

List of Poster Presentations on Day 1 (October 29(Tue))

Poster Presentations Odd Numbers: October 29(Tue) 13:35 - 14:20
Even Numbers: October 29(Tue) 14:20 - 15:05

- 1P-01 Structural study of the kink-turn motif**
Miki Nagashima¹, Jiro Kondo^{2*}
¹Graduate School of Science and Technology, Sophia University, Tokyo, Japan, ²Department of Materials and Life Sciences, Sophia University, Tokyo, Japan
- 1P-02 Selection and characterization of aptamers against fibroblast growth factor (FGF) 5**
Minami Saso¹, Ryo Amano¹, Masato Namekata², Masataka Horiuchi³, Takuya Yanagisawa¹, Kakeru Nishimoto¹, Yoichiro Tanaka⁴, Farhana Ishrat Ghani², Masakuni Yamamoto², Taiichi Sakamoto^{1*}
¹Dept. of Life and Env. Sci., Chiba Inst. Tech., ²Advangen Inc., ³Fac. Pharm., Health Sci. Univ. Hokkaido, ⁴Inst. Anal. Center, Yokohama Natl. Univ.
- 1P-03 A novel ring transformation of uracils to 2-oxazolidinones and 2-imidazolidinones**
Yoshiaki Kitamura^{1,2*}, Yuki Nagaya³, Asuki Ohguchi¹, Daiki Kato¹, Yuto Ohshima², Yukio Kitade^{1,4}, Hiroshi Katagiri⁵, Masato Ikeda^{1,2,3}
¹Faculty of Engineering, Gifu University, ²Graduate School of Natural Science and Technology, Gifu University, ³United Graduate School of Drug Discovery and Medical Information Sciences, Gifu University, ⁴Faculty of Engineering, Aichi Institute of Technology, ⁵Graduate School of Science and Engineering, Yamagata University
- 1P-04 Rational design of the silylated pyrene derivatives for the development of sensitive oligonucleotide probes**
Satomi Hida, Kaoruko Sasaki, Kazuki Tokita, Kazuo Shinozuka, Tomohisa Moriguchi*
Division of Molecular Science, Graduate School of Science and Technology, Gunma University
- 1P-05 Enhancement of 8-17 Allosteric DNzyme Activity by Cationic Copolymer for Nucleotides Detection**
Krittika Rudeejaroonrung, Naohiko Shimada, Atsushi Maruyama*
Department of Life Science and Technology, Tokyo Institute of Technology
- 1P-06 Topology-based DNA quadruplex sensors for characterization of intracellular crowding environments**
Shuntaro Takahashi¹, Johtaro Yamamoto^{2,3}, Akira Kitamura³, Masataka Kinjo³, Naoki Sugimoto^{1,4*}
¹Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, ²Advanced Industrial Science and Technology (AIST), ³Faculty of Advanced Life Science, Hokkaido University, ⁴Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
- 1P-07 Metabolic function imaging by utilizing molecular beacon to visualize cell stemness**
Yuki Murata, Jun-ichiro Jo and Yasuhiko Tabata*
Laboratory of Biomaterials, Institute for Frontier Life and Medical Sciences, Kyoto University

- 1P-08 Effect of RNA topology on phase separation of peptides and proteins in neurodegenerative diseases**
Hisae Tateishi-Karimata¹, Ye Teng^{1,2}, Tatsuya Ohyama¹, Shigenori Tanaka³, Eri Chatani⁴, Naoki Sugimoto^{1,5*}
¹Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, ²Changchun University of Chinese Medicine, School of Pharmacy, ³Department of Computational Science, Graduate School of System Informatics, Kobe University, ⁴Department of Chemistry, Graduate School of Science, Kobe University, ⁵Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
- 1P-09 Novel Structures of modified oligonucleotides and oligonucleotide-metal complexes**
Akira Ono^{1*}, Takahiro Atsugi¹, Hikari Ito¹, Misato Goto¹, Hisao Saneyoshi¹, Jiro Kondo²
¹Department of Materials & Life Chemistry, Faculty of Engineering, Kanagawa University, ²Department of Materials and Life Sciences, Faculty of Science and Technology, Sophia University
- 1P-10 Development of photochemical DNA and GCN4 peptide conjugation mediated by 3-cyanovinylcarbazole amino acid**
Zhiyong Qiu, Shigetaka Nakamura, Kenzo Fujimoto*
Department of Advanced Science and Technology, Japan Advanced Institute of Science and Technology
- 1P-11 Screening of transcriptomic RNAs that interact with thioflavin T derivative**
Tamaki Endoh¹, Masayasu Kuwahara², Yuka Kataoka², Naoki Sugimoto^{1,3*}
¹Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, ²Graduate School of Integrated Basic Sciences, Nihon University, ³Graduate school of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
- 1P-12 Topological structure evaluation of G-quadruplexes using high-throughput CD system**
Satoko Suzuki^{1*}, Kaori Tsukakoshi^{2*}, Taiji Oyama¹, Yasuo Horiguchi¹, Koushi Nagamori¹ and Kazunori Ikebukuro^{2*}
¹JASCO Corporation, ²Tokyo University of Agriculture and Technology
- 1P-13 DNA Quadruplex-Duplex Hybrids as Bimolecular Scaffolds for Asymmetric Catalysis**
Ji Hye Yum¹, Soyoung Park^{1*}, Hiroshi Sugiyama^{1,2*}
¹Department of Chemistry, Graduate School of Science, Kyoto University, ²Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University
- 1P-14 Synthesis and higher structure formation of modified oligonucleotides**
Masaya Inoshita, Risa Ikeda, Akira Ono*
Department of Materials & Life Chemistry, Faculty of Engineering, Kanagawa University
- 1P-15 Preparations of modified oligonucleotides with mirror image helical structures.**
Hiroyuki Fujita, Naoki Fushimi, Akira Ono*
Department of Materials & Life Chemistry, Faculty of Engineering, Kanagawa University

