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Noriko Tarashima, Koya Hayashi, Tatsuya Sumitomo, Noriaki Minakawa
Graduate School of Pharmaceutical Science, Tokushima University

1P-02 Creation of the ischemia-specific oligonucleotide therapeutics system with intracellular environment-responsive Peptide Ribonucleic Acids (PRNAs) : *Development of half-gamer type chimeric PRNA-DNA-LNA derivatives*

Masahito Inagaki¹⁾²⁾, Ryohei Uematsu¹⁾, Daisuke Unabara¹⁾, Yasuyuki Araki¹⁾, Seiji Nakamoto¹⁾, Satoru Ishibashi²⁾, Takanori Yokota²⁾, Takehiko Wada¹⁾

1) Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University, 2) Department of Neurology and Neurological Science, Tokyo Medical Dental University

1P-03 Synthesis of inosine 6-phosphate derivatives via phosphorylation of carbonyl oxygen

Natsuhisa Oka, Yuta Itakura, Yasuhiro Morita, Kaori Ando

Department of Chemistry and Biomolecular Science, Faculty of Engineering, Gifu University

1P-04 Synthesis and Biophysical Properties of 5'-Thio Derivative of 2', 4'- BNA/LNA

Md Ariful Islam¹⁾, Aki Fujisaka¹⁾²⁾, Kosuke Ito¹⁾, Reiko Waki¹⁾, Satoshi Obika¹⁾

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1P-05 Oligonucleotides Incorporating the 4-Vinylpyrimidine Derivatives to Investigate the Cross-link Formation with mRNA

Kenji Kikuta, Yosuke Taniguchi, Shigeki Sasaki

Graduate School of Pharmaceutical Sciences, Kyushu University

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Lei Wang, Hidenori Okamura, Yosuke Taniguchi, Shigeki Sasaki

Graduate School of Pharmaceutical Sciences, Kyushu University

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Mei Miyazaki, Yosuke Taniguchi, Nozomu Matsueda, Shigeki Sasaki

Graduate School of Pharmaceutical Sciences, Kyushu University

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Naohiro Horie, Satoshi Obika

Graduate School of Pharmaceutical Sciences, Osaka University

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Leo Takeshita, Kentaro Ohno, Yoshiaki Masaki, Mitsuo Sekine, Kohji Seio

Department of Life Science, Tokyo Institute of Technology

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Shyamapada Banerjee¹⁾, Srishylam Penjarla¹⁾, Raji Reddy Akiti¹⁾, Yogesh S Sanghvi²⁾
 1) Research and Development, Sapala Organics Private Limited, 2) Rasayan Inc., USA
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Izumi Okamura¹⁾, Soyoung Park¹⁾, Hiroshi Sugiyama¹⁾²⁾
 1) Department of Chemistry, Graduate School of Science, Kyoto University, 2) Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University
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 Graduate School of Pharmaceutical Sciences, Kyushu University
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 Department of Life Science and Technology, Tokyo Institute of Technology
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Thananjeyan Balasubramaniyam, Takumi Ishizuka, Yan Xu
 Division of Chemistry, Department of Medical Sciences, Faculty of Medicine, University of Miyazaki
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Ji Hoon Han¹⁾, Seigi Yamamoto²⁾, Soyoung Park¹⁾, Hiroshi Sugiyama¹⁾³⁾
 1) Department of Chemistry, Graduate School of Science, Kyoto University, 2) Graduate School of Pharmaceutical Sciences, Tokushima University, 3) Institute for Integrated Cell Material Sciences (iCeMS), Kyoto University
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 1) The Graduate School of Engineering, Tottori University, 2) Deptment of Material and Biological Chemistry, Faculty of Science, Yamagata University
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 Division of Chemistry, Department of Medical Sciences, Faculty of Medicine, University of Miyazaki
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 Graduate School of Pharmaceutical Sciences, Kyushu University
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Junichi Taniguchi¹⁾, Ganesh Pandian Namasivayam²⁾, Toshikazu Bando¹⁾, Hiroshi Sugiyama¹⁾²⁾
 1) Department of Chemistry, Graduate School of Science, Kyoto University, 2) Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University

