

Program (Invited Lectures)

Day 1: July 22 (Mon)

8:00-9:00	Registration	
9:00-9:10	Opening Remarks	
9:10-9:40	Invited Lectures Chair: Takehiko Wada Tohoku University	L1-01 To B or not to B : The Watson-Crick world is not enough <u>Naoki Sugimoto</u> Frontier Institute for Biomolecular Engineering Research (FIBER) and Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University, Japan
9:40-10:10		L1-02 Design of Nucleotide Prodrugs for Antiviral Chemotherapy – the TriPPPro-Approach <u>Chris Meier</u> Organic Chemistry, Department of Chemistry, Faculty of Sciences, Universität Hamburg, Germany
10:10-10:30	Break	
10:30-11:00	Invited Lectures Chair: Toshihiro Ihara Kumamoto University	L1-03 Conformation, stability and kinetic control of non-canonical DNA structures by 2'F-ANA modification <u>Masad J. Damha</u> Department of Chemistry, McGill University, Canada
11:00-11:30		L1-04 Site-selective modification of mRNA and its effect on the translation <u>Shigeki Sasaki</u> Graduate School of Pharmaceutical Sciences, Kyushu University, Japan
11:30-12:00		L1-05 Gene Nanovector through Branch-PCR <u>Zhen Xi</u> Department of Chemical Biology, State Key Laboratory of Elemento-Organic Chemistry, National Engineering Research Center of Pesticide (Tianjin), College of Chemistry, Collaborative Innovation Center of Chemical Science and Engineering (Tianjin), Nankai University, China
12:00-12:10	Briefing	
12:10-13:30	Lunch Break	
13:30-14:30	Poster Session I (odd number)	
14:30-15:00	Invited Lectures Chair: Akimitsu Okamoto The University of Tokyo	L1-06 Formation propensity and potential biological roles of DNA G-hairpins <u>Lukas Trantirek</u> Central European Institute of Technology – Masaryk University, Czech Republic & Institute of Biophysics, Czech Academy of Sciences, Czech Republic
15:00-15:30		L1-07 Small Molecules targeting Repeat Sequences causing Neurological Disorders <u>Kazuhiko Nakatani</u> Department of Regulatory Bioorganic Chemistry, The Institute of Scientific and Industrial Research (SANKEN), Osaka University, Japan
15:30-16:00		L1-08 G-Quadruplex secondary structures and DNA dynamics <u>Shankar Balasubramanian</u> Department of Chemistry, University of Cambridge, UK

Day 2: July 23 (Tue)

8:30-9:00	Registration	
9:00-9:30	Invited Lectures Chair: Fumi Nagatsugi Tohoku University	L2-01 Chemical Biology of Nucleic Acids: DNA Origami and Artificial Genetic Switch <u>Hiroshi Sugiyama</u> Department of Chemistry, Graduate School of Science and Institute Integrated Cell-Material Sciences (iCeMS), Kyoto University, Japan
9:30-10:00		L2-02 Challenging reversible cross-linking of DNA with biological motors <u>Steven Rokita</u> Department of Chemistry, Johns Hopkins University, USA
10:00-10:30	Break	
10:30-11:30	Poster Session II (even number)	
11:30-14:00	Lunch Break and Individual Discussion	
14:00-14:30	Invited Lectures Chair: Shigeori Takenaka Kyushu Institute of Technology	L2-03 Oligonucleotide-based mimetic of growth factors: A new chemical tool to reveal the function of cell membrane receptors <u>Shinsuke Sando</u> Department of Chemistry and Biotechnology, Department of Bioengineering, Graduate School of Engineering, The University of Tokyo, Japan
14:30-15:00		L2-04 Conversion from two- to three-quartet G-quadruplex <u>Janez Plavec</u> Slovenian NMR center, National Institute of Chemistry and University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia
15:00-15:30	Break	
15:30-16:00	Invited Lectures Chair: Noriaki Minakawa Tokushima University	L2-05 Fluorescence Imaging Reagents Based on RNA Aptamers, Synthetic Polymers and Fluorogenic Cyanine Dyes <u>Bruce Armitage</u> Department of Chemistry and Center for Nucleic Acids Science and Technology, Carnegie Mellon University, USA
16:00-16:30		L2-06 History of the chemical synthesis of DNA and RNA in Japan <u>Mitsuo Sekine</u> Kankyo Resilience Co. Ltd, Japan
18:30-20:30	Exchange Meeting at Portopia Hotel	

