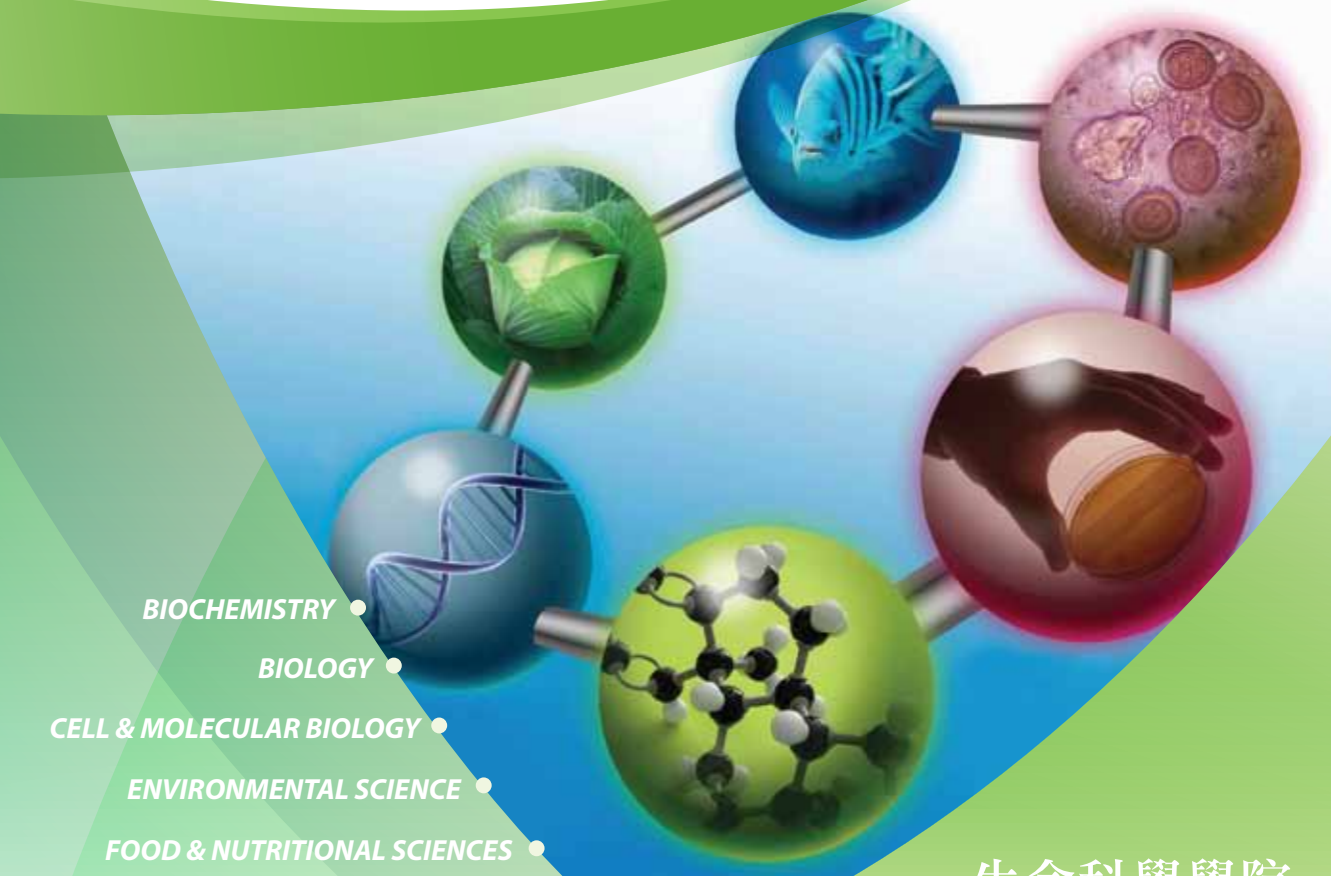
香 港 中 文 大 學
THE CHINESE UNIVERSITY OF HONG KONG

Life Sciences 生命科學課程 Programmes



- BIOCHEMISTRY
- BIOLOGY
- CELL & MOLECULAR BIOLOGY
- ENVIRONMENTAL SCIENCE
- FOOD & NUTRITIONAL SCIENCES
- MOLECULAR BIOTECHNOLOGY

生命科學學院
School of Life Sciences

Life Sciences Programmes
生命科學課程

Contents

Message from the Director

In 2010, the Faculty of Science established the School of Life Sciences, which offers six major programmes: Biochemistry, Biology, Cell & Molecular Biology, Environmental Science, Food & Nutritional Sciences, and Molecular Biotechnology. Our six programmes encompass an exceedingly wide array of study topics in life sciences, ranging from as tiny as a biological molecule to as giant as the global ecology. With our new curriculum design, our students are able to identify their individual interests from this extensive list of study areas the School offers. In addition to the existing DREAM program of overseas summer internship, we further launch the SMART program which provides plenty research opportunities to our students starting from their first year of undergraduate studies. Our major mission is not only to foster excellent professionals in life sciences, but through other ample learning activities, to equip students with all-round competence which secures success in different career prospects. If you are interested in knowing more about the science of life, you are most invited to join our big family.

– Professor Chu Ka-Hou

Establishment of the School of Life Sciences

Year	Event
1963	Established Department of Biology
1971	Established Department of Biochemistry
1994	Established Environmental Science Programme, jointly by Departments of Biochemistry, Biology, and Chemistry
	Established Food & Nutritional Sciences Programme, jointly by Departments of Biochemistry and Biology
1998	Established Molecular Biotechnology Programme, jointly by Departments of Biochemistry and Biology
2008	Established Cell & Molecular Biology Programme
2009	Launched Life Sciences Broad-based Admission Scheme
2010	Established the School of Life Sciences

Why SLS at CUHK?

High diversity in life sciences

The School provides highly diverse and sophisticated courses in life sciences. Study topics cover from biomolecules to ecology. And the flexible curriculum offered by the School also fits the needs of individual students.

World class education

The extraordinary reputation of our programmes and the excellent quality in education are commended and affirmed by the Quality Assurance Council of the Hong Kong University Grants Committee (UGC).

Excellent research

The School has a marvelous team of teachers who are field-pioneers and outstanding researchers. For instance, our plant biotechnology research is an Area of Excellence, with the establishment of the State-key laboratory of Agrobiotechnology. With a variety of the state-of-the-art equipment and our excellent research personnel, we ensure that our research shall continue to prosper.

High internationalization

Our programmes attract local and overseas students. In 2011, one quarter of our entrants is admitted through the non JUPAS scheme, and 10% among the non-JUPAS entrants are non-local.

Outstanding career prospects

Our recent survey illustrates that 51% of our graduates last year is now working full-time, 42% proceeds to postgraduate studies or other trainings, and approximately 7% is currently pursuing part-time jobs. Among the graduates working full-time, 9% joins the civil service, 25% becomes teachers, 13% works in social or public organizations, and the rest enters the commerce or industry.

HIGH DIVERSITY IN LIFE SCIENCES

High diversity in Life Sciences

The School of Life Sciences offers six programmes that focus on the study of an extensive range of topics in all aspects of life sciences. In total, we provide over 130 courses at the undergraduate level for the selections by our students. In addition to the lecture courses, more than 40% of the courses the School offers are laboratories courses, workshops, student-oriented teaching courses, independent study modules, and supervised research courses. This wide variety of course format and course content facilitates the establishment of the solid knowledge foundation in life sciences, and fosters the development of students' all-round competence.

Study Scheme

One principal highlight of the CUHK Life Sciences Programmes is the new design of the unique study scheme. In the first term of study, students admitted to the Life Sciences Programmes enroll 4 compulsory courses in fundamental biochemistry and biology, which serve as the foundations for subsequent specialized studies in life sciences. Then, in the second term, the study focuses on the exploration of the different majors of interest. Students can enrol classes from 10 different courses offered by the six majors under the Life Sciences Programmes, i.e. Biochemistry (BCHE), Biology (BIOL), Cell and Molecular Biology (CMBI), Environmental Science (ENSC), Food and Nutritional Sciences (FNSC), and Molecular Biotechnology (MBTE). To avoid overloading, students are recommended not to take more than 13 units of major courses. Nonetheless, this limitation can already accommodate the requirements of up to 3 majors to acquire their preliminary savours. Through this flexible course-selecting scheme, students can comprehend their specific interests in the diverse fields in life sciences and formulate their best fitting choice for the major. The declaration of major is finally submitted subsequent to the completion of the second term. Thereafter, students are enlisted in their selected major, and follow the study requirement posed by the specific major.

Course code	Unit	BCHE	BIOL	CMBI	ENSC	FNSC	MBTE
BCHE2000	2	✓					
BIOL2210	3		✓		✓		
BIOL2213	1		✓[a]		✓		
BIOL2310	3	✓	✓	✓			✓
BIOL2313	1	✓	✓[a]	✓			✓
CMBI2101	2			✓			✓
CMBI2200	2			✓			
ENSC2270	3				✓		
FNSC2003	2					✓	
MBTE2000	2						✓

[a] choose only ONE laboratory course from BIOL2213, BIOL2313 or BIOL3413 (offered in the second year) for the major requirement of BIOL.

General Study Scheme

Term 1

Build up fundamental knowledge

Take foundation courses in life science

BCHE2030 + BIOL2120 + LSCI2000 + LSCI2002

Term 2

Confirm your interest

Select preferred courses from a list of 10 offered by all 6 programs

BCHE2000 BIOL2210 BIOL2213 BIOL2310 BIOL2313
CMBI2101 CMBI2200 ENSC2270 FNSC2003 MBTE2000

Declare preferred Major

Term 3
Term 4
Term 5
Term 6

Foster to be a specialist

Engage in the advanced and specialized study posed by your Major program

Examples of course patterns for the second term of study

Example 1: Alan can never resist the temptation from food. Starting from several years ago, the issues of malachite green and nitrofuran residues found in freshwater fish, Sudan dyes in eggs as well as melamine in dairy products had aroused his awareness in the science of food safety. Hence, he decides to major in FNSC.

Example 2: Jackson enjoys nature and outdoor activities. Whenever he has a chance, he would go camping or diving with his friends. However, it frustrates him a lot lately as he can hardly find a nice local place for the activities due to pollution or urbanization. He wonders if he can contribute something to preserve our planet. Therefore, he wants to focus on the study of biodiversity and environmental science.

Example 3: Jenny is interested in the study of DNA and proteins, and wishes to find out more about BCHE, CMBI, and MBTE before she makes a final decision on her major.

