

List of Faculty Members, Graduate School of Life Science(As of October 1, 2022)

Transdisciplinary Life Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Bioinformation and Molecular Science	Professor	Toyoyuki Ose	Protein, nucleic acid, enzyme, signal transduction, infection regulation, disease related factor, X-ray/neutron structural biology, cryo-EM, NMR, quantum biology, protein crystallography, computer science, protein science, biophysics https://altair.sci.hokudai.ac.jp/g6/index-e.html
	Associate Professor Assistant Professor	UEHARA Ryota ISHIHARA Sumire	Cell division, ploidy, cytoskeleton, motor protein, self organization, cancer, aging, liver disease, microscopic analysis, biochemistry, molecular biology, cell culture, mouse model, transcriptome, mathematical modeling, compound screen https://altair.sci.hokudai.ac.jp/uehara_lab/
	Associate Professor Assistant Professor	NAKAOKA Shinji YAMAGUCHI Ryo	mathematical biology, systems biology, bioinformatics, microbial ecology, precision medicine, multi-omics, mathematical modeling, machine learning, big data analysis https://altair.sci.hokudai.ac.jp/infmcb/index-e.html
Biomaterials Science	Professor Lecturer Assistant Professor Assistant Professor	MONDE Kenji TANIGUCHI Tohru MURAI Yuta SWAMY Mahadeva M. M.	Chemical Biology, Chirality, Organic Synthesis, Inhibitors, Vibrational Circular Dichroism, Helix, Lipid Mediator, Glycoconjugate, Medicinal Chemistry https://altair.sci.hokudai.ac.jp/infchb/
	Professor Assistant Professor Assistant Professor	TAMAOKI Nobuyuki PADINHARE KAYAKALI Hashim AMMATHNADU SUDHAKAR Amrutha	molecular machine, motor protein, photochromic compound, azobenzene, liquid crystal, self-organization, inter-molecular interaction, organic synthesis, nano bio-machine, single molecular measurement, chirality http://tamaoki.es.hokudai.ac.jp/english/index.html
Functional Cellular Science	Professor Associate Professor Specially Appointed Assistant Professor	AYABE Tokiyoshi NAKAMURA Kiminori YOKOI Yuki	innate immunity, antimicrobial peptide, mucosal immunity, intestinal epithelial cell, Paneth cell, alpha-defensin, stem cell, intestinal microbiota, intestinal environment, inflammatory bowel disease, lifestyle diseases, food and medicine, preventive medicine, therapeutics https://altair.sci.hokudai.ac.jp/infsig/english/
	Professor Lecturer	Masataka Kinjo Akira Kitamura	Fluorescence Correlation Spectroscopy, Fluorescence Cross Correlation Spectroscopy, single molecule detection, neurodegenerative disease, ALS, glaucoma, molecular interaction, Live cell imaging, proteostasis, protein aggregation, C. elegans https://altair.sci.hokudai.ac.jp/infmcd/English/top_eng.html

