List of Faculty Members, Graduate School of Life Science(As of June 1, 2020)

Transdisciplinary Life Science Course, Division of Life Science

Laboratory	-	pervisors	Research Topics
	Professor Associate Professor Specially Appointed Assistant Professor	Min Yao Toyoyuki Ose Jian Yu	Protein, nucleic acid, translational control, signal transduction, infection regulation, disease related factor, X-ray/neutron structural biology, quantum biology, protein crystallography, computer science, protein science, biophysics https://altair.sci.hokudai.ac.jp/g6/index-e.html
Bioinformation and Molecular Science	Associate Professor	UEHARA Ryota	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://tenure-track.cris.hokudai.ac.jp/lab/uehara/
	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	MONDE Kenji TANIGUCHI Tohru MURAI Yuta	Chemical Biology, Chirality, Organic Synthesis, Inhibitors, Vibrational Circular Dichroism, Helix, Lipid Mediator, Glycoconjugate,Medicinal Chemistry https://altair.sci.hokudai.ac.jp/infchb/
	Professor Associate Professor Assistant Professor	TAMAOKI Nobuyuki Yuna Kim MATSUO Kazuya	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	AYABE Tokiyoshi NAKAMURA Kiminori	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, ALS, mole, ular interaction, Live cell imaging, FCS, FCCS, C. elegans https://altair.sci.hokudai.ac.jp/infmcd/English/top_eng.html

Transdisciplinary Life Science Course, Division of Life Science

Laboratory	Supervisors		Research Topics	
Functional and Regulatory Life Science	Professor Professor	NISHIMURA Shin-Ichiro HINOU 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	
	Professor	Toshiaki Koda	neurodegenrative 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 Visiting Professor Visiting Associate Professor Visiting Associate Professor	TSUDA Sakae KOMATSU Yasuo KONDO Hidemasa HIRANO Yu	Antifreeze protein, Ice-binding function, Snow mold fungi, Gene expression, Biomoleculart NMR, X-ray structural analysis, Biodiversity, Cell-preservation peptide, Reporter Assay, 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/research_kakusan.html	
Frontier Biomaterials Science Inter-Field Cooperation with National Institute for Material Science (NIMS)	Visiting Professor Visiting Associate Professor	HANAGATA Nobutaka YAMAZAKI Tomohiko	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	

Biosystems Science Course, Division of Life Science

Laboratory	Sup	pervisors	Research Topics
	Professor Assistant Professor Assistant Professor	TANAKA Kazuma MIOKA Tetsuo KISHIMOTO Takuma	cell polarity, phospholipid asymmetry, membrane traffic, flippase, yeast http://www.igm.hokudai.ac.jp/molint/index.html
Higher Order Cellular Functions	Professor Assistant Professor Assistant Professor	FUJITA Tomomichi NARAMOTO Satoshi Ooikock Teh	plant, evolutionary development, stem cell, cell polarity, cell cycle, cell proliferation and differentiation, environmental stress, abscisic acid, moss, space utilization science, <i>Physcomitrella patens</i> , <i>Marchantia polymorpha</i> , <i>Arabidopsis thaliana</i> https://www.sci.hokudai.ac.jp/PlantSUGOIne_en/
	Associate Professor	WATAHIKI Masaaki	auxin, feedback gene regulation, live imaging, plant morphogenesis http://www.sci.hokudai.ac.jp/watahiki/mkwhp/index.html
	Professor	IGUCHI-ARIGA M. M. Sanae	protooncogene, mutagen, oxidative stress, cancer, neurodegenerative disease, cellular and molecular biology, proliferation, transformation, apoptosis http://www.agr.hokudai.ac.jp/emolb/index.html
	Associate Professor	ITO Hidetaka	plants, epigenetics, transposon, environmental stress https://www.sci.hokudai.ac.jp/Cellfunction_Structure3/
Environmental Life Science	Professor Associate Professor	YAMAGUCHI Junji SATO Takeo	environmental adaptation, ubiquitin signal, nutrient metabolism, signal transduction, nutrient stress, plant immunity, proteomics http://www.sci.hokudai.ac.jp/CSF2-web/en
Ente Selence	Associate Professor	CHIBA Yukako	mRNA stability, stress response, arabidopsis https://www.sci.hokudai.ac.jp/~yukako/
	Associate Professor Assistant Professor Assistant Professor	TANAKA Ryouichi ITO Hisashi TAKABAYASHI Atsushi	photosynthesis, chlorophyll, cyanobacteria, algae, higher plants, arabidopsis, plant molecular biology, plant biochemistry http://www.lowtem.hokudai.ac.jp/plantadapt/ayumi/

