu (正木 良和)	3Pos106		2Pos007
Masri, Carmen	1EE005		2Pos033
Mastro, Tara	2SGA-3		3Pos161
Masuda, Keiko (益田 恵子)	1GJ001	Matsunami-Nakamura, Risa (中村 梨佐)	3Pos129
Masuda, Shinnosuke (増田 真之介)	3Pos137	Matsuno, Kenji (松野 健治)	3Pos060
Masuda, Takeshi (増田 豪)	1Pos079	Matsuo, Koichi (松尾 光一)	1SCA-6
Masuda, Yusuke (増田 悠祐)	2Pos027		2Pos013
Masuda, Yuzuki (益田 優月)	1GB007	Matsuo, Makiko (松尾 真紀子)	2SHA-5
Masuhara, Hiroshi (増原 宏)	1SCA-5	Matsuo, Muneyuki (松尾 宗征)	2SEP-4
Masui, Kyoko (増井 恭子)	3SIA-6		3Pos194
	1Pos112	Matsuo, Sumire (松尾 堇)	1Pos064
Masumoto, Hiroshi (増本 博)	1Pos203	Matsuo, Takuya (松尾 拓哉)	3SJA-2
	1Pos204	Matsuoka, Daisuke (松岡 大佑)	3SFA-3
Masuya, Takahiro (榎谷 貴洋)	1Pos116	Matsuoka, Satomi (松岡 里実)	3Pos100
Matsubara, Hiroto (松原 大都)	3Pos158	Matsusaki, Michiya (松崎 典弥)	1SCA-2
Matsubara, Hitomi (松原 瞳)	2Pos200	Matsusaki, Motonori	3Pos219
Matsubara, Takumi (松原 巧)	1Pos141	Matsushima, Keisuke (松島 啓介)	1GD011
Matsubayashi, Hideaki (松林 英明)	1Pos152	Matsuura, Koji (松浦 宏治)	2Pos088
	2Pos090	Matsuura, Tomoaki (松浦 友亮)	3Pos078
	3Pos078		3Pos154
	3Pos112	Matsuyama, Ayaka (松山 綾夏)	3Pos050
	3Pos113	Matsuyama, Saki (松山 紗妃)	1Pos058
	3Pos150	Matsuzaki, Kohei (松崎 興平)	1Pos071
Matsuda, Kyohei (松田 恭平)	1Pos151	Matsuzaki, Miki (松崎 美紀)	1Pos025
Matsuda, Kyosuke (松田 杏介)	3Pos198	Matsuzaki, Yuri (松崎 由理)	1Pos160
Matsuda, Yusuke (松田 祐介)	3Pos010	Matuski, Yoh (松木 陽)	3Pos055
Matsuda, Yuya (松田 佑也)	2Pos209	Mayumi, Koichi (真弓 皓一)	2Pos155
Matsui, Hiroaki (松井 啓晃)	3Pos010	Maéda, Yuichiro (前田 雄一郎)	1Pos093
Matsui, Kenji (松井 健二)	1GA004	McArthur, Steven John (マッカーサー スティーブン ジョン)	1EB002
Matsui, Takashi (松井 崇)	2Pos002	McCloskey, Daniel	2SJP-1
	2Pos011	McFee, Danielle (McFee Danielle)	1Pos116
Matsui, Tatsuki (松井 達明)	2Pos079	Md Alradzi, Islam	2Pos072
Matsukawa, Yuka (松川 由佳)	3Pos151	Md Nadim, Hossain	1GJ005
Matsuki, Katsuya (松木 勝也)	3Pos006	Meghna, Sobti (Meghna Sobti)	1GE009
Matsuki, Yoh (松木 陽)	3SEA-6	Meguro, Eiki (目黒 瑛暉)	3Pos086
Matsumori, Nobuaki (松森 信明)	1GF005	Mehta, Dalip Singh	3SAA-2
	2Pos106	Meshcheryakova, Irina	2SGA-3
	2Pos108		1Pos098
Matsumoto, Atsushi (松本 淳)	1SAA-5		3Pos117
Matsumoto, Eiji (松元 瑛司)	3Pos088	Meunier, Frédéric A.	1GA001
Matsumoto, Emika (松本 笑未香)	1Pos107	Mi-ichi, Fumika (見市 文香)	3Pos154
Matsumoto, Kai (松本 海)	3Pos201	Michele, Lorenzo Di (Michele Lorenzo Di)	

Michigami, Masataka (道上 雅孝)	2Pos038	1Pos087
Michiue, Tatsuo (道上 達男)	1GJ009	1Pos188
Michiue, Yuki (道上 佑希)	1GB006	2Pos069
Mie, Yasuhiro	1Pos217	2Pos207
Mifune, Konoka (三船 心花)	2Pos199	2Pos009
	3Pos199	3Pos004
Mikami, Bunzo (三上 文三)	2Pos185	3Pos005
Mikami, Chitose	1Pos217	3Pos006
Mikawa, Tsutomu (美川 務)	3Pos037	3Pos070
Miki, Koji (三木 康嗣)	3Pos166	2Pos048
Mikkeltborg, Marie	3SAA-4	3Pos212
Millard, S. Sean	3Pos117	3Pos153
Milovanovic, Dragomir	2SGA-3	1Pos137
	1EC003	3Pos115
Mimori-Kiyosue, Yuko (清末 優子)	2SCP-1	1GD009
Mimoto, Reika (三本 麗華)	2Pos196	3Pos019
Mimura, Mone (三村 萌音)	2Pos090	3Pos020
Mimura, Yutsuki (三村 唯月)	3Pos017	1EA004
Minagawa, Jun (皆川 純)	1Pos134	1GC008
Minagawa, Yoshihiro (皆川 慶嘉)	2SKP-4	1GJ001
	1GB010	1Pos094
	1GG002	<u>1YK1100</u>
	1Pos029	2Pos018
	1Pos057	1Pos049
	3Pos197	1GE008
	3Pos201	2Pos116
	3Pos215	1Pos058
Minaki, June (皆木 珠寧)	1Pos118	1Pos094
Minakuchi, Yohei (水口 洋平)	1GD009	<u>1YK1100</u>
	1Pos121	3Pos132
Minami, Atsushi (南 篤)	3Pos035	2Pos047
Minami, Hiroki (南 宏樹)	2Pos007	1Pos041
Minami, Katsuhiko (南 克彦)	2SAP-5	3Pos028
	2Pos062	3SEA-2
	<u>1YK0945</u>	2Pos045
Minami, Nao (南 尚)	1Pos012	1SBA-1
Minamisawa, Keito (南澤 溪翔)	2Pos141	2Pos049
Minegishi, Misa (峯岸 美紗)	3SHA-2	2Pos171
Minei, Ryuhei (嶺井 隆平)	3Pos131	2Pos174
Minigawa, Yoshihiro (皆川 慶嘉)	1GJ007	2Pos180
Mino, Hiroyuki (三野 広幸)	2SGP-4	3Pos039
	1GI008	3Pos176
	2Pos137	1SJA-5
Minoshima, Masafumi (莺島 維文)	2Pos215	2Pos190
Mio, Kazuhiro (三尾 和弘)	1GC011	3Pos027
Mishima, Yuichi (三島 優一)	3Pos055	3Pos008
Misima, Masaki (三島 正規)	2SGP-7	3Pos025
Mitani, Kazuki (三谷 和樹)	3Pos020	1MSG-3
Mitani, Kazuki (三谷 和輝)	1Pos026	1GD008
Mitani, Takahiro (三谷 隆大)	1Pos093	1GJ002
	2Pos090	2Pos090
Mitra, Shrutarshi (Mitra Shrutarshi)	2Pos029	3Pos055
Mitsui, Toshiyuki (三井 敏之)	1GD001	3Pos147
	Mitsuoka, Kaoru (光岡 薫)	
	Mitsutake, Ayori	
	Mitsuyama, Totai (光山 統泰)	
	Miura, Sota (三浦 聡汰)	
	Miura, Taiga (三浦 大河)	
	Miura, Tohru (三浦 徹)	
	Miura, Toru (三浦 徹)	
	Miura, Yuto (三浦 佑斗)	
	Miura, Yuuto	
	Miwa, Akari (三輪 明星)	
	Miyachi, Ryota (宮地 亮多)	
	Miyagawa, Yasuki (宮川 靖基)	
	Miyaguchi, Hide (宮口 英)	
	Miyakawa, Takuya (宮川 拓也)	
	Miyake, Kodai (三宅 皓大)	
	Miyake, Takanao (三宅 孝尚)	
	Miyamoto, Akinori (宮本 明典)	
	Miyamoto, Kei (宮本 圭)	
	Miyamoto, Kousei (宮本 工聖)	
	Miyamoto, Shuichi (宮本 秀一)	
	Miyanari, Yusuke (宮成 悠介)	
	Miyanoiri, Yohei (宮ノ入 洋平)	
	Miyashita, Naoyuki (宮下 尚之)	
	Miyashita, Osamu	
	Miyashita, Osamu (宮下 治)	
	Miyata, Hiroki (宮田 裕貴)	
	Miyata, Makoto (宮田 真人)	

	3Pos148		1Pos031
	3Pos209		1Pos186
Miyata, Makoto (宮田 誠)	3Pos079		3Pos158
Miyata, Tomoko (宮田 知子)	2SGP-6		3Pos169
	3Pos003		3Pos171
Miyauchi, Seiji (宮内 正二)	2Pos047	Mori, Takahiro (森 貴裕)	1Pos169
Miyazaki, Kana (宮崎 加菜)	3Pos123	Mori, Toshifumi (森 俊文)	1Pos178
Miyazaki, Makito	2Pos147		2Pos184
Miyazaki, Makito (宮崎 牧人)	1SIA-7		3Pos086
Miyazaki, Satoru (宮崎 智)	1Pos185	Mori, Yukina (森 雪永)	1GD009
Miyazaki, Yusuke (裕介 裕介)	1GG001	Morigaki, Kenichi (森垣 憲一)	3SIA-7
Miyazawa, Mitsuhiro (宮澤 光博)	1Pos025		1Pos112
	2Pos015		2Pos109
Miyazawa, Momoko (宮沢 桃子)	1Pos090		3Pos102
Miyoshi, Hideto (三芳 秀人)	1Pos116		3Pos104
Miyoshi, Kosuke (三好 晃輔)	2Pos124		3Pos136
Miyoshi, Takemasa (三好 建正)	2SFA-3	Moriguchi, Maiko (森口 舞子)	3SBA-3
Miytata, Makoto (宮田 真人)	1GF006	Morikawa, Syunya (森川 隼椰)	1Pos102
Mizue, Hatsune (水江 初音)	1Pos138	Morimatsu, Masatoshi (森松 賢順)	2Pos088
	1Pos141	Morimoto, Jumpei (森本 淳平)	3Pos175
Mizukami, Taku (水上 卓)	2Pos065	Morimoto, Yusuke V (森本 雄祐)	2Pos105
Mizuki, Houryou (水木 鳳了)	1Pos092	Morimoto, Yusuke V. (森本 雄祐)	1GD008
Mizuno, Ayato (水野 文人)	3Pos170		2Pos077
Mizuno, Daisuke	1Pos206		2Pos087
Mizuno, Gaku (水野 雅玖)	3SBA-7		2Pos095
Mizuno, Ikumi (水野 如海)	3Pos182		2Pos102
Mizuno, Kosuke (水野 皓介)	2Pos067		3Pos061
Mizuno, Moeka (水野 萌香)	1GA009		3Pos124
Mizuno, Yosuke (水野 陽介)	1GI001	Morino, Kohei (森野 航平)	3SFA-6
Mizutani, Arisa (水谷 ありさ)	1Pos087	Morishima, Keisuke (森島 圭祐)	3Pos067
Mizutani, Azuki (水谷 淳生)	2Pos177	Morishima, Ken (守島 健)	1GB007
Mizutani, Masaki (水谷 雅希)	2SKA-6		1GB009
	1GD008		1Pos019
	1Pos149	Morishita, Manato (森下 愛大)	1GB004
	3Pos080	Morita, Hiroto (森田 裕斗)	1Pos153
	3Pos148	Morita, Koshiro (森田 耕志郎)	2Pos146
Mizutani, Yuki (水谷 友紀)	2Pos112	Morita, Rikuri (森田 陸離)	1Pos020
	2Pos113		1Pos172
Mizutori, Ritsu (水鳥 律)	2SJA-3	Morita, Shu (森田 宗)	1GA004
	1MSG-2		1GA006
Mizuuchi, Ryo (水内 良)	1Pos150	Moritsugu, Kei (森次 圭)	1Pos176
	1Pos158		2Pos185
Mochida, Keisuke (持田 啓佑)	1SJA-1		3Pos182
Mochizuki, Atsushi (望月 敦史)	3SHA-5		3Pos188
Mori, Hiroyuki (森 博幸)	3Pos171	Moriwaki, Yoshitaka (森脇 由隆)	1GH012
Mori, Joe (森 丈)	2Pos176		1Pos009
Mori, Kaisei (森 凱世)	2Pos140		1Pos183
Mori, Miyu (森 美友)	1Pos065	Moriya, Ryohei	3SBA-1
	3Pos062	Moriya, Toshio (守屋 俊夫)	1Pos010
Mori, Shinnosuke (森 新之介)	1Pos104	Moriya, Wataru (森谷 互)	2Pos063
Mori, Shoko (森 祥子)	1Pos117	Moriyama, Minoru (森山 実)	1Pos149
Mori, Takaharu (森 貴治)	2SAA-1	Moriyama, Sakura (森山 さくら)	1GF001
	1GH002	Moriyama, Shunya (森山 俊哉)	3SIA-6

