

2010

APPLICANT GUIDELINES FOR the Global 30  
International Course on Systems Life Sciences

IN

THE GRADUATE SCHOOL OF SYSTEMS LIFE  
SCIENCES, KYUSHU UNIVERSITY

Entrance examination in July  
Academic Year from October, 2010

June, 2010



The Graduate School of Systems Life Sciences, Kyushu University

## 1. Admission Policy

The **International Master's Program in Systems Life Sciences** and the **International Doctoral Program in Systems Life Sciences** offer students the opportunity to become global leaders in research and education, and top-class professionals with expertise in the fields of advanced life sciences. These Programs are based on the innovative concept of Systems Life Sciences, which represents interdisciplinary education and research involving biology, agriculture, medicine, informatics and engineering, and positions itself at the forefront in the current era of rapidly developing life sciences.

The Graduate School of Systems Life Sciences was established in April 2003 as the University's first interdisciplinary graduate school for life sciences, and was enabled by the Graduate School/Faculty system that characterizes the organization of Kyushu University. The life sciences have developed extensively in the context of many evolutionary events, such as the rapid accumulation of genome data and the accelerated progress in biological and biomedical measurement and imaging techniques. A seamless and highly efficient form of collaboration among specialists in biology, informatics and engineering will be essential to the pursuit of the life sciences in the coming decades. Recognizing this need, the Graduate School of Systems Life Sciences was organized to establish a globally competitive education/research core by drawing from the faculties of many disciplines, including informatics, engineering, agriculture, biology and medicine. Participating academic staff members come from six faculties and one research institute at Kyushu University. The graduate school has a single Department of Systems Life Sciences to enhance interdisciplinary activities. It provides a five-year doctoral course to nurture global leaders of research and education in systems life sciences and top-caliber professionals with combined expertise in biology and informatics, or biology and engineering. There is also an option for a two-year master's program. For applicants who have obtained or will obtain the Master's degree, another entrance examination will be offered for entry as a third year student.

The Graduate School represents a single department composed of the five divisions of Bioinformatics, Life Engineering, Medical Molecular Cell Biology, Molecular Life Sciences and Biological Sciences. This makes the school an advanced education hub that covers the entire field of biology, ranging from the study of molecules to the study of populations and ecosystems.

Our Graduate School is currently establishing its status as a hub for all graduate schools involved in life sciences at Kyushu University, and as a global education/research core for the life sciences.

The **International Doctoral Program in Systems Life Sciences** encourages students of all nations to take on the future challenges of this rapidly developing field. The sought-after type of student is a student who...

- ...wishes to challenge the cutting-edge fields of the life sciences.
- ...has the flexibility to promote interdisciplinary development.
- ...has robust motivation, and is eager to pursue the quest for truth.
- ...has a good basic knowledge of the principles and ethics of the life sciences.

## 2. Qualifications for Application

(1) **Persons who have completed, or will complete, 16 years of academic education in foreign countries.**

(2) **Persons who have completed 15 years of formal education in foreign countries, and are recognized by our Graduate School to have received all the necessary credits with an excellent record.**

(3) Persons who have been recognized by our Graduate School, based on individual screening of the requirements for admission to our Graduate School, as having academic abilities equal to or better than university graduates. The minimum age will be 22 years at the time of entrance.

( Notes concerning application )

( Note 1 ) Persons who have graduated or will graduate from a Japanese university must take the general selective examination.

(Note 2) Applicants who intend to apply in accordance with categories (2) & (3) must participate in an individual evaluation of their scientific abilities in relation to the requirements for admission. This evaluation must occur before application.

### 3. Admission Capacity; Some numbers

### 4. Documents to be submitted

( 1 ) Application form for admission, Curriculum vitae, and Collation card/Examination card (Prescribed form)

( 2 ) Official Academic Transcript, Graduation Certificate or Statement that confirms expected graduation, and Recommendation to be issued by the university from which you will graduate or have graduated most recently.

( 3 ) Certificate of Japanese ability (if applicable)

( 4 ) \*Synthesized English qualifying examination score certificate : Submit the score certificate of TOEIC or TOEFL, the transcript of results of IELTS, or the certifying statement of results of Cambridge ESOL Examination (FCE, CAE or CPE). Persons who cannot submit those certificates when applying must indicate the date on which they expect to take the Examination.

