ポスター　Poster

1 日目（9 月 15 日（土））／Day 1（Sep. 15 Sat.）
PA 会場（大集会室），PB 会場（南第二集会室），PC 会場（南第三集会室），PD 会場（南第四集会室）／
Room PA (Large Assembly Room), Room PB (2nd South Assembly Room),
Room PC (3rd South Assembly Room), Room PD (4th South Assembly Room)

蛋白質：構造／Protein: Structure

1Pos001 分子動力学法を用いた Hras-GTP/GDP 複合体の各部の構造変化と各部の水素結合との動的関連性の研究
Molecular dynamics study of dynamical relationship between structures and the hydrogen bonds of some parts in the Hras-GTP/GDP complexes
Takeshi Miyakawa[1], Ryota Morikawa[1], Masako Takasu[1], Kimikazu Sugimori[2], Kazutomo Kawaguchi[3], Hidemi Nagao[3] ([1]*Sch. of Life Sci, Tokyo Univ. of Pharm. and Life Sci.*, [2]*Inst. of Liberal Arts. and Sci., Kanazawa Univ.*, [3]*Coll. of Sci. and Eng., Kanazawa Univ.*)

1Pos002 分子シミュレーションを用いた複数ドッキングポーズからの正しい結合ポーズの特定―自動デザインに向けて
Identifying correct ligand binding pose out of multiple docking poses by MD simulations toward AutoDesign
Hironori Kokubo (*Axcelead, Inc.*)

1Pos003 α シヌクレインフラグメントの 2 量体形成過程の解明に向けた定温定圧レプリカ置換分子動力学シミュレーション
Isothermal-isobaric replica-permutation molecular dynamics simulation to reveal dimerization process of α-synuclein fragments
Masataka Yamauchi[1,2,3], Hisashi Okumura[1,2,3] ([1]*SOKENDAI*, [2]*IMS*, [3]*ExCELLS*)

1Pos004 Cryo-tomography and sub-tomogram averaging of dimeric F type ATP synthase at bovine sub-mitochondrial particle
Jun-chi Kishikawa[1], Atsuko Nakanishi[1], Masatoshi Murai[2], Kaoru Mitsuoka[3], Ken Yokoyama[1] ([1]*Dept. Mol. BioSci., Kyoto Sangyo Univ.*, [2]*Div. Appl. Life Sci., Grad. Sch. Agrci., Kyoto Univ.*, [3]*Res. Ctr. UHVEM, Osaka Univ.*)

1Pos005 クライオ電子顕微鏡による好熱菌 *Thermus thermophilus* 由来 V 型 ATP 合成酵素の単粒子解析
Cryo EM structure of intact rotary H^+-ATPase/synthase from *Thermus thermophilus*
Atsuko Nakanishi[1], Jun-ichi Kishikawa[1], Masatada Tamakoshi[2], Kaoru Mitsuoka[3], Ken Yokoyama[1] ([1]*Dept. of Mol. Biosci., Kyoto Sangyo Univ.*, [2]*Dept. of Mol. Biol., Tokyo Univ. of Pharm. and Life Sci.*, [3]*Res. Ctr. for UHVEM, Osaka Univ.*)

1Pos006 Startup of Laboratory-scale SEC-SAXS (La-SSS) system
Rintaro Inoue, Ken Morishima, Nobuhiro Sato, Masaaki Sugiyama (*Institute for Integrated Radiation and Nuclear Science, Kyoto UniversityInstitute for Integrated Radiation and Nuclear Science, Kyoto University*)

1Pos007 Determination and Comparsion of the Structural Ensemble of Molten Globule State of Proteins by Computer Simulations
Masahiro Shimizu, Yuko Okamoto (*Grad. Sch. Sci., Univ. Nagoya*)

1Pos008 GPI アタッチメントシグナルの二次構造解析
Secondary structural analysis of GPI attachment signal
Keiya Inoue[1], Daiki Takahashi[1], Tatsuki Kikegawa[1], Kenji Etchuya[2], Yuri Mukai[1] ([1]*Dept. Electronics, Grad. Sch. Sci. & Tech., Meiji Univ.*, [2]*Biomed. Res. Inst., AIST*)

1Pos009 位相差クライオ電子顕微鏡単粒子解析法を用いた腸球菌 V-ATPase の構造解析
Single Particle Analysis of *Eh*V-ATPase by Phase-Plate electron cryo-microscopy
Jun Tsunoda[1,2], Chihong Song[2], Fabiana Lica Yakushiji[3], Takeshi Murata[3], Hiroshi Ueno[4], Naoyuki Miyazaki[5], Kenji Iwasaki[5], Junichi Takagi[5], Ryota Iino[1,6], Kazuyoshi Murata[1,2] ([1]*SOKENDAI*, [2]*NIPS*, [3]*Dept.Chem., Chiba Univ.*, [4]*Dept. Appl. Chem., Sch. Eng., Univ. Tokyo*, [5]*IPR, Osaka Univ.*, [6]*IMS*)

1Pos010 マルチスケールシミュレーションと構造比較を用いた、シグナル蛋白質カルモジュリンの研究
Multiscale simulation and Structural comparison of Calmodulin
Hiromitsu Shimoyama (*Kitasato University*)

1Pos011 Investigation of the common sequence-structural patterns in different protein folds using cross-profile analysis and simulation
Yu Yamamori, Kentaro Tomii (*AIST*)

1Pos012 Modeling three-dimensional (3D) volume of protein from Atomic-Force Microscopy (AFM) images
Bhaskar Dasgupta[1], Osamu Miyashita[2], Florence Tama[1,2,3] ([1]*Department of Physics, Graduate School of Science, Nagoya University*, [2]*Center for Computational Science, RIKEN, Kobe.*, [3]*Institute of Transformative Bio-Molecules (WPI-ITbM), Nagoya University*)

1Pos013 結合ヌクレオチド依存的なチューブリン C 末端テイルの構造分布に関する分子動力学計算解析
The bound-nucleotide (GDP or GTP) effects on C-terminal tails of tubulins investigated by molecular dynamics simulation
Takuma Todoroki[1], Yukinobu Mizuhara[2], Jun Ohnuki[2], Mitsunori Takano[2], Koji Umezawa[1,3] ([1]*Grad. Sch. of Sci. & Tech., Shinshu Univ.*, [2]*Grad. Scl. of Adv. Sci. & Eng., Waseda Univ.*, [3]*IBS, Shinshu Univ.*)

1Pos014 クライオ電子顕微鏡によるグルタミン酸脱水素酵素ドメイン運動の可視化
Visualizing the domain motion of Glutamate Dehydrogenase by using cryo-electron microscopy
Mao Oide[1,2], Takayuki Kato[3], Tomotaka Oroguchi[1,2], Keiichi Namba[3,4], Masayoshi Nakasako[1,2] ([1]*Grad. Sci. Tech., Keio Univ.*, [2]*RIKEN SPring-8 center*, [3]*Grad. Sch. of Front. Biosci., Osaka Univ.*, [4]*RIKEN, QBiC*)

1Pos015 クライオ電子顕微鏡単粒子解析法を用いた KcsA の構造解析
Structural Analysis of KcsA by Cryo-EM Single Particle Analysis
Hiroko Takazaki[1], Hirofumi Shimizu[2], Kaoru Mitsuoka[3], Takuo Yasunaga[1] ([1]*Grad. Sch. Comp. Sci. Syst. Eng., KIT*, [2]*Fac. Med. Sci., Univ. Fukui*, [3]*Research Center for UHVEM, Univ. Osaka*)

1Pos016 *Porphyromonas gingivitis* の線毛蛋白質 FimA の構造
Structure of FimA, a major component protein of fimbriae of *Porphyromonas gingivitis*
Kodai Okada[1], Koji Nakayama[2], Mikio Shoji[2], Satoshi Shibata[3], Katsumi Imada[1] ([1]*Grad. Sch. Sci., Osaka Univ.*, [2]*Grad. Sch. Biomedical Sci., Nagasaki Univ.*, [3]*OIST*)

1Pos017 好熱菌 V1-ATPase の単粒子解析
Single particle analysis of V1-ATPase from Thermus thermophilus
Aya Furuta[1] ([1]*Division of Life Sciences, Kyoto Sangyo University, Kyoto (Japan)*, [2]*Research Center for Ultra-High Voltage Electron Microscopy, Osaka University, Osaka (Japan)*)

1Pos018 マベガイ由来 PPL3 の構造解析
Structure analysis of PPL3 regulating pearl shell biomineralization
Setsu Nakae[1], Masafumi Shionyu[1], Tomohisa Ogawa[2], Tsuyoshi Shirai[1] ([1]*Fac. Bio-Sci., Nagahama Inst. Bio-Sci. Tech.*, [2]*Grad. Sch. Life Sci., Tohoku Univ.*)

1Pos019 Application of the solution technique to identify a binding site and mode of a ligand in a protein
Masataka Hamano, Masatake Sugita, Takeshi Kikuchi, Fumio Hirata (*Dept. Bioinf. Col. Life Sci. Ritsumeikan Univ.*)

1Pos020 MM/3D ー RISM 法を用いた水・エタノール混合溶液中における小分子間における結合エネルギー予測
Cosolvent effect on the binding affinity between small molecules in a water-ethanol mixture : MM/3D-RISM study
Kazuma Kondo[1], Masatake Sugita[1], Takeshi Kikuchi[1], Fumio Hirata[2] ([1]*Dept. of Bioinf., Col. Life Sci., Ritsumeikan Univ.*,, [2]*Toyota Phys. & Chem. Res. Inst.*)

1Pos021 MD シミュレーションを用いた BAF の野生型と変異体の揺らぎの解析
Analyses of fluctuations of wild type and mutant of BAF using MD simulation
Chiaki Yamaguchi[1], Siyao Li[2], Masatake Sugita[1], Toshiya Hayano[2], Takeshi Kikuchi[1] ([1]*Dept. of Bioinf., Col. Life Sci., Ritsumeikan Univ.*, [2]*Dept. of Biomed., Col. Life Sci., Ritsumeikan Univ.*)

1Pos022 Bio-SAXS を活用したタンパク質相関構造解析
Hybrid Approach of the Protein Structure Analysis utilizing Biological Small-Angle X-ray Scattering
Kento Yonezawa, Keiko Yatabe, Masatsuyo Takahashi, Yasuko Nagatani, Nobutaka Shimizu (*Photon Factory, IMSS, KEK*)

1Pos023 Chk1 阻害剤系の分類と自由エネルギー変分原理に基づく相対的結合自由エネルギー予測
Classification of Chk1 inhibitor system and Prediction of relative binding free energy based on a free energy variational principal
Daichi Kondo, Takeshi Ashida, Takeshi Kikuchi (*Dept. Bioinf. Col. Life Sci. Ritsumeikan Univ.*)

1Pos024 Sensitivity to radiation dose of buried waters in Green Fluorescent Protein
Hoang Anh Dao, Kiyofumi Takaba, Yang Tai, Nagayuki Hasegawa, Kazuki Takeda (*Kyoto University Graduate School of Science*)

1Pos025 ジスルフィド結合は β-ストランドを逆平行に会合することに関与している？
Do disulfide bonds involve in β-strand assembly in anti-parallel manner ?
Hiromi Suzuki (*Sch. Agri., Meiji Univ.*)

1Pos026 単粒子コヒーレント回折パターンを用いた粗視化分子モデリングのためのテンプレートマッチング法
A template matching method for coarse-grained molecular modelling using a noisy single particle coherent diffraction pattern
Atsushi Tokuhisa[1,5], Ryo Kanada[1], Shuntaro Chiba[2], Yuta Isaka[3], Biao Ma[3], Shigeyuki Matsumoto[2], Kei Terayama[4,6], Narutoshi Kamiya[7], Yasushi Okuno[1,2,3,4] ([1]*RIKEN. RCSTI. RCH*, [2]*RIKEN. RCSTI. MIH*, [3]*FBRI. CCD*, [4]*Grad. Sch. Med., Univ. Kyoto*, [5]*RIKEN. R-CCS*, [6]*RIKEN. AIP*, [7]*Grad. Sch. Sim., Univ. Hyogo*)

1Pos027 テンプレートの MD シミュレーションを利用したタンパク質モデリングツールの開発
Development of Template-based Protein Structure Modeling Software using Molecular Dynamics Simulations of Template proteins
Masaya Furue, Naoyuki Miyashita, Mitsutaka Nemoto (*BOST, KINDAI Univ.*)

1Pos028 Hsp90 をターゲットとするペプチドアプタマーの構造と、シミュレーションのための力場作成支援プログラムの開発
Dynamics of peptide aptamer which targeting Hsp90 and the development of supporting program for modification of force field parameters
Lisa Matsukura[1], Kazuto Mochizuki[2], Masumi Taki[2], Naoyuki Miyashita[1], Shinichi Watanabe[2] ([1]*BOST, KINDAI Univ.*, [2]*GSIE, UEC.*)

1Pos029 A skewed distribution of psi-loop motifs in the protein structure database
Koki Fukuda, George Chikenji (*Dept. Appl. Phys. ,Grad. Sch. Eng. , Nagoya Univ.*)

1Pos030 The protein structure database analysis of the greek key motif and its similar structures
Ryuichiro Ueda, George Chikenji (*Dept. Appl. Phys. , Grad. Sch. Eng. , Nagoya Univ.*)

1Pos031 Observation of the dynamics associated with ubiquitination of HECT E3 ubiquitin ligase using High speed AFM
Ikumi Muro[1], Huminori Kobayashi[1], Takahiro Nakayama[2], Noriyuki Kodera[2], Toshio Ando[2], Hiroki Konno[2] ([1]*Graduate School of Natural Science & Technology, Kanazawa University*, [2]*Nano life science institute, Kanazawa University*)

1Pos032 転写制御因子 LmrR および QacR における多剤認識メカニズムに関する分子シミュレーション研究
Molecular simulation study of the underlying mechanism of multidrug recognition in transcriptional regulators LmrR and QacR
Kazuho Cryershinozuka, **Tadaomi Furuta**, Minoru Sakurai (*Center for Biol. Res. & Inform., Tokyo Tech*)

1Pos033 Attempts at CA-type formal analysis of fibrous assembly of particles
Takashi Konno (*Mol. Physiol. Med. Univ. Fukui*)

1Pos034 ファーマコフォア解析を用いたビタミン D 受容体のアゴニスト/アンタゴニスト活性調節機構の研究
Regulation mechanism of agonistic / antagonistic activities of vitamin D receptor studied by pharmacophore analysis
Takafumi Kudo, Toru Ekimoto, Mitsunori Ikeguchi (*Grad. Sch. Medical Life Sci., Yokohama City Univ.*)

1Pos035 基準振動のネットワーク解析による TCR-pMHC 複合体の動的構造
Dynamic structures of TCR-pMHC complexes studied by a network analysis of normal modes
Hiroshi Wako[1], Yuko Tsuchiya[2], Shigeru Endo[3] ([1]*Sch. of Soc. Sci., Waseda Univ.*, [2]*AIRC, AIST*, [3]*Sch. of Sci., Kitasato Univ.*)

蛋白質：構造機能相関／Protein: Structure & Function

1Pos036 サルモネラ菌べん毛タンパク質 FliC と FljB で構成された繊維構造の比較と機能の違い
Structural comparison between Salmonella flagellar filaments consisting of FliC and FljB and the implication for their functions
Tomoko Yamaguchi[1], Takayuki Kato[1], Naoya Terahara[1], Shoko Toma[1], Keiichi Namba[1,2] ([1]*Osaka University FBS*, [2]*BDR & SPRING-8, RIKEN*)

1Pos037 溶液 NMR 法を用いた MAPK p38α によるストレスシグナル伝達最適化の構造機構の解明
Structural Basis for the Optimum Stress Signal Transduction via MAPK p38α under the ATP-depleted, Low pH Condition Elucidated by NMR
Yuji Tokunaga[1,2], Koh Takeuchi[1], Hideo Takahashi[3], Ichio Shimada[1,4] ([1]*molprof, AIST*, [2]*JBIC*, [3]*Grad Sch Med Life Sci, YCU*, [4]*Grad Sch Pharm Sci, UTokyo*)

1Pos038 自由エネルギー地形による T686A 変異 AMPA 受容体の部分作動メカニズムの解明
Free-energy landscapes reveal partial agonism at T686A mutation of AMPA receptor
Hiraku Oshima[1], Suyong Re[1], Masayoshi Sakakura[2], Hideo Takahashi[2], Yuji Sugita[1] ([1]*RIKEN BDR*, [2]*Grad. Sch. of Med. Life Sci., Yokohama City Univ.*)

1Pos039 糖転移酵素の基質特異性メカニズムの解明
Clarify of the substrate specificity mechanism of glycosyltransferase
Go Miyasaka[1], Kenji Etchuya[2], Yuri Mukai[1] ([1]*Dept. Electronics, Grad. Sch. Sci. & Tech., Meiji Univ.*, [2]*Biomed. Res. Inst., AIST*)

1Pos040 Pin1 由来のタンパク質分解酵素の触媒部位の変異解析
Mutational analysis on the catalytic site of a protease derived from Pin1
Teikichi Ikura, Nobutoshi Ito (*Med. Res. Inst., Tokyo Med. Dent. Univ.*)

1Pos041 酵素 PHBH の 2 つの没食子酸産生変異体の違いについての理論的考察
Theoretical insight into differences in two PHBH mutants that can produce gallic acid
Yoshitaka Moriwaki[1], Mirai Yato[1], Tohru Terada[2], Takatoshi Arakawa[1], Shinya Fushinobu[1], Kentaro Shimizu[1] ([1]*Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci.*, [2]*Interfaculty Initiative in Information Studies*)

1Pos042 LysW・LysY・LysZ 三者複合体仮説のモデリング
Modeling of a hypothetical ternary complex of LysW, LysY, and LysZ
Ryo Shimura[1], Yoshitaka Moriwaki[1], Tohru Terada[1,2], Takeo Tomita[1], Makoto Nishiyama[1], Kentaro Shimizu[1] ([1]*Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*, [2]*Interfaculty Initiative in Information Studies*)

1Pos043 How Toll-like receptor 4 dimerization is activated in lipid raft studied by molecular simulations
Manami Ikeda, Shyouzi Takada (*Dept. of Biophys., Div. of Bio. Sci., Grad. Sch. of Sci., Univ. of Kyoto*)

1Pos044 全反射赤外分光法による電位依存性タンパク質の構造研究
The chemistry-induced structural changes in voltage-sensing proteins studied by ATR-FTIR
Masayo Iwaki[1], Hirotaka Narita[1,2], Kohei Takeshita[2], Yasushi Okamura[3], Atsushi Nakagawa[2], Hideki Kandori[1] ([1]*Nagoya Inst. Tech.*, [2]*Inst. Protein Res., Osaka Univ.*, [3]*Grad. Sch. Med., Osaka Univ.*)

1Pos045 タンパク質の局所構造のサンプリングと構造コンプライアンス特性の解析
Sampling of Localized Structures of Proteins and Analysis of their Structural Compliance Properties
Keisuke Arikawa (*Fcl. Eng., Kanagawa Inst. of Tech.*)

1Pos046 実験と計算で明らかにした β-1,2-グルコオリゴ糖結合タンパク質の構造機能相関
Structure-function relationships of β-1,2-glucooligosaccharide-binding protein revealed by experimental and computational methods
Koichi Abe[1], Naoki Sunagawa[1], Tohru Terada[2], Takatoshi Arakawa[1], Kiyohiko Igarashi[1], Masahiro Samejima[1], Hiroyuki Nakai[3], Hayao Taguchi[4], Masahiro Nakajima[4], Shinya Fushinobu[1] ([1]*Grad. Sch. Agric. Life Sci., Univ. Tokyo*, [2]*GSII, Univ. Tokyo*, [3]*Grad. Sch. Sci. Technol., Niigata Univ.*, [4]*Dept. Appl. Bio. Sci., TUS*)

1Pos047 Wide-angle x-ray scattering study on cyanobacterial circadian clock system
Shuji Akiyama[1,2,3], Yoshihiko Furuike[1,2,3], Atsushi Mukaiyama[1,2,3], Takaaki Hikima[3] ([1]*CIMoS, IMS, NINS*, [2]*SOKENDAI*, [3]*RIKEN SPring-8 Center*)

1Pos048 Minimum free energy path of the conformational change in multidrug ABC transporter
Ryuji Ishida[1], Kei Moritsugu[1], Hiroaki Kato[2], **Akinori Kidera**[1] ([1]*Department of Medical Life Science, Yokohama City University*, [2]*Graduate School of Pharmaceutical Sciences, Kyoto University*)

1Pos049 シクロスポリン A の CHARMM 力場の開発
Development of the CHARMM force field for Cyclosporine A
Tsutomu Yamane, Yuta Watanabe, Toru Ekimoto, Mitsunori Ikeguchi (*Graduate School of Medical Life Science, Yokohama City University*)

1Pos050 Evaluation of tau's effects on flexural rigidity and growth rate of microtubule under nanometer-level precision
Hang Zhou[1], Naoto Isozaki[1], Taviare L. Hawkins[2], Jennifer L. Ross[3], Ryuji Yokokawa[1] ([1]*Kyoto University*, [2]*University of Wisconsin La Crosse*, [3]*University of Massachusetts Amherst*)

1Pos051 4-ヒドロキシイソロイシン脱水素酵素（ＨＩＬＤＨ）変異体における特異的反応に関する計算化学的研究
Computational investigation of the selective reaction in the 4-hydroxyisoleucine dehydrogenase (HILDH) mutant
Takaaki Sato[1], Yoshitaka Moriwaki[1], Tohru Terada[1,2], Kentaro Shimizu[1] ([1]*Dept. of Biotechnol., Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo*, [2]*Interfaculty Initiative in Information Studies, Univ. of Tokyo*)

1Pos052 重水素化支援中性子小角散乱と超遠心分析を協奏的に用いた αB-クリスタリンの構造と動態
Structure and kinetics of αB-crystallin by complementary use of deuteration-assisted SANS and AUC
Ken Morishima, Yusuke Sakamaki, Rintaro Inoue, Nobuhiro Sato, Masaaki Sugiyama (*Institute for Integrated Radiation and Nuclear Science*)

1Pos053 タンパク質ダイナミクスに対する多様体学習の適用
Applications of a manifold learning technique to protein dynamics
Hiroto Kikuchi, Hiroshi Fujisaki (*Dept. of Phys. Nippon Med. Sch.*)

1Pos054 培養細胞に一過性発現されたヒトヘアケラチン K85 と K35 の中間径フィラメント形成
Intermediate filament assembly of transiently expressed human hair keratins K85 and K35 in cultured cells
Yasuko Sakamoto[1], Masaki Yamamoto[1], Yuko Honda[2], Kenzo Koike[3], Toshihiko Matsumoto[1], Shoji Ando[1] ([1]*Sojo Univ. Fac. Biotech. Life Sci.*, [2]*Saga Univ. Fac. Med.*, [3]*Kao Corp.*)

1Pos055 ヤナギマツタケ（Agrocybe cylindracea）の子実体特異的蛋白質 PRI4 の免疫組織化学と分子物性
Immunohistochemistry and molecular property of a fruiting body-specific protein, PRI4, of the basidiomycete Agrocybe cylindracea
Mitsuki Hashimoto[1], **Chika Abematsu**[1], Masayuki Ikeda[1], Masashi Shin[1], Makoto Iwata[2], Toshihiko Matsumoto[1], Shoji Ando[1] ([1]*Sojo Univ. Fac. Biotech. Life Sci.*, [2]*IMB*)

1Pos056 Crystal structure of human oxidative nucleotide hydrolase in complex with a newly found substrate

Kana Fujimiya[1], **Teruya Nakamura**[1,2,3], Yuta Suzuki[1], Shaimaa Waz[2], Keisuke Hirata[2], Mami Chirifu[2], Shinji Ikemizu[1,2], Yuriko Yamagata[1,2] ([1]*Sch. of Pharmacy, Kumamoto Univ.*, [2]*Grad. Sch. of Pharmaceut. Sci., Kumamoto Univ.*, [3]*Priority Organization for Innovation and Excellence, Kumamoto Univ.*)

1Pos057 細菌 9 型分泌装置蛋白質 PorM の構造

Structure of PorM, a core component of bacterial type IX secretion system

Keiko Sato[1], Kodai Okada[2], Daisuke Nakane[3], Koji Nakayama[1], Katsumi Imada[2] ([1]*Grad. Sch. Biomedical Sci., Nagasaki Univ.*, [2]*Grad. Sch. Sci. Osaka Univ.*, [3]*Dept. Phy. Gakushuin Univ.*)

1Pos058 高速 AFM による IV 型線毛 ATPase-PilB の観察

Observation of the type IV pilus assembly ATPase PilB by using High-Speed AFM

Shogo Sugiyama[1], Zhaomin Yang[2], Takayuki Uchihashi[3] ([1]*Dept. of Phys., Kanazawa Univ.*, [2]*Dept. of Biol. Sci., Virginia tech.*, [3]*Dept. of Phys., Nagoya Univ.*)

1Pos059 3D−RISM 理論を応用した溶液中における Met−enkephalin の構造揺らぎの解析

Analysis of structural fluctuations of Met-encephalin in the solution phase by means of 3D-RISM theory

Masatake Sugita[1], Fumio Hirata[2] ([1]*Dept. of Bioinfo., Col. of Life Sci., Ritsumeikan Univ.*, [2]*Toyota Phys. & Chem. Res. Inst.*)

1Pos060 Design of peptides to hasten actin depolymerization

Clement P. M. Scipion[1,2], Robert C. Robinson[1,2,3] ([1]*INSTITUTE OF MOLECULAR AND CELL BIOLOGY*, [2]*NATIONAL UNIVERSITY OF SINGAPORE*, [3]*Research Institute for Interdisciplinary Science, Okayama University*)

1Pos061 残基間コンタクトプロファイルに基づく MD 計算トラジェクトリの比較手法：PDZ3 ドメインと CypA タンパク質への応用

Comparing two MD simulation trajectories in terms of residue-residue contact: detection of allostery in PDZ3 domain and CypA protein

Chie Motono[1], Takatsugu Hirokawa[1,2] ([1]*molprof, AIST*, [2]*Fac Med., Univ. Tsukuba*)

1Pos062 細胞骨格タンパク質であるビメンチンの細胞膜上への出現機構の解明

Elucidation of recruitment mechanism of vimentin to cell surface

Beomju Hwang[1], Hirohiko Ise[2] ([1]*Grad. Sch. Eng., Kyushu Univ.*, [2]*IMCE, Kyushu Univ.*)

1Pos063 酵素の触媒塩基におけるプロトンの配座転移に関するアンブレラ・サンプリング

Umbrella sampling on proton shift in catalytic base of enzyme

Kyosuke Sato (*Dept. Mol. Phys., Fac. Life Sci., Kumamoto Univ.*)

1Pos064 滴定 X 線溶液散乱を用いた GGA の構造と相互作用の解析

Structure and interaction analysis of GGA by using titration SAXS measurement

Yugo Hayashi[1], Natsumi Endo[1], Yoichi Yamazaki[1], Kazuhisa Nakayama[2], Soichi Wakatsuki[3], Hironari Kamikubo[1] ([1]*Div. Mat. Sci., NAIST*, [2]*Grad. Sch. Pharm., Kyoto Univ.*, [3]*Stanford Univ.*)

1Pos065 Ragulator-Rag GTPases 複合体構造における p18 の重要性

Crucial role of p18 component in assembly of Ragulator-Rag GTPases complex

Ryo Yonehara[1], Shigeyuki Nada[2], Tomokazu Nakai[2], Masahiro Nakai[2], Ayaka Kitamura[2], Akira Ogawa[2], Hirokazu Nakatsumi[3], Keiichi I. Nakayama[3], Songling Li[2], Daron M. Standley[2], Eiki Yamashita[1], Atsushi Nakagawa[1], Masato Okada[2] ([1]*Inst. for Protein Res., Osaka Univ.*, [2]*RIMD, Osaka Univ.*, [3]*Med. Inst. of Bioregulation, Kyushu Univ.*)

1Pos066 植物ホルモン「ブラシノステロイド」の生合成の鍵酵素 CYP90B1 の結晶構造解析

Structural insights into a key step of brassinosteroid biosynthesis

Keisuke Fujiyama[1], Tomoya Hino[1], Bunta Watanabe[2], Hyoung Jae Lee[3], Masaharu Mizutani[3], **Shingo Nagano**[1] ([1]*Grad. Sch. Eng., Tottori Univ.*, [2]*Inst. Chem. Res., Kyoto Univ.*, [3]*Grad. Sch. Agr., Kobe Univ.*)

