The 92nd Annual Meeting of the Japanese Biochemical Society Presentation Topics

Di Glycobiology 20 Glycobiology 31 Potebosqivanas 32 Potebosqivanas 33 Clarestification Di in general 34 Lipid Biology 35 Especial Annies and metabolisme 36 Steroids, cholesterol and lipoproteias 36 Potebosquanas 37 Proteins 38 Proteins 39 Proteins 30 P	Classifications	Topics
13 Proteins (1907) 14 Proteins (1907) 15 Carbohydrater related enzymes (1907) 15 Carbohydrater related enzymes (1907) 15 Carbohydrater related enzymes (1907) 16 Carbohydrater related enzymes (1907) 16 Carbohydrater related enzymes (1907) 17 Lipid Biology (1907) 18 Proteins (1907) 19 Proteins (1907		1) Glycoproteins
4 Lectins O Classification B International Content of the Content of Classification B International Content of Cl		2) Glycolipids
4 Lectins O Classification B International Content of the Content of Classification B International Content of Cl		3) Proteoglycans
9 Carbohydrate related enzymes 9 Classification 0 Lingui metabolome 1 Street (Street Pipids 3 Officerophospholipids 3 Officerophospholipids 4 Officerophospholipids 5 Officerophospholipids 7 Classification 0 Linguing 10 Street (Street Pipids) 5 Street (Street Pipids) 7 Classification (Street Pipid	01: Glycobiology	
OC Classification of in general Dispired protections of the protection of the prote		-,
19 Lipid metabolome 29 Sphinophospholipids 30 Giverophospholipids 31 Giverophospholipids 40 Steroids, Dobotsterol and lipoprocteins 60 Steroids, Dobotsterol and lipoprocteins 61 Steroids, Dobotsterol and lipoprocteins 62 Proteins 63 Proteins 64 Proteins 65 Proteins 65 Proteins 65 Proteins 66 Protein folding, quality control and chaperone 66 Proteoloysis 76 Classification 03 in general 77 Classification 03 in general 78 Enzymes and 66 Redox and Energy 67 Classification 03 in general 79 Enzymes (Oxiderochustous and related enzyme) 68 Enzymes and 69 Enzymes (Oxiderochustous and related enzyme) 69 Enzymes (Oxiderochustous and related enzyme) 60 Enzymes (Oxiderochustous and related enzyme) 61 Enzymes (Oxiderochustous and Patenterory) 62 Enzymes (Oxiderochustous and Defeateror) 63 Enzymes (Oxiderochustous and Defeaterory) 64 Enzymes (Oxiderochustous and Defeaterory) 65 Endox and Energy 66 Endox and Energy 67 Classification O1 in general 68 Enzymes (Oxiderochustous extension) 69 Enzymes (Oxiderochustous extension) 60 Enzymes (Oxiderochustous extension) 60 Enzymes (Oxiderochustous extension) 60 Enzymes (Oxiderochustous extension) 60 Enzymes (Oxiderochustous extension) 61 Enzymes (Oxiderochustous extension) 62 Enzymes (Oxiderochustous extension) 63 Enzymes (Oxiderochustous extension) 64 Enzymes (Oxiderochustous extension) 65 Enzymes (Oxiderochustous extension) 65 Enzymes (Oxiderochustous extension) 65 Enzymes (Oxiderochustous extension) 66 Enzymes (Oxiderochustous extension) 67 Enzymes (Oxiderochustous extension) 68 Enzymes (Oxiderochustous extension) 69 Enzymes (Oxiderochustous extension) 60		
28 Expine Bology 29 Sphingophospholipids 30 Giverophospholipids 30 Steverophospholipids 40 Bioactive lipids 50 Stevids, cholestered and lipoproteins 50 Patts neich, glycerides and neutral lipids 70 Classflactation Q2 in general 11 Structural biology, prediction of function and drug design 29 Protein modification 40 Protein modification 40 Protein finding, quality control and chaperone 40 Protein finding, quality control and pathogenic micrographics, quality control and pathogenic micrographics, quality control and pathogenic micrographics, quality control and protein finding pr		·
33 Givernophospholipida 34 Discovide, photosterol and lipoproteirs 35 Proteins 36 Proteins 36 Proteins 37 Proteins 38 Proteins 38 Proteins 39 Protein folding, quality control and chaperone 39 Protein folding, quality control and chaperone 30 Proteins 30 Protein folding, quality control and chaperone 30 Proteins 30 Proteins 31 Proteins 32 Protein folding, quality control and chaperone 33 Proteins 34 Proteins 35 Proteins 36 Classification 03 in general 36 Enzymea and 46 Enzymea and 46 Enzymea sand 46 Enzymea sand 46 Enzymea (Oxidoroductases and related enzymea) 47 Enzymea (Oxidoroductases and related enzymea) 48 Enzymea (Oxidoroductases and related enzymea) 49 Enzymea (Oxidoroductases and related enzymea) 40 Enzymea (Oxidoroductases and related enzymea) 40 Enzymea (Oxidoroductases and related enzymea) 41 Enzymea (Oxidoroductases and related enzymea) 42 Enzymea (Oxidoroductases and related enzymea) 43 Enzymea (Oxidoroductases and related enzymea) 44 Enzymea (Oxidoroductases and related enzymea) 45 Enzymea (Oxidoroductases and related enzymea) 46 Enzymea (Oxidoroductases and related enzymea) 46 Enzymea (Oxidoroductases and related enzymea) 47 Enzymea (Oxidoroductases and related enzymea) 48 Enzymea (Oxidoroductases and related enzymea) 49 Enzymea (Oxidoroductases and related enzymea) 40 Enzymea (Oxidoroductases and related enzymea (Oxidoroduc		
20 Bionetive lipids O Steroids, cholestered and lipoproteins O Fatty acids, gloyerides and neutral lipids O Fatty acids, gloyerides O Fatty		
O Steosids, cholesterol and lipoprotesis OF total roids, glycorrides and neutral lipids OF classification O2 in general OF control folding, quality control and drug design OF control folding, quality control and chaperone OF control folding and care doubties and reachodism OF control folding and care doubties and reachodism OF control folding and care doubties metabolism OF control folding and care doubties metabolism OF control folding and care doubties and reachodism and care doubties and reachodism and care doubties and reachodism and care doubties are doubties and pathogenic microorganisms, insects, etc.) OF control folding and pathogenic		