Suggested course pattern in second term for:

Example 1: Alan		Example 2: Jackson		Example 3: Jenny	
Course	Unit	Course	Unit	Course	Unit
FNSC2003	2	BIOL2210	3	BCHE2000	2
1 major elective	3	BIOL2213	1	BIOL2310	3
		BIOL2310	3	BIOL2313	1
		ENSC2270	3	CMBI2101	2
				CMBI2200	2
				MBTE2000	2
Total:	**5**	***Total:***	**10**	***Total:***	**12**

Course List for 3-year Cohort (2012-13)

Life Sciences

Course Code	*Course Title*	*Unit(s)*
LSCI1000	Biochemistry of Health and Disease	3
LSCI1001	Basic Concepts in Biological Sciences	3
LSCI1002	Introduction to Biological Sciences	3
LSCI1003	Life Sciences for Engineers	3
LSCI2000	Research and Communication Skills in Life Sciences	1
LSCI2002	Basic Laboratory Techniques in Life Sciences	2

Biochemistry

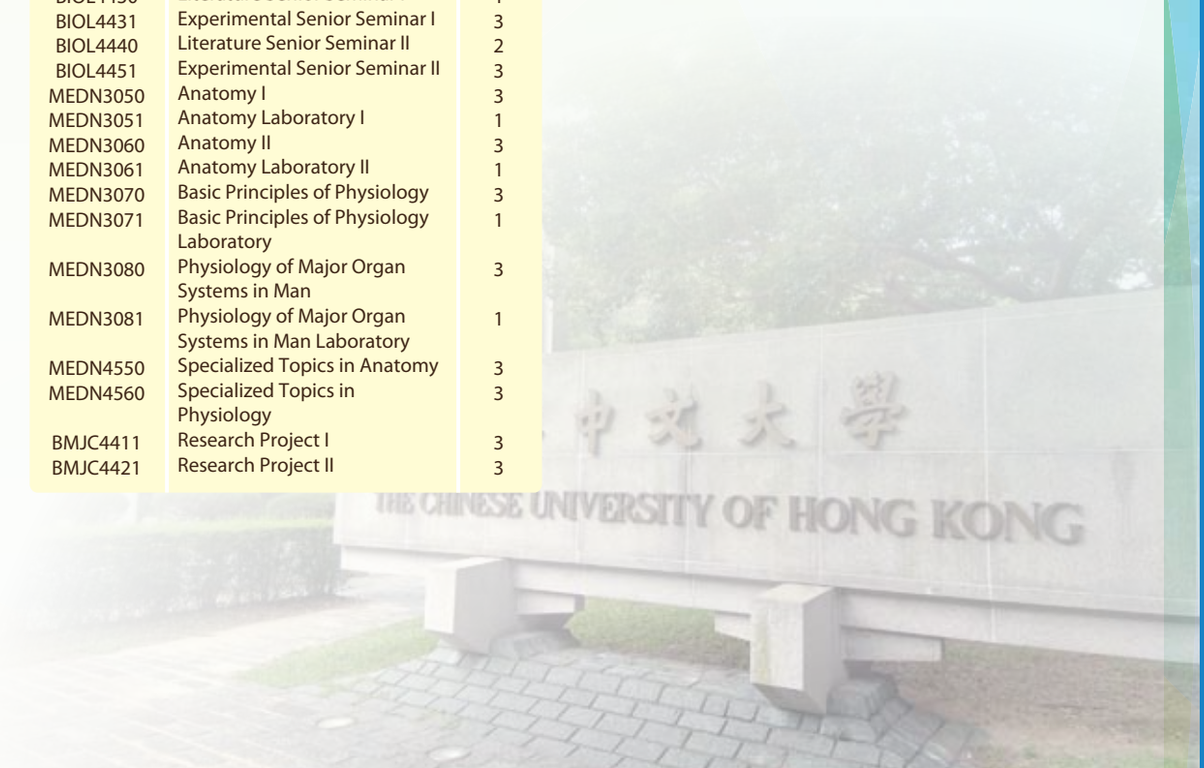
Course Code	*Course Title*	*Unit(s)*
BCHE2000	Frontiers in Biochemistry	2
BCHE2030	Fundamentals of Biochemistry	3
BCHE2070	Research Internship	2
BCHE3030	Methods in Biochemistry	3
BCHE3040	Proteins and Enzymes	3
BCHE3080	Bioenergetics and Metabolism	3
BCHE3090	Self-study Modules in Biochemistry	2
BCHE3630	Methods in Biochemistry Laboratory	2
BCHE3680	Bioenergetics and Metabolism Laboratory	2
BCHE4010	Molecular Biology	2
BCHE4020	Recombinant DNA Techniques	1
BCHE4030	Clinical Biochemistry	3
BCHE4040	Aspects of Neuroscience	3
BCHE4060	Basic and Applied Immunology	3
BCHE4130	Molecular Endocrinology	3
BCHE4300	Selected Topic in Biochemistry	2
BCHE4400	Guided Study in Biochemistry	2
BCHE4410	Supervised Research in Biochemistry	4
BCHE4610	Molecular Biology Laboratory	2
BCHE4640	Aspects of Neuroscience Laboratory	2
BCHE4660	Basic and Applied Immunology Laboratory	2
BCHE4830	Medical Biochemistry Laboratory	2

Biology

Course Code	*Course Title*	*Unit(s)*
BIOL1005	Introduction to Biological Sciences	3
BIOL2120	Cell Biology	3
BIOL2210	Ecology	3
BIOL2213	Ecology Laboratory	1
BIOL2310	General and Molecular Genetics	3
BIOL2313	Genetics Laboratory	1
BIOL3012	Biodiversity Laboratory I	2
BIOL3022	Biodiversity Laboratory II	2
BIOL3310	Human Biology	3
BIOL3410	General Microbiology	3
BIOL3413	Microbiology Laboratory	1
BIOL3530	Plant Physiology	3
BIOL3550	Plant Biology	4
BIOL3610	Invertebrate Form and Function	2
BIOL3620	Vertebrate Life	2
BIOL3630	Animal Physiology	3
BIOL3710	Marine Biology	3
BIOL4010	Evolutionary Biology	3
BIOL4012	Field and Environmental Biology	2
BIOL4032	Physiological Investigations	2
BIOL4120	Developmental Biology	3
BIOL4210	Environmental Pollution and Toxicology	3
BIOL4220	Environmental Biotechnology	3
BIOL4310	Human Genetics	3
BIOL4320	Genetic Engineering	3
BIOL4510	Hong Kong Flora and Vegetation	3
BIOL4430	Literature Senior Seminar I	1
BIOL4431	Experimental Senior Seminar I	3
BIOL4440	Literature Senior Seminar II	2
BIOL4451	Experimental Senior Seminar II	3
MEDN3050	Anatomy I	3
MEDN3051	Anatomy Laboratory I	1
MEDN3060	Anatomy II	3
MEDN3061	Anatomy Laboratory II	1
MEDN3070	Basic Principles of Physiology	3
MEDN3071	Basic Principles of Physiology Laboratory	1
MEDN3080	Physiology of Major Organ Systems in Man	3
MEDN3081	Physiology of Major Organ Systems in Man Laboratory	1
MEDN4550	Specialized Topics in Anatomy	3
MEDN4560	Specialized Topics in Physiology	3
BMJC4411	Research Project I	3
BMJC4421	Research Project II	3

Cell and Molecular Biology

Course Code	*Course Title*	*Unit(s)*
CMBI2101	Biology of Model Organisms for CMB Research	2
CMBI2200	Literature survey in CMB and Scientific Communication	2
CMBI3010	CMB Lab I	3
CMBI3020	CMB Lab II	3
CMBI3100	Methodology of Critical Thinking in CMB	2
CMBI3200	Creative Scientific Writing in CMB	2
CMBI4001	Protein Trafficking	1
CMBI4002	Protein Folding	1
CMBI4003	Signal Transduction	1
CMBI4100	Supervised Research in CMB I	3
CMBI4101	Cancer Cell Biology	1
CMBI4102	Stem Cell Biology	1
CMBI4103	Neuronal Cell Biology	1
CMBI4200	Supervised Research in CMB II	3
CMBI4201	Genomics and Transcriptomics	1
CMBI4202	Proteomics	1
CMBI4203	Metabolomics	1
CMBI4301	Current Topics in Cell Biology	1
CMBI4302	Current Topics in Molecular Biology	1
CMBI4303	Current Topics in Biotechniques	1



Environmental Science

Course Code	Course Title	Unit(s)
ENSC2270	Introduction to Environmental Science	3
ENSC2515	Environmental Chemistry	3
ENSC2517	Environmental Chemistry Laboratory	2
ENSC3000	Environmental Science Internship	2
ENSC3001	Field Study	2
ENSC3230	Principles of Environmental Protection and Pollution Control	3
ENSC3320	Biochemical Toxicology	3
ENSC3415	Environmental Instrumentation Techniques	3
ENSC3417	Environmental Instrumentation Techniques Laboratory	2
ENSC3920	Biochemical Toxicology Laboratory	2
ENSC4000	Literature Research in Environmental Science I	2
ENSC4001	Literature Research in Environmental Science II	2
ENSC4020	Directed Research in Environmental Science I	2
ENSC4221	Directed Research in Environmental Science II	4
ENSC4240	Environmental Impact Assessment	3
ENSC4242	Environmental Impact Assessment Laboratory	2
ENSC4250	Environmental Health	3
ENSC4252	Environmental Health Laboratory	2
ENSC4260	Conservation Biology	3
ENSC4310	Methods in Toxicological Research	3
ENSC4510	Methods in Toxicological Research Laboratory	2
ENSC4525	Advanced Environmental Chemistry	3
ENSC4535	Chemical Treatment Processes	3

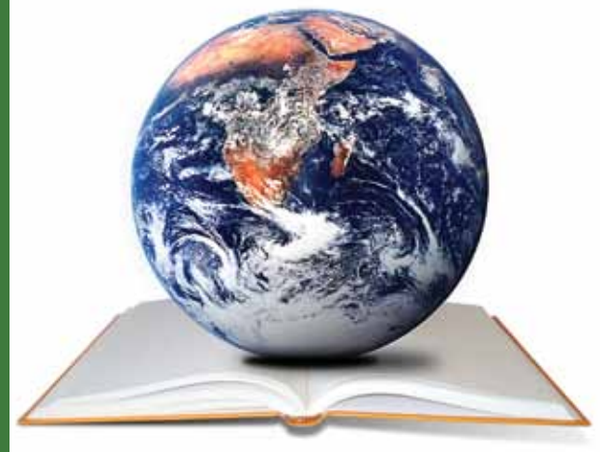
Food and Nutritional Sciences

Course Code	Course Title	Unit(s)
FNSC2003	Food, Nutrition and Health	2
FNSC3010	Nutrition and Human Development	3
FNSC3011	Nutrition and Human Development Laboratory	1
FNSC3030	Nutritional Biochemistry	3
FNSC3031	Nutritional Biochemistry Laboratory	1
FNSC3110	Food Chemistry and Analysis	3
FNSC3111	Food Chemistry and Analysis Laboratory	1
FNSC4110	Food Technology	3
FNSC4111	Food Technology Laboratory	1
FNSC4120	Community Nutrition	3
FNSC4121	Community Nutrition Laboratory	1
FNSC4150	Introduction to Medical Nutrition Therapy	3
FNSC4151	Introduction to Medical Nutrition Therapy Laboratory	1
FNSC4160	Nutrition Planning and Food Policy	3
FNSC4161	Nutrition Planning and Food Policy Laboratory	1
FNSC4170	Food Product Development and Quality Control	3
FNSC4171	Food Product Development and Quality Control Laboratory	2
FNSC4180	Food Microbiology	3
FNSC4181	Food Microbiology Laboratory	1
FNSC4411	Directed Research in Food and Nutritional Sciences I	3
FNSC4421	Directed Research in Food and Nutritional Sciences II	3

Molecular Biotechnology

Course Code	Course Title	Unit(s)
MBTE2000	Introduction to Molecular Biotechnology	2
MBTE3000	Business and Social Aspects of Biotechnology	3
MBTE4033	Methods in Molecular Biotechnology Laboratory I	2
MBTE4034	Methods in Molecular Biotechnology Laboratory II	2
MBTE4510	Plant Biotechnology	3
MBTE4520	Animal Biotechnology	3
MBTE4530	Microbial Biotechnology	3
MBTE4800	Research in Molecular Biotechnology	2
MBTE4830	Literature Seminar I	2
MBTE4840	Literature Seminar II	2
MBTE4850	Senior Experimental Project I	2
MBTE4860	Senior Experimental Project II	2

WORLD CLASS EDUCATION



World class education

The Hong Kong University Grants Committee (UGC) stated that the University ***'provides high quality student learning experience that reflects its mission and role statement, underpinned by good quality assurance systems'***. This merit, of course, is not the only affirmation. Hong Kong Economic Journal Monthly ranked CUHK to be the top among the other UGC-funded universities. The six major criteria included the percentage of PhD holders for academic staff, JUPAS admission results, teaching qualities, financial resources, quality of graduates, and research performance.