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 1) Graduate School of Engineering, Gifu University, 2) United Graduate School of Drug Discovery and Medical Information Sciences, Gifu University, 3) Faculty of Engineering, Aichi Institute of Technology
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 Department of Life Science, Tokyo Institute of Technology
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 1) Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, 2) Novosibirsk State University, 3) Kindai University
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 Division of Materials Science, Faculty of Advanced Science and Technology, Kumamoto University
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 1) Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, 2) Slovenian NMR Center, National Institute of Chemistry, Slovenia, 3) Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, 4) Department of Computational Science, Graduate School of System Informatics, Kobe University, 5) Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
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 1) Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, 2) Department of Applied Chemistry, Kyushu Institute of Technology, 3) Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
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Hiromichi Okura¹⁾, Shuntaro Takahashi¹⁾, Naoki Sugimoto¹⁾²⁾
 1) Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, 2) Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
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Yu-ki Zouzumi¹⁾, Nonoka Yamaguchi¹⁾, Naohiko Shimada²⁾, Shu-ichi Nakano¹⁾, Naoki Sugimoto³⁾⁴⁾, Atsushi Maruyama²⁾, Daisuke Miyoshi¹⁾
 1) Faculty of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University, 2) Department of Biomolecular Engineering, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, 3) Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, 4) Graduate school of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
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 1) Faculty of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University, 2) Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, 3) Graduate school of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University

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Tamaki Endoh¹⁾, Naoki Sugimoto¹⁾²⁾
 1) Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, 2) Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
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 Institute of Multidisciplinary Research for Advanced Materials, Tohoku University
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 1) Frontier Institute for Biomolecular Engineering Research (FIBER), Konan University, 2) Graduate School of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University
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 Graduate School of Engineering Science, Osaka University
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 1) Department of Chemistry, Graduate School of Science, Nagoya University, 2) Faculty of Pharmaceutical Science, Hokkaido University
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 Department of Advanced Science and Technology, JAIST
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 School of Materials Science, Japan Advanced Institute of Science and Technology
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 1) Department of Chemistry, Kyoto University, 2) Institute for Integrated Cell-Material Sciences (iCeMS) Kyoto University, Yoshida Ushinomiya-cho, Sakyo, Kyoto 606-8502 (Japan)
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 School of Materials Science, Japan Advanced Institute of Science and Technology
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 1) Department of Chemistry, Kyoto University, 2) Institute for Integrated Cell-Materials Science (iCeMS), Kyoto University

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School of Materials science, JAIST
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1) Department of Chemistry, Graduate School of Science, Kyoto University, 2) Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University
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1) Institute of Advanced Energy, Kyoto University, 2) Department of Chemistry, Faculty of Science, National University of Singapore
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1) Department of chemistry, Graduate School of Science, Kyoto University, 2) Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto University
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Institute of Advanced Energy, Kyoto University
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1) Department of Environmental & Biological Chemistry, Kindai University, 2) Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, 3) Novosibirsk State University
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Masayuki Fujii¹⁾, Yasuhiro Shinkai¹⁾, Shohei Yoshinaga¹⁾, Aya Miyahara¹⁾, Shinichi Kashihara¹⁾, Hirofumi Fujii¹⁾, Go Minematsu¹⁾, Alesha A Fokina²⁾, Dmitry A Stetsenko²⁾³⁾
1) Department of Environmental & Biological Chemistry, Kindai University, 2) Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, 3) Novosibirsk State University
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Graduate School of Engineering Science, Osaka University
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Takaaki Shinoda¹⁾, Takuya Nakada²⁾, Yuki Mizushima²⁾, Hiroaki Ito¹⁾, Yohei Nukaga¹⁾, Takeshi Wada¹⁾
1) Graduate School of Pharmaceutical Sciences, Tokyo University of Science, 2) Graduate School of Frontier Sciences, The University of Tokyo

