KUIAS

Kyoto University Institute for Advanced Study

KYOTO UNIVERSITY

Kyoto University

KUIAS

Wide-Open Window for Intellectual Exchange

Kyoto University Institute for Advanced Study

Kyoto University Institute for Advanced Study

In the spirit of Kyoto University's tradition of academic freedom, KUIAS conducts advanced research utilizing the strengths of the University. Preeminent researchers from Japan and overseas gather at its international research centers.

As a leading institute of Kyoto University, KUIAS has a system in which researchers with excellent achievements and next-generation researchers can practice high-level research activities, no matter what field they are from.

Through high-level research activities, KUIAS contributes to nurturing young researchers, returning research benefits to society, and promoting science internationally.

INDEX

Message from the President

President, Kyoto University
Nagahiro Minato

2022 will mark the 125th anniversary of Kyoto University's founding. Since its establishment in 1897, under its guiding principle of academic freedom, the university has sought to contribute to harmonious coexistence in the global community through the cultivation of unique new knowledge. In 2017, Kyoto University was assigned by the Japanese government as one of Japan's first Designated National Universities (DNU). In accordance with its fundamental mission, the university seeks to contribute to humanity and society, and meet the constantly changing demands and needs of our times.

The Kyoto University Institute for Advanced Study (KUIAS) was established in April 2016 as a hub for the world's most advanced research. It comprises world-class research groups that include a Nobel laureate and a Fields Medalist, and two research centers established under the Japanese government's World Premier International Research Center (WPI) Initiative. It is a platform that gathers the skills and creativity of numerous talented researchers from within Japan and overseas. Recently, in collaboration with international partner institutions, the institute has been establishing "On-site Laboratories" at various locations around the world to further enhance its global research and education activities.

KUIAS aims gather the collected knowledge and wisdom of leading domestic and international scholars, cultivate the next generation of talented researchers, and, as an organization that drives university reform, promote innovative initiatives in both research and education, as well as university management and administration.

Message from the Director-General

Director-General, KUIAS
Shigefumi Mori

KUIAS is an institute that continuously conducts advanced research utilizing the strengths of Kyoto University. It features the Center for Advanced Study, which is a team of excellent faculty members, including distinguished professors with internationally outstanding achievements in their respective fields, as well as various organizations engaged in world-leading research.

At present, KUIAS operates two World Premier International Research Center Initiative (WPI) centers: the Institute for the Advanced Study of Human Biology (ASHBi) since 2018, and the Institute for Integrated Cell-Material Sciences (iCeMS) since 2017. In addition, two collaborative research centers established in partnership with the National Institute of Advanced Industrial Science and Technology (AIST) and with RIKEN, as well as the Center for Integrative Medicine and Physics, a new endowed research laboratory founded in 2018, are undertaking cutting-edge research in their particular disciplines and combining their respective strengths to help accelerate the activities of KUIAS.

With these researchers and research centers at its core, KUIAS will contribute to academic progress as a global, cutting-edge research hub that draws together the knowledge of domestic and overseas researchers, fosters future scientific leaders, and shares the fruits of Kyoto University's research with society.

About KUIAS

■ Timeline

2016 Apr. 1	Kyoto University Institute for Advanced Study（KUIAS）is established Center for Advanced Study is established within KUIAS
2017 Apr. 1	Institute for Integrated Cell-Material Sciences（iCeMS）becomes a research center of KUIAS AIST-Kyoto University Chemical Energy Materials Open Innovation Laboratory（ChEM-OIL）joins KUIAS as a collaborative research center
2018 Jan. 1	Center for Integrative Medicine and Physics（iCeMS-CiMPhy）joins KUIAS as an endowed research section
2018 Mar. 1	RIKEN-Kyoto University Science, Technology and Innovation Hub（RIKEN-Kyoto U Hub）joins KUIAS as a collaborative research center
2018 Oct. 30	Institute for the Advanced Study of Human Biology（ASHBi）joins KUIAS as a research center

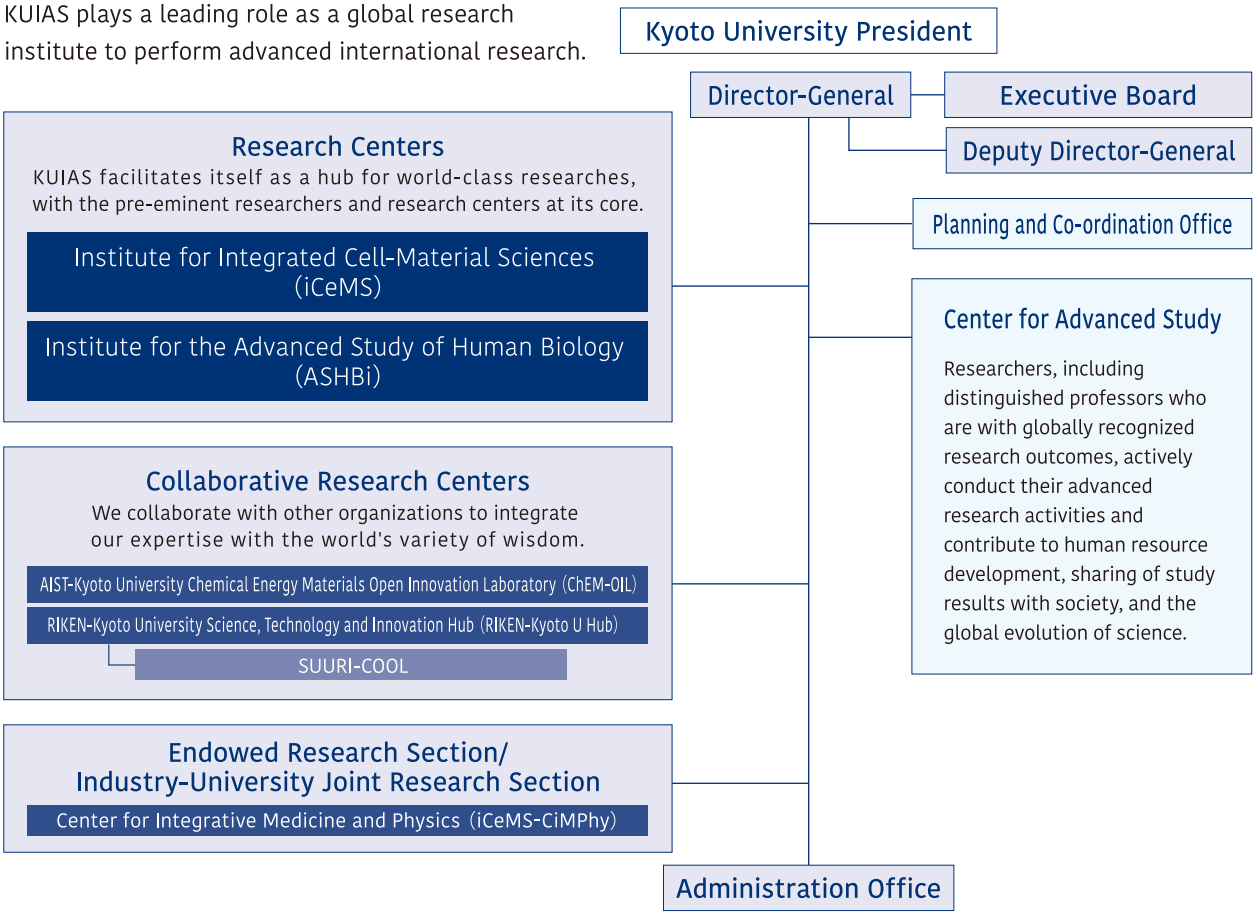
■ Features

KUIAS has the following features as an institute to grow into a leading center based on a new paradigm:

- Management with superb mobility under the strong leadership of the President
- Application of a pioneering organization system designed for a "special zone" within the university System to allow world-leading excellent researchers to continue their research regardless of the conventional mandatory retirement age

■ Organizational Structure

KUIAS plays a leading role as a global research institute to perform advanced international research.