Day 3: July 24 (Wed)

8:30-9:00	Registration	
9:00-9:30	Invited Lectures Chair: Masayuki Fujii Kindai University	L3-01 Vectorial self-assembly of RNA during transcription <u>Sarah Woodson</u> T. C. Jenkins Department of Biophysics, Johns Hopkins University, USA
9:30-10:00		L3-02 Expanding the RNP world in cells <u>Hirohide Saito</u> Center for iPS Cell Research and Application, Kyoto University, Japan
10:00-10:30		L3-03 Some Physico-Chemical Properties of Tetraplex DNA Important for Biological Function <u>Tigran V. Chalikian</u> Department of Pharmaceutical Sciences, Leslie Dan Faculty of Pharmacy, University of Toronto, Canada
10:30-11:00	Break	
11:00-11:30	Invited Lectures Chair: Takashi Morii Kyoto University	L3-04 Synthetic Oligonucleotide for Drug Discovery <u>Hiroshi Abe</u> Department of Chemistry, Graduate School of Science, Nagoya University, Japan
11:30-12:00		L3-05 Quadruplexes are everywhere... but where exactly? <u>Jean-Louis Mergny</u> Univ. Bordeaux, France
12:00-13:00	Lunch Break	
13:00-13:30	Invited Lectures Chair: Hiroyuki Asanuma Nagoya University	L3-06 Development of new molecular technologies for oligonucleotide therapeutics <u>Takeshi Wada</u> Department of Medicinal and Life Science, Faculty of Pharmaceutical Sciences, Tokyo University of Science, Japan
13:30-14:00		L3-07 Selection of XNA Backbone Motifs in Synthetic Biology <u>Piet Herdewijn</u> KU Leuven, Rega Institute for Medical Research, Medicinal Chemistry, Belgium
14:00-14:10	Closing Remarks	

List of Poster Presentations

Poster Presentations	Poster Session I	July 22 (Mon)	13:30-14:30
	Poster Session II	July 23 (Tue)	10:30-11:30

- P01 Design of Functional oligonucleotides with acyclic serinol derivatives**
Hiroyuki Asanuma, Keiji Murayama, Yukiko Kamiya, Hiromu Kashida
Nagoya University
- P02 Intercalation-directed click reaction in DNA**
Masayuki Tera^{1,2}, Nathan Luedtke¹
(1) University of Zurich, (2) Tokyo University of Agriculture and Technology
- P03 Synthesis and properties of parallel and antiparallel triplex-forming oligonucleotides containing 2-aminoquinoline derivatives**
Shuhei Nishizawa¹, Masahiro Tsukamoto¹, Akihiro Ohkubo^{1,2}
(1) Tokyo institute of technology, (2) CREST, Japan Science and Technology Agency (JST)
- P04 Inhibition of Self-duplex Formation by Using Methyl-adducted PNA**
Masaki Hibino, Yuichiro Aiba, Osami Shoji
Nagoya University
- P05 Synthesis and Properties of Oligonucleotides Containing 2',4'-Methyleneoxy-Bridged Thymidine Derivatives**
Yoshiyuki Hari¹, Han Kim¹, Misa Shoji¹, Takashi Osawa,^{1,2} Masakazu Dohi², Yuta Ito¹, Satoshi Obika²
(1) Tokushima Bunri University, (2) Osaka University
- P06 Synthesis and properties of oligonucleotides containing 6'S-methyl-2'-O,4'-C-ethylene-bridged 5-methyluridine**
Yuta Ito, Norika Tsutsui, Takashi Osawa, Yoshiyuki Hari
Tokushima Bunri University
- P07 Synthesis of Anti-viral Selenium Modified Nucleoside Analogues**
Daichi Fushihara¹, Yushi Nimi¹, Hideo Katakura¹, Tetsuro Suzuki², Tsutomu Murakami³, Eichi Kodama⁴, Yasuaki Kimura¹, Hiroshi Abe¹
(1) Nagoya University, (2) Hamamatsu University, (3) National Institute of Infectious Diseases, (4) Tohoku University
- P08 Design and synthesis of the pseudo-dC derivatives for the formation of an antiparallel type of triplex DNA**
Yosuke Taniguchi, Lei Wang, Hidenori Okamura, Shigeki Sasaki
Kyushu University