- 1P-16 Properties of reducing environment-responsive prodrug-type phosphate-modified oligonucleotides for development of oligonucleotide therapeutics**
Junsuke Hayashi, Ryohei Funaki, Norihito Sugimoto, Yosuke Ochi, Shun-ichi Wada, Hidehito Urata*
Department of Bioorganic Chemistry, Osaka University of Pharmaceutical Sciences
- 1P-17 Nanopore decoding for Adleman's approach to NP-complete problems based on DNA computing**
Sotaro Takiguchi, Nanami Takeuchi, Ryuji Kawano*
Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology (TUAT)
- 1P-18 Development of FRET System Using Fluorescent Thymine and Cytosine Analogues**
Shingo Hirashima¹, Ji Hoon Han¹, Soyoung Park^{1*}, Hiroshi Sugiyama^{1,2*}
¹Department of Chemistry, Graduate School of Science, Kyoto University, ²Institute for Integrated Cell-Material Science (iCeMS), Kyoto University
- 1P-19 Construction, Characterization, and Application of Histidine-modified G-quadruplex**
Koyuki Fukumoto¹, Soyoung Park^{1*}, Hiroshi Sugiyama^{1,2*}
¹Department of Chemistry, Graduate School of Science, Kyoto University, ²Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University,
- 1P-20 Development of thiol sensitive protecting groups for amino functions in nucleotides**
Tomonori Mikami, Takayuki Ota, Akira Ono*
Department of Materials & Life Chemistry, Faculty of Engineering, Kanagawa University
- 1P-21 Construction and analysis of catalytic RNA nanostructures composed of dimeric splicing ribozymes**
Junya Akaqi¹, Ryuji Kiyooka¹, Hiroshi Sugiyama^{2,3}, Masayuki Endo³, Shigeyoshi Matsumura¹, Yoshiya Ikawa^{1*}
¹Department of Chemistry, Graduate School of Science and Engineering, University of Toyama, ²Department of Chemistry, Graduate School of Science, Kyoto University, ³Institute for Integrated Cell-Material Science(iCeMS), Kyoto University
- 1P-22 Control of Receptor Dimerization States Using a DNA Aptamer**
Akihiro Eguchi¹, Ayaka Utsumi¹, Satoru Nagatoishi^{2,3}, Kouhei Tsumoto^{1,2,3}, Ryosuke Ueki^{1*}, Shinsuke Sando^{1,2*}
¹Department of Chemistry & Biotechnology, Graduate School of Engineering, The University of Tokyo, ²Department of Bioengineering, Graduate School of Engineering, The University of Tokyo, ³The Institute of Medical Science, The University of Tokyo
- 1P-23 Fluorescence imaging in cell and *in vivo* by bioorthogonal reaction**
Takumi Ishizuka¹, Hong-Shan Liu¹, Makiko Kawaguchi², Ryuichi Nishii³, Hiroaki Kataoka², Yan Xu^{1*}
¹Division of Chemistry, Department of Medical Sciences and ²Section of Oncopathology and Regenerative Biology, Department of Pathology, Faculty of Medicine, University of Miyazaki, ³Department of Molecular Imaging and Theranostics, National Institute of Radiological Sciences (NIRS), National Institutes for Quantum and Radiological Science and Technology(QST)

- 1P-24 Metal-mediated Structure Conversion and Self-sorting of Bipyridine-modified DNA Three-way Junctions**
Yusuke Takezawa, Shiori Sakakibara, Daisuke Kanemaru, Mitsuhiko Shionoya*
Department of Chemistry, Graduate School of Science, The University of Tokyo
- 1P-25 Development of a reduction cleavable linker for solid-phase synthesis**
Kazuma Terasawa¹, Akira Ono^{1*}, Hisao Saneyoshi^{2*}
¹Department of Material and Life Chemistry, Faculty of Engineering, Kanagawa University,
²Department of Chemistry, Shiga University of Medical Science
- 1P-26 Evaluation of the effect of CpG methylation on i-motif structure located in the CpG islands**
Daiki Oshikawa¹, Kaori Tsukakoshi², Kazunori Ikebukuro²
¹Department of Management of Technology, Graduate School of Engineering, Tokyo University of Agriculture and Technology, ²Department of Biotechnology and Life Science, Graduate School of Engineering, Tokyo University of Agriculture and Technology
- 1P-27 Preparation of metal-DNA wires containing metallo-base pairs**
Takahiro Atsugi, Akira Ono*
Department of Material and Life chemistry, Faculty of Engineering, Kanagawa University
- 1P-28 Investigation into DNA Binding Orientation of Cyclic Pyrrole-Imidazole Polyamides**
Yuki Hirose¹, Sefan Asamitsu², Toshikazu Bando^{1*}, Hiroshi Sugiyama^{1,3*}
¹Department of Chemistry, Graduate School of Science, Kyoto University, ²Department of Genomic Neurology, Institute of Molecular Embryology and Genetics, Kumamoto University, ³Institute for Integrated Cell-Material Science (WPI-iCeMS), Kyoto University
- 1P-29 Direct delivery of Cas9-sgRNA ribonucleoproteins into cells using a nanoneedle array**
Ayana Yamagishi¹, Mone Morikawa², Yoshio Kato¹, Chikashi Nakamura^{1,2*}
¹Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), ²Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology
- 1P-30 Visualization of G-quadruplex in Living Cells based on *in situ* Click reaction**
Mizuho Yasuda¹, Yue Ma², Sachiko Okabe³, Young-Tae Chang⁴, Hiroyuki Seimiya³, Kazuo Nagasawa^{1*}
¹Graduate School of Engineering, Tokyo University of Agriculture and Technology, ²Institute of Global Innovation Research, Tokyo University of Agriculture and Technology, ³Cancer Chemotherapy Center Japanese Foundation for Cancer Research, ⁴Pohang University of Science and Technology
- 1P-31 The effect of an acetylamino group at the 5'-end of the guide strand of an siRNA on RNAi activity**
Reiko Iwase^{1,2*}, Ryotaro Sakai², Takuya Nishizawa², Tsuyohito Maekawa¹
¹Graduate School of Science & Engineering, Teikyo University of Science, ²Faculty of Life & Environmental Sciences, Teikyo University of Science