08 Fotty acids, glycerides and neutral lipids 7 Classification 02 in general 10 Structural biology, prediction of function and drug design 9 Potein modification 10 Potein modification 10 Potein protein quality control and chaperone 10 Poteolysis 10 Classification 03 in general 11 Catalytic mechanism, regulatory mechanism and inhibitory mechanisms 2 Enzymes (Matalonzymes and hemothemical proteins) 2 Enzymes (Matalonzymes and hemothemical proteins) 3 Enzymes (Matalonzymes and hemothemical proteins) 10 Carymes, vitamins and biofactors 10 Metabolism and senobiotic metabolism 10 Classification 04 in general 10 Structure and 10 Classification 04 in general 10 Classification 05 in general 11 Dembrane transport chain 12 Classification 05 in general 13 Biological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 14 Classification 05 in general 15 Cell Cycle, Devolopment 16 Cell Cycle, Devolopment 17 Classification 05 in general 18 Cell Cycle, Devolopment 19 Cell Cycle, Devolopment 19 Cell Cycle, Devolopment 10 Censification 05 in general 10 Classification 05 in general 11 Cell Cycle, Devolopment 12 Censification 05 in general 13 Cell Cycle, Devolopment 14 Censification 05 in general 14 Cell Cycle, Devolopment 15 Cennetic Information and Devolution and polarity 16 Cennetic Information and Transduction 17 Classification 05 in general 18 Center of the proteins	02: Lipid Biology	
7 Classification O2 in general 9 Proteins 8 Proteins 9 Protein modification 9 Protein folding quality control and chaperone 0 Proteolysis 9 Classification 03 in general 1 Catalytic mechanism, regulatory mechanism and inhibitory mechanism 9 Engymene (Oxdoordeutses and robust on general 9 Engymene (Oxdoordeutses and robust on general 10 Catalytic mechanism, regulatory mechanism and inhibitory mechanism 9 Engymene (Oxdoordeutses and robust on gymene) 10 Centymene, vitamins and biofactors 10 Concession 0 Classification 04 in general 10 Concession 0 Classification 05 in general 11 Catalytic mechanism, regulatory mechanism and inhibitory mechanism 12 Classification 05 in general 13 Concession 0 Classification 05 in general 14 Concession 0 Classification 05 in general 15 Concession 0 Classification 05 in general 16 Concession 0 Classification 05 in general 17 Catalytic mechanism, regulatory extraordeuts 18 Concession 0 Classification 05 in general 19 Catalytic mechanism of general 10 Classification 05 in general 20 Catalytic mechanism of general 20 Catalytic mechanism of general 21 Catalytic mechanism of general 22 Catalytic mechanism of general 23 Catalytic mechanism of general 24 Catalytic mechanism of general 25 Catalytic mechanism of general 26 Catalytic mechanism of general 27 Catalytic mechanism of general 28 Catalytic mechanism of general 29 Catalytic mechanism of general 20 Catalytic mechanism of general 21 Catalytic mechanism of general 22 Catalytic mechanism of general 23 Catalytic mechanism of general 24 Catalytic mechanism of general 25 Catalytic mechanism of general 26 Catalytic mechanism of general 27 Catalytic mechanism of general 28 Catalytic mechanism of general 29 Catalytic mechanism of general 20 Catalytic mechanism of general 21 Ca		5) Steroids, cholesterol and lipoproteins
7 Classification O2 in general 9 Proteins 8 Proteins 9 Protein modification 9 Protein folding quality control and chaperone 0 Proteolysis 9 Classification 03 in general 1 Catalytic mechanism, regulatory mechanism and inhibitory mechanism 9 Engymene (Oxdoordeutses and robust on general 9 Engymene (Oxdoordeutses and robust on general 10 Catalytic mechanism, regulatory mechanism and inhibitory mechanism 9 Engymene (Oxdoordeutses and robust on gymene) 10 Centymene, vitamins and biofactors 10 Concession 0 Classification 04 in general 10 Concession 0 Classification 05 in general 11 Catalytic mechanism, regulatory mechanism and inhibitory mechanism 12 Classification 05 in general 13 Concession 0 Classification 05 in general 14 Concession 0 Classification 05 in general 15 Concession 0 Classification 05 in general 16 Concession 0 Classification 05 in general 17 Catalytic mechanism, regulatory extraordeuts 18 Concession 0 Classification 05 in general 19 Catalytic mechanism of general 10 Classification 05 in general 20 Catalytic mechanism of general 20 Catalytic mechanism of general 21 Catalytic mechanism of general 22 Catalytic mechanism of general 23 Catalytic mechanism of general 24 Catalytic mechanism of general 25 Catalytic mechanism of general 26 Catalytic mechanism of general 27 Catalytic mechanism of general 28 Catalytic mechanism of general 29 Catalytic mechanism of general 20 Catalytic mechanism of general 21 Catalytic mechanism of general 22 Catalytic mechanism of general 23 Catalytic mechanism of general 24 Catalytic mechanism of general 25 Catalytic mechanism of general 26 Catalytic mechanism of general 27 Catalytic mechanism of general 28 Catalytic mechanism of general 29 Catalytic mechanism of general 20 Catalytic mechanism of general 21 Ca		6) Fatty acids, glycerides and neutral lipids
10 Structural biology, prediction of function and drug design 21 Protein modification 31 Protein modification 32 Protein modification 33 Protein position (1) Protein (1) Protein position (1) Protein (1) Prot		
29 Protein modification 30 Protein Modification 31 Protein Modification 40 Protein Modification 51 Classification of sin general 52 Enzymes (Notiordeutases and related enzymes) 53 Enzymes (Notiordeutases and related enzymes) 54 Enzymes (Notiordeutases and related enzymes) 55 Redox and Energy 56 Redox and Energy 57 Conversion 58 Enzymes (Modification Off in general) 59 Enzymes (Notiordeutases and related enzymes) 69 Conversion 69 Cell Structure and 60 Cell Structure and 60 Cell Structure and 60 Punction 60 Cell Structure and 60 Punction 70 Classification 05 in general 71 Enzymes (Notiordeutases and redox regulation) 72 Lossification 05 in general 73 Enzymes (Notiordeutases and redox regulation) 74 Cellular Response 75 Cellular Response 76 Cell Structure and 76 Punction 77 Cellular Response 78 Enzymes (Notiordeutases) 79 Cellular Response 79 Cellular Response 70 Cellular Response 71 Cellular Response 72 Cellular Response 73 Cellular Response 74 Protein Response 75 Cellular Response 76 Cell Sydo, Devolopment 76 Cell Sydo, Devolopment 77 Cellular Response 78 Enzymes Response 79 Protein Response 70 Cellular Response 70 Cell Cydo, Devolopment 70 Cellular Response 70 Cell Cydo, Devolopment 71 Centeria Response 71 Centeria Response 72 Cellular Response 73 Centeria Response 74 Protein Response 75 Cellular Response 76 Cell Cydo, Devolopment 77 Centeria Response 78 Protein Response 79 Protein Response 70 Cellular Response 70 Centeria Response 71 Centeria Response 71 Centeria Response 72 Centeria Response 73 Protein Response 74 Protein Response 75 Cellular Response 76 Cell Cydo, Devolopment 77 Centeria Response 77 Centeria Response 78 Protein Response 79 Protein Response 70 Centeria Response 70 Centeria Response 71 Centeria Response 71 Centeria Response 71 Centeria Response 72 Centeria Response 73 Protein Response 74		