Moriyama, Yuuta (守山 裕大)	1Pos112 1GD001 1Pos087 1Pos188 2Pos069 2Pos207	Murrell, Michael (マレル マイケル) Mustakim, Mahammad Muthahari, Yusran Abdillah (舞手八芭麗 右司 覽 亞附 弟猪拉)	1Pos148 3Pos054 1SIA-6 1EA004 3Pos021
Motegi, Fumio (茂木 文夫)	1SIA-3 2Pos083	Muto, Yuto (武藤 優斗) Mwaniki, Stephen (モワニキ スティーブン)	3Pos004 3Pos087
Motohashi, Masahiro (本橋 昌大)	1GE011	Nagac, Fritz (長江 文律立)	3Pos057
Motohashi, Rie (本橋 里英)	3Pos003	Nagai, Arata (長井 新)	1GD001
Motomura, Hideki (本村 英樹)	1GC012	Nagai, Shunsaku (長井 駿作)	1Pos015
Motono, Chic (本野 千恵)	3Pos034	Nagai, Takeharu (永井 健治)	1GG012 1GJ005
Motose, Hiroyasu (本瀬 宏康)	2Pos136		1Pos211
Mototake, Shiori (元武 菜里)	3Pos115		2Pos038
Motoyama, Yuka (本山 由佳)	3Pos099		2Pos212
Muhammad Dirgantara, Jelang (ジェラン ムハマト デイルガンタラ)	1EE001		3Pos202
Mukai, Tomoya (向井 智哉)	3Pos204	Nagai, Tetsuro (永井 哲郎)	3Pos205
Mukaiyama, Atsushi (向山 厚)	3SJA-3	Nagai, Yuki (長井 佑樹)	3Pos211
Munakata, Rika (宗像 里佳)	3Pos185	Nagama, Misaki (永間 美咲)	3Pos109
Muneyuki, Eiro (宗行 英朗)	1GE011	Nagamine, Moecka (長峰 萌華)	1Pos037
Munro, Kathryn	2SJP-1	Naganathan, Athi N (Naganathan N Athi)	3Pos008
Murai, Masatoshi (村井 正俊)	1Pos116	Naganathan, Athi N. (Naganathan Athi N.)	1GE002
Murai, Toshiyuki (村井 稔幸)	3Pos106	Nagano, Kaito (長野 海翔)	2Pos029
Murakami, Hiroshi (村上 洋)	1Pos198	Nagao, Hidemi	2Pos089
Murakami, Taiga (村上 大河)	2Pos182		1GH007
Murakami, Tatsuya (村上 達也)	2Pos214 <u>1YK1015</u>	Nagao, Hidemi (長尾 秀実)	3Pos168
Murakoshi, Hideji (村越 秀治)	1GD010 1GD011		2Pos182
Murakoshi, Shunya (村越 峻也)	1MSF-3	Nagao, Kaisei (長尾 海星)	3Pos167
Muramatsu, Ryo (村松 亮)	2Pos154	Nagao, Satoshi (長尾 聡)	3Pos033
Muramoto, Kazumasa (村本 和優)	1Pos044	Nagaoka, Makoto (長岡 誠)	1GF009
Muranaka, Tomoaki (村中 智明)	3SJA-1	Nagashima, Kazuki (長嶋 一喜)	1GB003
Muraoka, Shunsuke (村岡 俊佑)	3Pos171	Nagata, Kazuhiro (永田 和宏)	2Pos204
Murata, Kazuhoshi (村田 和義)	3Pos073	Nagata, Takashi (永田 崇)	2SCP-7
Murata, Kazuyoshi	2Pos208		1GI002
Murata, Kazuyoshi (村田 和義)	1Pos010 2Pos001		1GI007
Murata, Keina (村田 景菜)	3Pos169		1Pos125
Murata, Satoshi (村田 智)	1Pos152 3Pos112 3Pos113 3Pos150	Nagata, Yuya (長田 祐也)	1Pos130
Murata, Takeshi (村田 武士)	1Pos010 1Pos047 3Pos073	Nagatomi, Isamu (永富 勇)	3Pos121
Murata, Yutaka	3Pos047	Nagatsugi, Fumi (永次 史)	2Pos132
Murayama, Keiji (村山 恵司)	1Pos158	Nagatsuka, Nanami (長塚 ななみ)	3Pos007
Murayama, Masanori (村山 正宜)	3SHA-4	Nagayama, Kuniaki (永山 國昭)	1GE002
Murayama, Yasuto (村山 泰斗)	2Pos051	Nagayama, Ryuna (永山 龍那)	3Pos104
Murayama, Yoshihiro (村山 能宏)	1GD004 1Pos058	Naito, Kota (内藤 航大)	3Pos210
		Naito, Takaharu (内藤 隆晴)	1ED003
		Nakabayashi, Takakazu (中林 孝和)	1GC004
		Nakada, Ayaka (中田 彩夏)	1GC007
		Nakada, Shunichi (中田 俊壹)	1Pos162
		Nakagaki, Toshiyuki (中垣 俊之)	3Pos183
			1GC007
			3HL1100
			3Pos120

Nakagawa, Kaito (中川 開斗)	3Pos042	Nakano, Atsuki (中野 敦樹)	2Pos009
Nakagawa, Yoshiko (中川 幸姬)	1Pos214		2Pos079
	1YK0930		3Pos004
Nakagawara, Ai (中川原 亜依)	1Pos108		3Pos005
Nakai, Tsubasa (中居 飛翔)	1Pos072		3Pos006
Nakajima, Daichi (中島 大地)	1Pos152		3Pos070
	3Pos078	Nakano, Haruo (中野 春男)	1Pos119
Nakajima, Haruto (中嶋 悠人)	1GA013	Nakano, Haruyuki (中野 晴之)	3Pos186
Nakajima, Kichitaro (中島 吉太郎)	2Pos042	Nakano, Hideo (中野 秀雄)	3Pos034
	2Pos205	Nakano, Minoru (中野 実)	2Pos110
	3Pos196	Nakano, Shogo (中野 祥吾)	1MSI-2
Nakajima, Yoshiki (中島 芳樹)	1GI008	Nakano, Yoshio (中野 義雄)	1Pos185
	1Pos135	Nakao, Arisa (中尾 有紗)	1Pos023
Nakakuki, Takashi (中茎 隆)	2Pos055	Nakao, Miku (中尾 未来)	1Pos058
Nakamae, Hidekazu (中前 秀一)	3SBA-9	Nakao, Ryoma (中尾 龍馬)	1MSF-4
Nakamoto, Akane (中本 朱音)	2Pos108	Nakao, Seiya (中尾 星哉)	1GB007
Nakamoto, Kaho (中本 佳歩)	3Pos040	Nakao, Toshiki (中尾 俊樹)	3Pos018
	3Pos048	Nakasako, Masayoshi (中迫 雅由)	1GG008
Nakamoto, Kodai (中元 滉大)	1Pos027	Nakasone, Yusuke (中曾根 祐介)	2Pos027
Nakamura, Chikashi (中村 史)	2Pos046		3Pos038
Nakamura, Hanane (中村 花音)	3Pos019		3Pos128
	3Pos020	Nakata, Masanori (中田 正範)	3Pos119
Nakamura, Hideki (中村 秀樹)	3Pos078	Nakatani, Hajime (中谷 肇)	1Pos045
Nakamura, Humika (中村 文香)	1Pos180	Nakatani, Madoka (中谷 円香)	1Pos173
Nakamura, Jun (中村 準)	3Pos164	Nakato, Ryuichiro (中戸 隆一郎)	1MSJ-3
Nakamura, Kazuha (中村 紀葉)	1Pos138	Nakatogawa, Hitoshi (中戸川 仁)	1SJA-1
Nakamura, Kazuyuki (中村 和幸)	2SAA-5	Nakatsu, Toru (中津 亨)	3SBA-3
Nakamura, Keita (仲村 慶大)	3HL0900		3SBA-4
Nakamura, Kosuke (中村 公祐)	1Pos082	Nakaya, Takayuki (中谷 隆幸)	3Pos107
Nakamura, Mai (中村 麻愛)	2Pos133	Nakaya, Yamato (中屋 岳人)	2Pos159
	1YK1115	Nakayama, Takahiro (中山 隆宏)	1Pos214
Nakamura, Masayoshi (中村 匡良)	3Pos086		1YK0930
Nakamura, Naohiko (中村 直彦)	2Pos137	Nakayama, Yohei (中山 洋平)	1Pos074
Nakamura, Ryuhei (中村 龍平)	3SFA-2		3Pos072
Nakamura, Seiwa (中村 星王)	2Pos006	Nakayoshi, Tomoki (仲吉 朝希)	3Pos170
	3Pos121		3Pos177
	3Pos122	Nakazato, Kako (仲里 佳子)	2SAP-5
Nakamura, Shinnosuke (中村 真乃祐)	3Pos173		2Pos062
Nakamura, Shota (中村 祥大)	2Pos004		1YK0945
Nakamura, Shuichi (中村 修一)	2Pos086	Nakazawa, Naotaka (中澤 直高)	1SIA-2
Nakamura, Takemasa (仲村 岳真)	1Pos097		2SIP-4
Nakamura, Toshiki (中村 敏規)	1GI006	Nakazawa, Yozo (中沢 洋三)	3Pos012
Nakamura, Tsukasa (中村 司)	1Pos010	Nako, Hiroyuki (中尾 裕之)	2Pos110
Nakamura-Norimoto, Aya	2SGA-3	Namba, Keiichi (難波 啓一)	2SGP-6
Nakane, Daisuke (中根 大介)	2SKA-6		3Pos003
	1GD004	Namba, Norihiro (南波 憲宏)	1Pos012
	1GD006		1Pos022
	3Pos080	Namikawa, Yuto (浪川 勇人)	1GB009
	3Pos084	Namiki, Ayaka (並木 彩華)	1Pos087
Nakane, Yurina (中根 有梨奈)	1GJ010	Namiki, Shigeyuki (並木 繁行)	1GG011
Nakanishi, Atsuko (中西 温子)	2Pos009	Nango, Eriko (南後 恵理子)	2SJA-3
Nakanishi, Jun (中西 淳)	2SDA-1		1GI005
Nakanishi, Ren (中西 蓮)	3Pos011		1Pos011

	3Pos138		2Pos142
	3Pos139		3Pos140
Nango, Eriko (南後 惠理子)	1Pos001	Nishikino, Tatsurou (錦野 達郎)	1Pos045
Nara, Toshifumi (奈良 敏文)	3Pos129	Nishimoto, Seri (西本 清里)	2Pos007
Narita, Akihiro	2Pos147	Nishimura, Taiki (西村 太希)	2Pos090
Narita, Akihiro (成田 哲博)	1Pos093	Nishimura, Takuma (西村 拓真)	1GF010
	3Pos022	Nishimura, Tamako (西村 珠子)	1SFA-1
	3Pos026	Nishimura, Yuji (西村 祐志)	2Pos197
Naruse, Keiji (成瀬 恵治)	2Pos088	Nishimura, Yukako (西村 有香子)	1SIA-3
	3Pos075		2Pos083
Nasrin, Syeda Rubaiya	2Pos093	Nishina, Hiroshi (仁科 博史)	2SCP-6
Natsume, Koki (夏目 航希)	3Pos142	Nishio, Takashi (西尾 天志)	1GE004
Natsume-Kitatani, Yayoi (夏目 やよい)	1SBA-8		1EA001
Nawata, Ryuya (縄田 竜也)	1Pos113		2Pos059
Negami, Tatsuki (根上 樹)	2SFP-5	Nishitani, Yudai (西谷 雄大)	2Pos135
Nemoto, Yuri L (根本 悠字里)	1EC003		3Pos130
Nemoto, Yuri L. (根本 悠字里)	1Pos089	Nishiyama, Akihito (西山 晃史)	3Pos040
Netter, Niklas (Netter Niklas)	2SGA-4		3Pos048
Neuhaus, Konstantin	1Pos201	Nishiyama, Ken-ichi (西山 賢一)	1Pos117
	<u>1YK1000</u>	Nishiyama, Makoto (西山 真)	1GB003
Neuhaus, Konstantin (Neuhaus Konstantin)	2SGA-4	Nishiyama, Masayoshi (西山 雅祥)	2Pos085
Ng'ang'a, Douglas K.	3Pos064		2Pos088
Ng'ang'a, Douglas Kagoiya	3Pos065	Nishiyama, So-ichiro (西山 宗一郎)	1GF012
Ngo, Kien Xuan	2SHP-7		1Pos118
Ni, Cheng-Wei (倪 丞緯)	3Pos049	Nishiyama, Tomoko (西山 朋子)	1SEA-1
Niina, Toru (新稲 亮)	1SAA-3		1MSJ-5
Niitsu, Ai (新津 藍)	1GA013	Nishizaka, Takayuki (西坂 崇之)	2SKA-6
	1Pos016		1GD008
	2Pos041		3Pos080
Nishi, Hafumi (西 羽美)	3Pos157	Nishizawa, Kenji (西澤 賢治)	1Pos086
Nishibe, Nobuyuki	3Pos143	Nishizawa, Ryohei (西澤 凌平)	1Pos196
Nishibe, Nobuyuki (西部 伸幸)	2Pos143	Nishizawa, Tomohiro (西澤 知宏)	1MSF-3
	2Pos216	Nitta, Ryo (仁田 亮)	2SHP-7
	2SHP-1	Nitta, Takahiro	3Pos064
Nishida, Noritaka (西田 紀貴)	1Pos218		3Pos065
Nishida, Shota		Nitta, Takahiro (新田 高洋)	3Pos067
Nishida, Sora (西田 爽楽)	3Pos207	Niwa, Shinsuke (丹羽 伸介)	1GE010
Nishida, Yui (西田 結衣)	2Pos009	Nobeyama, Tomohiro (延山 知弘)	2Pos153
Nishida, Yuki (西田 有希)	3HL0930		2Pos214
Nishigaki, Tomoyo (西垣 知世)	3Pos108		<u>1YK1015</u>
Nishigami, Yukinori (西上 幸範)	3Pos120	Nobu, Masaru Konishi (延 優)	3SFA-5
Nishiguchi, Shigetaka	3Pos213	Nobumoto, Kenji (信元 健智)	1GF006
Nishiguchi, Shigetaka (西口 茂孝)	2Pos082	Noda, Chizuru (野田 千鶴)	2Pos055
Nishikawa, Koki (西川 幸希)	2SBA-4	Noda, Nobuo N. (野田 展生)	2SGP-8
	1Pos002	Noda, Takeshi (野田 岳志)	1GI005
	1Pos084	Nogami, Yuta (野上 由太)	1Pos118
Nishikawa, Masatoshi (西川 正俊)	2Pos048	Nogi, Terukazu (禾 晃和)	2Pos028
Nishikawa, Ryo	3Pos095		2Pos164
Nishikawa, Takaaki (西川 孝明)	3HL1015	Nogimori, Takuto (野木森 拓人)	1EE001
Nishiki, Kazuma (錦 一磨)	1GG007	Noguchi, Hiroshi (野口 博司)	1GH009
Nishikino, Tatsuro (錦野 達郎)	1GI010	Noguchi, Rikuto (野口 陸斗)	1Pos188
	1Pos046		2Pos207
	1Pos132		1Pos135
	2Pos071	Noguchi, Takumi (野口 巧)	