Award-Winning Research

Fields Medal (1990)
Shigefumi Mori

Nobel Prize
in Physiology or Medicine (2018)
Tasuku Honjo

© Nobel Media. Photo: Alexander Mahmoud

Chern Medal (2018)
Masaki Kashiwara

©PABLO COSTA/ICM2018

Kyoto Prize
2016
Tasuku Honjo

2016
Takeo Kanade

2018
Masaki Kashiwara

Order of Culture	Person of Cultural Merit
2013 Tasuku Honjo	1990 Shigefumi Mori 2000 Tasuku Honjo 2019 Takeo Kanade

Order of the Sacred Treasure, Gold and Silver Star	Medal with Purple Ribbon
2020 Masaki Kashiwara	2011 Susumu Kitagawa

Member of the Japan Academy
1998 Shigefumi Mori 2005 Tasuku Honjo 2007 Masaki Kashiwara 2019 Susumu Kitagawa 2020 Takeo Kanade

■ Awards and Honors

2020	Kyoto Prefecture Culture Prize for Outstanding Contribution	S. Mori
	Member of the Japan Academy	T. Kanade
	Order of the Sacred Treasure, Gold and Silver Star	M. Kashiwara
	Imperial Prize and Japan Academy Prize	M. Saitou
	Asahi Prize	M. Saitou
	Uehara Prize	M. Saitou
	ISSCR 2020 Momentum Award	M. Saitou
	EMBO Associate Member	M. Saitou
2019	Kodaira Kunihiko Prize	S. Mori
	Member of the Japan Academy	S. Kitagawa
	Emanuel Merck Lectureship Award	S. Kitagawa
	Person of Cultural Merit	T. Kanade
	Global IT Award, State Award of Armenia	T. Kanade
2018	Nobel Prize in Physiology or Medicine	T. Honjo
	Grand Prix de la Fondation de la Maison de la Chimie	S. Kitagawa
	Chern Medal	M. Kashiwara
	Kyoto Prize	M. Kashiwara
2017	Honorary Doctorate of University of Warwick	S. Mori
	Foreign Associate of US National Academy of Sciences	S. Mori
	Warren Alpert Foundation Prize	T. Honjo
	Honorary Member of the Chemical Society of Japan	S. Kitagawa
	Chemistry for the Future Solvay Prize	S. Kitagawa
	Fujihara Award	S. Kitagawa
	IEEE Founders Medal	T. Kanade
2016	Foreign Member of the Russian Academy of Sciences	S. Mori
	Kyoto Prize	T. Honjo
	Keio Medical Science Prize	T. Honjo
	Fudan-Zhongzhi Science Award in Biomedicine	T. Honjo
	Pharmaceutical Society of Japan Award	T. Honjo
	Fred Basolo Medal	S. Kitagawa
	Japan Academy Prize	S. Kitagawa
	Kyoto Prize	T. Kanade
	Takeda Medical Prize	M. Saitou
2015	President of the International Mathematical Union	S. Mori
	Richard V. Smalley, MD Memorial Award	T. Honjo
2014	Tang Prize, Biopharmaceutical Science Award	T. Honjo
	William B. Coley Award	T. Honjo
	JCA-CHAAO Award	T. Honjo
	Japan Academy Medal and JSPS Prize	M. Saitou
2013	Order of Culture, Japan	T. Honjo
	Kyoto University Shi-Shi Award	S. Kitagawa
	Fellow of the UK Royal Society of Chemistry	S. Kitagawa
	Leo Esaki Prize	S. Kitagawa
2012	Robert Koch Prize	T. Honjo
2011	Medal with Purple Ribbon	S. Kitagawa
2010	University Professor of Nagoya University	S. Mori
	Thomson Reuters Citation Laureate (Chemistry)	S. Kitagawa
	Tateishi Prize, Grand Award	T. Kanade
	ACM-AAAI Allen Newell Award	T. Kanade
2009	Chemical Society of Japan Award	S. Kitagawa
2008	Bower Award and Prize for Achievement in Science, The Franklin Institute	T. Kanade
	Fujihara Award	M. Kashiwara
2007	Okawa Prize	T. Kanade
	Robot & Automation Pioneer Award, IEEE	T. Kanade
	Azriel Rosenfeld Lifetime Achievement Award, IEEE	T. Kanade
	Member of the Japan Academy	M. Kashiwara
2005	Member of the Japan Academy	T. Honjo
2004	Fujihara Award	S. Mori
	Thomson Leading Japanese Scientists in Emerging Research Fronts	T. Honjo
	Funai Achievement Award	T. Kanade
2002	Honorary Doctorate of University of Torino	S. Mori
2001	Foreign Associate of US National Academy of Sciences	T. Honjo
2000	Person of Cultural Merit	T. Honjo
	C&C Prize	T. Kanade
1998	Member of the Japan Academy	S. Mori
1997	Foreign Member of US National Academy of Engineering	T. Kanade
1996	Imperial Prize and Japan Academy Prize	T. Honjo
1995	Joseph F. Engelberger Award	T. Kanade
1992	Foreign Honorary Member of the American Academy of Arts and Sciences	S. Mori
1990	Person of Cultural Merit	S. Mori
	Fields Medal	S. Mori
	Japan Academy Prize	S. Mori
	Frank Nelson Cole Prize	S. Mori
1989	Inoue Prize for Science	S. Mori
1988	Autumn Prize of Mathematical Society of Japan	S. Mori
	Asahi Prize	M. Kashiwara
	Japan Academy Prize	M. Kashiwara
1983	Iyanaga Prize of Mathematical Society of Japan	S. Mori
1982	Asahi Prize	T. Honjo
1981	Noguchi Hideyo-Memorial Award for Medicine	T. Honjo
	Iyanaga Prize of Mathematical Society of Japan	M. Kashiwara

Current faculty, including distinguished professors and an invited distinguished professor.

Director-General Distinguished Professor

Shigefumi Mori

Algebraic Geometry
Birational Geometry

■ Biography

1973	B.Sc., Kyoto University
1975	M.Sc., Kyoto University
1978	Ph.D., Kyoto University
1975-1980	Assistant of Faculty of Science, Kyoto University
1980-1982	Lecturer of Faculty of Science, Nagoya University
1982-1987	Associate Professor of Faculty of Science, Nagoya University
1988-1990	Professor of Faculty of Science, Nagoya University
1990-2016	Professor of Research Institute for Mathematical Sciences, Kyoto University
2011-2014	Director of Research Institute for Mathematical Sciences, Kyoto University
2016-	Director-General and Distinguished Professor of KUIAS

| Research Overview |

Mori studies three-dimensional (3D) classification problems in a subfield known as birational classification theory of algebraic geometry. Algebraic geometry is a field in science that deals with shapes known as "algebraic varieties." Such an algebraic variety can appear in many slightly different forms if it is of dimension 2 (2D) or higher. The differences between these forms may be understood as partial dents or sharp points similar to those that appear in a physical object when it is struck by another. "Birational classification" refers to an approach where we ignore these minor differences when classifying algebraic varieties. It was known that one could make surfaces into minimal ones and minimize these differences by collapsing certain curves to points. This operation was known as the minimal model program (MMP).

For a long period of time, the generalization of the MMP to dimension three or higher was considered to be difficult; however, the introduction of extremal ray theory and application of general perspectives in [2]* was a major trigger for the development of 3D MMP. Following this, MMP was developed, and it was discovered that in a broad sense, 3D birational classification theory is linked to the conjectural existence of an operation known as "flip." Furthermore, in [3]*, by proving the existence of 3D flips, the problem of 3D MMP was resolved. Hence, the 3D birational classification theory was completed in a rough sense. Subsequently, with the contribution of many researchers, MMPs of dimension four or higher have been established in a practical form.

■ Honors

Iyanaga Prize of Mathematical Society of Japan (1983), Autumn Prize of Mathematical Society of Japan (1988), Inoue Prize for Science (1989), Frank Nelson Cole Prize (1990), Japan Academy Prize (1990), Fields Medal (1990), Person of Cultural Merit (1990), Foreign Honorary Member of the American Academy of Arts and Sciences (1992), Member of the Japan Academy (1998), Honorary Doctorate of University of Torino (2002), Fujihara Award (2004), University Professor of Nagoya University (2010), President of the International Mathematical Union (2015-2018), Foreign Member of the Russian Academy of Sciences (2016), Foreign Associate of US National Academy of Sciences (2017), Honorary Doctorate of University of Warwick (2017), Kodaira Kunihiko Prize (2019), Kyoto Prefecture Culture Prize for Outstanding Contribution (2020)

■ Selected Papers

[1] S. Mori, Projective manifolds with ample tangent bundles, *Ann. Math.* **110**, 593–606 (1979).
*[2] S. Mori, Threefolds whose canonical bundles are not numerically effective, *Ann. Math.* **116**, 133–176 (1982).
*[3] S. Mori, Flip theorem and the existence of minimal models for 3-folds, *J. Amer. Math.* Soc. **1**, 117–253 (1988).
[4] J. Kollar, S. Mori, Classification of three dimensional flips, *J. Amer. Math. Soc.* **5**, 533–703 (1992); *Erratum* **20**, 269–271 (2007).
[5] S. Mori, Y. Prokhorov, On Q-conic bundles, *Publ. Res. Inst. Math. Sci.* **44**, 315–369 (2008).