( 5 ) Receipt of Screening fee 30,000 yen

( 6 ) Application for Recognition of Academic Requirements : Applicants who intend to apply in accordance with (2) & (3) must obtain this recognition. Fill out the application forms for admission and for recognition of academic requirements.

\* Take the TOEIC TEST, or, alternatively, either the TOEFL-iBT ,TOEFL-CBT ,or TOEFL-PBT test. This should be done before application. Score Certificate means Official Score Certificate of TOEIC or Examinee Score Record of TOEFL.

\* Bring the original of each certificate on the day of the subject examination.

MEXT (Ministry of Education, Culture, Sports, Science, and Technology) Scholarship Students are able to apply via documents that are submitted through MEXT instead of the prescribed documents, excluding the application form, Collation card/Examination card (Prescribed form) and additional required documents. There will be no fee required for the screening.

### 5. Application Procedure

Applicants can submit or mail their application, as specified in section 4, to the Academic Affairs

Section, Graduate School of Systems of Life Sciences, addressed to the chairperson of the Division of their first choice, from June 9(Wednesday), 2010 to July 2 (Friday), 2010.

Detailed information on the Graduate School of Systems Life Sciences is presented in Tables at the end, and at the following website:

<http://www.sls.kyushu-u.ac.jp/en/>

Prior to the application, contact your preferred supervising Professor at the Graduate School of Systems Life Sciences

Persons who intend to apply in accordance with qualifications for application (2) & (3) should submit the necessary documents including “Application for Recognition of Academic Requirements” to the Academic Affairs Section, Graduate School of Systems of Life Sciences, Kyushu University by June 8, Tuesday, 2010.

We would like to request the applicants to transfer the screening fee to the following bank account using the bank transfer form. Please fill in your desired department, Code:2IE and your name in the box marked “name” after June 9 (Wednesday), 2010. A copy of receipt for transfer of the screening fee should be attached with the necessary documents for application.

- ( 1 ) Please transfer in Japanese yen.
- ( 2 ) Please cover all the commission costs when you transfer.

**Beneficiary:**

Name	Setsuo Arikawa, President, Kyushu University
Address	6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581
Nationality	JAPAN

**Beneficiary's Bank:**

Name	SUMITOMO MITSUI BANKING CORPORATION
Branch Name	FUKUOKA BRANCH
Address	1-1-1 Hakataekimae, Hakata-ku, Fukuoka 812-0011, JAPAN
A/C No.	7119240
Swift Code	SMBCJPJT

**6. Examination Date, Examination Place and Examination Subjects**

- ( 1 ) Date: July 9 (Friday), 2010.
- ( 2 ) Place: The details of the examination place, or room, etc will be sent to the applicants when the examination admission card is sent back.

**7.Examination Subjects**

At 5 Divisions (Bioinformatics, Life Engineering, Medical Molecular Cell Biology, Molecular Life Sciences, Biological Sciences), the following examination will be given.

- (a) English essay on specialized subjects and related topics

(b) Interview in English

## **8. Announcement of the Result of Screening**

( 1 ) Date: : July 14 (Wednesday), 2010, 9:00 am

( 2 ) Place: The result will be posted on the notice board at the Department building of the Graduate School of Systems Life Sciences on Hakozaki Campus. . The result will be informed to the applicants and shown in website at <http://www.sls.kyushu-u.ac.jp>.

## **9. Entrance Procedure**

Successful applicants should complete the entrance procedure by the prescribed date after receiving the entrance procedure documents, which will be sent around July 14.

## **10. Entrance fee and tuition fees**

Entrance fee : 282,000yen

Tuition fees : 267,900yen [ Annual amount 535,800yen ]

For applicants on a government scholarship by Japanese Government, these fees are remitted.

## **11. Notes**

( 1 ) Documents cannot be replaced, nor can a Screening fee be returned, after the application form is accepted.

( 2 ) Persons who didn't receive an examination card may contact the Academic Affairs Section until the day of the examination.

## **12. Mailing address for application form and related documents**

Academic Affairs Section, Graduate School of Systems Life Sciences, Kyushu University

6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581

TEL +81-(0)92-642-4289

E-mail [ms-shino@sci.kyushu-u.ac.jp](mailto:ms-shino@sci.kyushu-u.ac.jp)

## **13. Information Desk**

Applicants can receive a word file with the application forms upon inquiry via E-mail to the following address.

