

第1日目 (9月24日(火)) / Day 1 (Sep. 24 Tue.)

8:30~11:10 A会場/Room A: サミットホール天蘭/Summit Hall Tenran
1YA 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 15th year, we received 27 highly qualified applications. After the first round of competitive screening based on submitted documents, the following ten applicants were selected as the young invited speakers. In this symposium, each speaker will make 10-minute presentation followed by 3-minute discussion as the second round of screening. Up to five awardees of the Early Career Award in Biophysics will be selected and announced at the banquet held in the evening of the second day. 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 researches.

8:30 岡本 和子 2Pos091

1YA0830 転写因子の振る舞いとクロマチンのゆらぎの関係性を1分子計測によって解析する
Single molecular dynamics of transcription factors are controlled by diffusion movement of chromatin

○岡本 和子¹, 岡田 康志¹, 阿倍 訓也², 渡邊 朋信¹ (1理化学研究所 生命機能科学研究センター, 2理化学研究所 バイオリソース研究センター)

Kazuko Okamoto¹, Yasushi Okada¹, Kuniya Abe², Tomonobu M Watanabe¹ (¹RIKEN BDR, ²RIKEN BRC)

8:45 佐藤 慎哉 3Pos133

1YA0845 リガンド非結合時のオプシンは稀に光活性化したロドプシンと同等の活性を示す
Apo-opsin exists in equilibrium between a predominantly inactive and a rare highly active state

○佐藤 慎哉^{1,2}, Jastrzebska Beata³, Engel Andreas³, Palczewski Krzysztof^{3,4}, Kefalov Vladimir J.¹ (1セントルイス・ワシントン大, 2京都市大・院生命科学, 3ケースウエスタンリザーブ大, 4カルフォルニア大アーバイン校)

Shinya Sato^{1,2}, Beata Jastrzebska³, Andreas Engel³, Krzysztof Palczewski^{3,4}, Vladimir J. Kefalov¹ (¹DOVS, Washington Univ., ²Grad. Sch. Biostudies., Kyoto Univ., ³Case Western Reserve Univ., ⁴UC Irvine)

9:00 篠田 肇 3Pos180

1YA0900 酸性細胞環境内の超解像イメージング応用に向けた耐酸性可逆的光スイッチング緑色蛍光タンパク質の開発

Acid-tolerant Reversibly Switchable Green Fluorescent Protein for Super-resolution Imaging in Acidic Conditions

○篠田 肇^{1,2}, Lu Kai³, 中島 良介³, 和沢 鉄一³, 野口 滉介², 松田 知己^{2,3}, 永井 健治^{2,3} (1理研・開拓研究本部, 2阪大・工, 3阪大・産研)

Hajime Shinoda^{1,2}, Kai Lu³, Ryosuke Nakashima³, Tetsuichi Wazawa³, Kosuke Noguchi², Tomoki Matsuda^{2,3}, Takeharu Nagai^{2,3} (¹CPR, Riken, ²Grad. Sch. Eng., Osaka Univ., ³ISIR, Osaka Univ.)

9:15 武井 洋大 1Pos262

1YA0915 Intron seqFISH enables transcriptome-wide visualization of genome organization and nascent transcription in single cells

Yodai Takei¹, Sheel Shah², Wen Zhou¹, Eric Lubeck³, Jina Yun¹, Chee-Huat Linus Eng¹, Noushin Koulena¹, Christopher Cronin¹, Christoph Karp¹, Eric Liaw², Mina Amin⁴, Long Cai¹ (¹California Institute of Technology, ²University of California, Los Angeles, ³Stanford University, ⁴University of California, Riverside)

9:30 Tran Phuoc Duy 3Pos025

1YA0930 フレキシブルドッキングによる結合自由エネルギーと速度定数計算

Calculation of binding free energy and kinetic rates with flexible protein docking

○Tran Duy, 北尾 彰朗 (東工大・生命理工)

Duy Tran, Akio Kitao (Tokodai, Grad. Life Sci. Tech.)