30 Proteins 0		
4 Proteclysis 5 Classification 3 in general	OS: Danks's s	_,
5 Classification 03 in general	03. Froteins	
10 Catalytic mechanism, regulatory mechanism and inhibitory mechanism		·
2 Enzymes (Oxidoreductases and related enzymes) 3 Enzymes (Metabolism 40 Enzymes (Hydrolytic enzymes) 5 Coencymes, vistamins and biofactors 6 Oxensymes, vistamins and biofactors 7 Classification 04 in general 105 Redox and Energy Conversion 205 Endox and Energy Conversion 30 Electron transport and biocenergetics 10 Hombrane transporter 206 Cell Structure and Punction 40 Classification 05 in general 10 Membrane transporter 20 Adhesion, motility, extracellular matrix and cytoskeleton 20 Turacellular traffic systems (Vesicular transport etc.) 20 Classification 06 in general 20 Autophagy 21 Cellular Response 22 Autophagy 23 Cell death (Apoptosis etc.) 24 Oxerses response 25 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 26 Cell Structurion 27 Cellular signaling molecules (Bioactive substances, hormones, etc.) 28 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 29 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 20 Cell cycle, Development 20 Cell Cycle, Development 21 Cell cycle, cell division and plantity 22 Early development, Morphogenesis and growth control 23 Cell Cycle, cell division and plantity 24 Early development, Morphogenesis and growth control 25 Extracellular signaling molecules 26 Chromatia and processing transport, translation and degradation (including non-coding RNA) 26 Classification 09 in general 27 Classification 09 in general 28 Chromatia and opigenetics 29 DNA replication, recombration, mutation and repair 20 Chromatia and opigenetics 20 Chromatia and opigenetics 20 Chromatia and opigenetics 21 Chromation and opigenetics 22 Early development, Morphogenesis and growth control 23 Expression 24 Chromation (10 in general 25 Chromatia and opigenetics) 26 Chromation (20 in general 27 Classification (20 in general 28 Chromation (20 in general 29 Chromation (20 in general 20 Chromation (20 in general 20 Chromation (20 in general 20 Chromation (20 in general 21 Chromation (20 in general 22 Chromation (20 in general 23 Express (20		
30 Enzymes and Metabolism 30 Enzymes (Metabolism and sendonoism and beam enzymes) 30 Coenzymes, vitamins and biofactors 30 Metabolism and venobiotic metabolism 7 Classification of 1 peneral 1 D ROS generation, oxidative stress and redox regulation 2 D Intransport and bioenergetics 30 Electron transport chain 30 Classification of 5 in general 1 D Membrane transporter 2 D Intransport and bioenergetics 30 Electron transport chain 30 Classification of 5 in general 1 D Membrane transporter 2 D Membrane transporter 3 Structure (Intraellular ratific systems (Vesucular transport etc.) 30 Classification of 6 in general 1 D Hological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 30 Classification of 6 in general 1 D Hological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 30 Classification of 7 in general 1 D Membrane receptors and ion channels 2 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3 Nuclear receptors and ion channels 2 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3 Nuclear receptors 3 Protein kinases and phosphatases 3 D Protein kinases and phosphatases 3 D Protein kinases and phosphatases 3 D Protein kinases and ploarity 2 D Edity development, Morphogenesis and growth control 3 Stem cell and cell differentiation 4 D Classification of 10 in general 1 D Cell cycle, cell division and polarity 2 D Edity development, Morphogenesis and growth control 3 Stem cell and cell differentiation 4 D Classification of 10 in general 1 D Clas		
Dispersion of the Property o		2) Enzymes (Oxidoreductases and related enzymes)
Dispersion of the Property o		3) Enzymes (Metalloenzymes and heme enzymes)
Section	-	
6 Metabolism and senebiscic metabolism 7 Classification of a in general 10 Redox and Energy Conversion 20 In Consport and bioenergetics 3 Electron transport chain 4 Classification of 1 in general 1 Deferrence and property 2 Adhesion, motility, extracellular matrix and cytoskeleton 3 Structure, function and biogeneposis of organelles 4 Intracellular traffic systems (Visicular transport etc.) 9 Classification of 6 in general 1 Disological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 2 Autophagy 3 Cell Classification of 6 in general 1 Disological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 2 Autophagy 3 Cell death (Apoptosis etc.) 4 Stress response 5 Environmental biology 6 Classification of 7 in general 1 Disological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 2 Stress response 5 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3 Nuclear receptors 4 Classification of 8 in general 10 Classification of 1 in general 10 Classification of 1 in general 10 Classification of 1 in general 11 Structure and function of chromosome and nucleus 2 DA replication, recombination, mutation and repair 3 Transcription and its regulation 4 Classification of 10 in general 1 Structure and function of chromosome and nucleus 2 DA replication, recombination, mutation and repair 3 Transcription and its regulation 4 Classification of 1 in general 1 Demantical and single generics 3 Engle molecule single generics 4 Chromatin and egipenetics 5 RNA processing, transport, translation and degradation (including non-coding RNA) 6 Classification 1 in general 1 Classification 1 in general 1 Demantical and metabolic diseases 3 Diseases in general 1 Development of facility properties and channels and the sensory system shology 3 Substance metabolism and signal transduction 4 Development of neural networks 2 Symaptic transmission and plasticity, receptors and channels and the sensory system 3 Office of the properties of the properties of the properties	Metabolism	