Indeed, the faculty members from the School of Life Sciences have been recognized to be commendable that over the last few years, our teachers have been receiving various teaching awards.

Vice Chancellor's Exemplary Teaching Award

Year	Awardees
2002	Professor Lee Sau-Tuen Susanna
2003	Professor Ge Wei
2007	Professor Ge Wei
2008	Professor Leung Kwok-Nam

Teachers in the School of Life Sciences

Director

Chu Ka-Hou, PhD (MIT/WHOI)
Director, Simon F.S. Li Marine Science Laboratory
Email: kahouchu@cuhk.edu.hk

Research Interests:
1. Molecular marine biology and biotechnology
2. Biology of crustaceans

Professors

Chen Zhen-Yu, PhD (Mass.)
Director, Food & Nutritional Sciences Programme
Email: zhenyuchen@cuhk.edu.hk

Research Interests:
1. Cholesterol metabolism and heart diseases
2. Antioxidants and free radicals
3. Fatty acids and health

Fong Wing-Ping, PhD (CUHK)
Email: wpfong@cuhk.edu.hk

Research Interests:
1. Structure and function of antiquitin
2. Anti-tumor effects of novel photosensitizers in photodynamic therapy
3. Role of miR-200 in ovarian cancer development

Fung Ming-Chiu, PhD (ANU)
Email: mingchiufung@cuhk.edu.hk

Research Interests:
1. Molecular immunology and hematology
2. Parasite immunology
3. Cancer research

Ge Wei, PhD (Alta.)
Director, Cell and Molecular Biology Programme
Email: weige@cuhk.edu.hk

Research Interests:
1. Reproductive biology and endocrinology
2. Paracrine regulation in fish reproductive axis
3. Molecular biology of gonadotropins and their receptors

Jiang Li-Wen, PhD (S. Fraser)
Director, Centre for Cell and Developmental Biology
Email: ljiang@cuhk.edu.hk

Research Interests:
1. Cell and molecular biology
2. Protein targeting and trafficking
3. Plant endocytosis and exocytosis
4. Organelle dynamics and biogenesis
5. Plant biotechnology

Professors

Kong Siu-Kai, PhD (CUHK)
Email: skkong@cuhk.edu.hk

Research Interests:
1. Development of biosensors
2. Erythropoiesis and apoptosis
3. Mitochondria as regulators of cell death
4. Cancer biochemistry

Kwan Hoi-Shan, PhD (UC Davis)
Director, Food Research Centre
Email: hoishankwan@cuhk.edu.hk

Research Interests:
1. Genomics and functional genomics
2. Food safety and authentication
3. Microbiology, molecular biology and biotechnology
4. Molecular analysis of Chinese medicine and food

Leung Kwok-Nam, PhD (ANU)
Assistant Dean, Faculty of Science
Email: knleung@cuhk.edu.hk

Research Interests:
1. Immunomodulatory, anti-viral and anti-tumor activities of natural products and medicinal herbs
2. Cellular and molecular analyses of leukemia cell proliferation and differentiation
3. Neuromodulatory effects of cytokines and natural products
4. Anti-tumor activities of conjugated fatty acids

Shaw Pang-Chui, PhD (Lond.)
Director, Biochemistry Programme
Director, Centre for Protein Science and Crystallography
Email: pcshaw@cuhk.edu.hk

Research Interests:
1. Structure-function studies of proteins
2. Authentication and quality control of Chinese medicinal material

Wong Chong-Kim, PhD (Tor.)
Director, Biology Programme
Email: chongkimwong@cuhk.edu.hk

Research Interests:
1. Ecology of marine plankton
2. Feeding behavior of marine zooplankton
3. Trophic roles of microzooplankton and mesozooplankton
4. Genetic diversity of picophytoplankton
5. Ecotoxicology

Professors

Wong Kam-Bo, PhD (Cantab)
Assistant Dean, Faculty of Science
Email: kbwong@cuhk.edu.hk

Research Interests:
1. Structure-function studies of proteins
2. Structure-determination of proteins by NMR spectroscopy and X-ray crystallography
3. Protein engineering and design
4. Simulation and modeling of proteins

Wong Po-Keung, PhD (UC Davis)
Assistant Dean, Faculty of Science
Email: pkwong@cuhk.edu.hk

Research Interests:
1. Environmental biotechnology and Microbiology
2. Environmental technology
3. Ecotoxicology

Woo Ying-Shiu Norman, PhD (HK)
Email: normanwoo@cuhk.edu.hk

Research Interests:
1. Fish osmoregulatory physiology
2. Biology of stress and heat shock proteins
3. Fish diseases

Associate Professors

Ang Put Jr., PhD (Br. Col.)
Email: put-ang@cuhk.edu.hk

Research Interests:
1. Coral and coral reef biology, ecology and ecophysiology
2. Seaweed ecology, ecophysiology, phylogeography and applications
3. Environmental and functional responses of marine ecosystems

Au Wing-Ngor Shannon, PhD (HK)
Email: shannon-au@cuhk.edu.hk

Research Interests:
1. Protein post-translational modification
2. Macromolecular assembly

Chan Ho-Yin Edwin,
PhD (Cantab)
Director, M.Sc. Programme in Biochemical and Biomedical Sciences
Email: hyechan@cuhk.edu.hk

Research Interests:
1. Cellular, genetic and biochemical analyses of RNA and protein toxicity in neurological diseases
2. Human disease modelling

Chan King-Ming, PhD (Nfld.)
Director, Environmental Science Programme
Email: kingchan@cuhk.edu.hk

Research Interests:
1. Aquatic toxicology
2. Molecular endocrinology
3. Marine biotechnology
4. Environmental policy

Cheung Chi-Keung Peter,
PhD (NSW)
Division head, Food and Nutritional Science Research Postgraduate Programme
Email: petercheung@cuhk.edu.hk

Research Interests:
1. Structure-function of cell wall polysaccharides
2. Bioactive substances from mushroom and edible fungi
3. Chemical properties and biological functions of dietary fiber and prebiotics
4. Functional foods and nutraceuticals

Chiu Siu-Wai, PhD (Manc.)
Email: swchiu@cuhk.edu.hk

Research Interests:
1. Bioremediation using fungi
2. Conversion of wastes into fungal products
3. Diversity and life strategy of fungi
4. Mushroom development and genetics

Chu Lee-Man, PhD (Liv.)
Email: leemanchu@cuhk.edu.hk

Research Interests:
1. Industrial, restoration and urban ecology
2. Pollution studies

Chung Hau-Yin,
PhD (Louisiana State)
Email: anthonychung@cuhk.edu.hk

Research Interests:
1. Food flavor chemistry, analysis and application
2. Natural product, safety, health and application
3. Food evaluation and food product development
4. Soy-based fermented food and seafood

Ho Wing-Shing John,
PhD (NY State)
Email: ws203ho@cuhk.edu.hk

Research Interests:
1. Chemical carcinogenesis
2. Detoxifying enzymes
3. Natural products and herbal medicines
4. Cancer

Lam Hon-Ming,
PhD (Northwestern)
Director, Molecular Biotechnology Programme
Email: honming@cuhk.edu.hk

Research Interests:
1. Genomic study of soybean
2. Identification and characterization of functional genes to improve abiotic stress tolerance and disease resistance in plants;
3. Manipulation of nitrogen sink-source relationship in plants

Lee Sau-Tuen Susanna,
PhD (Cornell)
Email: lee2022@cuhk.edu.hk

Research Interests:
1. Nuclear receptor PPAR in health and diseases
2. Phytochemicals as therapeutic targets of metabolic diseases
3. Transgenic animals for disease models

Leung Lai-Kwok,
PhD (Kentucky)
Email: laikleung@cuhk.edu.hk

Research Interests:
1. Food toxicology

Ngai Sai-Ming, PhD (Alta.)
Email: smngai@cuhk.edu.hk

Research Interests:
1. Bioinformatics and Proteomics
2. Protein/peptide structural and functional studies
3. Research and development on modern Chinese medicines

Wong Yum-Shing, PhD (UC Davis)
Email: yumshingwong@cuhk.edu.hk

Research Interests:
1. Plant physiology and biochemistry
2. Phytochemicals and nutraceuticals
3. Bioactive natural and synthetic compounds

Assistant Professors

Chan Ting-Fung Philos,
PhD (Wash.)
Email: tf.chan@cuhk.edu.hk

Research Interests:
1. Bioinformatics analysis of microbial genomes and transcriptomes
2. Genetic and genomic analysis of complex human diseases
3. Application development for high-throughput sequencing data analysis
4. Synthetic biology

Guo Dian-Jing Diane.,
DS (Chinese Acad. of Sc.)
Email: djguo@cuhk.edu.hk

Research Interests:
1. Genomics and bioinformatics
2. Systems biology
3. Plant stress response
4. Plant secondary metabolism and trichome function

Kwan Kin-Ming, PhD (HK)
Email: kmkwan@cuhk.edu.hk

Research Interests:
1. Genetic manipulation by transgenic and gene knockout technology
2. Study of organogenesis and tumorigensis
3. Mammalian neural development
4. Stem cell research

Lau Kwok-Fai, PhD (CUHK)
Email: kflau@cuhk.edu.hk

Research Interests:
1. Molecular neuroscience
2. Molecular pathogenesis of neurodegeneration

Tsang Suk-Ying, PhD (CUHK)
Email: fayetsang@cuhk.edu.hk

Research Interests:
1. Stem cell biology
2. Derivatives of human embryonic stem cells for therapeutic purposes
3. Ion channels and cardiovascular physiology

Research Professor of Biology

Sun Sai-Ming Samuel,
PhD (Wis.-Madison)
Professor Emeritus Director, State Key Laboratory of Agrobiotechnology at CUHK
Director, Institute of Plant Molecular Biology and Agricultural Biotechnology
Email: ssun@cuhk.edu.hk

Research Interests:
1. Plant molecular biology
2. Plant and agricultural biotechnology

Research Associate Professor

Tan Bao-Cai, PhD (Flor.)
Email: bctan@cuhk.edu.hk

Research Interests:
1. Molecular and genetic analysis of seed development
2. Carotenoid metabolism in plants
3. Regulation of ABA biosynthesis

Research Assistant Professors

He Jun-Xian, DS (Lanzhou)
Email: jxhe@cuhk.edu.hk

Research Interests:
1. Plant development and signal transduction
2. Functional genomics and signaling mechanisms of plant stress resistance
3. Improvement of crop yield and quality using molecular biotechnologies

Research Assistant Professors

Ngo Chi-Ki Jacky,
PhD (UC San Diego)
Email: jackyngo@cuhk.edu.hk

Research Interests:
1. Structure-function studies of proteins regulating pre-mRNA splicing
2. The roles of splicing kinases in various cancers and viral infections
3. Molecular basis of interactions between kinases and their substrates
4. Structure-function studies of cancer-related proteases