1Pos067 分子動力学シミュレーションを用いた抗 HIV 中和抗体 PG9 と PG16 の CDR-H3 についての構造揺らぎの比較
Molecular dynamics study of structural Fluctuations in CDR-H3 of anti-HIV antibodies PG9 and PG16
Naoki Tanabe[1], Ryo Kiribayashi[1], Hiroko X Kondo[1], Daisuke Kuroda[2], Toru Saito[1], Jiro Kohda[1], Akimitsu Kugimiya[1], Yasuhisa Nakano[1], Kouhei Tsumoto[3], Yu Takano[1] ([1]*Sch. Info. Sci., Hiroshima City Univ.*, [2]*Grad. Sch. Eng., Univ. Tokyo*, [3]*Inst. Med., Univ. Tokyo*)

1Pos068 Crystal analysis investigates signaling molecule for general response protein RsbQ in Bacillus subtilis
Nipawan Nuemket[1], Kazuki Omichi[2], Takashi Kumasaka[1] ([1]*JASRI/SPring-8*, [2]*Kwansei Kaguin University*)

1Pos069 部位特異的スピンラベル EPR 分光法による ABC トランスポーター; BhuUV の構造変化の実時間測定
Real-time measurements of the conformational changes in ABC transporter; BhuUV, revealed by site-directed spin-labeling EPR spectroscopy
Kizashi Onishi, Motonari Tsubaki, Yasuhiro Kobori, Tetsunari Kimura (*Grad. Sch. Sci., Kobe Univ.*)

1Pos070 SR-Ca^{2+}-ATPase におけるリガンド解離の分子動力学法シミュレーション
Molecular dynamics simulations for dissociation of ligands in SR-Ca^{2+}-ATPase
Chigusa Kobayashi[1], Yasuhiro Matsunaga[1,2], Jaewoon Jung[1,3], Yuji Sugita[1,3,4] ([1]*RIKEN R-CCS*, [2]*JST PRESTO*, [3]*RIKEN TMS*, [4]*RIKEN BDR*)

1Pos071 Molecular simulation of protein conformational transition using a two-structure based model
Mashiho Ito, Ryota Mori, Tomoki P. Terada, Masaki Sasai (*Nagoya Univ.*)

1Pos072 網羅的構造解析によって示された基質結合蛋白質の天然変性領域の動的役割
Dynamic roles of intrinsically disordered regions of ligand binding proteins suggested by the comprehensive structural search
Satoshi Omori, Hafumi Nishi, Kengo Kinoshita (*Grad. Sch. of Info. Sci., Tohoku Univ.*)

1Pos073 時計タンパク質 KaiC に組み込まれたアロステリック制御
Allosteric Regulation Designed in Clock Protein KaiC
Yoshihiko Furuike[1,2], Atsushi Mukaiyama[1,2], Eiki Yamashita[3], Takao Kondo[4], Shuji Akiyama[1,2] ([1]*Research Center of Integrative Molecular Systems (CIMoS), Institute for Molecular Science (IMS)*, [2]*Department of Functional Molecular Science, SOKENDAI (The Graduate University for Advanced Studies)*, [3]*Institute for Protein Research, Osaka University*, [4]*Graduate School of Science, Nagoya University*)

1Pos074 全原子および粗視化シミュレーションによるバクテリアフリッパーゼ Pg1K の動作機構研究
Flipping mechanisms of bacterial flippase Pg1K studied by all-atom and coarse grained simulations
Yutaka Murata, Toru Niina, Shoji Takada (*Biophys. Sci. Kyoto Univ*)

1Pos075 タンパク質の折れ畳みの協同性が語るトポロジーの選択性
Cooperativity of protein folding tells us about topology selectivity in genome
Nobu C. Shirai[1], Shintaro Minami[2] ([1]*Center for Info. Tech. and Networks, Mie Univ.*, [2]*NINS, ExCELLS*)

放射線生物：活性酸素／Radiobiology: Active oxygen

1Pos076 銅イオン結合したプリオンペプチドのレドックスポテンシャル
Redox potential of copper-binding prion peptide
Shuhei Murakami, Yukihaya Watanabe, Wakako Hiraoka (*Grad.Sch.of Sci.& Tech.,Meiji Univ*)

1Pos077 酸化ストレスによるミトコンドリア電子伝達系機能異常の ESR 分析
ESR analysis of ROS-induced dysfunction of electron transport chain of mitochondria
Yukihaya Watanabe, Syuhei Murakami, Wakako Hiraoka (*Grad. Sch. of Sci. & Tech., Meiji Univ*)

1Pos078 NHEJ pathway mainly repairs lethal damage caused by the direct action of X-irradiation
Ryoichi Hirayama, Akiko Uzawa, Motofumi Suzuki, Sumitaka Hasegawa (*QST NIRS*)

生命の起源・進化／Origin of life & Evolution

1Pos079 Evaluation of correlation between fluctuation of enzyme activity and evolvability by single enzyme activity measurement
Morito Sakuma[1], Hiroshi Ueno[1], Kentaro Miyazaki[2], Kazuhito Tabata[1], Hiroyuki Noji[1,3] ([1]*Graduate School of Engineering, The University of Tokyo*, [2]*National Institute of Advanced Industrial Science and Technology (AIST)*, [3]*Impulsing Paradigm Change through Disruptive Technologies Program (ImPACT, JST)*)

1Pos080 High-throughput Laboratory Evolution of E. coli to Unveil Phenotypic Plasticity and Constraint
Chikara Furusawa[1,2], Takaaki Horinouchi[1], Tomoya Maeda[1] ([1]*BDR, RIKEN*, [2]*UBI, Univ. Tokyo*)

1Pos081 Natural Peptide-Oligomerization under Aqueous Condition
Muneyuki Matsuo[1,2], Kensuke Kurihara[2,3] ([1]*The Univ. of Tokyo*, [2]*Institute for Molecular Science*, [3]*Exploratory Research Center on Life and Living Systems*)

1Pos082 鋳型ライゲーションにおいて頻度依存的な選択がエラーカタストロフィーを抑制する
Suppression of error catastrophe by frequency-dependent information selection in template-directed ligation
Yasuhiro Magi, Shoichi Toyabe (*Appl. Phys., Tohoku Univ.*)

1Pos083 Experimental demonstration of information retention against diffusional mixing in templated ligation
Kazuki Hata, Shoichi Toyabe, Yasuhiro Magi (*Tohoku University*)

生体膜・人工膜／Biological & Artificial membrane: Structure & Property

1Pos084 せん断変形と狭窄変形における細胞粘弾性の負荷時間依存性
Loading-time dependence of cellular viscoelasticity under shear and squeezing deformation
Hiroaki Ito[1], Atsushi Kirimoto[1], Naoki Takeishi[2], Makoto Kaneko[1] ([1]*School of Engineering, Osaka University*, [2]*School of Engineering Science, Osaka University*)

1Pos085 Effect of lateral phase separation on mechanical stability of lipid membrane
Mika Terada, Yukihiro Tamba (*Natl. Inst. of Tech., Suzuka Coll.*)

1Pos086 抗菌ペプチド・PGLa と単一 GUV との相互作用とそれが誘起するポア形成
Interaction of Antimicrobial Peptide PGLa with Single Giant Unilamellar Vesicles and its Induced Pore Formation
Farliza Parvez[1], Md Jahangir Alam[3], Hideo Dohra[2], Masahito Yamazaki[1,3,4] ([1]*Grad. Sch. Sci. Tech., Shizuoka Univ.*, [2]*Res. Inst. Green Sci. Tech., Shizuoka University*, [3]*Res. Inst. Ele., Shizuoka Univ.*, [4]*Grad. Sch. Sci., Shizuoka Univ.*)

1Pos087 脂質分子のフリップ・フロップに対する膜張力の効果
Effect of Membrane Tension on Transbilayer Movement of Lipids
Moynul Hasan[1], Samiron Kumar Saha[1], **Masahito Yamazaki**[1,2,3] ([1]*Grad. Sch. Sci. Tech., Shizuoka Univ.*, [2]*Res. Inst. Ele., Shizuoka Univ.*, [3]*Grad. Sch. Sci., Shizuoka Univ.*)

1Pos088 リン脂質フリッパーゼ発現による細胞膜の粘度への影響
Effect of flippases expression on viscosity of plasma membranes
Haruna Hayashi[1], Naoto Takada[2], Akira Takakado[1], Hye-Won Shin[2], Koichi Iwata[1] ([1]*Fac. of Sci., Gakushuin Univ.*, [2]*Grad. of Pharm. Sci., Kyoto Univ.*)

1Pos089 バクテリアの推進力によるリポソーム膜の形態変化
Morphological changes of liposomes by bacterial propulsion force
Mai Hayakawa[1], Terajima Hazuki[1], Masamune Morita[2], Tomoyuki Kaneko[1] ([1]*LaRC, FB, Hosei Univ.*, [2]*Biomed. Res. Inst. AIST*)

1Pos090 抗菌ペプチド・マガイニン２が誘起するポア形成に対する膜界面疎水性の効果
Role of Interfacial Hydrophobicity in Antimicrobial Peptide Magainin 2 (mag)-Induced Pore Formation
Moynul Hasan[1], **Md. Mamun Or Rashid**[1], Hideo Dohra[2], Masahito Yamazaki[1,3,4] ([1]*Grad. Sch. Sci. Tech., Shizuoka Univ.*, [2]*Res. Inst. Green Sci. Tech., Shizuoka University*, [3]*Res. Inst. Ele., Shizuoka Univ.*, [4]*Grad. Sch. Sci., Shizuoka Univ.*)

1Pos091 モデル膜を用いたコレステロール依存性細胞溶解毒素の膜結合活性評価
Evaluation of binding activity of cholesterol-dependent cytolytic toxin using model membranes
Nobutake Tamai[1], Tohru Morimitsu[2], Masaki Goto[1], Hideaki Nagamune[1], Hitoshi Matsuki[1] ([1]*Grad. Sch. Tech. Indus. Soc. Sci., Tokushima Univ.*, [2]*Grad. Sch. Adv. Tech. Sci., Tokushima Univ.*)

1Pos092 コレステロールによる薬剤クロルゾキサゾン脂質膜結合抑制効果のリン脂質種依存性
Phospholipid species dependence of cholesterol inhibition effect on the bind of chlorzoxazone to lipid membrane
Hiroshi Takahashi, Shosei Kano (*Biophys. Lab. Gunma Univ.*)

1Pos093 気液界面における脂質単分子膜へのコレステロールと人工肺サーファクタントタンパク質 B の影響
Effect of cholesterol and synthetic lung surfactant protein B on a lipid monolayer at the air-water interface
Hideyuki Nagatsuka, **Masahiro Hibino** (*Div. Sustain. Environ. Eng., Muroran Inst. Tech.*)

1Pos094 粗視化モデルによる二成分脂質膜の構造安定性に関する理論的研究
Theoretical study on the conformational stability of binary lipid membrane by a coarse-grained model
Tetsu Matsuura, Tomoya Maeda, Kazutomo Kawaguchi, Hidemi Nagao (*Grad. Sch. Nat. Sci. Tech. Kanazawa Univ.*)

1Pos095 抗菌ペプチド・ラクトフェリシン B と単一大腸菌や大腸菌由来の脂質の GUV との相互作用
Interaction of antimicrobial peptide lactoferricin B (Lfcin B) with single *E. coli* cells and single vesicles of extract lipids
Farzana Hossain[1], Md. Moniruzzaman[1], Md. Mizanur Moghal[1], Masahito Yamazaki[1,2,3] ([1]*Grad. Sch. Sci. Tech., Shizuoka Univ.*, [2]*Res. Inst. Ele., Shizuoka Univ.*, [3]*Grad. Sch. Sci., Shizuoka Univ.*)

1Pos096 膜透過ペプチド・オリゴアルギニンの抗菌活性と単一大腸菌との相互作用
Antimicrobial activity of cell-penetrating peptide oligoarginine and its interaction with single cells of *Escherichia coli*
Sabrina Sharmin[1], Hideo Dohra[2], Masahito Yamazaki[1,3,4] ([1]*Grad. Sch. Sci. Tech., Shizuoka Univ.*, [2]*Res. Inst. Green Sci. Tech., Shizuoka University*, [3]*Res. Inst. Ele., Shizuoka Univ.*, [4]*Grad. Sch. Sci., Shizuoka Univ.*)

1Pos097 脂質二重膜の組成が EGFR JM 領域の二量体構造に与える影響
Investigation of the correlation between lipid composition and the dimer structure of EGFR JM region
Daisuke Matsuoka[1], Yasuhiro Matsunaga[2], Yuji Sugita[1,2,3] ([1]*RIKEN, Theoreitcal Molecular Science*, [2]*RIKEN R-CCS*, [3]*RIKEN BDR*)

1Pos098 Substrate-supported model biological membrane with controlled two-dimensional and three-dimensional structures
Sawako Kobayashi[1], Ryota Komatsu[1], Kennichi Morigaki[2] ([1]*Graduate School of Agricultural Science, Kobe University*, [2]*Biosignal Research Center, Kobe University*)

1Pos099 非対称膜組成の小胞封入ベシクルの作製
Formation of giant vesicle containing small vesicles with asymmetric lipid membranes
Koki Kamiya[1], Toshihisa Osaki[1,2], Shoji Takeuchi[1,2] ([1]*Kanagawa Institute of Industrial Science and Technology*, [2]*IIS, university of Tokyo*)

1Pos100 逆相遠心法による巨大リポソームの迅速形成・精製とその特性
Giant vesicles rapidly prepared and purified using a reverse-phase/centrifugation method
Kanta Tsumoto, Kohei Nakano, Yuki Hayashi, Masahiro Tomita (*Grad. Sch. Eng., Mie Univ.*)

1Pos101 Development of a polarized coarse grained water model and its application in lipid membrane systems
Yuusuke Miyazaki, Susumu Okazaki, Wataru Shinoda (*Grad. Sch. Eng., Nagoya Univ.*)

ゲノム生物学／Genome biology: Genome analysis

1Pos102 ニック DNA のナノポアへのつまりと特異的挙動
Clogging and returning of nicked DNA at nanopores
Kento Lloyd, Seiya Minato, Tomoya Kubota, Toshiyuki Mitsui (*Grad. Sch. of Sci. & Eng., Aoyama Gakuin Univ.*)

1Pos103 A datamining approach for genotype-phenotype correlation of *SCN1A*-related epilepsies based on physico-chemical properties changes
Shuichi Yoshida, Takuhiro Nishio (*Dept. of Physics, Hamamatsu Univ. Sch. Med.*)

1Pos104 数理モデルとライブイメージングデータを用いた分裂酵母間期核内構造の解析
Analysis of fission yeast interphase intranuclear structure by mathematical model and live imaging data
Yuki Takayama[1], Hiroaki Ito[2], Hisamichi Senda[2], Hiraku Nishimori[1], Masaru Ueno[2], Akinori Awazu[1] ([1]*Grad. Sch. Sci., Univ. Hiroshima*, [2]*Grad. Sch. Advanced Sciences of Matter, Univ. Hiroshima*)

1Pos105 ヌクレオチド組成空間におけるハビタブルゾーンの生物的意味
Biological meaning of “habitable zone” in nucleotide composition space
Shigeki Mitaku[1], Ryusuke Sawada[2] ([1]*Emeritus Prof. Nagoya Univ.*, [2]*Med. Inst. Bioregulation, Kyushu Univ.*)

1Pos106 Dynamic changes in the interchromosomal interaction of early histone gene loci during development of sea urchin
Masaya Matsushita, Hiroshi Ochiai, Ken-ichi Suzuki, Sayaka Hayashi, Ayaka Sugiyama, Takashi Yamamoto, **Akinori Awazu**, Naoaki Sakamoto (*Dept. of Math and Life Sci. Hiroshima Univ.*)

1Pos107 大腸菌における走化性関連タンパク質のコドン使用傾向
Pattern of codon usage for chemotaxis related protein genes in E.coli
Serika Taga[1], Nobuyuki Uchikoga[2], Takanori Sasaki[3] ([1]*Grad. Sch. Adv. Math. Sci., Meiji Univ*, [2]*Catalyst*, [3]*Grad. Sch. Adv. Math. Sci., Meiji Univ*)

1Pos108 遅発性アルツハイマー病に関連する新規ゲノム領域の網羅的探索
Comprehensive Search of Novel Genome Regions Related to Late-Onset Alzheimer’s Disease
Yudai Hirose, Hiraku Nishimori, Akinori Awazu (*Department of Mathematical and Life Sciences, Hiroshima University*)

1Pos109 核膜変形と核内流体を考慮した分裂酵母染色体動態の物理モデル
Physical model of fission yeast chromosome dynamics considering nuclear envelope deformation and intranuclear hydrodynamics
Kazutaka Takao, Hiraku Nishimori, Akinori Awazu (*Dept. Math and Life Sci., Hiroshima Univ.*)

1Pos110 Dynamics and organization of slow nucleosomes in live mammalian cells
Ashwin Selvarajan S[1], Tadasu Nozaki[2], Kazuhiro Maeshima[2], Masaki Sasai[1] ([1]*Department of Applied Physics, Nagoya University, Nagoya, Japan*, [2]*Structural Biology Center, National Institute of Genetics, Mishima, Japan*)

筋肉／Muscle

1Pos201 心筋の調節タンパク質トロポニンは構造多型をカルシウムとリン酸化により部分的にシフトさせる：二量子遷移(DQC)ESR 距離測定による研究
Calcium and phosphorylation partially shifts multiple conformations of cardiac troponin: Distance study by double quantum coherence ESR
Toshiaki Arata[1,2], Jun Abe[3], Shoji Ueki[4], Yasunori Ohba[3] ([1]*Dept. Biol., Grad. Sch. Sci., Osaka City Univ.*, [2]*Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ.*, [3]*Inst. Multidisciplinary Res. Adv. Materials, Tohoku Univ.*, [4]*Kagawa Sch. Pharmaceutical Sci., Tokushima Bunri Univ.*)

1Pos202 FRET で捉えたアクチン繊維末端付近の構造ゆらぎ
B- or P-ends of actin filament can be determined by measuring the fluctuation of FRET efficiencies
Ryota Mashiko[1], Hirotaka Ito[1], Ryusei G Ebata[1], Kenji Kamimura[2], Hajime Honda[1] ([1]*Dep. Bioeng., Nagaoka Univ.*, [2]*Tech, Dep. Elect. Contr. Eng., NIT, Nagaoka College*)

1Pos203 細胞クラスター構成法を用いた心筋細胞の拍動同期化における集団効果の解明
Community effect of cardiomyocytes in synchronous behavior of beating by constructing cell cluster (1): Experimental approach
Naoki Takahashi[1], Akihiro Yamashita[2], Kazuhumi Sakamoto[3], Masao Odaka[4,5], Akihiro Hattori[4,5], Kenji Matsuura[4,5], Kenji Yasuda[1,3,4,5] ([1]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Adv. Sci. & Eng., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [4]*Org. Univ. Res. Initiatives, Waseda Univ.*, [5]*WASEDA Biosci. Res. Ins. in Singapore*)

1Pos204 アクチン分子の構造多様性について
Polymorphism of actin molecules
Toshiro Oda[1], Shuichi Takeda[2], Akihiro Narita[2], Yuichiro Maeda[2,3] ([1]*Fac. Health and Welfare, Tokaigakuin Univ.*, [2]*Struct. Biol. Res. Center, Grad. Sch. Sci., Nagoya Univ.*, [3]*TOYOTA RIKEN*)

1Pos205 表面プラズモン共鳴を用いた β-アドレナリン刺激に関わる心筋トロポニン分子内相互作用の研究
Surface plasmon resonance studies of the intramolecular interaction in cardiac troponin concerned with β-adrenergic stimulation
Yurie Inamoto[1], Toshiaki Arata[2], Shoji Ueki[1] ([1]*Kagawa Sch. of Pharm.Sci.,Tokushima Bunri Univ.*, [2]*Grad.Sch.Sci.,Osaka City Univ.*)

1Pos206 高静水圧下におけるマウス心筋細胞への影響
High hydrostatic pressure induces cardiomyocyte contraction
Yohhei Yamaguchi[1], **Masayoshi Nishiyama**[2], Hiroaki Kai[3], Gentaro Iribe[3], Keiji Naruse[3], Masatoshi Morimatsu[3] ([1]*Asahikawa Med. Univ.*, [2]*Kindai Univ.*, [3]*Okayama Univ.*)

分子モーター／Molecular motor

1Pos207 *Bacillus* PS3 F_oF_1-ATP 合成酵素の H^+輸送活性の顕微鏡 1 リポソーム解析
Microscopic single liposome analysis of H^+-translocating activity of *Bacillus* PS3 F_oF_1-ATP synthase
Naoya Iida[1], Yuzo Kasuya[1], Naoki Soga[2], Taro Uyeda[1], Masasuke Yoshida[3], Kazuhiko Kinosita[1], Toshiharu Suzuki[2,3,4] ([1]*Dept. Physics, Waseda Univ.*, [2]*Dept. Eng, Univ. of Tokyo*, [3]*Dept. Mol Biochem, Kyoto Sangyo Univ*, [4]*CLS, Tokyo Inst of Tech*)

1Pos208 Rotation of the engineered F_1-ATPase with non-catalytic α-type P-loops
Hiroshi Ueno[1], Rie Koga[2], Tomoko Masaike[3], Nobuyasu Koga[2], Hiroyuki Noji[1] ([1]*Grad. Sch. Eng., Univ. Tokyo*, [2]*ExCELLS, NINS*, [3]*Grad. Sch. Sci. Tech., Tokyo Univ. of Sci.*)

1Pos209 ヒンジ領域を非触媒型に置換した触媒サブユニットをもつ F_1-ATPase の回転トルクと反応速度
Rotational torque and kinetics of F_1-ATPase containing the catalytic subunit with a non-catalytic hinge
Tomoyasu Sato[1], Hiroshi Ueno[2], Kumiko Hayashi[3], Rie Koga[4], Nobuyasu Koga[4], Hiroyuki Noji[2], Tomoko Masaike[1] ([1]*Dept. Appl. Biol. Sci., Grad. Sch. Sci. Tech., Tokyo Univ. of Sci.*, [2]*Dept. Appl. Chem., Grad. Sch. Eng., Univ. Tokyo*, [3]*Dept. Appl. Phys., Grad. Sch. Eng., Tohoku Univ.*, [4]*ExCELLS, NINS*)

1Pos210 好熱菌 F1 による ATP 加水分解におけるリン酸解離のタイミング
On the timing of phosphate release in the ATPase reaction by TF1
Eiro Muneyuki[1], Yohei Nakayama[1], Shoichi Toyabe[2], Hiroshi Ueno[3] ([1]*Department of Physics, Faculty of Science and Engineering, Chuo University*, [2]*Department of Applied Physics, Graduate School of Engineering, Tohoku University*, [3]*Department of Applied Chemistry, Graduate School of Engineering, The University of Tokyo*)

1Pos211 F1-ATPase の構造変化に α と β の P-loop 配列の違いが及ぼす影響
Impact of the sequence difference of P-loop on the conformational changes of F1-ATPase
Rie Koga[1], Hiroshi Ueno[2], Tomoko Masaike[3], Hiroyuki Noji[2,4], Nobuyasu Koga[1] ([1]*ExCELLS, NINS*, [2]*Dept. Appl. Chem., The Univ. Tokyo*, [3]*Dept. Appl. Biol. Sci., Tokyo Univ. of Sci.*, [4]*ImPACT, JST*)

1Pos212 Assignment of subunit components in motor evolved from F-ATPase for *Mycoplasma mobile* gliding
Takuma Toyonaga[1], Takayuki Kato[2], Akihiro Kawamoto[3], Noriyuki Kodera[4], Toshio Ando[4], Keiichi Namba[2,5], Makoto Miyata[1,6] ([1]*Grad. Sch. Sci., Osaka City Univ.*, [2]*Grad. Sch. Front. Biosci., Osaka Univ.*, [3]*IPR, Osaka Univ.*, [4]*Bio-AFM FRC, Kanazawa Univ.*, [5]*BDR & SPring-8, Riken*, [6]*OCARINA, Osaka City Univ.*)

1Pos213 Half channels and unidirectional rotation in the F_O sector of *E. coli* ATP synthase observed by molecular dynamics simulation
Dan Parkin, Daiki yamakoshi, Mitsunori Takano (*Dept. of Pure & Appl. Phys., Waseda Univ.*)

1Pos214 細菌べん毛モーターの回転方向変換制御機構の解明
Elucidation of the directional switching mechanism of the bacterial flagellar motor by electron cryomicroscopy
Tomoko Miyata[1], Takayuki Kato[1], Akihiro Kawamoto[2], Fumiaki Makino[1], Namba Keiichi[1,3] ([1]*Grad. Sch. Frontier Biosci., Osaka Univ.*, [2]*IPR, Osaka Univ.*, [3]*BDR & SPring-8, RIKEN*)

1Pos215 Effect of pH on rotation of the proton-driven bacterial flagellar motor under near zero load
Yuta Hanaizumi[1], Shuichi Nakamura[1,2], Yusuke V. Morimoto[2,3], Tohru Minamino[2], Keiichi Namba[2,4] ([1]*Grad.Sch.Eng.,Tohoku Univ.*, [2]*Grad.Sch.Frontier Biosci.,Osaka Univ.*, [3]*Dept. of Biosci. Bioinfo., Kyushu Inst. Tech.*, [4]*QBiC,RIKEN*)

1Pos216 Feedback regulation of the ion channel activity of the flagellar motor stator complex
Naoya Terahara[1], Keiichi Namba[1,2], Tohru Minamino[1] ([1]*Grad. Sch. Frontier BioSci., Univ. Osaka*, [2]*BDR and Spring8 RIKEN*)

1Pos217 海洋性ビブリオ菌べん毛モーター固定子 PomA タンパク質の Cys 変異導入を用いた細胞質領域荷電残基の構造解析
Analysis of charged residues by Cys mutagenesis in cytoplasmic loop of flagellar motor protein PomA of marine *Vibrio*
Taira Mino, Tatsuro Nishikino, Hiroto Iwatsuki, Seiji Kojima, **Michio Homma** (*Nagoya Univ, Sch Science, Biological Sci*)

1Pos218 Stator-units distribution and dynamics of E. coli sodium-driven chimera flagella motor
Tsai-Shun Lin[1], Michio Homma[2], Seiji Kojima[2], Chien-Jung Lo[1] ([1]*National Central Univ.,Taiwan*, [2]*Grad. sch. of Sci., Nagoya Univ.*)

1Pos219 *Paenibacillus* sp. TCA20 がもつ二価カチオン駆動型べん毛モーター固定子 MotA1MotB1 の機能解析
Characterization of ion specificity of MotA1/MotB1 in *Paenibacillus* sp. TCA20
Sakura Onoe[1], Myu Yoshida[2], Masahiro Ito[3], Yoshiyuki Sowa[1,2,4] ([1]*Grad. Sch. Sci. & Eng., Hosei Univ.*, [2]*Dept. Frontier Biosci., Hosei Univ.*, [3]*Grad. Sch. Life Sci. Toyo Univ.*, [4]*RC. Micro-nano Tech., Hosei Univ.*)

1Pos220 Investigating the Growth Mechanism of Bacterial Flagella by Real-time Fluorescencet Imaging
Xiang-Yu Zhuang, Chien-Jung Lo (*Department of physics, National Central University*)

1Pos221 線毛を使って運動する桿菌とその走化性に関するシミュレーション
Simulation study of bacillus moving with pili and its chemotaxis
Ryota Morikawa, Masatada Tamakoshi, Takeshi Miyakawa, Masako Takasu (*School of Life Sciences, Tokyo University of Pharmacy and Life Sciences*)

1Pos222 Rng2 のアクチン結合部位は、HMM で駆動されるアクチン運動を強くかつ協同的に阻害する
Potent and highly cooperative inhibition of actin movement on HMM by actin binding domain of Rng2
Yuuki Hayakawa[1], Kien X Ngo[2], Noriyuki Kodera[2], Taro Uyeda[1] ([1]*Grad. Sch. Faculty of Sci. and Eng., Waseda Univ.*, [2]*WPI NanoLSI., Kanazawa Univ.*)