Biosystems Science Course, Division of Life Science

Laboratory	Sup	ervisors	Research Topics
	Professor Assistant ProfessorAnimal	MIZUNAMI Makoto NISHINO Hiroshi	learning, olfaction, memory, insect, microbrain, neuroethology, physiology, genetics, pest control https://www.sci.hokudai.ac.jp/~mizunami/MICROB~2/http://www.es.hokudai.ac.jp/labo/nishino/
	Professor	OGAWA Hiroto	brain, neuroscience, electrophysiology, imaging, information processing, neural circuit, coding, sensorimotor integration, insect https://www.sci.hokudai.ac.jp/~hogawa/English/
Behavior and System Control	Associate Professor Assistant Professor	WADA Kazuhiro Nina Patzke	<kazuhiro wada=""> vocal learning, critical period, epigenetics, neural activated gene, songbird, neuroethology, genome, behaviour, DNA methylation, stuttering (http://www.wada-lab.org/) <nina patzke=""> Comparative neuroanatomy, encephalization, large brains of whales and cetaceans, cognitive hypothesis, thermogenesis hypothesis (https://patzkelab.org/author/ninapatzkegmxde/)</nina></kazuhiro>
	Associate Professor	SOMA Masayo	behavior, cognition, communication, bird song, learning, life history http://www.lfsci.hokudai.ac.jp/search/system/soma.html
	Associate Professor	AONUMA Hitoshi	Synthetic neuroethology, neurobiology, electrophysiology, biomechanics, robotics inspired biology, neurogenetics, neuromodulation, social behavior, aggression, ultra fast movement, insect http://ncmac2.es.hokudai.ac.jp/index.html
	Associate Professor	TANAKA Nobuaki	sensory processing, neuroendocrine system, Drosophila genetics, pygmy squid https://www.sci.hokudai.ac.jp/grp/tanaka/lab/index.html

Biosystems Science Course, Division of Life Science

Laboratory	Sup	ervisors	Research Topics	
	Professor	KATSU Yoshinao	endocrinology, steroid hormone, nuclear receptor, thermoreceptor, 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	
Reproductive and Developmental	Associate Professor	KITADA Kazuhiro	model animals, human deaseases, genome modification, gene function, mouse, rat https://sites.google.com/site/kitadalab/	
Sciences	Associate Professor	KOTANI Tomoya	oocyte, embryonic development, maternal factor, real-time imaging, zebrafish, mouse	
	Associate Professor	KIMURA Atsushi	transcription, epigenetics, gene regulation, long noncoding RNA, dual promoter-enhancer, 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	

Biomedical and Pharmaceutical Science Course, Division of Life Science

Fields	Su	ıpervisors	Research Topics
	Professor	KIHARA Akio	
Biochemistry	Associate Professor	SASSA Takayuki	lipid, membrane, biochemistry, metabolism, lipid mediator, barrier formation http://www.pharm.hokudai.ac.jp/seika/index.html
	Assistant Professor	OHNO Yusuke	***
RNA Biology	Professor Lecturer	NAKAGAWA Shinichi MAITA Hiroshi	noncoding RNA, epigenetics, nuclear structures, RNA processing
	Assistant Professor Assistant Professor	YOKOI Saori KURIHARA Misuzu	https://sites.google.com/site/hokudairnabiologyj/home
Neuroscience	Specially Appointed Professor Associate Professor	SUZUKI Toshiharu TARU Hidenori	neuroscience, cell biology, genetics, synapse, aging, protein trafficking, synaptopathy, neurodegenerative diseases http://www.pharm.hokudai.ac.jp/shinkei/index.html
Immunology	Professor Lecturer Lecturer Assistant Professor	MATSUDA Tadashi MUROMOTO Ryuta KASHIWAKURA Junichi KITAI Yuichi	host defense, immunity, inflammation, infection, cytokine, oncogenesis, signal transduction http://www.pharm.hokudai.ac.jp/eisei/
Biomolecular Science	Professor Associate Professor Assistant Professor	MAENAKA Katsumi KUROKI Kimiko FURUKAWA Atsushi	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/
Natural Products Chemistry	Assistant Professor Assistant Professor Assistant Professor	WAKIMOTO Toshiyuki MATSUDA Kenichi YOSHIMURA Aya Agustinus R. Uria	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
Fine Synthetic Chemistry	Associate Professor Assistant Professor	SATO Yoshihiro OONISHI Yoshihiro DOI Ryohei	organic synthesis, organometallic chemistry, transition-metal catalysis, asymmetric catalysis, natural product synthesis, utilization of gaseous molecules, green chemistry http://gouka.pharm.hokudai.ac.jp/
Synthetic and Industrial Chemistry	Professor Lecturer Assistant Professor	MATSUNAGA Shigeki YOSHINO Tatsuhiko KOJIMA Masahiro	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/

