

February 8, 2019
Sysmex Corporation

FY2018 Nakatani Award and Research Grant Recipients Announced

The Tokyo-based Nakatani Foundation for Advancement of Measuring Technologies in Biomedical Engineering announced 3 recipients of The Nakatani Award, 41 recipients of its Technology Development Research Grants and 4 recipients of its Investigative Research Grants for fiscal 2018. Sysmex Corporation (HQ: Kobe; Chairman and CEO: Hisashi Ietsugu) has been a financial supporter of the Foundation for many years.

The Foundation was established in April 1984 as The Nakatani Foundation of Electronic Measuring Technology Advancement, endowed principally by Sysmex and its founder and first president, the late Taro Nakatani, with the goal of "promoting advances in electronic measuring technology as a foundation for industrial technology, in order to contribute to the development of Japanese society and its economy as well as the betterment of national life." On April 1, 2012, the foundation was renamed The Nakatani Foundation for Advancement of Measuring Technologies in Biomedical Engineering. The foundation's activities include the provision of awards for biomedical engineering measurement and related technologies, as well as technology developmental research grants, investigative research grants, technology exchange grants, scholarship grants and science education promotion grants.

1. Recipients and research themes

Please see "Recipients of FY2018 Awards"

2. Total amount of grant

(Technology Development Research Grants and Investigative Research Grants)

¥517,910,000-

3. Presentation ceremony

Date and Time: February 22, 2019 at 13:00

Place: Mandarin Oriental Tokyo, Grand Ball Room

3. About the foundation

Name: Nakatani Foundation for Advancement of Measuring Technologies in Biomedical Engineering

Location: 1-2-2 Osaki, Shinagawa-ku, Tokyo

URL: <https://www.nakatani-foundation.jp/en/>

Recipients of FY2018 Awards
Nakatani Foundation
for Advancement of Measuring Technologies in Biomedical Engineering

Nakatani Award

Grand Prize

(Yen)

Recipient	Position and Affiliation	Prize Theme	Amount
Takao Someya	Professor, School of Engineering, The University of Tokyo Team Leader, Center for Emergent Matter Science, RIKEN	Seminal contribution to stretchable electronics for monitoring biological information	5,000,000

Encouraging Prize

(Yen)

Recipient	Position and Affiliation	Prize Theme	Amount
Hiromi Imamura	Division of Systemic Life Science, Graduate School of Biostudies, Kyoto University Associate Professor	Development and application of techniques to image intracellular ATP levels of single cells	2,500,000
Shinsuke Sando	Department of Chemistry and Biotechnology Graduate School of Engineering, The University of Tokyo Professor	Development of molecular technology to realize hyperpolarized-nuclear magnetic resonance analysis and its application to highly sensitive biomolecular imaging	2,500,000

Technology Development Research Grants

Long-term Research Grants: multi-year grants (five years)

(Yen)

Recipient	Position and Affiliation	Research Theme	Amount
Thomas N. Sato	Nara Medical University Professor	Virtual Human InformatiX Clinic (V- iCliniX)	300,000,000

Special Research Grants: multi-year grants (two years)

(Yen)

Recipient	Position and Affiliation	Research Theme	Amount
Motomasa Tanaka	RIKEN Center for Brain Science Team Leader	Development of a novel technology for detecting co-translational protein misfolding	30,000,000

Keisuke Goda	Department of Chemistry, Graduate School of Science, University of Tokyo Professor	High-performance Raman flow cytometry toward label-free medicine	30,000,000
Itaru Yanagihara	Department of Developmental Medicine, Research Institute, Osaka Women's and Children's Hospital Head	Development of ultrahigh sensitive nucleic acid detection method for fetomaternal infections	30,000,000

Development Research Grants

(Yen)