7. Classification 04 in general		
D. Rody generation, oxidative stress and redox regulation D. Intransport and biomeregetics		
20 Ion transport and bioenergetics		
Conversion 2-100 transport chain 4 Classification 05 in genored 1 Membrane transport chain 2 Adhesion, motility, extracellular matrix and cytoskeleton 3 Electron transported 2 Adhesion, motility, extracellular matrix and cytoskeleton 3 Electron transport etc. 3 Electron transport etc. 4 Classification 06 in genoral 4 Electron transport etc. 5 Classification 06 in genoral 6 Classification 07 in general 8 Electron transport etc. 9 Electron transport etc. 1 Electron transport etc. 2 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3 Nuclear receptors 4 Protein kinases and phosphatases 5 C proteins 6 Intracellular signaling molecules 7 Classification 08 in general 1 Cell cycle, cell division and polarity 1 Early development, Morphogenesis and growth control 3 Electron transport chain 4 Classification 09 in general 1 Structure and function of chromosome and nucleus 2 DNA replication, recombination, mutation and repair 3 Electron transport chain 4 Chromatin and epigenetics 5 RNA processing, transport, translation and degradation (including non-coding RNA) 6 Classification 10 in general 1 Ome research and analysis technology 1 Ome research and analysis technology 2 Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3 Systems biology 1 Cancer 2 Aging and life style related diseases 4 Heroditary diseases 5 Drug discovery, bioactive compounds and food science 6 Molecular diagnosis, laboratory medicine, etc. 7 Classification 12 in general 1 Development of neural networks 2 Synapit transmission and plasticity, receptors and channels and the sensory system 8 Neuroscience 1 Development of neural networks 2 Synapit transmission and plasticity, receptors and channe	05: Redox and Energy	
3 Electron transport chain 4 Classification 05 in general 1 Membrane transporter 2 Adhesion, motibity, extracellular matrix and cytoskeleton 3 Structure, function and biogenesis of organelles 4 Intracellular traffic systems (Vesicular transport etc.) 5 Classification 06 in general 1 Biological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 2 Autophagy 30 Cell death (Apoptosis etc.) 4 Stress response 5 Environmental biology 6 Classification 07 in general 1 Membrane receptors and ion channels 2 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3 Nuclear receptors 5 G proteins 6 Intracellular signaling molecules 7 Classification 08 in general 10 Cell cycle, Development 10 Cell cycle, cell division and polarity 2 Early development, Morphogenesis and growth control 3 Stem cell and cell differentiation 10 Structure and function of chromosome and nucleus 2 DNA replication, recombination, mutation and repair 10 Genetic Information and Expression 10 Classification 10 in general 11 Down research and analysis technology 2 Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3 RNA processing, transport, translation and degradation Gincluding non-coding RNA) 6 Classification 10 in general 1 One research and analysis technology 2 Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3 Systems biology 4 Chronobiology, sleep, photoperiodism and rhythm 5 Drug discovery, bioactive compounds and food science 6 Evolution and biodiversity 7 Genetic, nucleic acid, glycotechnology and cell engineering 8 Classification 11 in general 10 Cancer 20 Aging and life style-related diseases 3 Endoerinological and metabolic diseases 4 Diseases in general 6 Molecular diagnosis, laboratory medicine, etc. 7 Classification 12 in general 10 Development of neural networks 20 Synaptic transmi		
Oc. Cell Structure and Function Diembrane transporter	CONVETSION	3) Electron transport chain
10. Cell Structure and Function 11. Membrane transporter 22. Adhesion, motility, extracellular matrix and cytoskeleton 33. Structure, function and biogenesis of organelles 44. Intracellular traffic systems (Vesicular transport etc.) 55. Classification of in general 10. Biological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 24. Autophagy 37. Cell death (Apoptosis etc.) 47. Stress response 56. Classification of 7 in general 18. Membrane receptors and ion channels 29. Extracellular signaling molecules (Bioactive substances, hormones, etc.) 30. Nuclear receptors 40. Horedinary signaling molecules (Bioactive substances, hormones, etc.) 31. Nuclear receptors 40. Protein kinasses and phosphatases 57. Classification of 8 in general 19. Cell cycle, Development 41. Classification of 8 in general 10. Cell cycle, cell division and polarity 21. Early development, Morphogenesis and growth control 33. Stem cell and cell differentiation 44. Classification of 9 in general 15. Structure and function of chromosome and nucleus 16. Structure and function of chromosome and nucleus 17. Structure and function of chromosome and nucleus 18. Na Processing, transport, translation and degradation (including non-coding RNA) 46. Classification 10 in general 10. Ome research and analysis technology 27. Single molecule biochemistry, single cell biochemistry, imaging and biosensor 38. Systems biology 40. Chromobiology, sleep, photoperiodism and rhythm 51. Drug discovery, bioactive compounds and food science 40. Horeditary diseases 40. Horeditary diseases 40. Horeditary diseases 40. Horeditary diseases 41. Classification 12 in general 11. Development of neural networks 22. Synaptic transmission and plasticity, receptors and channels and the sensory system 38. Substance metabolism and signal transduction 49. Delular immunology and immune regulation 40. Classification 13 in general 10. Development of neural networks 21. Synaptic transmission and plasticity, receptors and channe		4) Classification 05 in general
20 Adhesion, motility, extracellular matrix and cytoskeleton		
Signature and Signature, function and biogenesis of organelles		
Ontracellular traffic systems (Vesicular transport etc.)	06: Cell Structure and	