Prof. Teruo Murakami, Department of Mechanical Engineering, Faculty of Engineering, Kyushu University

744 Motooka, Nishi-ku, Higashi-ku, Fukuoka 819-0395

TEL +81-(0)92-802-3072

E-mail [tmura@mech.kyushu-u.ac.jp](mailto:tmura@mech.kyushu-u.ac.jp)



**Educational background:**

		Names and Address of School	Officially required number of years of schooling	Year and Month of Entrance and Completion	Period of Schooling	Qualification	Major Subject
Elementary Education Elementary School		Name  Location	yrs	From  To	yrs  and mons		
Secondary Education Secondary School	Lower	Name  Location	yrs	From  To	yrs  and mons		
	Upper	Name  Location	yrs	From  To	yrs  and mons		
Higher Education Undergraduate Level		Name  Location	yrs	From  To	yrs  and mons		
Graduate Level		Name  Location	yrs	From  To			
Total of the years of schooling mentioned above			yrs	yrs			

- Note: 1. Kindergarten education or nursery school education is excluded.  
 2. Preparatory education for university admission is included in secondary education.  
 3. In the case that the applicant has passed the qualifying examination for admission to a university, indicate so in the blank marked.

**Employment Record: Begin with the most recent employment, if applicable.**

Name and Address of Organization	Period of Employment	Position	Type of Work

State the titles, if any, of books or papers (including graduation thesis authored by the applicant) (mention the name and address of publisher as well as the date of the publication) in the RESEARCH RECORD.

### COLLATION CARD

The preferred division  The preferred supervising Professor	Examinee's number
Alma mater  University Graduate School Department	
Year Month Day Completed will complete	Paste your passport-size photograph taken within the past 6 months. Write your name and nationality in block letters on the back of the photo.  (4cmX3cm)
Name in Japanese Katakana Male Female  Name in Roman block capitals	
Date of birth	

Do not fill in at the blank marked .  
**The Graduate School of Systems Life Sciences, Kyushu University**

### EXAMINATION CARD

Examinee's number	
The preferred division	
The preferred supervising Professor	
Name in Japanese Katakana and Roman block capitals	Date of birth
<b>The Graduate School of Systems Life Sciences, Kyushu University</b> Note 1. Do not fill in at the blank marked . 2. Keep this card during the examining. 3. Those who don't have this card cannot enter the examination room.	

## RESEARCH RECORD

The preferred division			
Name in Roman block capitals	Family name, First name, Middle name	Present status (university/company/organization, title)	
Name in Japanese Katakana if you know	Family name, First name, Middle name	Address	
Date of Birth (Age)		Present address	Telephone number E-mail address
State the titles, if any, of published papers, subjects of books and thesis (including graduation thesis authored by the applicant), papers presented at an International Conference,, patents, inventions, etc.	Title, Vol., Page, and Year of Journal, or date on which thesis was published (Fill in when or contributed.)		Name of all Authors
	Title and Year of international conference etc.		

State the titles, if any, of published papers, subjects of books and thesis (including graduation thesis authored by the applicant), papers presented at an International Conference,, patents, inventions, etc.	Title, Vol., Page, and Year of Journal or date in which thesis was published (Fill in so when being printing or contributing.)	Name of all Authors
	Title and Year of International conference etc.	

Note (1) Attach reprints or copies of published papers, conference proceedings, etc.. These will be returned to the applicant by the contacted professor after the examination.

(2) You may add similar forms when running short on this form.

(Applicants who intend to apply in accordance with qualifications 2 or 3 to the Doctoral Course only)

Year                      Month                      Day

## Application for Recognition of Academic Requirements

To Dean

The Graduate School of Systems Life Sciences,  
Kyushu University

Name in Roman block capitals

Name in Japanese Katakana  
(If you know)

Date of Birth      Year      Month      Day

For an individual evaluation of academic requirements as an applicant to Doctoral Course of The Graduate School of Systems Life Sciences  
(Division of \_\_\_\_\_),  
I hereby apply for the all the documents related.