- P09 Exploring the Messenger RNA Capping Code: CleanCap Co-transcriptional Capping Allows Synthesis of Cap 0, Cap 1, Cap 2 and m⁶A_m Capped RNAs**
Chunping Xu¹, Jordana Henderson¹, Alexandre Lebedev¹, Jared Davis², Patty Limphong², Kiyoshi Tachikawa², Christy Esau², Richard Hogrefe¹, Mike Houston¹, Samie Jaffrey³
(1) Trilink Biotechnologies, (2) Arcturus Therapeutics, (3) Cornell University
- P10 Synthesis and characterization of RNAs containing (R)- and (S)-5'-C-aminopropyl-2'-O-methyluridines**
Ryusei Kajino, Yusuke Maeda, Yoshihito Ueno
Gifu University
- P11 Design of siRNA and anti-miRNA oligonucleotide by using acyclic nucleic acid**
Yukiko Kamiya, Fuminori Satoh, Jumpei Ariyoshi, Hiroshi Kamimoto, Yuka Donoshita, Keiji Murayama, Hiroyuki Asanuma
Nagoya University
- P12 Catalytic 1D-oligomers of a group IC1 ribozyme whose assembly is controlled by its module-module interface**
Ryusei Tsuruga¹, Narumi Uehara², Yuki Suzuki³, Hiroyuki Furuta², Hiroshi Sugiyama³, Masayuki Endo³, Shigeyoshi Matsumura¹, Yoshiya Ikawa¹
(1) University of Toyama, (2) Kyushu University, (3) Kyoto University
- P13 Gene regulation by aggregates consisted of BODIPY-labeled oligonucleotides**
Kazuhito Tanabe, Ryohsuke Kurihara, Wataru Asahi
Aoyama Gakuin University
- P14 Development of the alkylation reactions to the higher-ordered structures of nucleic acids**
Kazumitsu Onizuka, Madoka E. Hazemi, Norihiro Sato, Gen-ichiro Tsuji, Shunya Ishikawa, Fumi Nagatsugi
Tohoku University
- P15 Cyclic naphthalene diimide derivatives as a novel group of tetraplex DNA ligand**
Tingting Zou^{1,2}, Ryusuke Takeuchi¹, Shinobu Sato^{1,2}, Shigeori Takenaka^{1,2}
(1) Department of Applied Chemistry, Kyushu Institute of Technology, (2) Research Center for Bio-microsensing Technology, Kyushu Institute of Technology
- P16 Construction, Characterization and Application of Histidine-modified G-quadruplex**
Soyoung Park¹, Koyuki Fukumoto¹, Hiroshi Sugiyama^{1,2}
(1) Kyoto University, (2) iCeMs
- P17 Heme-DNAzyme**
Yasuhiko Yamamoto¹, Ryosuke Shinomiya¹, Haruna Araki¹, Tomokazu Shibata¹, Atsuya Momotake¹, Sachiko Yanagisawa², Takashi Ogura², Akihiro Suzuki³, Saburo Neya⁴, Hikaru Hemmi⁵
(1) University of Tsukuba, (2) University of Hyogo, (3) National Institute of Technology, Nagaoka College, (4) Chiba University, (5) Food Research Institute, NARO