Deputy Director-General
Distinguished Professor

Tasuku Honjo

Molecular Immunology

■ Biography

1966	M.D., Kyoto University
1975	Ph.D., Kyoto University
1971-1973	Fellow of Carnegie Institution of Washington, Department of Embryology
1973-1974	Visiting Fellow and Associate of National Institute of Child Health and Human Development, NIH
1974-1979	Assistant Professor of Faculty of Medicine, The University of Tokyo
1979-1984	Professor of School of Medicine, Osaka University
1984-2005	Professor of Faculty of Medicine, Kyoto University
1996-2000	Director of Faculty of Medicine/Graduate School of Medicine, Kyoto University
2002-2004	Director of Faculty of Medicine/Graduate School of Medicine, Kyoto University
2005-	Specially-Appointed Professor of Graduate School of Medicine, Kyoto University
2006-2017	Visiting Professor of Kyoto University
2006-2012	Executive Member of the Council for Science and Technology Policy, Cabinet Office
2012-2017	Chairman, Board of Directors, Shizuoka Prefectural University Corporation
2015-	President of Foundation for Biomedical Research and Innovation (2018- Kobe Biomedical Innovation Cluster)
2017-	Distinguished Professor of KUIAS
2018-	Deputy Director-General of KUIAS
2020-	Director of Center for Cancer Immunotherapy and Immunobiology (CCII), Graduate School of Medicine, Kyoto University

| Research Overview |

Honjo is well known for his discovery of activation-induced cytidine deaminase (AID) that is essential for class switch recombination and somatic hypermutation. He has established the basic conceptual framework of class switch recombination starting from discovery of DNA deletion (1978). Dr. Honjo identified a series of key molecules involved in immune regulation, including IL-4, IL-5, SDF-1, and IL-2R α chain. Also appreciated is his seminal contribution to developmental biology by identification of RBP-J as the Notch signaling target. In addition, he discovered PD-1 (program cell death 1), a negative coreceptor at the effector phase of immune response and demonstrated that PD-1 inhibition contributes to cancer treatments. Anti-PD-1 cancer immunotherapy has been approved in US, EU, and Japan. This treatment revolutionalized the cancer therapy and is considered to be equivalent to penicillin in infectious diseases.

■ Honors

Noguchi Hideyo-Memorial Award for Medicine (1981), Asahi Prize (1982), The Imperial Prize and the Japan Academy Prize (1996), Person of Cultural Merit (2000), Foreign Associate of U.S. National Academy of Sciences (2001), Thomson Leading Japanese Scientists in Emerging Research Fronts (2004), Member of the Japan Academy (2005), Robert Koch Prize (2012), Order of Culture, Japan (2013), Tang Prize, Biopharmaceutical Science Award (2014), William B. Coley Award (2014), JCA-CHAAO Award (2014), Richard V. Smalley, MD Memorial Award (2015), Kyoto Prize (2016), The Keio Medical Science Prize (2016), Fudan-Zhongzhi Science Award in Biomedicine (2016), The Pharmaceutical Society of Japan Award (2016), Warren Alpert Foundation Prize (2017), Nobel Prize in Physiology or Medicine (2018)

■ Selected Papers

[1] T. Honjo, T. Kataoka, Organization of immunoglobulin heavy chain genes and allelic deletion model. *Proc. Natl. Acad. Sci. USA* **75**, 2140–2144 (1978).

[2] Y. Yaoita, T. Honjo, Deletion of immunoglobulin heavy chain genes from expressed allelic chromosome. *Nature* **286**, 850–853 (1980).

[3] Y. Ishida, Y. Agata, K. Shibahara, T. Honjo, Induced expression of PD-1, a novel member of the immunoglobulin gene superfamily, upon programmed cell death. *EMBO J.* **11**, 3887–3895 (1992).

[4] M. Muramatsu, K. Kinoshita, S. Fagarasan, S. Yamada,Y. Shinkai, T. Honjo, Class switch recombination and hypermutation require activation- induced cytidine deaminase (AID), a potential RNA editing enzyme. *Cell* **102**, 553–563 (2000).

[5] Y. Iwai, M. Ishida, Y. Tanaka, T. Okazaki, T. Honjo, N. Minato, Involvement of PD-L1 on tumor cells in the escape from host immune system and tumor immunotherapy by PD-L1 blockade. *Proc. Natl. Acad. Sci. USA* **99**, 12293–12297 (2002).

Deputy Director-General Distinguished Professor iCeMS Director

Susumu Kitagawa

Inorganic and Material Chemistry
Chemistry of Coordination Space

Biography

1974	B.Sc., Kyoto University
1976	M.Sc., Kyoto University
1979	Ph.D., Kyoto University
1979-1983	Assistant, Department of Chemistry, Kindai University
1983-1988	Lecturer, Department of Chemistry, Kindai University
1988-1992	Associate Professor of Department of Chemistry, Kindai University
1992-1998	Professor of Department of Chemistry, Tokyo Metropolitan University
1998-2017	Professor of Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University
2007-2012	Deputy Director and Professor of Institute for Integrated Cell-Material Sciences, Kyoto University
2013-2017	Director and Professor of Institute for Integrated Cell-Material Sciences, Kyoto University
2016-2018	Deputy Director-General of KUIAS
2017-	Distinguished Professor of KUIAS
2017-	Director of Institute for Integrated Cell-Material Sciences, KUIAS
2020-	Deputy Director-General of KUIAS

Research Overview

Kitagawa's main research field is inorganic and material chemistry, in particular, chemistry of coordination space, and his current research interests are centered on synthesis and properties of porous coordination polymers/metal-organic frameworks.

He was the first to discover and to demonstrate "porosity" for metal complexes with gas sorption experiments (1997), whose materials are called porous coordination polymers (PCPs) or metal-organic frameworks (MOFs). To date, MOFs are classified as a new category of porous materials, as opposed to the conventional classifications of inorganic and carbon materials. Kitagawa pioneered the functional chemistry of MOFs, and discovered flexible MOFs, dissimilar to those of conventional porous materials. Today several hundred different MOFs are known, and over 7,000 articles on this class of materials have been published annually worldwide. The research developments built on his discoveries are anticipated to lead to radical innovations in materials science, with wide-ranging implications for both academia and industry. Chemical industry firms are producing MOF materials for use in purification, storage, and transportation of gases, among other applications. Kitagawa's achievement has blazed a trail to a new era for porous materials, vital to addressing energy and environmental issues and contributing to human welfare.

Honors

The Chemical Society of Japan Award (2009), Thomson Reuters Citation Laureate (Chemistry) (2010), Medal with Purple Ribbon (2011), Kyoto University Shi-Shi Award (2013), The fellow of the UK Royal Society of Chemistry (2013), Leo Esaki Prize (2013), Japan Academy Prize (2016), Fred Basolo Medal (2016), Fujihara Award (2017), Chemistry for the Future Solvay Prize (2017), Honorary Member of the Chemical Society of Japan (2017), Grand Prix de la Fondation de la Maison de la Chimie (2018), Emanuel Merck Lectureship Award (2019), Member of the Japan Academy (2019)

Selected Papers

[1] R. Matsuda, R. Kitaura, S. Kitagawa, Y. Kubota, R. V. Belosludov, T. C. Kobayashi, H. Sakamoto, T. Chiba, M. Takata, Y. Kawazoe, Y. Mita, Highly controlled acetylene accommodation in a metal–organic microporous material. *Nature* **436**, 238–241 (2005).

[2] Y. Sakata, S. Furukawa, M. Kondo, K. Hirai, N. Horike, Y. Takashima, H. Uehara, N. Louvain, M. Meilikhov, T. Tsuruoka, S. Isoda, W. Kosaka, O. Sakata, S. Kitagawa, Shape-memory nanopores induced in coordination frameworks by crystal downsizing. *Science* **339**, 193–196 (2013).

[3] H. Sato, W. Kosaka, R. Matsuda, A. Hori, Y. Hijikata, R. V. Belosludov, S. Sakaki, M. Takata, S. Kitagawa, Self-Accelerating CO Sorption in a Soft Nanoporous Crystal. *Science* **343**, 167–170 (2014).

[4] N. Hosono, A. Terashima, S. Kusaka, R. Matsuda, S. Kitagawa, Highly responsive nature of porous coordination polymer surfaces imaged by in situ atomic force microscopy. *Nature Chemistry* **11**, 109–116 (2018).