\_\_\_\_\_ Please do not fill in as follows. \_\_\_\_\_

Academic Requirements	Chairperson of Division
YES NO	Supervising Professor

## Outline of each division

Division	Staff	Research field
Bioinformatics	Prof. Einoshin Suzuki Prof. Seiichi Uchida Prof. Keiji Iramina Prof. Kiyoshi Toko Prof. Kenshi Hayashi Prof. Satoru Kuhara Prof. Masahiro Okamoto Prof. Johan Lauwereyns Asso. Prof. Osamu Maruyama Asso. Prof. Kosuke Tashiro Asso. Prof. Taizo Hanai	Genome informatics is an interdisciplinary research field of bioscience and information science that was introduced during the genome project. In order to master genome science and its applications to the medical field, not only are ordinary bioscience subjects necessary, but also informational subjects from basic to advanced levels. This research field focuses on education and research that enable students to analyze subjects from genome to the basic principles of life on a basis of the theory of informatics. For this purpose, our course provides graduates with cutting-edge knowledge about measurement theory, mathematical science, statistics, basic informatics, database, algorithms, machine learning, cognitive neuroscience, bioinformatics and their applications to bioscience and medicine.
Life Engineering	Prof. Masamichi Kamihira Prof. Yoshiki Katayama Prof. Shoichi Kai Prof. Teruo Murakami Prof. Renshi Sawada Prof. Sanetaka Shirahata Prof. Makoto Kimura Asso. Prof. Hiroshi Mizumoto Asso. Prof. Takuro Niidome Asso. Prof. Naoto Kakuta Asso. Prof. Yoshinori Katakura Asso. Prof. Yoshimitsu Kakuta	Here we aim to train future leaders who specialize in the diverse fields of life engineering, with a combined background of engineering and agriculture. The emphasis is on biotechnology and biomedical engineering, though there exists in fact a variety of applied fields where design and industrialization can be approached via the development of life sciences. We focus particularly on: (a) the development of biotechnology for the purpose of production; (b) the development of biotechnology, where the biomedical engineer integrates biological, chemical, and physical findings about the organization and internal organs of living bodies; (c) the development of biological macromolecules and biomaterials targeting bio-compatibility, biodegradability, and/or biological absorption; (d) the development of bio-imaging techniques and nano micro machine techniques; (e) the study of biomacromolecules.
Medical Molecular Cell Biology	Prof. Hisao Kondo Prof. Ken-ichiro Morohashi Prof. Yasuyuki Fukumaki Prof. Daisuke Kohda Asso. Prof. Toshihiko Oka Asso. Prof. Ken Yamamoto Asso. Prof. Hiroki Shibata	We provide comprehensive educational opportunities to students for the diverse field of medical genome sciences including molecular medicine, molecular biology, genetics and population genetics, structural biology, bioinformatics, and bioethics. We also provide the students the opportunities of joining in the cutting-edge researches, such as 1) Analysis of human variation viewed from genomic diversity; 2) Analysis of homeostatic mechanisms based on genome information; 3) Structural and functional analysis of proteins and their application for medicine; 4) Genetic analysis of multifactorial disorders and intractable disorders; 5) Development of new methods in data analyses to expand the medical knowledge.
Molecular Life Sciences	Prof. Noriyuki Sagata Prof. Koh Iba Prof. Yukio Fujiki Prof. Takeshi Ishihara Prof. Toshiki Tsurimoto Prof. Shun-ichiro Kawabata Asso. Prof. Kazuya Nomura Asso. Prof. Hiroyuki Arata Asso. Prof. Shigehiko Tamura Asso. Prof. Makoto Koga Asso. Prof. Isao Ito Asso. Prof. Takumi Koshiba	The eukaryotic cell is a core structural unit for the constitution of bodies of higher organisms, and utilizes highly sophisticated membrane structures to perform various life functions. The division of Molecular Life Sciences conducts education and research of integrated biology of animals and plants from basic structure of genes to high-order function of bodies, focusing on the following aspects: mechanisms of chromosomal DNA replication to maintain genome structures; molecular dynamics of high-ordered structures from protein complexes to organelles managing cellular functions; signaling mechanisms through cell-cell communication for cell proliferation, cell formations and regulation of the metabolism; and mechanistic features of functions in individual bodies including development and differentiation, formation of neural networks and immune systems. We also provide basic lectures to students of other divisions aiming to improve their understanding of molecular biology. The lectures include basic structures and functions of the cell, developmental mechanisms of individual bodies from fertilization to highly organized cell society, and coordination of nerve systems to manage high-ordered biological activities.
Biological Sciences	Prof. Tetsukazu Yahara Prof. Yoh Iwasa Prof. Ken-ichiro Shimazaki Prof. Hidenori Tachida Prof. Mutsunori Tokeshi Asso. Prof. Toshio Ichikawa Asso. Prof. Teiichi Tanimura Asso. Prof. Eiichi Kasuya Asso. Prof. Yoshitaka Kobayakawa Asso. Prof. Alfred E. Szmidt Asso. Prof. Satoshi Nojima	Recent developments in ecology and evolutionary biology provide us better tools to investigate interactions among individuals and the coexistence of species within ecosystems. Similar advances in other branches of biology have likewise led to improved knowledge and technique. At the level of individuals and the cell developments in physiology have refined our methodologies of analyzing biological phenomena. Comparable advances in molecular biology have enhanced our knowledge of genomes and clarified details of the mechanisms underlying physiological processes. The current requirement is to integrate all such developments to investigate interactions between organisms and their environment and to deepen our understanding of the mechanisms underlying various biological attributes found at the levels of individuals and populations. With this in mind, our study areas include 1) perceptions of, and responses to, environmental stimuli in animals, 2) reception of, and responses to, light in plants, 3) adaptive strategies in reproduction and social structure in organisms, 4) establishment and maintenance of community structure in marine organisms, 5) molecular evolution and the maintenance of genetic diversity, and 6) mathematical aspects of complex biological phenomena. In such a focus we aim to integrate biological knowledge from the molecule, cell, individual and population levels. By participating in our division, students can learn how to conduct cutting-edge research on mechanisms of animal and plant responses to environmental stimuli, ecological interactions between organisms and environments, and the generation and maintenance of biodiversity.