- 1P-32 Approach to determination of G-quadruplex structure on the Nucleosome Structure using thdG-tC FRET pair**
Ji Hoon Han¹, Soyoung Park^{1*} and Hiroshi Sugiyama^{1,2*}
¹Department of Chemistry, Graduate School of Science, Kyoto University, ²Institute of Integrated Cell-Material Science (iCeMS), Kyoto University
- 1P-33 Complexes between G-quadruplex DNA and Phthalocyanines**
Mami Uchiyama¹, Tomokazu Shibata¹, Atsuya Momotake¹, Takahisa Ikeue² and Yasuhiko Yamamoto^{1*}
¹Dept. of Chem., Univ. of Tsukuba, ²Grad. Sch. of Sci. Eng., Shimane Univ.
- 1P-34 Effects of cation and G-quadruplex(G4) ligands on topology and binding ability of Cas9-binding aptamer**
Ikkei Sasaki¹, Maui Nishio¹, Kaori Tsukakoshi¹, Yue Ma², Kazuo Nagasawa¹, Ayana Yamagishi³, Yoshio Kato³, Chikashi Nakamura^{1,3}, Kazunori Ikebukuro^{1*}
¹Department of Biotechnology and Life Science, Graduate School of Engineering, Tokyo University of Agriculture and Technology, ²Institute of Global Innovation Research, Tokyo University of Agriculture and Technology, ³National Institute of Advanced Industrial Science and Technology
- 1P-35 Synthesis of 2', 3', 5', 5''-deuterium pyrimidine nucleoside derivatives**
Hiroki Ohno¹, Noriko Miyamoto², Yoshiaki Kitamura³, Kwihwan Park⁴, Yoshinari Sawama⁴, Hironao Sajiki⁴, Yukio Kitade^{1,2,3,5*}
¹Department of Materials Chemistry, Graduate School of Engineering, Aichi Institute of Technology, ²Department of Applied Chemistry, Aichi Institute of Technology, ³Department of Chemistry and Biomolecular Science, Faculty of Engineering, Gifu University, ⁴Laboratory of Organic Chemistry, Gifu Pharmaceutical University, ⁵e-NA Biotec Inc.
- 1P-36 Development of oligodeoxynucleotides with 2'-O-diazirine-conjugated nucleosides for photo-crosslinking reactions**
Soichi Tatsumi, Haruka Hirose, Yoshitaka Yamada, Tomonori Waku, Akio Kobori*
Graduate School of science and technology, Kyoto Institute of Technology
- 1P-37 Helically arranged chromophore clusters on DNA as a fluorogenic biosensor for nucleic acid detection**
Tadao Takada,* Koma Nishida, Aoi Nakano, Mitsunobu Nakamura, Kazushige Yamana*
Department of Applied Chemistry, Graduate School of Engineering, University of Hyogo
- 1P-38 Photochemical ^mC to T transition in dsDNA using reversible DNA photo-cross-linking**
Wan Licheng, Shigetaka Nakamura, Kenzo Fujimoto*
Department of Advanced Science and Technology, Japan Advanced Institute of Science and Technology
- 1P-39 RNA FISH of 16S rRNA in E. coli using photo-cross-linkable beacon probe containing pyranocarbazole**
Nanami Watanabe, Misaki Hashimoto, Shigetaka Nakamura, Kenzo Fujimoto*
Department of Advanced Science and Technology, Japan Advanced Institute of Science and Technology

- 1P-40 Synthesis and Properties of Antisense Oligonucleotides Containing AmNA and GuNA**
Masaki Yamagami¹, Takuro Kobori¹, Takao Suzuki¹, Kazuo Sekiguchi¹, Hideaki Sato¹, Naohiro Horie², Ryusuke Hatanaka², Takao Yamaguchi², Satoshi Obika², Tadashi Umemoto¹
¹Luxna Biotech Co. Ltd., ²Graduate School of Pharmaceutical Sciences, Osaka University
- 1P-41 Gene integration by CRISPR-Cas9-mediated homologous recombination using donor DNA conjugated with peptides**
Saori Yamaguchi¹, Junpei Yamamoto^{1*}, Keiichiro Suzuki^{1,2}, Shigenori Iwai¹
¹Graduate School of Engineering Science, Osaka University, ²Institute for Advanced Co-Creation Studies, Osaka University
- 1P-42 Design of sequence specific modular adaptors by tuning the reactivity of protein-tag substrate**
Zhengxiao Zhang, Eiji Nakata, Thang Minh Nguyen, Takashi Morii*
Graduate School of Fundamental Energy Sciences, Kyoto University
- 1P-43 DNA Charge Transfer Dynamics Using Single-Molecule Measurement**
Shuya Fan¹, Atsushi Maruyama², Kiyohiko Kawai^{1*}
¹The Institute of Scientific and Industrial Research, Osaka University, ²School of Life Science and Technology, Tokyo Institute of Technology
- 1P-44 Enhancement of peroxidase activity of heme-DNAzyme through interaction with cationic copolymers**
Haruka Araki¹, Atsuya Momotake¹, Yasuhiko Yamamoto^{1*}, Takuro Ochiai², Naohiko Shimada² and Atsushi Maruyama^{2*}
¹Department of Chemistry, University of Tsukuba, ²School of Life Science and Technology, Tokyo Institute of Technology
- 1P-45 Development of DNA nanostructure based fluorescent pH sensor**
Khongorzul Gerelbaatar¹, Eiji Nakata¹, Huyen Dinh¹, Zhang Zhengxiao¹, Konishi Hiroaki¹, Hisaaki Hirose², Shiroh Futaki², Takashi Morii^{1*}
¹Institute of Advanced Energy, Kyoto University, ²Institute for Chemical Research, Kyoto University
- 1P-46 The conformational property of RNA duplex including 2',5'-linkage under high pressure conditions**
Sho Miyazaki, Yoshiaki Masaki, Kohji Seio*
Department of Life Science and Technology, Tokyo Institute of Technology
- 1P-47 Development of new prediction parameters for RNA/DNA hybrid duplex stability under a physiological buffer condition**
Dipanwita Banerjee¹, Hisae Tateishi-Karimata¹, Tatsuya Ohyama¹, Tamaki Endoh¹, Shuntaro Takahashi¹ and Naoki Sugimoto^{1,2}
¹Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, ²Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
- 1P-48 Sequence-selective Recognition of dsDNA by unmodified PNA**
Masanari Shibata, Masaki Hibino, Yuichiro Aiba*, Osami Shoji*
Graduate School of Science, Nagoya University