1Pos223 Molecular Structures of Actin Filaments Bound with α-Actinin, Tropomyosin-Troponin and Myosin II Analyzed by High Speed AFM
Kien Xuan Ngo[1], Noriyuki Kodera[1], Taro Q.P. Uyeda[2] ([1]*Nano Life Science Institute (WPI-NanoLSI), Kanazawa University*, [2]*Department of Physics, Faculty of Advanced Science and Engineering, Waseda University*)

1Pos224 Myosin minifilament-driven fragmentation of actin filaments triggers contraction of a disordered actin network
Kyohei Matsuda[1], Takuya Kobayashi[2], Mitsuhiro Sugawa[1], Yurika Koiso[1], Yoko Y. Toyoshima[1], Junichiro Yajima[1] ([1]*Grad school of arts and sciences, Univ. of Tokyo*, [2]*Juntendo Univ. Grad School of Medicine*)

1Pos225 歩行運動中のミオシン VI の前足のブラウン運動の自由エネルギーランドスケープ
Free energy landscape for the Brownian motion of the leading head of myosin VI during the stepping motion
Tomoki P. Terada[1], Qing-Miao Nie[2], Masaki Sasai[1] ([1]*Dept. Appl. Phys., Grad. Sch. Eng., Nagoya Univ.*, [2]*Dept. Appl. Phys., Zhejiang Univ. Tech.*)

1Pos226 DNA オリガミ-ミオシン II モーター混合システムの 1 分子解析
Single molecule analysis of DNA origami-myosin II motor hybrid system
Hiroki Fukunaga[1], Masashi Ohmachi[2], Keisuke Fujita[2], Keigo Ikezaki[3], Toshio Yanagida[1,2], Mitsuhiro Iwaki[1,2] ([1]*FBS, Univ. Osaka*, [2]*BDR, Riken*, [3]*Grad. Sch. Sci., Univ. Tokyo*)

1Pos227 アクチンフィラメントに対するヘビーメロミオシンの協同的結合の方向性の解析
Analysis of the direction of cooperative binding of heavy meromyosin to actin filaments
Naoyuki Muratsubaki[1], Rika Hirakawa[1], Taro Q.P. Uyeda[2], Kiyotaka Tokuraku[1] ([1]*Grad. Sch. Sustain, Environ. Eng., Muroran Inst. Technol.*, [2]*Waseda Univ.*)

1Pos228 高速原子間力顕微鏡による人工ミオシンフィラメントでのミオシン II モーターの可視化
Direct visualization of individual myosin II motors in artificial myosin filaments by high-speed AFM
Masashi Ohmachi[1], Keigo Ikezaki[3], Toshio Yanagida[1,2], Mitsuhiro Iwaki[1,2] ([1]*BDR, Riken*, [2]*Grad. Sch. Front. Biosci., Osaka Univ.*, [3]*Grad. Sch. Sci., Univ. Tokyo*)

神経・感覚／Neuroscience & Sensory systems

1Pos301 アミロイド β（1-40）ペプチドと人工 GM1 糖鎖クラスターの複合体形成シミュレーション p
Binding Simulations of an Amyloid-β (1-40) peptide to an Artificial GM1 Glycan Cluster
Yuhei Tachi[1,2], Yuko Okamoto[1], Hisashi Okumura[2,3,4] ([1]*Graduate school of Science, Nagoya University*, [2]*Institute for Molecular Science*, [3]*The Graduate University for Advanced Studies*, [4]*Exploratory Research Center on Life and Living Systems*)

1Pos302 アミロイドβの凝集はアクチンに富む細胞辺縁部で凝集が促進される
Aggregation of amyloid β was induced at the actin-rich cell periphery
Yusaku Chikai[1], Ryota Yamashita[2], Masahiro Kuragano[3], Masayuki Takahashi[4], Kiyotaka Tokuraku[5] ([1]*Dep. App. Sci., Muroran Inst. Technol.*, [2]*Grad. Sch. Sustain., Environ. Eng., Muroran Inst. Technol.*, [3]*Grad. Sch. Chem. Sci. Eng., Univ. Hokkaido.*, [4]*Grad. Sch. Chem. Sci. Eng., Univ. Hokkaido.*, [5]*Grad. Sch. Sustain., Environ. Eng., Muroran Inst. Technol.*)

1Pos303 シナプス後肥厚部タンパク質群の自己集積のメソスケール分子シミュレーション研究
Mesoscopic Molecular Simulation for Self-assembly of the Postsynaptic Density Proteins
Hana Slevin Ohama, Diego Ugarte, Shoji Takada (*Dept. Biophysics, Div. Biology, Graduate School of Science, Kyoto University*)

1Pos304 AFM 細胞間接着力測定技術を用いた腫瘍内細胞間接着力の in vitro 解析
Measurements of intercellular adhesions of tumor microenvironment cells in vitro by using AFM
Kenta Ishibashi[1], Tomoko Okada[2], Chikashi Nakamura[1,2], Hyonchol Kim[1,2] ([1]*Grad. Sch. Eng., Tokyo Univ. Agric. Technol.*, [2]*Biomed. Res. Inst., AIST*)

1Pos305 全身麻酔薬プロポフォールによる蛙坐骨神経の複合活動電位抑制とその化学構造
Inhibition by general anesthetic propofol of frog sciatic nerve compound action potential and its chemical structure
Nobuya Magori, Tsugumi Fujita, Kotaro Mizuta, **Eiichi Kumamoto** (*Department of Physiology, Faculty of Medicine, Saga University*)

1Pos306 Chemosensing-neuron regulates cold tolerance via Ca2+-dependent endoribonuclease with apoptotic signaling in C. elegans
Atsushi Kuhara[1,5], Tomoyo Ujisawa[1], Atsushi Toyoda[3], Katsushi Arisaka[4], Miki Ii[2], Akane Ohta[1] ([1]*Institute for Integrative Neurobiology, Konan University*, [2]*University of Alaska Anchorage*, [3]*National Institute of Genetics*, [4]*UCLA*, [5]*PRIME, AMED*)

1Pos307 ミミズ繰り返し体壁刺激による慣れの神経機構
Mechanism of habituation by repeated tactile stimulus in earthworm
Yoshiichiro Kitamura, Haruya Fujita, Yoshiki Funahashi (*Department of Mathematical Sciences and Physics College of Science and Engineering, Kanto Gakuin University*)

1Pos308 エピカテキンはヨーロッパモノアラガイの味覚嫌悪学習による長期記憶形成を増強する
Epicatechin enhances the long-term memory formation for taste-aversive conditioning in the pond snail
Yoshimasa Komatsuzaki[1], Tetsuya Iwahori[1], Shogo Nakada[2], Ayaka Itoh[2], Sho Tozawa[1], Ken Lukowiak[3], Minoru Saito[2] ([1]*Dept. Phys., Coll. Sci. Tech., Nihon Univ.*, [2]*Dept. Biosci., Coll. Hum. Sci., Nihon Univ.*, [3]*Hotchkiss Brain Inst., Fac. Med., Univ. Calgary*)

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

1Pos309 インビボでの周波数依存性シナプス可塑性の数学的解析
Mathematical analysis of the frequency-dependent synaptic plasticity in vivo
Katsuhiko Hata[1,2,3,4,5], Osamu Araki[6], Osamu Yokoi[2,4], Toshiaki Kaminaka[2,4], Tatsuya Saka[2,4], Izumi Kuboyama[1], Susumu Ito[3], Tetsuro Nikuni[5] ([1]*Sch. Emerg. Med. Sys. Kokushikan Univ.*, [2]*DPEMS, Kokushikan Univ*, [3]*High-Tech Res. Cent., Kokushikan Univ*, [4]*Res Cent for Math Med*, [5]*Dept of Phys TUS*, [6]*Dept of Ap Phys TUS*)

1Pos310 Reinforcement learning using Deep Deterministic Policy Gradient (DDPG) with image input
Keisuke Hara[1], Naoto Kobayashi[1], Hideo Mukai[2] ([1]*Graduate School of Science and Technology, Meiji University*, [2]*School of Science and Technology, Meiji University*)

1Pos311 光ファイバー集束光加熱光学系を用いた高精度・非侵襲オンチップアガロースパターン構築技術の開発
A 1064/1480-nm photo-thermal etching system with fiber optics for an accurate and non-invasive micropatterning of an agarose thin layer
Takahito Kikuchi[1], Shota Aoki[1], Yuhei Tanaka[2], Masao Odaka[3,4], Akihiro Hattori[3,4], Kenji Matsuura[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore (WABIOS)*)

1Pos312 プラズモニックチップ上の増強蛍光による培養神経細胞の自発活動計測
Spontaneous activity in cultured neurons measured with the enhanced fluorescence on the plasmonic chip
Wataru Minoshima[1], Chie Hosokawa[2], Suguru Kudoh[1], Keiko Tawa[1] ([1]*Kwnasei Gakuin University*, [2]*National Institute of Advanced Industrial Science and Technology*)

1Pos313 神経突起伸長速度に対する細胞集団サイズとチャネル幅の効果
Effect of cell cluster size and channel width to neurite elongation rate
Hayato Toriumi, Tomoyuki Kaneko (*LaRC, FB, Hosei Univ*)

1Pos314 外部からの磁気刺激に対する神経細胞の応答 - 刺激強度依存性
Response of nerve cells to external magnetic stimulation - Stimulation intensity dependence
Toshiaki Kaminaka[1,2], Osamu Yokoi[1,2,3], Tatsuya Saka[1,2,3], Susumu Ito[4], Izumi Kuboyama[5], Katsuhiko Hata[1,2,3,4,5] ([1]*Res Cent for Math Med*, [2]*DPEMS Kokushikan Univ*, [3]*TUS*, [4]*HRC,Kokushikan Univ*, [5]*Sch. Emerg. Med. Sys, Kokushikan Univ*)

1Pos315 オンチップ多電極システムによる孤立神経１細胞自発発火の電位変化の解析
Extracellular field potential change analysis of spontaneous firing of an isolated neuron by an on-chip multi-electrode array system
Shota Aoki[1], Takahito Kikuchi[1], Yuhei Tanaka[2], Kenji Matsuura[3,4], Akihiro Hattori[3,4], Masao Odaka[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore (WABIOS)*)

1Pos316 神経活動電位系列の生成解読様式とその情報伝送容量について
Encoding and decoding of neural pulse code system and its channel capacity
Susumu Ito[1], Toshiaki Kaminaka[2], Katsuhiko Hata[1,2,3], Izumi Kuboyama[3] ([1]*HRC,Kokushikan Univ*, [2]*Res.Cent.Math.Med*, [3]*Sch.Emerg.Med.Sys, Kokushikan Univ*)

1Pos317 線虫のシナプス結合経路と全中枢神経細胞活動データから推定したシグナル経路の頑健性
Robustness of synaptic pathway and signaling pathway estimated from the whole-brain activity data in C. elegans
Yuishi Iwasaki[1], Hirofumi Sato[2], Suzu Oe[3], Sayuri Kuge[3], Takayuki Teramoto[3], Terumasa Tokunaga[4], Osamu Hirose[5], Stephen Wu[6], Yu Toyoshima[2], Moon Sun Jang[2], Ryo Yoshida[6], Yuichi Iino[2], Takeshi Ishihara[3] ([1]*Fac. Eng., Ibaraki Univ.*, [2]*Grad. Sch. Sci., Univ. Tokyo*, [3]*Grad. Sch. Sci., Kyushu Univ.*, [4]*Grad. Sch. Comp. Sci. and Sys. Eng., Kyushu Institute Tech.*, [5]*Institute. Sci. and Eng., Kanazawa Univ.*, [6]*Institute Stat. Math.*)

1Pos318 海馬で合成される男性・女性ホルモンやストレスホルモンによる記憶シナプスの non-genomic な制御
Non-genomic modulation of synapses by hippocampus-synthesized androgen, estrogen and stress steroid
Suguru Kawato[1,2], Mika Soma[1], Mari Ogiue-Ikeda[1] ([1]*Dep. Cognitive Neuroscience, Pharma-Science, Teikyo Univ.*, [2]*Dep. Urology, Grad Sch Medicine, Juntendo Univ.*)

1Pos319 アガロース微細構造を用いた二つの海馬細胞から伸長する２つの神経突起の反発相互作用の解析
Repulsive interactions of two neurites elongated from two isolated hippocampal cells in agarose width-length-controlled microchannels
Yuhei Tanaka[1], Takahito Kikuchi[2], Shota Aoki[2], Akihiro Hattori[3,4], Kenji Matsuura[3,4], Masao Odaka[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

1Pos320 小脳核ペリニューロナルネットによる GABA シナプス伝達修飾と運動学習制御
Perineuronal nets in the deep cerebellar nuclei modulate GABAergic transmission and regulate motor learning
Moritoshi Hirono[1], Satoshi Watanabe[2], Fuyuki Karube[1], Fumino Fujiyama[1], Shigenori Kawahara[3], Soichi Nagao[4,5], Yuchio Yanagawa[6], Hiroaki Misonou[1] ([1]*Grad. Sch. Brain Sci., Doshisha Univ.*, [2]*Natl Inst Neurosci, NCNP*, [3]*Grad. Sch. Sci. Eng., Univ. Toyama*, [4]*Lab. Motor Learning Control, RIKEN BSI*, [5]*Lab. Integrative Brain Functions, Nozomi Hospital*, [6]*Dep. Genetic and Behav. Neurosci., Gunma Univ. Grad. Sch. Med.*)

発生・分化／Development & Differentiation

1Pos321 どのように神経突起は軸索および樹状突起へと個性化するのか？ ～微小管配向動態の観点から～
How neurites acquire identity of axon and dendrites through microtubule orientation dynamics?
Naoki Honda (*Grad. Sch. Biostudies., Kyoto Univ.*)

1Pos322 細胞性粘菌の細胞分化に伴う細胞質 pH 変化
Changes in cytoplasmic pH following the cell differentiation in *Dictyostelium*
Yusuke V. Morimoto[1,2], Masahiro Ueda[2,3] ([1]*Dept. of Biosci. Bioinfo., Kyushu Inst. Tech.*, [2]*RIKEN, BDR*, [3]*Grad. Sch. Frontier Biosci., Osaka Univ.*)

1Pos323 ヒト誘導多能性幹細胞由来の内胚葉および中胚葉による原腸形成期の移動
Migration of Endoderm and Mesoderm Derived from Human Induced Pluripotent Stem Cells during Human Gastrulation Stage
Kenshiro Maruyama[1], Ryo Kobayashi[2], **Kiyoshi Ohnuma**[1] ([1]*Grad. Sch. Eng., Univ. Nagaoka Tech.*, [2]*Dept. BioEng., Univ. Nagaoka Tech.*)

1Pos324 細胞分裂、分化、発生過程を細胞内小器官の 3D 構造モデルから読み解くための試み
Attempt to understand cell division, differentiated, developmental process from 3D structural model of intracellular organelle
Takako M. Ichinose[1], Takeshi Itabashi[1,2,3], Hikari Mori[1], Junpei Kuroda[4], Shigeru Kondo[4], **Atsuko H. Iwane**[1,2,3] ([1]*Cell Field Struc., BDR, Riken*, [2]*Spec. Res. Promot. Group, Grad. Sch. Fronti., Biosci., Osaka Univ.*, [3]*Grad. Sci., Hiroshima Univ.*, [4]*Pattern formation, Grad. Sch. Fronti., Biosci., Osaka Univ.*)

1Pos325 線虫 *C. elegans* 胚発生における細胞形状ダイナミクスの定量解析
Quantitative analysis of cell shape dynamics in *C. elegans* embryogenesis
Yusuke Azuma, Shuichi Onami (*RIKEN BDR*)

1Pos326 初期胚発生における力学モデルの解析
Analyzing and modeling of early embryo development
Takaaki Matsui[1], Tetsuya Kobayashi[2] ([1]*Grad. Sch. Eng. EEIS, Univ.Tokyo*, [2]*IIS, Univ.Tokyo*)

1Pos401 紫外可視光変換システムとゲル固体電気化学素子のセンサーへの応用と水素化アモルファスシリコン薄膜の効果
Ultra violet visible light conversion system and gel electrochemical element for sensor and the effect of hydrogenated amorphous silicon
Koki Shimanaka[1], Makoto Horigane[1], Shotaro Minato[1], Miku Kaneta[1], Norimi Takahashi[1], Shota Murakami[1], Hiroshi Masumoto[2], Takashi Goto[3], **Yutaka Tsujiuchi**[1] ([1]*Material Science and Engineering, Akita University*, [2]*Frontier Research Institute for Interdisciplinary, Tohoku University*, [3]*Institute for Materials Research, Tohoku University*)

1Pos402 マイクロ流路を用いた連続滴定用オートサンプリングシステムの改良
Improvement of the micro-fluidics based auto sampling system designed for continuous titration experiments
Shinji Amano, Yugo Hayashi, Yoichi Yamazaki, Hionari Kamikubo (*Div. Mat. Sci., NAIST*)

1Pos403 HPD による広視野多色蛍光 1 分子検出
Wide-field single-molecule multicolor fluorescence detection by hybrid photo-detectors (HPDs)
Atsuhito Fukasawa[1], Gaku Nakano[1], Hiroaki Yokota[2], Minako Hirano[2], Toru Ide[3] ([1]*Hamamatsu Photonics K.K.*, [2]*Grad. Sch. Creation Photon Indust.*, [3]*Grad. Sch. Nat. Sci. Technol., Okayama Univ.*)

1Pos404 水溶液中における蛍光タンパク質発色団の赤外スペクトル−過渡蛍光を利用した新規手法の開発−
IR spectrum of fluorescent protein chromospheres in water -Development of a transient fluorescence-detected resonance IR spectroscopy-
Hirona Takahashi, Tomoya Miyake, Tatsuya Oue, Makoto Sakai (*Okayama University of Science*)

1Pos405 偏光蛍光相関分光法(Pol-FCS)による回転拡散成分振幅の配向依存性の研究
Study of the orientation dependency of fraction of rotational diffusion in Polarization-dependent Fluorescence Correlation Spectroscopy
Satoru Momosaki[1], Johtaro Yamamoto[2,3], Masataka Kinjo[2] ([1]*Graduate School of Life Science, Hokkaido University*, [2]*Faculty of Advanced Life Science, Hokkaido University*, [3]*Biomedical Research Institute, AIST*)

1Pos406 赤外超解像顕微鏡による羽毛内ケラチンタンパク質の分布・配向観察
Orientation-sensitive molecular imaging of feather keratin proteins by an IR super-resolution micro-spectroscopy
Hirona Takahashi, Masanobu Miyoshi, Takeshi Fujimoto, **Makoto Sakai** (*Faculty of Science, Okayama University of Science*)

1Pos407 マイクロデバイス中の単一酵素活性検出による病態診断法の開発
Development of Novel Disease Diagnosis Platform based on Enzyme Activity Detection at Single Protein Level
Shingo Sakamoto[1], Toru Komatsu[1,5], Rikiya Watanabe[4,5], Zhang Yi[4], Hiroyuki Noji[4], Yasuteru Urano[1,2,3] ([1]*Grad. Sch. Pharm. Sci., The Univ. Tokyo*, [2]*Grad. Sch. Med., The Univ. Tokyo*, [3]*AMED CREST*, [4]*Grad. Sch. Eng., The Univ. Tokyo*, [5]*JST PRESTO*)

1Pos408 Highly sensitive detections of protein-nucleic acid interactions and redox enzyme reactions using nanostructured electrode
Yasuhiro Mie, Yasuo Komatsu, Yoshiaki Yasutake, Tomohiro Tamura (*Bioproduction Res. Inst., AIST*)

1Pos409 フォトクロミック分子を利用した蛋白質の高時間分解拡散観測手法
Protein diffusion probed by the transient grating method with a photochromic molecule
Shunki Takaramoto, Yusuke Nakasone, Masahide Terazima (*Dep. Chem., Sch. Sci, Kyoto Univ.*)

1Pos410 リン酸結合タンパクを封入した水滴チャンバーアレイによるリン酸検出系の高度化
Advanced phosphate detection method by phosphate binding protein encapsulated in droplet chamber arrays
Akane Kumayama[1], Taisuke Inage[1], Masayuki Higuchi[1], Hiroshi Ueno[2], Kazuhito Tabata[2,3], Hiroyuki Noji[2], Tomoko Masaike[1,4] ([1]*Dept. Appl. Biol. Sci., Grad. Sch. Sci. Tech., Tokyo Univ. of Sci.*, [2]*Dept. Appl. Chem., Sch. Eng., Univ. of Tokyo*, [3]*PRESTO, JST*, [4]*PRESTO, JSTRes. Inst. for Sci and Tech., Tokyo Univ. of Sci.*)

1Pos411 細胞内高分子クラウディング状態モデル検証と細胞周期研究への応用
Verification of macromolecule species in intracellular macromolecular crowding condition application to cell cycle study
Akito Matsui[1], Johtaro Yamamoto[3], Masataka Kinjo[2] ([1]*Graduate School of Life Science, Hokkaido University*, [2]*Faculty of Advanced Life Science, Hokkaido University*, [3]*AIST*)

1Pos412 マクロファージにおける貪食効率の評価のための抗原 free-flow 法の開発
Development of free-flow assay for precise evaluation of phagocytosis efficiency of macrophages
Yuya Furumoto[1], Yoshiki Nakata[1], Toshiki Azuma[2], Amane Yoshida[2], Masao Odaka[3,4], Akihiro Hattori[3,4], Kenji Matsuura[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

1Pos413 オンチップ１細胞計測におけるマクロファージの同一点連続貪食の履歴効果評価
Hysteresis of single point sequential phagocytoses in macrophages using on-chip single cell measurement assay
Toshki Azuma[1], Yoshiki Nakata[2], Yuya Furumoto[2], Amane Yoshida[1], Akihiro Hattori[3,4], Kenji Matsuura[3,4], Masao Odaka[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

1Pos414 オンチップ１細胞計測系によるマクロファージの貪食限界の測定
Identifying the maximum size of phagocytosis in macrophages using on-chip single cell measurement assay
Amane Yoshida[1], Yoshiki Nakata[2], Yuya Furumoto[2], Toshiki Azuma[1], Akihiro Hattori[3,4], Kenji Matsuura[3,4], Masao Odaka[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

1Pos415 血管内皮細胞のダイナミクス解明に向けた集束光によるゼラチン三次元微細加工技術の評価
Evaluation of photo-thermal three-dimensional gelatin-gel microfabrication technology for clarification of endothelial cells' dynamics
Hiromichi Hashimoto[1], Kento Iida[2], Yuki Yamanaka[2], Ryuji Takano[1], Masao Odaka[3,4], Kenji Matsuura[3,4], Akihiro Hattori[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

1Pos416 アガロースマイクロチャンバーを用いた多電極アレイによる心筋細胞小細胞群における細胞外電位の測定
Measurement of extracellular potential in small cluster of cardiomyocytes by multi electrode array with agarose microchamber
Naoki Tadokoro, Tomoyuki Kaneko (*LaRc, FB, Hosei Univ.*)

1Pos417 細胞のマクロな特徴量とラマンスペクトルの間に対応はあるか
Is There A Correspondence between Cellular Macroscopic Quantities and Raman Spectra?
Ken-ichiro F. Kamei[1], Koseki J. Kobayashi-Kirschvink[1], Yuichi Wakamoto[1,2,3] ([1]*Graduate School of Arts and Sciences, The University of Tokyo*, [2]*Research Center for Complex Systems Biology, The University of Tokyo*, [3]*Universal Biology Institute, The University of Tokyo*)

1Pos418 オンチップ１点連続貪食計測系によるマクロファージの貪食飽和停止現象の解析
Analysis of neglecting phase in phagocytosis of macrophages using on-chip sequential single-point phagocytoses measurement assay
Yoshiki Nakata[1], Yuya Furumoto[1], Toshiki Azuma[2], Amane Yoshida[2], Masao Odaka[3,4], Kenji Matsuura[3,4], Akihiro Hattori[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

1Pos419 集束光によるゼラチンの 3 次元微細加工技術を用いた毛細血管形成のダイナミクス計測
Direct observation of blood vein formation dynamics exploiting flexible three-dimensional gelatin-gel microfabrication technology
Kento Iida[1], Yuki Yamanaka[1], Hiromichi Hashimoto[2], Ryuji Takano[2], Masao Odaka[3,4], Akihiro Hattori[3,4], Kenji Matsuura[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

1Pos420 Model comparison for inverse tissue mechanics of epithelial spreading
Yohei Kondo[1], Kazuhiro Aoki[1], Shin Ishii[2] ([1]*ExCELLS*, [2]*GSI, Kyoto Univ.*)

1Pos421 High precision single-molecule techniques for molecular biophysics
Ying Lu, Chun-Hua Xu, Shu-Xin Hu, Ming Li (*Institute of Physics, Chinese Academy of Sciences*)

2 日目（9 月 16 日（日））／Day 2（Sep. 16 Sun.）
PA 会場（大集会室），PB 会場（南第二集会室），PC 会場（南第三集会室），PD 会場（南第四集会室）／
Room PA (Large Assembly Room), Room PB (2nd South Assembly Room),
Room PC (3rd South Assembly Room), Room PD (4th South Assembly Room)

蛋白質：物性・構造／Protein: Property & Structure

2Pos001 Substrate analogue-induced folding of staphylococcal nuclease analyzed by statistical mechanical model
Shunta Furuzawa, Kosuke Maki (*Grad. Schl. Sci., Nagoya Univ.*)

2Pos002 Analysis of pH, salt and mutation effects on folding of the N-terminal domain of ribosomal protein L9 using statistical mechanical model
Takuya Mizukami[1,2], **Kosuke Maki**[1] ([1]*Schl. Sci., Nagoya Univ.*, [2]*Fox Chase Cancer Ctr.*)

2Pos003 Theoretical study on the structural stability of alanine dipeptide in supercritical carbon dioxide
Satoshi Nakagawa[1], Tatsuki Kataoka[1], Tomoya Maeda[1], Kazutomo Kawaguchi[1], Francesca Ingrosso[2], Marilia Martines-Costa[2], Manuel F Ruiz-Lopez[2], Hidemi Nagao[1] ([1]*Grad. Sch. Nat. Sci. Tech., Kanazawa Univ.*, [2]*Laboratoire de Physique et Chimie Theoriques, UMR CNRS 7019, Universite de Lorraine, 54506 Vandoeuvre-les-Nancy, France*)

2Pos004 Ribosome-assisted co-translational folding of a CFTR domain and its deletion mutant studied by molecular simulations
Suguru Kato, Kazushi Mochizuki, Shoji Takada (*Kyoto University*)

2Pos005 回転拡散より見積もられるリゾチーム間相互作用に対するホフマイスター効果
Hofmeister effects on lysozyme-lysozyme interaction estimated by rotational diffusion analysis
Akane Kato[1], Yudai Katsuki[1], Etsuko Nishimoto[2] ([1]*Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ.*, [2]*Fac. Agr., Kyushu Univ.*)

2Pos006 改良カメレオンモデルによるアデニル酸キナーゼの構造転移の解析
A study on conformational transition of adenylate kinase with an improved chameleon model
Ryota Mori, Mashiho Ito, Tomoki P. Terada, Masaki Sasai (*Dept. Appl. Phys., Grad. Sch. Eng., Nagoya Univ.*)

2Pos007 A thermodynamic model of amyloid-β protein oligomerization on negatively charged lipid bilayers
Keisuke Ikeda, Yuuki Sugiura, Minoru Nakano (*Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama*)

2Pos008 タンパク質フォールディングにおける自由エネルギー面の理論的解析
Theoretical analysis of free energy profile for folding of chignolin
Tomonari Sumi, Kenichiro Koga (*Res. Inst. Interdisciplinary Sci., Okayama Univ.*)

2Pos009 天然変性ペプチド pKID は高圧力下でフォールドするか
Do an intrinsically disordered peptide, pKID fold under high pressure?
Minoru Kato, Soichiro Kubota, Tubasa Yamamoto (*Dept. Applied Chem., Ritsumeikan Univ.*)

2Pos010 Ultra-fast dynamics of simple polyalanine peptides by using nanosecond region fluorescence correlation spectroscopy
Supawich Kamonprasertsuk[1,2], Hiroyuki Oikawa[1,2], Satoshi Takahashi[1,2] ([1]*IMRAM, Univ. Tohoku*, [2]*Chem, Grad. Sch. Sci., Univ. Tohoku*)