10 Classification 06 in general 11 Biological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 22 Autophagy 23 Cell death (Apoptosis etc.) 24 Classification 07 in general 15 Membrane receptors and ion channels 26 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 27 Classification 07 in general 28 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 29 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 20 Classification 08 in general 20 Cell Cycle, Development 20 Cell Cycle, Development 21 Cell Cycle, cell division and polarity 22 Early development, Morphogenesis and growth control 23 Stem cell and cell differentiation 24 Classification 09 in general 25 Early development, Morphogenesis and growth control 26 Early development, Morphogenesis and growth control 27 Classification 09 in general 28 Early development, Morphogenesis and growth control 39 Stem cell and cell differentiation 40 Classification of 9 in general 41 Classification of 9 in general 42 Classification of 9 in general 43 Chromatin and epigenetics 44 Chromatin and epigenetics 45 Classification 10 in general 46 Chromobiology, sleep, photoperiodism and rhythm 47 Cenetic, nucleus biochemistry, single cell biochemistry, imaging and biosensor 48 Systems biology 49 Chromobiology, sleep, photoperiodism and rhythm 40 Drug discovery, bioactive compounds and food science 40 Evolution and biodiversity 41 Cenetic, nucleic acid, glycotechnology and cell engineering 41 Classification 11 in general 41 Chromobiology, sleep, photoperiodism and rhythm 42 Drug discovery, bioactive compounds and food science 43 Expression 11 in general 44 Chromobiology, sleep, photoperiodism and rhythm 55 Drug discovery, bioactive compounds and food science 66 Evolution and biodiversity 77 Clenetic, nucleic acid, glycotechnology and cell engineering 87 Classification 12 in general 88 Expression 11 in general 89 Classification 12 in general 90 Development of neural networks 91 Systems and signal transdu	Function	
19 Biological interactions (Symbiotic and pathogenic microorganisms, insects, etc.) 29 Autophany 30 Cell death (Apoptosis etc.) 40 Stress response 51 Environmental biology 61 Classification 07 in general 11 Membrane receptors and ion channels 22 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 31 Nuclear receptors 41 Protein kinases and phosphatases 42 Protein kinases and phosphatases 43 Protein kinases and phosphatases 44 Protein kinases and phosphatases 45 Of groteins 45 Of Broteins 46 Intracellular signaling molecules 47 Classification 08 in general 48 Cell Cycle, Development 49 Early development, Morphogenesis and growth control 49 Stem cell and cell differentiation 40 Classification 09 in general 40 Structure and function of chromosome and nucleus 40 DNA replication, recombination, mutation and repair 40 Classification 10 in general 40 Chromatin and epigenetics 51 RNA processing, transport, translation and degradation (including non-coding RNA) 40 Classification 10 in general 40 Chromatin and epigenetics 51 RNA processing, transport, translation and degradation (including non-coding RNA) 40 Classification 10 in general 40 Chromation and including non-coding RNA) 40 Classification 10 in general 40 Chromation and including non-coding RNA) 41 Classification 10 in general 41 Chromobiology, sleep, photoperiodism and rhythm 42 Single molecule biochemistry, single cell biochemistry, imaging and biosensor 43 Systems biology 44 Chromobiology, sleep, photoperiodism and rhythm 45 Drug discovery, bioactive compounds and food science 46 Evolution and biodiversity 47 Genetic, nucleic acid, glycotechnology and cell engineering 48 Classification 11 in general 40 Classification 12 in general 41 Development of neural networks 42 Synaptic transmission and plasticity, receptors and channels and the sensory system 43 Substance metabolism and signal transduction 44 Behavior, cognition and biological rhythms 45 Nervous and mental disorders 46 Classification 13 in general		
107: Cellular Response 20		
10°- Cellular Response 30°- Cell death (Apoptosis etc.) 40°- Stress response 50°- Environmental biology 60°- Classification 07° in general 10°- Cell Cycle, Development 10°- Cell Cycle, Cycle, Development 10°- Cycle, Cycle, Cycle, Cycle, Development 10°- Cycle, Cycle, Cycle, Development 10°- Cycle, Cycle, Development 10°- Cycle, Cycle, Development 10°- Cycle, Cycle, Development 10°- Cycle, Cycle, Cycle, Cycle, Cycle, Development 10°- Cycle, Cycle, Cycle, Cycle, Cycle, Cycle, Cycl		
4) Stress response 5) Environmental biology 6) Classification of in general 1) Membrane receptors and ion channels 2) Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3) Nuclear receptors 4) Protein kinases and phosphatases 5) G proteins 6) Intracellular signaling molecules (Bioactive substances, hormones, etc.) 7) Classification 08 in general 1) Cell cycle, cell division and polarity 2) Early development, Morphogenesis and growth control 3) Stem cell and cell differentiation 4) Classification 09 in general 1) Structure and function of chromosome and nucleus 2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chromobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 10 Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 10 Powelopment of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 14: Immunity and Infectious diseases		2) Autophagy
4) Stress response 5) Environmental biology 6) Classification of in general 1) Membrane receptors and ion channels 2) Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3) Nuclear receptors 4) Protein kinases and phosphatases 5) G proteins 6) Intracellular signaling molecules (Bioactive substances, hormones, etc.) 7) Classification 08 in general 1) Cell cycle, cell division and polarity 2) Early development, Morphogenesis and growth control 3) Stem cell and cell differentiation 4) Classification 09 in general 1) Structure and function of chromosome and nucleus 2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chromobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 10 Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 10 Powelopment of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 14: Immunity and Infectious diseases	05: G II 1 B	3) Cell death (Apoptosis etc.)