Transdisciplinary Life Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Functional and Regulatory Life Science	Professor Professor	NISHIMURA Shin-Ichiro HINOUE Hiroshi	Chemical biology, Medicinal chemistry, Glycomedicine, Automated glycosynthesis, Glycomics, Glycobiology, Biomarker discovery, Dynamic epitope, Glycopeptide, Antibody drug, Glycoconjugates probe, Microarray https://altair.sci.hokudai.ac.jp/g4/index.html
	Assistant Professor	TAN Roger S.	
	Specially Appointed Professor	Toshiaki Koda	neurodegenerative disease, poly-glutamine disease, autophagy, model mice, embryonic engineering http://altair.sci.hokudai.ac.jp/infemb/index.html
Biomolecular Adaptation Science (Inter-field Cooperation with AIST)	Visiting Professor	KOMATSU Yasuo	Antifreeze protein, Ice-binding function, Snow mold fungi, Gene expression, Protein crystallography, Biodiversity, Cell-preservation peptide, 3D molecular structure, Gene detection, Nucleic acid drugs, Functional DNA/RNA, Molecular detection, Cell-function evaluation, Electrochemistry https://altair.sci.hokudai.ac.jp/g_renkei/top_e.html https://unit.aist.go.jp/bpri/bpri-bimo/research1.html
	Visiting Professor	KONDO Hidemasa	
	Visiting Associate Professor	HIRANO Yu	
Frontier Biomaterials Science Inter-Field Cooperation with National Institute for Material Science (NIMS)	Visiting Professor	HANAGATA Nobutaka	Nanomedicine, nanobiotechnology, protein engineering, nucleic acid-based drug, adjuvant, DNA aptamer, biosensor, immune system, comprehensive gene analysis, nanoparticle, DNA delivery, nanotoxicity https://www.nims.go.jp/hokudai/index_en.html https://life.sci.hokudai.ac.jp/en/tl/lab/frontier-biomaterials-science http://www.nims.go.jp/group/nanomedicine/english/index.html
	Visiting Associate Professor	YAMAZAKI Tomohiko	

List of Faculty Members, Graduate School of Life Science(As of October 1, 2022)

Biosystems Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Higher Order Cellular Functions	Professor Assistant Professor	TANAKA Kazuma KISHIMOTO Takuma	cell polarity, phospholipid asymmetry, membrane traffic, flippase, yeast http://www.igm.hokudai.ac.jp/molint/index.html
	Professor Assistant Professor	FUJITA Tomomichi BEIER Pascal Marcel	plant, evolutionary development, stem cell, cell polarity, cell cycle, cell proliferation and differentiation, extreme environmental stress, abscisic acid, moss, space utilization science, terraforming, <i>Physcomitrium patens</i> , <i>Arabidopsis thaliana</i> https://keitai1.sci.hokudai.ac.jp/en.html/
	Associate Professor	NARAMOTO Satoshi	(1) Molecular mechanisms of polar auxin transport, (2) Evolutionary process of polar auxin transport, (3) Roles of auxin in the morphological diversification of land plants, (4) Adaptation to environmental stress, (5) Evolution of symbiosis and leaf morphology https://keitai1.sci.hokudai.ac.jp/en.html/
	Associate Professor	WATAHIKI Masaaki	auxin, feedback gene regulation, live imaging, plant morphogenesis http://www.sci.hokudai.ac.jp/watahiki/mkwhp/index.html
Environmental Life Science	Associate Professor	ITO Hidetaka	plants, epigenetics, transposon, environmental stress https://www.sci.hokudai.ac.jp/Cellfunction_Structure3/
	Associate Professor Assiatant Professor	SATO Takeo TAKAGI Junpei	environmental adaptation, ubiquitin signal, nutrient metabolism, signal transduction, nutrient stress, plant immunity, proteomics http://www.sci.hokudai.ac.jp/CSF2-web/en
	Associate Professor	CHIBA Yukako	mRNA stability, stress response, arabidopsis https://www.sci.hokudai.ac.jp/~yukako/