- P18 Kinetic analysis of the inhibitory effect of BzDANP on Dicer cleavage of pre-miR-136**
Asako Murata¹⁾, Takahiro Otabe¹⁾, Konami Nagano²⁾, Gota Kawai²⁾, Ayako Sugai¹⁾, Kazuhiko Nakatani¹⁾
(1) Osaka University, (2) Chiba Institute of Technology,
- P19 Regulation of RNA cleaving activity of hammerhead ribozyme by a synthetic RNA binding molecule**
Chikara Dohno, Maki Kimura, Kazuhiko Nakatani
The Institute of Scientific and Industrial Research, Osaka University
- P20 Linear type hexaoxazole as a G-quadruplex ligand for selective anti-parallel topology**
Shogo Sasaki¹⁾, Yue Ma¹⁾, Hong-Liang Bao²⁾, Takumi Ishizuka²⁾, Yan Xu²⁾, Takatsugu Hirokawa³⁾, Kazuo Nagasawa¹⁾
(1) Tokyo University of Agriculture and Technology, (2) University of Miyazaki, (3) National Institute of Advanced Industrial Science and Technology
- P21 Effective Sequence-selective Recognition of Double-stranded DNA via Invasion Complex Formation by Peptide Nucleic Acids**
Yuichiro Aiba, Masanari Shibata, Masaki Hibino, Osami Shoji
Nagoya University
- P22 Exploration of DNA structure and interactions under native conditions using in-cell NMR spectroscopy**
Silvie Foldynova-Trantirkova^{1,2)}, Michaela Krafcikova^{1,2)}, Simon Dzatko¹⁾, Pavlina Viskova¹⁾, Anton Granzhan^{3,4)}, Coralie Caron^{3,4)}, Marie-Paule Teulade-Fichou^{3,4)}, Robert Hansel-Hertsch⁵⁾, Jean-Louis Mergny^{2,6)}, Lukas Trantirek¹⁾
(1) Central European Institute of Technology, (2) Institute of Biophysics CAS, (3) Institut Curie, (4) Universite Paris Sud/Universite Paris Saclay, (5) University of Cambridge, (6) Institut Europeen de Chimie et Biologie/University Bordeaux
- P23 A new insight into the mode of binding of a potent antitumor agent, triazoloacridinone C-1305, to dsDNA**
Jakub Grynda¹⁾, Tomasz Laskowski¹⁾, Witold Andralojc²⁾, Zofia Gdaniec²⁾, Jan Mazerski¹⁾
(1) Faculty of Chemistry, Gdańsk University of Technology, (2) Instytut of Bioorganic Chemistry, Polish Academy of Science
- P24 The effect of interactions between dipeptide repeats and r(GGGGCC)₃GGG of RNA G-quadruplexes using molecular dynamics simulation**
Tatsuya Ohyama¹⁾, Hisae Tateishi-Karimata¹⁾, Shigenori Tanaka²⁾, Naoki Sugimoto^{1,3)}
(1) FIBER, Konan University, (2) Kobe University, (3) FIRST, Konan University
- P25 Cu(II)-induced Stabilization and Destabilization of DNA Duplexes Containing 5-Carboxyuracil Nucleobases**
Yusuke Takezawa, Akira Suzuki, Manabu Nakaya, Kotaro Nishiyama, Mitsuhiko Shionoya
The University of Tokyo

