

Workshop Program

●Day 1 June 20 (Tue.) 16:00–18:30 (tentative)

1WA

Theme	20 years anniversary since nucleosome structure was determined –what we have learned and what we have not yet 【Session Language: Japanese】
Organizers	Hitoshi Kurumizaka(Waseda Univ.), Hidetoshi Kono(QST)
Outline	It has been 20 years since the first atomic structure of nucleosome was determined. Nucleosome was considered to be just a structure, which accommodates genomic DNA in the nucleus. However, recent evidences strongly suggest that nucleosome positively regulates genomic DNA function. We will discuss the regulatory mechanism of genomic DNA based on chromatin structure and dynamics, which are highly influenced by variants and post-translational modifications of histones.
Speakers	Hidetoshi Kono(QST), Yoshifumi Nishimura(Yokohama City Univ.), Satoko Akashi(Yokohama City Univ.), Shoji Takada(Kyoto Univ.), Kiyoe Ura(Chiba Univ.), Hitoshi Kurumizaka(Waseda Univ.) Oral presentations will NOT be chosen from the posters

1WB

Theme	Structure, solution property and function of antibody drugs 1 –Development of biophysical characterization methods for enhanced properties– 【Session Language: Japanese】
Organizers	Susumu Uchiyama(Osaka Univ.), Shinya Honda(NAIST)
Outline	Antibody drug development requires total design including structure, solution property and function of antibody molecules. In this workshop, researches related to stabilization of antibody solution, mechanism of antibody aggregation, and new detection method for antibody structural change will be presented. How protein science contributes to development of high quality drug will be discussed.
Speakers	Susumu Uchiyama(Osaka Univ.), Mitsuhiro Sekiguchi(Astellas Pharma Inc.), Tomoya Kinumi(NAIST), Shinya Honda(NAIST), Seigo Oe(TOSOH Corp.) Several oral presentations will be chosen from the posters

1WC

Theme	Bottom-up design of functional artificial proteins in vitro and in vivo 【Session Language: English】
Organizers	Ryoichi Arai(Shinshu Univ.), Masahiro Kawahara(Univ. of Tokyo)
Outline	Recent developments in protein science and computational chemistry facilitate actually structural design of artificial proteins. For the future, rational design of functional artificial proteins in vitro and in vivo is very important issues. This workshop provides various hot topics for active discussions, such as de novo protein design, self-assembling artificial proteins, and functional chimeric proteins in cells.
Speakers	Ryoichi Arai(Shinshu Univ.), Nobuyasu Koga(CiMoS), Kam Y. J. Zhang(RIKEN), Ayae Sugawara–Narutaki(Nagoya Univ.), Keiji Nishida(Kobe Univ.), Masahiro Kawahara(Univ. of Tokyo) Several oral presentations will be chosen from the posters

1WD

Theme	Protein Science in Oxygen Sensing 【Session Language: Japanese】
Organizers	Norio Suzuki(Tohoku Univ.), Ken Itoh(Hirosaki Univ.)
Outline	A variety of “oxygen sensor proteins” play important roles in maintaining cellular homeostasis. In this workshop, we will discuss molecular mechanisms of oxygen sensing by sensor proteins and intracellular signaling pathways after oxygen sensing.
Speakers	Tatsuki Kurokawa(Kyoto Univ.), Takafumi Suzuki(Tohoku Univ.), Koh Nakayama(TMDU), Keisuke Wakasugi(Univ. of Tokyo) Several oral presentations will be chosen from the posters

1WE

Theme	Flexibility and function of proteins 【Session Language: English】
Organizers	Yasuhisa Mizutani(Osaka Univ.)
Outline	Proteins function by changing their three-dimensional structure. Sophisticated mechanisms are involved in proteins to excellently function in cells, of which environment is heterogeneous, condensed, and full of thermal noise. To clarify the mechanism, it is necessary to collaborate a variety of advanced approaches. In this workshop, we discuss flexibility of protein and the functioning mechanism produced by the flexibility, which have been clarified by cutting-edge works of theory, measurement and creation.
Speakers	Tahei Tahara(RIKEN), Akio Kitao(Univ. of Tokyo), Hideki Kandori(Nagoya Inst. of Tech.), Yasuhisa Mizutani(Osaka Univ.) Several oral presentations will be chosen from the posters

●Day 2 June 21 (Wed.) 16:00–18:30 (tentative)

2WA

Theme	Measurement techniques for visualizing 'live' protein molecules 【Session Language: English】
Organizers	Daisuke Kohda(Kyushu Univ.), Noritaka Nishida(Univ. of Tokyo)
Outline	Static, but accurate 3D protein structures have provided convenient explanations of the protein functions as biological functional elements. However, we still need to understand the more details of the dynamic aspects of protein structures in transient states under physiological conditions. In this workshop, we selected interesting research topics to discuss the developments and applications of new measurement techniques.
Speakers	Noritaka Nishida(Univ. of Tokyo), Masaki Okumura(Tohoku Univ.), Ryuji Igarashi(Kyoto Univ.), Tomohide Saio(Hokkaido Univ.) Several oral presentations will be chosen from the posters