2Pos011 蛋白質-蛋白質相互作用面の二次構造に着目した分類手法の開発
Development of classification method of protein-protein interfaces based on their secondary structures
Takashi Fujii, Kazuo Fujiwara, Masamichi Ikeguchi (*Grad. Sch. of Eng., Soka Univ*)

2Pos012 水溶性および膜貫通 β-バレル構造における β-ストランドのねじれ/曲がり
β-strand twisting/bending in soluble and transmembrane β-barrel structures
Nobuaki Kikuchi, **Kazuo Fujiwara**, Masamichi Ikeguchi (*Dept. Bioinfo., Grad. Sch. Eng., Soka Univ.*)

2Pos013 アクチンフィラメントの圧電・誘電アロステリーがコフィリンの選択的結合に与える影響
Piezoelectric and dielectric allostery of an actin filament and its effect on binding preference of cofilin
Jun Ohnuki, Akira Yodogawa, Takato Sato, Taro Q.P. Uyeda, Mitsunori Takano (*Dept. of Pure & Appl. Phys., Waseda Univ.*)

2Pos014 The effect of a soft/discontinuity driveshaft on the rotation of F_1-ATPase
Shou Furuike[1], Naoki Soga[2], Yasushi Maki[1], Hideji Yoshida[1] ([1]*Osaka Med. Col.*, [2]*Sch. Eng., Univ. Tokyo*)

2Pos015 Investigation on the structural properties of proteins included in non-membraneous granule droplets
Saya Nakano[1,2], Hiroyuki Oikawa[1], Satoshi Takahashi[1] ([1]*IMRAM*, [2]*Grad. school of Life Science, Tohoku Univ.*)

2Pos016 フェリチン変異体の帯電限界
Charge limit of ferritin mutants
Takumi Kuwata[1], Daisuke Sato[2], Atushi Kurobe[1], Satuki Takebe[1], Kazuo Fujiwara[1,2], Masamichi Ikeguchi[1,2] ([1]*Grad. Sch. of Eng., Soka Univ.*, [2]*Fac. of Sci. and Eng., Soka Univ*)

2Pos017 蛍光寿命計測によるアシル CoA 結合タンパク質のフォールディング機構の研究
Folding dynamics of acyl-CoA binding protein revealed by fluorescence lifetime measurements
Koichi Fujii, Motonari Tsubaki, Tetsunari Kimura (*Grad. Sch. Sci., Kobe Univ*)

2Pos018 Influence of ligand binding on the glass transition temperature
Alexander Krah[1], Peter John Bond[2,3] ([1]*School of Computational Sciences, Korea Institute for Advanced Study (KIAS)*, [2]*Bioinformatics Institute, A*STAR*, [3]*Department of Biological Sciences, National University of Singapore*)

2Pos019 回転対称軸周辺における相互作用の摂動による球殻状超分子のアセンブリ・メカニズムへの影響
Change in the assembly mechanism by disrupting of local interactions around symmetry axes of a spherical shell-shaped supermolecule
Daisuke Sato[1], Takumi Kuwata[2], Eriko Aoki[1], Kazuo Fujiwara[1,2], Masamichi Ikeguchi[1,2] ([1]*Fac. of Sci. and Eng., Soka Univ.*, [2]*Grad. Sch. of Eng., Soka Univ.*)

2Pos020 ポリミアン優先取込システムに関与する好熱菌由来 PotA の結晶構造解析
Crystal structure of PotA, a membrane-associated ATPase of the spermidine-preferential uptake system in Thermotoga maritima
Mihoka Amano[1], Taichi Naruse[1], Keiko Kashiwagi[2], Kazuei Igarashi[3], Shigeru Sugiyama[4] ([1]*Grad. Sch. Sci., Kochi Univ.*, [2]*Fac. Pharm., Chiba Ins. Sci.*, [3]*Amine Pharma Res. Ins.*, [4]*Fac. Sci. & Tec., Kochi Univ.*)

2Pos021 ヨツヒメゾウリムシ由来アルギニンキナーゼの構造学的研究
Structural studies of arginine kinase from Paramecium tetraurelia
Yumeto Otsuka[1], Junko Tanaka[1], Daichi Yano[2], Koji Uda[2], Tomohiko Suzuki[2], Shigeru Sugiyama[2] ([1]*Grad. Sch. Sci., Kochi Univ.*, [2]*Fac. Sci. & Tec., Kochi Univ.*)

2Pos022 FABP3 の低分子薬剤に対する分子認識機構の解明
Elucidation of the molecular recognition mechanism of FABP3 in complex with low-molecular medicines
Junko Tanaka[1], Yumeto Otsuka[1], Daisuke Matsuoka[2], Osamu Hiraoka[3], Shigeru Matsuoka[4], Masashi Sonoyama[5], Michio Murata[2], Shigeru Sugiyama[6] ([1]*Grad. Sch. Sci., Kochi Univ.*, [2]*Grad. Sch. Sci., Osaka Univ. & JST ERATO*, [3]*Sch. Pharm., Shujitsu Univ.*, [4]*Fac. Med., Oita Univ*, [5]*Sch. Sci. & Tec., Gumma Univ.*, [6]*Fac.Sci & Tec.,Kochi Univ*)

2Pos023 Conformational fluctuations and diffusive dynamics of small proteins
Eiji Yamamoto[1], Takuma Akimoto[2] ([1]*Dept. System Design Engineering, Keio Univ.*, [2]*Dept. Phys., Tokyo Univ. Sci.*)

2Pos024 カロテノイド結合とアミノ酸変異による微生物型ロドプシン TR の熱安定化
Thermostabilization of the microbial rhodopsin TR by carotenoid binding and amino-acid mutation
Tomoki Akiyama[1], Keigo Nishikawa[3], Sayaka Nemoto[4], Satoshi Yasuda[2,4,5], Daisuke Umeno[6], Masahiro Kinoshita[2], Yuki Sudo[3], Takeshi Murata[4,7] ([1]*Graduate School of Science and Engineering, Chiba University*, [2]*Institute of Advanced Energy, Kyoto University*, [3]*Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama University*, [4]*Graduate School of Science, Chiba University*, [5]*Molecular Chirality Research Center, Chiba University*, [6]*Graduate School of Engineering, Chiba University*, [7]*PRESTO*)

2Pos025 多糖モノオキシゲナーゼ，CBP21 の熱安定性に対する金属イオンの効果
Effects of metal ions on the thermal unfolding of lytic polysaccharide monooxygenase, CBP21
Hayuki Sugimoto, Ayaka Motoyama, Erina Katagiri, Takeshi Watanabe, Kazushi Suzuki (*Fac. Agri., Niigata Univ.*)

2Pos026 水棲哺乳類ミオグロビンの分子進化：二つの適応戦略
Tracing evolution of aquatic mammal myoglobins: the two adaptation mechanisms
Yasuhiro Isogai[1], Hiroshi Imamura[2], Setsu Nakae[3], Tomonari Sumi[4], Ken-ichi Takahashi[3], Taro Nakagawa[3], Antonio Tsuneshige[5], Tsuyoshi Shirai[3] ([1]*Dept. Pharm. Eng., Toyama Pref. Univ.*, [2]*Life Sci., Ritsumeikan Univ.*, [3]*Dept. Comp. Bio-Sci., Nagahama Inst. Bio-Sci. Tech.*, [4]*Dept. Chem., Okayama Univ.*, [5]*Dept. Frontier Biosci., Hosei Univ.*)

核酸結合蛋白質／Nucleic acid binding proteins

2Pos027 スピンラベル ESR によるヘテロクロマチンタンパク質 HP1 の動的構造の研究
Structural dynamics of heterochromatin protein HP1 studied by site-directed spin labeling ESR spectroscopy
Toshiaki Arata[3,4], Yuichi Mishima[4], Shigeaki Nakazawa[5], Kazunobu Sato[5], Takeji Takui[5], Toshimichi Fujiwara[4], Makoto Miyata[3], **Isao Suetake**[1,2,4] ([1]*Koshien Univ.*, [2]*Twin Research Center, Osaka Univ.*, [3]*Dept. Biol., Grad. Sch. Sci., Osaka City Univ.*, [4]*IPR, Osaka Univ.*, [5]*Dept. Chem., Grad. Sch. Sci., Osaka City Univ.*)

2Pos028 TALE 蛋白質の新規構築法と応用
A simple and accurate construction of TALEs and its applications
Kazuho Ikeda, Yoko Terahara, Yasushi Okada (*RIKEN, BDR*)

2Pos029 標的 RNA の切断前後の CRISPR-CMR の動力学
The dynamics of CRISPR-CMR before/after the cleavage of targeted RNA
Tomohiro Yamaguchi, Ryo Ohashi, Naoyuki Miyashita (*BOST, KINDAI Univ.*)

2Pos030 Distinct binding of nuclear proteins to non B-type DNA studied by molecular simulations
Mami Saito, Shoji Takada (*Dept Biophysics, Div Biology, Grad School Science, Kyoto University*)

2Pos031 Theoretical Studies on Stability of RA-VII for Anti-Cancer Agent by Docking and Molecular Dynamics Simulations
Muhammad Arwansyah Saleh[1], Yoh Noguchi[2], Takeshi Miyakawa[2], Kazutomo Kawaguchi[1], Yukio Hitotsuyanagi[3], Satoshi Yokojima[3], Ryota Morikawa[2], Masako Takasu[2], Hidemi Nagao[1] ([1]*Division of Mathematical and Physical Sciences, Kanazawa University*, [2]*School of Life Sciences, Tokyo University of Pharmacy and Life Sciences*, [3]*School of Pharmacy, Tokyo University of Pharmacy and Life Sciences*)

2Pos032 Combinatorial DNA Binding of Sox/Oct Transcription Factors Studied with Molecular Dynamics Simulations
Cheng Tan, Shoji Takada (*Department of Biophysics, Kyoto University*)

2Pos033 蛍光相互相関分光法による単量体/二量体グルココルチコイド受容体の DNA 結合様式解明に向けた研究
Single-oligonucleotide mutated GRE impacts on glucocorticoid receptor binding studied by FCCS
Daisuke Yamashita[1], Sho Oasa[2], Jhotaro Yamamoto[2,3], Masataka Kinjo[2] ([1]*Grad. Shc. of Life Sci., Hokkaido Univ.*, [2]*Fac. of Adv. Life Sci., Hokkaido Univ.*, [3]*Biomed. Res. Inst. AIST*)

2Pos034 Comparing Nucleoprotein Filament Assembly of Yeast Dmc1 and Rad51 Recombinases at the Single-Molecule Level
Wei-Hsuan Lan[1], Sheng-Yao Lin[1], Wen-Hsuan Chang[1], Chih-Yuan Kao[2], Peter Chi[2,3], Hung-Wen Li[1] ([1]*Dept. of Chemistry, NTU*, [2]*Inst. of Biochemical Sciences,NTU*, [3]*Inst. of Biological Chemistry, Academia Sinica*)

2Pos035 がん抑制タンパク質ｐ５３の標的探索ダイナミクスの一分子観察
Single-molecule observation of the target search dynamics of a tumor suppressor p53
Yuji Itoh, Agato Murata, Satoshi Takahashi, Kiyoto Kamagata (*IMRAM*)

2Pos036 Using Single-Molecule Optical Microscopy to Study How PriA Helicase Restarts replication
Han Lin Yang[1], Hung-Wen Li[1], Min Guan Lin[2], Chwan-Deng (David) Hsiao[2] ([1]*Dept. Chem, NTU*, [2]*IMB, Academia Sinica*)

核酸／Nucleic acid

2Pos037 二面角系疎視化モデルによる巨大核酸分子の立体構造ゆらぎ―Ｘ線構造の温度因子との比較
Structure fluctuations of large nucleic acids with a corse-grained model in torsional angle space–A comparison with temperature factors
Shigeru Endo[1], Hiroshi Wako[2] ([1]*Dept. Phys., Sch. Sci., Kitasato Univ.*, [2]*Sch. Socical Sci., Waseda Univ.*)

2Pos038 SAXS および SANS プロファイルに基づくオーバーラッピングダイヌクレオソームのモデル構築
Model building of overlapping dinucleosome based on SAXS and SANS profiles
Atsushi Matsumoto[1], Hidetoshi Kono[1], Rintaro Inoue[2], Masaaki Sugiyama[2], Yasuhiro Arimura[3], Hitoshi Kurumizaka[3] ([1]*QST*, [2]*Kyoto U.*, [3]*U. Tokyo*)

2Pos039 分子輪投げによる環状 DNA1 分子のトラップ
Trapping of Single Circular DNA Molecules by Molecular Ringtoss
Ken Hirano[1], Taiki Dohi[1,2], Kyohei Terao[2] ([1]*Health Res. Inst., AIST*, [2]*Dep. Eng., Kagawa Univ.*)

2Pos040 siRNA を安定化するカチオン性分子と二本鎖 RNA の NMR による相互作用解析
NMR analysis of interactions between dsRNA and cationic oligomers that stabilize small interfering RNA
Taiichi Sakamoto[1], Rintaro Hara[2], Yusuke Maeda[2], Takeshi Wada[2] ([1]*Fac. Adv. Eng., Chiba Inst. Tech.*, [2]*Fac. Pharm., Tokyo Univ. Sci.*)

2Pos041 DNA の構造の揺らぎへの溶媒粘性の影響
Effect of solvent viscosity on configuration fluctuations of DNA
Masato Tanigawa, Takafumi Iwaki (*Biophysics, Faculty of Medicine, Oita University*)

2Pos042 Structural effect of spermine analogues on inducing DNA compaction
Tomoki Kitagawa, Tkashi Nishio, Yuuko Yoshikawa, Takahiro Kenmotsu, Kenichi Yoshikawa (*Faculty of Biological and Medical Sciences, Doshisha University Laboratory of Life Physics*)

2Pos043 1-propanol causes reentrant transition on DNA whereas 2-propanol does not: Experimental verification through single molecular observation
Yue Ma, Yuko Yoshikawa, Koichiro Sadakane, Kenichi Yoshikawa (*Grad. Sch. Life Med. Sci, Doshisha Univ.*)

2Pos044 Direct Observation of the Protein-DNA Interaction Using Passive Force-Clamp Optical tweezers
Yen Chan Chang, Hung Wen Li (*Department of Chemistry, National Taiwan University, Taipei, Taiwan*)

2Pos045 X 線小角散乱法による RecA タンパク質ーDNA 複合体フィラメントの構造解析とシミュレーションモデルとの比較
Structural changes of RecA protein/DNA complex filament promoted by Mg ions analyzed using SAXS and compared with its models
Satomi Inaba[1], Chantal Prevost[2], Tsutomu Mikawa[3], Hiroshi Sekiguchi[1], Masayuki Takahashi[4] ([1]*JASRI/SPring-8*, [2]*CNRS*, [3]*RIKEN BDC*, [4]*Tokyo Inst. Technol.*)

2Pos046 DNA インターカレーションと光応答
DNA intercalation and optical response
Satoshi Yokojima (*Tokyo University of Pharmacy and Life Sciences*)

2Pos047 転写開始複合体における DNA 開裂の粗視化分子シミュレーション研究
DNA Opening in Transcription Initiation Complex Studied by Coarse-grained Molecular Simulation
Genki Shino, Masahiro Shimizu, Shintaroh Kubo, Toru Niina, Shoji Takada (*Dept. of Biophys., Div. of Bio. Sci., Grad. Sch. of Sci., Univ. of Kyoto*)

2Pos048 光照射で構築した DNA マイクロ構造体の熱力学的特性の解析
Analysis of the thermodynamic property of DNA microstructures formed by photo-irradiation
Yu Kasahara, Masahiro Takinoue (*Tokyo Institute of Technology/School of Computing/Computer Science.*)

2Pos049 細胞核様 DNA ゲルカプセルの形成のシミュレーション
Numerical simulation of phase separation-based formation of cell nucleus-like DNA gel capsule
Tetsuro Sakamoto, Masamune Morita, Masahiro Takinoue (*Department of Computer Science, Tokyo Institute of Technology*)

2Pos050 Heterogeneous chromatin accessibility establishes human nuclear organization
Shin Fujishiro[1,2], **Masaki Sasai**[1,2] ([1]*Dept. Comp. Sci. & Eng., Nagoya Univ.*, [2]*Dept. Appl. Phys., Nagoya Univ.*)

2Pos051 ヌクレオソーム排他的領域のインスレーター機能の解析
Analysis of insulator function of nucleosome exclusive genome regions
Yuki Matsushima, Hiraku Nishimori, Naoaki Sakamoto, Akinori Awazu (*Dept. of Math and Life Science, Hiroshima Univ.*)

2Pos052 過渡的に生じる中間体ヌクレオソームにおけるヒストンテール動態
Histone Tail Dynamics in Transient Intermediate Single Nucleosomes
Takeru Kameda, Yuichi Togashi, Akinori Awazu (*Department of Mathematical and Life Sciences, Hiroshima University*)

電子状態／Electronic state

2Pos053 アミロイドβ凝集の初期過程に対する QM/MM 法を用いた解析
QM/MM analysis of the initial aggregation of amyloid-β peptides
Hiroaki Nishizawa[1,2], Hisashi Okumura[1,2,3] ([1]*ExCELLS*, [2]*IMS*, [3]*Sokendai*)

2Pos054 Relative stability between hydroxide models and oxo models of S1 state of the OEC of PSII by DFT and beyond DFT methods
Koichi Miyagawa[2], Takashi Kawakami[1], Hiroshi Isobe[3], Mitsuo Shoji[4], Shusuke Yamanaka[1], Kazuhiko Nakatani[2], Mitsutaka Okumura[1], Kizashi Yamaguchi[2,5] ([1]*Grad. Sch. Sci., Osaka Univ.*, [2]*ISIR, Osaka Univ.*, [3]*Grad. Sch. Nat. Sci. and Tech., Okayama Univ.*, [4]*CCS, Tsukuba Univ.*, [5]*Inst. Nanosci. Design, Osaka Univ.*)

2Pos055 DASH 型クリプトクロムにおける電子移動反応に関する理論的解析
Theoretical Analysis of Electron Transfer Reaction for Cryptochrome-DASH
Ryuma Sato, Makoto Taiji (*RIKEN*)

2Pos056 光電子放出を用いた TR の電子構造の観測 2：RxR との比較
Electronic structure of a film with TR observed by technique using photoelectron emission 2: Comparison with RxR
Daisuke Sano[1], Yuki Takeda[1], Tomoki Akiyama[1], Kanae Kanahara[2], Takeshi Murata[1,3], Yuki Sudo[2], Hisao Ishi[1,3,4] ([1]*GSSE Chiba Univ.*, [2]*GSMP Okayama Univ.*, [3]*MCRC Chiba Univ.*, [4]*CFS Chiba Univ.*)

2Pos057 高感度紫外光電子分光を用いたリゾチーム薄膜のギャップ内準位の観測
Gap state of lysozyme thin film observed by high-sensitivity UV photoelectron spectroscopy
Ichiro Ide[1], Daisuke Sano[1], Shintaro Maruyama[1], Yuya Tanaka[3], Takeshi Murata[2], Hisao Ishii[4] ([1]*Grad. Sch. Sci. Eng., Univ. Chiba*, [2]*Grad. Sch. Sci. Eng, Chi. Res. Cen., Univ. Chiba*, [3]*Grad. Sch. Sci. Eng., Cen. Fro. Sci., Univ. Chiba*, [4]*Grad. Sch. Sci. Eng., Fro. Sci. Cen., Chi. Res. Cen., Univ. Chiba*)

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

2Pos058 各種溶質周囲の水分子ダイナミクスの分子動力学計算と解析
MD simulations and analysis of hydration dynamics around several types of solute molecules
Takuya Takahashi, Kota Kasahara, Ryoi Ashida, Nobuya Hasegawa, Daigo Itsuji, Tomomi Kura (*College of Life Science, Ritsumeikan University*)

2Pos059 細胞混雑中の蛋白質間相互作用に及ぼす代謝物とイオンの影響:分子動力学法による理論的研究
Influence of metabolites and ions on the protein-protein interactions in cellular crowding: Theoretical study with MD simulations
Isseki Yu[1,2], Michael Feig[3], Yuji Sugita[2] ([1]*Maebashi Institute of Technology*, [2]*RIKEN Theoretical Molecular Science Lab.*, [3]*Michigan State University*)

2Pos060 機械学習アプローチによる物理化学量の予測
Classification and prediction of physicochemical properties by machine-learning approach: molecular dynamic study of hydration water
Taku Mizukami[1], Viet Cuong Nguyen[3], Tien Lam Pham[2], Heui Chi Dam[2] ([1]*JAIST, Materials*, [2]*JAIST, Knowledge*, [3]*HPC.Inc*)

2Pos061 MDM2-p53NTD と MDM2-MIP の結合自由エネルギーに見られる大きな差の物理起源
Physical origin of the large difference between MDM2-p53NTD and -MIP complexes in binding free energy
Tatsuya Yamada[1], Tomohiko Hayashi[1], Naohiro Kobayashi[2], Hiroshi Yanagawa[3], Masato Katahira[1], Takashi Nagata[1], Masahiro Kinoshita[1] ([1]*Inst. of Adv. Energy, Kyoto Univ.*, [2]*Inst. for Protein Res., Osaka Univ.*, [3]*IDAC Theranostics, Inc.*)

2Pos062 溶媒の種類が蛋白質の安定構造に及ぼす効果
Effects of solvent species on the stabilized structure of a protein
Tomohiko Hayashi[1], **Masao Inoue**[1], Satoshi Yasuda[1,2,3], Emanuele Petretto[4], Tatjana Skrbic[4], Achille Giacometti[4], Masahiro Kinoshita[1] ([1]*Inst. Adv. Energ., Kyoto Univ.*, [2]*Grad. Sch. Sci., Chiba Univ.*, [3]*MCRC, Chiba Univ.*, [4]*Dept. of Molecular Sciences and Nanosystems, Venezia Univ.*)

2Pos063 セロビオースとマルトースの水への溶解度の大きな差に関する統計熱力学
Statistical thermodynamics on the large difference between maltose and cellobiose in terms of solubility in water
Simon Hikiri[1,2], Tomohiko Hayashi[2], Mitsunori Ikeguchi[3,4], Masahiro Kinoshita[2] ([1]*Grad. Sch. of Sci., Chiba Univ.*, [2]*Inst. of Adv. Energy, Kyoto Univ.*, [3]*Grad. Sch. of Med. Life Sci., Yokohama City Univ.*, [4]*RIKEN, MIH*)

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

2Pos064 The analysis of Housekeeping Gene Expression Variations During iPS Reprogramming Process
Yulia Panina, Arno Germond, Tomonobu Watanabe (*RIKEN BDR*)

2Pos065 エピジェネティックな状態変化と遺伝子相互作用が細胞のがん化に及ぼす影響のランドスケープ理論による解析
Landscape analyses of coupled dynamics of epigenetic state change and gene interaction in carcerization
Yutaro Kameyama, Masaki Sasai (*Dept. Appl. Phys., Grad. Sch. Eng., Nagoya Univ.*)

生体膜・人工膜／Biological & Artificial membrane: Structure & Property

2Pos066 細胞膜アンカーを目指したαヘリックス型ペプトイドの合成
Synthesis of an α-helix peptoid for cell-membrane anchoring
George Mogami, Wato Oba, Masaya Yamamoto (*Grad. Sch. Eng., Tohoku Univ.*)

2Pos067 Implicit Solvent Coarse-Grained Lipid Model for Molecular Simulations of Multicomponent Membrane Systems
Diego Ugarte, Shoji Takada (*Dept. Biophysics, Div. Biology, Graduate School of Science, Kyoto University*)

2Pos068 細胞模倣系における蛍光相関分光法による分子拡散測定
Molecular diffusion in cell-mimicking system measured by fluorescence correlation spectroscopy
Chiho Watanabe, Yuta Kobori, Miho Yanagisawa (*Tokyo Univ. Agri. Technol.*)

2Pos069 Single molecule analysis of transport protein using small liposome with size uniformity
Naoki Soga[1], Rikiya Watanabe[1,2], Hiroyuki Noji[1] ([1]*Dept. of Appl. Chem., The Univ. of Tokyo*, [2]*AMED-PRIME, JST*)

2Pos070 高速 AFM を用いた光受容体ロドプシンクラスターとトランスデューシンとの相互作用観察
Observing the interaction between rhodopsin cluster and transducin by high-speed AFM
Yasushi Tanimoto[1], Hayato Yamashita[2,3], Kento Nomura[2], Masayuki Abe[2], Fumio Hayashi[4], Kenichi Morigaki[1,5] ([1]*Biosignal research Center, Univ Kobe*, [2]*Grad. Sch. Eng. Sci., Univ Osaka*, [3]*PRESTO, JST*, [4]*Grad. Sch. Scie, Univ. Kobe*, [5]*Grad. Sch. Agr., Univ. Kobe*)

2Pos071 全反射赤外分光法によるGタンパク質共役受容体-リガンド間相互作用の解析
Investigation of ligand-protein interaction in a G protein-coupled receptor via ATR-FTIR spectroscopy
Hisao Tsukamoto[1,2], Yuji Furutani[1] ([1]*Institute for Molecular Science*, [2]*PRESTO, JST*)

2Pos072 細胞骨格封入巨大リポソームの繰返し屈伸運動
Repetitive stretching of cytoskeleton-encapsulating giant liposomes
Masahito Hayashi[2], Shunsuke Tanaka[1], Masayoshi Nishiyama[3], Taro Toyota[4], **Kingo Takiguchi**[1] ([1]*Grad Sch of Sci, Nagoya Univ*, [2]*CBS, RIKEN*, [3]*Dept of Phys, Kindai Univ*, [4]*Graduate School of Arts and Sciences, The University of Tokyo*)

2Pos073 アガロースマイクロチャンバー内でのマクロファージの運動の観察
Observation of Macrophage Migration in Agarose Microchamber
Nami Morizono, Tomoyuki Kaneko (*LaRC, FB, Hosei Univ*)

2Pos074 *In vitro* reconstitution system for traveling waves of PIP3
Hitomi Matsubara[1,2], Satomi Matsuoka[1,2], Masahiro Ueda[1,2] ([1]*Grad. Sch. FBS., Univ. Osaka*, [2]*RIKEN*)

2Pos075 クラミドモナスの機械反応における TRP11 の役割
Roles of TRP11 in Mechanoresponces in Chlamydomonas
Kosuke Anzai[1], Akiko Yoshida[1], Megumi Yoshida[1], Ken-ichi Wakabayashi[2], Kenjiro Yoshimura[1] ([1]*Dept. Machinery & Control Systems., Shibaura Inst. Technol.*, [2]*Inst. Innovative Res., Tokyo Inst. Technol.*)

2Pos076 ナノポアによる一分子 AND ゲートの構築とリポソームへの搭載
Single molecule AND gate with a biological nanopore integrated into a liposome
Ping Liu, Keisuke Shimizu, Masayuki Ohara, Ryuji Kawano (*Tokyo University of Agriculture and Technology*)

2Pos077 A simple method for single ion channel recordings
Kota Kaneko[1], Huimin Ma[1], Minako Hirano[2], Toru Ide[1] ([1]*Okayama University*, [2]*The Graduate School for the Creation of New Photonics Industries*)

2Pos078 イオンチャネルの特性の改変
Modifications of K^+ channel property
Tomoya Ishido[1], Toru Ide[1], Minako Hirano[2] ([1]*Okayama University*, [2]*GPI*)

2Pos079 ステロールによる膜張力を介した KcsA カリウムチャネル活性の制御
Regulation of the activity of the KcsA potassium channel via bilayer tension-mediated sterol action
Masayuki Iwamoto, Shigetoshi Oiki (*Dept. Mol. Physiol. Biophys., Univ. Fukui Facul. Med. Sci.*)

2Pos080 ATP 合成阻害時の細胞内ミトコンドリアの膜電位モニタリング
Monitoring of mitochondrial membrane potential upon addition of oligomycin
Emika Shida, Yshihiro Ohta (*Tokyo University of Agriculture and Technology*)

2Pos081 多剤輸送担体 EmrE の多剤認識における熱力学
Thermodynamics of multidrug recognition in multidrug transporter, EmrE
Kazumi Shimono[1,2], Keisuke Matsuda[2], Shoko Suzuki[2], Kaho Yajima[2], Sakiyo Yamamoto[2], Seiji Miyauchi[2] ([1]*Fac. Pharm. Sci., Sojo Univ.*, [2]*Fac. Pharm. Sci., Toho Univ.*)