- 1P-49 Enzymatic synthesis and photo-deprotection of DNA incorporating photo-caged deoxypseudouridine**
Yuji Yamada, Leo Takeshita, Yoshiaki Masaki and Kohji Seio*
Department of Life Science and Technology, Tokyo Institute of Technology
- 1P-50 Development of Light-up Type Probes for Detection of G-quadruplex**
Yue Ma¹, Yuki Wakabayashi², Ryota Saito³, Kazuo Nagasawa^{2*}
¹Institute of Global Innovation Research, Tokyo University of Agriculture and Technology, ²Graduate school of Engineering, Tokyo University of Agriculture and Technology, ³Graduate school of Science, Toho University
- 1P-51 Chemical Modification of siRNA Eliminating Off-target Effect of the Sense Strand**
Yasuo Shiohama, Takashi Fujita, Shuichi Miyata, Yojiro Kotake and Masayuki Fujii*
Department of Biological and Environmental Chemistry, Kindai University
- 1P-52 Separation of single-molecule DNA using a nanopore filter**
Asuka Tada and Ryuji Kawano*
Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology
- 1P-53 Recognition of Triplex Nucleic Acid by Triplex Nucleic Acid-Binding Protein**
Maiko Shimmura, Saki Hirai, Kota Sugiyama, Kazuki Kiuchi, Norihiro Sato, Takuma Katayama, Kei Hirabayashi, Hidetaka Torigoe*
Department of Applied Chemistry, Faculty of Science, Tokyo University of Science
- 1P-54 X-ray Crystallographic Structure for the Specific Binding between Metal Ion and Chemically Modified Mismatched Base Pairs**
Kei Hirabayashi^{1*}, Saki Adachi¹, Ayami Yaguchi¹, Akira Ono², Jiro Kondo^{3*}, Hidetaka Torigoe^{1*}
¹Department of Applied Chemistry, Faculty of Science, Tokyo University of Science, ²Department of Material & Life Chemistry, Faculty of Engineering, Kanagawa University, ³Department of Materials and Life Sciences, Faculty of Science and Technology, Sophia University
- 1P-55 Increase of Melting Temperature does not Usually Indicate Specific Binding between Metal Ion and Mismatched Base Pair**
Fumihiko Arakawa¹, Hayahide Kida¹, Saki Adachi¹, Akira Ono², Hidehito Urata³, Kei Hirabayashi¹, Hidetaka Torigoe^{1*}
¹Department of Applied Chemistry, Faculty of Science, Tokyo University of Science, ²Department of Material & Life Chemistry, Faculty of Engineering, Kanagawa University, ³Department of Bioorganic Chemistry, Osaka University of Pharmaceutical Sciences
- 1P-56 Chemo-enzymatic rapid synthesis of tetrahydroisoquinoline alkaloids exhibiting reversible DNA alkylating ability**
Ryo Tanifuji¹, Kaori Tsukakoshi², Kazunori Ikebukuro², Hideaki Oikawa³, Hiroki Oguri^{1*}
¹Department of Applied Chemistry, ²Department of Biotechnology and Life Science, Graduate School of Engineering, Tokyo University of Agriculture and Technology, ³Department of Chemistry, Faculty of Science, Hokkaido University,

- 1P-57 New Insights into DNA Minidumbbell Forming Sequences**
Cheuk Kit Ngai¹, Liqi Wan¹, Pei Guo², Sik Lok Lam^{1*}
¹Department of Chemistry, The Chinese University of Hong Kong, ²School of Biology and Biological Engineering, South China University of Technology
- 1P-58 Effect of terminal double-stranded structures on intracellular localization of anti-miRNA oligonucleotide**
Yu Hirano¹, Sachiko Chidaka¹, Yasuo Komatsu^{2*}
¹Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), ²Biotechnology Research Institute for Drug Discovery, National Institute of Advanced Industrial Science and Technology (AIST)
- 1P-59 Molecular chaperone α B-crystallin regulates focal adhesion stability under mechanical stress conditions**
Saaya Hayasaki¹, Yasuomi Sasai², Masaki Imayasu², Miho Shimizu¹, Soichiro Fujiki³, Keiji Naruse⁴, Toshiyuki Watanabe⁵, Yoriko Atomi^{1*}
¹Material Health science Laboratory, Graduate School of Engineering, Tokyo University of Agriculture and Technology, ²Menicon Co., Ltd, ³Department of Physiology and Biological Information, Dokkyo Medical University, ⁴Department of Cardiovascular Physiology, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, ⁵Division of Applied Chemistry, Graduate School of Engineering, Tokyo University of Agriculture and Technology
- 1P-60 The theoretical calculations of charge transport through DNA metal-mediated base pairs**
Jakub Šebera¹, Jiří Fukal¹, David Řeha², Yoshiyuki Tanaka³, Vladimír Sychrovský^{1*}
¹Institute of Organic Chemistry and Biochemistry, ²Center for Nanobiology and Structural Biology, ³Graduate School of Pharmaceutical Sciences, Tohoku University
- 1P-61 Development of aptamers binding to a transmembrane protein expressed on the surface of the human cells**
Eun Ryung Kim, SungJun Lee, Man Bock Gu*
Department of Biotechnology, College of Life Sciences and Biotechnology, Korea University
- 1P-62 Isolation and selection of aptamers binding to cell surface proteins of foodborne pathogens**
Thanh Qui Thi Nguyen, Na Eun Lee, Man Bock Gu*
Department of Biotechnology, College of Life Sciences and Biotechnology, Korea University
- 1P-63 Dynamics and multiscale chirality in the supramolecular self-assembly of DNA with a π -conjugated polymer**
Mathieu Fossépre^{1*} Marie E. Trévisan¹, Inbal Tuvi-Arad², David Beljonne¹, Mathieu Surin¹
¹Laboratory for Chemistry of Novel Materials, Center for Innovation in Materials and Polymers, University of Mons (UMONS), ²Department of Natural Sciences, The Open University of Israel