[5] C. Gu, N. Hosono, J. Zheng, Y. Sato, S. Kusaka, S. Sakaki, S. Kitagawa, Design and control of gas diffusion process in a nanoporous soft crystal. *Science* **363**, 387–391 (2019).

Professor
ASHBi Director

Mitinori Saitou

Developmental Biology
Cell Biology

■ Biography

1995	M.D., Kyoto University
1999	Ph.D., Kyoto University
1999-2003	Travelling Research Fellow/Senior Research Associate, Wellcome Trust/Cancer Research UK Gurdon Institute for Developmental Biology and Cancer
2003-2009	Team leader, RIKEN Center for Developmental Biology
2009-2018	Professor, Graduate School of Medicine and Faculty of Medicine, Kyoto University
2011-2018	Director, JST Strategic Basic Research Programs ERATO
2013-2018	Adjunct Principal Investigator, Institute for Integrated Cell-Material Sciences, Kyoto University
2018-	Guest Principal Investigator, Center for iPS Cell Research and Application, Kyoto University
2018-	Professor of KUIAS Director of Institute for the Advanced Study of Human Biology, KUIAS

| Research Overview |

Saitou has been promoting studies on the developmental mechanisms of germ cells, the origin of all life. He clarified the formation mechanisms of mouse germ cells and successfully generated primordial germ cell-like cells (PGCLCs) in vitro from mouse ESCs and iPSCs to produce sperm, oocytes and healthy offspring. He used this experimental system as a model to investigate the molecular mechanisms of key phenomena in germ cell development, including epigenomic reprogramming, oocyte differentiation, and meiosis induction mechanisms. Saitou's analysis of the developmental mechanisms of cynomolgus monkeys has allowed us to identify the characteristics of pluripotent cell lineages in mice, monkeys and humans and the formation mechanisms of germ cells in primates. He has also generated PGCLCs and oogonium from human iPSCs and pioneered research on in vitro reconstitution in the process of human germ cell development.

Saitou aims to promote advanced human biology that develops these studies, to identify the characteristics and evolutionary mechanisms of humans and primates, and to lay out new possibilities in medical science.

■ Honors

Osaka Science Prize (2013), Japan Academy Medal and JSPS Prize (2014), Takeda Medical Prize (2016), Academic Award of the Mochida Memorial Foundation (2018), Asahi Prize, Uehara Prize, Imperial Prize and Japan Academy Prize, ISSCR Momentum Award, EMBO Associate Member (2020)

■ Selected Papers

[1] Saitou, M., Barton, S. C., and Surani, M. A. A molecular programme for the specification of germ cell fate in mice. *Nature*, **418**, 293-300 (2002).
[2] Ohinata, Y., Ohta, H., Shigeta, M., Yamanaka, K., Wakayama, T., and Saitou, M. A signaling principle for the specification of the germ cell lineage in mice. *Cell*, **137**, 571-584 (2009).
[3] Hayashi, K., Ohta, H., Kurimoto, K., Aramaki, S., and Saitou, M. Reconstitution of the mouse germ cell specification pathway in culture by pluripotent stem cells. *Cell*, **146**, 519-532 (2011).
[4] Nakamura, T., Okamoto, I., Sasaki, K., Yabuta, Y., Iwatani, C., Tsuchiya, H., Seita, Y., Nakamura, S., Yamamoto, T., and Saitou, M. A developmental coordinate of pluripotency among mice, monkeys, and humans, *Nature*, **537**, 57-62 (2016).
[5] Yamashiro, C., Sasaki, K., Yabuta, Y., Kojima, Y., Nakamura, T., Okamoto, I., Yokobayashi, S., Murase, Y., Ishikura, Y., Shirane, K., Sasaki, H., Yamamoto, T., and Saitou, M. Generation of human oogonia from induced pluripotent stem cells in vitro, *Science*, **362**, 356-360 (2018).

Takeo Kanade

Invited Distinguished Professor

Computer Vision, Robotics,
Artificial Intelligence, Multimedia

Since early 70's, Kanade has performed a series of pioneering research in computer vision. The feature of his accomplishments is that they are fundamental in nature and have practical impacts. To illustrate a few, his neural network-based face detection technique raised the detection rate to an unprecedented level and thus led to today's common use of face detection in smart phone cameras; his optical-flow algorithm for estimating the direction and speed of moving patterns is now the basis of almost all the video processing including motion video coding; and his factorization algorithm for the so-called structure-from-motion problem was one of the earliest algorithms that demonstrated a successful reconstruction of three-dimensional shape from image sequence, which now is a powerful and common procedure for scene modeling by video. Kanade launched an autonomous vehicle project in 1985, and formed the early foundation for the recent emergence of autonomous driving technologies. The team developed one of the first artificial intelligence systems capable of sensing freeway lanes, executing accurate lane changes, recognizing and avoiding obstacles, and detecting other vehicles in real time based on data from vehicle-mounted range sensors and cameras. In 1995, he carried out a demonstration called No Hands Across America, in which the NAVLAB 5 vehicle drove from coast to coast, 98.2% under auto driving.

Biography

1974	Ph.D., Kyoto University
1974-1976	Research Assistant, Faculty of Engineering, Kyoto University
1976-1980	Associate Professor, Faculty of Engineering, Kyoto University
1980-1982	Senior Research Scientist, The Robotics Institute and Computer Science Department, Carnegie Mellon University (CMU)
1982-1985	Associate Professor, The Robotics Institute and Computer Science Department, CMU
1985-1994	Professor, The Robotics Institute and Computer Science Department, CMU
1992-2001	Director, The Robotics Institute, CMU
1993-1998	U.A. and Helen Whitaker Chaired Professor, CMU
1998-	U.A. and Helen Whitaker University Professor, CMU
2004-2010	Director, Digital Human Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Japan
2006-2012	Director, Quality of Life Technology Engineering Research Center, CMU
2015-	Honorary AIST Fellow
2016-	Senior advisor, Center for Advanced Integrated Intelligence Research, RIKEN
2017-	Invited Distinguished Professor, Kyoto University Institute for Advanced Study (KUIAS)

Honors

Joseph F. Engelberger Award (1995), Foreign Member of US National Academy of Engineering (1997), C&C Prize (2000), Funai Achievement Award (2004), Azriel Rosenfeld Lifetime Achievement Award, IEEE Computer Society (2007), Robot & Automation Pioneer Award, IEEE (2007), Okawa Prize (2007), Bower Award and Prize for Achievement in Science, The Franklin Institute (2008), ACM-AAAI Allen Newell Award (2010), Tateishi Prize, Grand Award (2010), Kyoto Prize (2016), IEEE Founders Medal (2017), Person of Cultural Merit (2019), Global IT Award, State Award of Armenia (2019), Member of the Japan Academy (2020)

Masaki Kashiwara

Program-Specific Professor

Mathematics, Algebraic Analysis,
Representation Theory

Dr. Kashiwara's work in Mathematics extends from microlocal analysis, representation theory and combinatorics to homological algebra, symplectic geometry and integrable systems. Most well-known works of him are his contributions to the theory of D-modules and his creation of crystal basis theory. Introduced by Sato around 1960, algebraic analysis is a framework in which systems of linear differential equations are formulated as modules over the ring D of differential operators and are investigated with algebraic means such as rings, modules, sheaves and categories. Sato's idea of D-modules was greatly developed by Kashiwara, and has become a fundamental tool in many branches of mathematics. In the 1980s with Schapira he further introduced and developed microlocal sheaf theory. One of his early major results was his 1980 construction of the Riemann-Hilbert correspondence, a generalization of Hilbert's 21st problem about the existence of a linear differential equation on the projective line with prescribed monodromy. The Riemann-Hilbert correspondence, found a remarkable application to a problem in representation theory, called the Kazhdan-Lusztig conjecture.