Keywords for each educational group

	Educational group	Staff	Keywords
Bioinformatics	Data Mining and Bioinformatics	Professor Einoshin Suzuki	Data Mining, Machine Learning, Swarm Robotics, Knowledge Engineering <a href="http://www.i.kyushu-u.ac.jp/~suzuki/suzuki.html">http://www.i.kyushu-u.ac.jp/~suzuki/suzuki.html</a>
		Associate Professor Osamu Maruyama	Systems biology, Computational biology, Algorithms, Machine learning <a href="http://www2.math.kyushu-u.ac.jp/~om/">http://www2.math.kyushu-u.ac.jp/~om/</a>
	Biomathematical Science	-	Multivariate statistical analysis, Statistical modeling, Discriminant analysis, Clustering, Biostatistics, Computational statistics
		Professor Seiichi Uchida	Visual Information Processing, Signal Processing, Image Processing, Optimization, Pattern Recognition, Database
	Neuroimaging and Neuroinformatics	Professor Keiji Iramina	Neuroimaging, Measurement of Brain Function , Biomedical Engineering, Brain Computer Interface (BCI), Magnetencephalogram (MEG), Electroencephalogram (EEG), Near-Infrared Spectroscopy (NIRS), Transcranial Magnetic Stimulation (TMS) <a href="http://bie.is.kyushu-u.ac.jp">http://bie.is.kyushu-u.ac.jp</a>
	Bioelectronics	Professor Kiyoshi Toko	Taste sensor , Ultra high sensitive biosensor, Kansei biosensor , Electronic material, Functional material <a href="http://ultrabio.ed.kyushu-u.ac.jp/">http://ultrabio.ed.kyushu-u.ac.jp/</a>
		Professor Kenshi Hayashi	Organic electronic material and devices, Odor sensor, Odor informatics <a href="http://ultrabio.ed.kyushu-u.ac.jp/">http://ultrabio.ed.kyushu-u.ac.jp/</a>
	Gene Expression Control	Professor Satoru Kuhara	transcriptome, network analysis, structure-function correlation, bioinformatics <a href="http://www.grt.kyushu-u.ac.jp/grt-docs/mogt/">http://www.grt.kyushu-u.ac.jp/grt-docs/mogt/</a>
		Associate Professor Kosuke Tashiro	transcriptional regulation, cell differentiation, animal development, environmental microorganism, transcriptome
	Biological Information Systems	Professor Masahiro Okamoto	Bioinformatics, nonlinear dynamics, system biology, evolutionary algorithm, computer simulation <a href="http://www.brs.kyushu-u.ac.jp/bioinfo/index.htm">http://www.brs.kyushu-u.ac.jp/bioinfo/index.htm</a>
Associate Professor Taizo Hanai		Synthetic Biology, Metabolic Engineering, Systems Biology, Bioalcohol, Bioinformatics, Artificial Genetic Network, Medical Application <a href="http://www.brs.kyushu-u.ac.jp/~taizo/index.htm">http://www.brs.kyushu-u.ac.jp/~taizo/index.htm</a>	
Cognitive Neuroscience	Prof. Johan Lauwereyns	Decision Making, Information Processing, Neural Circuits, Cognitive Neurodynamics, Neurophysiology, Visual Perception, Behavioral Analysis	