List of Poster Presentations on Day 2 (October 30(Wed))

Poster Presentations Odd Numbers: October 29(Tue) 13:35 - 14:20
Even Numbers: October 29(Tue) 14:20 - 15:05

- 2P-01 Computer-aided molecular design for DNA bulge recognition ligands by order-*N* elongation method**
Yuuichi Orimoto¹, Anna Pomogaeva^{1,2}, Keisuke Hisama³, Ayaka Yano⁴, Koichi Miyagawa⁴, Kazuhiko Nakatani⁴, Yuriko Aoki^{1*}
¹Department of Material Sciences, Faculty of Engineering Sciences, Kyushu University, ²Institute of Chemistry, St. Petersburg State University, ³Department of Molecular and Material Sciences, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University ⁴The Institute of Scientific and Industrial Research, Osaka University
- 2P-02 Label-free *in situ* Monitoring of the DNA Hybridization Chain Reaction by using Sequence-selective Minor groove-binding Fluorophores**
Takashi Sakamoto^{*}, Rikuto Yamada
Faculty of Systems Engineering, Wakayama University
- 2P-03 Reversible Gene Regulation Using Riboswitch-Engineered Vesicular Stomatitis Virus Vector**
Kei Takahashi, Yohei Yokobayashi^{*}
Nucleic Acid Chemistry and Engineering Unit, Okinawa Institute of Science and Technology Graduate University.
- 2P-04 Improvement and design of pH-sensitive Baby Spinach aptamer by fusing triplex forming sequence**
Kinuko Ueno¹, Kaori Tsukakoshi¹, Alessandro Porchetta², Francesco Ricci², Kazunori Ikebukuro^{1*}
¹Department of Biotechnology and Life Science, Graduate School of Engineering, Tokyo University of Agriculture and Technology, ²Chemistry Department, University of Rome Tor Vergata
- 2P-05 Synthesis of amphiphilic oligodeoxynucleotides bearing imine bond and their pH responsiveness**
Shunichiro Tomimizu, Ryosuke Kurihara, Kazuhito Tanabe^{*}
College of Science and Engineering, Aoyama Gakuin University
- 2P-06 Phase separation of RNA G-quadruplexes induced by cationic peptides**
Kazuki Kohata¹, Wataru Sugimoto¹, Keiko Kawauchi¹, Naoki Sugimoto^{1,2}, Daisuke Miyoshi^{1*}
¹Faculty of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University, ²Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University
- 2P-07 Amplified detection of cancer cells by DNA circuit**
Yusuke Kitamura^{1*}, Yuki Kudo¹, Ayase Tashima¹, Yuta Nakashima¹, Keiichiro Yasuda², Masaaki Iwatsuki³, Yousuke Katsuda¹, Hideo Baba³, Yoshitaka Nakanishi¹, Toshihiro Ihara^{1*}
¹Faculty of Advanced Science and Technology, Kumamoto University, ²OGIC Technologies Co., Ltd., ³Faculty of Life Sciences, Kumamoto University

- 2P-08 Synthesis and evaluation of deazapurine nucleotide analogue selectively recognizing 8-oxo-2'-deoxyguanosine in DNA.**
Yusuke Nagata, Yosuke Taniguchi*, Ikuko Sagara, Yoshiya Kikukawa, Shigeki Sasaki*
Graduate School of Pharmaceutical Sciences, Kyushu University
- 2P-09 Single-Molecule Observation and Analysis of the Dynamics of the Photoresponsive Transcription Factor**
Guruprasad Raghavan^{1,2}, Kumi Hidaka¹, Hiroshi Sugiyama¹, Masayuki Endo^{1*}
¹Department of Chemistry Graduate School of Science, Kyoto University, ²Department of Bioengineering, California Institute of Technology
- 2P-10 Synthesis of Carbocyclic Nucleosides Using Julia-Kocienski Reagents Derived From Nucleosides**
Natsuhisa Oka^{1,2*}, Mayuka Kanda¹, Minami Furuzawa¹, Kaori Ando^{1*}
¹Department of Chemistry and Bimolecular Science, Faculty of Engineering, Gifu University, ²Center for Highly Advanced Integration of Nano and Life Sciences, Gifu University (G-CHAIN)
- 2P-11 Artificial cationic peptides that control the properties of therapeutic oligonucleotides**
Kazunori Takagi¹, Rintaro Iwata Hara^{1,2}, Kazuki Sato¹, Keisuke Taniuchi^{3*}, Takeshi Wada^{1*}
¹Graduate School of Pharmaceutical Sciences, Tokyo University of Science, ²Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, ³Department of Gastroenterology and Hepatology, Kochi Medical School, Kochi University
- 2P-12 Bifunctional nucleic acid aptamers as potent drug carriers for inhibition of cancer cell proliferation**
Yuka Kataoka¹, Hiroto Fujita¹, Yasuyo Nakajima², Masanobu Yamada², Masayasu Kuwahara^{1*}
¹Graduate School of Integrated Basic Sciences, Nihon University, ²Graduate School of Medicine, Gunma University
- 2P-13 Preparations of oligonucleotide-metal nanocluster complexes**
Sayuri Seki, Daichi Momiyama, Keisuke Fujita, Akira Ono*
Department of Materials & Life Chemistry, Faculty of Engineering, Kanagawa University
- 2P-14 Preparations of DNA duplexes containing metallo-base pairs.**
Keiki Sibayama, Daichi Momiyama, Keisuke Fujita, Akira Ono*
Department of Materials & Life Chemistry, Faculty of Engineering, Kanagawa University
- 2P-15 Development of reduction sensitive protection groups for nucleotides**
Kaito Suzuki, Kyouzi Horikawa, Kazuma Terasawa, Akira Ono*
Department of Materials & Life Chemistry, Faculty of Engineering, Kanagawa University
- 2P-16 Design and synthesis of solvatochromic 3-deaza-2'-deoxyguanosine derivatives: distinction of cytosine by probing the DNA minor groove**
Shoutoku Koboku, Masaki Yanagi, Azusa Suzuki, Yoshio Saito*
Department of Chemical Biology and Applied Chemistry, College of Engineering, Nihon University