Yu Wei-Chang, PhD (Missouri)
Email: yuwc@cuhk.edu.hk

Research Interests:
1. Plant artificial chromosomes
2. Structure and function of plant chromosomes
3. Plant made pharmaceuticals

Senior Instructor

Chiu Chi-Ming Lawrence,
PhD (HKU)
Email: chimingchiu@cuhk.edu.hk

Research Interests:
1. Cell signaling in apoptosis
2. Cancer chemoprevention and chemotherapy with natural products targeting the molecular pathways in carcinogenesis
3. Applications of flow cytometry

Instructors

Chung Kwok-Cheong,
PhD (CUHK)
Email: kcchung@cuhk.edu.hk

Research Interests:
1. Biology and systematics of pomacanthid species
2. Biodiversity
3. Intensive fish culture in re-circulating seawater systems
4. Ornamental fish and plants

Chow Cheung-Ming Cherry,
PhD (Oxford)
Email: cmchow@cuhk.edu.hk

Research Interests:
1. Plant cell biology
2. Membrane trafficking
3. Nitrogen metabolism in plants

Lee Pui-Wai Connie,
MSc (HKU SPACE), Registered Dietitian (Ulster)
Email: cpwlee_fns@cuhk.edu.hk

Research Interests:
1. Clinical nutrition and diet therapy
2. Diet and cardiovascular disease, diabetes
3. Health psychology

Liu Man-Fai Andrew,
MSc (McGill)
Email: andrewliu@cuhk.edu.hk

Research Interests:
1. Cell biology
2. Signal transduction of G proteins

Lo Fai-Hang, PhD (CUHK)
Email: lofaihang@cuhk.edu.hk

Research Interests:
1. Molecular cell biology
2. Cancer research
3. Natural product research
4. Life science research and education methodologies

Ngai Hung-Kui, PhD (CUHK)
Email: hkngai@cuhk.edu.hk

Research Interests:
1. Protein biochemistry
2. Science education

Yam Kwan-Mei, MPhil (CUHK)
Email: kwanmeiyam@cuhk.edu.hk

Research Interests:
1. Molecular biology
2. Endocrinology
3. Popular science promotion
4. Learning and teaching methodologies

Yip Pui-Sze Peggy,
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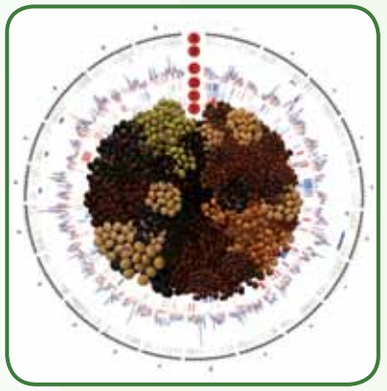
Research Interests:
1. Nutrition promotion
2. Public health and community nutrition

EXCELLENT RESEARCH

The Story Inside and Behind the Soybean Genome



Genomic differences between wild and cultivated soybeans (Photo from Prof. Lam Hon-Ming)

Soybean was domesticated in its homeland China 5000 years ago. However, more than two-third of the soybean currently consumed in China is imported, from USA, Brazil, and Argentina. In 2008, the total import value of soybean by China had risen to a record high of US$23 billion.

The high economic value of soybean is due to its importance in providing dietary protein (~70% total) and edible oil (~30%) for the world's population. The high symbiotic nitrogen fixation capacity of soybean is environmentally important since it helps to replenish organic nitrogen in the soil without consuming fossil fuels. Due to the limitation of quantity and quality of lands in China, growing stress tolerant soybeans on marginal lands has become an attractive model of sustainable agriculture.

China has the richest wild soybean germplasm in the world. These wild soybean accessions may entrap novel genes that allow the wild soybeans to survive in the sub-optimal natural habitat. On the other hand, the cultivated soybeans that are grown on man-made fields may have lost some functions that are related to the survival under adverse environment.

Professor Lam Hon-Ming has been working on the identification of stress tolerance genes in soybean for more than 10 years. Sharing the same dream of promoting soybean production in China, Prof. Lam and Prof. Sun Sai-Ming Samuel first advocated for and initiated a large scale genomic project on wild soybean in 2009. Completed jointly by the research team of Prof. Lam's laboratory and bioinformatics scientists at the Beijing Genomics Institute, Shenzhen, a total of 17 wild and 14 cultivated soybean genomes were sequenced and compared. The genomic differences due to human selection were mapped and the higher biodiversity in the wild soybean genome was verified. Due to the strong impact on future soybean research, the results of this project were published as a cover story in the renowned scientific journal *Nature Genetics* last December.

Subsequent soybean researches led by Prof. Lam Hon-Ming will build on these genomic data as well as unique genetic materials constructed in his laboratory over the last 10 years. The ultimate goal is to identify useful molecular markers and/or genes from wild soybeans that can help to enhance soybean production on marginal lands. Some of the genetic materials will be used in the breeding programme to generate new stress tolerant soybean lines.

Hermit to King, or Hermit to All

When you are enjoying a delicious meal of Alaskan or Japanese king crabs, you probably are not aware of the fact that what you are eating, scientifically speaking, are not really 'crabs', in the same way as are the Chinese mitten crab, the common mud crab and other swimming crabs. King crabs are actually close relatives of hermit crabs, and belong to a group known as the anomurans, a group of crustaceans including hermit crabs and other forms that have a crab-like (such as the king crabs and porcelain crabs) or lobster-like (called squat lobsters) appearance. Compared to true crabs, the last pair of legs of anomurans is very small and their tails are often folded under the body. Interestingly, it has been long proposed that king crabs, which may weigh more than 18 pounds and measure up to 6 feet across the legs, are not only related to tiny hermit crabs generally weighing less than a quarter of a pound, but in fact have evolved from a hermit crab-like ancestor. This 'hermit to king' hypothesis, however, has been controversial for at least two decades.

To resolve this issue, Prof. Chu Ka-hou, Director of the School of Life Sciences and Simon F. S. Li Marine Science Laboratory at The Chinese University of Hong Kong (CUHK), worked in collaboration with his PhD graduate Dr. Tsang Ling-ming, Prof. Chan Tin-yam from Taiwan Ocean University and Dr. Shane Ahyong from the Australian Museum in Sydney to develop a DNA sequence analysis for the crustaceans. With new evidence from DNA analysis, they have confirmed that hermit crabs indeed gave rise to king crabs. More importantly, this study indicates that the hermit crab is the ancestor of not only the king crab, but also almost all other anomurans, including the squat lobsters. That is, it is not just 'hermit to king' but 'hermit to all (anomurans)'.

Professor Chu said, 'We got this interesting result by DNA sequence analysis of nuclear protein-coding gene markers we newly developed for the crustaceans. The crab-like and squat lobster forms evolved more than once from their hermit crab ancestors. This fact shows that the body plan of the hermit crab is highly flexible and parallel evolution to crab-like forms is common in this group.' Parallel evolution refers to the independent evolution of similar characteristics, in this case the different crab-like forms from hermit crabs. Moreover, the true crabs and crab-like anomurans are also examples of parallel evolution. This example also shows that similarity in appearances between animals can be a deceptive indicator of relatedness.

This study has just been published in *Systematic Biology*, the top journal in the field of evolutionary biology, in August 2011. Before it was formally published, the results had been highlighted in a *New York Times* column on 'Remarkable Creatures' contributed by Prof. Sean Carroll of the University of Wisconsin, Madison. Professor Carroll states that 'The surprising stories of king crab and squat lobster evolution from hermit crab ancestors are examples of a frequent lesson in the era of DNA-based genealogy - looks can be deceiving. Very dissimilar forms can evolve from a given type of ancestor, and similar-appearing forms can evolve entirely independently from unrelated ancestors.'

A symmetrical hermit crab shown at the centre is the common ancestor of all the other anomurans in this figure. Clockwise from the top-right: asymmetrical hermit crab, squat lobster, hairy stone crab, porcelain crab, yeti crab, and king crab

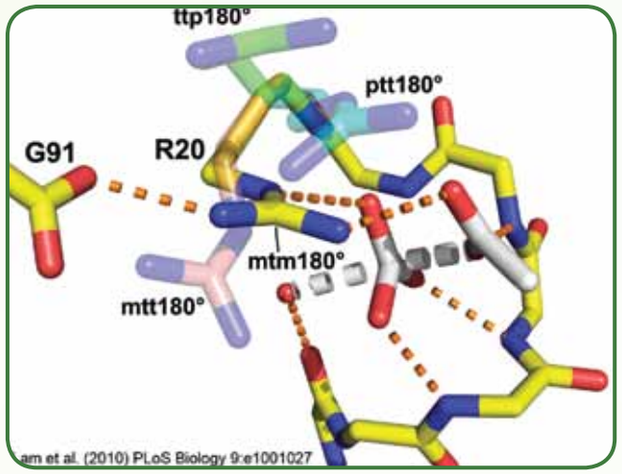
Better Enzymes in Test Tube

Enzymes are proteins that speed up chemical reactions. Their useful and diverse applications in industry have long been demonstrated. Nonetheless, the stringent condition in which the enzymes work has greatly confined their usefulness. Finding a way to overcome this restriction has become an essential need.

Recently, a breakthrough in the understanding of the enzyme structure has been made, and was published in the March issue of *PLoS Biology*, a top ranked journal in biology. This facilitates possible future design of the biotechnological important enzymes. Led by Professor Wong Kam-Bo, Professor of the School of Life Sciences and Deputy Director of the Centre for Protein Science and Crystallography, his research team demonstrated an easy but crucial way to fine-tune the natural function of an enzyme.

Based on the intensive study over the last 10 years, Professor Wong and his team members identified a unique bridge structure at the active site of the heat-resistant thermophilic enzyme. By introducing this rigidifying salt-bridge to the mesophilic enzyme which works best at lower temperature, the enzymatic activity at high temperatures is improved, but at the same time is reduced at lower temperatures.

This investigation will direct the improvement of enzymes in the biotechnological industry, and benefit the evolution of new enzymes in test tubes.



Hope for Patients with Spinocerebellar Ataxia

Spinocerebellar ataxia is a class of neurodegenerative disorders, characterized by the slowly progressive loss of the coordination of gait and often associated with poor coordination of hands, speech, and eye movements.

Genetically, this hereditary disease is accused by the abnormal number of CAG repeats in the disease genes, and those subsequent gene products then complex together and deposit in neurons which lead to the eventual brain damage. Though some unknowns of the disorder have been unveiled, neither the cure nor method to slow down the damage progression has been established.

Until recently, Professor Chan Ho-Yin Edwin has successfully discovered a gene called HSPA1L. This is a highly effective agent in fighting the accumulation of the complexed disease-causing protein, which is one of the major causes of the progression of spinocerebellar ataxia. Using *Drosophila* (the fruit fly), his team elegantly shows the reduction in the accumulation of the abnormal disease protein when the amount of HSPA1L is controlled.

Making a critical step forward, this latest finding definitely sheds some lights on ways towards the treatment for the currently incurable spinocerebellar ataxia.

Professor Chan is the recipient of the Genetics Society of China 13th Ju-Chi Li Animal Genetics Prize and Young Researcher Award.

iGEM – Gold Medal Story


大腸桿菌基因儲碼
中大生研發「超級硬盤」
創新新加密技術 奪麻省iGEM賽金獎

Staring from 2003, the International Genetically Engineered Machines (iGEM) has become a premier synthetic biology competition for undergraduates at the Massachusetts Institute of Technology in USA. In iGEM 2010, 138 teams with over 1,900 participants from all around the world took part, and they aimed to specify, design, build, and test simple biological systems made from standard, interchangeable biological parts. The accomplishments of these student teams often lead to important advances in medicine, energy use, and the environment.