2Pos082 移動性細胞における $PI(3,4,5)P_3$ の非対称分布を安定化する PTEN-$PI(4,5)P_2$ ポジティブフィードバック機構
PTEN-$PI(4,5)P_2$ positive feedback mechanism for stabilizing asymmetric $PI(3,4,5)P_3$ localization in migrating cell
Daisuke Yoshioka[1,3], Hiroyasu Koteishi[3], Daichi Okuno[3], Satomi Matsuoka[3], Toru Ide[4], Masahiro Ueda[1,2,3] ([1]*Grad. Sch. of Sci., Osaka Univ.*, [2]*Grad. Sch. of Front. Biosci., Osaka Univ.*, [3]*RIKEN*, [4]*Grad. Sch. of Nat. Sci. and Tech., Okayama Univ.*)

2Pos083 Simulation of Shape Transformation of Vesicle Including Particles
Hibiki Itoga[1], Ryota Morikawa[1], Tsuyoshi Ueta[2], Takeshi Miyakawa[1], Yuno Natsume[3], Masako Takasu[1] ([1]*Tokyo Univ. Pharm. Life Sci.*, [2]*Jikei Univ.*, [3]*J. Women's Univ.*)

行動／Behavior

2Pos084 機械刺激がゾウリムシの逃走反応を誘導するしくみ
Molecular mechanism of escape response induced by mechanical stimulation in Paramecium
Mutsumi Kawano[1], Ayaka Seto[1], Takashi Tominaga[2], Masaki Ishida[3], **Manabu Hori**[1] ([1]*Fac. Sci, Yamaguchi Univ.*, [2]*Inst Neurosci, Tokushima BUNRI Univ.*, [3]*Sch. Sci. Edu., Nara Univ. Edu.*)

2Pos085 三次元空間における真正粘菌変形体の管ネットワーク形成
Tubular network formation in three dimensional space by the true slime mold
Seiji Takagi (*Future University Hakodate*)

光生物学：視覚・光受容／Photobiology: Vision & Photoreception

2Pos086 珪藻および渦鞭毛藻由来の真核生物型 H^+ポンプロドプシンの機能・光化学的解析
Characterization of eukaryotic H^+ pumping rhodopsins from the diatom *Pseudo-nitzschia granii* and dinoflagellate *Oxyrrhis marina*
Masuzu Kikuchi[1], Susumu Yoshizawa[2], Akimasa Kaneko[1], Keiichi Kojima[1,3], Yuki Sudo[1,3] ([1]*Fac. of Pharm. Sci., Okayama Univ.*, [2]*AORI, UTokyo.*, [3]*Grad. Sch. of Med. Dent Pharm. Sci., Okayama Univ.*)

2Pos087 スチレンマレイン酸 (SMA) コポリマーを用いた微生物型ロドプシンの可溶化とその分光学的解析
Solubilization and spectroscopic analysis of microbial rhodopsins in styrene-maleic acid (SMA) copolymers
Tetsuya Ueta[1], Kanae Kanehara[1], Keiichi Kojima[1,2], Tomoya Hino[3], Shingo Nagano[3], Yuki Sudo[1,2] ([1]*Fac. of Pharm. Sci. Okayama Univ.*, [2]*Grad. Sch. of Med. Dent. Pharm. Sci., Okayama Univ.*, [3]*Grad. Sch. of Eng., Tottori Univ.*)

2Pos088 光駆動ナトリウムポンプ KR2 における Ser70 の役割
Role of Ser70 for transport activity of a light-driven sodium ion pump
Rei Abe-Yoshizumi[1], Aki Nemoto[1], Keiichi Inoue[1,2,3], Hideki Kandori[1] ([1]*Nagoya Inst. Tech.*, [2]*ISSP Univ. of Tokyo*, [3]*JST PRESTO*)

2Pos089 光駆動 SO_4^{2-} 輸送体（SyHR）のアニオン輸送と選択性への塩基性アミノ酸残基の役割
Role of basic amino acid residues on the anion transport and its selectivity in a light-driven SO_4^{2-} transporter SyHR
Masaki Nakama[1], Keiichi Kojima[1,2], Marie Kurihara[2], Susumu Yoshizawa[3], Yuki Sudo[1,2] ([1]*Fac. of Pharm. Sci. Okayama Univ*, [2]*Grad. Sch. of Med. Dent. & Pharm. Sci. Okayama Univ*, [3]*AORI, UTokyo*)

2Pos090 出芽酵母を用いたアニオンチャネルロドプシンの発現と分光学的解析
Expression and spectroscopic analysis of anion channelrhodopsins using a eukaryotic yeast, *Saccaromyces cerevisiae*
Ryota Ono[1], Taro Yamanashi[2], Keiichi Kojima[1,2], Hisao Moriya[3], Yuki Sudo[1,2] ([1]*Div. of Pharm. Sci., Okayama Univ.*, [2]*Grad. Sch. of Med., Dent. & Pharm. Sci., Okayama Univ.*, [3]*Res. Core for Interdiscip. Sci., Okayama Univ.*)

2Pos091 海洋性真核藻類 *Guillardia theta* における 44 種類の微生物型ロドプシン様タンパク質の遺伝子発現解析
Gene expression analysis of 44 microbial rhodopsin-like proteins from marine algae *Guillardia theta*
Yumeka Yamauchi[1], Masae Konno[1,2], Keiichi Inoue[1,3,4], Hideki Kandori[1,2] ([1]*Grad. Sch. Eng., NIT*, [2]*OBTRC, NIT*, [3]*ISSP, Univ. Tokyo*, [4]*PRESTO, JST*)

2Pos092 円石藻ウイルス由来のヘリオロドプシンの分子物性解析
Molecular characterization of heliorhodopsin from Emiliania huxleyi virus
Ritsu Mizutori[1], Masae Konno[1,2], Keiichi Inoue[1,2,3,4], Oded Beja[5], Hideki Kandori[1,2] ([1]*Grad. Sch. Eng., NIT*, [2]*OBTRC, NIT*, [3]*ISSP, Univ. Tokyo*, [4]*PRESTO, JST*, [5]*Technion-Israel Inst. Tech.*)

2Pos093 Mutational analysis of amino acid residues surrounding the electron-transferring terminal Trp of plant (6-4) photolyase
Yuhei Hosokawa[1], Ryuma Sato[2], Shigenori Iwai[1], Junpei Yamamoto[1] ([1]*Grad. Sch. Eng. Sci., Univ. Osaka*, [2]*Riken*)

2Pos094 Analysis of binding of light-harvesting secondary chromophore to animal and plant (6-4) photolyase
Ayaka Morimoto, Kumar Rajiv, Yuhei Hosokawa, Yuma Terai, Shigenori Iwai, Junpei Yamamoto (*Grad. Sch. Eng., Univ. Osaka*)

2Pos095 過渡回折格子法を用いた orange carotenoid protein の光反応ダイナミクスの研究
Study on photoreaction dynamics of orange carotenoid protein using transient grating method
Takatoshi Ohata, Yusuke Nakasone, Masahide Terazima (*Grad. Sch. Sci., Univ. Kyoto*)

2Pos096 ビリベルジン結合型シアノバクテリオクロムの遠赤／橙色光変換過程での構造変化の検出
Detection of structural change during far-red/orange reversible photoconversion of biliverdin-binding cyanobacteriaochrome
Yuka Takeda, Keiji Fushimi, Rei Narikawa (*Grad. Sch. Integrated Science and Technology, Univ. Shizuoka*)

2Pos097 Application of electron spin polarization imaging method to obtain geometries of photoinduced charge-separated states in cryptochrome
Hiroki Nagashima[1], Misato Hamada[2], Takashi Tachikawa[1,2], Tatsuya Iwata[3], Hideki Kandori[4], Till Biskup[5], Stefan Weber[5], Yasuhiro Kobori[1,2] ([1]*Mol. PhotoSci., Kobe Univ.*, [2]*Grad. Sch. Sci., Kobe Univ.,*, [3]*Facul. Pharmaceutical Sci., Toho Univ.*, [4]*Grad. Sch. Eng., Nagoya Inst. Tech.,*, [5]*Inst. Phys. Chem., Albert-Ludwigs-Univ. Freiburg*)

2Pos098 Rc-PYP(K72Q)を用いた複合体形成過程の解析
Elucidation of the complex formation process using Rc-PYP mutant K72Q
Natsuki Oka, Yoichi Yamazaki, Yugo Hayashi, Hironari Kamikubo (*Nara Institute of Science and Technology*)

2Pos099 膜脂質環境が G タンパク質トランスデューシンの活性化効率に及ぼす影響
The effect of lipid environment of outer segment membranes on the activation of photoreceptor specific G protein, Transducin
Kyoko Kadomatsu[1], Keiji Seno[2], Yuki Ito[1], Satoru Kawamura[1], Shuji Tachibanaki[1] ([1]*Grad. Sch. of Frontier Biosci., Osaka Univ.*, [2]*Department of Biology, Faculty of Medicine, Hamamatsu University School of Medicine*)

2Pos100 色覚視物質の結晶構造解析に向けたユニークな戦略
Unique approaches towards cone opsin crystallization
Kota Katayama, Hideki Kandori (*Grad. Sch. Eng., Nagoya Inst. Tech.*)

2Pos101 フーリエ変換赤外分光法によるロドプシンと錐体視物質の発色団／蛋白質相互作用の比較
Comparison of chromophore/protein interaction between rhodopsin and cone pigment using Fourier transform infrared spectroscopy
Naoto Noguchi[1], Takahiro Yamashita[1], Yoshinori Shichida[2], Yasushi Imamoto[1] ([1]*Kyoto University*, [2]*Ritsumeikan University*)

2Pos102 網膜桿体細胞内円盤膜上の脂質-光受容タンパク質の秩序形成の数理モデル
A mathematical model of pattern formation of lipid-photoreceptor proteins on disk membranes of retinal cells
Yukito Kaneshige[1], Akinori Awazu[1], Hiraku Nishimori[1], Humio Hayashi[3], Kenichi Morigaki[2], Taishi Tanimoto[2] ([1]*Grad. Sci. Univ. Hiroshima*, [2]*Grad. Agri. Univ. Kobe*, [3]*Grad. Sci. Univ. Kobe*)

2Pos103 バクテリオロドプシンにおける 1 段階目のプロトン移動を対象とした大規模量子分子動力学シミュレーション
Large-scale quantum-mechanical molecular dynamics simulations for the primary proton transfer in bacteriorhodopsin
Junichi Ono[1], Minori Imai[2], Yoshifumi Nishimura[1], Hiromi Nakai[1,2,3] ([1]*RISE, Waseda Univ.*, [2]*Grad. Sch. of Adv. Sci. & Eng., Waseda Univ.*, [3]*ESICB, Kyoto Univ.*)

2Pos104 大規模励起状態計算手法の開発と光活性イエロータンパク質に対する応用研究
Development of large-scale excited-state calculation method and applied research on photoactive yellow protein
Nana Komoto[1], Takeshi Yoshikawa[1], Junichi Ono[2], Hiromi Nakai[1,2,3] ([1]*Grad. Sch. of Adv. Sci. & Eng., Waseda Univ.*, [2]*RISE, Waseda Univ.*, [3]*ESICB, Kyoto Univ.*)

その他／Miscellaneous topics

2Pos105 ポリリジン残基の付加は、DNA オリガミへの SNAPf 融合蛋白質の結合速度を向上させる
Poly-lysine tag increase the binding rate of SNAPf-fused protein to DNA origami
Kodai Fukumoto[1], Yuya Miyazono[2], Hisashi Tadakuma[1], Yoshie Harada[1] ([1]*IPR, Osaka Univ.*, [2]*Grad. Sch. Front. Sci., Univ. Tokyo*)

2Pos106 希少糖生産に関わる単糖間異性化反応の熱力学的研究
Thermodynamic investigation on the isomerization of monosaccharides for rare sugar production
Akihide Yoshihara, Mitsuki Murakami, Ryoko Iwata, Taro Kozakai, Kimi Fujiwara, **Kazuhiro Fukada** (*Fac. Agric., Kagawa Univ.*)

2Pos107 試料環境による eGFP の電子誘起変換の依存性
The environmental dependence of the "electron-induced" conversion of eGFP
Koki Matsui, Keiichirou Akiba, Hiroki Minoda (*TUAT*)

2Pos108 A model for analyzing phenomena in multicellular organisms with multivariable polynomials: Polynomial-life model
Hiroshi Yoshida (*Grad. Schools of Math. & Systems Life Sci. Kyushu Univ.*)

2Pos109 The ancient gods of the modern cytoskeleton
Caner Akil[1,2], Robert C. Robinson[1,2,3] ([1]*Institute of Molecular and Cell Biology, A*STAR (Agency for Science, Technology and Research)*, [2]*Department of Biochemistry, Yong Loo Lin School of Medicine, National University of Singapore*, [3]*Research Institute for Interdisciplinary Science, Okayama University*)

2Pos110 Structural characterization of ALP37, a potential chromosome segregating ParM
Samson Ali[1,2], N Akihiro[3], D Popp[1], Robert C. Robinson[1,2,4] ([1]*Institute of Molecular and Cell Biology*, [2]*National University of Singapore, NUS, Yong Loo Lin School of Medicine*, [3]*Nagoya University Graduate School of Science, Structural Biology Research Center and Division of Biological Sciences*, [4]*Research Institute for Interdisciplinary Science (RIIS), Okayama University*)

分子モーター／Molecular motor

2Pos201 アクトミオシンの運動を利用した抗原抗体反応の促進
Acceleration of antigen-antibody reaction by actomyosin motility
Shohta Takamori[1], Kaito Kobayashi[1], Takashi Ishiguro[2], Hajime Honda[1] ([1]*Nagaoka Univ. Tech.*, [2]*Taiyo Yuden Co., Ltd.*)

2Pos202 水晶振動子微量天秤によるアクチン繊維とミオシンの見かけの質量変化
QCM revealed the changes of apparent mass of actin filaments and myosin molecules
Kaho Yokomuro[1], Shota Takamori[1], Kazuya Soda[1], Takashi Ishiguro[2], Hajime Honda[1] ([1]*Nagaoka Univ. Tech.*, [2]*Taiyo Yuden Co., Ltd.*)

2Pos203 Single-molecule fluorescence imaging analysis of Serratia marcescens ChitinaseA (SmChiA) Trp-active mutant
Akasit Visootsat[1,2], Paul Vignon[3], Akihiko Nakamura[1,2], Ryota Iino[1,2] ([1]*SOKENDAI*, [2]*Institute for Molecular Science*, [3]*ParisTECH*)

2Pos204 DNA ナノチューブに沿って移動する生体分子モーターの設計
Engineering motor proteins to move along DNA nanotubes
Ryota Ibusuki[1], Akane Furuta[2], Tatsuya Morishita[1], Kazuhiro Oiwa[1,2], Hiroaki Kojima[2], Ken'ya Furuta[2] ([1]*Graduate School of Biological Science, University of Hyogo*, [2]*Adv. ICR. Res. Ins., NICT. Kobe*)

2Pos205 高速 AFM を用いた DNA terminase の構造と動態の研究
Study of structure and dynamics of DNA terminase using high-speed AFM
Hirotaka Ariyama, Toshio Ando (*WPI-NanoLSI, Kanazawa Univ.*)

2Pos206 プロセッシブダイニンモータードメインのマイクロ秒時間分解能、ナノメーター位置決定精度 1 粒子トラッキング
Single-particle tracking of motor domain of a processive dynein at microsecond time resolution and nanometer localization precision
Jun Ando[1,2], Tomohiro Shima[3], Akihiko Nakamura[1,2], Akasit Visootsat[1,2], Mayuko Yamamoto[1], Takahide Kon[4], Ryota Iino[1,2] ([1]*IMS, NINS*, [2]*SOKENDAI*, [3]*Univ. Tokyo*, [4]*Osaka Univ.*)

2Pos207 中間鎖点変異による外腕ダイニンモーター活性の低下
A point mutation in intermediate chain gene reduces motor activity of outer-arm dynein
Yusuke Kondo[1], Tomoka Ogawa[1], Emiri Kanno[2], Masafumi Hirono[3], Takako Minoura[2], Ritsu Kamiya[2], Toshiki Yagi[1] ([1]*Dept. Biol. Sci., Pref. Univ. Hiroshima*, [2]*Dept. Biol. Sci., Chuo Univ*, [3]*Dept. of Front. Life Sci., Hosei Univ*)

2Pos208 単一軸糸ダイニンを欠失した新規クラミドモナス変異株９種の単離と解析
Identification of nine kinds of Chlamydomonas mutants missing single axonemal dynein heavy chains
Tomohiro Komatsu, Yusuke Kondo, Natsuki Tanaka, Kohei Fujimoto, Kazuhiro Takeshima (*Dept. Life Sci., Pref. Univ. of Hiroshima*)

2Pos209 X 線繊維回折法で明らかにするクラミドモナス鞭毛軸糸構成要素の Ca2+濃度依存的らせん対称性の変化
Ca^{2+} dependent changes in helical symmetry of axonemal components of *Chlamydomonas* flagella studied by X-ray fiber diffraction
Kazuhiro Oiwa[1], Hiroyuki Iwamoto[2] ([1]*Natl. Inst. Info.Commun.Technol.*, [2]*Japan Sync. Rad. Res. Inst., SPring-8*)

2Pos210 Behavior of polymerized microtubules interacted with dyneins still attached on a doublet microtubule detected by laser tweezers
Takashi Fujiwara[1], Chikako Shingyoji[1], Hideo Higuchi[2] ([1]*Dept. Biol. Sci., Grad. Sch. Sci., The Univ. Tokyo*, [2]*Dept. Phys., Grad. Sch. Sci., The Univ. Tokyo*)

2Pos211 細胞質ダイニンの二足歩行メカニズムに関するマルコフ状態モデリング
Bi-pedal motions of cytoplasmic dynein via Markov state modeling
Shintaroh Kubo, Shoji Takada (*Takada Lab., Grad. Sch. of Sci., Kyoto Univ.*)

2Pos212 高速原子間力顕微鏡により観察されたクラミドモナス軸糸ダイニンの調整機構
High-speed atomic force microscopic observations on demembranated Chlamydomonas axonemes and dynein arms
Kenta Ishibashi[1,2], Kazuhiro Oiwa[2,3] ([1]*Grad. Sch. Frontier Biosci., Osaka Univ*, [2]*Advanced ICT Inst., NICT*, [3]*Grad. Sch. Sci., Univ. Hyogo*)

2Pos213 Step sizes and rate constants of single-headed cytoplasmic dynein
Yoshimi Kinoshita[1], Taketoshi Kambara[1,2], Kaori Nishikawa[1], Motoshi Kaya[1], Hideo Higuchi[1] ([1]*Dept. Phys., Univ of Tokyo*, [2]*RIKEN QBiC*)

2Pos214 DNA-templated assembly of axonemal outer arm dynein complexes in vitro
Yuka Matsuda[1], Akane Furuta[2], Hiroaki Kojima[2], Kazuhiro Oiwa[1,2], Ken'ya Furuta[2] ([1]*Grad. Sch. Sci., Univ Hyogo*, [2]*Adv ICT Res Ins, NICT*)

2Pos215 クライオ電子顕微鏡画像解析により明らかになった細胞質ダイニンの新たな歩行パターン
Cryo-EM observation of stepping patterns of cytoplasmic dynein on microtubules with new freezing conditions
Riko Kanazawa[1], Hiroshi Imai[1], Takuma Shioi[1], Rieko Shimo[1], Ryousuke Yamamoto[1], Kaoru Mitsuoka[2], Takahide Kon[1] ([1]*Dep. Boil. Grad. Sch. of Sci. Osaka Univ*, [2]*Res. Ctr. UVHEM, Univ. Osaka*)

2Pos216 細胞質ダイニンが運動活性を示す蛍光 ATP の合成
Synthesis of fluorescent ATP to elucidate coordination of multiple ATPase sites in cytoplasmic dynein
Karibu Sakai, Tomotaka Komori, Tomohiro Shima, Sotaro Uemura (*Dep. of Bio. Sci., Grad. Sch. of Sci., The Univ. of Tokyo*)

2Pos217 粘弾性溶液中におけるキネシンによる微小管の運動についての研究
Investigation of motility of microtubules driven by kinesins in viscoelastic media
Masayuki Furukawa[1], Taikopaul Kaneko[1], Farhana Tammana[1], Hirohumi Shintaku[2], Hidetoshi Kotera[2], Ryuji Yokokawa[1] ([1]*Kyoto Univ. Micro Eng.*, [2]*Riken*)

2Pos218 糸状菌キネシンへの１残基置換が低温適性をもたらす代わりに熱安定性を損なう
Single amino acid substitution for the fungal kinesin offers possible cold-adaptation but impairs thermal stability
Youske Shimizu, Toru Togawa, Shigeru Chaen (*Dept. Biosciences, Nihon Univ.*)

2Pos219 細胞分裂に関わるキネシン 5 の高速一分子観察
High-speed single molecule observations of the stepping motion of mitotic kinesin-5
Taiga Yamada, Kohei Matsuzaki, Michio Tomishige, Yoko Sakai (*Aoyamagakuinuniversity Tomishige lab.*)

2Pos220 遺伝性痙性対麻痺を引き起こす変異型ヒト KIF1A の神経細胞内 Run-time 分布
Run-time distributions of human KIF1A mutants in hippocampal neurons in relation to hereditary spastic paraplegia
Shiori Matsumoto[1], Shinsuke Niwa[2], Kumiko Hayashi[1,3] ([1]*Dep. Appl. Phys., Grad. Sch. of Eng., Tohoku Univ.*, [2]*FRIS, Tohoku Univ.*, [3]*PRIME, AMED*)

2Pos221 キネシン 1 二量体の前頭部における微小管からの解離抑制の直接観察
Direct observation of the suppression of the leading head of kinesin-1 dimer from detachment from microtubule
Kohei Matsuzaki, Michio Tomishige (*Dept. Math. Phys., Col. Sci. Eng., Aoyama Univ.*)

2Pos222 Selective nano-patterning of kinesin motor-proteins and its effect on collective motion of microtubules
Tamanna Ishrat Farhana, Taikopaul Kaneko, Ryuji Yokokawa (*Dep. of microengineering, Kyoto university*)

2Pos223 Does giraffe kinesin move faster than mouse?
Taketoshi Kambara[1], Yasushi Okada[1,2] ([1]*RIKEN BDR*, [2]*Univ of Tokyo, Grad. Sci.*)

2Pos224 Photoregulation of kinesin Eg5 using photochromic compound composed of azobenzene and spiropyran which forms three isomerization states
Md Alrazi Islam, Kei Sadakane, Shinsaku Maruta (*Soka University*)

2Pos225 2 つのアゾベンゼンを持つ新規フォトクロミック阻害剤を介したキネシン Eg5 の光制御
Photo-regulation of mitotic kinesin Eg5 using a novel photochromic inhibitor composed of two azobenzene
Kei Sadakane, Kenichi Taii, Alrazi M.D. Islam, Shinsaku Maruta (*Dept. Bioinfo., Soka Univ.*)

2Pos226 Photo-control of Ras GDP-GTP exchange using the peptide modified with spiropyran derivative
Kenichi Taii, Nobuyuki Nishibe, Shinsaku Maruta (*Dept. of Bioinfo, Grad. Sch. of Engin, Soka Univ.*)

2Pos227 鞭毛軸糸再構築系における微小管の繰り返し座屈運動の観察
Repetitive buckling of microtubules driven by axonemal dynein arrays reconstituted on a microtubule
Misaki Sagawa[1], Misaki Shiraga[2], Hitoshi Sakakibara[3], Kazuhiro Oiwa[3] ([1]*Sch. Sci, Univ. Hyogo*, [2]*Grad. Sch. Sci, Univ. Hyogo*, [3]*Adv. ICT Res. Inst., NICT*)

2Pos228 Identifying actin regulators from complex cellular lysates through profilin pull down
Dennis Mweti Mwangangi[1,2], R. Robinson[1,2,3], S. Widyawillis[1] ([1]*Institute of Molecular and Cell Biology, A*STAR*, [2]*Department of Biochemistry, Yong Loo Lin School of Medicine, National University of Singapore*, [3]*Research Institute for Interdisciplinary Science (RIIS), Okayama University*)

細胞生物的課題／Cell biology

2Pos301 Cellular localization of SAS6-L, a paralog of a flagellar basal body protein that self-assembles into a 9-fold symmetrical structure
Yuki Nakazawa[1], Masahito Nagao[1], Akira Noga[2], Manuel Hilbert[3], Michel O. Steinmetz[3], Masafumi Hirono[1] ([1]*Dept. of Frontier Biosci., Hosei Univ.*, [2]*Dept. of Biosci., Grad. Sch. Sci, Univ. Tokyo*, [3]*PSI*)

2Pos302 ビブリオ菌の極べん毛本数制御における FlhG の ATPase モチーフおよび ATPase 活性の役割
The role of ATPase motif and ATPase activity of FlhG in flagellar number regulation at cell pole of Vibrio alginolyticus
Yoshino Imura, Seiji Kojima, Michio Homma (*Grad. Sch. Sci., Univ. Nagoya*)

2Pos303 ビブリオ菌細胞の極に局在するタンパク質 FlhF による極べん毛形成促進機構の解析
Role of FlhF localized at cell pole on initiating the polar flagellar formation of Vibrio alginolyticus
Yuna Inoue, Seiji Kojima, Michio Homma (*Division of Biological Science, Graduate School of Science, Nagoya University*)

2Pos304 ナトリウムイオン透過における、べん毛モーター固定子タンパク質 PomA のペリプラズムループ領域の構造機能解析
Structural and functional characterization of periplasmic loop regions of PomA, a stator protein of flagellar motor, in sodium ion flux
Hiroto Iwatsuki[1], Masayo Iwaki[2], Hiroyuki Terashima[1], Seiji Kojima[1], Hideki Kandori[2], Michio Homma[1] ([1]*Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ.*, [2]*Grad. Sch. Eng., Nagoya Inst. Tech*)

2Pos305 細菌べん毛モーター形成の中心となる超分子膜構造体 MS リングの形成メカニズムの解明
Assembly mechanism of supramolecular membrane structure of bacterial flagellar MS-ring composed of FliF
Keiichi Hirano, Hiroyuki Terashima, Michio Homma (*Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ*)

2Pos306 細菌べん毛 III 型分泌装置のある構成因子は翻訳後多段階プロセシングを受ける
A component of the bacterial flagellar type III secretion apparatus receives multistep post-translational processing
Yohei Hizukuri[1], Takehiro Suzuki[2], Kosuke Terushima[1], Naoshi Dohmae[2], Yoshinori Akiyama[1] ([1]*Inst. Front. Life Med. Sci., Kyoto Univ.*, [2]*Center Sust. Res. Sci., RIKEN*)

2Pos307 バクテリアべん毛輸送ゲート複合体の構造機能解析
Structural and functional analyses of the bacterial flagellar type III export gate complex
Miki Kinoshita[1], Tomoko Miyata[1], Akihiro Kawamoto[2], Takayuki Kato[1], Keiichi Namba[1,3], Tohru Minamino[1] ([1]*Grad. Sch. Frontier Biosci, Osaka Univ.*, [2]*IPR, Osaka Univ.*, [3]*RIKEN Quantitative Biology Center*)

2Pos308 海洋性ビブリオ菌の極べん毛本数制御機構における FlhG の N 末端領域の解析
Role of N-terminal region of FlhG in polar flagellar number regulation in Vibrio alginolyticus
Seiji Kojima, Akira Mizuno, Michio Homma (*Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ.*)

2Pos309 Quantitative observation of CheY-GFP binding to a flagellar motor in the presence of external load by electrorotation
Kenta Morishima, Yong-Suk Che, Akihiko Ishijima, Hajime Fukuoka (*Grad. Sch. Front Biosciences, Osaka Univ*)

2Pos310 Difference on chemotaxis response of E.coli derived from the dependency of flagellar motor
Akinori Nagataki, Yong-Suk Che, Akihiko Ishijima, Hajime Hukuoka (*Grad. Sch Front Biosciences, Osaka Univ.*)