2WB

Theme	Structure, solution property and function of antibody drugs 2 –Recent researches on activity and immunogenicity– 【Session Language: Japanese】
Organizers	Akiko Ishii-Watabe(NIHS), Kouhei Tsumoto(Univ. of Tokyo)
Outline	Antibody drug development requires total design including structure, solution property and function of antibody molecules. In this workshop, antibody researches such as aggregation-immunogenicity relationship, antigen-antibody complex in serum, development of anti-PD1 antibody will be presented. How protein science and immunology contributes to development of highly effective drug will be discussed.
Speakers	Kouhei Tsumoto(Univ. of Tokyo), Minoru Tada(NIHS), Shiro Shibayama(ONO Pharmaceutical Co., LTD.), Elena Krayukhina(Osaka Univ.), Takanori Aoki(DAIICHI SANKYO CO., LTD.) Several oral presentations will be chosen from the posters

2WC

Theme	Peptide structure and dynamics: from soluble to membrane-bound 【Session Language: Japanese】
Organizers	Minoru Sakurai(Tokyo Tech.), Izuru Kawamura(Yokohama National Univ.)
Outline	Physiologically active peptides, such as membrane-binding peptides which activates at cellular membrane, or soluble peptides in cells, are supporting the lives to maintain. The functions of peptides are tightly related to the dynamic structure. In this workshop, we introduce and discuss new research about molecular structural assessments of peptides including spectroscopic measurements and computational chemical assay.
Speakers	Minoru Sakurai(Tokyo Tech.), Hisakazu Mihara(Tokyo Tech.), Yoshiaki Yano(Kyoto Univ.), Kazumi Saikusa(Hiroshima Univ.), Izuru Kawamura(Yokohama National Univ.) Several oral presentations will be chosen from the posters

2WD

Theme	Nascent chains in charge of organelle homeostasis 【Session Language: English】
Organizers	Kenji Inaba(IMRAM), Yukio Fujiki(MiB, Kyusyu Univ.)
Outline	Cellular systems for protein quality control operate at the early stage of protein synthesis by ribosome. Pprotein targeting to its destined organelle is also regulated when it appears as a nascent polypeptide chain. In this workshop, all speakers present the latest topics of study on nascent chains in charge of organelle homeostasis and provide opportunities for active discussion.
Speakers	Yukio Fujiki(MiB, Kyusyu Univ.), Masaaki Koike(NAIST), Masao Sakaguchi(Univ. of Hyogo), Akiko K. Satoh(Hiroshima Univ.), Ryo Ushioda(Kyoto Sangyo Univ.), Kenji Inaba(IMRAM) Several oral presentations will be chosen from the posters

2WE

Theme	APPA/PS/PSSJ Joint Workshop – IPR Seminar: Toward International Cooperation in Protein Science 【Session Language: English】
Organizers	Hiroyuki Noji(Univ. of Tokyo), Hiroki Shirai(Astellas Pharma Co., Ltd.), Yuji Goto(Osaka Univ.)
Outline	The Asia Pacific Protein Association (APPA), founded in 2004, aims at advancing cooperation and collaboration in protein science among countries in the Asia Pacific region. The 2020 APPA Conference is likely to be held as a joint symposium with Protein Society. We discuss current status of protein science in APPA regions and future cooperation among APPA and with Protein Society.
Speakers	Yuji Goto(Osaka Univ), Zengyi Chang(Peking Univ.), James R. Ketudat-Cairns(Suranaree Univ. of Tech.), Raja Noor Zaliha Raja Abd. Rahman(Univ. Putra), Ping-Chiang Lyu(Univ. Hsin-Chu), Hiroyuki Noji(Univ. of Tokyo) Oral presentations will NOT be chosen from the posters

●Day 3 June 22 (Thu.) 8:30–11:00 (tentative)

3WB

Theme	Approaches toward innovative biological medicine from protein science 【Session Language: English】
Organizers	Yuji Ito(Kagoshima Univ.), Mitsuo Umetsu(Tohoku Univ.)
Outline	Rapid advance in the clinical use of biopharmaceuticals, mainly antibody therapeutics is remarkable in recent years. However, the studies on biopharmaceuticals have reached a maturity stage, and a breakthrough which can open the way to next generation's biopharmaceuticals is desired. In this forum, introducing the new technologies to support the development of novel protein/antibody therapeutics, we would discuss together to accelerate the speed of their development.
Speakers	Ryutaro Asano(Tokyo Univ. of Agr), Yuji Ito(Kagoshima Univ.), Mitsuo Umetsu(Tohoku Univ.), Tomoshi Kameda(AIST), Nobuaki Takahashi(Kyowa Hakko Kirin Co., Ltd.) Several oral presentations will be chosen from the posters