9:45 堤 研太 3Pos016

1YA0945 クライオ電子顕微鏡による多剤排出ポンプ複合体 MexAB-OprM の構造解析

The wild-type structures of MexAB-OprM multidrug efflux pump revealed by cryo-electron microscopy

○堤 研太¹, 米原 涼¹, 池田 悦子¹, 宮崎 直幸^{1,2}, 前田 晋太郎^{1,3}, 岩崎 憲治^{1,2}, 中川 敦史¹, 山下 栄樹¹ (¹阪大・蛋白研, ²筑波大・生存ダイナミクス研, ³スクリプス研究所)

Kenta Tsutsumi¹, Ryo Yonehara¹, Etsuko Ishizaka-Ikeda¹, Naoyuki Miyazaki^{1,2}, Shintaro Maeda^{1,3}, Kenji Iwasaki^{1,2}, Atsushi Nakagawa¹, Eiki Yamashita¹ (¹IPR, Univ. Osaka, ²TARA, Univ. Tsukuba, ³The Scripps Research Inst.)

10:00 中村 彰彦 2Pos132

1YA1000 結晶性キチン加水分解酵素は背水の陣で進むブラウンianモーターである

Crystalline chitin hydrolase is a Burnt-bridge Brownian motor

○中村 彰彦^{1,2}, 岡崎 圭一¹, 古田 忠臣³, 櫻井 実³, 飯野 亮太^{1,2} (¹自然科学研究機構 分子科学研究所, ²総合研究大学院大学, ³東京工業大学)

Akihiko Nakamura^{1,2}, Kei-ichi Okazaki¹, Tadaomi Furuta³, Minoru Sakurai³, Ryota Iino^{1,2} (¹Institute for Molecular Science, ²SOKENDAI, ³Tokyo Institute of Technology)

10:15 丸山慎太郎 2Pos118

1YA1015 The combination of high-speed atomic force microscopy and X-ray crystallography reveals rotary catalysis of a shaftless V1 motor

Shintaro Maruyama¹, Motonori Imamura², Takayuki Uchihashi^{3,4}, Kazuya Nakamoto¹, Kenji Mizutani⁵, Lica Fabiana Imai¹, Kano Suzuki¹, Yoshiko Ishizuka-Katsura⁶, Tomomi Someya-Kimura⁶, Mikako Shirouzu^{1,6,7}, Ichiro Yamato^{1,7}, Toshio Ando², Takeshi Murata^{1,8} (¹Grad. Sch. Sci., Univ. Chiba, ²WPI Nano Life Sci. Inst., Univ. Kanazawa, ³JST, CREST, ⁴Dep. Phys., Univ. Nagoya, ⁵Grad. Sch. Med. Life. Sci., Univ. Yokohama, ⁶DSSB, RIKEN, ⁷Ind. Sci. Tokyo Univ. Sci., ⁸PREST, JST)

10:30 柳沼 秀幸 2Pos278

1YA1030 定量的 ATP イメージングを用いた細胞の代謝状態の空間的相関の解析

Spatial correlation of metabolic states in mammalian cells revealed by quantitative single-cell ATP imaging

○柳沼 秀幸^{1,2}, 岡田 康志^{1,3} (¹理研・BDR, ²東大院・工, ³東大院・理)

Hideyuki Yaginuma^{1,2}, Yasushi Okada^{1,3} (¹BDR, Riken, ²Grad. Sch. of Eng., Univ. of Tokyo, ³Grad. Sch. of Sci., Univ. of Tokyo)

10:45 山置 佑大 1Pos091

1YA1045 In-cell NMR 法を用いたヒト生細胞内核酸の構造およびダイナミクスの評価

Evaluation of the structure and dynamics of nucleic acids inside the living human cells by in-cell NMR spectroscopy

○山置 佑大¹, 永田 崇^{1,2}, 清石 彩華², 三宅 雅之², 加納 ふみ³, 村田 昌之^{3,4}, 片平 正人^{1,2} (1京大・エネルギー理工学研究所, 2京大・院エネルギー科学, 3東工大・科学技術創成研究院, 4東大・院総合文化)

Yudai Yamaoki¹, Takashi Nagata^{1,2}, Ayaka Kiyoshi², Masayuki Miyake², Fumi Kano³, Masayuki Murata^{3,4}, Masato Katahira^{1,2} (1*Inst. Adv. Energy, Kyoto Univ.*, 2*Grad. Sch. Energy Sci., Kyoto Univ.*, 3*Inst. Innovative Res., Tokyo Inst. Technol.*, 4*Grad. Sch. Arts and Sci., Univ. Tokyo*)