	1Pos138		3Pos142
	1Pos141	Nystadq, Mona	3SAA-2
Noguchi, Tomohiro (野口 智弘)	2SCA-3	Oba, Shoya (大場 翔矢)	1Pos164
	1GH012	Oba, Yuichi (大場 裕一)	3SBA-5
Noguchi, Yoshifumi (野口 良史)	3SBA-8		3SBA-7
Noh, Joseph J.	3Pos122	Obana, Nozomu	1GI011
Noji, Hiroyuki (野地 博之)	3Pos215	Obata, Koryo (小幡 昂諒)	1Pos184
Noji, Hiroyuki (野地 博行)	2SKP-4	Obayashi, Kohe (尾林 虹兵)	1Pos178
	1GA012	Obayashi, Kohei (尾林 虹兵)	2Pos132
	1GB010	Ochiai, Yumika (落合 優美華)	3Pos051
	1GE005	Oda, Akifumi (小田 彰史)	3Pos170
	1GE006		3Pos177
	1GE007	Oda, Arisa H (小田 有沙)	1GG004
	1GE008	Oda, Masayuki (織田 昌幸)	2Pos168
	1GE009	Oda, Nanase (小田 七星)	3Pos148
	1GG002	Oda, Tatsuro (小田 達郎)	2Pos155
	1GJ007	Oda, Toshiro (小田 俊郎)	1Pos091
	1Pos029		1Pos093
	1Pos038	Oda, Yukako (小田 裕香子)	2SGA-5
	1Pos057	Ogasawara, Hiroki (小笠原 浩輝)	1Pos046
	1Pos097	Ogasawara, Mitsuo (小笠原 光雄)	2SAP-3
	2Pos079	Ogawa, Haruto (小川 遙士)	1GE004
	3Pos197	Ogawa, Kairi (小川 海吏)	1Pos025
	3Pos201		2Pos015
Noma, Chinatsu (野間 千夏)	1Pos027	Ogawa, Shuichiro (小川 秀一郎)	1Pos207
Nomaki, Hidetaka (野牧 秀隆)	3SFA-3	Ogawa, Taiyo (小川 太陽)	3Pos029
Nomura, Kaoru (野村 薫)	3SEA-5	Ogawa, Takuya (小川 拓哉)	1Pos109
	1Pos117	Ogawa, Yuichi (小川 雄一)	3Pos206
Nomura, Kayoko	1Pos209	Ogawa, Yuuka (小川 侑香)	1Pos063
Nomura, Kayoko (野村 加代子)	2Pos209	Ogi, Anna (扇 杏奈)	2Pos025
Nomura, M. Shin-ichiro (野村 M. 慎一郎)	2SEP-2	Ogi, Hirotsugu (荻 博次)	2Pos042
Nomura, Shin-ichiro (野村 慎一郎)	3Pos150		2Pos205
Nomura, Shin-ichiro (野村 慎一郎)	3Pos078		3Pos196
Nomura, Shin-ichiro M.	1EA004	Ogihara, Satoshi (荻原 智)	3Pos057
Nomura, Shin-ichiro M. (野村 慎一郎)	3SIA-3	Ogino, Aya (荻野 綾)	1Pos042
	3Pos113		2Pos040
Nomura, Shinichiro (野村 慎一郎)	3Pos112	Ogino, Gaku (荻野 楽)	2Pos024
Nomura, Shinichiro M. (野村 M. 慎一郎)	1Pos152	Ogita, Goshi (荻田 豪士)	2SFA-3
Nomura, Takashi (野村 高志)	1Pos214		1Pos196
	<u>1YK0930</u>	Ogura, Kazuki (小椋 一輝)	1Pos135
	2Pos010	Ogura, Naoki (小倉 尚樹)	1GD004
Nomura, Takeshi (野村 健)	2Pos115	Ohashi, Gai (大橋 凱)	2Pos074
	2Pos117	Ohashi, Sayaka (大橋 沙也佳)	2SJA-3
Norizoe, Yuki (乗添 祐樹)	1GB012		1GI005
Nosho, Kazuki (納庄 一樹)	2SGA-4	Ohdaira, Takeshi (大平 猛)	1GD012
Nozawa, Hikaru (野澤 光輝)	2Pos204	Ohe, Kouichi (大江 浩一)	3Pos166
	3Pos057	Oheda, Hiroaki (大枝 弘明)	2Pos162
Nuemket, Nipawan (Nuemket Nipawan)	2SJA-3		2Pos164
	1GI005	Ohgita, Takashi (扇田 隆司)	1Pos012
Nukui, Shiho (温井 志歩)	2Pos003		1Pos022
Numoto, Nobutaka (沼本 修孝)	1MSG-3	Ohhara, Takashi (大原 高志)	1MSH-6
Nur Rochmah, Atika	1Pos001		1GA002
Nureki, Osamu (濡木 理)	1MSF-3		3HL1115

Ohhashi, Yumiko (大橋 祐美子)	2SIA-3	1MSF-3
	1Pos042	1GG010
Ohkawa, Yasuyuki (大川 恭行)	2SAP-3	1EC002
Ohkubo, Tatsunari (大久保 達成)	1GC011	1Pos069
Ohkubo, Tomoki (大久保 智樹)	1Pos155	1Pos079
Ohmichi, Kazuki (大道 一輝)	1Pos129	1Pos210
Ohmura, Takuto (大村 拓登)	1GH012	2Pos083
Ohmura, Takuya (大村 拓也)	1Pos201	3Pos204
	1YK1000	1SEA-4
	3Pos120	1GD009
Ohnishi, Kohei (大西 康平)	3Pos115	1GJ009
Ohnishi, Miho (大西 美穂)	3Pos110	1Pos003
Ohnishi, Yusuke (大西 裕介)	3Pos177	2Pos025
Ohno, Kaisei (大野 介聖)	3Pos126	2Pos025
Ohnuki, Jun (大貫 隼)	1Pos038	1GA004
	2Pos166	1GA006
Ohnuma, Kiyoshi (大沼 清)	1Pos065	1GE005
	3Pos062	1Pos038
Ohnuma, Takayuki (大沼 貴之)	3Pos019	1Pos116
Ohshima, Ayano (大島 彩乃)	1GB002	2Pos166
Ohshima, Hiromu (大島 広夢)	3HL1130	1Pos013
Ohsugi, Miho (大杉 美穂)	1SIA-5	1SBA-7
Ohta, Akane (太田 茜)	1GD009	3Pos020
	1Pos120	3SAA-1
	1Pos121	1GD003
	1Pos123	1GD007
	2Pos120	3Pos214
	3Pos115	3HL1030
Ohta, Kunihiro (太田 邦史)	1GG004	3Pos187
Ohta, Masateru (太田 雅照)	2SFP-6	2SFA-4
Ohtake, Kazumasa (大竹 和正)	3Pos035	2Pos191
Ohtsu, Mina (大津 美奈)	2SEA-4	3Pos060
Ohuchi, Hideyo (大内 淑代)	1Pos129	3Pos075
	2Pos129	3Pos035
	2Pos132	2SGA-2
	3Pos127	2Pos176
Ohzawa, Izumi (大澤 五住)	2Pos122	2Pos178
Oide, Mao (大出 真央)	2SAA-3	3Pos107
Oikawa, Hiroyuki (小井川 浩之)	2Pos031	2SFP-1
Oikawa, Tsukasa (及川 司)	1Pos089	2SFP-6
Oimoto, Rento (老本 蓮叶)	3HL0900	3Pos195
Oishi, Takumi (大石 匠美)	3Pos057	1SJA-3
Oiwa, Kazuhiro (大岩 和弘)	1Pos082	2SJA-3
Ojima-Kato, Teruyo (加藤 晃代)	3Pos034	2SJA-3
Okabe, Kohki (岡部 弘基)	3SJA-6	1GI005
	2Pos068	2Pos213
	3Pos203	1SCA-1
Okabe, Manato (岡部 真翔)	3Pos051	1GF012
Okada, Mana (岡田 真奈)	2Pos069	1Pos118
Okada, Shun (岡田 瞬)	1Pos159	3Pos114
Okada, Shunya (岡田 隼弥)	1GC009	3Pos131
Okada, Takashi (岡田 崇)	2Pos196	3Pos189
Okada, Yasushi (岡田 康志)	1SIA-3	1GI003
	Okada, Yuki (岡田 由紀)	
	Okahata, Misaki (岡畑 美咲)	
	Okajima, Takaharu (岡嶋 孝治)	
	Okamoto, Kenji (岡本 憲二)	
	Okano, Keiko (岡野 恵子)	
	Okano, Toshiyuki (岡野 俊行)	
	Okawa, Atsushi (大川 敦司)	
	Okazaki, Kei-ichi (岡崎 圭一)	
	Okazaki, Shigetoshi (岡崎 茂俊)	
	Okazaki, Susumu (岡崎 進)	
	Oki, Hiroya (沖 大也)	
	Okimura, Chika (沖村 千夏)	
	Okuda, Mitsuhiro (奥田 充宏)	
	Okuda, Momoka (奥田 桃加)	
	Okuda, Satoru	
	Okuda, Satoru (奥田 覚)	
	Okuda, Sota (奥田 宗太)	
	Okumura, Hisashi (奥村 久士)	
	Okuno, Takashi (奥野 貴士)	
	Okuno, Yasushi (奥野 恭史)	
	Okuyama, Kohei (奥山 紘平)	
	Okuzumi, Ayami (奥住 文美)	
	Oliveira, Leonardo (Oliveira Leonardo)	
	Olivucci, Massimo (Olivucci Massimo)	
	Oma, Yukako (尾間 由佳子)	
	Omatsu, Takashige (尾松 孝茂)	
	Omori, Fuga (大森 楓河)	
	Omori, Satoshi (大森 聡)	
	Omoto, Kenta (尾本 健太)	
	Onaka, Yoshimitsu (尾中 良充)	

Onda, Maki (恩田 真紀)	2Pos185	Park, Ingyo	2SKA-1
Onizuka, Kazumitsu (鬼塚 和光)	1GE002	Park, Jae-Hyun	1Pos005
Onoe, Hiroaki (尾上 弘晃)	3Pos052	Park, Sam-Yong	1Pos005
	3Pos071	Park, Seonha	2SKA-1
Onoue, Yasuhiro (尾上 靖宏)	3SJA-4	Patron, Kishandra A.	3Pos122
	1Pos024	Pavlovich, Martin	3Pos176
	2Pos023	Peng, Zugui (彭 祖癸)	1GA013
Onozato, Kota (小野里 幸太)	1Pos091	Penka, Elke (Penka Elke)	1MSG-5
Ooka, Hideshi (大岡 英史)	3SFA-2	Perez, Alberto (Perez Alberto)	2Pos177
Ooka, Koji (大岡 紘治)	2Pos017	Pestana Nobles, Roberto Carlos	3Pos176
Ooka, Mako (大岡 眞子)	3Pos140	Peterson, Walker	2Pos210
Oosawa, Chikoo (大澤 智興)	2Pos105	Pham, Quynh (Quynh Pham)	1Pos041
Orii, Ryota (折井 良太)	1SIA-3	Phan, Tri Minh	2Pos035
	2Pos092	Postrado, Michael (ポストラド マイケル)	1Pos107
Orita, Takuya (織田 拓也)	1GH010	Prabhat, Verma (ブラブハット バルマ)	1Pos200
Oroguchi, Tomotaka (荳口 友隆)	1SAA-2	Pradipta Bandyopadhyay, Pooja	1EE003
Osaka, Hirona (大坂 紘奈)	1Pos212	Pretre, Gabriela	3Pos214
Osaka, Jiro (小坂 二郎)	2SBP-6	Priyambada, Kamila Putridifa (Priyambada Putridifa	
Osawa, Tsukiho (大澤 月穂)	1Pos117	Kamila)	1GE002
Oshima, Atsunori (大嶋 篤典)	1Pos002	Prosser, Robert Scott	2SBA-1
Oshima, Hiraku (尾嶋 拓)	2Pos186	Purba, Endang R. (Purba Endang R.)	2Pos138
	2Pos187	Putera, Fachruddin Hari Anggara	3Pos168
Oshiro, Takumi (大城 拓未)	2Pos002	Pyo, Ki Eun	3Pos122
	2Pos011	Quang Vu, Cong	1Pos208
Ota, Motonori (太田 元規)	1Pos176	Quirin, Sean	3Pos122
	2Pos159	Rabe von Pappenheim, Fabian (Rabe von Pappenheim	
Ota, Tomoki (太田 朝貴)	2Pos042	Fabian)	1MSG-5
Otomo, Akihiro (大友 章裕)	1Pos010	Rafidah, Izzati (ラフィダー イッサティ)	1GG012
	1Pos073	Rafiq, Nisha Mohd (ニーシャ モハド ラフィク)	
	1Pos076		1EC001
Otomo, Kohei (大友 康平)	3Pos073	Rajendran, Divya (Rajendran Divya)	2Pos029
Otosu, Takuhiro (乙須 拓洋)	2SEA-6	Ramakrishnan, Charu	3Pos122
	1Pos051	Rashid, Rubaya	1EA004
	1Pos205	Rattanasombat, Petlada	3Pos039
Otsuka, Takuya	2Pos210	Raul, Emilio Macias Estrada (RAUL Emilio Macias	
Ottevaere, Heidi (Ottevaere Heidi)	1Pos013	Estrada)	1Pos065
Otuska, Mizuho	1GF004	Razavi, Shiva	3Pos078
Ou, Ruikinshinn (王 銳瑾萱)	3HL1000	Razib, Datta	2SFA-4
Owada, Azusa (大和田 梓)	1Pos140	Re, Suyong (李 秀榮)	1EE001
Oya, Momoko (大矢 桃子)	2Pos038	Reja, Shahi Imam (レジャ シャヒ イマム)	2Pos215
Oya, Tatsuya (大矢 辰哉)	1GE005	Ren, Weitong (任 衛同)	3SAA-3
Ozaki-Noma, Ryohei (尾崎-野間 涼平)	2Pos038		2Pos008
Ozaki-Noma, Ryohei (尾崎-野間 涼平)	3Pos205	Rerganan, Pattarisa (ルークアナン パッタリサー)	
Ozaki-Noma, Ryohei (尾崎-野間 涼平)	1Pos211		3Pos016
Ozeki, Yasuyuki (小関 泰之)	1EB005	Rhee, Hyun-woo	1Pos040
P. Su, Matthew	3Pos176	Ries, Jonas	1MSF-2
P.M., Sayeesh	3Pos009	Rimbara, Emiko (林原 絵美子)	1GD006
Paczia, Nicole (Paczia Nicole)	2SGA-4	Rindfleisch, Sören (Rindfleisch Sören)	1MSG-5
Paggi, Joseph M.	3Pos122	Robinson, Robert	2Pos147
Paitio, Jose (パイティオ ジョゼ)	3SBA-7	Robinson, Robert (ロビンソン ボブ)	1Pos092
Palombo, Riccardo (Palombo Riccardo)	2SJA-3	Robinson, Robert C. (Robert C. Robinson)	1MSG-3
Paramio, Olivia (Paramio Olivia)	2Pos005	Robinson, Robert Charles	2SCP-2
	<u>1YK1030</u>	Romain, Amyot (Romain Amyot)	2Pos067