Biosystems Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Behavior and System Control	Professor	OGAWA Hiroto	brain, neuroscience, electrophysiology, imaging, information processing, neural circuit, coding, sensorimotor integration, insect https://www.sci.hokudai.ac.jp/~hogawa/English/
	Professor	WADA Kazuhiro	vocal learning, critical period, epigenetics, neural activated gene, songbird, neuroethology, genome, behaviour, DNA methylation, stuttering (http://www.wada-lab.org/)
	Associate Professor	SOMA Masayo	behavior, cognition, communication, bird song, learning, life history http://www.lfsci.hokudai.ac.jp/search/system/soma.html
	Associate Professor Assistant Professor Assistant Professor	TANAKA Nobuaki NISHINO Hiroshi SCHLEYER Michael	(Tanaka Lab) sensory processing, neuroendocrine system, Drosophila genetics, pygmy squid https://www.sci.hokudai.ac.jp/grp/tanaka/lab/index.html (Nishino lab) pest insects, IPM, biomimetics, pheromone and odor processing, neurophysiology (intracellular and extracellular recording), neuroanatomy (vital neuronal staining), behavioral analysis, TEM http://www.es.hokudai.ac.jp/labo/nishino/research_english.html (Schleyer Lab) learning and memory, decision making, locomotion, optogenetics, dopamine, Drosophila larvae https://www.schleyerlab.com
Reproductive and Developmental Sciences	Professor	KATSU Yoshinao	endocrinology, steroid hormone, nuclear receptor, evolution, endocrine disruptor https://www.repdev-katsu.jp/index.html
	Professor Assistant Professor Assistant Professor	KUROIWA Asato YOSHIDA Ikuya MIZUSHIMA Shusei	sex determination, sex chromosome, X chromosome inactivation, fertilization, evolution, the spiny rat, chicken, quail, mouse https://sites.google.com/site/kuroiwagroup/home
	Associate Professor	KITADA Kazuhiro	model animals, human diseases, genome modification, gene function, mouse, rat https://sites.google.com/site/kitadalab/
	Associate Professor	KOTANI Tomoya	oocyte, embryonic development, maternal factor, real-time imaging, zebrafish, mouse
	Professor	KIMURA Atsushi	transcription, epigenetics, gene regulation, long noncoding RNA, multifunctional genome, reproduction, spermatogenesis, protease https://www.sci.hokudai.ac.jp/~akimura/Molecular/Welcome.APK.html
	Associate Professor	OGIWARA Katsueki	ovary, ovulation, follicle selection, endocrine regulation, mouse, zebrafish, medaka https://www.sci.hokudai.ac.jp/~kogi/Reproductive2/Welcome.html

List of Faculty Members, Graduate School of Life Science(As of October 1, 2022)

Biomedical and Pharmaceutical Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Biochemistry	Professor	KIHARA Akio	lipid, membrane, biochemistry, metabolism, lipid mediator, barrier formation http://www.pharm.hokudai.ac.jp/seika/index.html
	Associate Professor	SASSA Takayuki	
	Assistant Professor	OHNO Yusuke	
	Assistant Professor	NAGANUMA Tatsuro	
RNA Biology	Professor	NAKAGAWA Shinichi	noncoding RNA, epigenetics, nuclear structures, RNA processing https://sites.google.com/site/hokudairnabiologyj/home
	Lecturer	MAITA Hiroshi	
	Assistant Professor	YOKOI Saori	
	Assistant Professor	KURIHARA Misuzu	
Immunology	Professor	MATSUDA Tadashi	host defense, immunity, inflammation, infection, cytokine, oncogenesis, signal transduction http://www.pharm.hokudai.ac.jp/eisei/
	Associate Professor	MUROMOTO Ryuta	
	Assistant Professor	KITAI Yuichi	
Biomolecular Science	Professor	MAENAKA Katsumi	immunology, infectious disease, cell surface receptor, X-ray crystallography, protein engineering, biologics, drug discovery, chemical library screening, in silico screening, virology, microbiology http://convallaria.pharm.hokudai.ac.jp/bunshi/
	Associate Professor	KUROKI Kimiko	
	Assistant Professor	Kita Shunsuke	
Natural Products Chemistry	Professor	WAKIMOTO Toshiyuki	bioactive natural products, isolation, structure elucidation, stereochemistry, structure-activity relationship, molecular targets, biosynthesis, drug leads, bioprobes http://www.pharm.hokudai.ac.jp/tennen/index.html
	Lecturer	MATSUDA Kenichi	
	Assistant Professor	YOSHIMURA Aya	
	Assistant Professor	URIA Agustinus	
Fine Synthetic Chemistry	Professor	SATO Yoshihiro	organic synthesis, organometallic chemistry, transition-metal catalysis, asymmetric catalysis, natural product synthesis, utilization of gaseous molecules, green chemistry http://gouka.pharm.hokudai.ac.jp/
	Associate Professor	OONISHI Yoshihiro	
	Assistant Professor	MORISAKI Kazuhiro	
	Assistant Professor	NAKAMURA Kento	
Synthetic and Industrial Chemistry	Professor	MATSUNAGA Shigeki	synthetic organic chemistry, asymmetric catalysis, bimetallic cooperative catalysis, natural product synthesis, oligosaccharide synthesis based on new glycosidation method http://www.pharm.hokudai.ac.jp/yakuzou/
	Associate Professor	YOSHINO Tatsuhiko	
	Assistant Professor	KOJIMA Masahiro	
Organic Chemistry for Drug Development	Professor	SHUTO Satoshi	medicinal chemistry: drug design http://www.pharm.hokudai.ac.jp/yuuki/index.html
	Associate Professor	WATANABE Mizuki	
	Assistant Professor	FUJIWARA Koichi	