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 Graduate School of Pharmaceutical Sciences, Tokyo University of Science
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 1) Faculty of Medicine, Natioanl Defencse Medical College, 2) The Institute of Scientific and Industrial Research (ISIR), Osaka University, 3) Graduate School of Engineering, Osaka University
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 College of Food Science and Engineerig, Ocean Universtity of China
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 Institute of Advanced Energy, Kyoto University
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 College of Chemistry and Materials Science, Nanjing Normal University
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 Division of Materials Science, Faculty of Advanced Science and Technology, Kumamoto University
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 Division of Materials Science, Faculty of Advanced Science and Technology, Kumamoto University
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 1) Graduate School of Science and Technology, Sophia University, 2) Bioorganic Research Institute, Suntory Foundation for Life Sciences, 3) Department of Materials and Life Sciences, Sophia University
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Yoshinari Tada¹⁾, Takenori Dairaku²⁾, Hisao Saneyoshi³⁾, Yoshiyuki Tanaka²⁾⁴⁾, Akira Ono³⁾, Jiro Kondo¹⁾⁵⁾
 1) Graduate School of Science and Technology, Sophia University, 2) Graduate School of Pharmaceutical Sciences, Tohoku University, 3) Department of Material and Life Chemistry, Kanagawa University, 4) Faculty of Pharmaceutical Sciences, Tokushima Bunri University, 5) Department of Materials and Life Sciences, Sophia University

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Yuuichi Orimoto¹⁾, Yuriko Aoki¹⁾²⁾
 1) Kyushu University, Department of Material Sciences, Faculty of Engineering Sciences, 2) Japan Science and Technology Agency, CREST
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Yusuke Kawamoto¹⁾, Asuka Sasaki²⁾³⁾, Anandhakumar Chandran¹⁾, Kaori Hashiya¹⁾, Satoru Ide²⁾³⁾,
Toshikazu Bando¹⁾, Kazuhiro Maeshima²⁾³⁾, Hiroshi Sugiyama¹⁾⁴⁾
 1) Department of Chemistry, Graduate School of Science, Kyoto University, 2) Structural Biology Center, National Institute of Genetics, 3) Department of Genetics, School of Life Science, Graduate University for Advanced Studies (Sokendai),
 4) Institute for Integrated Cell-Material Science (WPI-iCeMS), Kyoto University
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Yudai Yamaoki¹⁾, Ayaka Kiyoshi²⁾, Tsukasa Mashima¹⁾²⁾, Fumi Kano³⁾, Masayuki Murata⁴⁾,
Takashi Nagata¹⁾²⁾, Masato Katahira¹⁾²⁾
 1) Institute of Advanced Energy, Kyoto University, 2) Graduate School of Energy Science, Kyoto University, 3) Institute of Innovative Research, Tokyo Institute of Technology, 4) Graduate School of Arts and Sciences, The University of Tokyo
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Yasuhiko Yamamoto, Yusuke Nakano, Yuki Moritaka, Yusaku Nakayama, Yuya Katahira, Hulin Tai,
Tomokazu Shibata
 Department of Chemistry, University of Tsukuba
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Yuya Katahira¹⁾, Tomokazu Shibata¹⁾, Toru Matsui¹⁾, Kenji Morihashi¹⁾, Akari Watanabe²⁾, Tomomi Nakao²⁾,
Sachiko Yanagisawa²⁾, Takashi Ogura²⁾, Yasuhiko Yamamoto¹⁾
 1) Dept. of Chem., Univ. of Tsukuba, Japan, 2) Grad. Sch. of Life Sci., Univ. of Hyogo, Japan
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Hiroki Kanazawa¹⁾, Juan Pablo Maianti²⁾, Stephen Hanessian²⁾, Jiro Kondo¹⁾³⁾
 1) Graduate School of Science and Technology, Sophia University, 2) Department of Chemistry, Universite de Montreal,
 3) Department of Materials and Life Sciences, Sophia University
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Shadi Sedghi Masoud¹⁾, Keisuke Iida²⁾, Kazuo Nagasawa¹⁾
 1) Department of Biotechnology and Life Science, Tokyo University of Agriculture and Technology, 2) Research Institute for Clinical Oncology, Saitama Cancer Center
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Koji Wakui¹⁾, Maho Tsuchida²⁾, Shingo Saito²⁾, Masami Shibukawa²⁾, Hitoshi Furusho³⁾, Keitaro Yoshimoto¹⁾
 1) Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, 2) Graduate School of Science and Engineering, Saitama University, 3) Nissan Chemical Industries, Ltd.
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Ryo Maruyama¹⁾, Toru Yoshitomi¹⁾, Fumiya Wayama¹⁾, Koji Wakui¹⁾, Hitoshi Furusho²⁾, Keitaro Yoshimoto¹⁾
 1) Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, 2) Nissan Chemical Industries, Ltd.
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Chie Nakagawa, Kazuya Takahashi, Seiya Urata, Hiroaki Kozuka, Nanaho Abe, Keita Hamasaki
 Department of Applied Chemistry, College of Engineering, Shibaura Institute of Technology