Biography

1971	M.Sci., Graduate School of Science, The University of Tokyo
1971-1974	Assistant, Research Institute for Mathematical Sciences, Kyoto University
1974-1977	Associate Professor, Nagoya University
1974	Ph.D., Kyoto University
1977-1978	Associate researcher, Massachusetts Institute of Technology
1978-1984	Associate Professor, Research Institute for Mathematical Sciences, Kyoto University
1984-2010	Professor, Research Institute for Mathematical Sciences, Kyoto University
2001-2003	Director of Research Institute for Mathematical Sciences, Kyoto University
2007-2009	Director of Research Institute for Mathematical Sciences, Kyoto University
2010-	Project Professor, Research Institute for Mathematical Sciences, Kyoto University
2019-	Program-Specific Professor, Kyoto University Institute for Advanced Study (KUIAS)

Honors

Iyanaga Prize of Mathematical Society of Japan (1981), Asahi Prize (1988), Japan Academy Prize (1988), Member of the Japan Academy (2007), Fujihara Award (2008), Chern Medal (2018), Kyoto Prize (2018), The Order of the Sacred Treasure, Gold and Silver Star (2020)

Yasuaki Hiraoka

Director of Center for Advanced Study / Deputy Director of ASHBi / Professor

Topological Data Analysis, Applied Mathematics

Hiraoka is a world leading mathematician in the area of topological data analysis (TDA). He studies mathematical theory and algorithms of TDA, and also works on applying them into scientific and engineering problems. His primary interest is to develop descriptors for characterizing shape of complex and big data. By combining various mathematical theories such as topology, representation, probability, he succeeded in making TDA powerful and general for practical problems. In applications, he has organized the materials TDA team, and his group achieved several pioneering results on structural analysis in materials science based on TDA. In particular, a series of methods developed by his group using persistent homology, machine learning, and inverse analysis are expected to be a key technology for materials informatics in future. In addition to materials science, he has recently launched TDA projects for other application areas such as life science.

Biography

2005	Doctor of Science, Graduate School of Engineering Science, Osaka University
2005-2006	JSPS PD, Research Institute for Electronic Science, Hokkaido University
2006-2009	Assistant Professor, Graduate School of Science, Hiroshima University
2009-2011	Associate Professor, Graduate School of Science, Hiroshima University
2009-2010	Visiting researcher, Department of Mathematics, University of Pennsylvania
2011-2015	Associate Professor, Institute of Mathematics for Industry (IMI), Kyushu University
2015-2016	Associate Professor, Advanced Institute for Materials Research (AIMR), Tohoku University
2016-2018	Professor, Advanced Institute for Materials Research (AIMR), Tohoku University
2017-	Team Leader, Center for Advanced Intelligence Project, RIKEN
2018-	Director of Center for Advanced Study and Professor, Kyoto University Institute for Advanced Study (KUIAS)
2018-	Deputy Director of Institute for the Advanced Study of Human Biology, Kyoto University Institute for Advanced Study (KUIAS)

Honors

JSIAM Best Paper Award (2004), The 1st Hiroshi Fujiwara Mathematical Science Award (2012), NISTEP Award (2016), JCS-Japan Award of the Outstanding Papers (2019)

Yasuhiro Murakawa

Professor

Human Genomics, Medicine, Life Science

More than 15 years have passed since the DNA sequence of the human genome, the general blueprint of the human being, was determined by an international research effort. However, “what is written in our human genome” is still largely unknown. Dr. Murakawa's team aims to understand the operating principles of our human genome that give rise to the dynamics of life, by combining classical biochemistry, cutting-edge high-throughput sequencing technology, and bioinformatics approach. We integrate multi-scale human data from the molecular level to the social level, and understand the fundamental mechanisms of our life, aging and death. We are also engaged in research with the aim of elucidating how diseases are caused and creating new future therapies. To this end, we hope to stay eccentric.

Biography

2008	M.D., Kyoto University
2008-2010	Resident, Kyoto University Hospital
2010-2015	DAAD fellow, Max-Delbrueck-Center for Molecular Medicine
2014	Ph.D., Free University of Berlin
2015-2019	Manager, RIKEN Preventive Medicine & Diagnosis (PMI)
2016-2018	Unit Leader, RIKEN Innovation Center (RInC)
2018-2020	Team Leader, RIKEN Center for Integrative Medical Sciences (IMS)
2019-2020	Group Leader, The FIRC Institute Molecular Oncology (IFOM)
2020-	Professor, Kyoto University Institute for Advanced Study (KUIAS)

Honors

Kyoto University President’s Award (2008)

Shinya Yamamoto

Associate Professor

Animal Behavior, Comparative Cognitive Science

Yamamoto is studying the evolution of sociality and its related intelligence in humans and non-human animals, developing a two-by-two research paradigm: experiments and fieldwork with chimpanzees and bonobos. Recently he has been expanding this to some other animals such as dogs, cats, horses and elephants, both in captivity and in natural environments. His ultimate theme is to explore what humanity is. Where did it come from and how can it change in the future? He is especially interested in the evolution of social living characterized by empathy, cooperation, and culture. His previous work has revealed that chimpanzees help others upon request, but not proactively, even when they understand others' goals. This suggests that proactive helping is one of unique characteristics of humans. His main research sites are the Kumamoto Sanctuary (chimpanzees and bonobos), Wamba and Mbali/Malebo in DR Congo (wild bonobos), Bossou in Guinea (wild chimpanzees), horse-riding clubs and dog nurseries in Japan, Serra d'Arga in Portugal (feral horses), and Taiwan (free-ranging dogs).

Biography

2009	Ph.D. Science (Comparative Psychology), Graduate School of Science, Kyoto University
2009-2010	JSPS Post Doctoral Fellow (PD), Graduate School of Arts and Sciences, University of Tokyo
2010-2013	Program-specific Assistant Professor, Primate Research Institute, Kyoto University
2013-2017	Associate Professor, Graduate School of Intercultural Studies, Kobe University
2013-2017	Specially Appointed Associate Professor, Wildlife Research Center, Kyoto University
2017-	Associate Professor, Kyoto University Institute for Advanced Study (KUIAS)
2017-	Concurrent Associate Professor, Wildlife Research Center, Kyoto University

Honors

Takashima Award, Primate Society of Japan (2011), Award for Distinguished Early and Middle Career Contribution, Japanese Psychological Association’s International Award (2015), Young Researcher Award, Kobe University President Award (2016), MEXT Young Scientists' Prize (2019)

wpi World Premier International Research Center Initiative

Institute for Integrated Cell-Material Sciences (iCeMS)

iCeMS KYOTO UNIVERSITY WPI Research Center

iCeMS is committed to integrating materials science and cell biology to establish novel academic disciplines. Our mission is to explore the secrets of life by creating compounds to control cells, and further down the road to create life-inspired super materials.

Our approach is radical and new. At iCeMS we are not simply rewriting the rule-book, we are throwing it out of the window. Traditional single discipline-based research is not enough for nurturing flexible and innovative ideas. Thus at iCeMS biologists, chemists, engineers, physicists, and mathematicians share ideas and work together to devise new ways to integrate cells and materials, to keep creating new science.

iCeMS was established in 2007 as a center of the World Premier International Research Center Initiative (WPI) supported by Japan's ministry of science and has since fostered research excellence and promoted internationalization. In 2017, the institute was certified as a WPI Academy center for its level of research and management was recognized as the World Premier Status.

Susumu Kitagawa
Director

■ Timeline

2007	Sep.	iCeMS is selected for the World Premier International Research Center (WPI) Initiative by the Ministry of Education, Culture, Sports, Science and Technology (MEXT).
	Oct.	iCeMS is established at Kyoto University with Prof. Norio Nakatsuji as founding director.
2008	Jan.	The Center for iPS Cell Research and Application (CiRA) is established under the auspices of iCeMS with Prof. Shinya Yamanaka as founding director.
2010	Apr.	The Center for iPS Cell Research and Application (CiRA) is re-established as a sister institute to iCeMS with Prof. Shinya Yamanaka as founding director.
2012	Oct.	Prof. Shinya Yamanaka wins the Nobel Prize in Physiology or Medicine.
2013	Jan.	Prof. Susumu Kitagawa succeeds Prof. Nakatsuji as director.
2017	Apr.	iCeMS becomes a research center of KUIAS.
	May	iCeMS is certified as a WPI Academy center by MEXT.

icems.kyoto-u.ac.jp/en/

■ Principal Investigators（PIs）/ Adjunct PIs

At iCeMS, researchers from different fields work together to devise groundbreaking ideas.

● PIs
● Adjunct PIs

Chemical Biology


● Dan Ohtan Wang


● Motonari Uesugi

Cell Biology


● Jun Suzuki


● Ryoichiro Kageyama


● Ganesh Pandian Namasivayam


● Hiroshi Sugiyama


● Peter Carlton


● Mineko Kengaku


● Kazumitsu Ueda


● Itaru Hamachi


● Michiyuki Matsuda


● Yuichi Taniguchi


● Aiko Fukazawa


● Ken-ichiro Kamei

Tissue Engineering

Materials Science


● Shuhei Furukawa


● Daishi Fujita


● Easan Sivaniah


● Susumu Kitagawa


● Fuyuhiko Tamanoi


● Hiroshi Imahori


● Satoshi Horike


● Hiroshi Kageyama


● Daniel Packwood


● Kunihisa Sugimoto


● Kazuki Nakanishi


● Hiroshi Kitagawa


● Yasuo Mori


● Motomu Tanaka


● Ryu Abe


● Koichiro Tanaka

Biophysics

Research Center

wpi World Premier International Research Center Initiative

Institute for the Advanced Study of Human Biology (ASHBi)

ASHBi aims to establish an advanced study of human biology that sheds light on the origin and unique characterics of human beings, by elucidating the design principles of human beings and disease states and by synthesizing this knowledge, using an interdisciplinary methodology that integrates multiple fields of study (life sciences, mathematics, humanities).

