若手招待講演　Early Research in Biophysics Award Candidate Presentation Symposium

1 日目（9 月 15 日（土））／Day 1（Sep. 15 Sat.）

9:00〜11:30　B 会場／Room B：A21 教室／A21
1YB　日本生物物理学会若手奨励賞選考会
Early Research in Biophysics Award Candidate Presentations

**オーガナイザー：男女共同参画・若手支援委員会**
**Organizer: Promotion of Gender Equality and Young Researchers Committee**

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Biophysical Society of Japan (BSJ) grants “Early Career Award in Biophysics” and “Early Career Presentation Award” to young BSJ members for their excellent presentations that show great potential to contribute to the progress of biophysics. In this 14th year, we received 33 highly qualified applications. After the first round of competitive screening based on submitted documents, the following ten applicants were selected as the young invited speakers. In this symposium, each speaker will make 10-minute presentation followed by 3-minute discussion as the second round of screening. Up to five awardees of the Early Career Award in Biophysics will be selected and announced at the banquet held in the evening of the second day. The Early Career Presentation Award will be given to the rest of the excellent invited speakers. We welcome all the BSJ members to attend this symposium to foresee the future of biophysics in Japan through the speakers and their researches.

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9:00　**市川　宗厳**　2M1554

1YB0900　**クライオ電子顕微鏡を用いた高分解能構造解析による軸糸ダブレット微小管の構築・安定化機構の解明**

Cryo-electron microscopy revealed a high-resolution structure of doublet microtubule and its assembly and stabilization mechanisms

○市川 宗厳 [1], Liu Dinan[1], Kastritis Panagiotis L.[2], Basu Kaustuv[3], Hsu Tzu Chin[1], Yang Shunkai[1], Bui Khanh Huy[1,4]（[1]マギル大学, [2]EMBL, [3]マギル大学, FEMR, [4]GRASP）

**Muneyoshi Ichikawa**[1], Dinan Liu[1], Panagiotis L. Kastritis[2], Kaustuv Basu[3], Tzu Chin Hsu[1], Shunkai Yang[1], Khanh Huy Bui[1,4] ([1]*Dept. of Anat. and Cell Biol., McGill Univ.*, [2]*Struct. and Comput. Biol. Unit, EMBL*, [3]*FEMR, McGill Univ.*, [4]*GRASP*)

9:15　**大上　雅史**　1C1448

1YB0915　**スーパーコンピューティングによる網羅的タンパク質間相互作用予測法の開発と予測結果データベースの公開**

Supercomputing-based exhaustive protein-protein interaction prediction and its open database

○大上 雅史 [1], 林 孝紀 [1], 渡辺 紘生 [1,2], 松崎 由理 [3], 内古閑 伸之 [3], 秋山 泰 [1,3]（[1]東工大 情報理工, [2]産総研, RWBC-OIL, [3]東工大 情生院）

**Masahito Ohue**[1], Takanori Hayashi[1], Hiroki Watanabe[1,2], Yuri Matsuzaki[3], Nobuyuki Uchikoga[3], Yutaka Akiyama[1,3] ([1]*Sch Computing, Tokyo Tech*, [2]*RWBC-OIL, AIST*, [3]*ACLS, Tokyo Tech*)

9:30　**小林　幹**　2M1618

1YB0930　Structure of a prehandover mammalian ribosomal SRP·SRP receptor targeting complex

**Kan Kobayashi**[1], Ahmad Jomaa[1], Jae Ho Lee[2], Sowmya Chandrasekar[2], Daniel Boehringer[1], Shu-ou Shan[2], Nenad Ban[1] ([1]*ETH Zurich*, [2]*Caltech*)

9:45　坂口　美幸　2O1606

1YB0945 一分子時間分解 FRET データの三次元解析：生体高分子の構造不均一性をモデルフリーで定量する方法の開発

Third-order correlation analysis of single-molecule time-resolved FRET data: a new method for quantification of heterogeneity

○坂口 美幸 [1], 石井 邦彦 [1,2], 田原 太平 [1,2]（[1]理研・田原分子分光, [2]理研・光量子工学研究センター）

**Miyuki Sakaguchi**[1], Kunihiko Ishii[1,2], Tahei Tahara[1,2] ([1]*Molecular Spectroscopy Lab., RIKEN*, [2]*RAP, RIKEN*)

10:00　佐藤　恵太　1H1548

1YB1000 脊椎動物の光受容体 Opn5L1 は逆行性・自己再生能をもつ新しいタイプのオプシンである

Vertebrate photoreceptor, Opn5L1, is the newcomer of opsin acting as a reverse and self-regenerating photoreceptor