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Atsuhiko Yoshimura¹⁾, Koichi Sugawara²⁾, Jiro Kondo¹⁾²⁾
1) Graduate School of Science and Technology, Sophia University, 2) Department of Materials and Life Sciences, Sophia University
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Hongliang Bao, Takumi Ishizuka, Yan Xu
Department of Chemistry, Faculty of Medicine, University of Miyazaki
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Xiao Liu¹⁾²⁾, Takumi Ishizuka¹⁾, Kei Wada¹⁾, Keisuke Iida²⁾, Kazuo Nagasawa²⁾, Yan Xu¹⁾
1) Department of Chemistry, University of Miyazaki, 2) Tokyo University of Agriculture and Technology
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Yusuke Ito, Atsuko Kikuchi, Yutaro Shirasaka, Syougo Yokota, Naoki Ooizumi, Kazuya Takahashi, Keita Hamasaki
Department of Applied Chemistry, Shibaura Institute of Technology
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Chikara Dohno, Hayato Yamaguchi, Shingo Makishi, Koichi Matsuzaki, Kazuhiko Nakatani
Department of Regulatory Bioorganic Chemistry, The Institute of Scientific and Industrial Research, Osaka University
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Ayami Yaguchi¹⁾, Ryo Akiba¹⁾, Akira Ono²⁾, Hidetaka Torigoe¹⁾
1) Department of Applied Chemistry, Faculty of Science, Tokyo University of Science, 2) Department of Material & Life Chemistry, Faculty of Engineering, Kanagawa University
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Kohta Sugiyama, Kazuki Kiuchi, Hidetaka Torigoe
Department of Applied Chemistry, Faculty of Science, Tokyo University of Science
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Ryo Akiba, Ayami Yaguchi, Hidetaka Torigoe
Department of Applied Chemistry, Faculty of Science, Tokyo University of Science
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Jinxing Li¹⁾, Jun Matsumoto¹⁾, Li-Ping Bai²⁾, Asako Murata¹⁾, Chikara Dohno¹⁾, Kazuhiko Nakatani¹⁾
1) Department of Regulatory Bioorganic Chemistry, The Institute of Scientific and Industrial Research, Osaka University, 2) State Key Laboratory of Quality Research in Chinese Medicine, and Macau Institute for Applied Research in Medicine and Health, Macau University of Science and Technology
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Nanae Terado¹⁾, Akihiko Hatano¹⁾, Mana Otsu²⁾, Gota Kawai²⁾
1) Department of Applied Chemistry, Shibaura Institute of Technology, 2) Chiba Institute of Technology