ASHBi was established in 2018 within the Kyoto University Institute for Advanced Study (KUIAS) as a new research center for the World Premier International Research Center Initiative (WPI) program of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). ASHBi creates a highly open and flexible international research environment, and along with iCeMS, will be a world-leading international research center.

Mitinori Saitou
Director

■ Key Features of the Institute

- Research collaboration between biology and mathematics, and between biology and the humanities
- Core facilities with leading-edge technologies: Single-Cell Genome Information Analysis Core (SignAC), Primate Genome Engineering Core (PRiME) and Non-human Primate Phenotype Analysis Facility (NPAF)
- Prioritized support for overseas PIs and links with key international institutions (including EMBL, University of Cambridge, Karolinska Institutet)
- Strong links with the Kyoto University Hospital
- Prioritized support for early-career PIs linking with the University's researcher fostering projects.

■ Timeline

2018 Oct. ASHBi is selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) as a part of the World Premier International Research Center Initiative (WPI).
ASHBi is established within KUIAS.
ASHBi Satellite is established at the Shiga University of Medical Science.

2019 Mar. ASHBi Kick-off Symposium is held.

ash bi. kyoto-u.ac.j p/

■ Key Investigators

At ASHBi, researchers in life sciences, mathematics and humanities pursue to create new ideas beyond their respective fields.

Cantas Alev ●
Program-Specific Research Center
Associate Professor, KUIAS
Developmental Biology

Ken-ichi Amemori ●
Program-Specific Research Center
Associate Professor, KUIAS
Neuroscience,
Cognitive Neurophysiology

Guillaume Bourque ●
Professor, McGill University
Bioinformatics

Mototsugu Eiraku ●
Professor, Institute for Frontier
Life and Medical Sciences
Developmental Biology

Masatsugu Ema ●
Professor, Shiga University
of Medical Science
Developmental Engineering

Anne Ferguson-Smith
[Senior Academic Mentor]
Professor, University of Cambridge
Epigenetic Inheritance,
Developmental Genetics

Misao Fujita ●
Program-Specific Professor,
Center for iPS Cell Research and
Application, Kyoto University
Bioethics

Takashi Hiiragi ●
Group Leader, European
Molecular Biology Laboratory (EMBL)
Developmental Biology

Yasuaki Hiraoka ●
[Vice Director]
Professor, KUIAS
Applied Mathematics

Fumitaka Inoue ●
Program-Specific Associate
Professor, KUIAS
Genomics, Molecular
Developmental Biology

Tadashi Isa ●
[Vice Director]
Professor, Graduate
School of Medicine
Neuroscience

Shingo Iwami
[Associate Investigator]
Associate Professor,
Kyushu University
Mathematical Sciences,
Mathematical Biology

Tomoyuki Miura
[Associate Investigator]
Associate Professor,
Institute for Frontier Life and
Medical Sciences
Virology

Yasuhiro Murakawa ●
Professor, KUIAS
Systems Biology, Genomics

Seishi Ogawa ●
Professor, Graduate
School of Medicine
Molecular Oncology

Tadashi Ogawa
[Administrative Director]
Program-Specific Professor, KUIAS
Cognitive Neuroscience,
Experimental Psychology

Mitinori Saitou ●
[Director]
Professor, KUIAS
Developmental Biology

Shohei Shimizu
[Associate Investigator]
Professor, Shiga University
Statistical Science

Tomoyuki Tsukiyama ●
[Core Head (PRiME)]
Associate Professor,
Shiga University of Medical Science
Developmental Engineering,
Reproductive and Stem Cell Biology

Hideki Ueno ●
Professor, Icahn School of
Medicine at Mount Sinai
Immunology

Ryo Yamamoto ●
Program-Specific Research Center
Associate Professor, KUIAS
Stem Cell Biology & Hematology

Takuya Yamamoto ●
[Core Head (SignAC)]
Associate Professor, Center for
iPS Cell Research and Application
Molecular Biology, Bioinformatics

Motoko Yanagita ●
Professor, Graduate
School of Medicine
Nephrology

Hiroyuki Yoshitomi ●
Associate Professor,
Graduate School of Medicine
Human Immunology

● Principal Investigators (PIs)
● Co-PIs

Collaborative Research Centers

AIST-Kyoto University Chemical Energy Materials Open Innovation Laboratory (ChEM-OIL)

ChEM-OIL integrates the expertise of Kyoto University and the National Institute of Advanced Industrial Science and Technology (AIST) by combining basic materials science and device development/application. It aims to create non-conventional technologies for energy conversion and storage by directly integrating Kyoto University's inventions in advanced materials, such as porous coordination polymers (MOFs/PCPs), electrolytes, and metal-catalyst nanoparticles, with AIST's expertise in the construction of functional interface and development of electrochemical devices. Its objective is to focus on basic research and serve as a bridge to promote private business participation in its industry-government-academia network. To this end, ChEM-OIL will conduct basic and applied research on base technologies and materials (e.g., electrolytes) and further enhance technologies for designing and developing catalyst materials and electrodes, which are necessary to accomplish the practical application of innovative technologies for advanced chemical materials catering to energy-related issues.

RIKEN-Kyoto University Science, Technology and Innovation Hub (RIKEN-Kyoto U Hub)

Through collaboration between Kyoto University and RIKEN, this Hub aims to conduct joint research by using their respective potencies, extending the borders of their research organizational frameworks and study areas. It further strives to promote the world's most advanced research, leading to the development of new research horizons, and motivate next-generation researchers to advance its endeavors.

SUURI-COOL

The first collaborative center of the Hub, has recently been established within KUIAS. Its ultimate goal is to unravel the mysteries of the universe, matter and life, as well as address various key issues of modern society through its unique interdisciplinary approaches focusing on mathematics.

Endowed Research Section / Industry-University Joint Research Section

Center for Integrative Medicine and Physics (iCeMS-CiMPhy)

This center has been established by the munificence of Nakatani Foundation for Advancement of Measuring Technologies in Biomedical Engineering with an objective to integrate physics and clinical medicine. The center aims to develop multiscale measurement/analysis platforms for the diagnosis of diseases and develop new technologies for the quantitative evaluation of the dynamics and collective order of cells. This center actively contributes to the society by implementing its newly developed measurement platforms (both hardware and software) and nurturing junior researchers with a global mindset.

KUIAS-Heidelberg-iTHEMS joint WS "Mathematical Sciences and Medicine" at SUURI-COOL Kyoto

Facilities

KUIAS Main Building

[Approx. 4,000㎡]

The Main Building bears the headquarter functions of KUIAS. In addition to laboratories and collaborative research spaces, the building has a seminar hall, a lounge for informal gatherings of researchers, and an exhibition room which can also be used for meetings.

KUIAS West Building

[Approx. 550㎡]

The West Building mainly serves as the laboratory and office of faculty members and researchers of the Center for Advanced Study.
To facilitate exchanges among researchers, the building is also equipped with shared spaces.

KUIAS iCeMS Research Building

Research Building No.1 / Project Lab

Research Building No.1 Annex

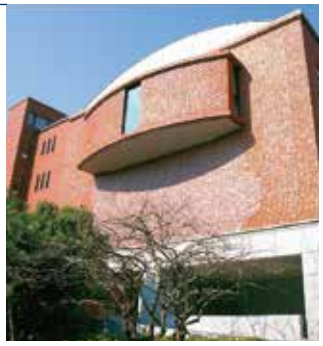
[Approx. 6,000㎡]

In addition to laboratories for PIs, the building is equipped with the analysis center and common laboratories, as well as open office spaces and community spaces to advance cross-disciplinary research.

Faculty of Medicine Building B Institute for the Advanced Study of Human Biology

[Approx. 1,900㎡]

In addition to laboratories for PIs, the building is equipped with the single-cell genome information analysis core and common laboratories, as well as open office spaces and community spaces to advance cross-disciplinary research.