55 Environmental biology 6 Classification of Tingeneral 1 Membrane receptors and ion channels 2 Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3 Nuclear receptors 4 Protein kinases and phosphatases 5 G proteins 60 Intracellular signaling molecules 7 Classification 08 in general 10 Cell Cycle, Development 10 Cell Cycle, Development 10 Cenetic Information and Expression 10 Structure and function of chromosome and nucleus 2 DNA replication, recombination, mutation and repair 3 Transcription and its regulation 4 Classification 10 in general 1 Ome research and analysis technology 2 Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3 Systems biology 4 Chronobiology, sleep, photoperiodism and rhythm 5 Drug discovery, bioactive compounds and food science 6 Evolution and biodiversity 7 Genetic, nucleic acid, glycotechnology and cell engineering 8 Classification 11 in general 1 Cancer 2 Aging and life style-related diseases 3 Diseases in general 1 Development of neural networks 2 Synaptic transmission and plasticity, receptors and channels and the sensory system 3 Substance metabolism and signal transduction 4 Behavior, cognition and biological rhythms 5 Neuroscience 6 Classification 12 in general 10 Development of neural networks 2 Synaptic transmission and plasticity, receptors and channels and the sensory system 3 Substance metabolism and signal transduction 4 Behavior, cognition and biological rhythms 5 Nervous and mental disorders 6 Classification 13 in general 10 Clauliar immunology and immune regulation 4 Immunopathy	07: Cellular Response	
6) Classification 07 in general 1) Membrane receptors and ion channels 2) Extracellular signaling molecules (Bioactive substances, hormones, etc.) 3) Nuclear receptors 4) Protein kinases and phosphatases 5) G proteins 6) Intracellular signaling molecules 7) Classification 08 in general 10: Cell Cycle, Development 10: Genetic Information and Expression 11: Frontier Sciences and 12: Prontier Sciences and 13: Neuroscience 14: Biology of Diseases 15: Production of Company and Company a		
18: Signal Transduction 18: Signal Transduction 18: Signal Transduction 18: Signal Transduction 19: Cell Cycle, Development 10: Cell Cycle, Development 10: Genetic Information and Expression 11: Frontier Sciences and Frontier Sciences and Expression 12: Piology of Diseases 13: Pala Genetic Information and Technology 14: Inmunity and Infection 15: Provided Application 16: Genetic Information and Expression 17: Frontier Sciences and Expression 18: Provided Application 19: Provided Application 10: Genetic Information and Expression 10: Genetic Information and Application 10: Genetic Information and Application 10: Stance Information and Application 10: Stance Information and Application 10: Stance Information and Information Application 10: Genetic Information and Application 11: Frontier Sciences and Application 12: Provided Application Information Application 13: Systems biology 14: Provided Application Information Application 15: Provided Application Information Application 16: Classification Information Application Information		
28: Signal Transduction 40: Protein kinases and phosphatases 51: G proteins 63: D proteins 64: Protein kinases and phosphatases 55: G proteins 65: G proteins 66: Intracellular signaling molecules 70: Classification 08 in general 10: Cell Cycle, Development 10: Cell Cycle, Development 10: Genetic Information and Expression 11: Frontier Sciences and Expression 11: Frontier Sciences and Expression Expression Expression 12: Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 13: Systems biology 14: Chronobiology, sleep, photoperiodism and rhythm 15: Drug discovery, bioactive compounds and food science 16: Evolution and biodiversity 17: Genetic, nucleic acid, glycotechnology and cell engineering 18: Classification 11 in general 19: Cancer 29: Aging and life style-related diseases 30: Endocrinological and metabolic diseases 40: Hereditary diseases 50: Diseases in general 60: Molecular diagnosis, laboratory medicine, etc. 70: Classification 12 in general 10: Evelopment of neural networks 20: Synaptic transmission and plasticity, receptors and channels and the sensory system 30: Substance metabolism and signal transduction 40: Behavior, cognition and biological rhythms 50: Nervous and mental disorders 60: Classification 13 in general 10: Cellular immunology and immune regulation 40: Immunopathy		
13. Nuclear receptors 4. Protein kinases and phosphatases 5. G proteins 6. Intracellular signaling molecules 7. Classification 08 in general 10. Cell cycle, cell division and polarity 2. Early development, Morphogenesis and growth control 3. Stem cell and cell differentiation 4. Classification 09 in general 10. Structure and function of chromosome and nucleus 2. DNA replication, recombination, mutation and repair 3. Transcription and its regulation 2. DNA replication, recombination, mutation and repair 3. Transcription and its regulation 4. Chromatin and epigenetics 5. RNA processing, transport, translation and degradation (including non-coding RNA) 6. Classification 10 in general 10. Ome research and analysis technology 2. Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3. Systems biology 4. Chromobiology, sleep, photoperiodism and rhythm 5. Drug discovery, bioactive compounds and food science 6. Evolution and biodiversity 7. Genetic, nucleic acid, glycotechnology and cell engineering 8. Classification 11 in general 1. Cancer 2. Aging and life style-related diseases 3. Endocrinological and metabolic diseases 4. Hereditary diseases 5. Diseases in general 6. Molecular diagnosis, laboratory medicine, etc. 7. Classification 12 in general 11. Development of neural networks 22. Synaptic transmission and plasticity, receptors and channels and the sensory system 33. Substance metabolism and signal transduction 44. Behavior, cognition and biological rhythms 55. Nervous and mental disorders 66. Classification 13 in general 76. Cellular immunology and immune regulation 77. Classification 13 in general 78. Cellular immunology and immune regulation 79. Host defense and infectious diseases		1) Membrane receptors and ion channels
10: Genetic Information and Expression 10: Genetic Information and Expression 11: Frontier Sciences and Iris Frontier Sciences Albert Frontier Frontier Sciences Albert Frontier Frontier Sciences Albert Frontier Frontie		2) Extracellular signaling molecules (Bioactive substances, hormones, etc.)