- 2P-21** Interaction between Metal Ion and Mismatched Duplex DNA with 5-Hydroxyuracil or 5-Hydroxycytosine
Fumihiko Arakawa¹⁾, Ayami Yaguchi¹⁾, Akira Ono²⁾, Hidetaka Torigoe¹⁾
 1) Department of Applied Chemistry, Faculty of Science, Tokyo University of Science, 2) Department of Material & Life Chemistry, Faculty of Engineering, Kanagawa University
- 2P-22** siRNA Targeting to the Kinetochore Protein D40/Knl-1 Induces Growth Inhibition and Apoptotic Cell Death in Human Cervical Cancer
Yuri Nagamine Urata¹⁾, Hiroki Tanaka¹⁾²⁾, Masato Takimoto¹⁾
 1) Institute for Genetic Medicine, Hokkaido University, 2) Department of Gastrointestinal Immunology and Regenerative Medicine, Asahikawa Medical University
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Masato Takimoto¹⁾, Fumitaka Takeshita²⁾⁴⁾, Yuri Nagamine Urata¹⁾, Hiroki Tanaka¹⁾³⁾, Takahiro Ochiya²⁾
 1) Institute for Genetic Medicine, Hokkaido University, 2) Division of Molecular and Cellular Medicine, National Cancer Center Research Institute, 3) Department of Gastrointestinal Immunology and Regenerative Medicine, Asahikawa Medical University, 4) Department of Functional Analysis, National Cancer Center Research Institute
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Nae Sakimoto, Misaki Kamenno, Natsumi Sasaki, Junji Kawakami
 Department of Nanobiochemistry, FIRS, Konan University
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Yuhi Kurahashi¹⁾, I. M. Mahaputra Wijaya¹⁾, Tatsuya Iwata¹⁾²⁾³⁾, Hideki Kandori¹⁾²⁾³⁾
 1) Department of Frontier Materials, Nagoya Institute of Technology, 2) Department of Life Science and Applied Chemistry, Graduate School of Engineering, Nagoya Institute of Technology, 3) OptoBiotechnology Research Center, Nagoya Institute of Technology
- 2P-26** Engineering allosteric pistol ribozymes by deep sequencing
Kei Takahashi, Shungo Kobori, Yohei Yokobayashi
 Nucleic Acid Chemistry and Engineering Unit, Okinawa Institute of Science and Technology Graduate University
- 2P-27** Design of novel fluorescence quenching-based DNA probes for SNPs genotyping
Yoshio Saito, Takuya Takeda, Tatsuya Aso, Masaki Yanagi, Noriki Takahashi
 Department of Chemical Biology and Applied Chemistry, Nihon University
- 2P-28** Rapid Detection of Methylated DNA with Laminar Flow-Assisted Dendritic Amplification on a Power-Free Microfluidic Chip
Kazuki Hasegawa¹⁾²⁾, Mutsuyoshi Matsumoto²⁾, Kazuo Hosokawa¹⁾, Mizuo Maeda¹⁾
 1) Bioengineering Laboratory, RIKEN, 2) Department of Materials Science and Technology, Tokyo University of Science
- 2P-29** Metal-responsive Bifacial Nucleobase Pairing of 5-Hydroxyuracils inside DNA Duplexes
Kotaro Nishiyama, Yusuke Takezawa, Mitsuhiko Shionoya
 Department of Chemistry, Graduate School of Science, The University of Tokyo
- 2P-30** Highly sensitive FISH with L-DNA-tagged PCR product
Anri Ichiu¹⁾, Gosuke Hayashi¹⁾, Akimitsu Okamoto¹⁾²⁾
 1) Department of Chemistry and Biotechnology, School of Engineering, The University of Tokyo, 2) Research Center for Advanced Science and Technology, The University of Tokyo