- 2P-17 Characterization of Enhancement Effects of Cationic Copolymers on DNzyme Activity**
He Huang, Orakan Hanpanich, Hitonari Miyaguchi, Naohiko Shimada, Atsushi Maruyama*
Department of Life Science and Technology, Tokyo Institute of Technology
- 2P-18 Immunochemical Assessment of 5-Methylcytosine and 5-Hydroxymethylcytosine Nitrogen Mustard Modified Linkers**
Naoshi Kojima¹, Tomomi Suda¹, Takaaki Kurinomaru², Ryoji Kurita^{1*}
¹Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST) and DAILAB, DAICENTER, ²Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST)
- 2P-19 Immunostimulatory properties of CpG ODNs forming G-quadruplex structure**
Anh Thi Tram TU^{1,2}, Kazuaki Hoshi², Kazunori Ikebukuro³, Tomohiko Yamazaki^{1,2*}
¹Division of Life Science, Hokkaido University, ²Research Center for Functional Materials (RCFM), National Institute for Materials Science (NIMS), ³Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology
- 2P-20 Naphthalene diimide carrying two β -cyclodextrins to recognize tetraplex RNA**
Shinobu SATO^{1,2}, Yuka SATO¹, Shigeori TAKENAKA^{1,2*}
¹Department of Applied Chemistry, ²Research Center for Biomicrosensing Technology, Kyushu Institute of Technology
- 2P-21 Synthesis and properties of fluorescent C5-aryl-2'-deoxyuridines and their incorporation into oligodeoxyribonucleotides**
Juri Kamimura, Runa Ishikawa, Hiroaki Ozaki *
Graduate School of Science and Technology, Gunma University
- 2P-22 Systematic Minimization of RNA Ligase Ribozyme Through Large-Scale Design-Synthesis-Sequence Cycles**
Yoko Nomura, Yohei Yokobayashi*
Nucleic Acid Chemistry and Engineering Unit, Okinawa Institute of Science and Technology Graduate University
- 2P-23 Synthesis and Characterization of 4'-C-Aminoalkoxy-2'-O-methyl-modified RNAs**
Ryo Tsukimura¹, Yusuke Maeda², Yoshihito Ueno^{1,2,3*}
¹Graduate School of Natural Science and Technology, Gifu University, ²Faculty of Applied Sciences, Gifu University, ³Center of Highly Advanced Integration of Nano and Life sciences, Gifu University (G-CHAIN)
- 2P-24 Synthesis of cyclic-di-ZMP**
Yusuke Kumanomido, Noriko Saito-Tarashima, Noriaki Minakawa*
Graduate School of Pharmaceutical Science, Tokushima University

- 2P-25 Fluorine-containing oligonucleotides for cell membrane permeability**
Honoka Watanabe¹, Kohsuke Aikawa¹, Kunihiro Morihiko¹, Akimitsu Okamoto^{1,2*} Yuichiro Ishibashi³, Takashi Okazoe^{1,3*}
¹Department of Chemistry and Biotechnology, Graduate School of Engineering, The University of Tokyo, ²Research Center for Advanced Science and Technology (RCAST), The University of Tokyo, ³Materials Integration Laboratories, AGC Inc.,
- 2P-26 Development of 2'-β -Thio or Seleno modified Nucleoside Analogs**
Hiroataka Murase, Chang Jun Shi, Ti Zheng, Fumitaka Hashiya, Yasuaki Kimura, Hiroshi Abe*
Department of Chemistry Graduate School of Science, Nagoya University
- 2P-27 Functional oligonucleotide synthesis using chemical ligation reaction**
Kazuki Yamaoka¹, Naoko Abe¹, Kosuke Nakamoto¹, Fumitaka Hashiya¹, Fumiaki Tomoike^{1,2}, Yasuaki Kimura¹, Hiroshi Abe^{1,3*}
¹Department of Chemistry, Graduate School of Science, Nagoya University, ²Department of Life Science, Graduate School of Science, Gakushuin University, ³JST CREST "Large-Scale Genome Synthesis and Cell Programming"
- 2P-28 Design of Mammalian ON-riboswitches Based on Tandemly Fused Aptamer and Ribozyme**
Kamila Mustafina, Keisuke Fukunaga and Yohei Yokobayashi
Nucleic Acid Chemistry and Engineering Unit, Okinawa Institute of Science and Technology Graduate University,
- 2P-29 Enhancement of peroxidase activity of myoglobin by parallel G-quadruplex forming aptamer**
Kaori Tsukakoshi¹, Mana Kanazashi², Kenta Nakama¹, Akimasa Matsugami³, Fumiaki Hayashi³, Kanjana Khunathai², Hitoshi Kuno², Kazunori Ikebukuro^{1*}
¹Department of Biotechnology and Life Science, Graduate School of Engineering, Tokyo University of Agriculture and Technology, ²DENSO CORPORATION, ³Advanced NMR Application and Platform Team, NMR Research and Collaboration Group, NMR Science and Development Division, RIKEN Spring-8 Center
- 2P-30 Design of DNA-based growth factor mimetics with unique biological activities**
Momoko Akiyama¹, Ryosuke Ueki^{1*}, Shinsuke Sando^{1,2*}
¹Department of Chemistry and Biotechnology, Graduate School of Engineering, The University of Tokyo, ²Department of Bioengineering, Graduate School of Engineering, The University of Tokyo
- 2P-31 Telomere Imaging in Human Live cells with Pyrrole-Imidazole Polyamide**
Yutaro Tsubono¹, Takuya Hidaka¹, Yusuke Kawamoto², Kaori Hashiya¹, Ganesh Pandian Namasivayam³, Toshikazu Bando¹, Hiroshi Sugiyama^{1,3*}
¹Department of Chemistry, Graduate school of Science, Kyoto University, ²Department of Chemistry and Biochemistry, University of California, ³Institute for Integrated Cell-Material Sciences(iCeMS), Kyoto University