In 2010, under the supervision of Professor Chan King-Ming, Professor Chan Ting-Fung and Professor Kong Siu-Kai, the team from the School of Life Sciences participated in the competition and were awarded the gold medal. The team included three instructors – Yu Chi-Shing, Li Jing-Woei and Yim Kay-Yuen, and eight students – Loo Fong-Chuen, Choi Ricky Thomson, Chu Tin-Yi, Wong Kit-Ying, Chiu Wai-Yin, Mak Ka-Yan, Liu Si-Si and Wong In-Chun. They successfully strengthened the storage and security systems of using bacteria for information storage. This innovative idea involved the use of the bacterial plasmid DNA to store information such as texts and images. With the present standard, one gram of bacteria can approximately hold up to 2 TB of data, and this technology has other great applications, for instance, encryption and decryption capabilities.

'The team was formed in April 2010, and members had spent endless hours during the past 10 months developing the research project from scratch, designing experiments, testing out the idea, to creating a website and poster, and presenting in front of a panel of judges.' Said Professor Chan King-Ming, who is highly delighted by the outstanding result the students attained. In 2011, the school has formed a team of 24 members from various programmes and departments, including engineering students.

This excellent achievement has also garnered the attention of the Secretary for Commerce and Economic Development, Mrs. Rita Lau. She warmly sent her congratulations to the students and staff who took part and won the gold medal in iGEM.

Academic Honorees and Awardees

Academician of the Chinese Academy of Engineering and the International Eurasian Academy of Sciences

Professor SUN Sai-Ming Samuel

Professor Sun is the Research Professor of Biology. He joined the University in 1995 and was Chair of the Department of Biology from 1996 to 2004 as well as the Founding Director of the Molecular Biotechnology Programme from 1998 to 1999. He has also been the Director/Coordinator of the UGC-AoE Centre for Plant and Agricultural Biotechnology (former as Plant and Fungal Biotechnology Centre) since 2000, Director of Institute of Plant Molecular Biology and Agricultural Biotechnology since 2006, Director of State Key Lab of Agrobiotechnology (CUHK) since 2008, and Master of S. H. Ho College in 2009.

Professor Sun's research interests encompass a number of areas such as plant gene isolation, characterization, transfer, expression, and regulation; plant bioreactors; as well as rice quality improvement and functional genomics. Professor Sun is credited as the scientist who first cloned a plant gene, discovered plant gene intervening sequences, and enhanced an essential amino acid in plant through biotechnological approach.

Croucher Senior Research Fellowship

Professor JIANG Li-Wen

Professor Jiang joined CUHK in 2000, after receiving his PhD from Canada's Simon Fraser University and working as a Research Associate at Washington State University for four years. He is now Professor of the School of Life Sciences and Director of the Centre for Cell and Development Biology. He has since received numerous awards for outstanding teaching and research, including Higher Education Outstanding Scientific Research Output Award by China's Ministry of Education and Research Excellence Award by the University. During the past ten years, he has received competitive research grants worth over HK$20 million from the Hong Kong Research Grants Council, the National Natural Science Foundation of China, the National High-Technology Research and Development Programme, and other important funding bodies.

Professor Jiang has spent most of his career researching on plant biotechnology, and is the joint holder of a US patent on a plant gene expression system for transgenic seeds.. He particularly concerns the molecular mechanism of protein degradation in germinating seeds, the characterization of plant prevacuolar compartments at the molecular level, protein targeting and organelle biogenesis. He is also a member of the American Society for Plant Biologists, the American Association for the Advancement of Science and the International Society for Seed Science.

China's Ministry of Education Higher Education Outstanding Scientific Research Output Award

This honorable award is granted to outstanding researchers, who are selected by experts from the same fields as the candidates.

Professor JIANG Li-Wen

This honorable award is granted to recognize Professor Jiang's findings in "Molecular Characterization of Plant Prevacuolar and Endosomal Compartments".

Professor CHEN Zhen-Yu

Professor Chen, Professor of the School of Life Sciences and Director of Food and Nutritional Sciences, receives the award on his work "Cholesterol-lowering and Cardiovascular Functional Foods and Nutraceuticals".

Other Research Awards

Research Excellence Award

Year	Awardees
2006-2007	Professor Jiang Li-Wen
2007-2008	Professor Chu Ka-Hou
2008-2009	Professor Chen Zhen-Yu
2009-2010	Professor Jiang Li-Wen

Young Researcher Award

Year	Awardees
2008-2009	Professor Kwan Kin-Ming
2009-2010	Professor Chan Ho-Yin Edwin

Genetics Society of China 13th Ju-Chi Li Animal Genetics Prize

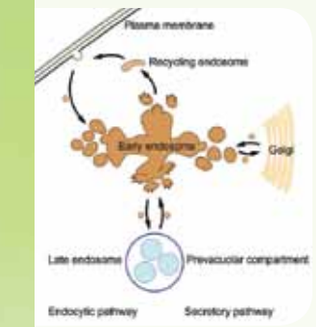
Year	Awardees
2011	Professor Chan Ho-Yin Edwin

Research in the School

The School of Life Sciences engages actively in a wide research areas. They vary from as small as a molecule to as large as a habitat.

Cell Biology

This covers a wide range of interdisciplinary areas in life sciences that explain the molecular and cellular organization, and how the signaling pathway regulates cellular function. Major topics include signal transduction, cell fate, neuroscience, stem cell biology, and cancer cell biology.

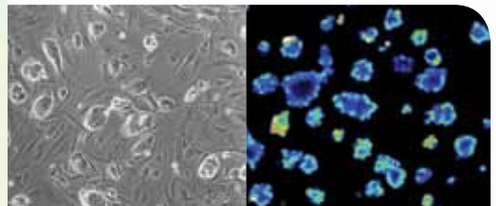


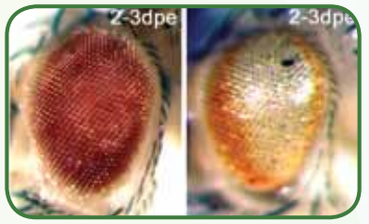
Molecular mechanisms of protein trafficking in the plant secretary and endocytic pathways provide hints for using plants as bioreactors for producing pharmaceuticals.

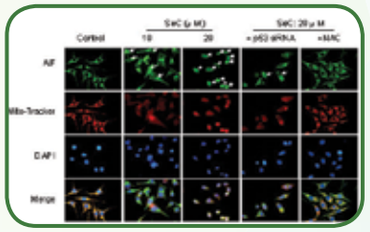
Recent development of stem cell research focuses on the basic biology and biomedical application of embryonic stem cells that aim to identify possible strategies for clinical uses.

Cancer cells were discovered to be capable of recovering after exposure to a chemical cocktail that triggers programmed cell death. This finding could potentially help the development of new, more effective anti-cancer drugs.

Neuroscience is the biology of nervous system, which allows us to sense and respond to the external environment. Our neuroscience research actively investigates the pain hypersensitivity, neuronal differentiation, and the pathogenesis of nervous system diseases, for instance, Alzheimer's and Parkinson's Diseases.







Ecology and Environmental Science

One of our research areas is in the discipline of wildlife conservation and habitat restoration. Analyses of ecosystem functioning, bioindicator assemblages, and microbiological status are the key attributes of the desirable ecological changes in terms of the ecosystem integrity and health, which are of primary concern in the ecological restoration. We also investigate vegetation composition and ecological succession on fly-ash lagoons and used municipal landfill sites for better habitat restoration.

Enzymes from fungi and microorganisms are studied for the bioremediation of sites polluted by toxic organic matters. We also study the contaminations of metals and trace organics in the coastal areas and inland waters.

Marine Science

A number of nuclear protein-coding genes are used as DNA markers for resolving the phylogenetic relationships among the decapods crustaceans such as shrimps, lobsters and crabs.

The studies of dolphin, coral communities, and seaweed are underway in local marine parks. Impacts of climate change on marine ecosystems are also of our concerns.

Food & Nutritional Sciences

Nutritive food ingredients, like lipids and dietary fibers, and non-nutritive chemicals isolated from plant foods are investigated for their potential benefits in prevention of chronic disease development.

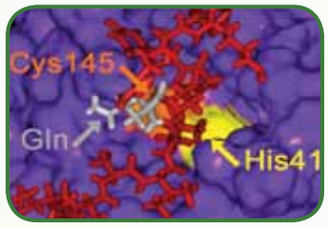
The palatability of food depends on our sensual perception. Key food chemical ingredients interacting with our sensory receptor are investigated.

To tackle diseases that have not yet been cured by modern medicine, several members in the School are working on functional foods and nutraceuticals. The neurological, anti-tumoral, and immunomodulatory effects of the active compounds isolated from traditional Chinese medicines and functional foods are examined at gene and protein levels, using pathway guided, genomic and proteomic approaches.

Genomics & Bioinformatics

During the past two decades, genomic information of an increasing number of living organisms, including human, have been made completely deciphered by the ever-improving DNA-sequencing technologies. This provides a new area of research focusing on the sequence, structural, and functional analysis of the genomic data, termed Bioinformatics. Other key research areas in this field include the studies on the various human, bacterial and viral proteins and enzymes.

The importance of genomics and bioinformatics research was best exemplified during the SARS outbreak in 2003. An integrated functional genomics, bioinformatics, and system biology approach also benefits the discovery of genes, pathways, and biological networks in plant systems.



Plant & Agricultural Science

Crop improvement of rice has been done in two ways: improvement of nutritional quality through enhancement of lysine content, and improvement of productivity by increasing photosynthetic efficiency.

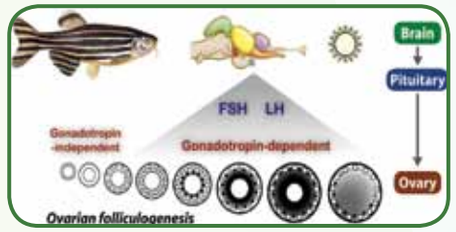
Engineered minichromosomes in maize are constructed as plant artificial chromosome for future genetic engineering to create crops with novel properties.

Natural constituents in edible plants, fungi, and algae that promote our health are in investigation.

Protein Science

In this post-genomic era, protein structure-function study is of major importance in understanding the molecular basis of cellular pathways and developing therapeutic targets. Our ongoing research projects focus on proteins in cellular signaling and biomedical science, pathogenic microorganisms, and are of biotechnological significance.

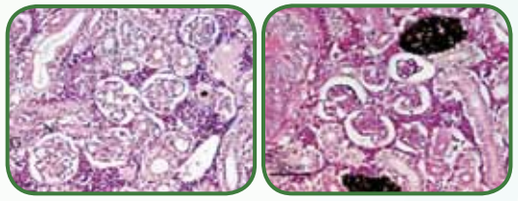
Physiology & Developmental Biology



This area of study is made possible by the advanced molecular biology, cell biology, and genetic engineering technology. The mammalian embryonic developmental process is studied with mouse as the model organism.

Functional analyses of the brain-pituitary-ovary axis that explain the communication network in the ovary and the molecular biology of gonadotropins and their receptors have been exemplified with the use of zebrafish as a model.