- 2P-31** Facile DNA/RNA detections using tandem repeats of a G-quadruplex as amplicons
Masayasu Kuwahara, Hiroto Fujita, Yuka Kataoka
 Graduate School of Science and Technology, Gunma University
- 2P-32** Fluorescence detection of cellular nucleotide excision repair using a probe prepared by a facile method
Hana Tawarahara, Isao Kuraoka, Shigenori Iwai
 Graduate School of Engineering Science, Osaka University
- 2P-33** Circularly Polarized Luminescence Emitted from Pyrene π -Stack Array on RNA Duplex
Junpei Suzuki, Mitsunobu Nakamura, Tadao Takada, Kazushige Yamana
 Department of Applied Chemistry, University of Hyogo
- 2P-34** Development of a miRNA diagnostic system with LNA-conjugated solid supports and OMU₂ probes
Yuta Sugihara¹⁾, Kosuke Nakajima¹⁾, Yu Watari¹⁾, Jumpei Ariyoshi¹⁾, Asako Yamayoshi²⁾³⁾, Akira Murakami⁴⁾, Akio Kobori¹⁾
 1) Department of Biomolecular Engineering, Graduate School of Science and Technology, Kyoto Institute of Technology, 2) The Hakubi Center for Advanced Research, Kyoto University, 3) Department of Chemistry, Graduate School of Science, Kyoto University, 4) Kyoto Pharmaceutical University
- 2P-35** Electrochemical hybridization assay for miRNA by using ferrocenylnaphthalene diimide
Shinobu Sato¹⁾²⁾, Akira Nakayama¹⁾, Yasunobu Hayashida¹⁾, Shigeori Takenaka¹⁾²⁾
 1) Department of Applied Chemistry, Kyushu Institute of Technology, 2) Research Center for Bio-microsensing Technology, Kyushu Institute of Technology
- 2P-36** Development of Dumbbell-Shaped Molecular Beacon Probes Bearing Diphenylsilylated Pyrene
Tomohisa Moriguchi, Ryohei Nakayama, Daisuke Moki, Kazuno Shinozuka
 Division of Molecular Science, Gunma University
- 2P-37** Screening and characterization of aptamers for myoglobin
Yasuko Yamagishi¹⁾, Taiki Saito¹⁾, Mana Kanazashi²⁾, Hitoshi Kuno²⁾, Nasa Savory¹⁾, Kaori Tsukakoshi¹⁾, Kazunori Ikebukuro¹⁾
 1) Department of Biotechnology and Life Science, Graduate School of Engineering, Tokyo University of Agriculture and Technology, 2) DENSO CORPORATION
- 2P-38** Development of DNA aptamers against *FokI* nuclease domain for genome editing
Maui Nishio¹⁾, Koichi Abe¹⁾, Daisuke Matsumoto¹⁾, Kaori Tsukakoshi¹⁾, Yoshio Kato²⁾, Chikashi Nakamura¹⁾²⁾, Kazunori Ikebukuro¹⁾
 1) Department of Biotechnology and Life Science, Graduate school of Engineering, Tokyo University of Agriculture and Technology, 2) Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology
- 2P-39** Metal Ion-Responsive Hydrogels made of PEG-DNA copolymers prepared by Liquid phase DNA synthesis
Shizuma Tanaka, Kazuki Fukushima, Kenta Wakabayashi, Shinsuke Yukami, Akinori Kuzuya, Yuichi Ohya
 Department of Chemistry and Materials Engineering, Kansai University
- 2P-40** Effect of G-quadruplex ligand on the topology of G-quadruplex forming aptamer and its affinity to the target molecules
Yuri Ikuta¹⁾, Kaori Tsukakoshi¹⁾, Koichi Abe¹⁾, Taiki Saito¹⁾, Tomomi Yokoyama¹⁾, Keisuke Iida²⁾, Yue Ma¹⁾, Kazuo Nagasawa¹⁾, Koji Sode¹⁾, Kazunori Ikebukuro¹⁾
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- 2P-41** Signal amplification by DNAzyme combined with RNase H