AIST-Kyoto University Chemical Energy Materials Open Innovation Laboratory (ChEM-OIL)

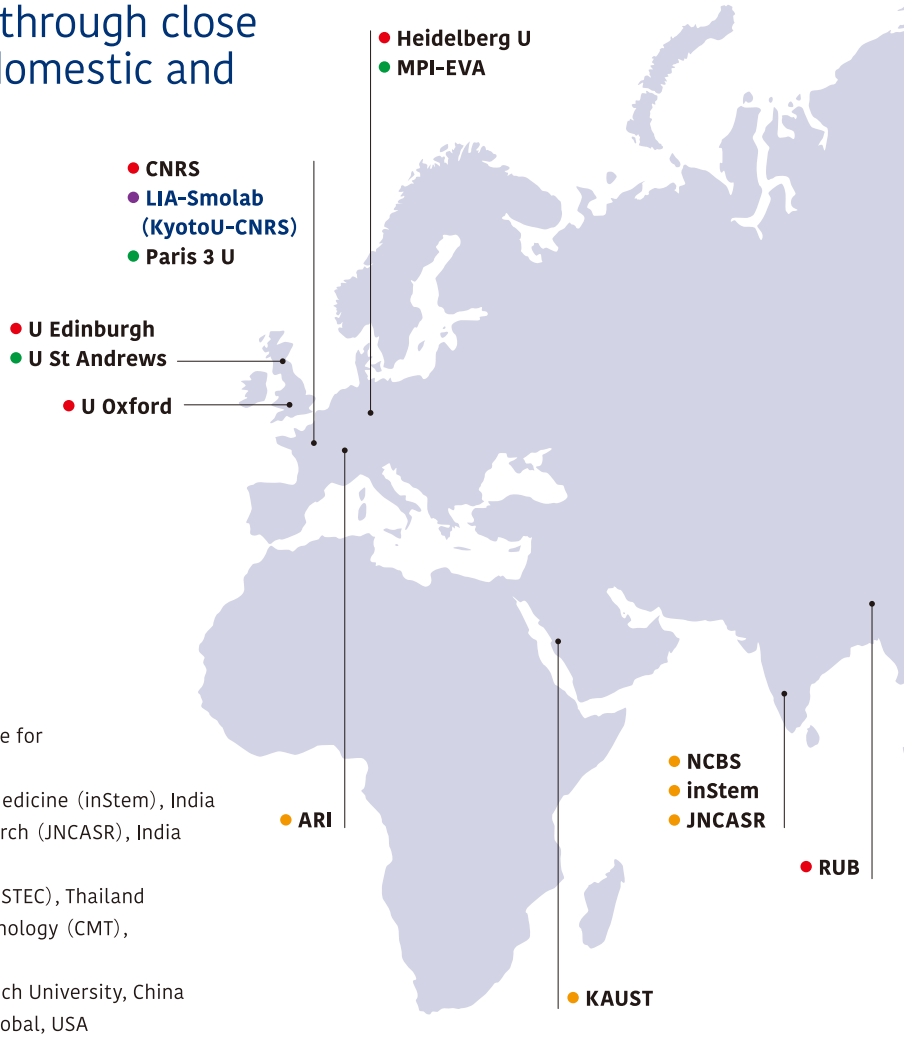
(in International Science Innovation Building)

[Approx. 165㎡]

ChEM-OIL acts as a bridge between industry and academia to accelerate commercialization of next-generation chemical materials and technologies for energy issues.

Partner Institutions

KUIAS enriches its research through close contact with the following domestic and international partners.



| International Partners |

University-level MoU Partners

- Seoul National University, South Korea
- Pohang University of Science and Technology (POSTECH), South Korea
- Rice University, USA
- Heidelberg University, Germany
- University of Edinburgh, UK
- University of Oxford, UK
- Royal University of Bhutan, Bhutan
- National Center for Scientific Research (CNRS), France
- Academia Sinica, Taiwan
- National Taiwan University (NTU), Taiwan

MoU Partners

- California NanoSystems Institute (CNSI), UCLA, USA
- Tata Institute of Fundamental Research National Centre for Biological Sciences (NCBS), India
- The Institute for Stem Cell Biology and Regenerative Medicine (inStem), India
- Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), India
- Peking-Tsinghua Center for Life Sciences (CLS), China
- Vidyasirimedhi Institute of Science and Technology (VISTEC), Thailand
- Research and Development Center for Membrane Technology (CMT), Chung Yuan Christian University (CYCU), Taiwan
- School of Physical Science and Technology, ShanghaiTech University, China
- Zoological Society of San Diego d/b/a San Diego Zoo Global, USA
- AO Research Institute Davos (ARI), AO Foundation, Switzerland
- School of Environmental and Chemical Engineering (ECE), Shanghai University (SHU), China
- King Abdullah University of Science and Technology (KAUST), Saudi Arabia
- School of Materials Science and Engineering, South China University of Technology (SCUT), China
- Center for Self-assembly and Complexity (CSC), Institute for Basic Science (IBS), South Korea
- Department of Chemistry, Ulsan National Institute of Science and Technology (UNIST), South Korea

Overseas Office (iCeMS)

- iCeMS Taiwan Office, Taiwan

International Associated Laboratory (CNRS-LIA)

- Small Molecule Lab: LIA-Smolab (KyotoU-CNRS), France

Collaborative Laboratory (iCeMS)

- ZEISS-iCeMS Innovation Core, Japan

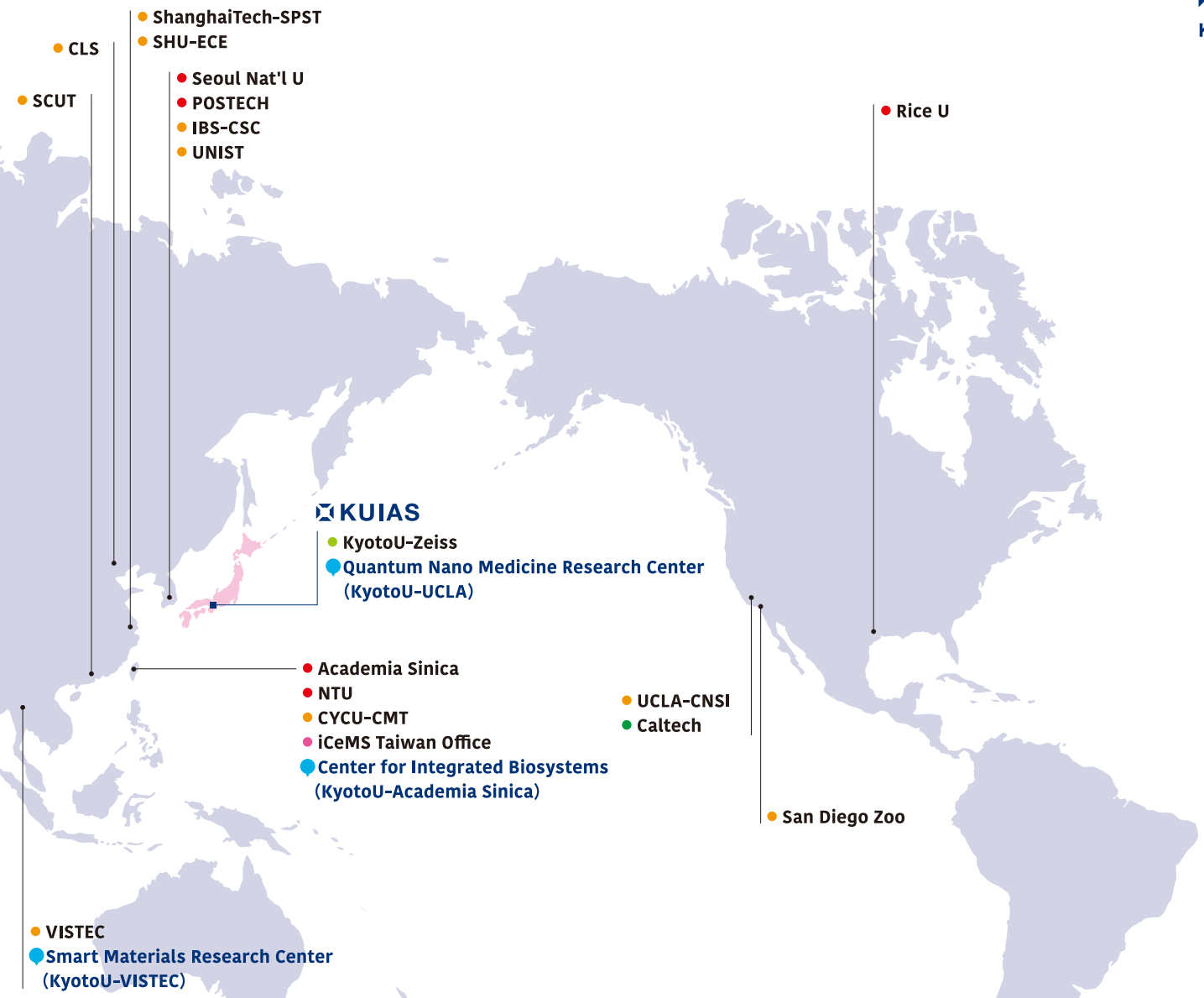
International Partners

- California Institute of Technology (Caltech), USA
- Max Planck Institute for Evolutionary Anthropology (MPI-EVA), Germany
- University of St Andrews, UK
- Sorbonne Nouvelle Paris III University, France

KyotoU On-site Laboratories

Kyoto University launched an 'on-site laboratory' initiative in 2018 as part of a strategy implemented under the education ministry's Designated National University (DNU) program. The initiative involves KyotoU departments/centers and their overseas partners collaboratively establishing laboratories.
These centers are tasked with conducting world-leading advanced research, developing quality human capital, recruiting talented international students, and expanding collaboration with industrial partners.