Recipient	Position and Affiliation	Research Theme	Amount
Shinya Goto	Department of Medicine (Cardiology) Professor	Development of the Method to Measure Dynamic Change in Intra-Cellular Calcium Ion Concentration in Platelet Adhering on von Willebrand Factor under Blood Flow Conditions.	4,000,000
Hisashi Tadakuma	Institute for protein research, Osaka University Assistant Professor	Development of autonomous molecular device for biological interaction analysis	4,000,000
Takahiro Kuchimaru	Center for Molecular Medicine, Jichi Medical University Assistant Professor	Development of a new strategy for noninvasive visualization of protein-protein interactions	4,000,000
Seiichi Nishizawa	Department of Chemistry, Graduate School of Science, Tohoku University Professor	Development of red-emissive fluorogenic indicators for targeting bacterial A-site RNA with strong binding affinity and high selectivity	4,000,000
Masahito Yamanaka	Department of Electronics, Nagoya University Assistant Professor	Development of high-speed measurement technique of intracellular stiffness and viscosity	4,000,000
Satoko Akashi	Graduate School of Medical Life Science, Yokohama City University Associate Professor	Development of native mass spectrometry of protein complexes under crude biological conditions	4,000,000
Masayuki Endo	Department of Chemistry, Graduate School of Science, Kyoto University Associate Professor	Development of single-molecule analysis of physical properties of biomolecules using the nanoscale space	4,000,000

Masahiro Ono	Department of Patho-Functional Bioanalysis, Graduate School of Pharmaceutical Sciences, Kyoto University Professor	Development of detection method for β -amyloid oligomers toward very early diagnosis of Alzheimer's disease	4,000,000
Koichi Nishiyama	International Research Center for Medical Sciences, Kumamoto University Associate Professor	Development of On-Chip system for understanding of mechanobiology machinery in angiogenesis and its medical application	4,000,000
Shingo Sato	Tokyo Medical and Dental University, Cancer Center Junior Associate Professor	Development of three-dimensional bone structural analysis method using bone clearing technique	4,000,000
Kenji Ikushima	Faculty of Engineering, Tokyo University of Agriculture and Technology Associate Professor	Development of noninvasive fibrosis diagnosis using ultrasound waves	4,000,000
Masataka Kinjo	Faculty of Advanced Life Science, Hokkaido University Professor	Development of monitoring method for protein aggregation in living cell based on fluctuation of polarization fluorescence intensity.	4,000,000
Michio Murakoshi	Department of Mechanical Engineering, Kagoshima University	Development of a screening method for compounds restoring localization and function of mutant membrane protein causing hearing loss	4,000,000
Sadao Ota	Research Center for Advanced Science and Technology, The University of Tokyo Associate Professor	Cell Phenotyping by machine learning-driven label-free "imaging" cell sorter	4,000,000
Hidetaka Kioka	Department of Cardiovascular Medicine, Osaka University Graduate School of Medicine Assistant Professor	Development of the comprehensive metabolic imaging with ultra-high-field MRI	4,000,000
Takashi Saitou	Translational Research Center, Ehime University Hospital Assistant Professor	Development of quantitative method for steato-hepatitis assessment using multi-photon excitation spectral recording	2,050,000

Masaru Tanaka	Institute for Materials Chemistry and Engineering, Soft Materials Chemistry, Kyushu University Professor	Development of selective biomarker separation by controlling the biointerfacial water structure	4,000,000
Junya Toguchida	Department of Tissue Regeneration, Institute for Frontier Life and Medical Sciences, Kyoto University Professor	Development of the measurement method for osteogenic differentiation	4,000,000
Takeaki Ishizawa	Hepato-Biliary-Pancreatic Surgery Division, Department of Surgery, Graduate School of Medicine, the University of Tokyo Lector	Development of a portable fluorometry device for bed-side diagnosis of postoperative bile leak and pancreatic fistula	4,000,000
Shigeyuki Namiki	Department of cellular and molecular pharmacology, Graduate school of medicine, The University of Tokyo Lecturer	Development of super-resolution microscopy by a turn-on fluorescent probe	4,000,000
Hidewaki Nakagawa	RIKEN Center for Integrative Medical Sciences, Laboratory for Cancer Genomics Team Leader	Cell-free DNA analysis for cancer patient plasma by single-molecule sequencing technology	4,000,000
Yuki Takahashi	Kyoto University, Graduate School of Pharmaceutical Sciences, Department of Biopharmaceutics and Drug Metabolism Associate Professor	Development of a method to analyze in vivo behavior of endogenous exosomes for the elucidation of a mechanism that maintains blood concentration of exosomes	4,000,000