Ran An¹⁾²⁾, Hayato Kawai²⁾, Hiroyuki Asanuma²⁾, Xingguo Liang¹⁾
 1) College of Food Science and Engineering, Ocean University of China, 2) Graduate School of Engineering, Nagoya University
- 2P-42** Azobenzene-tethered amphiphilic oligonucleotides as radiation-activated drug carrier
Takuma Itagaki, Ryohsuke Kurihara, Kazuhito Tanabe
 Department of Science and Engineering, Aoyama gakuin University
- 2P-43** Evaluation delivery of antisense oligonucleotides using PEG-modified β -glucans
Daiki Ito, Yoshiya Maegawa, Shinichi Mochizuki, Kazuo Sakurai
 Department of Life and Environment Engineering, The University of Kitakyusyu
- 2P-44** Direct observation of the duplex formation and dissociation in the G-quadruplex-/i-motif-forming site
Masayuki Endo¹⁾, Xiwen Xing²⁾³⁾, Xiang Zhou³⁾, Tomoko Emura²⁾, Kumi Hidaka²⁾, Bodin Tuesuwan⁴⁾, Hiroshi Sugiyama¹⁾²⁾
 1) Institute for Integrated Cell-Material Sciences, Kyoto University, 2) Graduate School of Science, Kyoto University, 3) Wuhan University, 4) Chulalongkorn University
- 2P-45** Preparation and Cellular Uptake of DNA/Chitosan Nanoparticles for Astaxanthin Delivery
Yingyuan Zhao, Qian Wang, Jing Li, Xingguo Liang, Baihui Wan, Yaping Zhang
 College of Food Science and Engineerig, Ocean Universtity of China
- 2P-46** Efficient delivery of nucleic acid medicines using DNA nanostructure
Shuto Tokunaga¹⁾, Shinichi Mochizuki²⁾, Noriko Miyamoto³⁾, Kazuo Sakurai⁴⁾
 1) Department of Chemistry and Biochemistry, University of Kitakyushu, 2) Department of Chemistry and Biochemistry, University of Kitakyushu, 3) Department of Chemistry and Biochemistry, University of Kitakyushu, 4) Department of Chemistry and Biochemistry, University of Kitakyushu
- 2P-47** Preparation and evaluation of DNA-Chitosan nanocomplex as novel drug carriers
Jing Li, Yingyuan Zhao, Yaping Zhang, Lei Guan, Ping Dong, Xingguo Liang
 College of Food Science and Engineerig, Ocean Universtity of China
- 2P-48** Analysis of β -glucan receptor for DDS application of SPG/DNA complex
Nobuaki Fujiwara¹⁾, Hiroto Izumi²⁾, Shinichi Mochizuki¹⁾, Shohei Nagao¹⁾, Yasuo Morimoto²⁾, Kazuo Sakurai¹⁾
 1) Department of Chemistry and Biochemistry, The University of Kitakyushu, 2) The University of Occupational and Environmental Health, Japan
- 2P-49** Organizing three-dimensional DNA origami components into a crystalline structure having pores with designed geometry
Yuki Suzuki¹⁾²⁾, Ibuki Kawamata²⁾, Satoshi Murata²⁾
 1) Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, 2) Department of Robotics, Graduate School of Engineering, Tohoku University
- 2P-50** Novel Drug Delivery System for targeting circulating microRNA
Asako Yamayoshi¹⁾²⁾, Yusuke Kishimoto²⁾³⁾, Rie Tamura⁴⁾, Chie Muramatsu⁴⁾, Akio Kobori³⁾, Eishi Ashihara⁴⁾, Akira Murakami⁴⁾
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- 2P-51** Immunity control by crosslinked-nanogel consist of two types back bone CpG-ODN
Noriko Miyamoto, Kazuo Sakurai, Shinichi Mochizuki
 The university of Kitakyushu