Biomedical and Pharmaceutical Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Molecular Catalysis	Professor	URAGUCHI Daisuke	Molecular Catalysis, Organic Synthesis, Mechanistic Analysis
	Associate Professor	ASANO Keisuke	
	Assistant Professor	Qing Zhao	
Pharmacology	Professor	MINAMI Masabumi	neuropharmacology, electrophysiology, emotion, pain, addiction, BBB http://www.pharm.hokudai.ac.jp/yakuri/index.html
	Associate Professor	AMANO Taiju	
	Associate Professor	TAKEUCHI Yuichi	
	Specially Appointed Associate Professor	CHAN Michel	
Molecular Design of Pharmaceutics	Professor	HARASHIMA Hideyoshi	drug delivery system, organelle-targeting, nanomedicine, gene delivery, siRNA delivery, intracellular trafficking, imaging, vaccine, cancer therapy http://www.pharm.hokudai.ac.jp/yakusetu/index.html
	Associate Professor	YAMADA Yuma	
	Assistant Professor	NAKAMURA Takashi	
	Assistant Professor	SATO Yusuke	
(Innovative Nanomedicine)	Professor	HARASHIMA Hideyoshi	vascular-targeted drug delivery, nanomedicine, active targeting, tumor, liver, adipose tissue, specific ligand http://www.pharm.hokudai.ac.jp/mirai/
	Associate Professor	YAMADA Yuma	
	Assistant Professor	NAKAMURA Takashi	
	Assistant Professor	SATO Yusuke	
Molecular Imaging	Professor	OGAWA Mikako	molecular imaging, imaging probe, PET, optical imaging, MRI http://www.pharm.hokudai.ac.jp/bunseki/index.html
	Lecturer	TAKAKURA Hideo	
	Assistant Professor	NAKAJIMA Kohei	
Clinical Pharmaceutics & Therapeutics	Professor	KOBAYASHI Masaki	transporter, clinical research, cancer pharmacotherapy http://rinshoyakuzaigaku.pharm.hokudai.ac.jp/
	Lecturer	NARUMI Katsuya	
	Assistant Professor	FURUGEN Ayako	