- 2P-32 Analysis of the behavior of crowding molecules and their effects on DNAs at atomic level**
Tatsuya Ohyama¹, Hisae Tateishi-Karimata¹, Shigenori Tanaka², Naoki Sugimoto^{1,3*}
¹Frontier Institute for Biomolecular Engineering Research (FIBER), ²Graduate School of System Informatics, Kobe University, ³Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
- 2P-33 PNA with Metal-Coordinating Peptide for Sequence-Specific DNA Cleavage**
Masaki Hibino, Yuichiro Aiba*, Osami Shoji*
Graduate School of Science, Nagoya University
- 2P-34 Labeling of DNA-interacting protein using oligodeoxynucleotides that induce solvatochromic fluorophore**
Mariko Aso^{1*}, Ayaka Kinjo², Yukiko Abe¹, Yosuke Taniguchi¹, Shigeki Sasaki¹
¹Graduate School of Pharmaceutical Sciences, Kyushu University, ²Faculty of Pharmaceutical Sciences, Kyushu University
- 2P-35 Antisense oligonucleotide self-assemblies featuring improved physicochemical stability by chemical modification of nucleotides**
Hiroyuki Chaya¹, Kotaro Hayashi², Shigeto Fukushima², Mitsuru Naito³, Hyun Jin Kim³, Kazunori Kataoka^{2,4}, Kanjiro Miyata^{1*}
¹Graduate School of Engineering, The University of Tokyo, ²Innovation Center of NanoMedicine, Kawasaki Institute of Industrial Promotion, ³Graduate School of Medicine, The University of Tokyo, ⁴Institute for Future Initiatives, The University of Tokyo
- 2P-36 Effect of adjacent base to target cytosine in photochemical C to U mutagenesis using reversible RNA photo-cross-linking**
Shigetaka Nakamura, Sethi Siddhant, Nozomi Honda, Yasuharu Takashima, Kenzo Fujimoto*
Department of Advanced Science and Technology, Japan Advanced Institute of Science and Technology
- 2P-37 Synthesis of cell-permeable and GSH-activatable oligonucleotides**
Takayuki Ohta¹, ZhaomaShu², Hiroshi Abe², Akira Ono^{1*}, Hisao Saneyoshi^{3*}
¹Department of Material and Life Chemistry, Faculty of Engineering, Kanagawa University, ²Department of Chemistry, Graduate School of Science, Nagoya University, ³Department of Chemistry, Shiga University of Medical Science
- 2P-38 Thermal stability analysis of CpG-methylated *RET* G-quadruplex structures**
Saowalak Laddachote, Wataru Yoshida*
Graduate School of Bionics, Tokyo University of Technology

- 2P-39 Synthesis and evaluation of linear type of polyoxazole compounds for inducing anti-parallel topology against telomeric DNA**
Shogo Sasaki¹, Yue Ma^{1,2}, Hong-Liang Bao³, Takumi Ishizuka³, Yan Xu³, Takatsugu Hirokawa⁴, Kazuo Nagasawa^{1*}
¹Department of Biotechnology and Life Science, Faculty of Engineering, Tokyo University of Agriculture and Technology, ²Institute of Global Innovation Research, Tokyo University of Agriculture and Technology, ³Division of Chemistry, Department of Medical Science, Faculty of Medicine, University of Miyazaki, ⁴Molecular Profiling Research Center for Drug Discovery, National Institute of Advanced Industrial Science and Technology
- 2P-40 Enzymatic Reactions on DNA Catenane and Rotaxane Prepared Inside a DNA Origami Frame**
Arivazhagan Rajendran¹, Seo-jeong Park², Eiji Nakata¹, Youngjoo Kwon², Takashi Morii^{1*}
¹Institute of Advanced Energy, Kyoto University, ²College of Pharmacy, Ewha Womans University
- 2P-41 Improvement in binding property of the anti-idiotypic aptamer against bevacizumab based on structural information**
Yutaka Shimizu¹, Kaori Tsukakoshi¹, Tomohiro Yamada², Jiaxing Tong², Asami Hishiki², Kodai Hara², Hiroshi Hashimoto², Toshimasa Toyo'oka² Kenichiro Todoroki², Kazunori Ikebukuro^{1*}
¹Department of Biotechnology and Life Science, Graduate School of Engineering, Tokyo University of Agriculture and Technology, ²School of Pharmaceutical Sciences, University of Shizuoka
- 2P-42 End-to-End Collision Dynamics of Single-Stranded DNAs Monitored by Sulfonated Pyrene**
Jie Xu, Shunichi Miyamoto, Sachiko Tojo, Kiyohiko Kawai*
The Institute of Scientific and Industrial Research, Osaka University
- 2P-43 Orthogonal base pair formation by nucleoside analogs bearing additional hydrogen-bonding units**
Hidenori Okamura^{1,2}, Giang Hoang Trinh^{1,2}, Fumi Nagatsugi^{1,2*}
¹Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, ²Graduate School of Science, Tohoku University
- 2P-44 Development of artificial nucleoside for 5-methyl CG base pair recognition in antiparallel triplex DNA**
Ryotaro Notomi, Yosuke Taniguchi*, Takayuki Osuki, Shigeki Sasaki*
Graduate School of pharmaceutical Science, Kyushu University
- 2P-45 Direct observation of CUG repeat RNAs assembled on DNA nanostructure**
Musashi Shimizu¹, Shun Nakano^{1,2}, Shunsuke Tajima¹, Takashi Morii^{1,2*}
¹Graduate School of Energy Science, Kyoto University, ²Institute of Advanced Energy, Kyoto University
- 2P-46 Encapsulation of DNA-protein assembly in nanoliposome**
Hiroaki Konishi¹, Huyen Dinh², Tomohiko Wakisaka¹, Eiji Nakata^{1,2}, Shun Nakano^{1,2}, Takashi Morii^{1,2*}
¹Graduate School of Energy Science, Kyoto University, ²Institute of Advanced Energy, Kyoto University