- P26 Highly selective detection of ATP and ADP by using fluorescent ribonucleopeptide sensors**
Shun Nakano, Musashi Shimizu, Huyen Dinh, Takashi Morii
Kyoto University, IAE
- P27 DNA Photo-cross-linking of GCN4 Peptide Containing L-3-cyanovinylcarbazole Amino Acid to Duplex DNA**
Zhiyong Qiu, Shigetaka Nakamura, Kenzo Fujimoto
Japan Advanced Institute of Science and Technology
- P28 Photochemical Inhibition of GFP Protein Expression by Ultrafast RNA Photo-cross-linking in GFP-HeLa Cell**
Yasuha Watanabe, Shigetaka Nakamura, Kenzo Fujimoto
Japan Advanced Institute of Science and Technology
- P29 The methylation effect for binding of dimeric 2-amino-1,8-naphthyridine derivatives to CGG/CGG triad in DNA**
Takeshi Yamada, Shuhei Sakurabayashi, Kazuhiko Nakatani
Osaka University
- P30 Effect of Surrounding Environment of Target Cytosine in Pinpoint RNA Editing Using RNA Photo-cross-linking**
Kenzo Fujimoto, Nozomi Honda, Siddhant Sethi, Shigetaka Nakamura
Japan Advanced Institute of Science and Technology
- P31 Rolling circle translation of chemically synthesized circular RNA**
Kosuke Nakamoto, Naoko Abe, Hiroshi Abe
Nagoya University
- P32 Guide RNA for site-directed A-to-I RNA editing utilizing the activity of hADAR**
Kanako Nose, Kota Hidaka, Yohei Tomita, Masatora Fukuda
Fukuoka University
- P33 Tolerance of N²-heteroaryl modifications on guanine bases in G-quadruplex structure**
Yoshiaki Masaki, Takeshi Inde, Atsuya Maruyama, Kohji Seio
Tokyo Institute of Technology
- P34 Facile post-synthetic functionalization of 3' terminus of DNA with alkyne and thiol**
Junpei Yamamoto, Tatsuya Yajima, Yuma Terai, Shigenori Iwai
Osaka University
- P35 Split and Non-split DNazymes Containing a Cu(II)-mediated Artificial Base Pair: Metal-dependent Regulation of the RNA-cleaving Activity**
Takahiro Nakama, Yusuke Takezawa, Mitsuhiko Shionoya
The University of Tokyo

- P36 Enhanced DNA repair activity of DNA photolyase by artificial light-harvesting chromophore**
Yuma Terai, Risa Matsumura, Junpei Yamamoto, Shigenori Iwai
Osaka University
- P37 Photochemistry of psoralen-conjugated oligonucleotides targeting double-stranded DNA with epigenetic modifications**
Asako Yamayoshi^{1,2}, Chitose Hida¹, Juki Nakao¹, Tsuyoshi Yamamoto¹, Takehiko Wada³, Kazuhiko Nakatani⁴
(1) Nagasaki University, (2) JST/PRESTO, (3) Tohoku University, (4) Osaka University
- P38 Stabilization of Noncanonical DNA Structures in the Presence of Bulky Cations**
Shu-ichi Nakano¹, Masao Horita¹, Kazuya Tanabe¹, Ryuta Morimoto¹, Naoki Sugimoto^{1,2}
(1) FIRST, Konan University, (2) FIBER, Konan University
- P39 Prediction of DNA duplex stability in cell-mimicking crowded environment using nearest-neighbor model**
Saptarshi Ghosh¹, Shuntaro Takahashi¹, Tamaki Endoh¹, Hisae Tateishi-Karimata¹, Naoki Sugimoto^{1,2}
(1) FIBER, Konan University, (2) FIRST, Konan University
- P40 Development of prediction method for the stability of RNA/DNA hybrid duplex under a physiological buffer condition**
Dipanwita Banerjee¹, Hisae Tateishi-Karimata¹, Tamaki Endoh¹, Shuntaro Takahashi¹, Naoki Sugimoto^{1,2}
(1) FIBER, Konan University, (2) FIRST, Konan University
- P41 Syntheses and properties of reducing environment responsive prodrug-type oligonucleotides bearing cyclic and linear disulfide moieties**
Junsuke Hayashi, Ryohei Funaki, Norihito Sugimoto, Yosuke Ochi, Shun-ichi Wada, Hidehito Urata
Osaka University of Pharmaceutical Sciences
- P42 Fluorescent Nucleic Acid Probes Possessing Stacked Cyanine Dye Chromophores**
Tadao Takada, Koma Nishida, Aoi Nakano, Mitsunobu Nakamura, Kazushige Yamana
University of Hyogo
- P43 Base flip-inducing oligo DNA and photo-crosslinking**
Kazumitsu Onizuka, Kei Ishida, Eriko Mano, Fumi Nagatsugi
Tohoku University
- P44 Remarkable Enhancement of RNaseH Cleavage Activities of RNA Complexed with Peptide Ribonucleic Acid (PRNA)**
Takehiko Wada¹, Masahito Inagaki¹, Akira Yano¹, Seiya Ishizawa¹, Hiroka Sugai¹, Yasuyuki Araki¹, Masaki Nishijima¹, Satoru Ishibashi², Asako Yamayoshi³, Kazuhiko Nakatani⁴
(1) Tohoku University, (2) Tokyo Medical and Dental University, (3) Nagasaki University, (4) Osaka University