10: Genetic Information and Expression 10: Genetic Information and Expression 11: Frontier Sciences and Iris Frontier Sciences Albert Frontier Frontier Sciences Albert Frontier Frontier Sciences Albert Frontier Frontie		3) Nuclear receptors
5) G proteins 6) Intracellular signaling molecules 7) Classification 08 in general 1) Cell cycle, cell division and polarity 2) Early development, Morphogenesis and growth control 3) Stem cell and cell differentiation 4) Classification 09 in general 1) Structure and function of chromosome and nucleus 2) DNA replication, recombination, mutation and repair 2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 4) Hereditary diseases 5) Diseases 5) Diseases 6) Diseases 13: Neuroscience 14: Immunity and Infection 15: Immunopathy 16: Immunopathy 17: Immunopathy 18: Immunity and Infection 18: Index in and pical infectious diseases 19: Inflammation 20: Inflammation 20: Inflammation 20: Inflammation 20: Inflammation 20: Inflammation 20: Inflammation 21: Inflammation 21: Inflammation 22: Inflammation 23: Inflammation 24: Inflammation 25: Inflammation 26: Inflammation 27: Inflammation 28: Inflammation 29: Inflammation 20: Inflammation	08: Signal Transduction	
6) Intracellular signaling molecules 7) Classification 08 in general 1) Cell cycle, cell division and polarity 2) Early development, Morphogenesis and growth control 3) Stem cell and cell differentiation 4) Classification 09 in general 1) Structure and function of chromosome and nucleus 2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chromobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 1) Development of neural networks 13: Neuroscience 14: Immunity and Infection 14: Immunity and Infection 15. Orlows and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Inflammation 4) Inflammation 4) Immunopathy		
7) Classification 08 in general 1) Cell cycle, cell division and polarity 2) Early development, Morphogenesis and growth control 3) Stem cell and cell differentiation 4) Classification 09 in general 1) Structure and function of chromosome and nucleus 2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Inflammation 4) Immunopathy		
1) Cell cycle, cell division and polarity 2) Early development, Morphogenesis and growth control 3) Stem cell and cell differentiation 4) Classification 09 in general 1) Structure and function of chromosome and nucleus 2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chromobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 10 Evelopment of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Inflammation 4) Inflammation 4) Inflammation 4) Immunopathy		
2) Early development, Morphogenesis and growth control 3) Stem cell and cell differentiation 4) Classification 09 in general 1) Structure and function of chromosome and nucleus 2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		
3) Stem cell and cell differentiation 4) Classification 09 in general 1) Structure and function of chromosome and nucleus 2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		
3 Stem cell and cell differentiation 4 Classification 09 in general 10 Structure and function of chromosome and nucleus 2 DNA replication, recombination, mutation and repair 3 Transcription and its regulation Expression 4 Chromatin and epigenetics 5 RNA processing, transport, translation and degradation (including non-coding RNA) 6 Classification 10 in general 1 Dome research and analysis technology 2 Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3 Systems biology 4 Chronobiology, sleep, photoperiodism and rhythm 5 Drug discovery, bioactive compounds and food science 6 Evolution and biodiversity 7 Genetic, nucleic acid, glycotechnology and cell engineering 8 Classification 11 in general 1 Cancer 2 Aging and life style-related diseases 3 Endocrinological and metabolic diseases 4 Hereditary diseases 5 Diseases in general 6 Molecular diagnosis, laboratory medicine, etc. 7 Classification 12 in general 1 Development of neural networks 2 Synaptic transmission and plasticity, receptors and channels and the sensory system 3 Substance metabolism and signal transduction 4 Behavior, cognition and biological rhythms 5 Nervous and mental disorders 6 Classification 13 in general 1 Cellular immunology and immune regulation 2 Host defense and infectious diseases 3 Inflammation 4 Immunopathy	09: Cell Cycle Development	
10: Structure and function of chromosome and nucleus 21: DNA replication, recombination, mutation and repair 31: Transcription and its regulation 41: Chromatin and epigenetics 52: RNA processing, transport, translation and degradation (including non-coding RNA) 63: Classification 10 in general 11: Frontier Sciences and 12: Frontier Sciences and 13: Neuroscience 14: Immunity and Infection 15: Structure and function of chromosome and nucleus 27: DNA replication, recombination, mutation and repair 38: Transcription and its regulation 49: Chromatin and epigenetics 50: RNA processing, transport, translation and degradation (including non-coding RNA) 60: Classification 10 in general 10: Ome research and analysis technology 20: Single molecule biochemistry, single cell biochemistry, imaging and biosensor 39: Systems biology 40: Chromobiology, sleep, photoperiodism and rhythm 51: Drug discovery, bioactive compounds and food science 60: Evolution and biodiversity 71: Genetic, nucleic acid, glycotechnology and cell engineering 80: Classification 11 in general 71: Cancer 72: Aging and life style-related diseases 73: Endocrinological and metabolic diseases 74: Hereditary diseases 75: Diseases in general 76: Molecular diagnosis, laboratory medicine, etc. 77: Classification 12 in general 77: Classification 12 in general 78: Synaptic transmission and plasticity, receptors and channels and the sensory system 78: Substance metabolism and signal transduction 79: Development of neural networks 79: Synaptic transmission and plasticity, receptors and channels and the sensory system 79: Substance metabolism and signal transduction 79: Development of neural networks 79: Synaptic transmission and plasticity, receptors and channels and the sensory system 79: Substance metabolism and signal transduction 79: Substance metabolism and signal trans	ov cen cycle, bevelopment	3) Stem cell and cell differentiation
2) DNA replication, recombination, mutation and repair 3) Transcription and its regulation 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		4) Classification 09 in general