Royant, Antoine	2Pos133 <u>1YK1115</u>	Sakaguchi, Wataru (坂口 航)	3Pos004
Rozenberg, Andrey	1GI002	Sakaguchi, Yuya (阪口 裕哉)	3HL1045
Rozenberg, Andrey (Rozenberg Andrey)	1Pos125	Sakai, Gaku (坂井 岳)	3Pos026
Ruan, Xiaomi (阮 晓米)	3HL1015	Sakai, Hayata (酒井 颯太)	3Pos136
Rupprecht, Jean-François (Rupprecht Jean-François)		Sakai, Kazumi	2SJA-4
	1Pos086	Sakai, Kazumi (酒井 佳寿美)	2Pos131
Rutkowski, David (David Rutkowski)	1SHA-1	Sakai, Keisuke (坂井 恵輔)	2Pos087
Sadakane, Koichiro (貞包 浩一郎)	2Pos059	Sakai, Makoto (酒井 誠)	2Pos199
	2Pos155		3Pos199
	3Pos153	Sakai, Yusuke (酒井 祐輔)	1Pos124
	3Pos155	Sakai, Yusuke (酒井 雄介)	1Pos034
Saga, Yoshitaka (佐賀 佳央)	1Pos137	Sakakibara, Haruki (榊原 晴希)	3Pos024
Sagawa, Naoya (佐川 直也)	1Pos017	Sakakura, Terutoshi	1MSH-2
Sagawa, Takahiro (沙川 貴大)	3Pos072	Sakamoto, Ayu (坂本 亜優)	3Pos053
Saha, Dibya (Saha Dibya)	2SGA-4	Sakamoto, Kantaro (坂本 貫太郎)	3Pos023
Sahashi, Kentaro (佐橋 健太郎)	1GH001	Sakamoto, Ritsuki (坂本 璃月)	1Pos019
Saini, Mohit. K. (Saini Mohit. K.)	2Pos138	Sakamoto, Ryota (坂本 遼太)	1SIA-6
Saio, Tomohide	3Pos219	Sakamoto, Tatsuya (坂本 達哉)	2Pos145
Saio, Tomohide (齋尾 智英)	2SHP-2	Sakamoto, Yuta (阪本 悠太)	1Pos219
	3SEA-4	Sakane, Reibun (坂根 礼文)	3Pos107
Saito, Ami (齋藤 碧海)	2Pos107	Sakanoue, Rin (坂上 凜)	1Pos094
Saito, Atsushi (齋藤 敦)	1EC001		<u>1YK1100</u>
Saito, Hikaru (齋藤 光)	1Pos127	Sakashita, Nanase (坂下 七瀬)	2Pos185
Saito, Hiroyuki (齋藤 博幸)	1Pos012	Sakata, Ayaka	3SGA-3
	1Pos022	Sakata, Eri (坂田 絵理)	1MSG-5
Saito, Katsuya (齋藤 克哉)	3Pos164	Sakata, Nana (阪田 奈菜)	2Pos015
Saito, Keisuke (齋藤 圭亮)	2SJA-1	Sakata, Nana (阪田 奈菜)	1Pos025
Saito, Keiya (齋藤 啓哉)	1Pos016	Sakaue, Takahiro (坂上 貴洋)	1GB012
Saito, Kohei (齋藤 康平)	1Pos203		1Pos219
	1Pos204		1Pos220
Saito, Makoto (齋藤 諒)	1SDA-5		2Pos060
Saito, Minoru (齋藤 稔)	3Pos118		2Pos220
Saito, Nen (齋藤 稔)	2SFA-5	Sako, Yasushi (佐甲 靖志)	1Pos003
	1Pos194		2Pos099
	1Pos195	Sakuma, Koya (佐久間 航也)	1GC003
	2Pos124	Sakuma, Tatsumi (佐久間 達海)	2Pos054
Saito, Ren (齋藤 蓮)	3Pos197	Sakuma, Yuka (佐久間 由香)	1Pos111
Saito, Takumi (齋藤 匠)	2SIP-2	Sakumura, Yuichi (作村 諭一)	2SIP-5
	3Pos076		1GG006
Saito, Yasuhisa (齋藤 保久)	2Pos196		1Pos088
Saito, Yutaka (齋藤 裕)	2SCA-3		1Pos155
	1MSI-1		1Pos192
	1GE008	Sakuraba, Syun (桜庭 俊)	1Pos193
Saitoh, Akiyoshi (齋藤 顕宜)	1Pos185		3Pos138
Saitoh, Tsuyoshi (齋藤 毅)	1GA008		3Pos139
Saitou, Shinnosuke (齋藤 真之介)	1GE002	Sakurai, Akari (櫻井 あかり)	2Pos150
Saitou, Suzuka (齋藤 涼華)	1Pos182	Sakurai, Kazumasa (櫻井 一正)	3Pos013
Sakae, Mao (栄 真央)	3Pos162	Sakurai, Tatsunari (櫻井 建成)	1GD003
Sakae, Yoshitake (栄 慶丈)	1GH001	Sakuta, Hiroki (作田 浩輝)	2Pos155
Sakaguchi, Ayuri (坂口 歩理)	1Pos101		3Pos149
Sakaguchi, Miyuki (坂口 美幸)	1Pos051	Salvatore, Corrado	1GI011
	1Pos205	Samatsu, Yuki (佐松 優希)	1Pos126

Sampson, Josephina (サンブソン ジョセフィナ)	2Pos098	Satouh, Yuhkoh (佐藤 裕公)	2Pos088
Sando, Shinsuke (山東 信介)	3Pos175	Sawa, Masato (澤 征都)	1Pos210
Sano, Taisei (佐野 太星)	2Pos073	Sawada, Yasuyuki (澤田 康之)	2Pos115
Sano, Yutaka (佐野 豊)	2Pos029		2Pos117
Saper, Gadiel	2Pos093	Sawai, Satoshi (澤井 哲)	1Pos099
Sasaki, Daiki (佐々木 大樹)	1EC003	Sawazaki, Yoshihito (澤崎 義仁)	3Pos191
Sasaki, Daisuke (佐々木 大輔)	1GC011	Schmidt, Roman	1MSF-2
	3Pos058	Schmitt, Cassidy	2Pos031
Sasaki, Kodai (佐々木 洸大)	1GG011	Schwitter, Ariane (スクウイター アリアナ)	1GF008
Sasaki, Mirai (佐々木 弥来)	1GG002	Seddon, Chloe (Seddon Chloe)	2Pos005
Sasaki, Naoya (佐々木 直哉)	2Pos201		1YK1030
Sasaki, Risa (佐々木 里瑩)	3SFA-2	Sega, Jumpei (瀬賀 純平)	3Pos080
Sasaki, Takanori (佐々木 貴規)	1Pos162	Seito, Daito (清藤 大翔)	1Pos148
	1Pos163	Seki, Soichiro (関 荘一郎)	2SGP-6
	1Pos164		1Pos006
Sasaki, Yuji. C (佐々木 裕次)	1GC011	Seki, Takehito (関 健仁)	1Pos116
Sasamori, Kansuke (笹森 貫佑)	2Pos194	Sekiyama, Naotaka (関山 直孝)	2Pos040
Sato, Chikara (佐藤 主税)	3Pos164	Semwal, Vivek	2Pos094
Sato, Daisuke (佐藤 大輔)	1GA013	Sengoku, Sakura (仙石 桜)	2Pos120
	1Pos016	Senju, Yosuke (千住 洋介)	2Pos114
Sato, Hajime (佐藤 玄)	1Pos183	Sergeev, Nikolay	1MSF-2
Sato, Hikari (佐藤 光莉)	3Pos008	Seto, Mayumi (瀬戸 蘭美)	3SFA-2
Sato, Hisako (佐藤 久子)	1Pos015	Shen, Jian-Ren (沈 建仁)	1MSG-3
Sato, Imari (佐藤 いまり)	1Pos211		1GI008
Sato, Katsuhiko (佐藤 勝彦)	3Pos120		1Pos135
Sato, Katsuki (佐藤 克樹)	1Pos031	Shen, Simiao (潘 思淼)	2Pos136
Sato, Kazuhisa (佐藤 和久)	2Pos206	Shenoy, Thanh-Nga C.	3Pos126
Sato, Kazunobu (佐藤 和信)	3Pos055	Shi, Jenny	3Pos122
Sato, Keisuke (佐藤 慶典)	1Pos114	Shiba, Tomoo (志波 智生)	1GA001
Sato, Keita (佐藤 恵太)	2SJA-5		1GA004
	1Pos129		1GA006
	2Pos129	Shibagaki, Mitsuki (柴垣 光希)	1MSG-1
	2Pos132	Shibai, Atsushi (芝井 厚)	3Pos146
	3Pos127	Shibasaki, Ryota (芝崎 亮汰)	2Pos180
Sato, Mana (佐藤 茉奈)	1GC005	Shibata, Kei (柴田 圭)	1Pos102
Sato, Riho (佐藤 璃歩)	3Pos001	Shibata, Keisei (柴田 桂成)	3SBA-9
Sato, Ryu (佐藤 龍)	1GG007	Shibata, Keitaro (柴田 桂太朗)	2SFA-2
Sato, Shoko	3Pos056		3Pos083
Sato, Shoko (佐藤 祥子)	1Pos041	Shibata, Mikihiro (柴田 幹大)	1GD010
Sato, Shumpei (佐藤 駿平)	3Pos146		1GD011
Sato, Shun (佐藤 駿)	2Pos081		1Pos041
Sato, Suguru (佐藤 優)	1Pos151		1Pos114
Sato, Taiyo (佐藤 大洋)	3Pos067		3Pos028
Sato, Yuki (佐藤 優輝)	1Pos203	Shibata, Tatsuo	2Pos094
Sato, Yuki (佐藤 夕希)	1Pos123	Shibata, Tatsuo (柴田 達夫)	2SFA-3
	3Pos115		2SEP-7
Sato, Yusei (佐藤 優成)	1GF010		1Pos196
	1Pos151	Shibata, Yutaka (柴田 穰)	1Pos134
Sato, Yusuke (佐藤 佑介)	1GJ004		3Pos134
	2Pos118		3Pos135
	3Pos217		3Pos136
Satou, Hazime (佐藤 玄)	2Pos161	Shibayama, Naoya (柴山 修哉)	1Pos043

Shiga, Yasuhiro (志賀 靖弘)	2Pos131	Shimogochi, Shota (下河内 翔太)	1SBA-1
Shigematsu, Hideki (重松 秀樹)	2SHP-7		2Pos171
	2Pos190	Shimogoochi, Shota (下河内 翔太)	2Pos049
	3Pos070	Shimomae, Koki (下前 弘稀)	3Pos139
Shigeta, Yasuteru	1EE004	Shimono, Kazumi (下野 和実)	2Pos047
Shigeta, Yasuteru (重田 育照)	1GH003	Shimoyama, Hiromitsu (下山 絃充)	2Pos022
	1Pos020	Shimura, Naoki (志村 直輝)	3Pos107
	1Pos172	Shin, Byeongmin	2SKA-1
	1Pos184	Shin, Fujishiro (藤城 新)	2Pos061
	2Pos179	Shinkai, Arisa (新開 有紗)	1GA008
Shih, Hsuan-Yu (Shih Hsuan-Yu)	1Pos007	Shinkai, Soya (新海 創也)	1SEA-3
Shihoya, Wataru (志甫谷 渉)	3Pos142	Shinkai, Yasuhiro (新開 泰弘)	1Pos119
Shima, Tomohiro (島 知弘)	2Pos102	Shinobu, Ai	2Pos170
Shimada, Akari (島田 明星)	3HL1115	Shinobu, Ai (信夫 愛)	2SFP-2
Shimada, Atsuhiko (島田 敦広)	1GF009		2Pos050
Shimada, Kazuki (島田 和樹)	1GH006	Shinoda, Wataru (篠田 渉)	1GF007
Shimada, Yoshiki (島田 佳季)	1GD006		1GG001
Shimada, Yuichiro (嶋田 友一郎)	1Pos141		3Pos105
Shimakawa, Ginga (嶋川 銀河)	3Pos010		3Pos166
Shimamoto, Kana (島本 花菜)	3Pos087	Shinohara, Akira (篠原 彰)	3Pos087
Shimamoto, Keiko (島本 啓子)	1Pos117	Shinozaki, Ryuto (Shinozaki Ryuto)	1SHA-4
Shimamoto, Shigeru (島本 茂)	1Pos025	Shintaku, Hirofumi (新宅 博文)	3SHA-2
	1Pos026	Shintani, Seine A. (新谷 正嶺)	1EC004
	1Pos027	Shinya, Kumagai (熊谷 慎也)	2Pos217
	2Pos015	Shinzawa-Ito, Kyoko (新澤 (伊藤) 恭子)	1Pos139
	3Pos019	Shinzawa-Itoh, Kyoko (伊藤・新澤 恭子)	1Pos044
	3Pos020	Shioda, Norifumi (塩田 倫史)	2Pos052
Shimamoto, Yuta (島本 勇太)	1SIA-1	Shioi, Akihisa (塩井 章久)	1Pos157
	1Pos094	Shioi, Takuro (塩井 琢郎)	2SAP-3
	<u>1YK1100</u>	Shiomi, Akifumi (塩見 晃史)	3SHA-2
Shimamura, Hisashi (嶋村 悠)	1GB012	Shiomi, Gaku (塩見 岳)	3HL0915
Shimamura, Ryotaro (嶋村 亮太郎)	1Pos142	Shiomi, Shunsuke (汐見 駿佑)	2Pos156
Shimamura, Saya (島村 牙矢)	3HL1045		3Pos152
Shimamura, Yuiki (島村 惟葵)	3Pos135	Shionyu, Masafumi (塩生 真史)	3Pos160
Shimane, Yasuhiro (嶋根 康弘)	3SFA-3	Shiota, Yuma (塩田 優真)	1SBA-1
Shimazaki, Yukiho (嶋崎 幸穂)	2Pos068		2Pos171
Shimbo, Ayaka (新保 綾花)	1Pos186	Shiraga, Keiichiro (白神 慧一郎)	3Pos206
Shimi, Takeshi	1Pos095	Shirahama, Ranmaru (白浜 蘭丸)	1Pos143
Shimi, Takeshi (志見 剛)	1Pos199	Shirai, Tsuyoshi (白井 剛)	3SBA-7
Shimizu, Hirofumi (清水 啓史)	3Pos044		2Pos148
Shimizu, Kazuma (清水 和真)	1GD007		3Pos131
Shimizu, Kotaro (清水 浩太郎)	1GF005	Shiraishi, Taro (白石 太郎)	1GH012
Shimizu, Masahiro (清水 将裕)	2Pos032	Shiraiwa, Hiromasa (白岩 弘将)	2Pos156
Shimizu, Miho (清水 美穂)	3Pos089		3Pos152
Shimizu, Rei	2Pos202	Shiraki, Kentaro (白木 賢太郎)	2Pos153
Shimizu, Rumi (清水 瑠美)	1MSH-6		2Pos214
Shimizu, Sasa (清水 早沙)	3Pos098		<u>1YK1015</u>
Shimizu, Yoshihiro (清水 義宏)	2SHA-2	Shiramasa, Yutaro (白砂 雄太郎)	1GB004
	1GJ001	Shirasaki, Yoshitaka (白崎 善隆)	1EB005
Shimizu, Yosuke (清水 洋祐)	2Pos028	Shiro, Yoshitsugu (城 宜嗣)	3Pos042
Shimizume, Kota (清水目 孝太)	2Pos096		3Pos046
Shimoaka, Takafumi (下赤 卓史)	1Pos108	Shiroguchi, Katsuyuki	1GJ011
	1Pos133	Shiroguchi, Katsuyuki (城口 克之)	2SDP-1

Shiroshita, Honori (城下 穂乃里)	1Pos022	Suetsugu, Shiro (末次 志郎)	1SFA-1
Shirota, Hideaki (城田 秀明)	1GA010	Sugai, Hiroka (菅井 祥加)	2SDA-3
Shirouzu, Mikako (白水 美香子)	2Pos010	Sugao, Kanon (菅尾 果音)	3Pos019
Shirranc, Sally (Shirranc Sally)	2Pos005		3Pos020
	<u>1YK1030</u>	Sugasawa, Haruka (菅澤 はるか)	3Pos008
Shoji, Hiroto (庄司 紘都)	1GD005		3Pos025
Shoji, Kan (庄司 観)	1EB004		3Pos037
	1Pos159	Sugase, Kenji (菅瀬 謙治)	2SBP-4
	2Pos118	Sugata, Daiki (菅田 大輝)	1Pos061
Shoji, Kentaro (庄司 健太郎)	1Pos154	Sugawara, Ren (菅原 蓮)	3Pos023
Shoji, Tomoya (庄司 智哉)	2Pos084	Sugawara, Takeshi (菅原 武志)	3Pos193
Shono, Mayu (庄野 真由)	1Pos157	Sugi, Takuma (杉 拓磨)	2SJP-2
	2Pos057		1GJ010
Shota, Tsuji (辻 章太)	1Pos065	Sugie, Atsushi (杉江 淳)	2SBP-6
Simpson, David	2SJP-1	Sugihara, Kaori	1GF004
Singh, Manish (Singh Manish)	1GI006		1ED002
Singha, Nanki (Singha Nanki)	2Pos005		2Pos198
	<u>1YK1030</u>	Sugihara, Kaori (杉原 加織)	1GF003
Skinner, Dominic (Skinner Dominic)	2SGA-4		1GF008
Skinner, Dominic J.	1Pos201		1GF011
	<u>1YK1000</u>		2Pos034
Sljoka, Adnan	2SBA-1	Sugijo, Yovin (洲祇恕 葉浮音)	3Pos021
	2SBA-6	Sugimoto, Hiroshi (杉本 宏)	3Pos041
So, Masatomo (宗 正智)	2SBP-4		3Pos042
Sobaih, Mohamed Marzouk (ソベ モハメド マルゾーク)	2Pos050	Sugimoto, Hisroshi (杉本 宏)	3Pos046
Sobti, Meghna (Sobti Meghna)	1GE007	Sugimoto, Teppei (杉本 哲平)	3Pos045
Sokabe, Masahiro (曽我部 正博)	2Pos115	Sugimoto, Yukihiro (杉本 幸裕)	3Pos140
	2Pos117	Sugishiata, Tomoaki (杉下 友晃)	1Pos183
Somiya, Masaharu (曾宮 正晴)	1SFA-4	Sugita, Masatake (杉田 昌岳)	3Pos055
Sonanie, Ravi (Sonanie Ravi)	2Pos005		2Pos175
	<u>1YK1030</u>	Sugita, Yuji	1Pos179
Sono, Hidekazu (園 英和)	1Pos158	Sugita, Yuji (杉田 有治)	1SBA-2
Sonobe, Seiji (園部 誠司)	1Pos082		2SAA-3
Sonoshita, Masahiro	2Pos210		2SAA-6
Sonoyama, Masashi (園山 正史)	1Pos108		2SHP-3
	1Pos133		1GE011
Soshino, Ibuki (曾篠 一落)	2Pos029		1Pos028
Sotoma, Shingo (外間 進悟)	1GJ006		2Pos041
Sowa, Yoshiyuki (曾和 義幸)	2Pos084		2Pos177
	2Pos157		2Pos187
	3Pos093		3Pos165
Stenhammar, Joakim	2SEP-6	Sugita, Yukihiro (杉田 征彦)	1GI005
Stewart, Alastair G. (Stewart Alastair G.)	1GE007	Sugiura, Kazunori (杉浦 一徳)	2Pos038
Stokes, David L.	1EE002		3Pos205
Sudo, Yuki (須藤 雄気)	2Pos132	Sugiura, Masahiro (杉浦 雅大)	1GI004
	3Pos125		3Pos122
	3Pos126	Sugiura, Yuya (杉浦 勇也)	1GA009
Suenaga, Naoki (末永 尚基)	1Pos139	Sugiyama, Haruki	1MSH-2
Suetaka, Shunji (季高 駿士)	1GC009	Sugiyama, Hironori (杉山 博紀)	3SHA-5
	1GC010		3Pos197
	3Pos033	Sugiyama, Masaaki (杉山 正明)	1GB007
Suetake, Isao (末武 勲)	3Pos055		1GB009
			1Pos019