	Educational group	Staff	Keywords
Life Engineering	Life Process Engineering	Professor Masamichi Kamihira	Biomedical Engineering, Tissue Engineering, Genetic Engineering, Virus Engineering, Transgenic Animals <a href="http://www.chem-eng.kyushu-u.ac.jp/lab3/Eng_ver.html">http://www.chem-eng.kyushu-u.ac.jp/lab3/Eng_ver.html</a>
		Associate Professor Hiroshi Mizumoto	hybrid artificial liver, regenerative medicine, stem cell, multicellular organoid, animal cell culture
	Assembled Chemistry for creating functions	Professor Yoshiki Katayama	Intracellular signal transduction, drug delivery system, gene delivery system, biochip, biomaterials, bioanalysis <a href="http://www.chem.kyushu-u.ac.jp/~katayama/">http://www.chem.kyushu-u.ac.jp/~katayama/</a>
		Associate Professor Takuro Niidome	Gold nanoparticles, Peptide, Dendrimer, Photothermal therapy, Gene therapy, Drug delivery system <a href="http://www.chem.kyushu-u.ac.jp/~katayama/">http://www.chem.kyushu-u.ac.jp/~katayama/</a>
	Life Engineering and Physics	Professor Shoichi Kai	biophoton, biomimetics, optical measurement, applied optics, complex systems <a href="http://www.e.ap.kyushu-u.ac.jp/ap/index-j.html">http://www.e.ap.kyushu-u.ac.jp/ap/index-j.html</a>
	Bionic Design	Professor Teruo Murakami	Biomechanics, Bionic Design, Biotribology, Biomaterials, Cellular Mechanics <a href="http://tribo1.mech.kyushu-u.ac.jp/BD/">http://tribo1.mech.kyushu-u.ac.jp/BD/</a>
	Microsystems and Medical Engineering	Professor Renshi Sawada	Optical MEMS (Micro Mechanical Electro Mechanical Systems), medical engineering, Bio-microsystems, Micro displacement sensor, Blood flow sensor, Microencoder, Nanoimprint, Avian influenza <a href="http://nano-micro.mech.kyushu-u.ac.jp/bh">http://nano-micro.mech.kyushu-u.ac.jp/bh</a>
	Biothermal Engineering	Associate Professor Naoto Kakuta	Bioheat and mass transfer, Light propagation in tissue, Thermal and optical properties, Energy transfer in biological system, Noninvasive measurement <a href="http://www.by.ap.kyushu-u.ac.jp/index_e.html">http://www.by.ap.kyushu-u.ac.jp/index_e.html</a>
	Cellular Regulation Technology	Professor Sanetaka Shirahata	Animal cell culture, Functional foods, Functional water, Oxidative stress-related diseases, In vitro immunization, Human monoclonal antibody, Origin of life <a href="http://www.grt.kyushu-u.ac.jp/grt-docs/crt/">http://www.grt.kyushu-u.ac.jp/grt-docs/crt/</a>
		Associate Professor Yoshinori Katakura	Aging, Anti-aging, Functional food, Life-style-related disease <a href="http://web.me.com/katakura/Site/TOP.html">http://web.me.com/katakura/Site/TOP.html</a>
	Structural Biology	Professor Makoto Kimura	Biochemistry, Ribozyme, RNA processing, Structural biology, Structural genomics, Translational regulation <a href="http://www.agr.kyushu-u.ac.jp/biosci-biotech/seibutu/">http://www.agr.kyushu-u.ac.jp/biosci-biotech/seibutu/</a>
		Associate Professor Yoshimitsu Kakuta	Structural biology, biochemistry, gene translation, gene translation, starch engineering, sulfotransferase, glycosyltransferase <a href="http://www.agr.kyushu-u.ac.jp/biosci-biotech/seibutu/">http://www.agr.kyushu-u.ac.jp/biosci-biotech/seibutu/</a>