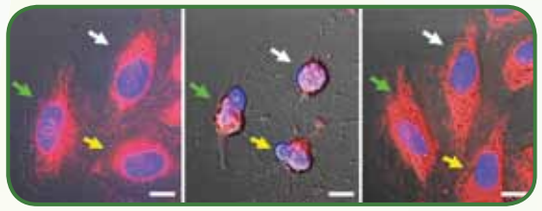
Salinity adaptation in seabream, which depends on changes in kidney and gill function, is another actively undergoing project.



Toxicology

The research of toxicology and health centres on liver metabolism and detoxification enzymes of drugs and environmental toxicants, chemical carcinogenesis, and the development of biomarkers of effects from chemical toxicants.

Effects of environmental pollutants, such as metals, pesticides, and trace organics on liver metabolism of fish and rats are investigated. Sophisticated techniques involved in the toxicology research include the differential gene expression and proteomic studies, molecular toxicological approach with the use of gene cloning and DNA array as well as the use of enzyme markers or reporter gene systems for the evaluations of potential health risks of the environmental contaminants including endocrine disruptors. Both mammalian models and fish models are being used for toxicity assessments



Research Institutes and Centers

- Centre of Plant Molecular Biology and Agricultural Biotechnology
- Centre for Cell and Developmental Biology
- Centre for Protein Science and Crystallography
- Food Research Centre
- Simon FS Li Marine Science Laboratory

AMPLE OPPORTUNITIES

Internship, Scholarship and other opportunities

DREAM

The Dedicated Research Exchange And Mentorship (DREAM) Programme provides precious opportunities for our students to expose to the frontiers of biological researches. Our students first participate in a coaching programme, and learn the basic techniques and background information related to the project from a local supervisor in the School. During summer, as sponsored by the School, they travel abroad and conduct research projects in foreign laboratories or corporations. Participating institutions and corporations in 2011 include Harvard University, University of California at San Diego, University of California at Davis, Ohio State University, University of Tübingen, Academia Sinica, and the Law Offices of Albert Wai-Kit Chan.

SMART

The new Young Scientist Mentorship And Research Training (SMART) Programme specifically offers a distinguished research experience to first year students. Through individual guidance from Professors in research laboratories, students are able to ignite their inquisitiveness in scientific research at the very beginning of the university journey. Besides, they may also receive up to $5000 as rewards for working in the research laboratory.

University Student Sponsorship Programme

'Thanks to the University and Ocean Park Conservation Foundation, we went to Bohol, the Philippines for a 10-day cetacean survey. During the survey, the Pilipino cetacean experts led us to the sea along a designated line transect. On the boat, three members took turn every hour to actively search for the signs of dolphin and whale with binocular. During 2-week survey, we spotted countless dolphins and whales, ranging from small Fraser's Dolphin to enormous Pilot Whale, and from active Spinner Dolphin to the shy Melon-headed Whales. Besides, 10-meter Whale Shark, water birds, different kinds of fishes and numerous marine organisms were also encountered. This trip brought us to the nature and to be face-to-face with the wild animals that we can never experience and see in Hong Kong! What's more, it was a valuable chance for us to experience the threat human posed on our beloved ocean. After this trip, we would definitely be more actively engaging ourselves in the conservation of our ocean!'

- 2011 participants – Lam Ka-Yiu Eric (ENSC) and Le Ga-Wun (BIOL)

'It is really an unforgettable experience to participate in a bird population research. Sponsored by Ocean Park Conservation Foundation, we stayed in a forest of Cebu, the Philippines for 14 days to look for an endemic endangered bird species Black Shama Copsychus cebuensis. These birds make long melodious call, and they are only found in Cebu with a population of around 3000. During the 14 days, we learnt bird ringing and radio-telemetry. In fact, what we learnt most was to appreciate the nature. A forest contains various types of vegetation, and is home for numerous animals. It is always joyful to live with the forest, the lovely animals and the stunning natural environment in harmony.'

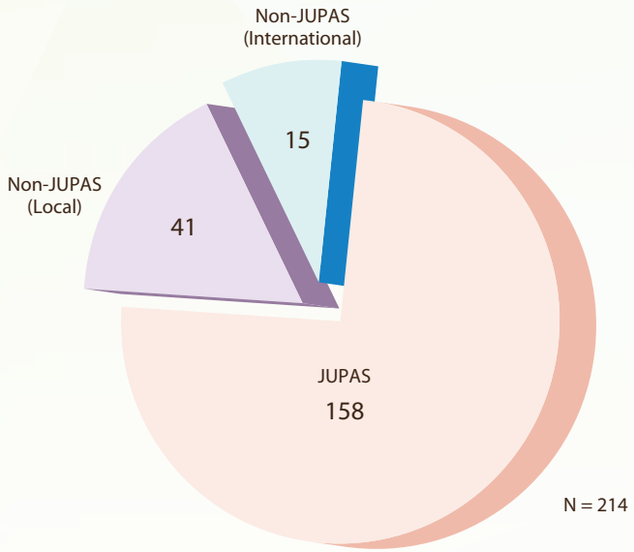
- 2010 participant – Chow, Ming-Him (ENSC)

GOOD INTERNATIONALIZATION

Every year, the University attracts excellent secondary students both from local and overseas. Currently, the University has 3,800 international students from 45 countries and regions. Our full-time undergraduates come from the following places: Belgium, Canada, France, Germany, India, Indonesia, Italy, Kazakhstan, Lithuania, mainland China, Malaysia, Mauritius, Poland, Singapore, South Korea, Taiwan, the Netherlands, the UK, the USA, Venezuela, and Zimbabwe.

This year, the School of Life Sciences admitted 214 students; and among them, 10% of the entrants comes from overseas and were admitted through non-JUPAS scheme.

Statistics of 2011 undergraduate entrants



OUTSTANDING CAREER PROSPECTS

The diverse training by the School prepares our graduates to not only feature in areas related to their studies, but also find their starring paths in areas outside life sciences.

Interviews of Alumni

The best biochemistry programme in Hong Kong, and the excellent college system as well as the whole-person education are some of my determinants to study at CUHK. The rigorous biochemistry training I received at CUHK laid the foundation for my post-graduate study at the University of Cambridge. In my opinion, CUHK students are in no way inferior to any graduates from any other universities.

1990 Alumnus (Biochemistry) – Wong Kam-Bo
Professor, School of Life Sciences, CUHK
Assistant Dean, Faculty of Science, CUHK
Assembly of Fellow, S.H. Ho College

After graduation, I continued my study in the finance areas, and obtained my Master degree in Finance and the Advanced Diploma in Professional Financial Planning. I am now working in the area of financial planning engaging in the wealth and relationship management. Financial world is full of uncertainties. Strong and independent logical thinking and scientific method I acquired from my undergraduate study benefit my judgment in deciphering the reason and finding out the answers for these uncertainties. I particularly thank the inspiration provided by my programme for the scientific and personal growth.

2007 Alumnus (Biology) – Mok Kai-Cheung Steven
Chief Wealth Management Advisor, Convoy Financial Services Limited
Swiss Privilege – Financial Planning Top 10 Awardee
Hong Kong Institute of Bank – Financial Planning Competition Awardee

I would like to say thanks to all my teachers for their guidance, support, and also the research opportunities such as the summer research programme and the internship programme that prompted me to apply to graduate school for more intense graduate research training. The study at CUHK not only provided me with a platform to acquire textbook knowledge of biochemistry, but most importantly enabled me to appreciate its beauty of the scientific knowledge. Being a professor at CUHK now, in addition to fostering responsible students and researchers, one of my anticipated roles is to make sure that the knowledge of biochemistry and life sciences can reach different strata of our society, and ultimately everyone can apply scientific knowledge to their work positions and daily lives.

1995 Alumnus (Biochemistry) – Chan Ho-Yin Edwin
Associate Professor, School of Life Sciences, CUHK
Faculty Exemplary Teaching Awardee
Young Researcher Awardee
Genetics Society of China Thirteenth Ju-Chi Li Animal Genetics Prize winner

Though I opted to do life science, I always believe that students should never be trained only to acquire scientific knowledge, but should also broaden the vision in wide aspects. I joined Molecular Biotechnology at CUHK due to its learning environment, culture of student life, and more importantly, the pioneering nature of the subject in science. I had ample chances to expose to both science area and legal industry that benefitted my extensive understanding towards how this industry runs.

2008 Alumnus (Molecular Biotechnology) – Wang Jun Philip
Project Manager in legal service for intellectual property, Law Offices of Albert Wai-Kit Chan, PLLC, New York

The study of life science at CUHK helped me to build up my self-confidence and to improve my skills of critical thinking, information processing, presentation, and the team-working capability. Particularly, the lab sessions trained me to become more methodical and careful, and reminded me to seriously consider the consequences of every step of an experiment before action and to follow protocols precisely. These skills and personality are essentially crucial in operating aircrafts.

2010 Alumnus (Molecular Biotechnology) – Lam King-Yeung Tony
Cadet Pilot, Cathay Pacific Airways Limited

Food science and nutritional science are subjects that, I think, are more interesting than most of the other subjects in pure science. From FNSC, I acquired the basic microbiology and biochemistry knowledge which facilitated the study of the more advanced topics about food science, food technology and nutrition. My current career, which oversees the food testing and provides quality assurance solution to the food and catering industries, requires me to have relevant learning background.

1998 Alumnus (Food and Nutritional Sciences) – Lau Wai-Yee Charine
Senior Manager (Consumer Testing Division), SGS Hong Kong Limited

I am glad that I chose FNSC at CUHK as my undergraduate major. In addition to the solid knowledge on food science and nutrition from the coursework, the soft skills, like trouble-shooting and communication skills, creativity, and passion benefited my career development. The summer lab and undergraduate final year research programme are something in particular to mention as they allowed me to gain early exposure to food laboratory environment.

1997 Alumnus (Food and Nutritional Sciences) – Leung Arnold
Senior Food Scientist, the Coca-Cola Company

Though there is no direct linkage between my major and my current occupation, the more in-depth knowledge in biological science, environmental science and geography help my understanding and analyses towards issues related to environment and life science. These definitely facilitate the formulation of more thorough news reports.

2000 Alumnus (Environmental Science) – Pun Wai-Lam
Senior Reporter, TVB

Biology programme at CUHK was my top choice for my undergraduate study. It offered a board curriculum as well as special topics in life science that provided me a very good foundation for my graduate study in marine biology as well as the scientific knowledge, training and skills of logical and critical thinking for my career as a Senior Fisheries Officer in the government.

1991 Alumnus (Biology) - Chow Wing-Kuen
Senior Marine Conservation Officer, Agriculture, Fisheries and Conservation Department of the Government of HKSAR

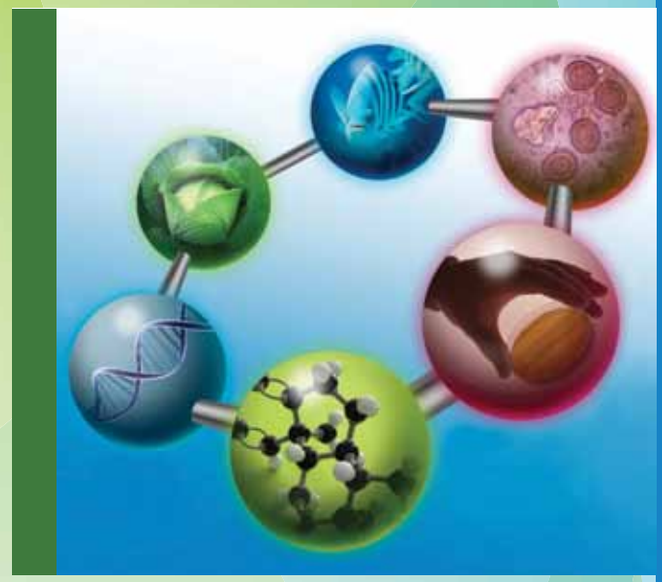
The programme equipped me with knowledge, both theoretical and practical, of current advances in the field and skills for conducting research in life sciences. These prepared me well for the study of M. Phil that facilitated my job hunting in the education field after graduation. The training also allows me to share the current development in the field with students both from the view of researchers as well as public health which is hot in Liberal Studies.