- P45 High-throughput screening of genomic G-quadruplex selective ligands**
Kaho Nagano¹, Shino Kinugasa¹, Shinya Hagihara², Ayato Sato³, Keiko Kawauchi¹, Hisae Tateishi⁴, Naoki Sugimoto^{1,4}, Daisuke Miyoshi¹
(1) FIRST, Konan University, (2) RIKEN, (3) Nagoya University, (4) FIBER, Konan University,
- P46 Recovery of damaged DNA G-quadruplex by a ligand-conjugated guanine tract**
Shuntaro Takahashi¹, Byeang Hyeon Kim², Dmitry Stetsenko³, Janez Plavec⁴, Naoki Sugimoto^{1,5}
(1) FIBER, Konan University, (2) POSTECH, (3) Siberian Branch of the Russian Academy of Sciences, (4) Slovenian NMR Centre, (5) FIRST, Konan University
- P47 Investigation of DNA Quadruplex-Duplex Hybrids and Its Application to Asymmetric Synthesis**
Ji Hye Yum¹, Soyoung Park¹, Hiroshi Sugiyama^{1,2}
(1) Kyoto University, (2) Institute for Integrated Cell-Material Sciences, Kyoto University
- P48 In-cell ¹⁹F NMR: Telomere DNA G-quadruplex structures in living human cells**
Hong-Liang Bao, Takumi Ishizuka, Yan Xu
Division of Chemistry, Department of Medical Sciences, Faculty of Medicine, University of Miyazaki
- P49 Conformational dynamics of RNA G-quadruplex affects protein expression in Escherichia coli**
Tamaki Endoh¹, Naoki Sugimoto^{1,2}
(1) FIBER, Konan University, (2) FIRST, Konan University
- P50 Phase separation of repeated RNA with peptides in neurodegenerative diseases is promoted by RNA G-quadruplexes**
Hisae Tateishi-Karimata¹, Ye Teng¹, Tatsuya Ohyama¹, Shigenori Tanaka², Naoki Sugimoto^{1,3}
(1) FIBER, Konan University, (2) Kobe University, (3) FIRST, Konan University
- P51 Development of convenient genotyping of HR-HPV using sensitive fluorescence DNA probes**
Yusuke Irie, Kazuo Shinozuka, Tomohisa Moriguchi
Gunma University
- P52 Facile mutation analysis of viral RNA genomes using a signal amplification by ternary initiation complexes**
Masayasu Kuwahara¹, Hiroto Fujita¹, Yasuyo Kashiwagi², Hisashi Kawashima²
(1) Nihon University, (2) Tokyo Medical University
- P53 RNA fluorescence In situ hybridization using photo-cross-linkable beacon probes targeted to 16S rRNA in E. coli**
Shigetaka Nakamura, Misaki Hashimoto, Chinami Kano, Kenzo Fujimoto
Japan Advanced Institute of Science and Technology
- P54 G-quartet recognition based on ferrocenylnaphthalene diimide derivatives**
Shigeori Takenaka, Shinobu Sato
Kyushu Institute of Technology