	Educational group	Staff	Keywords
Medical Molecular Cell Biology	Molecular Cell Biology	Professor Hisao Kondo	Organelles, Cell cycle, membrane fusion, ER, Golgi <a href="http://web.mac.com/hk228_01/iWeb/Site/Kondo-Lab.html">http://web.mac.com/hk228_01/iWeb/Site/Kondo-Lab.html</a>
	Biology of Sex Difference	Professor Ken-ichiro Morohashi	sex differentiation, tissue specific expression, nuclear receptor <a href="http://www.med.kyushu-u.ac.jp/seisaseibutu/">http://www.med.kyushu-u.ac.jp/seisaseibutu/</a>
		Associate Professor Toshihiko Oka	Mitochondria, Golgi apparatus, Organelle Morphology
	Medical Genome Informatics	-	
	Genome Analysis	Associate Professor Ken Yamamoto	Genome, Polymorphism, Medical Genetics, HLA <a href="http://www.gen.kyushu-u.ac.jp/~genome/">http://www.gen.kyushu-u.ac.jp/~genome/</a>
	Human Molecular Genetics	Professor Yasuyuki Fukumaki	Human genetics, Molecular genetics, Genetic diversity, Molecular evolution, Neuropsychiatric disorder, Animal model <a href="http://www.gen.kyushu-u.ac.jp/~byouin/">http://www.gen.kyushu-u.ac.jp/~byouin/</a>
		Associate Professor Hiroki Shibata	Human genetics, Population genetics, Genome diversity, Molecular evolution, Psychiatric disorder, Neurological disorder <a href="http://www.gen.kyushu-u.ac.jp/~byouin/">http://www.gen.kyushu-u.ac.jp/~byouin/</a>
Structural Biomacromolecular Science	Professor Daisuke Kohda	Structural biology, X-ray crystallography, Nuclear Magnetic Resonance (NMR), Cryoelectron Microscopy, Molecular recognition mechanism, Weak protein-ligand interactions with wide specificities, Mitochondrial import system, N-glycosylation system, NADPH oxidase system <a href="http://www.bioreg.kyushu-u.ac.jp/vsb">http://www.bioreg.kyushu-u.ac.jp/vsb</a>	
	-		

	Educational group	Staff	Keywords
Molecular Life Sciences	Molecular and Cell Biology	Professor Noriyuki Sagata	Xenopus, early development, cell cycle, checkpoint control, cell differentiation <a href="http://www.biology.kyushu-u.ac.jp/~hassei/hassei_top_index.html">http://www.biology.kyushu-u.ac.jp/~hassei/hassei_top_index.html</a>
		Associate Professor Kazuya Nomura	glycome, C. elegans, glycobiology, proteome, membrane biology <a href="http://seibutsu.biology.kyushu-u.ac.jp/~nomura/index.html">http://seibutsu.biology.kyushu-u.ac.jp/~nomura/index.html</a>
	Plant Molecular Biology	Professor Koh Iba	Environmental/Stress Plant Physiology, Stomatal CO <sub>2</sub> Signaling, <i>Arabidopsis thaliana</i> <a href="http://plant.biology.kyushu-u.ac.jp/en/index.html">http://plant.biology.kyushu-u.ac.jp/en/index.html</a>
		Associate Professor Hiroyuki Arata	photosynthesis, electron transfer, photosynthetic bacteria, Crassulacean acid metabolism, circadian rhythm
	Molecular Cell Biology	Professor Yukio Fujiki	Molecular mechanisms of organelle biogenesis and human disorders, Protein kinesis, Biological functions of peroxisome assembly factors, peroxins, Peroxisome biogenesis disorder and pathogenic gene, Mechanism of protein transport between nucleus and cytoplasm, Organelle homeostasis and regulation of cellular function <a href="http://www.biology.kyushu-u.ac.jp/~taisha/">http://www.biology.kyushu-u.ac.jp/~taisha/</a>
		Associate Professor Shigehiko Tamura	Organelle biogenesis, Protein kinesis, Peroxisome biogenesis disorder and pathogenic gene, Peroxisome assembly factors, peroxins, <a href="http://www.biology.kyushu-u.ac.jp/~taisha/">http://www.biology.kyushu-u.ac.jp/~taisha/</a>
	Molecular Genetics	Professor Takeshi Ishihara	<i>C. elegans</i> , Behavioral Genetics, Live Imaging, Brain, Neural Network, Molecular Mechanisms, Informational Processing, Olfaction, Behavioral Plasticity, Behavioral Regulation by Internal Environments <a href="http://www.biology.kyushu-u.ac.jp/~bunsiide/">http://www.biology.kyushu-u.ac.jp/~bunsiide/</a>
		Associate Professor Makoto Koga	<i>C. elegans</i> , Molecular Genetics, Manic Depression, Lithium Ion <a href="http://www.biology.kyushu-u.ac.jp/~bunsiide/">http://www.biology.kyushu-u.ac.jp/~bunsiide/</a>
	Molecular Neuroscience	Associate Professor Isao Ito	Brain , Neuron , Synapse , Receptor , Plasticity <a href="http://seibutsu.biology.kyushu-u.ac.jp/~neurosci/">http://seibutsu.biology.kyushu-u.ac.jp/~neurosci/</a>
	Chromosomal Functions	Professor Toshiki Tsurimoto	chromosomal replication, replication proteins, DNA polymerase, cell cycle, protein complexes <a href="http://seibutsu.biology.kyushu-u.ac.jp/~chromosome/">http://seibutsu.biology.kyushu-u.ac.jp/~chromosome/</a>
	Protein Science and Cellular Biochemistry	Professor Shun-ichiro Kawabata	Invertebrate Innate Immunity, Serine Proteases, Lectins, Antimicrobial Peptides, Transglutaminase, Protein Cross-linking, Pathogen Recognition <a href="http://www.biology.kyushu-u.ac.jp/~biopoly/">http://www.biology.kyushu-u.ac.jp/~biopoly/</a>
		Associate Professor Takumi Koshiba	Mitochondria, antiviral innate immunity, membrane fusion, signaling event, GTPase <a href="http://www.biology.kyushu-u.ac.jp/~koshiba/index.html">http://www.biology.kyushu-u.ac.jp/~koshiba/index.html</a>