Sumikama, Takashi (炭竈 享司)	2SAA-4	Suzuki, Tateki (鈴木 干城)	1Pos141
	1GD010	Suzuki, Tetsuhito (鈴木 哲仁)	2Pos031
	1GD011	Suzuki, Tsutomu (鈴木 勉)	3Pos206
Sumino, Ayumi (角野 歩)	1Pos215	Suzuki, Yuki (鈴木 勇輝)	2Pos204
Sumitomo, Kakeru (住友 翔)	1Pos084	Suzuki, Yukihiro (鈴木 文文)	3Pos053
Sumiyoshi, Rieko (住吉 里英子)	1Pos077	Tabata, Kazuhito (田端 和仁)	1GG006
	1YK1045	Tabata, Koji	1Pos097
	1Pos151	Tabata, Yota (田端 陽多)	2Pos210
	2Pos073	Tabe, Jinichiro (多部 仁一朗)	3Pos144
Sunaga, Junko (須長 純子)	2SFA-7	Tachi, Tomohiro (館 知宏)	1Pos146
Sunami, Tomoko	3Pos056	Tachikawa, Masashi (立川 正志)	2Pos007
Sunami, Tomoko (角南 智子)	2SAP-1		2Pos189
	1MSH-4		3Pos108
Suno, Chiyo (寿野 千代)	1GA009	Tadokoro, Yoshitaka (田所 良崇)	2Pos174
Suno, Ryoji	2Pos048	Tagami, Daiki (田上 大輝)	3HL1130
Suno, Ryoji (寿野 良二)	1GA009	Tagami, Shunsuke	1GC006
	1GI005	Tagami, Shunsuke (田上 俊輔)	2SEA-1
	2Pos004	Tagawa, Haruna (田川 晴奈)	2SIP-5
Suno-Ikeda, Chiyo	2Pos048	Tagawa, Hauna (田川 晴奈)	1Pos192
Suwa, Makiko (諏訪 牧子)	3Pos156	Tagawa, Shotaro (田川 翔大朗)	3SFA-6
	3Pos164	Tagishi, Ryouma (田岸 亮馬)	3Pos009
Suwa, Manami (諏訪 麻菜美)	2Pos014	Taguchi, Hideki (田口 英樹)	2SIA-3
Suzuki, Aussie (Suzuki Aussie)	1Pos094		1Pos042
	1YK1100	Taguchi, Kazuma (田口 主馬)	3HL0900
Suzuki, Daiki (鈴木 大樹)	2Pos168	Taguchi, Mai (田口 真衣)	1GE008
Suzuki, Hinako X. (鈴木 日奈子)	2Pos178	Taguchi, Masahiko (田口 真彦)	3Pos050
Suzuki, Kano (鈴木 花野)	1Pos010		3Pos138
	3Pos073		3Pos139
Suzuki, Kenichi (鈴木 健一)	2SDA-4	Taguchi, Seiichi (田口 精一)	1SFA-3
Suzuki, Kenichi G. N. (鈴木 健一)	1SFA-2	Tahara, Shinya (田原 進也)	3Pos183
	1GF002	Tahara, Tahei (田原 太平)	1Pos205
Suzuki, Kenichi G.N. (鈴木 健一)	3Pos104	Tahara, Yuhei (田原 悠平)	3Pos209
Suzuki, Kenichi GN (鈴木 健一)	1EC003	Tahara, Yuhei O (田原 悠平)	3Pos148
Suzuki, Kenta T. (鈴木 健大)	1GG006	Taji, Teruaki (太治 輝明)	2Pos120
Suzuki, Madoka	3Pos085	Tajima, Hirotaka (田島 寛隆)	2Pos119
Suzuki, Madoka (鈴木 団)	1Pos216		3Pos114
	2Pos098	Tajima, Kenya (田島 研也)	1Pos034
Suzuki, Makoto (鈴木 誠)	1Pos070	Tajima, Seiya (但馬 聖也)	1GI004
Suzuki, Masato (鈴木 允人)	2Pos151		2Pos006
Suzuki, Michio (鈴木 道生)	1GB009		3Pos122
Suzuki, Naoya (鈴木 直哉)	1Pos122	Tajima, Shuma (田島 秀真)	2Pos004
Suzuki, Nobuhiro (鈴木 喜大)	3HL1130	Tajitsu, Motoharu (田實 元陽)	3Pos161
	2Pos014	Takabatake, Haru (高畠 晴)	2SIA-3
	3Pos016	Takada, Sakura (高田 咲良)	2Pos155
Suzuki, Nobutake (鈴木 信勇)	1EB005	Takada, Sakura (高田 咲良)	2SKP-3
Suzuki, Ryunosuke (鈴木 龍之介)	1GG005	Takada, Shoji	3Pos047
Suzuki, Shino (鈴木 志野)	2SKP-1	Takada, Shoji (高田 彰二)	1SAA-3
Suzuki, Shota (鈴木 翔大)	2SBA-4		2SBP-1
	1Pos002		1MSG-6
Suzuki, Souta (鈴木 爽太)	1Pos100		1GC003
Suzuki, Taisei (鈴木 大晴)	1GD010		1Pos061
Suzuki, Takao (鈴木 誉保)	2Pos149		1Pos069
Suzuki, Takehiro (鈴木 健裕)	1Pos138		2Pos170

Takagaki, Natsune (高垣 菜式)	3Pos057	Takano, Mitsunori (高野 光則)	1Pos072
Takagi, Kanta (高木 幹太)	1Pos121		2Pos024
Takagi, Ken (高木 堅)	1Pos055		2Pos063
	3Pos072		2Pos078
Takagi, Kohta (高木 鴻太)	3Pos110	Takano, Yu (鷹野 優)	3Pos177
Takagi, Koki (高木 洸希)	3Pos136	Takao, Daisuke (高尾 大輔)	1Pos079
Takagi, Kosuke (高木 宏輔)	3HL1015	Takarada, Masaharu (寶田 雅治)	3Pos203
Takagi, Toshiyuki (高木 俊之)	1Pos108	Takaramoto, Shunki (宝本 俊輝)	1GI009
Takagi, Yusuke (高木 悠丞)	1GH011		1Pos125
	3Pos179	Takaramoto, Shunki (寶本 俊輝)	1GI002
	3HL0915		1GI004
Takahara, Yuma (高原 佑真)	1MSG-3	Takasawa, Taichi (高澤 太一)	2Pos002
Takahashi, Daichi (高橋 大地)	2Pos047	Takase, Ryoya (高瀬 稜也)	2Pos103
Takahashi, Daisuke (高橋 大輔)	3Pos051	Takase, Yurina (高瀬 祐理菜)	3HL0945
Takahashi, Fumio (高橋 文雄)	2Pos199	Takase, Yuzuki (高瀬 悠月)	3Pos175
Takahashi, Hirona (高橋 広奈)	3Pos199	Takashima, Yui (高島 柚衣)	3HL1000
	1Pos107	Takaso, Nanato (高相 虹翔)	3Pos215
	1Pos108	Takasu, Atsushi (鷹巣 篤志)	1Pos094
	3Pos101		<u>1YK1100</u>
Takahashi, Hiroto (高橋 大翔)	1Pos125	Takata, Koji (高田 耕兄)	2Pos214
Takahashi, Hiroto (高橋 大翔)	1GI002		<u>1YK1015</u>
Takahashi, Kaoru (高橋 郁)	3Pos022	Takatsuka, Hiroto (高塚 大知)	1SDA-4
Takahashi, Kazumo (高橋 風雲)	3Pos112	Takayama, Yuki (高山 裕貴)	1GG008
Takahashi, Koichi (高橋 恒一)	2SAP-5		2Pos213
	2Pos062	Takayama, Yuto (高山 優翔)	1Pos204
	<u>1YK0945</u>	Takazaki, Hiroko (高崎 寛子)	3Pos044
	2Pos132	Takazaki, Hiroko (高崎 寛子)	3Pos087
Takahashi, Kuto (高橋 空翔)	1GJ010	Takazawa, Momoka (高沢 桃花)	2Pos036
Takahashi, Manami (高橋 真奈美)	1GC001	Takebe, Gen (建部 厳)	1Pos013
Takahashi, Nao (高橋 尚央)	3SJA-1	Takebe, Masumi (建部 益美)	3Pos138
Takahashi, Nozomu (高橋 望)	2Pos164		3Pos139
Takahashi, Remii (高橋 怜見衣)	1GB005	Takeda, Seiji (武田 晴治)	1Pos018
Takahashi, Satoshi (高橋 聡)	1GE002		2Pos030
	2Pos029	Takeda, Shuichi (武田 修一)	1Pos091
	2Pos031		1Pos092
	1Pos119		1Pos093
Takahashi, Shigeru (高橋 滋)	1Pos133	Takeda, Youtaro (武田 陽太郎)	3Pos179
Takahashi, Shota (高橋 渉太)	1Pos182	Takeguchi, Miki (竹口 未来)	3Pos129
Takahashi, Takuya (高橋 卓也)	1Pos168	Takei, Kohji (竹居 孝二)	1Pos212
	1Pos171	Takei, Riku (武井 陸)	2Pos119
	1Pos173	Takei, Toshiki (武居 俊樹)	3Pos055
	1Pos174	Takekawa, Norihiro (竹川 宜宏)	1GF012
	1Pos175		1Pos045
	3Pos173		1Pos080
	3Pos145		2Pos071
Takahashi, Tomoei (高橋 智栄)	3Pos181		2Pos075
Takahashi, Yoshimasa	3Pos135		3Pos007
Takahashi, Yuichiro (高橋 裕一郎)	1Pos119		3Pos077
Takahashi, Yuji (高橋 勇二)	1MSF-3	Takemori, Kenta (竹森 健太)	2Pos077
Takai, Akira (高井 啓)	1GE012	Takemura, Masaharu (武村 政春)	2SKP-2
Takamatsu, Nobumichi (高松 宣道)	1Pos089	Takenaka, Shinji (竹中 慎治)	2Pos138
Takano, Kazunori (高野 和儀)	2Pos125		2Pos140
Takano, Kento (高野 健人)	2Pos184	Takeno, Yuka E. (竹野 有香)	1GI004
Takano, Mistunori (高野 光則)			

Takeshima, Gento (竹島 源斗)
 Takeuchi, Chihiro (竹内 千尋)

Takeuchi, Dai (竹内 大)
 Takeuchi, Koh (竹内 恒)
 Takeuchi, Nahoko (武内 菜穂子)
 Takeuchi, Noriko (竹内 法子)
 Takiguchi, Kingo (瀧口 金吾)

Takinoue, Masahiro
 Takinoue, Masahiro (瀧ノ上 正浩)

Takizawa, Yoshimasa (滝沢 由政)
 Takizuka, Hiroto (瀧塚 寛音)
 Takui, Takeji (工位 武治)
 Takuwa, Hiroyuki (田桑 弘之)
 Tama, Florence

Tama, Florence (Tama Florence)

Tamada, Taro (玉田 太郎)
 Tamai, Shingo (玉井 真悟)

Tamaki, Kenta (玉木 健太)
 Tamano, Tomoaki (玉野 智章)
 Tambo, Mai (端保 舞)
 Tame, Jeremy R.H.
 Tamogami, Jun (田母神 淳)

Tamura, Hideki (田村 英紀)

Tamura, Hiroki (田村 洋樹)
 Tamura, Itaru (田村 格良)
 Tamura, Ryota (田村 遼太)
 Tamura, Sachiko (田村 佐知子)

Tan, Cheng
 Tan, Cheng (Tan Cheng)
 Tan, Cheng (譚 丞)

Tanabe, Ayumi (田邊 あゆ美)

3Pos076
 1Pos065
 3Pos062
3Pos128
 2Pos058
 3HL0900
 1Pos068
 2Pos090
 2Pos112
 2Pos113
 3Pos149
 1EA003
2SKP-6
 1Pos053
 1Pos054
 1Pos055
 2Pos054
 2Pos056
 2Pos057
 3Pos052
2SAP-3
1Pos145
 3Pos055
 1GJ010
2SAA-7
 3Pos039
 3Pos176
 3Pos178
 3Pos180
 2Pos190
 3Pos027
 1MSH-6
 1Pos214
1YK0930
1Pos153
 2Pos022
1Pos215
 1Pos005
 2Pos130
3Pos129
 1Pos180
 2Pos181
3Pos206
 1MSH-6
1GE009
 2SAP-5
 2Pos062
1YK0945
 1Pos179
 2Pos041
 2SAA-6
2SHP-3
 3HL1045

Tanabe, Hodaka (田辺 帆高)
 Tanaka, Hideaki (田中 秀明)
 Tanaka, Ichiro (田中 伊知朗)

Tanaka, Issei (田中 一成)
 Tanaka, Junko (田中 潤子)
 Tanaka, Masahito (田中 真仁)

Tanaka, Motomasa (田中 元雅)

Tanaka, Nobukiyo (田中 信清)
 Tanaka, Nozomi (田中 希)
 Tanaka, Shin-ichi (田中 慎一)
 Tanaka, Shun-ichi (田中 俊一)
 Tanaka, Sota (田中 蒼大)
 Tanaka, Tatsuki (田中 達基)
 Tanaka, Yoshikazu (田中 良和)

Tanaka, Yoshiki (田中 芳樹)

Tane, Natsumi (多根 奈津美)
 Tang, Bo

Tang, Bo (唐 博)

Tang, Qian-Yuan
 Tang, Qianyuan (唐 乾元)