2007 Alumnus (Biochemistry) – Ho Lilian
Graduate Master/ Mistress, Holy Trinity College

The critical piece of mind acquired from project works and assignment work, comprehensive thinking and good communication / presentation skills obtained from lab report and project works, and persistence and a piece of mind to serve the community learnt from the final year project are some of the critical generic skills that were trained by my major programme. These figured me into an enthusiastic territory educator to inspire students in Science Education of the next generation. I broke my school's 11 years of record with the highest credit rates and full passes for my class. Some of my graduates have joined the School of Life Sciences at CUHK in these several years.

2005 Alumnus (Biology) – Ho Tik Shun
Head, Department of Science, The Chinese Foundation Secondary School

PROGRAMMES IN THE SCHOOL OF LIFE SCIENCES



Biochemistry
Biology
Cell and Molecular Biology
Environmental Science
Food & Nutritional Sciences
Molecular Biotechnology

Background

Biochemistry is a branch of science that investigates the chemical compounds and processes occurring in living organisms at molecular level. The knowledge procured from the study in biochemistry has found extensive applications in medicine and biotechnology that drastically revolutionize our daily life.

In 1971, the University established the Department of Biochemistry (now the Biochemistry programme), and it quickly became a strong programme in teaching and research. The study of Biochemistry in the School comprises a broad array of scientific disciplines, including the chemistry of life processes, bioinformatics, the metabolism of biomolecules and their regulation, energy transformation, the functions of enzymes and the structure-function relationship of enzymes and proteins, genome research and genetic diseases, heredity and evolution, the mechanisms of the nervous, immune and endocrine systems, biotechnology, and biomedical sciences.

Mission

- To provide concepts and mechanisms of biochemical processes, with emphasis on clinical and biomedical sciences
- To provide training on the latest biochemical technology
- To cultivate the ability of critical thinking, a proactive and responsible attitude and efficient communication skills for high competitiveness in further study and in the job market

Biochemistry Programme Picnic

Curriculum

Biochemistry (BCHE)

Study Focus:
- Genetics and Cell biology
- Protein and Enzymes
- Bioenergetics and Metabolism
- Methods in Biochemistry and Molecular biology
- Microbiology and Health Sciences

Elective Areas:
- Independent research in Biochemistry
- Self-study modules in Biochemistry
- Clinical biochemistry
- Immunology
- Endocrinology
- Neuroscience
- Advanced topics offered by other SLS programmes:
  - Biology: Microbiology, Animal physiology, Human genetics, Bioinformatics and Proteomics
  - Cell & Molecular Biology: Protein trafficking and folding, Stem cell biology, Cell biology of Cancer and Neuronal system
  - Environmental Science: Biochemical toxicology, Environmental Health
  - Food & Nutritional Sciences: Medical nutrition therapy, Nutrition and Human development
  - Molecular Biotechnology: Microbial and animal Biotechnology
- Biostatistics

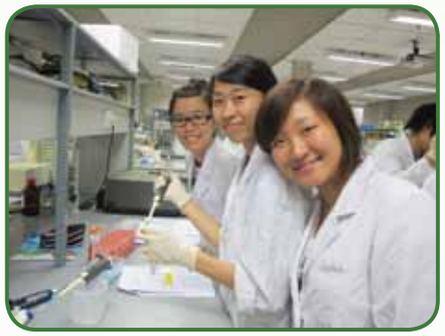
Career Talks given by Alumni

Curriculum highlights

- Current topics in biochemistry and molecular biology that have scientific, medical and social significance
- Self-study modules and independent research opportunity

Expected learning outcomes

- Understand the core knowledge in biochemistry covering biomolecules, molecular biology, cellular biochemistry, metabolism, bioinformatics, proteins and enzymes
- Gain the knowledge of the latest biochemical technology in clinical biochemistry, immunology, neurosciences, biotechnology, endocrinology, genomics, and proteomics
- Possess skills in designing experiments to test hypothesis, writing research report, applying their knowledge to daily life, and developing self-learning capability
- Become all-round competent



Undergradutes enjoying science in laboratory

Interviews of current students

I chose the Biochemistry programme after my study in IVE because of its excellent learning environment and abundant research chances. The curriculum improves not only my research and presentation skills, but also capability for individual and team work.

Cheng Wing-Sang

The good reputation and the interesting topics got me to do my major in Biochemistry. The excellent research training allows me to develop my analytical thinking skill and rationality. I strongly recommend you to study subjects that you are interested in. Please grab the chance to join us.

Wong Ho-Chun

BCH Shield organized by Biochemistry Society

Contact

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Programme Director:
Professor Shaw, Pang-Chui
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Background

Biology is a broad field embracing many different disciplines, which include the study of living organisms from virus to human. Fundamental to the study of life is unfolding biological organization at its many levels, from molecular architecture to ecosystem structure. During the past few decades, the science of biology has undergone rapid changes to bring significant impact on the way we live. Armed with exciting new research methods and information from genomics of human and other living organisms, biologists are beginning to unravel some of life's most engaging mysteries.

The Department of Biology, now the Biology Programme, was established in 1963, and is one of the oldest departments in the University. Indeed, we are the first biological sciences department in Hong Kong awarded the Area of Excellence by University Grants Committee. We offer a broad range of subjects for students to choose from, including genetics, physiology, plant biology, zoology, marine biology, and ecology. In addition, a specialized stream in Human Biology is jointly offered with the School of Biomedical Sciences of the Faculty of Medicine for students interested in health-related disciplines.

Mission

- To provide concepts in modern biological sciences
- To promote the advancement of teaching and research in this multifaceted science
- To contribute to our understanding of the events of life and improving the quality of life.

Curriculum

Biology (BIOL)

Study Focus:
- Ecology
- Genetics
- Microbiology
- Fundamentals of Biochemistry & Cell biology

Elective Areas:
- *Biology stream:* Biodiversity, Evolution, Plant, Marine & Animal biology, Developmental biology, Environmental biology, Physiology
- *Human Biology stream:* jointly offered with Faculty of Medicine: Anatomy, Human biology & Physiology
- Advanced topics offered by other SLS programmes:
  - Biochemistry: Bioenergetics and Metabolism, Molecular biology, Immunology, Endocrinology
  - Cell & Molecular Biology: Protein trafficking and folding, Stem cell biology, Cell biology of cancer and neuronal system
  - Environmental Science: Conservation biology
  - Food & Nutritional Sciences: Food microbiology
  - Molecular Biotechnology: Molecular biotechnology
- Biostatistics

Curriculum highlights

- 4 recommended packages based on the different combinations of the courses offered by Biology Programme: (1) Molecular Biology and Biotechnology; (2) Biodiversity and Conservation; (3) Marine Biology and Environmental Biology; and (4) Biology for Teaching Career
- Human Biology stream jointly offered with the Faculty of Medicine

Expected learning outcomes

- Understand biological knowledge in depth
- Acquire data analysis and computational skills related to biostatistics and bioinformatics
- Gain a sense of ecological conservation and environmental issues
- Appreciate the biological knowledge and the world of nature

Interviews of current students

After finishing my associate degree in Health Studies at HKCC, I joined CUHK due to its diverse choices in life sciences. Finally, I picked Biology as my major because I think Biology is a very interesting topic and the knowledge acquired helps prepare myself to further study in biomedical sciences, such as musculoskeletal medicine and rehabilitation.

Yau Man-Ho

The Biology Programme offers numerous courses which cover many topics in biological sciences from tiny microscopic cells to the macroscopic ecosystem, and it also has study packages which help us plan our career path upon graduation. In addition, career talks are organized annually by the Biology Society for our better understanding towards possible job opportunities.

Leung Hill-Tone Jessica

Contact

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Professor Wong Chong-Kim
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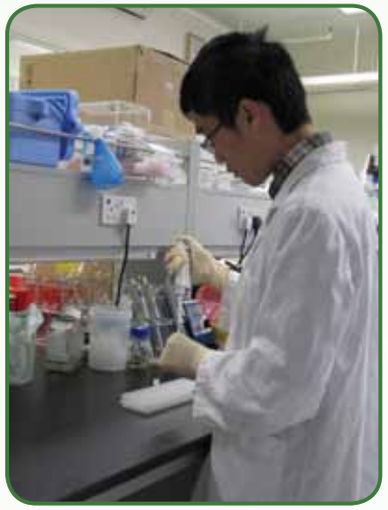
Background

Cell and molecular biology is the foundation of contemporary life sciences and represents the frontiers of modern biology and biomedicine. With the completion of genome projects in human and an increasing number of different organisms, the focus of modern biology is quickly shifting to functional genomics which aims at understanding the functions of genes at molecular, cellular, and organism levels.

It is in this background that the University proudly launched the new Cell and Molecular Biology programme in 2008. As the first programme focusing on cell and molecular biology in the region, we target to train superior professionals that fulfill the increasing manpower demand for the cutting-edge researches in the fields of cell biology and molecular biology. These advanced scientific disciplines include stem cell biology, cancer cell biology, neurobiology, signaling transduction, and developmental biology.

Mission

- To provide the best education and training that prepare students with professional research competence in biological and biomedical sciences as well as biotechnology
- To become a regional education centre with international recognition and a premier research hub for cutting-edge research in cell and molecular biology



Curriculum

Cell and Molecular Biology (CMBI)

Study Focus:
- Research methods & Scientific communication
- Stem cell biology, Cell biology of cancer and neuronal system
- Molecular biology
- Genomics, Transcriptomics & Metabolomics
- Contemporary topics in Cell biology & Molecular biology
- Fundamentals in Biochemistry & Genetics

Elective Areas:
- Independent research in Cell & Molecular Biology
- Medicinal chemistry and Pharmaceutical Analysis
- Advanced topics offered by other SLS programmes:
  - Biology: Physiology, Developmental biology, Genetic engineering
  - Biochemistry: Clinical biochemistry, Neuroscience, Immunology
  - Molecular Biotechnology: Animal, Plant and Microbial biotechnology
- Pharmacy offered by Faculty of Medicine
- Biomedical Engineering offered by Faculty of Engineering
- Biostatistics

Curriculum highlights

- STOT courses conducted in either a small class or 1 student-on-1 teacher basis
- Intensive project-based lab training
- Extensive coverage of contemporary and advanced topics in cell and molecular biology on top of the solid knowledge in life sciences

Expected learning outcomes

- Acquire solid subject knowledge in the fields of cell biology and molecular biology
- Comprehend laboratory skills essential for a research career
- Possess all-round competence

Interviews of current students

This one-to-one STOT learning scheme provides students with an extraordinary angle to appreciate the wonderful scientific world. Family-like atmosphere in CMB allows good interactions among teachers, staff and students. The project-based CMBI lab courses are fascinating. Not only that we learnt the essential techniques for molecular cloning, we also worked with plant cells and mammalian cells for our cell biology projects.