Biological Sciences	Educational group	Staff	Keywords
	Animal physiology	Associate Professor Toshio Ichikawa	Insects, beetles, pupa, defensive behavior, high-speed photography
		Associate Professor Teiichi Tanimura	Drosophila, molecular neurobiology, feeding behavior, taste, learning, circadian rhythm, sleep <a href="http://cellbio.biology.kyushu-u.ac.jp/tanimura/">http://cellbio.biology.kyushu-u.ac.jp/tanimura/</a>
	Ecology	Professor Tetsukazu Yahara	Plant reproductive ecology, conservation ecology, plant ecological genomics, speciation, daylily, Stevia, Cambodia, China, Mexico <a href="http://seibutsu.biology.kyushu-u.ac.jp/~yahara/">http://seibutsu.biology.kyushu-u.ac.jp/~yahara/</a>
		Associate Professor Eiiti Kasuya	Behavioral ecology, evolution of mating behavior, sexual conflicts, social behavior, statistical analyses of ecological data <a href="http://kasuya.ecology1.org/">http://kasuya.ecology1.org/</a>
	Theoretical Biology	Professor Yoh Iwasa	Mathematical and computational modeling of biological phenomena. Modeling of development and morphogenesis, immune system, animal behavior, life history, circadian rhythm, population extinction, evolution of cooperation, simulation. <a href="http://bio-math10.biology.kyushu-u.ac.jp/~iwasa/">http://bio-math10.biology.kyushu-u.ac.jp/~iwasa/</a>
	Cell Function	Professor Ken-ichiro Shimazaki	Light signaling, Stomata, Plant hormone, Phototropin, Membrane, transport proteins
		Associate Professor Yoshitaka Kobayakawa	Hydra, Pattern Formation, Cell Differentiation, Gametogenesis, Sexual Reproduction, Symbiosis, Molecular Phylogeny
	Evolutionary Genetics	Professor Hidenori Tachida	evolution, population genetics, molecular evolution, natural selection, speciation <a href="http://cellbio.biology.kyushu-u.ac.jp/tachida/">http://cellbio.biology.kyushu-u.ac.jp/tachida/</a>
		Associate Professor Alfred E. Szmids	population, genetics, evolution, phylogeography, phylogeny <a href="http://genetics.biology.kyushu-u.ac.jp/">http://genetics.biology.kyushu-u.ac.jp/</a> <a href="http://www.popgen.org">http://www.popgen.org</a>
Marine and Freshwater Biology	Professor Mutsunori Tokeshi	community ecology, biodiversity, coastal ecosystems, coral reef systems, freshwater ecosystems <a href="http://ambl-ku.jp/">http://ambl-ku.jp/</a>	
	Associate Professor Satoshi Nojima	hermatypic corals, population and community ecology, coral reefs, ecosystems <a href="http://ambl-ku.jp/">http://ambl-ku.jp/</a>	