- 2P-47 Enzymatic incorporation of 2'-O-alkylcarbamoyl-UTP for development of RNA aptamer**
Leo Takeshita, Ayano Iwake, Takahito Tomori, Yoshiaki Masaki, Kohji Seio*
Department of Life Science and Technology, Tokyo Institute of Technology
- 2P-48 Construction of Boolean logic gates based on a stimuli-responsive DNAzyme**
Ayaka Banno¹, Sayuri Higashi², Aya Shibata¹, Masato Ikeda^{1,2,3*}
¹Department of Life Science and Chemistry, Graduate School of Natural Science and Technology, Gifu University, ²United Graduate School of Drug Discovery and Medical Information Sciences, Gifu University, ³Center for Highly Advanced Integration of Nano and Life Sciences (G-CHAIN)
- 2P-49 Recognition and Fluorescence Detection of G-quadruplex by ESIPT based ligand**
Keisuke Iida* Shunsuke Ishida, Ayano Sasaki
Soft Molecular Activation Research Center (SMARC), Chiba Iodine Resource Innovation Center (CIRIC), Molecular Chirality Research Center (MCRC), and Department of Chemistry, Graduate School of Science, Chiba University,
- 2P-50 Gas sensing based on DNA-modified graphene devices**
Ryo Nozaki, Takashi Ikuta, Kinuko Ueno, Kaori Tsukakoshi, Kazunori Ikebukuro, Kenzo Maehashi*
Institute of Engineering, Tokyo University of Agriculture and Technology
- 2P-51 Development of A New Method for Chemical Synthesis of Genomic DNAs**
Hiroki Suto^{1,2}, Yu Miyake¹, Kousuke Ikeda¹, Akihiro Ohkubo^{1,2*}
¹Department of Life Science and Technology, School of Life Science and Technology, Tokyo Institute of Technology, ²CREST, Japan Science and Technology Agency (JST)
- 2P-52 Development of SERS-active nanoparticles for sensitive detection of nucleic acids**
Ryo Ota, Yuki Fukushima, Yuta Araki, Tomonori Waku, Akio Kobori*
Department of Biomolecular Engineering, Graduate school of science and technology, Kyoto Institute of Technology
- 2P-53 Thermodynamic Properties of the Specific Binding between Metal Ion and Mismatched Base Pairs Involving 5-Fluorouracil**
Saki Adachi¹, Kei Hirabayashi¹, Akira Ono², Jiro Kondo³, Hidetaka Torigoe^{1*}
¹Department of Applied Chemistry, Faculty of Science, Tokyo University of Science, ²Department of Material & Life Chemistry, Faculty of Engineering, Kanagawa University, ³Department of Materials and Life Sciences, Faculty of Science and Technology, Sophia University
- 2P-54 Specific Binding between Metal Ion and Mismatched Base Pair under Molecular Crowding Condition**
Sumire Nakayama¹, Saki Adachi¹, Akira Ono², Kei Hirabayashi¹, Hidetaka Torigoe^{1*}
¹Department of Applied Chemistry, Faculty of Science, Tokyo University of Science, ²Department of Material & Life Chemistry, Faculty of Engineering, Kanagawa University
- 2P-55 Detection of similar sequence microRNA using RT-Hpro-PCR**
Fumie Takei*, Misaki Akiyama
Faculty of Medicine, National Defense Medical College (NDMC)

- 2P-56 Site-specific and efficient acetylation of the 2'-OH of RNA by the reactive oligonucleotide**
Natsu Miyamoto, Kentaro Kitazaki, Hayate Takasaki, Yosuke Taniguchi, Shigeki Sasaki*
Graduate School of Pharmaceutical Sciences, Kyushu University
- 2P-57 Construction of the short chain guide RNA for site-directed A-to-I RNA editing**
Kanako Nose, Kota Hidaka, Yohei Tomita, Masatora Fukuda*
Department of Chemistry, Graduate School of Science, Fukuoka University
- 2P-58 Small heat shock protein α B-crystallin controls adhesion and microtubule dynamics**
Miho Shimizu¹, Kako Makino¹, Saaya Hayasaki¹, Eri Fujita¹, Soichiro Fujiki², Yoriko Atomi^{1*}
¹Tokyo University of Agriculture and Technology, ²Dokkyo University
- 2P-59 In vitro and in vivo skeletal muscle adaptation studies by muscle fiber type**
**Aya Atomi¹, Keisuke Hitachi², Kaho Sugiyama¹, Saaya Hayasaki¹, Eri Fujita¹, Soichiro Fujiki³,
Miho Shimizu¹, Yoriko Atomi^{1*}**
¹Tokyo University of Agriculture and Technology, ² Fujita Health University, ³Dokkyo University
- 2P-60 Aptamer duo-based portable electrochemical biosensor using a mini-potentiostat**
Cheulmin Joe, SangHoon Kim, and Man Bock Gu*
Department of Biotechnology, College of Life Sciences and Biotechnology, Korea University
- 2P-61 Aptamer selection for targeting human cell membrane receptor**
JongTae Kim, Eun Ryung Kim, SungJoon Lee, ManBock Gu*
Department of Biotechnology, College of Life Sciences and Biotechnology, Korea University
- 2P-62 Construction of binding affinity dependent fluorescence aptasensors**
Yuuka Watahiki, Akane Kiyose, Marina Takemoto, Taku Ishigaki, Shinya Taniguchi, Yumi Akamatsu, and Junji Kawakami*
Faculty of Frontiers of Innovative Research in Science and Technology, Konan University