- Smart Materials Research Center (KyotoU-VISTEC), Thailand
- Center for Integrated Biosystems (KyotoU-Academia Sinica), Taiwan
- Quantum Nano Medicine Research Center (KyotoU-UCLA), Japan



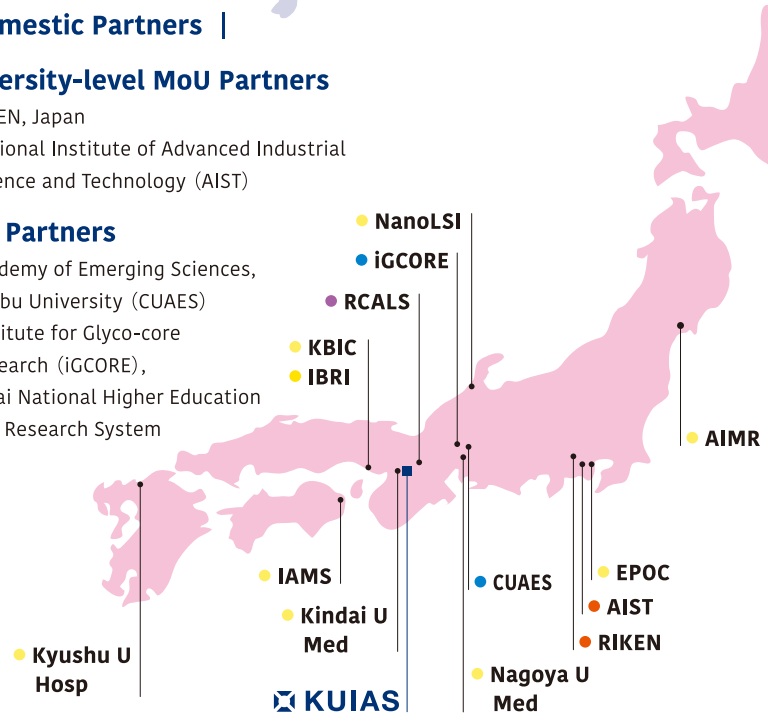
Domestic Partners

University-level MoU Partners

- RIKEN, Japan
- National Institute of Advanced Industrial Science and Technology (AIST)

MoU Partners

- Academy of Emerging Sciences, Chubu University (CUAES)
- Institute for Glyco-core Research (iGCORE), Tokai National Higher Education and Research System



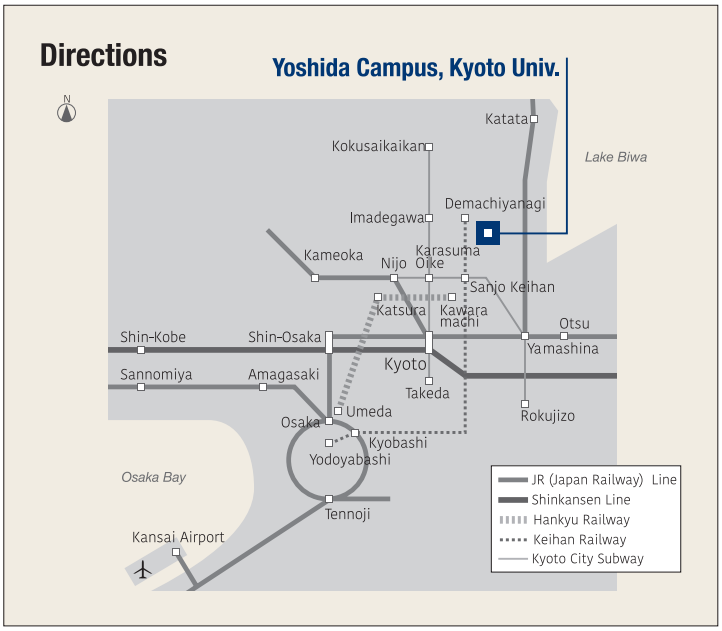
Domestic Partners

- Advanced Institute for Materials Research (AIMR), Tohoku University
- Nano Life Science Institute (NanoLSI), Kanazawa University
- Exploratory Oncology Research & Clinical Trial Center (EPOC), National Cancer Center
- Graduate School of Medicine, Nagoya University
- Faculty of Medicine, Kindai University
- Kobe Biomedical Innovation Cluster (KBIC)
- Institute of Biomedical Research and Innovation (IBRI)
- Institute of Advanced Medical Sciences (IAMS), Tokushima University
- Kyushu University Hospital

Satellite (ASHBi)

- Research Center for Animal Life Science, Shiga University of Medical Science (RCALS)

125th ANNIVERSARY KYOTO UNIVERSITY



KUIAS Main Building
KUIAS West Building

Yoshida Ushinomiya-cho, Sakyo-ku, Kyoto
One-minute walk from "Kyodai Seimon-mae" Stop (Kyoto City Bus)

KUIAS iCeMS Research Building

- Research Building No.1 / Project Lab
- Research Building No.1 Annex

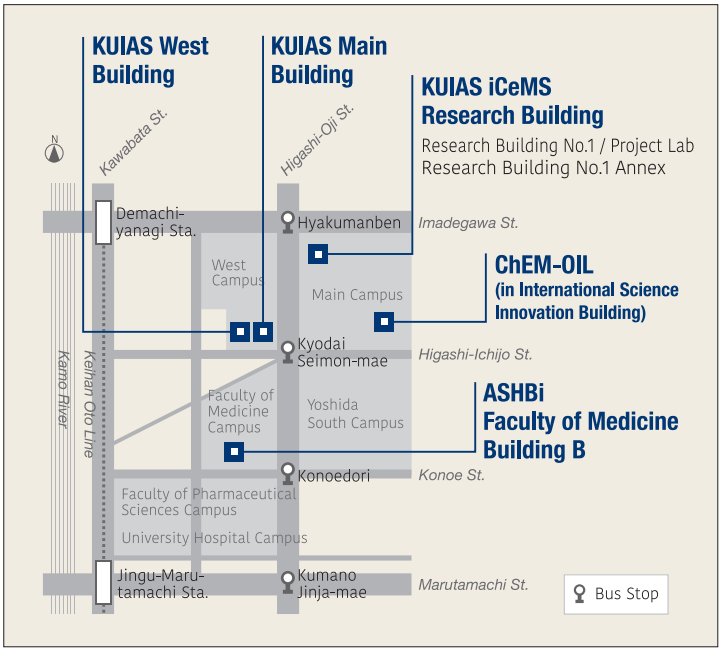
Yoshida Honmachi, Sakyo-ku, Kyoto
One-minute walk from "Hyakumanben" Stop (Kyoto City Bus)

AIST-Kyoto University Chemical Energy Materials Open Innovation Laboratory (ChEM-OIL)

Yoshida Honmachi, Sakyo-ku, Kyoto
Five-minute walk from "Kyodai Seimon-mae" Stop (Kyoto City Bus)

Faculty of Medicine Building B Institute for the Advanced Study of Human Biology (ASHBi)

Yoshida Konoe-cho, Sakyo-ku, Kyoto
Five-minute walk from "Konoedori" Stop (Kyoto City Bus)



KUIAS
Kyoto University Institute for Advanced Study (KUIAS)
Yoshida Ushinomiya-cho, Sakyo-ku, Kyoto 606-8501, Japan
PHONE: +81-75-753-9753 E-mail: info@kuias.kyoto-u.ac.jp

Latest info on KUIAS

kuias.kyoto-u.ac.jp/e

KUIAS Brochure Issued: January 2021