10: Genetic Information and Expression 4 Chromatin and epigenetics 5 RNA processing, transport, translation and degradation (including non-coding RNA) 6 Classification 10 in general 1 Ome research and analysis technology 2 Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3 Systems biology 4 Chronobiology, sleep, photoperiodism and rhythm 5 Drug discovery, bioactive compounds and food science 6 Evolution and biodiversity 7 Genetic, nucleic acid, glycotechnology and cell engineering 8 Classification 11 in general 1 Cancer 2 Aging and life style-related diseases 3 Endocrinological and metabolic diseases 4 Hereditary diseases 5 Diseases in general 6 Molecular diagnosis, laboratory medicine, etc. 7 Classification 12 in general 6 Molecular diagnosis, laboratory medicine, etc. 7 Classification 12 in general 1 Development of neural networks 2 Synaptic transmission and plasticity, receptors and channels and the sensory system 3 Substance metabolism and signal transduction 4 Behavior, cognition and biological rhythms 5 Nervous and mental disorders 6 Classification 13 in general 1 Cellular immunology and immune regulation 2 Host defense and infectious diseases 3 Inflammation 4 Immunopathy		1) Structure and function of chromosome and nucleus
10: Genetic Information and Expression 4 Chromatin and epigenetics 5 RNA processing, transport, translation and degradation (including non-coding RNA) 6 Classification 10 in general 1 Ome research and analysis technology 2 Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3 Systems biology 4 Chronobiology, sleep, photoperiodism and rhythm 5 Drug discovery, bioactive compounds and food science 6 Evolution and biodiversity 7 Genetic, nucleic acid, glycotechnology and cell engineering 8 Classification 11 in general 1 Cancer 2 Aging and life style-related diseases 3 Endocrinological and metabolic diseases 4 Hereditary diseases 5 Diseases in general 6 Molecular diagnosis, laboratory medicine, etc. 7 Classification 12 in general 6 Molecular diagnosis, laboratory medicine, etc. 7 Classification 12 in general 1 Development of neural networks 2 Synaptic transmission and plasticity, receptors and channels and the sensory system 3 Substance metabolism and signal transduction 4 Behavior, cognition and biological rhythms 5 Nervous and mental disorders 6 Classification 13 in general 1 Cellular immunology and immune regulation 2 Host defense and infectious diseases 3 Inflammation 4 Immunopathy		2) DNA replication, recombination, mutation and repair
Expression 4) Chromatin and epigenetics 5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy	10: Genetic Information and Expression	
5) RNA processing, transport, translation and degradation (including non-coding RNA) 6) Classification 10 in general 1) Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		
11: Frontier Sciences and 11: Frontier Sciences and 12: Frontier Sciences and 13: Neuroscience 13: Neuroscience 14: Immunity and Infection 10: Genetic, nucleic and special spice and special spice and spice		
10 Ome research and analysis technology 2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		
2) Single molecule biochemistry, single cell biochemistry, imaging and biosensor 3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		
3) Systems biology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy	11: Frontier Sciences and Technology	
11: Frontier Sciences and Technology 4) Chronobiology, sleep, photoperiodism and rhythm 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
Technology 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
Technology 5) Drug discovery, bioactive compounds and food science 6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
6) Evolution and biodiversity 7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
7) Genetic, nucleic acid, glycotechnology and cell engineering 8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		
8) Classification 11 in general 1) Cancer 2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
12: Biology of Diseases 12: Biology of Diseases 13: Aging and life style-related diseases 14: Immunity and Infection 15: Aging and life style-related diseases 16: Aging and metabolic diseases 17: Classification 12 in general 18: Neuroscience 19: Classification 12 in general 10: Development of neural networks 20: Synaptic transmission and plasticity, receptors and channels and the sensory system 31: Neuroscience 14: Immunity and Infection 15: Classification 13 in general 16: Classification 13 in general 17: Cellular immunology and immune regulation 28: Host defense and infectious diseases 39: Inflammation 40: Immunopathy		
2) Aging and life style-related diseases 3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
3) Endocrinological and metabolic diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		,
12: Biology of Diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
12: Biology of Diseases 4) Hereditary diseases 5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy	12: Biology of Diseases	3) Endocrinological and metabolic diseases
5) Diseases in general 6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
6) Molecular diagnosis, laboratory medicine, etc. 7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
7) Classification 12 in general 1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
1) Development of neural networks 2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
2) Synaptic transmission and plasticity, receptors and channels and the sensory system 3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 4) Immunopathy		
3) Substance metabolism and signal transduction 4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		*
4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy	13: Neuroscience	
4) Behavior, cognition and biological rhythms 5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 3) Inflammation 4) Immunopathy		3) Substance metabolism and signal transduction
5) Nervous and mental disorders 6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 3) Inflammation 4) Immunopathy		4) Behavior, cognition and biological rhythms
6) Classification 13 in general 1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 3) Inflammation 4) Immunopathy		
1) Cellular immunology and immune regulation 2) Host defense and infectious diseases 14: Immunity and Infection 3) Inflammation 4) Immunopathy		
2) Host defense and infectious diseases 3) Inflammation 4) Immunopathy		
14: Immunity and Infection 3) Inflammation 4) Immunopathy		
4) Immunopathy	14.1	
	14. Immunity and Infection	
5) Classification 14 in general		
		5) Classification 14 in general

The 91st Annual Meeting of the Japanese Biochemical Society Presentation Topics

Classifications	Topics
15: Medical Inovation	1) Regenerative medicine (Stem Cells and iPS cells)
	2) Regenerative medicine (Tissue engineering and matrix engineering)
	3) Biochemistry in neuronal degenerative diseases
	4) Biochemistry in chronic inflammation
	5) Chemical biology, screening, and drug development
	6) Nucleic acid-, protein- and antibody-engineering and drug development
	7) Information science and drug development
	8) Classification 15 in general
16: Plant Biology	1) Plant ome research
	2) Plant organelle, cell and organogenesis
	3) Environmental response and photosynthes
	4) Plant-pathogen interactions
	5) Plant intracellular signal reception and transduction
	6) Classification 16 in general
17: Science Communication,	
Education, Moral Ethics and Policy	1) Science communication, education, moral ethics, policy and others