2Pos311 モーターの回転方向の同調的制御における CheR, CheB の役割
The role of CheR and CheB in coordinated switching of flagellar motor in *Escherichia coli*
Tatsuki Hamamoto, Yong-Suk Che, Akihiko Ishijima, Hajime Fukuoka (*Grad. Sch. Frontier Biosci., Osaka Univ.*)

2Pos312 Quantitative analysis for the ratio of WT and mutant receptors that collapses receptor cooperativity in chemotaxis in *Escherichia coli*
Shin Koguchi, Hajime Fukuoka, Akihiko Ishijima, Yong-Suk Che (*Grad.Sch. Frontier Biosci., Osaka Univ*)

2Pos313 Probing cell-wall synthesis dynamic using bacterial membrane protein-complex
Yi-Jen Sun, Chien-Jung Lo (*Department of Physics and Graduate Institute of Biophysics, National Central University, Zhongli, Taiwan 32001*)

2Pos314 らせん形細菌スピロヘータの推進力測定
Force measurement of the spirochete *Leptospira* swimming
Keigo Abe[1], Kyosuke Takabe[2], Shuichi Nakamura[1] ([1]*Grad.Sch.Eng., Tohoku Univ.*, [2]*Life and Env.Sci., Tsukuba Univ.*)

2Pos315 細胞性粘菌や好中球の基質の硬さ感知
Rigidity sensing of fast-moving cell types
Chika Okimura[1], Yuichi Sakumura[2,3], Katsuya Shimabukuro[4], Yoshiaki Iwadate[1] ([1]*Fac. Sci., Yamaguchi Univ.*, [2]*Sch. Inf. Sci. Tech., Aichi Pref. Univ.*, [3]*Grad. Sch. Sci. Tech., NIST*, [4]*Nat. Ins. Tech. Ube Col.*)

2Pos316 アクチンフィラメントに結合した MAPs の微小管重合促進活性の評価
Microtubule assembly-promoting activity of MAPs bound to actin filaments
Chihiro Doki[1], Miyuki Siga[1], Syoma Saitou[1], Susumu Kotani[2], Kiyotaka Tokuraku[1] ([1]*Grad. Sch. Sustain, Environ. Eng., Muroran Inst. Technol.*, [2]*Fac. Sci., Kanagawa Univ.*)

2Pos317 アクチン繊維の集団運動により形成されるベルト状パターン
The shape of belt-like patterns with millimeter size emerged from actomyosin motility
Kentaro Ozawa[1], Hirotaka Taomori[1], Itsuki Kunita[2], Shigeru Sakurazawa[3], Hajime Honda[1] ([1]*Dept. Bioeng., Nagaoka Univ. Tech.*, [2]*Univ. Ryukyus*, [3]*Future Univ. Hakodate*)

2Pos318 重力下での形態形成に対する YAP 依存のアクトミオシンネットワークの寄与
Theoretical study of contribution of YAP-dependent actomyosin network to morphogenesis under gravity
Kazunori Takamiya, Seirin Ri, Hiraku Nishimori, Akinori Awazu (*Grad. Sch. Sci., Univ. Hiroshima Dept. Math and Life Sci*)

2Pos319 中心体アクチンネットワークによる微小管の形成制御
Regulation of microtubule growth by centrosomal actin network
Daisuke Inoue[1], Dorian Obino[2,3,4], Francesca Farina[5], Jeremie Gaillard[5], Christophe Guerin[5], Laurent Blanchoin[1,5,6,7,8,9], Ana-Maria Lennon-Dumenil[2,3,4], Manuel Thery[1,5,6,7,8,9] ([1]*CEA, BIG*, [2]*PSL Research Univ.*, [3]*INSERM*, [4]*Institute Curie*, [5]*CNRS*, [6]*INRA*, [7]*Grenoble-Alpes Univ.*, [8]*Paris 7 Univ., Univ. Inst. Hematology*, [9]*Saint Louis Hospital*)

2Pos320 FilGAP PH ドメインの構造と機能の解析
Structural and functional analysis of FilGAP PH domain
Koji Tsutsumi[1], Yurina Suzuki[1], Shunsuke Sato[2], Go Watanabe[2], Yasutaka Ohta[1] ([1]*Div. of Cell Biol., Sch. of Sci., Kitasato Univ.*, [2]*Div. of Biophysics., Sch. of Sci., Kitasato Univ.*)

2Pos321 微小管結合蛋白質が微小管の強度と曲がりやすさに与える影響
Influence of microtubule-associated protein on strength and flexibility of microtubules
Miki Tamura[1], Kazuhumi Matsui[1], Kabir Arif Md. Rashedul[2], Akira Kakugo[2], Susumu Kotani[3], Kiyotaka Tokuraku[1] ([1]*Div. Sust. Env. Eng. Muroran Inst. Tech*, [2]*Fac. Sci. Hokkaido Univ*, [3]*Fac. Sci, Kanagawa Univ.*)

2Pos322 アメーバ運動中の ABP 局在形成機構の解明のためのアクチンと ABP からなる in vitro 系の構築
A new, actin and ABP-based in vitro system for elucidating the mechanism of intracellular ABP localization during amoeboid movement
Yosuke Yamazaki, Taro Q.P. Uyeda (*Dept. Physics, Waseda Univ.*)

2Pos323 Examining force regulation of anaphase cell
Takeshi Itabashi[1,2], Shin'ichi Ishiwata[2] ([1]*RIKEN BDR*, [2]*Fac. Sci. Eng., Waseda Univ.*)

2Pos324 C 型インフルエンザウイルスの直進的運動
Directional motility of influenza C virus
Tatsuya Sakai[1], Hiroaki Takagi[2], Yasushi Muraki[3], Mineki Saito[1] ([1]*Department of Microbiology, Kawasaki Medical School*, [2]*Department of Physics, School of Medicine, Nara Medical University*, [3]*Department of Microbiology, School of Medicine, Iwate Medical University*)

2Pos325 紡錘状細胞集団の示す配向秩序と牽引力
Traction Force and Dynamics in Orientation Order of Spindle-shaped Cells
Masahito Uwamichi[1], Kyogo Kawaguchi[2], Masaki Sano[1] ([1]*Dept. of Phys, Univ. of Tokyo*, [2]*Dept. of System Biol, Harvard Med. Sch.*)

2Pos326 ARF1 activation initiates a regulation circuit for ARF1 and RAC1 activities in GPCR-mediated neutrophil chemotaxis
Yuichi Mazaki[1], Yasuhito Onodera[2], Tsunehito Higashi[1], Takahiro Horinouchi[1], Tsukasa Oikawa[2], Hisataka Sabe[2] ([1]*Dept. Cell. Pharm., Grad. Sch. Med., Hokkaido Univ.*, [2]*Dept. Mol. Biol., Grad. Sch. Med., Hokkaido Univ.*)

バイオイメージング／Bioimaging

2Pos401 Investigation of binding mechanism of E-cadherin by high-speed atomic force microscopy (HS-AFM)
Hiroki Watanabe[1], Sivasankar Sanjeevi[2], Takayuki Uchihashi[3] ([1]*RIBM Co., Ltd.*, [2]*Dept. of Phys. and Astron., Iowa State Univ.*, [3]*Dept. of Phys., Nagoya Univ.*)

2Pos402 ホウレンソウ由来ストロマラメラに内在する F0 c-リングの原子間力顕微鏡による観察
Observation of the c subunit ring of F0 in stroma lamellae membrane from spinach by atomic force microscopy
Daisuke Yamamoto, Risa Mutoh (*Fac. Sci. Fukuoka Univ.*)

2Pos403 Simultaneous observation of a living COS7 cell using high-speed atomic force microscopy and fluorescence microscopy
Hiroki Furuhashi[1], Mikihiro Shibata[2,3] ([1]*Grad. Sch. Math. & Phys., Kanazawa Univ.*, [2]*Infiniti, Kanazawa Univ.*, [3]*WPI-NanoLSI, Kanazawa Univ.*)

2Pos404 マウスノロウイルス MNV-S7 のクライオ電顕単粒子構造解析
Capsid Structure of Murine Norovirus S7 revealed by cryo-electron microscopy
Chihong Song[1], Reiko Todaka[2], Kei Haga[2], Akira Fujimoto[2], Masaru Yokoyama[3], Naoyuki Miyazaki[4], Kenji Iwasaki[4], Kazuhiko Katayama[2], Kazuyoshi Murata[1] ([1]*National Institute for Physiological Sciences*, [2]*Kitasato University*, [3]*National Institute of Infectious Diseases*, [4]*Institute for Protein Research, Osaka University*)

2Pos405 銀、金、銀金合金ナノ粒子を用いたマルチカラー 1 分子イメージング
Multi-color single-molecule imaging with silver, gold, and silver/gold-alloy nanoparticles
Jun Ando[1,2], Akihiko Nakamura[1,2], Mayuko Yamamoto[1], **Ryota Iino**[1,2] ([1]*IMS, NINS*, [2]*SOKENDAI*)

2Pos406 細胞内自発的発熱の検出と生理的意義の解明
Investigating the detection and the significance of spontaneous intracellular thermogenesis
Cuiyuan Cai[1], Kohki Okabe[1,2], Takashi Funatsu[1] ([1]*Grad. Sch. Pharm. Sci., Univ. Tokyo*, [2]*PRESTO, JST*)

2Pos407 Fluorescence correlation spectroscopy analysis of RNA degradation in cells
Naotaka Shimada[1], Kazunori Watanabe[1], Takashi Ohtsuki[1,2] ([1]*Grad. Sch. Nat., Univ. okayama*, [2]*Grad. Sch. Int., Univ. okayama*)

2Pos408 The fast reporter system for quantification of the transcription by using BRET and the split luciferase complementation
Taishi Kakizuka[1,2], Akira Takai[2], Keiko Yoshizawa[2], Yasushi Okada[2], Tomonobu Watanabe[1,2] ([1]*FBS, Univ. Osaka*, [2]*BDR, Riken*)

2Pos409 高次粒子数輝度解析法を用いたタンパク質オリゴマー分布解析：多成分系への応用に向けて
Protein Oligomer Distribution Analysis by High Order Number and Brightness Analysis: towards the Application to Multiple Components
Ryosuke Fukushima[1], Johtaro Yamamoto[2,3], Masataka Kinjo[2] ([1]*Grad. Sch. of Life Sci., Hokkaido Univ.*, [2]*Fac. of Adv. Life Sci., Hokkaido Univ.*, [3]*Biomed. Res. Inst., AIST*)

2Pos410 Single fluorophore imaging using a DIY microscope with high extensibility
Takashi Sagawa, Wataru Nakashima, Kazuki Nakajima, Shin Yamaguchi, Tomohiro Masuda, Yuichi Inoue (*SIGMAKOKI Co.,LTD.*)

2Pos411 A multi-emitter fitting algorithm for potential live cell super-resolution imaging over a wide range of molecular densities

Tomochika Takeshima[1], Teruo Takahashi[1], Jiro Yamashita[1], Yasushi Okada[2], **Shigeo Watanabe**[1] ([1]*Hamamatsu Photonics K.K., System division*, [2]*RIKEN Center for Biosystems Dynamics Research*)

2Pos412 単一細胞 ATP イメージングにより明らかになった不均一な代謝状況下での頑健なエネルギー量調節

Single-cell ATP imaging reveals robust energy level control despite unequal metabolic contexts

Hideyuki Yaginuma, Yasushi Okada (*BDR, RIKEN*)

2Pos413 Development of programmable RNA-binding protein and its application for live-cell imaging and manipulation of authentic RNAs

Akira Takai[1], Yasushi Okada[1,2] ([1]*BDR, RIKEN*, [2]*Grad. Sch. of Sci., Univ. of Tokyo*)

2Pos414 共焦点画像解析による新規 FCS/FCCS 法の開発とその応用

A new FCS/FCCS method based on the image processing of a confocal laser scanning microscope and applications for it

Kazunari Mouri[1], Yasushi Okada[1,2] ([1]*BDR, RIKEN*, [2]*Univ. Tokyo, Grad. Sch. Sci., Dept. Phys.*)

2Pos415 Single-molecule detection of combinatorial histone modifications for key genes in Epithelial-Mesenchymal-Transition

Jen-Chien Chang[1], Ye Liu[1], Kazuhide Watanabe[1], Prashanti Jeyamohan[1], Haruka Yabukami[1], Yuko Sato[2], Hiroshi Kimura[2], Akiko Minoda[1] ([1]*RIKEN IMS*, [2]*Tokyo Tech, Dept. Life Sci. Tech.*)

2Pos416 X 線自由電子レーザーを用いた低温 X 線回折イメージングによる異なる細胞周期にある酵母細胞核の構造解析

Structural analyses of yeast nuclei in different cell phases by X-ray diffraction imaging at cryogenic temperature using XFEL

Takahiro Yamamoto[1,2], Amane Kobayashi[2], Mao Oide[1,2], Koji Okajima[1,2], Tomotaka Oroguchi[1], Masaki Yamamoto[2], Masayoshi Nakasako[1,2] ([1]*Grad. Sci. Tech. Keio Univ.*, [2]*RSC, RIKEN*)

2Pos417 High-speed imaging of muscle myosin and super-resolution imaging of epidermal growth factor receptor with DNA origami technique

Keisuke Fujita[1,2], Michio Hiroshima[1], Toshio Yanagida[1,2], Mitsuhiro Iwaki[1,2] ([1]*BDR, RIKEN*, [2]*Grad. Sch. of Front. Bioscience., Osaka Univ.*)

2Pos418 ゆらぎを利用した非侵襲力測定の軸索輸送動画解析への応用

Fluctuation-based non-invasive force measurement for dynamic image analysis of axonal transport

Yasuhiro Hieda[1], Takashi Sagawa[2], Kyoko Chiba[3,4], Kumiko Hayashi[1,5] ([1]*Dep. Appl. Phys., Grad. Sch. of Eng., Tohoku Univ.*, [2]*NICT*, [3]*Lab. Neuroscience, Grad. Sch. Pharm. Sci., Hokkaido Univ.*, [4]*Col. Biol. Sci., UC DAVIS*, [5]*PRIME, AMED*)

2Pos419 生細胞核内における転写因子 MafG の２量体化に依存した１分子動態

Dimerization dependent single-molecule dynamics of MafG transcription factor in living cell

Yuma Ito[1], Takahiro Maeda[1], Kumiko Sakata-Sogawa[3], Masaaki Shiina[2], Makio Tokunaga[1] ([1]*Sch. Life Sci. Tech., Tokyo Inst. Tech.*, [2]*Grad. Sch. Med. Life Sci., Yokohama City Univ.*, [3]*Grad. Sch. Agr. Sci., Tohoku Univ.*)

2Pos420 遺伝子コード型抗体プローブを用いた翻訳後修飾の１分子イメージング

Single-molecule imaging of post-translational modification using genetically encoded antibody probe

Shuntaro Sato[1], Yuma Ito[1], Yuko Sato[2], Hiroshi Kimura[2], Makio Tokunaga[1] ([1]*Sch. Life Sci. Tech., Tokyo Inst. Tech.*, [2]*IIR, Tokyo Inst. Tech.*)

2Pos421 ヘテロクロマチンタンパク HP1α 動態の生細胞１分子イメージング

Dynamics of Heterochromatin protein 1α in living cells using single-molecule imaging

Takahiro Maeda[1], Yuma Ito[1], Shin-Ya Isobe[2], Chikashi Obuse[2], Makio Tokunaga[1] ([1]*Sch. Life Sci. Tech., Tokyo Inst. Tech.*, [2]*Biosci. Grad Sch Sci., Osaka Univ*)

2Pos422 悪性高熱症関連変異を有する骨格筋型リアノジン受容体の構造と機能変化
Structure and function change of skeletal muscle-type ryanodine receptor
Toshiko Yamazawa[1], Maki Yamaguchi[1], Haruo Ogawa[2], Takashi Murayama[3], Hideto Oyamada[4], Nagomi Kurebayashi[3], Junji Suzuki[5], Kazunori Kanemaru[5,6], Takashi Sakurai[3], Masamitsu Iino[5,6] ([1]*Dept Mol. Physiol., Jikei Univ. Sch. Med.*, [2]*Institute Quantitative Biosci., The Univ.Tokyo*, [3]*Dept. Pharmacol., Juntendo Univ. Sch. Med.*, [4]*Dept. Pharmacol., Sch. Med., Showa Univ.*, [5]*Dept. Pharmacol., Grad. Sch. Med., The Univ.Tokyo*, [6]*Dept. Cell. Mol. Pharmacol., Nihon Univ. Sch. Med.*)

2Pos423 ゼロモード導波路(ZMW)を用いた生体分子複合体の定量分析
Quantitative analysis of biomolecular complexes using Zero-Mode Waveguides (ZMW)
Kimiko Nakao[1], Hisashi Tadakuma[1], Yong-Woon Han[2], Yoshie Harada[1] ([1]*IPR, Osaka Univ.*, [2]*IMS., RIKEN*)

2Pos424 線形ゼロモード導波路を用いたアクチン重合の 1 分子解析
Single-molecule analysis of actin polymerization using linear zero-mode waveguides
Soichiro Fujii[1], Ryo Iizuka[1], Masamichi Yamamoto[1], Makoto Tsunoda[1], Takashi Tanii[2], Takashi Funatsu[1] ([1]*Grad. Sch. Pharm. Sci., Univ. Tokyo*, [2]*Fac. Sci. Eng., Waseda Univ.*)

3 日目（9 月 17 日（月））／Day 3（Sep. 17 Mon.）
PA 会場（大集会室），PB 会場（南第二集会室），PC 会場（南第三集会室），PD 会場（南第四集会室）／
Room PA (Large Assembly Room), Room PB (2nd South Assembly Room),
Room PC (3rd South Assembly Room), Room PD (4th South Assembly Room)

ヘム蛋白質／Heme proteins

3Pos001 ヒト成人ヘモグロビンの四量体構造の安定性に対する β サブユニットの Fe-His 結合の寄与
Contribution of the Fe-His Bond of the β Subunit to Stability of Tetramer of α2β2 in Human Adult Hemoglobin
Shigenori Nagatomo[1], Masako Nagai[2], Teizo Kitagawa[3] ([1]*Dept. Chem., Univ. Tsukuba*, [2]*Res. Center Micro-Nano Tech., Hosei Univ.*, [3]*Grad. Sch. Life Sci., Univ. Hyogo*)

3Pos002 ヘムタンパク質におけるヘム周囲のタンパク質環境の網羅解析
Global analysis of the protein environment around heme in hemeproteins
Hiroko X. Kondo[1], Masanori Fujii[1], Yusuke Kanematsu[2], Yasuhiro Imada[3], Yu Takano[2] ([1]*Fac. Eng., Kitami Inst. Tech.*, [2]*Grad. Sch. Info. Sci., Hiroshima City Univ.*, [3]*IPR, Osaka Univ.*)

3Pos003 鉄還元酵素ヒト Steap3 の分子機能解明
Analyses on the molecular function of human Steap3 as a ferric reductase
Akito Nakata[1], Mika Fujimura[1], Fusako Takeuchi[2], Motonari Tsubaki[1] ([1]*Dept. of Chem., Grad. Sch. Sci., Kobe Univ.*, [2]*IPHE, Kobe Univ.*)

3Pos004 呼吸鎖 A タイプ酸素還元酵素のカルシウムイオン結合構造
Calcium ion-binding structure of respiratory A-type oxygen reductase
Kazumasa Muramoto, Kyoko Shinzawa-Itoh (*Grad. Sch. Life Sci., Univ. Hyogo*)

3Pos005 金属タンパク質の酸化還元電位の第一原理計算
Ab initio evaluation of redox potential of metalloprotein
Cheng Cheng, Shigehiko Hayashi (*Kyoto Univ*)

3Pos006 レーザーフラッシュフォトリシスによるリン脂質二分子膜へ再構成した proteorhodopsin の光サイクルに関する研究
A study on photocycle of proteorhodopsin reconstituted in phospholipid bilayer by laser flash photolysis
Airi Yamamoto[1], Fumio Hayashi[2], Toshinori Motegi[1], Takashi Kikukawa[3,4], Masashi Sonoyama[1] ([1]*Grad. Sch. Sci. Tech., Gunma Univ.*, [2]*Ctr. Inst. Anl., Gunma Univ.*, [3]*Fac. Adv. Life Sci., Hokkaido Univ.*, [4]*GI-CoRE, Hokkaido Univ.*)

3Pos007 カロテノイド末端基のアシル化が及ぼすハロロドプシン-バクテリオルベリン複合体形成への影響
Effect of acylation of carotenoid terminal group on halorhodopsin-bacterioruberin complex formation
Fumiya Hattori, Takanori Sasaki (*Grad.Sch.Adv.Math.Sci.,Meiji Univ*)

3Pos008 古細菌膜上におけるハロロドプシンのレチナール再結合能力
Retinal rebinding ability of halorhodopsin on archaeal membrane
Shun Yano, Takanori Sasaki (*Graduate School of Advanced Mathematical Sciences, Meiji University*)

3Pos009 古細菌 *N.Pharaonis* 由来の膜タンパク質ハロロドプシンの複素環式化合物存在下における安定化
Thermal stability of halorhodopsin from *N.Pharaonis* in the presence of heterocyclic compound
Shinichiro Hayashi, Takanori Sasaki (*Grad. Sch. Adv. Math. Sci., Meiji Univ.*)

3Pos010 RxR の極めて高い熱安定性に対する統計熱力学
Statistical thermodynamics for the extremely high thermostability of a microbial rhodopsin from the eubacterium *Rubrobacter* (RxR)
Tomohiko Hayashi[1], Satoshi Yasuda[1,2,3], Kano Suzuki[2], Tomoki Akiyama[2], Kanae Kanehara[4], Yuki Sudo[4], Takeshi Murata[2,3,5], Masahiro Kinoshita[1] ([1]*Inst. Adv. Energy, Kyoto Univ.*, [2]*Grad. Sch. Sci., Chiba Univ.*, [3]*MCRC, Chiba Univ.*, [4]*Fal. Pharm. Sci., Okayama Univ.*, [5]*PREST, JST*)

3Pos011 サーモフィリックロドプシンの非常に高い熱安定性の物理起源
Physical origin of exceptionally high thermostability of thermophilic rhodopsin
Satoshi Yasuda[1,2,3], Tomohiko Hayashi[3], Yuta Kajiwara[4], Takeshi Murata[1,2,5], Masahiro Kinoshita[3] ([1]*Chiba Univ., Grad. Sch. Sci.*, [2]*Chiba Univ., MCRC*, [3]*Kyoto Univ., IAE*, [4]*Kyoto Univ., Grad. Sch. Ene. Sci.*, [5]*PRESTO*)

3Pos012 アルカリ条件下におけるバクテリオルベリンと古細菌脂質の結合に伴うハロロドプシンの熱安定化
Thermal stabilization of halorhodopsin by binding of bacterioruberin and archaeal lipids under alkaline condition
Kenichi Takeda[1], Takashi Kikukawa[2], Makoto Demura[2], Takanori Sasaki[1] ([1]*Grad. Sch. Adv. Math. Sci., Meiji Univ.*, [2]*Fac. Adv. Life Sci., Hokkaido Univ.*)

3Pos013 脂質二重膜中の AMPA 受容体の高速 AFM 観察
High-speed atomic force microscopy imaging of AMPA receptors in lipids
Kento Ikeda[1], Wenlong Gao[2], Yao Wang[2], Motoyuki Hattori[2], Mikihiro Shibata[3,4] ([1]*Grad. Sch. Math. & Phys., Kanazawa Univ.*, [2]*Sch. Life Sci., Fudan Univ.*, [3]*InFiniti, Kanazawa Univ.*, [4]*WPI-NanoLSI, Kanazawa Univ.*)

3Pos014 High-speed AFM imaging of membrane protein embedded in Nanodisc
Takamitsu Haruyama[1], Yasunori Sugano[1], Noriyuki Kodera[2], Takayuki Uchihashi[3], Toshio Ando[2], Yoshiki Tanaka[1], Hiroki Konno[2], **Tomoya Tsukazaki**[1] ([1]*Nara Inst. of Sci. and Tech.*, [2]*WPI-NanoLSI, Kanazawa Univ.*, [3]*Dept. of Physics, Nagoya Univ.*)

3Pos015 構造生物学的解析に向けた TRPV3 のナノディスク化について
Reconstitution of TRPV3 into Nanodiscs for structural study
Tomoki Maeda[1], Kaname Ojima[1], Shingo Nagano[2], **Tomoya Hino**[2] ([1]*Grad. Sch. Sus. Sci., Tottori Univ.*, [2]*Grad. Sch. Eng., Tottori Univ.*)

3Pos016 X 線 1 分子追跡法による TRPV1 チャネルの 3 次元運動
3D motion of TRPV1 cation channel depicted by diffracted X-ray tracking method
Shoko Fujimura[1], Kazuhiro Mio[1], Masahiro Kuramochi[2], Hiroshi Sekiguchi[3], Muneyo Mio[1], Tai Kubo[1], Yuji C. Sasaki[1,2,3] ([1]*OPERANDO-OIL, AIST*, [2]*Grad. Sch. Frontier Sci., Univ. Tokyo*, [3]*JASRI/Spring-8*)

3Pos017 分子シミュレーションによるヘムインポーターの化学-力学共役機構の解明
Deciphering chemomechanical coupling mechanism of a heme importer with molecular simulations
Koichi Tamura[1], Hiroshi Sugimoto[2,3], Yoshitsugu Shiro[2], Yuji Sugita[1,4,5] ([1]*RIKEN R-CCS*, [2]*Grad. Sch. Life Sci., Univ. Hyogo*, [3]*RIKEN SPring-8*, [4]*RIKEN TMS*, [5]*RIKEN BDR*)

3Pos018 Nanodisc を用いたリン脂質二重膜環境中におけるヒトセロトニン受容体の機能解析
Functional analyses of human serotonin receptor in phospholipid membrane environments using Nanodisc
Kouhei Yoshida[1], Daisuke Kuroda[1,2,3], Satoru Nagatosihi[1,3,4], Kouhei Tsumoto[1,3,4] ([1]*Dept. of Bioeng., Sch. of Eng,. Univ. of Tokyo*, [2]*RS Med. Dev. Dev. Reg. Res. Center, Sch. of Eng., Univ. of Tokyo*, [3]*Dept. of Chem. Biotech., Sch. of Eng., Univ. of Tokyo*, [4]*Inst. of Med. Sci., Univ. of Tokyo*)

3Pos019 ATR-FTIR を用いた細菌べん毛固定子のイオン透過経路の解析
Analysis of Na+-conducting pathway in the stator complex of the bacterial flagellar motor by ATR-FTIR spectroscopy
Hiroyuki Terashima[1], Masayo Iwaki[2], Hideki Kandori[2], Michio Homma[1] ([1]*Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ.*, [2]*Dept. Life Sci. Appl. Chem., Nagoya Inst. Tech.*)

3Pos020 マグネシウムイオンチャネル MgtE のイオン―タンパク質間相互作用の振動解析
Vibrational analysis for studying ion-protein interactions of a magnesium ion channel, MgtE
Tetsunari Kimura[1,2,7], Victor Lorenz-Fonfria[3,4], Shintaro Doki[5], Hideyoshi Motoki[6], Ryuichiro Ishitani[5], Osamu Nureki[5], Masahiro Higashi[6], **Yuji Furutani**[1,2] ([1]*Inst. Mol. Sci.*, [2]*SOKENDAI*, [3]*ICMol, Univ. Valencia*, [4]*Dep. Biochem. Mol. Biol., Univ. Valencia*, [5]*Grad. Sch. Sci., Univ. Tokyo*, [6]*Grad. Sch. Eng. Sci., Univ. Ryukyus*, [7]*Grad. Sch. Sci., Kobe Univ.*)

3Pos021 A Multiscale Model for Flavivirus Dynamics & Host Interactions
Jan K. Marzinek, Roland G. Huber, Daniel A. Holdbrook, Peter J. Bond (*Bioinformatics Institute (A*STAR), #07-01, Matrix, 138671 Singapore*)

3Pos022 Direct reconstitution of membrane proteins from cell membrane blebs into a model biological membrane
Rurika Nagai[1], Yasushi Tanimoto[2], Rinshi Kasai[3], Kenichi Suzuki[4,7], Fumio Hayashi[5], Kenichi Morigaki[6] ([1]*Grad. Sch. Agr., Univ. Kobe*, [2]*Biosignal research Center., Univ. Kobe*, [3]*Institute for Frontier Life and Medical Sciences., Univ. Kyoto*, [4]*G-chain., Univ. Gifu*, [5]*Grad. Sch. Scie., Univ. Kobe*, [6]*Grad. Sch. Agr., Univ. Kobe*, [7]*Grad of Nat. Scie and Tech., Univ. Gifu*)