- 2P-52** A Facile Synthesis of Peptide Nucleic Acid by Using Hydrophobic Soluble Tag
Keisuke Ogami¹⁾, Yohei Okada²⁾, Yoshikazu Kitano¹⁾, Kazuhiro Chiba¹⁾
 1) Department of applied science, United graduate school of agricultural science, Tokyo university of agriculture and technology, 2) Graduate school of bio-applications and systems engineering, Tokyo university of agriculture and technology
- 2P-53** Cleavage of target DNA promotes sequence conversion with a tailed duplex
Hiroyuki Kamiya¹⁾²⁾³⁾, Tetsuya Suzuki¹⁾, Takashi Imada¹⁾, Natsuki Nishigaki¹⁾²⁾, Miwako Kobayashi³⁾, Ichiro Matsuoka³⁾
 1) Graduate School of Biomedical and Health Sciences, Hiroshima University, 2) Graduate School of Science and Engineering, Ehime University, 3) College of Pharmaceutical Sciences, Matsuyama University
- 2P-54** Development of a DNA aptamer for detection of the salivary stress marker alpha-amylase
Hiroataka Minagawa¹⁾, Masayasu Kuwahara²⁾, Taiichi Sakamoto³⁾, Joe Akitomi¹⁾, Naoto Kaneko¹⁾, Ikuo Shiratori¹⁾, Katsunori Horii¹⁾, Iwao Waga¹⁾
 1) Innovation Laboratory, NEC Solution Innovators, 2) Graduate School of Science and Technology, Gunma University, 3) Department of Life and Environmental Sciences, Chiba Institute of Technology
- 2P-55** Aptamer-based biosensors for rapid detection of stress markers
Naoto Kaneko¹⁾, Hiroataka Minagawa¹⁾, Joe Akitomi¹⁾, Keishi Ohashi²⁾, Shigeki Kuroiwa²⁾, Shofarul Wustoni²⁾, Sho Hideshima²⁾, Tetsuya Osaka²⁾, Katsunori Horii¹⁾, Iwao Waga¹⁾
 1) Innovation Laboratory, NEC Solution Innovators, 2) Research Organization for Nano & Life Innovation, Waseda University
- 2P-56** Disassembly-driven signal turn-on probe for multimodal detection of DNAs using ¹⁹F NMR and Fluorescence
Takashi Sakamoto, Daisaku Hasegawa, Kenzo Fujimoto
 School of Materials Science, Japan Advanced Institute of Science and Technology
- 2P-57** Controlling gene expression in a predatory bacterium using synthetic riboswitches
Mohammed Essameldin Ibrahim Dwidar, Yohei Yokobayashi
 Nucleic Acid Chemistry and Engineering Unit, Okinawa Institute of Science and Technology Graduate University
- 2P-58** Construction of photo regulation system of protein expression in *Synechocystis* sp. PCC 6803
Chika Shono¹⁾²⁾, Koichi Abe¹⁾²⁾, Yuta Sakai¹⁾²⁾, Ippei Sakamoto¹⁾²⁾, Kaori Tsukakoshi¹⁾, Koji Sode¹⁾²⁾, Kazunori Ikebukuro¹⁾²⁾
 1) Department of Biotechnology and Life Science, Graduate School of Engineering, Tokyo University of Agriculture and Technology, Japan , 2) Japan Science and Technology Agency, CREST
- 2P-59** Synthesis and Hg(II) ion adsorption of synthetic polymers having thymine residues
Akira Ono, Kai Anakubo, Kentaro Ota, Hisao Saneyoshi
 Department of material & life chemistry, Faculty of engineering, Kanagawa University
- 2P-60** New green and orange fluorescent DNA probes: design and applications to live cells
Akinobu Nakamura¹⁾, Kazumasa Takigawa²⁾, Shinya Tsukiji³⁾⁴⁾
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- 2P-61** Photochemical properties of DNA-bound flavin
Tatsuya Iwata, Michiko Hayakawa, Hideki Kandori
 Graduate School of Engineering, Nagoya Institute of Technology