Biomedical and Pharmaceutical Science Course, Division of Life Science

Fields	Supervisors		Research Topics
Organic Chemistry for Drug Development	Professor Lecturer Assistant	SHUTO Satoshi WATANABE Mizuki	medicinal chemistry: drug design http://www.pharm.hokudai.ac.jp/yuuki/index.html
	Professor	FUJIWARA Koichi	
Pharmacology	Professor Lecturer Lecturer	MINAMI Masabumi AMANO Taiju NOMURA Hiroshi	neuropharmacology, electrophysiology, emotion, pain, addiction, BBB http://www.pharm.hokudai.ac.jp/yakuri/index.html
	Assistant Professor	HITORA Natsuko	
	Professor	HARASHIMA Hideyoshi	
Molecular Design of	Associate Professor	YAMADA Yuma	drug delivery system, organelle-targeting, nanomedicine, gene delivery, siRNA delivery, intracellular trafficking, imaging, vaccine, cancer therapy
Pharmaceutics	Assistant Professor Assistant Professor	NAKAMURA Takashi SATO Yusuke	http://www.pharm.hokudai.ac.jp/yakusetu/index.html
	Professor	HARASHIMA Hideyoshi	
(Innovative	Associate Professor	YAMADA Yuma	vascular-targeted drug delivery, nanomedicine, active targeting, tumor, liver, adipose tissue, specific ligand
Nanomedicine)	Assistant Professor Assistant Professor	NAKAMURA Takashi SATO Yusuke	http://www.pharm.hokudai.ac.jp/mirai/
	Professor	OGAWA Mikako	
Molecular Imaging	Lecturer	TAKAKURA Hideo	molecular imaging, imaging probe, PET, optical imaging, MRI http://www.pharm.hokudai.ac.jp/bunseki/index.html
	Assistant Professor	SUZUKI Motofumi	acipy, ,
Clinical	Associate Professor	KOBAYASHI Masaki	
Clinical Pharmaceutics & Therapeutics	Assistant Professor Assistant Professor	NARUMI Katsuya FURUGEN Ayako	transporter, clinical research, cancer pharmacotherapy http://rinshoyakuzaigaku.pharm.hokudai.ac.jp/

Biomedical and Pharmaceutical Science Course, Division of Life Science

Fields	Su	pervisors	Research Topics
Pathophysiology & Therapeutics	Specially Appointed Professor Assistant	Hiroshi Takeda	inflammatory bowel disease, MIF, hypoxia, ghrelin, anorexia http://www.pharm.hokudai.ac.jp/byoutai/index.html
	Professor	Naoto Okubo	
	Professor	SUGAWARA Mitsuru	
	Associate Professor	TAKEKUMA Yoh	
Pharmacokinetics	Lecturer Lecturer	KASHIWAGI Hitoshi SATO Yuki	pharmacokinetics, transporter, drug metabolism, pharmaceutics http://www.pharm.hokudai.ac.jp/doutai/index.html
	Assistant Professor Assistant	IMAI Syungo	
	Professor	KATO Izumi	
Center for Research	Professor	ICHIKAWA Satoshi	
and Education on Drug Discovery	Lecturer	YAKUSHIJI Fumika	organic synthesis, natural products, drug discovery, chemical library screening, in silico screening, intractable disease, chemical biology
(Synthetic Drug Discovery)	Assistant Professor	KATSUYAMA Akira	https://japanese-apricot.pharm.hokudai.ac.jp/gouseiiyaku/index.php
	Professor	MAENAKA Katsumi	
	Associate Professor	FUKUHARA Hideo	
	Specially Appointed Associate Professor	MAEDA Naoyoshi	
Center for Research	Assistant	SUMI Masato	
and Education on Drug Discovery (Biologics and Drug Development)	Professor Specially Appointed Assistant	NOMURA Takao	biologics, drug discovery, chemical library screening, in silico screening, intractable disease http://japanese-apricot.pharm.hokudai.ac.jp/
Development)	Professor Specially Appointed	KITA Syunsuke	
	Assistant Professor Specially Appointed Assistant Professor	TADOKORO Takashi	

Division of Soft Matter, Graduate School of Life Science

Laboratory	Sup	ervisors	Research Topics
Soft Matter	Professor Professor Associate Professor Specially Appointed Associate Professor Assistant Professor	Jian Ping Gong KUROKAWA Takayuki NAKAJIMA Tasuku NONOYAMA Takayuki Daniel R King	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 https://altair.sci.hokudai.ac.jp/g2/index_e.html
Materials Science	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/
Biomolecular Soft Matter	Professor Lecturer Assistant Professor	DEMURA Makoto KIKUKAWA Takashi TSUKAMOTO Takashi	photoactive proteins, photobiology, rhodopsin, membrane protein, ion pump, membrane transport, transporter, NMR, biomimicry 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/
	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/
Soft Matter Biophysics	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

Division of Soft Matter, Graduate School of Life Science

Laboratory	Sup	oervisors	Research Topics
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

Division of Clinical Pharmacy, Graduate School of Life Science

Fields		rvisors	Research Keywords (lower case)
	Associate 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
Department of Clinical Pharmaceutics	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	Specially Appointed Professor	Hiroshi Takeda	inflammatory bowel disease, MIF, hypoxia, ghrelin, anorexia 【Laboratory of Pathophysiology & Therapeutics】 http://www.pharm.hokudai.ac.jp/byoutai/index.html
	Lecturer	NOMURA Hiroshi	neuropharmacology, electrophysiology, emotion, pain, addiction, BBB [Laboratory of Pharmacology] http://www.pharm.hokudai.ac.jp/yakuri/index.html