3Pos023 1 分子イメージングによる PDGF 受容体-Akt シグナル伝達の研究
Single molecule imaging study on PDGF receptor and Akt signal transduction
Hideaki Yoshimura, Takeaki Ozawa (*Department of Chemistry, School of Science, The University of Tokyo*)

3Pos024 Solubilization and purification of the Rieske/cytochrome *b* complex in green sulfur bacteria
Hiraku Kishimoto[1], Chihiro Azai[2], Risa Mutoh[3], Hideaki Tanaka[4], Genji Kurisu[4], Hirozo Oh-oka[1] ([1]*Grad. Sch. Sci., Osaka Univ.*, [2]*Grad. Sch. Lif. Sci., Ritsumeikan Univ.*, [3]*Fac. Sci., Fukuoka Univ.*, [4]*Inst. Protein Res., Osaka Univ.*)

3Pos025 線虫 Cytochromeb_{561} ホモログ Cecytb-2 のアスコルビン酸特異的電子伝達反応解析
Analyses on the ascorbate-specific electron transfer function of Cecytb-2, a cytochrome b_{561} homolog in *Caenorhabditis elegans*
Misaki Fukuzawa, Mika Fujimura, Masahiro Miura, Tetsunari Kimura, Motonari Tsubaki (*Dept. of Chem., Grad. Sch. Sci., Kobe Univ.*)

3Pos026 三量体オートトランスポーターの構造形成における荷電残基の役割
Roles of charged residues on assembly of the trimeric autotransporter transmembrane domain
Eriko Aoki, Daisuke Sato, Kazuo Fujiwara, Masamichi Ikeguchi (*Fac. of Sci. and Eng., Soka Univ.*)

3Pos027 Ubiquitination of MHCII changes tendency of antigen presentation due to structral conversion of MHCII

Takashi Kawamoto[1], Yuko Kozono[1], Jae-won Chang[2], Masahiro Kuramochi[2], Yuji Sasaki[2], Haruo Kozono[1] ([1]*Grad. Sch. bio, TUS*, [2]*Grad. Sch. fro, Univ. Tokyo*)

光生物／Photobiology: Photosynthesis

3Pos028 Light-induced FTIR spectroscopic studies on quinone exchange mechanism of the LH1-RC complexes from native and chimeric purple bacteria

Rikako Kishi[1], Michie Imanishi[1], Kanako Hashimoto[1], Kenji Nagashima[2], Masayuki Kobayashi[3], Shinji Takenaka[1], Zheng-yu Wang-Otomo[4], Yukihiro Kimura[1] ([1]*Grad. Agri., Univ. Kobe*, [2]*Photobio Inst., Univ. Kanagawa*, [3]*Ariake Kosen*, [4]*Sci., Univ. Ibaraki*)

3Pos029 光化学系 II の水の酸化反応における D1/V185 の役割
The role of D1/V185 in the water oxidation mechanism in Photosystem II

Itsuki Takachi[1], Yuya Hara[1], Alain Boussac[2], Miwa Sugiura[3] ([1]*Grad. Sch. Sci and Eng, Ehime Univ*, [2]*CEA Saclay*, [3]*PROS, Ehime Univ*)

3Pos030 Thermodynamic Dissociation Kinetics assay to determine the binding strengths within a membrane protein complex

Eunchul Kim, Ryutaro Tokutsu, Akimasa Watanabe, Jun Minagawa (*National Institute for Basic Biology*)

3Pos031 Biosynthesis of Gold Nanoparticles by photosynthetic apparatus

Hiroki Matsumura[1], Rie Nagayoshi[1], Mariko Miyachi[2], Daiki Nishiori[2], Yoshinori Yamanoi[2], Hiroshi Nishihara[2], **Tatsuya Tomo**[1] ([1]*Faculty of Science, Tokyo University of Science*, [2]*School of Science, The University of Tokyo*)

3Pos032 クロロフィル d を主要色素とするシアノバクテリア光化学系 II における分光特性
Absorption and fluorescence properties of Photosystem II complex in a chlorophyll d-dominated cyanobacterium

Reona Toyofuku[1], Seiji Akimoto[2], Toshiyuki Shinoda[1], Tatsuya Tomo[1] ([1]*Grad. Sch. Sci., Tokyo Univ. Sci.*, [2]*Grad. Sch. Sci., Univ. Kobe.*)

3Pos033 The orientation of menaquinone in the heliobacterial reaction center analyzed with the EPR spectroscopy

Toru Kondo[1], Chihiro Azai[2], Shigeru Itoh[3], **Hirozo Oh-oka**[4] ([1]*Dept. Chem., MIT*, [2]*Coll. Life Sci., Ritsumeikan Univ.*, [3]*Grad. Sch. Sci., Nagoya Univ.*, [4]*Grad. Sch. Sci., Osaka Univ.*)

3Pos034 Role of D1-Ser169 near O4 of the Mn4CaO5 cluster in photosynthetic water oxidation

Yuichio Shimada[1], Tomomi Kitajima-Ihara[1], Ryo Nagao[1,2], Takumi Noguchi[1] ([1]*Grad. Sch. Sci., Nagoya Univ.*, [2]*RIIS, Okayama Univ.*)

3Pos035 光合成水分解反応の S2→S3 遷移におけるプロトン共役電子移動の時間分解赤外分光解析
Mechanism of proton-coupled electron transfer in the S2-S3 transition of photosynthetic water oxidation revealed by TRIR analysis

Hiroshi Takemoto, Takumi Noguchi (*Grad. Sch. Sci., Nagoya Univ.*)

3Pos036 Effect of replacement of Cl- with NO3- on photosynthetic water oxidation as studied by time-resolved infrared spectroscopy

Yasutada Okamoto, Takumi Noguchi (*Grad. Sch. Sci., Nagoya Univ.*)

3Pos037 FTIR-spectroelectrochemical study on the pH dependence of the redox potential of the non-heme iron in photosystem II

Hiroki Watanabe, Takumi Noguchi, Yuki Kato (*Grad. Sch. Sci., Nagoya Univ.*)

3Pos038 QM/MM analysis of the DOD vibrations of water molecules around the Mn4CaO5 cluster in photosystem II

Masao Yamamoto, Shin Nakamura, Takumi Noguchi (*Grad. Sch. Sci., Nagoya Univ.*)

3Pos039 光合成における電子伝達体拡散のルーメン環境依存性に関する理論的研究
Theoretical studies on dependence of diffusion of electron carriers in photosynthesis on environment in lumen side
Hidemi Nagao, Isman Kurniawan, Arwansyah Saleh, Koichi Kodama, Satoshi Nakagawa, Kazutomo Kawaguchi (*Kanazawa University*)

3Pos040 LOV を導入したファシンによるアクチン束化の制御
Regulation of actin bundles by using LOV-fused fascin
Ikuko Fujiwara[1], Miki Iwatani[1], Yumeka Yamauchi[2], Tatsuya Iwata[3], Shuichi Takeda[4], Toshiro Oda[5], Tomoharu Matsumoto[4], Akihiro Narita[4], Satoshi Tsunoda[2,6], Hideki Kandori[2] ([1]*NITech*, [2]*Grad Sch Eng, Nagoya Inst Tech*, [3]*Toho University*, [4]*Grad. Sch. Sci., Univ. Nagoya*, [5]*Univ. Tokaigakuin*, [6]*JST*)

3Pos041 Aureo 1 における C 末端 Jα ヘリックスの役割
The role of the C-terminal Jα helix in Aureochrome-1
Hiroto Nakjima, Osamu Hisatomi, Itsuki Kobayashi (*grad.sch.sci.,Univ.Osaka*)

3Pos042 Calcium concentration modulation in HeLa cells induced by mid-infrared laser irradiation
Yoshiyuki Shimizu, Toyohiko Yamauchi, Tatsuo Dougakiuchi, Gen Takebe (*Hamamatsu Photonics K.K.*)

3Pos043 光駆動プロトンポンプ型ロドプシンのシロイヌナズナへの異種発現の試み
An attempt of heterologous expression of light-driven proton pump rhodopsins in the higher plant *Arabidopsis thaliana*
Saki Inoue[1], Yurie Nagase[2], Kyohei Harada[3], Keiichi Kojima[1,2], Shintaro Munemasa[4], Susumu Yoshizawa[5], Yoshiyuki Murata[4], Shinji Masuda[6], Yuki Sudo[1,2] ([1]*Grad. Sch. of Med. Dent. & Pharm. Sci., Okayama Univ.*, [2]*Fac. of Pharm. Sci., Okayama Univ.*, [3]*Grad. Sch. Biosci. Biotechnol., Tokyo Inst. Technol.*, [4]*Grad. Sch. Environ. Life Sci., Okayama Univ.*, [5]*AORI, UTokyo*, [6]*Cent. Biolog. Resources & Informatics, Tokyo Inst. Technol.*)

3Pos044 緑藻クラミドモナスの葉緑体へのプロトンポンプ型ロドプシンの異所発現と葉緑体プロトン濃度勾配制御の試み
Expression of proton pump rhodopsins in the chloroplast of the alga *Chlamydomonas reinhardtii* for optical control of proton gradient
Yurie Nagase[1], Saki Inoue[2], Hiroshi Kuroda[3], Keiichi Kojima[1,2], Susumu Yoshizawa[4], Yuichiro Takahashi[3], Yuki Sudo[1,2] ([1]*Fac. of Pharm. Sci. Okayama Univ.*, [2]*Grad. Sch. of Med. Dent. Pharm. Sci. Okayama Univ.*, [3]*RIIS. Okayama Univ.*, [4]*AORI, UTokyo.*)

3Pos045 Development of Red-Shifted Channelrhodopsin Variants Using Long-Conjugated Retinal Analogues
Yi-Chung Shen[1], Toshikazu Sasaki[1], Takesi Matsuyama Hoyos[1], Takahiro Yamashita[1], Yoshinori Shichida[1,2], Takashi Okitsu[3], Yumiko Yamano[3], Akimori Wada[3], Toru Ishizuka[4], Hiromu Yawo[4], Yasushi Imamoto[1] ([1]*Dept. of Biophys., Grad. Sch. of Sci., Kyoto Univ.*, [2]*Res. Org. for Sci. & Tech., Ritsumeikan Univ.*, [3]*Lab. of Organ. Chem. for Life Sci., Kobe Pharm. Univ.*, [4]*Dept. of Dev. Bio. & Neurosci., Grad. Sch. of Life Sci., Tohoku Univ.*)

3Pos046 Theoretical study on molecular mechanism of a light-driven ion transport of Halorhodopsin
Ryo Oyama, Taisuke Hasegawa, Shigehiko Hayashi (*Grad. Sch. Sci., Univ. Kyoto*)

化学受容／Chemoreception

3Pos047 シグナル伝達分子の細胞膜上空間分布解析
Spatial distribution analysis of signaling proteins on the cell membrane
Hiroaki Takagi[1], Yukihiro Miyanaga[2], Satomi Matsuoka[3], Masahiro Ueda[2,3] ([1]*Sch. Med., Nara Med. Univ.*, [2]*Grad. Sch. Front. Bio. Sci., Osaka Univ.*, [3]*BDR, Riken*)

3Pos048 大腸菌走化性応答における CheY 極局在の役割
Role of polar localization of chemotaxis protein CheY for the intracellular signaling under non-stimulated conditions in *Escherichia coli*
Yong-Suk Che, Akihiko Ishijima, Hajime Fukuoka (*Dept. Frontier Biosci., Osaka Univ*)

3Pos049 コレラ菌タウリン走性受容体 Mlp37 の温度依存的遺伝子発現
Temperature-dependent gene expression of the taurine sensor Mlp37 of *Vibrio cholerae*
So-ichiro Nishiyama[3], Shiori Onogi[1], Yoshiyuki Sowa[1,2], Hiroshi Urakami[3], Ikuro Kawagishi[1,2] ([1]*Dept. Frontier Biosci., Hosei Univ.*, [2]*Res. Cen. Micro-Nano Tech., Hosei Univ.*, [3]*Fac. App. Life Sci., Niigata Univ. Pharm. App. Life Sci.*)

結晶成長・結晶化技術／Crystal growth & Crystallization technique

3Pos050 ファインバブル水を利用したタンパク質結晶化の新しいアプローチ
Novel approach for protein crystallization with ultrafine bubble water
Taichi Naruse[1], Mihoka Amano[1], Hiroaki Adachi[2], Shigeo Maeda[3], Toshihiro Fujita[3], Yusuke Mori[4], Shigeru Sugiyama[5] ([1]*Grad. Sch. Sci., Kochi Univ.*, [2]*SOSHO Inc.*, [3]*IDEC Corp.*, [4]*Grad. Sch. Eng., Osaka Univ.*, [5]*Fac. Sci. & Tec., Kochi Univ.*)

蛋白質：機能／Protein: Function

3Pos051 国産無償創薬ソフトウェア myPresto の進展：ΔG 推算を中心に
Progress of free drug development software suite myPresto: focusing on ΔG estimation
Tadaaki Mashimo[1,2], Yoshifumi Fukunishi[3] ([1]*N2PC*, [2]*IMSBIO Co., Ltd.*, [3]*AIST(molprof)*)

3Pos052 The binding mechanism of Hepatitis B virus X protein to Smc5/6 complex
Katsumi Omagari, Yasuhito Tanaka (*Nagoya City Univ.*)

3Pos053 タンパク質–タンパク質結合の粗視化 MD シミュレーション: barnase と barstar を例として
Coarse grained molecular dynamics simulation of barnase-barstar binding
Yu Sugimoto[1,3], Yoshitaka Moriwaki[1], Tohru Terada[1,2], Kentaro Shimizu[1] ([1]*Grad. Sch. Agri. Life Sci., Univ. Tokyo*, [2]*III, Univ. Tokyo*, [3]*JSPS*)

3Pos054 アルケミカル自由エネルギー計算における遅い緩和
Slow relaxation on alchemical free energy calculations
Yoshiaki Tanida, Azuma Matsuura (*Fujitsu Laboratories Ltd.*)

3Pos055 Rationalization of sampling space for searching fragment-binding poses
Hiroyuki Sato, Yoshiaki Tanida, Azuma Matsuura (*Fujitsu Lab. Ltd.*)

3Pos056 QM/MM metadynamics シミュレーションによる trehalose-6-phosphate phosphatase の触媒機構に関する研究
QM/MM metadynamics study of the catalytic mechanism of trehalose-6-phosphate phosphatase
Toshihiro Hayashi, Tadaomi Furuta, **Minoru Sakurai** (*Tokyo Tech*)

3Pos057 QM/MM metadynamics 計算による Chitinase A の加水分解機構の解析
Theoretical analysis of the hydrolysis mechanism in Chitinase A using QM/MM metadynamics simulation
Tsubasa Iino, Tadaomi Furuta, Minoru Sakurai (*Center for Biol. Res. & Inform., Tokyo Tech*)

3Pos058 Spectroscopic analysis of an electron-bifurcating [FeFe] hydrogenase
Krzysztof Pawlak[1], Nipa Chongdar[1], Olaf Rudiger[1], Edward Reijerse[1], Wolfgang Lubitz[1], James Birrell[1], **Hideaki Ogata**[1,2] ([1]*MPI CEC*, [2]*ILTS Hokkaido Univ.*)

3Pos059 鉄硫黄クラスターを利用した tRNA 硫黄修飾酵素 TtuA の反応機構の解明
Elucidation of the tRNA thiolation mechanism of TtuA involved in Fe-S cluster
Masato Ishizaka[1], Minghao Chen[1], Syun Narai[1], Masaki Horitani[2], Seiko Oka[3], Yoshikazu Tanaka[4], Min Yao[1,5] ([1]*Grad. Sch. Life Sci., Univ. Hokkaido*, [2]*Fac. Agric., Univ. Saga*, [3]*G.F.C., Univ. Hokkaido*, [4]*Grad. Sch. Life Sci., Univ. Tohoku*, [5]*Grad. Sch. Adv. Life Sci., Univ. Hokkaido*)

3Pos060 無機ポリリン酸存在下でのアクチンとミオシン間の相互作用
Interactions between actin and myosin in the presence of inorganic polyphosphates
Koji Ito, Yoshiya Miyasaka, Kuniyuki Hatori (*Grad. Sch. Sci. Eng., Yamagata Univ.*)

3Pos061 テトラヒメナ外腕ダイニンにおける致死性 P ループ変異の機能解析
Functional characterization of lethal P-loop mutations in Tetrahymena outer arm dynein (Dyh3p)
Masaki Edamatsu (*Department of Life Sciences, The University of Tokyo*)

3Pos062 ヒトジヒドロリポアミドデヒドロゲナーゼの酵素反応の制御機構における定常状態と時間分割蛍光についての研究
Steady-state and Time-resolved Fluorescence Studies on the Enzymatic Reaction Mechanism of Human Dihydrolipoamide Dehydrogenase
Yayoi Hara[1], Etsuko Nishimoto[2] ([1]*Grad. Sch. Bioresour. Bioenviron. Sci., Kyushu Univ.*, [2]*Fac. Agr., Kyushu Univ.*)

3Pos063 Optimizing the protocol for accelerating the analysis of the ATPase activity of circadian clock protein KaiC
Dongyan Ouyang[1], Atsushi Mukaiyama[1,2], Yoshihiko Furuike[1,2], Shuji Akiyama[1,2] ([1]*IMS*, [2]*SOKENDAI*)

3Pos064 多分子のキネシンによる協調運動の高速一分子観察
High-speed nanometer-precision tracking of the cargo transport by multiple kinesin-1 motor proteins
Tsukasa Enomoto (*Grad. Life science., Univ. Aoyama*)

蛋白質：計測・解析／Protein: Measurement & Analysis

3Pos065 質量分析によるヌクレオソームにおけるヒストンアセチル化の解析
Characterization of histone acetylation in nucleosome core particle using mass spectrometry
Haruna Hidaka[1], Shunsuke Izumi[1], Satoko Akashi[2], Kazumi Saikusa[1,2] ([1]*Hiroshima university*, [2]*Yokohama city university*)

3Pos066 異なる pH で形成したインスリン B 鎖アミロイド核形成中間体の構造比較
Structural comparison of amyloid nucleation intermediates of insulin B chain formed at different pH values
Yuhki Yoshikawa, Naoki Yamamoto, Atsuo Tamura, Eri Chatani (*Grad.Sch.Sci.,Kobe Univ.*)

3Pos067 固体 NMR 常磁性緩和促進法による大腸菌細胞内生体分子の局在化解析
Localization of biomolecules in E. coli cells as studied by solid-state NMR under paramagnetic relaxation enhancement
Zhongliang Zhang, Hajime Tamaki, Kazuya Yamada, Toshimichi Fujiwara (*Institute for Protein Research, Osaka Univ.*)

3Pos068 High-speed single molecule tracking of allosteric transitions in hemoglobin using Diffracted X-ray Tracking (DXT)
Yuu Okamura[1], Masahiro Kuramochi[1,2], Toshiki Hiraki[3], Naoki Yamamoto[3], Naoya Shibayama[3], Hiroshi Sekiguchi[4], Yuji Sasaki[1,2,4] ([1]*The Univ. of Tokyo Grad Sch FS*, [2]*AIST-UTokyo OPELAND-OIL*, [3]*Jichi Med Univ*, [4]*SPring8/JASRI*)

3Pos069 Protein Motion Analyzed by Diffracted X-ray Blinking
Hiroshi Sekiguchi[1], Masahiro Kuramochi[2], Noboru Ohta[1], Yuji Sasaki[1,2] ([1]*JASRI/SPring-8*, [2]*Frontier Sci., Univ. Tokyo*)

3Pos070 Nanopore probe with protein: Electrical observation of small protein motility in the nanospace
Misa Yamaji, Masaki Matsushita, Ryuji Kawano (*Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology*)

3Pos071 インスリンアミロイドに結合したチオフラビン T の蛍光寿命特性に対する pH の影響
Effect of pH on fluorescence lifetime behavior of Thioflavin T binding to insulin amyloid
Akinori Oda, Hiroshi Satozono, Tomoo Inubushi (*Hamamatsu Photonics K.K.*)

3Pos072 高速 AFM 画像データに対する生体分子立体構造のフレキシブルフィッティング
Flexible fitting of biomolecular structures to high-speed AFM image data
Toru Niina, Sotaro Fuchigami, Shoji Takada (*Kyoto Univ. Grad. Sch. Sci.*)

3Pos073 高転移性マウス乳癌細胞の細胞弾性におけるネスチンテールドメインの機能解析
Functional analysis of nestin tail domain in elastic modulus of highly metastatic mouse breast cancer cells
Moe Susaki[1], Mei Mizusawa[1], Ayana Yamagishi[2], Chikashi Nakamura[1,2] ([1]*Grad. Sch. Eng., Tokyo Univ. Agric. Technol.*, [2]*Biomed. Res. Inst., AIST*)

3Pos074 タンパク質の水和／溶媒和層の定量的な評価
Quantitatively characterization of the hydration and/or solvation shell of protein
M. Hirai[1], S. Ajito[1], H. Iwase[2], S. Arai[3] ([1]*Grad. Sch. Sci. Tech., Gunma Univ.*, [2]*Comp. Res. Org. Sci. Soc.*, [3]*Nat. Inst. Quan. Rad. Sci. Tech.*)

3Pos075 物理系と温度系の合成：カップルされた能勢ーフーバー方程式
A coupling of physical system and a temperature system: Coupled Nose-Hoover equations
Ikuo Fukuda[1], Kei Moritsugu[2] ([1]*Grad. Sch. Sim., Univ. Hyogo*, [2]*Grad. Sch. of Med. Life Sci., Yokohama City Univ.*)

3Pos076 周期境界条件下の分子動力学シミュレーションを使った結合自由エネルギー計算で生じる有限サイズ効果を抑えるアルケミカル摂動法の開発
An effective alchemical perturbation method eliminating finite-size effect on binding free energies
Toru Ekimoto, Tsutomu Yamane, Mitsunori Ikeguchi (*Yokohama City Univ.*)

蛋白質工学／Protein: Engineering

3Pos077 アレルギー性喘息を引き起こすインターロイキン 33 の阻害タンパク質の開発
Development of a protein that inhibits interleukin-33 responsible for allergic asthma
Mio Sano[1], Yoshiki Oka[1], Yuuki Hayashi[1], Munehito Arai[1,2] ([1]*Dept. Life Sci., Univ. Tokyo*, [2]*Dept. Phys., Univ. Tokyo*)

3Pos078 細胞内ヌクレオチド定量センサーの合理的設計
Rational design of nucleotide sensors for intracellular quantitative imaging
Yoshiki Oka[1], Shunji Suetaka[1], Hinako Ago[2], Yuna Miyachi[2], Yuuki Hayashi[1,2], Munehito Arai[1,2,3] ([1]*Dept. Life Sci., Univ. Tokyo*, [2]*College Arts Sci., Univ. Tokyo*, [3]*Dept. Phys., Univ. Tokyo*)

3Pos079 抗体の親和性向上におけるフレームワーク領域へのアルギニンクラスター導入の効果
Role of Arg cluster (R5) introduced into framework region (FR3) in affinity improvement
Shingo Maeta[1], Makoto Nakakido[1,2,3], Kouhei Tsumoto[1,2,3] ([1]*Dept. of Bioeng., Univ. of Tokyo*, [2]*Dept. of Chem and Biotech., Univ. of Tokyo*, [3]*Med Proteom., Inst. of Med Sci., Univ. of Tokyo*)

3Pos080 Characterization of the “scrap-and-build” process in the proteasome α ring formation
Taichiro Sekiguchi[1,2,4], Tadashi Satoh[3], Kentaro Ishii[1,4], Hirokazu Yagi[3], Koichi Kato[1,2,3,4] ([1]*ExCELLS*, [2]*SOKENDAI*, [3]*Nagoya City Univ*, [4]*Inst. for Mol. Sci.*)

3Pos081 状態選択的に安定化された G タンパク質共役受容体の合理デザイン
Rational Design of G-Protein Coupled Receptors Stabilized in Aimed State
Masaya Mitsumoto[1,2], Ryosuke Nakano[3], Takeshi Murata[3,4], Nobuyasu Koga[1,2] ([1]*ExCELLS, NINS*, [2]*SOKENDAI*, [3]*Fac. of Sci., Chiba Univ.*, [4]*PRESTO, JST*)

3Pos082 ファージディスプレイ法への応用を目指した蛍光検出ファージソーターの改良
Improvement of the fluorescent detected phage sorter for the application to phage display
Hitomi Urabe[1,2], Saya Nakano[1,3], Yuki Shimizu[1,2], Naoki Mikosiba[1,3], Hiroyuki Oikawa[1,2,3], Satoshi Takahashi[1,2,3] ([1]*IMRAM, Tohoku Univ.*, [2]*Grad. Sch. Sci., Tohoku Univ.*, [3]*Grad. Sch. Life Sci., Tohoku Univ.*)

3Pos083 Design of multi-domain protein structures for small molecule binding
Hiroko Yamada[1], Nobuyasu Koga[2] ([1]*SOKENDAI*, [2]*NINS ExCELLS*)

3Pos084 Designing an artificial transcription factor with a small molecular weight based on engrailed homeodomain
Tomoko Sunami, Yu Hirano, Taro Tamada, Hidetoshi Kono (*QST*)

3Pos085 立体構造に基づく配列プロファイルを利用した熱安定化 β-グルコシダーゼの設計に向けて
Toward design of thermostable β-glucosidase with structure-based sequence profile
Naoya Kobayashi[1], Shintaro Minami[1], Taku Uchiyama[2], Naoki Sunagawa[2], Kiyohiko Igarashi[2], Hiroyuki Noji[3,4], Nobuyasu Koga[1] ([1]*ExCELLS, NINS*, [2]*Dept. Biomater. Sci., Grad. Sch. Agri. Life Sci., Univ. Tokyo*, [3]*Dept. Appl. Chem., Grad. Sch. Eng., Univ. Tokyo*, [4]*ImPACT, JST*)

3Pos086 平行ベータシート蛋白質の設計図におけるデザイナビリティの評価基準
Criteria for evaluating designability of pure parallel beta sheet structures
Hayao Imakawa[1], Nobuyasu Koga[2], George Chikenji[1] ([1]*Dept. of App. Phys., Nagoya Univ.*, [2]*CIMoS, IMS*)

3Pos087 タンパク質-タンパク質結合部位の予測とエピトープマッピング
Prediction of Protein-Protein Binding Sites and Epitope Mapping
John Gunn[2], Elizabeth Sourial[2], **Kinya Toda**[1], Paul Labute[2] ([1]*MOLSIS Inc.*, [2]*Chemical Computing Group ULC*)

3Pos088 理論的変異解析によるジヒドロ葉酸還元酵素の高活性化
Enhancing activity of dihydrofolate reductase by theoretical mutational analysis
Kazuhisa Ohara[1], Yoshiki Oka[1], Yuuki Hayashi[1], Munehito Arai[1,2] ([1]*Dept. Life Sci., Univ. Tokyo*, [2]*Dept. Phys., Univ. Tokyo*)

非平衡・発生リズム／Nonequilibrium state & Biological rhythm

3Pos089 Mathematical Modeling for Morphallactic Segment Formation Using a Size-Dependent Multi-Loop Negative Feedback System
Yusuke Shibasaki[1], Chikako Yoshida-Noro[2], Minoru Saito[1] ([1]*Graduate School of Integrated Basic Sciences, Nihon University*, [2]*College of Industrial Technology, Nihon University*)

3Pos090 Maximizing Local Information Transfer in Boolean Networks
Taichi Haruna[1], Kohei Nakajima[2,3] ([1]*Tokyo Woman's Christian University*, [2]*The University of Tokyo*, [3]*PRESTO, JST*)

3Pos091 局所情報流最大化に駆動される時空間ダイナミクス
Spatiotemporal dynamics driven by maximization of local information transfer
Kohei Nakajima[1,3], Taichi Haruna[2] ([1]*The University of Tokyo*, [2]*Tokyo Woman's Christian University*, [3]*JST PRESTO*)