Tang, Ta I David
 Tani, Aruno (谷 明琉乃)
 Tani, Kazutoshi (谷 一寿)

Tani, Marie
 Tani, Marie (谷 茉莉)
 Tanibayashi, Sara (谷林 桜来)
 Taniguchi, Ryo (谷口 瞭)
 Taniguchi, Yuichi (谷口 雄一)

Tanimoto, Hirokazu (谷本 博一)

Tanimoto, Yasushi (谷本 泰士)

Tanizaki, Hikaru (谷崎 光)

1Pos181
 3Pos177
1MSH-1
 1MSH-4
 2Pos007
 1Pos037
1Pos094
1YK1100
 1SJA-1
1SJA-6
 1Pos214
1YK0930
 2Pos010
 1Pos029
 2Pos130
2Pos206
2SCA-5
 1GC012
 3Pos142
 1GC004
 1GC007
 1Pos156
 2Pos011
 2Pos154
1GD008
 1GJ002
 1GB011
 1EC003
 1Pos098
1SHA-4
 1Pos096
 2Pos012
3SAA-3
 2Pos008
 2SHP-4
 3HL0900
 2Pos138
 2Pos140
 2Pos093
 3Pos195
2Pos043
3Pos038
 1GC002
 1EB003
 3Pos159
 1SIA-3
 1Pos083
 2Pos092
 3Pos090
3SIA-6
 3SIA-7
1Pos112
3Pos077

Tanzawa, Takehito (丹澤 豪人)	1GB001	Thi Ngoc Nguyen, Loan	1Pos208
Tashiro, Yosuke (田代 陽介)	3Pos103	Thiel, Vera (Thiel Vera)	2Pos138
Tate, Shin-ichi (楯 真一)	1Pos040	Thiticharoentam, Chayanit	3Pos187
	2Pos053	Thiyagarajan, Dhivya B.	3SAA-4
Tate, Shinichi (楯 真一)	1GB011	Timonen, Jaakko V. I.	2SEP-6
Tateno, Akihiro (立野 明宏)	3Pos031	Tinguely, Jean-Claude	3SAA-2
Tatsumi, Rie (巽 理恵)	2Pos037	Tittmann, Kai (Tittmann Kai)	1MSG-5
Tatsuta, Haruka (竜田 遙)	3Pos026	Tochio, Hidehito (朽尾 豪人)	2Pos003
Tayama, Tomotaka (田山 智嵩)	1GC013		2Pos040
Tefera, Dessalegn Abeje	1MSG-1		2Pos045
Tendo, Tomoya (天童 智也)	2Pos007		2Pos052
Tenjimbayashi, Mizuki	2SDA-2		3Pos003
Tenno, Takeshi (天野 剛志)	3Pos014	Tochio, Naoya (朽尾 尚哉)	2Pos041
Terada, Hiroto (寺田 弘人)	2Pos185	Toda, Hirofumi (戸田 浩史)	1SDA-6
	3Pos188	Toda, Satoshi (戸田 聡)	2SEA-3
Terada, Tohru (寺田 透)	2SCA-1		2Pos067
	2SFP-5	Todaka, Reiko (戸高 玲子)	2Pos001
	1GH006	Togashi, Yuichi (富樫 祐一)	1Pos177
	1GH008		1Pos189
	1GH012		1Pos190
	1Pos009	Togo, Azusa (都甲 梓)	2Pos153
	1Pos165	Tohru, Terada (寺田 透)	2Pos161
	1Pos169	Toji, Takumi (田路 卓巳)	1Pos068
	1Pos181	Tojo, Yoshihiro (東條 義大)	3Pos133
	1Pos183	Tokita, Kei (時田 恵一郎)	3Pos145
	2Pos165	Tokonami, Shunro (床次 俊郎)	2Pos027
	2Pos169	Tokuhisa, Atsushi (徳久 淳師)	1SAA-4
Terada, Tomoki P. (寺田 智樹)	1Pos014	Tokunaga, Etsuko (徳永 恵津子)	1Pos030
	1Pos067	Tokunaga, Yuji (徳永 裕二)	2Pos058
Terai, Kotoku (寺井 康徳)	1SIA-5	Tokuraku, Kiyotaka (徳樂 清孝)	2SCP-5
Terakawa, Tsuyoshi	3Pos047	Tokutsu, Ryutaro (得津 隆太郎)	1Pos134
Terakawa, Tsuyoshi (寺川 剛)	1MSG-6	Tokuyasu, Ayama (徳安 礼磨)	3Pos090
	1GC003	Toma, Sachiko (藤間 祥子)	1Pos017
	1GE001	Toma-Fukai, Sachiko (藤間 祥子)	1GA003
	1Pos187		2Pos127
Terakita, Akihisa (寺北 明久)	1GI007	Tominaga, Daichi (富永 大智)	3Pos217
	1Pos124	Tominaga, Kanan (富永 果楠)	3Pos095
Terakura, Kei (寺倉 慶)	2Pos175	Tominaga, Yuri (富永 侑利)	1Pos124
Teramura, Ryuga (寺村 龍河)	3Pos005	Tomioka, Yosuke (富岡 洋介)	2Pos213
Teranishi, Hiroaki (寺西 宏顕)	1Pos121	Tomishige, Michio (富重 道雄)	1Pos071
Terasaka, Naohiro (寺坂 尚絨)	1Pos034	Tomita, Taisuke (富田 泰輔)	3Pos161
	1Pos036	Tomoda, Yugo (巴田 侑吾)	2Pos100
Terauchi, Kazuki (寺内 一姫)	3SJA-4	Tomohara, Kanji (友原 貫志)	1GJ007
Terauchi, Yuki (寺内 裕貴)	1GC001	Torii, Kotaro (鳥井 孝太郎)	3SHA-2
Terayama, Kei (寺山 慧)	2SFP-7	Tosaka, Toshiyuki (登坂 俊行)	1GJ003
Terazima, Masahide (寺嶋 正秀)	2Pos027	Toshimori, Kiyotaka (年森 清隆)	1Pos079
	3Pos038	Toshino, Kenta (歳納 健太)	1Pos075
	3Pos128	Toshioka, Fumi (利岡 文美)	1Pos035
Terui, Yudai (照井 雄大)	2Pos184	Tostani, Fofou Yonta	1Pos078
Teshima, Taku (手嶋 琢)	1GA004	Toyabe, Shoichi (鳥谷部 祥一)	1Pos074
Teshirogi, Yosuke (手代木 陽介)	1GH008		3Pos072
Tetsunari, Kimura (木村 哲就)	3Pos041	Toyama, Rene (外山 玲音)	1Pos051
Tezuka, Ataru (手塚 陽琉)	3HL0930	Toyoda, Atsushi (豊田 敦)	2SAP-5

	1GD009		2Pos125
	1Pos121		2Pos132
	2Pos062	Tsukamoto, Takashi (塚本 卓)	3Pos126
	<u>1YK0945</u>	Tsukazaki, Tomoya (塚崎 智也)	1Pos031
Toyoda, Yusei (豊田 裕生)	3Pos046	Tsukui, Itta (津久井 一太)	1GB002
Toyonaga, Takuma (豊永 拓真)	3Pos066	Tsumoto, Kanta (湊元 幹太)	3Pos149
Toyooka, Ryuya (豊岡 龍弥)	2Pos007	Tsuneshige, Antonio (常重 アントニオ)	2Pos044
Toyoshima, Fumiko (豊島 文子)	2Pos200		2Pos148
Toyoshima, Yu (豊島 有)	2SDP-2	Tsunoda, Satoshi (角田 聡)	2SJA-3
Toyota, Taro (豊田 太郎)	2Pos158		1Pos142
Traiphophon, Darunee	2Pos188		1Pos146
Tran, Duy (チャンズイ)	2SFP-3		2Pos141
Tran, Duy Phuoc	2SBA-4		3Pos142
	1GH004	Tsunoda, Tatsuhiko (角田 達彦)	3SGA-5
	2Pos183		2Pos204
Tran, Duy Phuoc Tran	2SBA-1	Tsunoyama, Taka A.	2SGA-3
Tran, Linh	2Pos147	Tsunoyama, Taka A. (角山 貴昭)	1SHA-4
Tran, PhuocDuy	2Pos039	Tsunoyama, Taka-Aki	1Pos098
Trebbia, Jean-Baptiste	1SHA-3	Tsunoyama, Taka-Aki (角山 貴昭)	1Pos096
Tsai, Chieh-Yu (蔡 傑宇)	2SBP-2	Tsunoyama, Taka-aki (角山 貴昭)	1EC003
Tsai, Feng-Ching	2Pos114	Tu, Le Ngoc Thao	1GA007
Tsai, Ming-Daw	2Pos133	Tuboi, Hazuki (坪井 葉月)	3Pos062
	<u>1YK1115</u>	Tyukosova, Valentina	2Pos191
Tsai, Pi-Cheng (蔡 弼丞)	2Pos136	Uchida, Akane (内田 朱音)	1Pos193
Tseng, Ching-yu	1GA007	Uchida, Takeshi (内田 毅)	1GF009
Tsubaki, Motonari (鐔木 基成)	3Pos045	Uchida, Tsutomu (内田 努)	1Pos064
Tsuboi, Hazuki (坪井 葉月)	1Pos065	Uchida, Yumiko (内田 裕美子)	1GJ008
Tsuchida, Arata (土田 新)	3SHA-2		2Pos076
Tsuchida, Misaki (土田 美咲)	1GC002		2Pos084
Tsuchihashi, Shuhei (土橋 周平)	3Pos124		2Pos100
Tsuchiya, Wataru (土屋 渉)	3Pos198		2Pos103
Tsuchiya, Yuko (土屋 裕子)	1SBA-3		3Pos092
	3Pos131	Uchihashi, Takayuki	3Pos213
Tsuda, Sakae (津田 栄)	1GA011	Uchihashi, Takayuki (内橋 貴之)	1SGA-7
	1GG009		1Pos031
	1Pos021		1Pos047
Tsudome, Mikiko (津留 美紀子)	2Pos219		1Pos153
Tsudzuki, Taiku (都築 大空)	1Pos109		1Pos200
Tsuji, Akihiro (辻 明宏)	1SEA-5		1Pos212
	1Pos049	Uchikoga, Nobuyuki (内古閑 伸之)	1Pos160
Tsuji, Miho (辻 美帆)	2Pos217	Uchiyama, Tomo (内山 友)	1GE007
Tsuji, Shosei (辻 翔成)	3HL1015	Uchizawa, Kaho (内澤 楓穂)	1GA011
Tsuji, Yoshinori (辻 敬典)	3Pos010		1GG009
Tsujikawa, Koyo (辻河 高陽)	1GH001		1Pos021
Tsujimoto, Taiki (辻本 泰輝)	1Pos213	Udono, Hirotake (鵜殿 寛岳)	2SEP-2
Tsujimura, Masaki (辻村 真樹)	2SJA-1	Ueda, Fuka (上田 楓華)	2Pos009
	1GI004	Ueda, Kensuke (植田 健介)	1Pos158
	3Pos122	Ueda, Masahiro (上田 昌宏)	3Pos100
Tsujita, Kazuya (辻田 和也)	1Pos089	Ueda, Motoki (上田 一樹)	3SIA-2
Tsujiuchi, Yutaka (辻内 裕)	1Pos203	Ueda, Toshiaki (上田 稔淳)	3Pos012
	1Pos204	Ueda, Yuika (上田 唯花)	2SIP-7
Tsukamoto, Hisao (塚本 寿夫)	1Pos129	Uegaki, Koichi (上垣 浩一)	1Pos026
	1Pos178		3Pos019

Uehara, Shuta (上原 秀太)	2Pos011	Usuda, Hatsuho (臼田 初穂)	2Pos153
Ueki, Misuzu (植木 美鈴)	1Pos115	Usui, Kenji (臼井 健二)	1GA013
Ueki, Shoko (植木 尚子)	3Pos084	Usuki, Shin (臼杵 深)	1GJ010
Uemura, Naoki (上村 直輝)	1GD006	Utada, Andrew	1GI011
	3Pos084		1GI012
Uemura, Sotaro (上村 想太郎)	3SGA-5	Utada, Andrew S.	2Pos202
	1GC013	Uyeda, Taro (上田 太郎)	3Pos026
	2Pos204	Uyeda, Taro Q.P. (上田 太郎)	1Pos075
	2Pos218		3Pos022
	3Pos057	Vanderpoorten, Oliver	3SAA-6
Ueno, Hiroshi (上野 博史)	1GA012	Vattulainen, Ilpo	2Pos114
	1GE005	Vavylonis, Dimitrios	1Pos207
	1GE006	Vavylonis, Dimitrios (Dimitrios Vavylonis)	1SHA-1
	1GE007	Voth, Gregory	2Pos114
	1GE008	Vu, Cong Quang (ブー コン クアン)	2Pos209
	1GE009	Vu, Quang Cong	3Pos036
	1Pos029	Wada, Hitomi (和田 眸)	2Pos080
	2Pos079	Wadati, Hiroki (和達 大樹)	2Pos206
Ueno, Riki (上野 力樹)	2Pos184	Waizumi, Tatsuyuki (和泉 達幸)	3Pos149
Ueno, Shingo (上野 真吾)	1Pos035	Wakabayashi, Ken-ichi (若林 憲一)	1MSG-4
Ueno, Taiji (上野 大慈)	1GB010	Wakabayashi, Takatoshi (若林 孝俊)	1Pos183
Ueno, Takafumi (上野 隆史)	1Pos037	Wakamoto, Yucchi (若本 祐一)	1GG004
	2Pos162	Wakita, Nodoka (脇田 和佳)	1GG007
Ugarte La Torre, Diego Renato (ウガルテ ラ ディエゴ レナト)	1SBA-2	Walkup IV, Ward G.	2SGA-3
Ukai, Kotaro (鵜飼 幸太郎)	2Pos165	Wan, Biao (万 彪)	1EE005
Ukawa, Mai (鵜川 真衣)	1Pos171	Wan, Yumeng (万 育萌)	1Pos089
Umakoshi, Takayuki (馬越 貴之)	1SCA-4	Wang, Feng-Yu (王 鳳宇)	2SBP-2
	1Pos200	Wang, Jun (王 駿)	3SAA-3
	1SJA-1		2Pos008
Umeda, Kenichi (梅田 健一)	1EB002	Wang, Maoji	1Pos098
	2Pos051	Wang, Maoji (王 茂基)	1SHA-4
	3Pos029		1Pos096
	3Pos040	Wang, Peter Y.	3Pos122
	3Pos048	Wang, Po-Hsun	2Pos133
	3Pos207		<u>1YK1115</u>
Umemura, Maiko (梅村 舞子)	2SCA-4	Wang, Tingting (WANG Tingting)	2Pos190
Umemura, Mariko (梅村 真理子)	1Pos119	Wang, Yuzhu (王 雨竹)	3Pos142
Umena, Yasufumi (梅名 泰史)	1Pos030	Wang-Otomo, Zheng-Yu (Wang-Otomo Zheng-Yu)	
Umezawa, Haruka (梅澤 遙佳)	1Pos005		2Pos139
	1Pos008	Wang-Otomo, Zheng-Yu (大友 征宇)	2Pos138
	3Pos012		2Pos140
Umezawa, Koji (梅澤 公二)	3Pos175	Warisaya, Kanata (割鞘 奏太)	2Pos007
Unabara, Daisuke (海原 大輔)	3Pos066	Washio, Takashi (鷺尾 隆)	3SGA-1
Unno, Masashi (海野 雅司)	1GI003	Washio, Takumi (鷺尾 巧)	2SFP-4
	2Pos128	Watanabe, Atsuya (渡辺 敦也)	1GC010
	2Pos130	Watanabe, Chiho (渡邊 千穂)	1Pos105
	2Pos201	Watanabe, Daisuke (渡邊 大介)	3Pos200
	3Pos123	Watanabe, Go (渡辺 豪)	2Pos002
Urano, Ryo (浦野 諒)	3Pos105	Watanabe, Hiroshi (渡邊 宙志)	3Pos186
Urui, Taito (潤井 泰斗)	2SJA-2	Watanabe, Kaito (渡邊 開斗)	3Pos116
Ushioda, Ryo (潮田 亮)	2SCP-7	Watanabe, Kento (渡邊 健人)	2Pos004
Ushioda, Suguru (潮田 優)	2Pos189	Watanabe, Kyosuke (渡辺 喬介)	3Pos134
		Watanabe, Maho (渡辺 真歩)	3Pos037