- P55 DNA Quadruplex Hydrogels Prepared by Liquid-Phase Large Scale DNA Synthesis**
Akinori Kuzuya
Kansai University
- P56 Single-Molecule Monitoring of Molecular Beacon Type Probe by Controlling the Fluorescence Blinking**
Kiyohiko Kawai¹, Naohiko Shimada², Atsushi Maruyama²
(1) Osaka University, (2) Tokyo Institute of Technology
- P57 Highly sensitive and selective mercury sensor based on mismatched base pairing with dioxT**
Ji Hoon Han¹, Shingo Hirashima¹, Soyoung Park¹, Hiroshi Sugiyama^{1,2}
(1) Kyoto University, (2) Institute of Integrated Cell-Material Science (iCeMS)
- P58 Thermoresponsive polyion complex micelles for systemic delivery of antisense oligonucleotides**
Beob Soo Kim¹, Shigehito Osawa², Kazunori Kataoka^{1,2}, Kanjiro Miyata¹
(1) The University of Tokyo, (2) Innovation Center of NanoMedicine (iCONM)
- P59 Cumulative deformation of a linear DNA origami nanoarm comprising tension-adjustable modules**
Yuki Suzuki, Kohei Mizuno, Ibuki Kawamata, Satoshi Murata
Tohoku University
- P60 Characterization of DNA origami nanospace using G-quadruplex and i-motif structure**
Masayuki Endo¹, Sagun Jonchhe², Shankar Pandey², Tomoko Emura¹, Kumi Hidaka¹, Hiroshi Sugiyama¹, Hanbin Mao²
(1) Kyoto University, (2) Kent State University
- P61 Stabilization of chemically-modified siRNAs using cationic oligodiaminogalactose (ODAGal)**
Kazuki Sato¹, Atsushi Irie², Rintaro Hara^{1,3}, Takeshi Wada¹, Futoshi Shibasaki²
(1) Tokyo University of Science, (2) Tokyo Metropolitan Institute of Medical Science, (3) Tokyo Medical and Dental University
- P62 Synthesis and biological evaluation of cyclic dinucleotide analogs**
Noriko Saito-Tarashima, Yusuke Kumanomido, Mao Kinoshita, Kazuto Shiraishi, Kazuhiro Furukawa, Noriaki Minakawa
Tokushima University
- P63 Cooperative DNA recognizing system assisted by orthogonal γ PNA dimerization domains**
Zutao Yu^{1,2}, Danith H. Ly³, Hiroshi Sugiyama^{1,2}
(1) Graduate school of science, Kyoto University, (2) Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University, (3) Department of Chemistry, Carnegie Mellon University

- P64 Synthetic gene switches to regulate liver cell differentiation**
Soumya Sethi¹, Minh Nguyen Tuyet Le², Kouichi Hasegawa², Ganesh Pandian Namasivayam², Hiroshi Sugiyama¹
(1) Graduate School of Science ,Kyoto University, (2) iCEMS , Kyoto University
- P65 Disruption of the Alzheimer's disease-related complex between prion and amyloid β by an anti-prion aptamer**
Tsukasa Mashima¹, Mamiko Iida¹, Yudai Yamaoki¹, Masatomo So², Takashi Nagata¹, Masato Katahira¹
(1) Institute of Advanced Energy, Kyoto University, (2) Institute for Protein Research, Osaka University
- P66 Development of a novel nucleic acid medicine by staple oligomer**
Yousuke Katsuda¹, Shin-ichi Sato², Takuto Kamura¹, Maimi Inoue¹, Yusuke Kitamura¹, Masaki Hagihara³, Toshihiro Ihara¹
(1) Kumamoto University, (2) Kyoto University, (3) Hirosaki University
- P67 Automatic design of synthetic RNA devices using deep generative models**
Shunsuke Sumi^{1,2}, Kaoru R. Komatsu^{1,2}, Shunsuke Wada^{1,2}, Hirohide Saito^{1,2}
(1) Kyoto University, (2) Center for iPS Cell Research and Application
- P68 RNA binding small molecule that mitigates disease phenotype in spinocerebellar ataxia type 31**
Tomonori Shibata¹, Konami Nagano², Morio Ueyama³, Yoshitaka Nagai³, Kinya Ishikawa⁴, Gota Kawai², Kazuhiko Nakatani¹
(1) The Institute of Scientific and Industrial Research (ISIR), Osaka University, (2) Department of Life and Environmental Sciences, Faculty of Engineering, Chiba Institute of Technology, (3) Department of Neurotherapeutics, Osaka University Graduate School of Medicine, (4) Center for Personalized Medicine for Healthy Aging, Tokyo Medical and Dental University