3Pos092 Spatial Cooperation between DNA and Actin in Micro-Confinement Generated through Spontaneous Phase Segregation
Hiroki Sakuta[1], Naoki Nakatani[1], Masahito Hayashi[2], Kingo Takiguchi[3], Kanta Tsumoto[4], Kenichi Yoshikawa[1] ([1]*Grad. Sch. Life Med. Sci., Doshisha Univ.*, [2]*Center of Brain Sci., RIKEN*, [3]*Grad. Sch. Sci., Nagoya Univ.*, [4]*Grad. Sch. Eng., Mie Univ.*)

3Pos093 Theoretical model of dynamics of epithelial tissue with cellular chirality
Takaki Yamamoto[1], Tetsuya Hiraiwa[2], Tatsuo Shibata[1] ([1]*Riken, Lab. Phys. Biol.*, [2]*Univ. Tokyo, Sci. Phys.*)

3Pos094 Analysis of soliton-like collective migration of non-chemotactic *dictyostelium* cells
Masayuki Hayakawa[1], Hidekazu Kuwayama[2], Yuko Wada[1], Tatsuo Shibata[1] ([1]*BDR, Riken*, [2]*Faculty of Life and Environmental Sciences, University of Tsukuba*)

3Pos095 多電極システムによる心筋細胞ネットワークにおける拍動伝導の計測技術の開発
Development of a method to track conductions in cardiomyocyte network with a multi-electrode system
Kazufumi Sakamoto[1], Natsuki Seki[1], Shota Aoki[2], Naoki Takahashi[2], Masao Odaka[3,4], Kenji Matsuura[3,4], Akihiro Hattori[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

生命情報科学／Bioinformatics

3Pos201 タンパク質複合体構造モデリングの評価のためのベンチマークデータセット
A large decoy dataset for protein-protein docking model quality assessment
Takanori Hayashi[1], Masahito Ohue[1], Juliette Martin[2], Guillaume Launay[2], Yuri Matsuzaki[3], Nobuyuki Uchikoga[3], Yutaka Akiyama[1,3] ([1]*Sch Computing, Tokyo Tech*, [2]*MMSB, CNRS, Univ Lyon*, [3]*ACLS, Tokyo Tech*)

3Pos202 Sequence profile for protein design based on database analysis of backbone environment
Shintaro Minami, Rie Koga, Nobuyasu Koga (*NINS, ExCELLS*)

3Pos203 Development of a method for predicting pathogenicity of missense variants incorporating supramolecular structural information
Atsushi Hijikata, Masafumi Shionyu, Tsuyoshi Shirai (*Nagahama Inst. Bio-Sci. Tech.*)

3Pos204 Performance improvement of the method for large-scale structural comparison of protein pockets
Tsukasa Nakamura[1,2], Kentaro Tomii[1,2] ([1]*CBMS, GSFS, Univ. Tokyo*, [2]*AIRC, AIST*)

3Pos205 ヒト機能未知スプライシングアイソフォームの特徴解析
Analysis of characteristics of function-unknown splicing isoforms in human
Masafumi Shionyu, Atsushi Hijikata (*Fac. Biosci., Nagahama Inst. Bio-Sci. Tech.*)

3Pos206 Characterizing SLC transporters by sequence and functional networks
Hafumi Nishi[1], Yuya Hanazono[1], Hitoshi Yamagata[2], Kengo Kinoshita[1] ([1]*Grad. Sch. Info. Sci., Tohoku Univ.*, [2]*Adv. Res. Lab., Canon Medical Systems Corp.*)

3Pos207 肺癌細胞の発現変動遺伝子を対象としたクラスタセントロイド間の相関ネットワーク
Correlated network by cluster centroids for differentially expressed genes in lung cancer cell
Kohei Misu[1], Masahiro Sugimoto[2], Takanori Sasaki[1] ([1]*Grad. Sch. Adv. Math. Sci., Meiji Univ.*, [2]*RDCMIT, Tokyo Med. Univ.*)

3Pos208 機能に関する選択シミュレーションにおける P-loop 蛋白質構造の多様化
Diversification of P-loop protein structure simulated by imposing the functional requirement as a selection pressure
Kohei Inukai, Masaki Sasai, George Chikenji (*Department of Engineering, Nagoya University*)

数理生物学／Mathematical biology

3Pos209 脳の階差成長による皺形成シミュレーション
Winkling simulation of differential growth of brain
Katsuyoshi Matsushita[1], Kazuya Horibe[1], Naoya Kamamoto[1], Ken-ichi Hironaka[2], Koichi Fujimoto[1] ([1]*Department of Biological Science, Graduate School of Science, Osaka University*, [2]*Department of Biological Sciences, Graduate School of Science, University of Tokyo*)

3Pos210 機械学習を利用した集団内細胞行動解析
System analysis of cellular behavior with machine learning during collective cell migration
Moegi Marumoto[1,2], Masaya Hagiwara[1] ([1]*N2RI, Osaka Pref. Univ.*, [2]*Dept. of Biol. Sci., Osaka Pref. Univ.*)

3Pos211 多細胞の協調的な運動時における細胞の複雑な変形のフェーズフィールドモデル
Phase-field modeling of complex cell deformation and multi-cellular motion
Daisuke Imoto[1], Nen Saito[4], Satoshi Sawai[1,2,3] ([1]*Dept Basic Sci, Grad School of Arts and Sci, Univ of Tokyo*, [2]*Research Ctr for Complex Systems Biology, Univ of Tokyo*, [3]*JST PRESTO, School of Science, The University of Tokyo,*, [4]*Universal Biology Institute, The University of Tokyo*)

3Pos212 不正確な素子から正確な情報伝達をおこなうためのネットワーク構造と協同性
Cooperative reliable response from sloppy gene expression dynamics
Masayo Inoue[1], Kunihiko Kaneko[2] ([1]*IMS, Meiji Univ.*, [2]*Univ. of Tokyo*)

3Pos213 A data-driven model for collective cell motion in Dictyostelium discoideum
Keizaburo Nishikino[1], Ryo Yokota[2], Tetsuya J. Kobayashi[1,2,3] ([1]*EEIS, Univ Tokyo*, [2]*IIS, Univ Tokyo*, [3]*IST, Univ Tokyo*)

3Pos214 ATPase activity of individual KaiC molecules decisively influences the ensemble-level oscillation of cyanobacterial KaiABC clock
Sumita Das[1,2], Tomoki P. Terada[1,2], Masaki Sasai[1,2] ([1]*Deparment of Computational Science and Engineering, Nagoya University, Nagoya*, [2]*Department of Applied Physics, Nagoya University, Nagoya*)

3Pos215 Effects of the binding domain of Pin1 interacting with proteins of variable conformations
Romain Amyot, **Yuichi Togashi** (*Grad. Sch. Sci., Univ. Hiroshima*)

3Pos216 Experimental Validation of a Mathematical Model of ErbB Receptor Signaling to Cell Cycle
Kyoichi Ebata, Hiroaki Imoto, Kazunari Iwamoto, Shigeyuki Magi, Suxiang Zhang, Mariko Okada (*IPR, Osaka Univ.*)

3Pos217 蟻の死骸の山の形成プロセスにおける一考察
Ant Cemeteries Grow via the Ambiguous Local Environment
Tomoko Sakiyama (*Grad. Sch. Nat. Sci. Tech., Univ. Okayama*)

3Pos218 Reduction of a Markov operator representing the dynamics of stochastic neuronal model by sparse discrete cosine transform
Takanobu Yamanobe (*Hokkaido University School of Medicine*)

3Pos219 アルツハイマー病とシロスタゾール ー傾向スコアを用いた医療費の検討ー
Alzheimer's disease and cilostazol -medical cost through propensity score-
Izumi Kuboyama, Susumu Ito, Toshiaki Kaminaka, Katsuhiko Hata (*Kokushikan University*)

3Pos220 Coupled epigenetic and genetic network gives rise to a probability landscape with eddy currents
Bhaswati Bhattacharyya, Masaki Sasai (*Department of Computational Science and Engineering, Nagoya University*)

細胞生物学／Cell Biology

3Pos301 SPI-2 感染装置先端蛋白質 SseB の集合体形成
Assembly characteristics of SseB, a putative tip protein of the SPI-2 injectisome
Takumi Tsujimoto[1], Yuki Yamanaka[2], Linda J Kenny[2], Katsumi Imada[1] ([1]*Grad. Sch. of Sci., Osaka Univ.*, [2]*MBI., NUS.*)

3Pos302 GPCR ダイマーを構成する一部の分子は、リガンド刺激前に自発的に活性化している
Spontaneous activation in a transient GPCR dimer before ligation as revealed by dual-channel single fluorescent molecule imaging
Rinshi Kasai (*Inst. Front. Life. Med. Sci., Kyoto Univ.*)

3Pos303 MCF 細胞内における p52Shc の Grb2 シグナル伝達制御
Regulation of Grb2 signaling dynamics by p52Shc scaffold protein in MCF7 cells
Ryo Yoshizawa[1,2], Nobuhisa Umeki[2], Masataka Yanagawa[2], Masayuki Murata[1], Yasushi Sako[2] ([1]*Grad.sch.arts and ahi., the univ. Tokyo*, [2]*Wako Inst., Riken*)

3Pos304 RhoA activation inhibits proliferation of skin cancer cells
Oleg Dobrokhotov[1,2], Atsushi Enomoto[3], Masaki Sunagawa[3], Masahide Takahashi[3], Mikhail Samsonov[4], Masahiro Sokabe[2], Hiroaki Hirata[1,2] ([1]*R-Pharm Japan*, [2]*Mechanobiology Lab., Grad. Sch. Med., Nagoya Univ.*, [3]*Dept. Pathology, Grad. Sch. Med., Nagoya Univ.*, [4]*R-Pharm*)

3Pos305 Size-dependent beating rate changes of cardiomyocyte clusters by environmental thermal changes
Wei Wang, Tomoyuki Kaneko (*LaRC, FB, Grad.Sch., Hosei Univ.*)

3Pos306 心筋細胞メカニクスに NADPH オキシダーゼ 4 が及ぼす影響
Single cell mechanics effects of NADPH oxidase (NOX) 4 in mouse ventricular cardiomyocytes
Keiko Kaihara, Gentaro Iribe, Hiroaki Kai, Keiji Naruse (*Dept Cardio Physiol, Grad Sch med, Okayama Univ*)

3Pos307 1 細胞レベルの電気信号伝導速度計測に向けた心筋細胞ネットワーク再構築
Reconstruction of cardiomyocyte network for measuring the signal conduction velocity at single cell level
Koki Fujii, Tomoyuki Kaneko (*LaRC, FB, Hosei univ*)

3Pos308 間葉系幹細胞の温度依存形態振動に伴うメカノシグナル転写因子の核ー細胞質シャトリング
Nucleocytoplasmic shuttling of the mechanotransducing proteins in temperature-dependent shape-oscillating mesenchymal stem cells
Sayaka Masaike[1], Satoru Kidoaki[2] ([1]*Grad. Sch. Eng., Kyushu Univ.*, [2]*IMCE, Kyushu Univ.*)

3Pos309 iPS 細胞は最適弾性率を持つハイドロゲル表面に移動し増殖する
iPS cells move toward and efficiently proliferate on the hydrogel surface with optimal elasticity
Mengfan Wang[1], Satoru Kidoaki[2] ([1]*Grad. Sch. Eng., Kyushu Univ.*, [2]*IMCE, Kyushu Univ.*)

3Pos310 ハイドロゲル上でのマスト細胞の刺激応答
Inhibition of degranulation in mast cells cultured on hydrogel
Atsushi Shiki, Yoshikazu Inoh, Satoru Yokawa, Tadahide Furuno (*Sch. Pharm., Univ. Aichi Gakuin*)

3Pos311 三次元細胞構造体の構築：高分子混雑環境下におけるレーザーピンセットの活用
Constructing 3D Cellular Assembly: Laser Tweezering under Depletion Effect on Albumin Solution
Ritsuki Ito, Kakehiro Yamazaki, Satoshi Kishimoto, Takahiro Kenmotsu, Koichiro Sadakane, Kenichi Yoshikawa (*Faculty of Biological and Medical Sciences, Doshisha University*)

3Pos312 Investigation for the crosstalk mechanism of two damping oscillators, p38 MAP kinase and NF-κB
Hiroki Michida, Minami Ando, Shigeyuki Magi, Kazunari Iwamoto, Mariko Okada (*IPR Osaka Univ.*)

3Pos313 多繊毛上皮細胞の基底小体の配列・配向秩序化の数理モデル
Mathematical model for alignment and orientation order of basal bodies in a multi-ciliated cell
Toshinori Namba[1], Shuji Ishihara[1,2] ([1]*Graduate School of Arts and Sciences, The University of Tokyo*, [2]*Universal Biology Institute, The University of Tokyo*)

3Pos314 隣接させた心臓組織片の同期化プロセスの解明
Synchronization processes of cardiac tissue fragment pair and the regional differences in the heart
Shin Arai[1], Tomoyuki Kaneko[2], Toshiyuki Mitsui[1] ([1]*Grad. Sch. of Sci. & Eng., Aoyama Gakuin Univ.*, [2]*LaRC, Grad. Sci. Eng., Hosei Univ.*)

3Pos315 長期的機械刺激による心筋細胞集合体への影響
Long-term influence of external mechanical stimulus on cardiomyocyte aggregations
Takashi Miyazawa, Shin Arai, Takahiro Uehara, Shogo Yahagi, Toshiyuki Mitsui (*Grad. Sch. of Sci. & Eng., Aoyama Gakuin Univ.*)

3Pos316 Exploring the basic law that determines the shape of fast moving cells
Gen Honda[1], Satoshi Sawai[1,2] ([1]*Department of Basic Science, Graduate School of Arts and Sciences, University of Tokyo*, [2]*Research Center for Complex Systems Biology, Graduate School of Arts and Sciences, University of Tokyo*)

3Pos317 AFM を用いた腫瘍微小環境を構成する細胞間の接着剥離力と細胞接触時間の関係評価
Relationship between detachment force and contact time for cells making up tumor microenvironments measured by AFM
Kenta Ishibashi[1], Tomoko Okada[2], Chikashi Nakamura[1,2], **Hyonchol Kim**[1,2] ([1]*Grad. Sch. Eng., Tokyo Univ. Agric. Technol.*, [2]*Biomed. Res. Inst., AIST*)

3Pos318 生物発光イメージング法を用いた ECM と接着したマスト細胞の脱顆粒の可視化解析
Video-Rate Bioluminescence Imaging of Degranulation of Mast Cells Attached to the Extracellular Matrix
Satoru Yokawa[1], Takahiro Suzuki[2], Ayumi Hayashi[1], Satoshi Inouye[3], Yoshikazu Inoh[1], Tadahide Furuno[1] ([1]*Sch. Pharm., Aichi Gakuin Univ.*, [2]*Sch. Dent., Aichi Gakuin Univ.*, [3]*JNC Co., Yokohama.*)

3Pos319 FERT 法による走化性受容体クラスター活性とべん毛モーター回転の 1 細胞同時計測
Simultaneous measurement of chemoreceptor array's activity and the flagellar motor rotation utilizing single cell FRET
Hajime Fukuoka, Tatsuya Yamakoshi, Sarina Nishimura, Yong-Suk Che, Akihiko Ishijima (*Grad. Sch. Frontier Biosci., Osaka Univ.*)

3Pos320 大腸菌におけるべん毛の回転方向と CheY の細胞内動態の同時計測
Simultaneous measurement of flagellar motor rotation and dynamics of CheY in a single *E.coli* cell
Tatsuya Yamakoshi, Yong-Suk Che, Akihiko Ishijima, Hajime Fukuoka (*Grad.Sch.Frontier.Osaka Univ.*)

3Pos321 T 細胞シグナルの超解像イメージング法の開発
Development of the superresolutional imaging in T cell signaling
Hiroaki Machiyama, Ei Wakamatsu, Tadashi Yokosuka (*Dept. Immunol., Tokyo Med. Univ.*)

3Pos322 磁性細菌の走磁性運動におけるべん毛回転運動の生細胞イメージング
Live-cell imaging of flagellar rotation in magnetotactic bacterial cell during magneto-aerotaxis
Yuta Takaoka[1], Azuma Taoka[1], Yoshihiro Fukumori[2] ([1]*Grad. Sch. of Nat. Sci. and Tech., Kanazawa Univ.*, [2]*Vice President, Kanazawa Univ.*)

3Pos323 高速 AFM による細胞表面の分子イメージング
Molecular imaging of dynamic process on bacterial cell surface by high speed AFM
Hayato Yamashita[1,2], Azuma Taoka[3,4], Masayuki Abe[1] ([1]*Grad. Sch. of Eng. Sci., Osaka Univ.*, [2]*PRESTO, JST*, [3]*Grad. Sch. of Nat. Sci. & Tech., Kanazawa Univ.*, [4]*Bio-AFM Frontier Research Center, Kanazawa Univ.*)

3Pos324 魚類ケラトサイトの遊走メカニズムに微小管は必要ない
Microtubules are not required for crawling migration of keratocytes
Hitomi Nakashima, Chika Okimura, **Yoshiaki Iwadate** (*Fac. Sci., Yamaguchi Univ.*)

3Pos325 神経突起との接着による膵島 α 細胞の細胞内顆粒動態とグルカゴン分泌の抑制
Decreased intracellular granule movement and glucagon secretion in pancreatic α cells attached to superior cervical ganglion neurites
Tadahide Furuno[1], Satoru Yokawa[1], Kiyoto Watabe[1], Yoshikazu Inoh[1], Takahiro Suzuki[2] ([1]*Sch. Pharm., Aichi Gakuin Univ.*, [2]*Sch. Dent., Aichi Gakuin Univ.*)

3Pos326 赤外線レーザー照射刺激による心筋細胞拍動変化の物理的要因
Physical effect on beating rate change of cardiomyocytes induced by infrared laser irradiation
Yukino Motohashi, Kento Nozawa, Maki Ishii, Tomoyuki Kaneko (*LaRC, FB, Hosei univ.*)

3Pos327 100 分子ほどの膜貫通足場タンパク LAT がマスト細胞の免疫反応を担っている
Only ~100 copies of a transmembrane scaffolding protein LAT are responsible in the immune response in mast cells
Koichiro M. Hirosawa[1], Nao Hiramoto-Yamaki[2], Shohei Nozaki[3], Taka A. Tsunoyama[4], Bo Tang[5], Kenichi G.N. Suzuki[1,2], Kazuhisa Nakayama[3], Takahiro K. Fujiwara[2], Akihiro Kusumi[4] ([1]*G-CHAIN, Gifu Univ.*, [2]*iCeMS, Kyoto Univ.*, [3]*Grad. Sch. Pharma., Kyoto Univ.*, [4]*OIST*, [5]*Wuhan University*)

バイオエンジニアリング／Bioengineering

3Pos401 Stiffness measurement of cell by using micro-hand systems with plate shape end effector
Masaru Kojima[1], Taisei Tanaka[1], Yasushi Mae[1], Toshihiko Ogura[2], Tatsuo Arai[3,4] ([1]*Grad. Sch. Eng. Sci., Osaka Univ.*, [2]*IDAC, Tohoku Univ.*, [3]*Glob. Alliance Lab., The Univ. of Electro-Communications*, [4]*Beijing Inst. of Tech.*)

3Pos402 油中水滴界面を利用した DNA ハイドロゲルマイクロカプセルの構築
Construction of DNA hydrogel microcapsules using water-in-oil droplet interface
Yuji Nakashima, Yusuke Sato, Yu Kasahara, Masahiro Takinoue (*Dept. of com. sci., TITech*)

3Pos403 DNA でつくるシグナル伝達機構の実現に向けた DNA 生成反応回路の構築
Construction of a DNA Generation Circuit toward Engineering of DNA-based Signal Transduction Systems
Ken Komiya, Chizuru Noda, Masayuki Yamamura (*Sch. Comp., Tokyo Tech.*)

3Pos404 iPS 細胞の心筋分化誘導における血管内皮細胞の影響
Effect of vascular endothelial cells on cardiac differentiation of iPS cells
Chika Tada, Ken Takahashi, Masatoshi Morimatsu, Keiji Naruse (*Grad. Sch Med Dent Pharm Sci., Okayama Univ.*)

3Pos405 Evaluation of membrane shape deformation of giant vesicles prepared by droplet transfer method
Masamune Morita, Naohiro Noda (*Biomed. Res. Inst., AIST*)

3Pos406 細胞外電位測定による心筋細胞集団と心臓組織片の拍動同期過程の解析
Analysis of signal synchronization process between dispersed cardiomyocyte and cardiac tissue piece by measuring extracellular potential
Toru Nakamura, Chiho Nihei, Tomoyuki Kaneko (*Laboratory for Reconstructive Cell biology, Department of Frontier Bioscience, Hosei University*)

3Pos407 新規心毒性検査技術を目指した心臓組織片の細胞外電位計測
Measurement of Extracellular Potential on Heart Tissue for Novel Cardiotoxicity Test
Ryohei Kobayashi, Koji Emura, Tomoyuki Kaneko (*LaRC,FB,Hosei Univ.*)

3Pos408 細胞外電位計測による心臓組織片の拍動同期解析
Analysis of beating synchronization of cardiac tissue pieces by field potential measurement
Yousuke Kamei[1], Toshiyuki Mitsui[2], **Tomoyuki Kaneko**[1] ([1]*LaRC, FB, Hosei Univ.*, [2]*Dept. Math. Phys., Col. Sci. Eng., Aoyama Univ.*)

3Pos409 血中循環腫瘍細胞をサイズ分画するための流路チップデザインの加工工程における形状の転写の加工精度の定量的評価
Quantitative evaluation of preciseness in design copy in microfabrication procedures of circulating tumor cell cluster size-filtration
Ayako Kawai[1], Moe Iwamura[2], Kenji Matsuura[3,4], Akihiro Hattori[3,4], Masao Odaka[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

3Pos410 血中循環腫瘍細胞を選択回収するサイズ分画機能を備えた画像認識型セルソーターの開発
Development of size filtration-imaging cell sorter for real time selective collection of circulating tumor cells (CTCs) in blood
Moe Iwamura[1], Kenji Matsuura[3,4], Ayako Kawai[2], Masao Odaka[3,4], Akihiro Hattori[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ*, [4]*WASEDA Biosci. Res. Ins. in Singapore (WABIOS)*)

3Pos411 単一細胞分析のための Ba2 + / Ca2 +アルギン酸微小滴からの選択的な細胞回収方法の検討
Selective digestion of Ba2+/Ca2+ alginate microdroplets for single-cell-analysis
Masao Odaka[1,2], Moe Iwamura[3], Ayako Kawai[4], Akihiro Hattori[1,2], Kenji Matsuura[1,2], Kenji Yasuda[1,2,3,4] ([1]*Org. Univ. Res. Initiatives, Waseda Univ.*, [2]*WASEDA Biosci. Res. Ins. in Singapore*, [3]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [4]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*)

3Pos412 Environment-dependent self-assembly of DNA nanostructures on phase-separated lipid bilayer membranes
Yusuke Sato[1], Masayuki Endo[2,3], Masamune Morita[4], Masahiro Takinoue[1], Hiroshi Sugiyama[2,3], Satoshi Murata[5], Shin-ichiro M. Nomura[5], Yuki Suzuki[5,6] ([1]*Dept. Comput. Sci., Tokyo Tech*, [2]*iCeMS, Kyoto Univ.*, [3]*Grad. Sch. Sci., Kyoto Univ.*, [4]*Biomed. Res. Inst., AIST*, [5]*Grad. Sch. Eng., Tohoku Univ.*, [6]*Fronti. Res. Inst. Interdiscrip. Sci., Tohoku Univ.*)

3Pos413 血管新生の遺伝子発現解析のためのマトリゲル構造を用いた発芽的血管内皮細胞の回収方法の開発

Development of sprouting vascular endothelial cell collection method using flexible design of Matrigel for expression analysis

Yuki Yamanaka[1], Kento Iida[1], Ryuji Takano[2], Hiromichi Hashimoto[2], Masao Odaka[3,4], Akihiro Hattori[3,4], Kenji Matsuura[3,4], Kenji Yasuda[1,2,3,4] ([1]*Dept. Pure & Appl. Phys., Grad. Sch. Adv. Sci. & Eng., Waseda Univ.*, [2]*Dept. Pure & Appl. Phys., Sch. Adv. Sci. & Eng., Waseda Univ.*, [3]*Org. Univ. Res. Initiatives, Waseda Univ.*, [4]*WASEDA Biosci. Res. Ins. in Singapore*)

3Pos414 交流磁場によるフェリチン内合成マグネタイトナノ粒子の加熱

Heating effect of magnetite nanoparticles synthesized in the ferritin cavity by alternating magnetic field

Daisuke Katayama[1], Hideyuki Yoshimura[2] ([1]*Grad. Sch. Sci Eng. Phys, Univ. Meiji*, [2]*Sci Eng. Phys, Univ. Meiji*)

3Pos415 Insertion of cancer cell specific binding peptide into ferritin

Naoki Takashima[1], Hideyuki Yhoshimura[2], Tomoko Kanamaru[2] ([1]*Grad. Sch. Sci/Eng Phy. Univ. Meiji*, [2]*Sci/Eng Phy. Univ. Meiji*)

3Pos416 蛍光・発光タンパク質に基づくマイクロディスプレイ

Micro-display devices based on fluorescence and bioluminescence proteins

Kosuke Hama[1], Trisha.D Farha[1], Mieko Imayasu[1], Ken-ichi Shinohara[1], Yuichi Hiratsuka[1], Atsushi Miyawaki[2], Hidekazu Tsutsui[1,2] ([1]*JAIST, material Sci*, [2]*Wako Inst., Riken*)

3Pos417 Photo-regulation of Small GTPase Ras using Photochromic SOS-Peptide

Masahiro Kuboyama[1], Nobuyuki Nishibe[1], Kenichi Taii[1], Kazunori Kondo[2], Shinsaku Maruta[1] ([1]*Dept. of Bioinformatics, Graduate School of Engineering, Soka University*, [2]*Department of Science and Engineering, Faculty of Science and Engineering, Soka University*)

3Pos418 High-throughput in vitro selection method for obtaining peptide agonists of G protein-coupled receptors

Anna Matsueda[1], Takashi Sakurai[1], Ryo Iizuka[1], Yasuyuki Nakamura[2], Jun Ishii[3], Akihiko Kondo[2], Ayaka Iguchi[4], Dong Hyun Yoon[5], Tetsushi Sekiguchi[5], Shuichi Shoji[4], Yuu Fujimura[6], Jin Akagi[6], Masayuki Ishige[6], Takashi Funatsu[1] ([1]*Grad. Sch. of Pharm. Sci., The Univ. of Tokyo*, [2]*Grad. Sch. of Eng., Kobe Univ.*, [3]*Org. of Adv. Sci. and Technol., Kobe Univ.*, [4]*Dept. of Nanosci. and Nanoeng., Waseda Univ.*, [5]*Res. Org. for Nano & Life Innov., Waseda Univ.*, [6]*On-chip Biotechnol. Co., Ltd.*)

3Pos419 Droplet-based microfluidic screening for obtaining microbes producing macromolecule-degrading enzymes

Ryo Iizuka[1], Kai Saito[1], Eiji Shigihara[1], Wataru Kawakubo[2], Daiki Tanaka[3], Dong Hyun Yoon[3], Tetsushi Sekiguchi[3], Shuichi Shoji[2], Mei Ito[4], Yuji Hatada[4], Takashi Funatsu[1] ([1]*Grad. Sch. of Pharm. Sci., The Univ. of Tokyo*, [2]*Dept. of Nanosci. and Nanoeng., Waseda Univ.*, [3]*Res. Org. for Nano & Life Innov., Waseda Univ.*, [4]*Dept. of Life Sci. and Green Chem., Saitama Inst. of Technol.*)

3Pos420 統合情報理論に基づく意識を持つ DNA ネットワークの設計と解析

Design and analysis of DNA network with consciousness based on integrated information theory

Hiroki Watanabe[1], Ryuji Kawano[2], Masahiro Takinoue[1] ([1]*Dept. Compt. Sci., Tokyo Tech*, [2]*Dept. Bio. Life Sci., Tokyo Univ. Agri. Tech.*)

3Pos421 The way to the perfect observation!! ~Research of drone that mimics the birds~

Ayumu Kuroda (*Tokyo Metropolitan high sch .,F-pro*)