Watanabe, Mai (渡辺 麻衣)	3Pos137	Yamada, Daisuke (山田 大輔)	1Pos185
Watanabe, Masaya (渡部 誠也)	1GI004	Yamada, Hiroshi (山田 浩司)	1Pos212
Watanabe, Naoki (渡邊 直樹)	1SHA-1	Yamada, Issaku (山田 一作)	2Pos022
	1Pos207	Yamada, Koyo (山田 航洋)	1Pos132
Watanabe, Naoko (渡邊 直子)	1Pos094	Yamada, Mayu (山田 麻友)	2Pos101
	<u>1YK1100</u>	Yamada, Risa (山田 莉彩)	2SBP-1
Watanabe, Rikiya (渡邊 力也)	2Pos097	Yamada, Soma (山田 壮真)	3HL1000
Watanabe, Ryo (渡邊 亮)	1GE009	Yamada, Teppei (山田 哲平)	1GF007
Watanabe, Satoshi (渡部 聡)	2SHP-6	Yamada, Yoichi (山田 洋一)	2Pos214
Watanabe, Tomonobu (渡邊 朋信)	1Pos040		<u>1YK1015</u>
Watanabe, Tomonobu M (渡邊 朋信)	3SGA-6	Yamada, Yuhei (山田 雄平)	1ED004
Watanabe, Toshiyuki (渡邊 敏行)	3Pos089	Yamagata, Atsushi (山形 敦史)	2Pos010
Watanabe-Nakayama, Takahiro (中山 隆宏)	1SJA-2	Yamagishi, Ayana (山岸 彩奈)	2Pos046
	1GC001	Yamagishi, Jumpei (山岸 純平)	3SFA-4
	1GG012	Yamagishi, Mai (山岸 舞)	1EB005
Wazawa, Tetsuichi (和沢 鉄一)	1Pos211	Yamagishi, Masahiko (山岸 雅彦)	1GD002
	2Pos038		1GF010
	2Pos212		1Pos077
	3Pos205		<u>1YK1045</u>
	3Pos198		1Pos151
Wei, Fan-Yan (魏 范研)	2Pos063		2Pos073
Wei, Fangqian (衛 方千)	1Pos052		3Pos068
Wen, Jin-Der (溫 進德)	2Pos034	Yamaguchi, Keiichi (山口 圭一)	2Pos042
Weng, Wei Chun	3Pos166	Yamaguchi, Manami (山口 真稔)	3Pos014
Wenting, Huo	1Pos150	Yamaguchi, Satoshi (山口 哲志)	3SGA-4
Widada, Alika Andjani (Widada Alika Andjani)	1Pos004	Yamaguchi, Shin (山口 真)	1GD002
Woci-Chyn, Chu	3SAA-4	Yamaguchi, Shoichi (山口 祥一)	1Pos051
Wolfson, Deanna Lynn	2Pos005		1Pos205
Wong, Joshua (Wong Joshua)	<u>1YK1030</u>	Yamaguchi, Takehiro (山口 雄大)	1MSF-4
	2SHP-4	Yamaguchi, Takumi (山口 拓実)	1GH005
Wu, Kingsley	1GJ005	Yamaguchi, Takumi (山口 拓海)	2Pos121
Wu, Ti (呉 題)	1Pos170		3Pos116
Wu, Yichao	3Pos159	Yamaguchi, Tomoyuki (山口 智之)	2Pos193
Xie, Bingxin (シー ビンシン)	1SHA-3	Yamakawa, Minori (山川 実莉)	2Pos199
Xuesi, Zhou	2Pos052		3Pos199
Yabuki, Yasushi (矢吹 悌)	1Pos121	Yamamori, Yu (山守 優)	1Pos020
Yabuuchi, Sho (藪内 翔)	3Pos178	Yamamoto, Aika (山本 愛華)	3Pos109
Yadav, Ajeet Kumar	2SFA-4	Yamamoto, Daisuke (山本 大輔)	1Pos140
Yagasaki, Rei (矢ヶ崎 怜)	1GH005		2Pos135
Yagi, Hirokazu (矢木 宏和)	2Pos016		3Pos130
Yagi, Maho (矢木 真穂)	1GC006	Yamamoto, Eiji (山本 詠士)	1GH011
Yagi, Sota	2Pos088		3Pos179
Yagi, Toshiki (八木 俊樹)	3Pos081	Yamamoto, Johtaro (山本 条太郎)	2Pos203
	2SBP-5		3Pos059
Yagi-Utsumi, Maho (矢木 真穂)	2SJA-4	Yamamoto, Junpei (山元 淳平)	1Pos007
Yaguchi, Junko	2SJA-4		1Pos127
Yaguchi, Shunsuke	1GD002		2Pos133
Yajima, Junichiro (矢島 潤一郎)	1GF010		<u>1YK1115</u>
Yajima, Junichiro (矢島 潤一郎)	1Pos077	Yamamoto, Kentaro (山本 健太郎)	2Pos119
	<u>1YK1045</u>	Yamamoto, Kodai (山本 高太)	2Pos002
	1Pos151	Yamamoto, Masahiro (山本 将大)	2Pos145
	2Pos073	Yamamoto, Masaki (山本 雅貴)	2Pos190
	3Pos068	Yamamoto, Miki (山本 実季)	1GJ009

Yamamoto, Naoki (山本 直樹)	1GB007	Yamazawa, Toshiko (山澤 徳志子)	1EB001
Yamamoto, Norifumi (山本 典史)	3SBA-6	Yan, Xi (晏 晞)	1GE001
	2Pos167	Yanagawa, Masataka (柳川 正隆)	2Pos096
	2Pos172		2Pos099
	3Pos183	Yanagisawa, Keisuke (柳澤 溪甫)	2Pos175
Yamamoto, Shohei (山本 昌平)	1Pos090	Yanagisawa, Miho (柳澤 実穂)	1Pos099
	3Pos089		2Pos155
Yamamoto, Soma (山本 颯馬)	1Pos039	Yanagisawa, Naoya (柳沢 直也)	2Pos155
Yamamoto, Takashi	2SJA-4	Yanagisawa, Sachiko	3Pos039
Yamamoto, Takayoshi (山元 孝佳)	1GJ009	Yanai, Takeshi	3Pos180
Yamamoto, Takuya (山本 拓也)	1EE001	Yanaka, Sacko (谷中 冴子)	2Pos016
Yamamoto, Tatsuya	2Pos202	Yanase, Tomoki (梁瀬 智輝)	1GJ012
Yamamoto, Tetsuya (山本 哲也)	1MSJ-6	Yanase, Yuta (柳瀬 雄太)	3Pos026
	1GH009	Yang, Kai-Chun (Yang Kai-Chun)	1Pos007
	3HL0900		1Pos127
Yamamoto, Yuka (山本 優果)	1Pos062	Yang, Keishi (楊 惠詩)	1Pos200
Yamanaka, Masanori (山中 雅則)	1Pos166	Yang, Wonjin	2SKA-3
	2Pos106	Yang, Xiaoxiong (楊 曉雄)	2SDP-2
Yamane, Koki (山根 晃輝)	2SFP-6	Yang, Xuchun (Yang Xuchun)	1GI005
Yamane, Tsutomu (山根 努)	2Pos162	Yang, Ya-Ching (楊 雅晴)	2SBP-2
	2Pos164	Yang, Zhuohao (楊 倬皓)	1EB005
Yamano, Nami (山野 奈美)	2Pos135	Yanick Besong, Ateke	1Pos218
Yamano, Yuuhei (山野 雄平)	1GE002	Yano, Daichi (矢野 大地)	3SBA-7
Yamaoka, Yoshiyuki (山岡 祥之)	3Pos175	Yano, Kotaku (矢野 甲拓)	3Pos044
Yamase, Keidai (山瀬 桂大)	3Pos184	Yasuda, Haruto (安田 悠人)	3HL0930
Yamashiro, Sawako	1Pos098	Yasuda, Kenji (安田 賢二)	1Pos100
Yamashiro, Sawako (山城 佐和子)	1SHA-1		1Pos102
Yamashita, Aimi (山下 愛海)	1Pos188		1Pos103
	2Pos207	Yasuda, Koki (安田 光希)	3Pos069
Yamashita, Hayato (山下 隼人)	1SEA-5	Yasuda, Kyota (安田 恭大)	1GB011
	1Pos049		1Pos040
Yamashita, Ibuki (山下 息吹)	1GB008		2Pos053
Yamashita, Takahiro	2SJA-4	Yasuda, Takashi	1GF004
Yamashita, Takahiro (山下 高廣)	2Pos129	Yasuda, Takunori (保田 拓範)	1Pos172
	2Pos131	Yasufumi, Umena (梅名 泰史)	3Pos058
	2Pos132	Yasuhara, Kazuma (安原 主馬)	3SIA-1
Yamashita, Takefumi (山下 雄史)	3Pos185		3Pos106
Yamashita, Yo (山下 陽)	1GI004	Yasui, Masato (安井 正人)	1Pos064
Yamauchi, Masataka (山内 仁喬)	1MSG-6	Yasui, Reito (保井 伶斗)	3Pos138
Yamauchi, Tsugumi (山内 つぐみ)	1Pos185	Yasunaga, Takuo (安永 卓生)	2Pos070
Yamauchi, Yuhei (山内 悠平)	3SHA-5		2Pos080
Yamazaki, Hirohito (山崎 洋人)	3Pos198		2Pos095
Yamazaki, Ryuichiro (山崎 隆一郎)	2Pos207		2Pos105
Yamazaki, Shunsuke (山崎 隼佑)	2Pos220		3Pos001
Yamazaki, Takeru	1Pos209		3Pos044
Yamazaki, Takeru (山崎 健)	1EB001	Yasutake, Yoshiaki	1Pos217
	2Pos209	Ye, Shen (叶 深)	1Pos134
Yamazaki, Tomohiro (山崎 智弘)	2SEA-2		3Pos134
Yamazaki, Toshio	1GA007		3Pos135
Yamazaki, Yoichi (山崎 洋一)	1Pos017		3Pos136
	1Pos023	Yi, Ruiqin (蟻 瑞欽)	1Pos147
	1Pos143	Yoda, Takao (依田 隆夫)	2Pos041
Yamazaki, Youichi (山崎 洋一)	2Pos127	Yohei, Hayashi (洋平 林)	1Pos065

Yokohama, Sarara (横濱 さらら)	1GD006	Yoshimura, Kenjiro (吉村 建二郎)	2Pos116
Yokoi, Shun	2Pos048	Yoshimura, Shige H. (吉村 成弘)	1GB012
Yokono, Masaya (横野 雅也)	1Pos202	Yoshimura, Yu (吉村 優)	3Pos104
Yokota, Hiroaki (横田 浩章)	1Pos050	Yoshimura, Yukihide (吉村 至偉)	2Pos161
Yokota, Tatsuya (横田 達也)	3SGA-5	Yoshinaga, Takuro (吉永 琢朗)	1GJ004
Yokota, Yasunari (横田 康成)	1GF002	Yoshinari, Kaho (吉成 佳穂)	3Pos092
Yokoyama, Daiki (横山 大輝)	1GA004	Yoshioka, Aoba (吉岡 青葉)	1GD004
Yokoyama, Kazuki (横山 和輝)	1Pos045	Yoshizawa, Kazumi (吉澤 一巳)	1Pos185
	2Pos075	Yoshizawa, Ryuta (吉澤 龍汰)	3Pos081
Yokoyama, Ken (横山 謙)	2Pos009	Young, David	2SBA-1
	3Pos004	Yu, Isseki (優 乙石)	3Pos165
	3Pos005	Yu, Jin (喻 进)	1EE005
	3Pos006	Yu, Sangya (俞 翔也)	3Pos037
	3Pos070	Yu, Wookyung	2SKA-3
Yokoyama, Takeshi (横山 武司)	1Pos156	Yuan, Hanna S. (袁 小玲)	1Pos004
	2Pos074	Yuasa, Hina (湯淺 日菜)	1GA001
	2Pos154	Yuki, Atsunori (由岐 淳憲)	3Pos174
Yokoyama, Yuka (横山 優花)	2SFA-7	Yuki, Haruka (結城 遙香)	1Pos100
Yonekura, Koji (米倉 功治)	1MSH-3		1Pos102
	1Pos139		1Pos103
	3Pos066	Yumita, Momoko (弓田 桃子)	1Pos007
Yonekura, Naoto (米倉 直努)	2Pos195	Yurtsever, Ayhan	2SHP-7
Yonemura, Shigenobu (米村 重信)	2SFA-2	Yuzu, Keisuke (柚 佳祐)	1SCA-5
	3Pos083		1GB006
Yonetani, Yoshiteru (米谷 佳晃)	2Pos064		1GB007
Yonezawa, Kento (米澤 健人)	1Pos017	Zhan, Feng-Yueh (詹 豐嶽)	1Pos200
	1Pos023	Zhang, Bicheng (張 畢澄)	1GJ007
	1Pos143	Zhang, Boyang (張 博洋)	3Pos119
	2Pos127	Zhang, Han	2Pos169
Yonezawa, Yasushige (米澤 康滋)	1SBA-5	Zhang, Hongtao	1GI012
Yoon, Ina	2SKA-1	Zhang, Jing (張 景)	1GF004
Yoshida, Haruna (吉田 春菜)	2Pos019	Zhang, Wancheng (Zhang Wancheng)	3Pos154
Yoshida, Koki (吉田 光輝)	3Pos071	Zhang, Xianjun (張 先駿)	1Pos134
Yoshida, Naoki (吉田 直樹)	2Pos057	Zhang, Yangyang	1Pos179
Yoshida, Norio (吉田 紀生)	2SDA-4	Zhang, Yue (張 悅)	1GH005
	2SBP-3	Zhang, Zecheng	2Pos012
Yoshida, Shuya (吉田 柊哉)	1Pos119	Zhang, Zecheng (張 澤成)	2Pos008
Yoshida, Yuko (吉田 悠紘)	1Pos054	Zhang, Zhejing (張 喆菁)	3SAA-3
	1Pos055	Zhang, Ziyun (張 梓芸)	1SIA-2
Yoshidome, Takashi (吉留 崇)	1Pos167	Zhao, Fan (趙 凡)	2Pos216
Yoshikawa, Eri (吉川 英里)	3HL1045	Zhao, Shufeng	1GH012
Yoshikawa, Kenichi (吉川 研一)	1GE004		1GI011
	1Pos157		1GI012
	2Pos057		2Pos202
	2Pos059	Zhao, Wenyang (趙 文洋)	3Pos027
	3Pos149	Zhao, Yimeng (Zhao Yimeng)	1Pos114
Yoshikawa, Taichi (吉川 太智)	3Pos196	Zheng, Yinqiang (Zheng Yinqiang)	1Pos211
Yoshikawa, Yuko (吉川 祐子)	1GE004	Zheng, Yuxiang	2Pos012
	2Pos059	Zhong, Chongxia (仲 崇霞)	2Pos098
Yoshiki, Niino (吉木 新雪)	2Pos168	Zhou, Qianfan (周 千帆)	2Pos126
Yoshimi, Akira (吉見 啓)	1GC001	Zhu, Zhangliang (朱 張亮)	1Pos049
Yoshimi, Tsubura	3Pos039	Zhuang, Haotong (庄 皓桐)	2SAP-3
Yoshimura, Haruka (吉村 悠)	3Pos045	Zimmermann, Timo	1MSF-2