3WC

Theme	Recent progress and future in structural life science at SACLA 【Session Language: Japanese】
Organizers	Eriko Nango(RIKEN), Toru Nakatsu(Kyoto Univ.)
Outline	Intense, femtosecond X-ray pulses from X-ray free electron laser (XFEL) have enabled protein structure determination before the onset of radiation damage. Recently, it is capable of visualizing structural changes in protein by time-resolved crystallography using XFEL. We will discuss current protein structural science and future prospects with latest topics from SACLA.
Speakers	Kensuke Tono(JASRI), Atsuhiko Shimada(Univ. of Hyogo), Tetsuya Masuda(Kyoto Univ.), Minoru Kubo(RIKEN), Michi Suga(Okayama Univ.) Oral presentations will NOT be chosen from the posters

3WD

Theme	Structural Dynamics of Metals in Biology 【Session Language: English】
Organizers	Kohei Tsumoto(Univ. of Tokyo), Yoshitsugu Shiro(Univ. of Hyogo)
Outline	In this WS, we focus on some transition metals indispensable for all of lifes. To understand the molecular mechanism of their transport, storage, sensing, and function in biological system, we will discuss molecular structures and functions of related proteins on the basis of structural biological, biochemical, biological and theoretical studies.
Speakers	Shigetoshi Aono(IMS), Yoshiaki Furukawa(Keio Univ.), Koichiro Ishimori(Hokkaido Univ.), Yuji Sugita(RIKEN), Hiroshi Sugimoto(RIKEN), Masaki Horitani(Saga Univ.), Takashi Fujishiro(Saitama Univ.) Several oral presentations will be chosen from the posters

3WE

Theme	Integrative approach to Dynamical ordering of protein systems by using multi-probes 【Session Language: Japanese】
Organizers	Masaaki Sugiyama(KURRI), Hironari Kamikubo(NAIST)
Outline	Complex molecular systems comprised of various proteins respond to external stimulus from the environment, resulting in autonomous dissociation and association of the components. Molecular-based understanding of the dynamical ordering should require combined methods to characterize molecular complexes involved in the system. This workshop will focus on multilateral analysis to investigate the dynamical ordering.
Speakers	Takayuki Uchihashi(Kanazawa Univ.), Hiroyoshi Matsumura(Ritsumeikan Univ.), Eri Chatani(Kobe Univ.), Kentaro Ishii(OIB), Masaaki Sugiyama(KURRI), Hironari Kamikubo(NAIST) Oral presentations will NOT be chosen from the posters

●Day 3 June 22 (Thu.) 14:30–17:00 (tentative)

3WBp

Theme	Concert of theory and experiment in the protein science 【Session Language: Japanese】
Organizers	Takashi Yoshidome(Tohoku Univ.), Tomotaka Oroguchi(Keio Univ.)
Outline	Due to recent developments of theories, predictions and interpretations of experimental results have become possible using advanced theories. From the development, we believe that concert of theory and experiment should be inevitable for further development of the protein science. In this workshop, we introduce several recent studies of the concert, and discuss further development of concert.
Speakers	Toru Ekimoto(Yokohama City Univ.), Tomotaka Oroguchi(Keio Univ.), Osamu Miyashita(RIKEN), Satoshi Yasuda(Chiba Univ.), Takashi Yoshidome(Tohoku Univ.) Several oral presentations will be chosen from the posters

3WDP

Theme	Functional analysis of intrinsically disordered region and multi-subunit complex 【Session Language: Japanese】
Organizers	Masayuki Seki(TMPU), Masami Horikoshi(Tokyo Univ.)
Outline	Structure of protein reveals function of protein at the atomic level. Although structures of many multi-subunit complexes are solved, function of each subunit within the complexes often remains elusive. Function of intrinsically disordered region (IDR) of protein also remains elusive. In this workshop, we focus on the functional analyses of IDR and multi-subunit complex.
Speakers	Nobuo N. Noda(IMC), Kozo Tanaka(Tohoku Univ.), Motonori Ota(Nagoya Univ.), Masami Horikoshi(Univ. of Tokyo), Masayuki Seki(TMPU) Several oral presentations will be chosen from the posters

3WEp

Theme	Science of mobility-coupled functional molecular machines 【Session Language: English】
Organizers	Ryota Iino(NINS), Ken'ya Furuta(NICT)
Outline	Both biological and synthetic molecular machines have been intensively studied for a long time. However, they have been advanced independently, although both molecular machines have complementary advantages such as advanced functions and flexibility in designs. In this workshop, we will discuss how we can cooperate and merge these two highly relevant research fields.
Speakers	Ryota Iino(NINS), Ken'ya Furuta(NICT), Akihiko Nakamura(NINS), Kazushi Kinbara(Tokyo Tech.), Takahiro Kosugi(IMS), Takafumi Ueno(Tokyo Tech.) Several oral presentations will be chosen from the posters