Ma Tsz-Ching Charlotte

Marvelous teaching team, nice research facility, interesting study topics, and constructive career development are some of the many reasons that I would recommend CMB to you. The skills in writing, presentation, critical thinking, and scientific research have well prepared me to be a scientific researcher.

Kwok Chun-Ho Leo

Contact

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Programme Director:
Professor Ge Wei
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Background

Environmental Science is an integrated science using the basic knowledge and skills of applied biochemistry, biology and chemistry to assess and resolve environmental problems. In response to the growing public concerns about the environmental protection and conservation issues, the University established the Environmental Science programme in 1994.

We foster our students with training in ecology, environmental chemistry, pollution control, waste management, biodiversity, conservation, toxicology and health, energy research, environmental impact assessment, and policy development. Our body of lecturing staff comprises professors from the School of Life Sciences and Department of Chemistry, as well as other professionals from related disciplines. In addition, our Advisory Committee, composed of the specialists from the Government, industries, and other academic sectors, also provides precious advice on curricular matters, thus improving the relevance of our graduates to the local need in particular, and that of overseas as well.

Mission

- To provide wide multidisciplinary background in environmental sciences with good communication skills
- To cultivate high level of competence in scientific understanding of environmental issues with creative idea in solving environmental problems
- To train our students with the appropriate professional techniques in addressing different environmental issues

Curriculum

Environmental Science (ENSC)

Study Focus:
- Ecology
- Environmental impact assessments
- Environmental chemistry & instrumentations
- Biochemical toxicology

Elective Areas:
- Independent research in Environmental Science
- Chemical treatment processes
- Environmental management & protection
- Environmental health
- Methods in toxicological research
- Conservation biology and biodiversity
- Advanced topics offered by Biology Programme: Hong Kong Flora and Fauna, Environmental Biotechnology
- Topics in Earth System Science offered by Faculty of Science, Public Health offered by Faculty of Medicine, and in Geography and Resource Management offered by Faculty of Social Science
- Biostatistics

Curriculum highlights

- Elective courses from the Department of Geography and Resource Management in Faculty of Social Science and the Public Health Programme in Faculty of Medicine, including Environmental Impact Assessment Workshop, Urban Environmental Problems, Hydrology, Eco-Tourism, Epidemiology, Biostatistics, Environment and Work, etc.
- Field study and internship courses
- Site visits to local and overseas environmental facilities, eco-tours, career development workshops, and summer research internship programmes

Expected learning outcomes

- Understand the core knowledge covering environmental chemistry, biological conservation, toxicology and environmental impacts
- Develop to be an active researcher and professional in various aspects of environmental science with innovative ideas
- Adapt to fast-changing social environment to stay competitive in job market and be aware of the latest developments in environmental issues

Interviews of current students

The programme invests a lot of resources in the lab courses such as molecular and biochemical studies, but it also includes a lot more than these. We can study specific topics in environmental science such as environmental management, landscaping, and plant identification. The good study environment is another plus that I would recommend this programme to you.

Sin Man-Wai

I am a first year student in ENSC. Classmates are friendly and willing to help in the programme. In this year, I have learnt basic knowledge about the environmental problems and their solutions, which are essential for me to work in the environmental aspect later on after graduation.

Siu Hoi-Ying

Career prospect

Half of our graduates directly involves in environmental related jobs after graduation. They work in government departments, consulting firms, green groups, and commercial sectors focusing on various aspects of environmental issues, from green purchasing, carbon audit, to environmental impact assessments and tree management. Other graduates become post-graduate students or find jobs in schools as teachers, in the business sectors as administrators or marketing officers.

Contact

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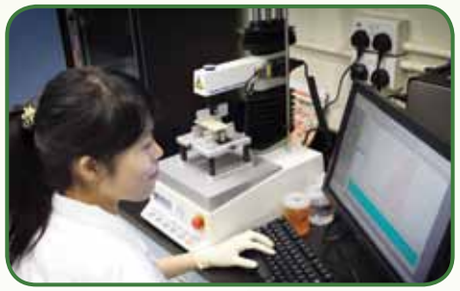
Programme Director:
Professor Chan King-Ming
Email: kingchan@cuhk.edu.hk

Background

Food safety and healthy eating that improve the quality of life have become an everyday critical awareness. The rapid advance and expansion of food-related industries further pose new challenges and research opportunities in food science and nutritional science.

In response to the increasing demand of manpower for food science and nutritional studies, the University established the Food and Nutritional Sciences programme in 1994. We are intended for students who are interested in modern food and nutritional sciences, and their diverse applications such as food safety and toxicology, food microbiology, food preservation, food product development, food analysis, quality assurance, nutrient metabolism, introductory dietetics, and community nutrition. The specialized training in the field with wide scope prepares our students for the employment in the industrial and commercial sectors, in government and private health services, and food service organizations.



Mission

- To provide training to students on modern food and nutritional sciences, with an emphasis on oriental cultural background and perspectives
- To provide research and development expertise that enhances and sustains the competitiveness of the Hong Kong food industry and health/nutrition professions and business.

Curriculum

Food and Nutritional Sciences (FNSC)

Study Focus:
- Nutrition & Human development
- Food chemistry & analysis
- Nutritional biochemistry
- Microbiology
- Fundamentals of Biochemistry & Cell biology

Elective Areas:
- Independent research in Food & Nutritional Sciences
- Community nutrition & Medical nutrition therapy
- Food technology & Food policy
- Food product development & Quality control
- Human physiology
- Advanced topics offered by other SLS programmes:
  - Biology: Genetics
  - Biochemistry: Immunology, Endocrinology
  - Environmental Science: Environmental toxicology
  - Molecular Biotechnology: Molecular biotechnology
- Biostatistics

Expected learning outcomes

- Understand the core knowledge and latest issues in food and nutritional sciences that promote the competitiveness of the students in the labor market
- Acquire abilities to access, retrieve and critically evaluate information relevant to food and nutritional sciences
- Apply the knowledge of food and nutritional sciences into real-life practical situations

Interviews of current students

The good reputation and interesting study topics brought me to the CUHK Food and Nutritional Sciences. The contents of the major courses are good. The knowledge related to food science and nutrition well prepares me for future career development. One excellence about the curricular design is the chances to study different topics in life sciences before selecting the major.

Kwok Wing-Hang

Food and Nutritional Sciences programme has an excellent team of teachers that the staff are enthusiastic about teaching. They are very kind to offer helping hands. The well being of the students is always prioritized.

Yu Chi-On

Contact

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Tel: 852-3943-6295

Programme Director:
Professor CHEN Zhen-Yu
Email: zhenyuchen@cuhk.edu.hk

Background

Molecular biotechnology is a revolutionary area of scientific discipline that involves the modification of naturally occurring genomic materials. This state-of-the-art technology has exerted remarkable contributions to agricultural, biological, biomedical, pharmaceutical, and other bio-industrial and health-related industrial areas. In the recent decades, numerous profound advances in biotechnologies bring new and prominent insights to health, food and environment, and at the same time tremendously facilitate our research on life sciences. Indeed, this is widely regarded as one of the major and fast growing technologies of this century.

In view of the current needs of increasing manpower and future prospects of biotechnology, the University launched the Molecular Biotechnology programme in 1998. We target students who are interested in the methods of biochemistry, genetic engineering, microbial, plant, and animal biotechnology. Other in-depth knowledge from an array of elective courses covering bioinformatics, protein biochemistry and proteomics, developmental and biology, physiology are also provided for students' selection. In addition, we also address the business and social implications of biotechnology, such as government policy, management, intellectual property, and ethical and public concerns.

Career Talk given by Alumni

Graduation

Mission

- To provide training to students on the current development, business and social implications of molecular biotechnology
- To cultivate the ability of logical and critical thinking, and scientific communications

Curriculum

Molecular Biotechnology (MBTE)

Study Focus:
- Molecular Biotechnology in Animals, Plants and Microorganisms
- Business & Social Aspects of Biotechnology
- Methods in Molecular Biotechnology
- Methods in Biochemistry
- Genetics & Genetic Engineering
- Cell Biology & Biology of Model Organisms
- Microbiology

Elective Areas:
- Independent research in Molecular Biotechnology
- Advanced topics offered by other SLS programmes:
  - Biochemistry: Protein and Enzymes, Bioenergetics and Metabolism, Immunology
  - Biology: Physiology, Developmental Biology
  - Cell & Molecular Biology: Stem Cell Biology, Cell Biology of Cancer and Neuronal System
- Biostatistics
- Biomedical Engineering

10th Anniversary Banquet

10th Anniversary Symposium

Curriculum highlights

- Fundamental knowledge in life science with emphasis on molecular biotechnology
- Hands-on skills through specially designed laboratory courses on methods in molecular biotechnology
- In-depth knowledge in selected areas of your choice. Topics cover bioinformatics, protein biochemistry and proteomics, developmental biology, and physiology
- Comprehensive understanding of the business and social implications of biotechnology, such as government policy, management, intellectual property, and ethical and public concerns

Expected learning outcomes

- Gain solid knowledge in life science, with particular emphasis on the principles and potential applications of molecular biotechnology in methods in biochemistry, molecular biology, genetic engineering, microbial biotechnology, plant biotechnology and animal biotechnology
- Acquire hands-on operational capability in basic skills of molecular biotechnology
- Understand the business and social implications of biotechnology, such as government policy, management, intellectual property, and ethical and public concerns
- Be able to judge the pros and cons of various applications of molecular biotechnology on human society and natural environment
- Become all-round competent

Interviews of current students

I enrolled to the University via the Early Admission Scheme. After the first year of study in life sciences, I found that we had a good chance to know the study topics and format before really choosing the preferred major. I have decided to choose Molecular Biotechnology for my major, and it is because its curriculum strikes an excellent balance between basic science knowledge and technical skills. In addition, the ample research chances and good reputation are other factors that bring me to this programme.

Woo Theodosia

Visit Biotechnology Companies

Molecular Biotechnology Research

Contact

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Programme Director:
Professor Lam Hon-Ming
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Minimum Admission Requirements

JUPAS Applicants

For applicants who are applying on the strength of Hong Kong Advanced Level Examination results, they should fulfill the following requirements.

1. Good grades in HKCEE for:
   (i) any two language courses,
   (ii) Biology
   (iii) Chemistry, and
   (iv) one subject from Mathematics, Additional Mathematics, Physics or Engineering Science

2. Grade E or above in HKALE for:
   (i) AS Chinese Language & Culture,
   (ii) AS Use of English,
   (iii) AL Biology or Chemistry, and
   (iv) one AL science subject or two AS science subjects

Non-JUPAS Applicants

For applicants who are seeking admissions on the strength of qualifications other than Hong Kong Advanced Level Examination results, admission requirements could be found in the website of our Office of Admissions and Financial Aids (OAFA) at *http://www2.cuhk.edu.hk/oafa/main.html*. The general requirements include acceptable level of proficiency in English and Chinese, and satisfactory results in Biology and/or Chemistry in internationally recognized examinations. These applications will be individually considered.

Applicants with eligible local residency who wish to admit via Early Admissions Scheme for Secondary 6 Students, OR who are students enrolled in GCE, IB, SAT or other international recognized systems, OR who are sub-degree holders, OR who wish to transfer from other local University Grants Committee (UGC)-funded universities, please visit OAFA webpage for more details.

Students from overseas and mainland China who are interested in the Life Sciences Programmes can also apply. More information can be located in the following websites respectively: *http://www2.cuhk.edu.hk/oafa/adm.php* and *http://www2.cuhk.edu.hk/oafa/prc.php*.

Contact

General Office of the School of Life Sciences

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