Biomedical and Pharmaceutical Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Molecular and Cellular Medicine	Professor Assistant Professor Assistant Professor	OHNISHI Shunsuke OKUBO Naoto MAEHARA Osamu	Mesenchymal stem cells, Cell therapy, Regenerative medicine, Kampo medicine
Pharmacokinetics	Professor Associate Professor Lecturer Lecturer Assistant Professor Assistant Professor	SUGAWARA Mitsuru TAKEKUMA Yoh KASHIWAGI Hitoshi SATO Yuki KATO Izumi NASHIMOTO Shunsuke	pharmacokinetics, transporter, drug metabolism, pharmaceuticals http://www.pharm.hokudai.ac.jp/doutai/index.html
Advanced Prevention and Research Laboratory for Dementia	Specially Appointed Professor Visiting Professor Associate Professor Visiting Associate Professor	SUZUKI Toshiharu KOMANO Hiroto TARU Hidenori HATA Saori	neuroscience, cell biology, genetics, synapse, protein trafficking, vesicular trafficking neurodegenerative diseases, Alzheimer's disease, biomarker
Center for Research and Education on Drug Discovery (Synthetic Drug Discovery)	Professor Associate Professor Assistant Professor Assistant Professor	ICHIKAWA Satoshi YAKUSHIJI Fumika KATSUYAMA Akira YAMAMOTO Kazuki	organic synthesis, natural products, drug discovery, chemical library screening, in silico screening, intractable disease, chemical biology https://japanese-apricot.pharm.hokudai.ac.jp/gouseiikyaku/index.php
Center for Research and Education on Drug Discovery (Biologics and Drug Development)	Professor Specially Appointed Associate Professor Assistant Professor Specially Appointed Lecturer	MAENAKA Katsumi MAEDA Naoyoshi SUMI Masato NOMURA Takao	biologics, drug discovery, chemical library screening, in silico screening, intractable disease http://japanese-apricot.pharm.hokudai.ac.jp/

Biomedical and Pharmaceutical Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Genome Biology	Associate Professor	OHTA Shinya	genome, chromatin, aging, cellular senescence, cancer, human, yeast model, genomics, proteomics, microscopy, biochemistry https://www.igm.hokudai.ac.jp/3dgenome/ja/index.html
Molecular Cell Biology	Associate Professor Assistant Professor	OKAZAKI Tomohiko MORIMOTO Nao	Our research goal is to understand how cells integrate numerous external and internal signals into meaningful biological outputs by focusing on (1) post-translational modifications and logistics of proteins, or (2) inter-organelle communications. In addition, we are also studying (3) the interactions between immune and nervous systems and (4) neuroethology using Drosophila. Through these studies, we wish to discover the sophisticated (crazy cool) systems of living organisms for surviving in a complex world. https://www.igm.hokudai.ac.jp/molcell/en/

List of Faculty Members, Graduate School of Life Science(As of October 1, 2022)

Division of Soft Matter, Graduate School of Life Science

Fields	Supervisors		Research Topics
Soft Matter Materials Science	Professor Associate Professor Associate Professor Associate Professor Assistant Professor	GONG Jian Ping NAKAJIMA Tasuku NONOYAMA Takayuki INDEI Tsutomu Li Xueyu	Soft & wet matter, polymer gel, double network gel, gel more durable than metal, self-healing gel, self-growing gel, bonding gel, thermal toughening gel, low friction gel, super lubricating gel, color changing gel, Sea glue gel, artificial cartilage, cell scaffold gel (1) https://altair.sci.hokudai.ac.jp/g2/index_e.html (2) https://life.sci.hokudai.ac.jp/fa/lab/soft-matter-collaborative-research-unit
	Professor	KUROKAWA Takayuki	Polymer gel, Double network gel, Friction of gel, Artificial cartilage, Cell culture substrate, Soft composite material, Adsorption and adhesion, Donnan potential https://altair.sci.hokudai.ac.jp/tsl/
	Professor Associate Professor Assistant Professor	IJIRO Kuniharu MITOMO Hideyuki YONAMINE Yusuke	Self-organization, self-assembly, functional device, biosensor, DNA, protein, biomolecule, cell, molecular recognition, drug delivery system, vaccine, gold nanoparticle, surface plasmon, stimuli- responsivity, capsule https://chem.es.hokudai.ac.jp/en/
	Associate Professor	LI Xiang	Polymer solution, polymer gel, rubber, nanostructure, molecular dynamics, light scattering, X-ray scattering, neutron scattering, Raman spectroscopy, rheology, polymer synthesis, polymer physics https://xianglilabhokkaido.wixsite.com/website?lang=en
Biomolecular Soft Matter	Professor Associate Professor Assistant Professor	DEMURA Makoto KIKUKAWA Takashi TSUKAMOTO Takashi	Photoactive proteins, photobiology, rhodopsin, optogenetics, laboratory evolution, membrane protein, ion pump, membrane transport, transporter, flash photolysis https://altair.sci.hokudai.ac.jp/infana/
	Professor	AIZAWA Tomoyasu	protein science, structural biology, protein engineering, NMR, metabolome, biomarker research, biological defense, innate immunity, antimicrobial peptides, allergen, cytokines, microbiological control https://altair.sci.hokudai.ac.jp/g5/