Ziyun, Zhang (張梓芸)
Zou, Ruisi (鄒瑞思)
Zugui, Peng (彭祖癸)

2Pos143
1Pos178
1Pos016

第63回 日本生物物理学会年会

浜松ホトニクス株式会社 BP セミナー

日時：2025年 9月 24日（水） 11:50-12:40

会場：奈良県コンベンションセンター F会場（202）

演題 1 コンピュータショナル4Dイメージングによる 脳の情報処理機構の解明

演者 杉 拓磨 先生

広島大学 大学院統合生命科学研究科
超階層システム数理行動学研究室 准教授

セミナー内容

光工学と情報科学が融合したコンピュータショナルイメージングの1つのライトフィールドイメージングでは、空間スキャン無しにシングルショットで3D撮影できる。我々はこの技術の汎用化を妨げる低解像度の問題を解決し、ユーザーの顕微鏡にアドオンするだけで誰でも共焦点顕微鏡の100倍以上の速度で3D動態を計測可能な4Dイメージング技術を開発した。本発表ではこの4D技術と線虫やマウスの神経回路における情報処理機構の研究を紹介する。

演題2 浜松ホトニクスの最新イメージング技術

演者 豊田 浩

浜松ホトニクス株式会社 画像計測機器営業推進部

浜松ホトニクス株式会社
www.hamamatsu.com

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島津製作所 バイオフィジックスセミナー2

日時 9月24日(水) 11:50~12:40

会場 I会場〈205〉

生体のナノ領域での組織構造や物理特性を解き明かす！
走査電子顕微鏡SUPERSCANシリーズの特長とSPM/AFMを用いた測定事例をご紹介します

セミナー内容

SUPERSCANシリーズは、操作性や観察能力、拡張性に優れた最新の走査電子顕微鏡です。

生体組織の構造や働きを解明するのに役立つ、各種の拡張システムにも幅広く対応します。

これらの特長について、動画や図説などを交えて詳しくご説明します。

また、SPM/AFMは、ナノ領域での形態観察に留まらず、様々な物理的特性を測ることもできます。

様々な生体試料についてSPM/AFMを用いてナノ領域での力学特性を測定した例をご紹介します。

幅広い倍率レンジでのイメージングが可能であるという、両者の特長を活かした複合的な解析方法についても考察します。

演者 坂前 浩 (株式会社 島津製作所)

司会 北村 孝平 (株式会社 島津製作所)

お問合せ | (株)島津製作所 分析計測事業部 営業企画部
〒604-8511 京都市中京区西ノ京桑原町1 メールアドレス: an_seminar@group.shimadzu.co.jp

第63回 日本生物物理学会年会 ランチョンセミナー BPセミナー3

2025年
日時 **9月24日 (水) 11:50-12:40**

会場 **J会場 (206)**
奈良コンベンションセンター

FRET、バイオセンサーから超解像顕微鏡までできる
蛍光寿命イメージング



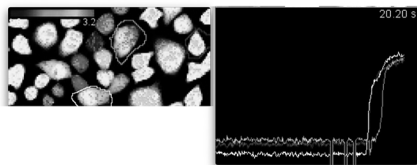
蛍光寿命は、励起スペクトルや蛍光のスペクトルと同様に、蛍光物質がもつ固有の物理特性の一つであり、輝度とは異なる情報を持っています。共焦点顕微鏡STELLARISを用いた蛍光寿命イメージング (Fluorescence Lifetime Imaging Microscopy, FLIM)により、これまでの輝度イメージングと全く異なる情報が得られ、より定量的なFRET効率の測定、カルシウムイオン濃度測定などバイオセンサーとしての利用、蛍光物質同士や蛍光物質と自家蛍光の分離、そして超解像顕微鏡STEDの分解能の向上などが可能となりました。本セミナーでは、新井 敏 先生（金沢大学ナノ生命科学研究所）をお招きし、絶え間無く起こる細胞内での複雑な現象をとらえるバイオセンサー研究の最先端について、実例とともにご発表いただきます。またLeicaからは、STELLARISを用いた蛍光寿命イメージングの有用性について紹介します。

演者1 **新井 敏 先生**
金沢大学 ナノ生命科学研究所

演者2 **長利 卓**
ライカマイクロシステムズ株式会社



▲高速蛍光寿命イメージング顕微鏡 STELLARIS FALCON



▲イオノマイシンを添加したHeLa細胞のカルシウムレベルの変動。

共催：第63回 日本生物物理学会年会／ライカマイクロシステムズ株式会社

横河電機株式会社 BP セミナー

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隠れた生命現象を可視化する 蛍光偏光イメージング

講演者

東京科学大学 教授 寺田 純雄 先生

セミナー番号 BP セミナー 4

日時 9月25日(木) 11:45-12:35

会場 E 会場 (201)

● 関連製品



共焦点スキャナユニット CSU

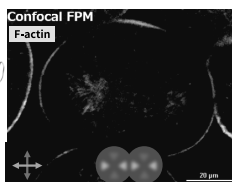
隠れた生命現象を可視化する蛍光偏光イメージング

蛍光偏光は利用の進んでいない蛍光の性質であるが、その観測により蛍光分子の向きを知ることができる。生体分子を蛍光分子により相互の分子の位置関係を固定した状態で標識すれば、蛍光偏光観測により標識された分子の位置と向きの同時観測が可能となる。進化分子工学的スクリーニング法を利用した組換えバインダを足場とした蛍光標識法 POLARIS 法の開発により、任意の生体分子につき蛍光偏光観測可能な標識が実現する (PNAS 118, e2019071118, 2021; BBRC 565:50-56, 2021)。超解像法を含め従来の蛍光イメージングはいわば蛍光輝点の位置情報の精密計測による「点描画」であり、1分子イメージングは蛍光輝点の並進運動の観測が大勢であった。しかし、POLARIS 法による蛍光偏光観測では分子の位置と向きの変化が同時かつ経時的に可視化される。ニポウディスク方式の共焦点スキャナユニットは褪色を抑えつつ高速なライブイメージングを可能とするが、蛍光偏光特性への攪乱が少ない点で、蛍光偏光イメージングにおいても優れた性能を発揮する。

本セミナーでは POLARIS 法開発とその発展の経緯、ニポウディスク方式の共焦点スキャナユニット利用による蛍光偏光イメージングを中心とする実験例を提示し、新しい手法により隠れた生命現象が可視化される様子を共有したい。



Crystal structure of POLARISTM



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[Ed:01/d]

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第63回 日本生物物理学会年会 ZEISS BP セミナーのご案内

「マルチモーダル共焦点レーザー顕微鏡 LSM 990 のご紹介」



Seeing beyond

森と木を見ることを可能にした革新的共焦点レーザー顕微鏡

新たに1分子レベルの拡散や濃度計測を可能とした様々な蛍光相関分光機能と共にイメージング機器の新たな時代の幕を開く

開催日時 9月25日(木) 11:45-12:35

開催会場 F会場(部屋番号 202)

カールツァイス株式会社 プロダクト&アプリケーションセールス

座長 滝口 正人 光学顕微鏡スペシャリスト

演者 佐藤 康彦 光学顕微鏡エキスパート



Instant volume. Instant insight.

ZEISSは新しい共焦点レーザー顕微鏡 LSM 990を2025年3月に発表した。これまでの技術に更に磨きをかけた高度な共焦点技術として13色を超える多色イメージングを1スキャンで達成できるスペクトルマルチプレキシング技術を基軸に、高速広範囲マッピング画像の作成から共焦点超解像撮影までを誰もが手軽に操作できるように仕上げている。上位機種では最大分解能をXY軸80nm、Z軸200nmまで飛躍させ、超解像顕微鏡専用機とも言える分解能にまで進化をさせた。

そして革新的とも言える 1 volume / 1 Snap を実現する Lightfield 顕微鏡技術を加えることで3次元顕微鏡の新たな時代の幕を開いた。Lightfield 4D と名付けたこの技術は Widefield ベースの蛍光顕微鏡技術を応用。共焦点レーザー顕微鏡が苦手とする森をタイムラグなしに一気に見るような Volume イメージングをカバーできるようになった。

さらに木を見る、というより、木の間を縫って飛ぶ虫を見るかのような分子レベルの拡散挙動計測を2つも備えている。一つは分子の拡散情報や濃度だけではなく、液-液相分離にも見られる膜を持たない構造境界面での拡散非対称性や分子フローを解析できる技術。二つ目は、画像全体の分子の拡散挙動や近接蛍光によるクロストークの影響を除外した相互相関解析をヒートマップ化して客観的に捉える技術である。ZEISSは古くから分子蛍光相関解析を共焦点レーザー顕微鏡に取り入れてきたが、新たな2手法により、従来のFRAPなどの拡散計測手法と合わせて強力な細胞内分子挙動解析を後押しすることとなる。

本セミナーでは新たに加わったLightfield 4Dと合わせてユーザの期待する実験を包括的にサポートすることができる革新的なマルチモーダル共焦点レーザー顕微鏡LSM 990をご紹介させていただく。

皆様のご来場をお待ち申し上げます。

カールツァイス株式会社
ZEISS Research Microscopy Solutions



SSBD: バイオイメーキングデータのグローバルな共有



理化学研究所生命機能科学研究センター

大浪 修一・SSBD チーム



SSBDは、NBDC統合化推進プログラムの支援を受けて2013年より構築・運用を開始した、バイオイメーキングデータを共有・再利用するための公共リポジトリおよびデータベースです。論文に基づいた多様な画像データを受け入れる**SSBD:repository**と、再利用性の高いキュレート済みデータを提供する**SSBD:database**の二階層で構成され、国際的なバイオイメーキングデータ共有ネットワーク（GIDE）とも連携し、世界規模でのデータ公開・利活用を推進しています。

さらに、2025年度の科研費公募分からは、**論文発表時に根拠データの即時公開が義務化される**こととなっており、これまで以上にデータ公開と、信頼できる公開先の選定が求められています。**SSBD**は、こうした要請に応えることができる国内のデータ公開基盤のひとつとして活用されています。

本セミナーでは、バイオイメーキングデータ共有に関する国際的な動向、**SSBD:repository**へのデータ登録方法、データ公開時に求められるメタデータやフォーマットの実際について、具体的な事例とともに紹介します。

論文データの公開対応に悩む方、これからバイオイメーキングデータの共有を検討している方は、ぜひご参加ください。研究データ公開の第一歩をこの機会にサポートします。

プログラム番号 BPセミナー7 (E会場: 201)
開催日時 2025年9月26日 (金) 12:00 – 12:50

演題1：招待講演

タンパク質プロトタイピング技術に対する展望もしくは妄想

東京大学大学院 工学系研究科 応用化学専攻 教授

野地 博行 先生

近年、計算的なタンパク質モデリング技術や配列設計手法の進展により、in silico でタンパク質構造を合理的に設計することが可能となってきた。一方で、機能を持つタンパク質分子や分子システムの合理的設計は依然として大きな課題であり、実験的な検証を必要とする。こうした背景のもと、多数の候補タンパク質を迅速かつ低コストで合成・評価するためのプロトタイピング技術の刷新が求められている。特に、oligonucleotide library mix から目的配列を選択的に取得し、高効率にDNAを構築する分子操作技術の開発が重要である。一方、各種一分子計測技術の確立により、プロトタイピングに必要なDNAやタンパク質は微量で済むケースも増えている。本講演では、現行の設計・評価技術を俯瞰した上で、1分子スケールでの分子操作・分子評価を前提とした、将来的な超高効率プロトタイピング技術の可能性について展望（妄想）する。

演題2：企業講演

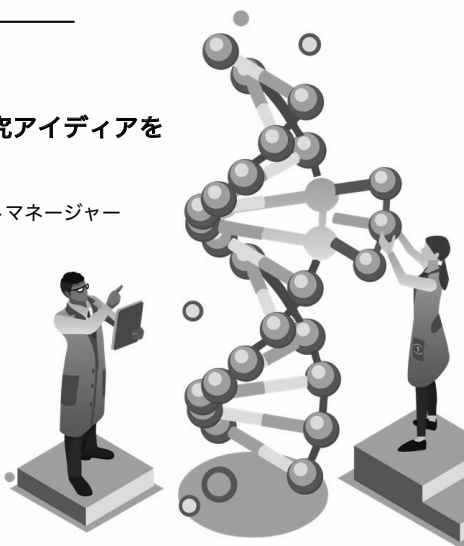
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第 63 回日本生物物理学会 BPセミナー

2025 年 9 月 26 日 (金)

BPセミナー8 I会場 (205) 12:00-12:50

1. PDBj の最近の活動と wwPDB の今後の活動方針について Activity report of PDBj and activity plan of wwPDB

栗栖源嗣 (大阪大学蛋白質研究所)

Genji Kurisu, Institute for Protein Research

The University of Osaka

PDBj (<https://pdbj.org>) は, worldwide PDB (<https://www.pdb.org>) の設立メンバーとしてアジア・中東地区で決定された蛋白質等の生体高分子の構造をwwPDBが管理するコアアーカイブ (PDB, BMRB, EMDB) に登録処理し, 国際的に協調して座標と実験データを全世界へ無償で公開しています。今回のセミナーでは, wwPDBが管理するコアアーカイブの今後の運営体制とデータ検証の方向性について説明いたします。さらに2024年PDBjが主催し日本で行ったwwPDB運営諮問委員会で議論されたPDB周辺の最近の状況を紹介しします。PDBjの最近の活動として昨年10月に新しくスタートしたUniProtポータル機能を中心に複数の新サービスについて解説します。

2. 計算によって得られたデータと結晶回折像のPDBjへの登録 Deposition of computationally derived data and crystal diffraction images to PDBj

Gert-Jan Bekker (大阪大学蛋白質研究所)

Institute for Protein Research

The University of Osaka

PDBj has developed two novel archives for deposition of data beyond structures to the PDB. The Biological Structure Model Archive (BSMA or BSM-Arc, <https://bsma.pdbj.org/>) enables researchers to submit data derived from computational methods, such as molecular dynamics simulations. On the other hand, the Xtal Raw Data Archive (XRDa, <https://xrda.pdbj.org/>) enables researchers to submit raw crystal diffraction images to PDBj. For both archives, depositors login using their ORCID ID to submit or modify an entry. Data can either be uploaded via a web form, or via RSYNC/SFTP, and upon publication, the data becomes publicly available and can be downloaded via HTTPS or RSYNC. Each entry is also assigned a unique DOI for linking from publications. We invite researchers to submit their raw data to BSM-Arc and XRDa to publicly share the data in a similar manner as structural data is being shared via the PDB.

Protein Data Bank Japan
<https://pdbj.org>

日本蛋白質構造データバンク (PDBj) 事務局

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TEL: 06-6879-4311 (事務局) 8634 (登録事務局)

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THE BIOPHYSICAL SOCIETY
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Meeting of Korean Societies for Biomolecular and
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