Junior Researcher Grants

(Yen)

Recipient	Position and Affiliation	Research Theme	Amount
Satoshi Iwano	RIKEN Center for Brain Science Researcher	Development of bioluminescence probes	2,000,000
Nobuhiro Yanai	Department of Chemistry and Biochemistry, Graduate School of Engineering, Kyushu University Associate Professor	Development of hyperpolarization technique for MRI of biomolecules	2,000,000

Masatoshi Maeki	Division of Applied Chemistry, Faculty of Engineering, Hokkaido University Assistant Professor	Comprehensive characterization of exosomes using micro-nano fluidic devices and its application to cancer diagnosis	2,000,000
Daigo Terutsuki	Research Center for Advanced Science and Technology, The University of Tokyo Project Assistant Professor	Enhancing the stability of a bio-FET odorant sensor based on insect cells expressing insect odorant receptors	2,000,000
Hirokazu Tanimoto	Faculty of Science, Yokohama City University Lecturer	Magnetic tweezers-based intracellular force measurement	2,000,000
Takeshi Moriwaki	Faculty of Science and Technology, Hirosaki University Assistant Professor	Adhesive Property Imaging by Scanning Haptic Microscope	2,000,000
Yuki Hiruta	Department of Applied Chemistry, Faculty of Science and Technology, Keio University Assistant Professor	The development of ultra-sensitive fluorescent polymer pH imaging probe for the diagnostics of cancer malignancy	2,000,000
Yosuke Niko	Research and Education Faculty, Multidisciplinary Science Cluster, Interdisciplinary Science Unit, Kochi University Assistant Professor	Development of Two-photon Active Fluorescent Dyes Compatible with Femtosecond Fiber Laser	2,000,000
Kenichi Arai	Department of regenerative medicine and biomedical engineering, faculty of medicine, Saga University Research Assistant Professor	Development of drug response analysis method using the cardiac tissues fabricated by Bio-3D printer	2,000,000
Masahiro Kuramochi	Department of Advanced Materials Science, Graduate School of Frontier Sciences, The University of Tokyo Assistant Professor	An integrated measurement system by Diffracted X-ray measurement and cell imaging for capturing simultaneously the single molecular dynamics and cellular activity in living <i>Caenorhabditis elegans</i>	1,960,000
Takahisa Matsuzaki	Institute of research, Tokyo medical and dental university JSPS research fellow (PD)	Development of super resolution interferometry for visualization of "live" cell adhesion	2,000,000

Hiroyuki Kai	Department of Finemechanics, Tohoku University Research Assistant Professor	Development of perspiration sensors by the flow control of microfluid	2,000,000
Kanako Nakajima	Human Augmentation Research Center, National Institute of Advanced Industrial Science and Technology Researcher	Development of Long-term Plantar Force Measurement and Recording Device for Chronic Ankle Instability	1,990,000
Mana Toma	School of Science and Technology, Kwansei Gakuin University Assistant Professor	Development of colorimetric plasmonic biosensor for rapid nad sensitive detection of pathogenic virus	2,000,000
Tomoaki Kyoden	National Institute of Technology, Toyama college Associate Professor	Quantitative evaluation of peripheral blood flow disorder using three- dimensional in-vivo blood flow imaging next-generation device	2,000,000

Investigative Research Grants: multi-year grants (two years)

(Yen)

Recipient	Position and Affiliation	Research Theme	Amount
Masaki Mori	Department of Surgery and Science, Graduate School of Medical Sciences, Kyushu University Professor	Establish of registration system for colon cancer lymph node metastasis diagnosis data by OSNA	3,000,000
Makoto Tanaka	Graduate School of Health Care Sciences, Tokyo Medical and Dental University (TMDU) Professor	Development of detection of inflammatory cytokine levels in anal Mucosa by noninvasive specimen collection	3,000,000
Koichiro Matsumura	Department of Cardiology, Kansai Medical University Medical Center Assistant Professor	Influence of hemolysis in patients with end stage renal disease	3,000,000
Satomi Asai	Department of Laboratory Medicine, Tokai University School of Medicine Associate Professor	Evaluation index of “the autonomic disorder” with ammonia radiating from human skin	2,910,000