Division of Soft Matter, Graduate School of Life Science

Fields	Supervisors		Research Topics
Soft Matter Biophysics	Professor Assistant Professor	HAGA Hisashi ISHIHARA Seiichiro	Cell Mechanics, Collective Cell Behavior, 3D Morphogenesis, Cancer Invasion, Atomic Force Microscopy https://altair.sci.hokudai.ac.jp/g3/
	Professor Associate Professor Assistant Professor	NAKAGAKI Toshiyuki SATO Katsuhiko NISHIGAMI Yukinori	ciliate, amoeba, slime mold, protozoa, nematode, live cell imaging, field work, evolutionary ecology, biomechanics, locomotion, memory and learning, mathematical modeling, computer simulation, nonlinear dynamics, active soft matter, Belousov-Zhabotinski reaction, pattern formation, scaling theory, network of biochemical reactions http://pel.es.hokudai.ac.jp/index-en.html
Soft Matter Medical Science	Associate Professor	TSUDA Masumi	biomaterial, cancer stem cell, molecular targeted therapy, regenerative medicine, cartilage regeneration, neuroregeneration http://patho2.med.hokudai.ac.jp
	Lecturer	ONODERA Tomohiro	Orthopaedic Surgery, Joint Surgery, Regenerative Medicine, Musculoskeletal System, Animal Model, Scaffold, Cartilage, Bone, Meniscus, Biomaterials, Soft Matter, Clinical Application, Translational Research http://www.hokudaiseikei.jp/
Functional Soft Matter Inter-Field Cooperation with National Institute for Materials Science (NIMS)	Visiting Professor Visiting Associate Professor	NAKANISHI Takashi UEKI Takeshi	molecular liquid, ionic liquid, polymer gel, block copolymer, stimuli-responsive materials, optoelectronic function, self-assembly, dynamic biomimetics, sensor, actuator https://www.nims.go.jp/hokudai/en/ https://life.sci.hokudai.ac.jp/en/sm/lab/functional-soft-matter

List of Faculty Members, Graduate School of Life Science(As of October 1, 2022)

Division of Clinical Pharmacy, Graduate School of Life Science

Fields	Supervisors		Research Keywords (lower case)
Department of Clinical Pharmaceutics	Professor	KOBAYASHI Masaki	transporter, clinical research 【Laboratory of Clinical Pharmaceutics & Therapeutics】 http://rinshoyakuzaigaku.pharm.hokudai.ac.jp/
	Professor	OGAWA Mikako	molecular imaging, imaging probe, PET, optical imaging, MRI, Theranostics
	Professor Associate Professor Lecturer Lecturer	SUGAWARA Mitsuru TAKEKUMA Yoh KASHIWAGI Hitoshi SATO Yuki	pharmacokinetics, transporter, drug metabolism, pharmaceutics 【Laboratory of Pharmacokinetics】 http://www.pharm.hokudai.ac.jp/lab_17.html
	Associate Professor	YAMADA Yuma	gene delivery, nanotechnology, liposome, vaccine, intracellular trafficking 【Laboratory for Molecular Design of Pharmaceutics】 http://www.pharm.hokudai.ac.jp/yakusetu/index.html
Department of Pharmacotherapy & Clinical Informatics	Professor	OHNISHI Shunsuke	Mesenchymal stem cells, Cell therapy, Regenerative medicine, Kampo medicine 【Laboratory of Molecular and Cellular Medicine】 https://www.pharm.hokudai.ac.jp/byoutai/index.html