○佐藤 恵太 [1], 山下 高廣 [2], 大内 淑代 [1], 竹内 敦子 [3], 後藤 人志 [4], 小野 勝彦 [4], 水野 操 [5], 水谷 泰久 [5], 友成 さゆり [6], 酒井 佳寿美 [2], 今元 泰 [2], 和田 昭盛 [7], 七田 芳則 [2,8]（[1]岡大院医歯薬, [2]京大院理, [3]神薬大中央分析室, [4]京府医大生物, [5]阪大院理, [6]徳大院ソシオテクノサイエンス, [7]神薬大生命有機化, [8]立命大総科技研）

**Keita Sato**[1], Takahiro Yamashita[2], Hideyo Ohuchi[1], Atsuko Takeuchi[3], Hitoshi Gotoh[4], Katsuhiko Ono[4], Misao Mizuno[5], Yasuhisa Mizutani[5], Sayuri Tomonari[6], Kasumi Sakai[2], Yasushi Imamoto[2], Akimori Wada[7], Yoshinori Shichida[2,8] ([1]*Grad. Sch. of Med., Dent. and Pharm. Sci., Okayama Univ.*, [2]*Grad. Sch. of Sci., Kyoto Univ.*, [3]*Div. of Anal. Lab., Kobe Pharm. Univ.*, [4]*Dept. of Biol., Kyoto Pref. Univ. of Med.*, [5]*Graduate School of Science, Osaka University*, [6]*Inst. of Tech. and Sci., Tokushima Univ.*, [7]*Dept. of Org. Chem. for Life Sci., Kobe Pham. Univ.*, [8]*Res. Org. for Sci. and Tech., Ritsumeikan Univ.*)

10:15　佐藤　佑介　3Pos412

1YB1015 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.*)

10:30　Arno Germond　2O1400

1YB1030 Predicting gene expression of living cells from a label-free spectral imaging technique

**Arno Germond**[1], Vipin Kumar[1], Takaaki Horinouchi[1], Chikara Furusawa[1,2], Hideaki Fujita[1], Yuichi Taniguchi[1], Toshio Yanagida[1], Taro Ichimura[1], Tomonobu M. Watanabe[1] ([1]*RIKEN BDR*, [2]*Tokyo Univ.*)

10:45　島田　敦広　1M1448

1YB1045 チトクロム酸化酵素によるプロトンポンプは、酸素結合によって誘起されるタンパク質内構造変化によって厳密に制御されている

Structure changes induced by $O_2$-binding tightly regulate the proton-pumping of cytochrome c oxidase

○島田 敦広 [1], 久保 稔 [2], 馬場 清喜 [3], 吾郷 日出夫 [2], 月原 冨武 [4,5], 吉川 信也 [5]（[1]岐阜大・応生, [2]理研・SPring-8, [3]高輝度研, [4]阪大・蛋白研, [5]兵県大・生命理・ピコ研）

**Atsuhiro Shimada**[1], Minoru Kubo[2], Seiki Baba[3], Hideo Ago[2], Tomitake Tsukihara[4,5], Shinya Yoshikawa[5] ([1]*Fac. Appl. Biol. Sci., Gifu Univ.*, [2]*RIKEN, SPrng-8*, [3]*JASRI*, [4]*Inst. Protein Res., Osaka Univ.*, [5]*Picobiol. Inst., Grad. Sch. Life Sci., Univ. Hyogo*)

11:00　寺川　剛　1E1548

1YB1100　コンデンシン複合体は分子モーターである

The condensin complex is a mechanochemical molecular motor

○寺川 剛 [1,2], Bisht Shveta[3], Eeftens Jorine M.[4], Dekker Cees[4], Haering Christian H.[3], Greene Eric C.[2]（[1]京大・院理, [2]コロンビア大, [3]EMBL, [4]デルフト工科大）

**Tsuyoshi Terakawa**[1,2], Shveta Bisht[3], Jorine M. Eeftens[4], Cees Dekker[4], Christian H. Haering[3], Eric C. Greene[2] ([1]*Kyoto Univ.*, [2]*Columbia Univ.*, [3]*EMBL*, [4]*Delft Univ. of Technology*)

11:15　中西　温子　1Pos005

1YB1115　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*

○中西 温子 [1], 岸川 淳一 [1], 玉腰 雅忠 [2], 光岡 薫 [3], 横山 謙 [1]（[1]京産大・総合生命科学部, [2]東京薬科大・生命科学部, [3]大阪大・超高圧電顕センター）

**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.*)