



School of Biomedical Sciences

生物醫學學院



香港中文大學
The Chinese University of Hong Kong



FACULTY OF MEDICINE
THE CHINESE UNIVERSITY OF HONG KONG



"Biomedical Sciences" is identified as one of the five Focused Areas of Research in *Strategic Plan 2006* of The Chinese University of Hong Kong. Guided by the University's vision of pursuing research excellence, the pre-clinical science Departments of Anatomy, Biochemistry (Medicine), Pharmacology, and Physiology were reorganized in June 2009. The School of Biomedical Sciences (SBS) was inaugurated under the Faculty of Medicine in January 2010.

Vision

The School of Biomedical Sciences aims to nurture physicians and other healthcare workers who are abreast of current biomedical advances and scientific investigators who have the ability to do cutting-edge research that will lead to alleviation of human suffering. We envision becoming a world-recognized leader in selected research areas with particular relevance to Hong Kong and China.

Missions

- To promote cutting-edge biomedical research through introduction of innovative technologies and collaboration among basic scientists of different disciplines
- To facilitate translational research by providing platforms that will enhance interdisciplinary collaboration among basic science investigators and clinicians
- To generate synergies in team teaching at both undergraduate and postgraduate levels
- To nurture the next generation of basic researchers and physician scientists in Hong Kong, China, Asia and around the world



「香港中文大學策略計劃 2006」把「生物醫學」列為香港中文大學五大重點研究領域之一。為配合大學追求卓越研究的願景，香港中文大學於 2009 年 6 月，將醫學院轄下四個臨床前期學系，包括解剖學系、生物化學系（醫學院）、藥理學系及生理學系合併，並在 2010 年 1 月正式成立生物醫學學院。

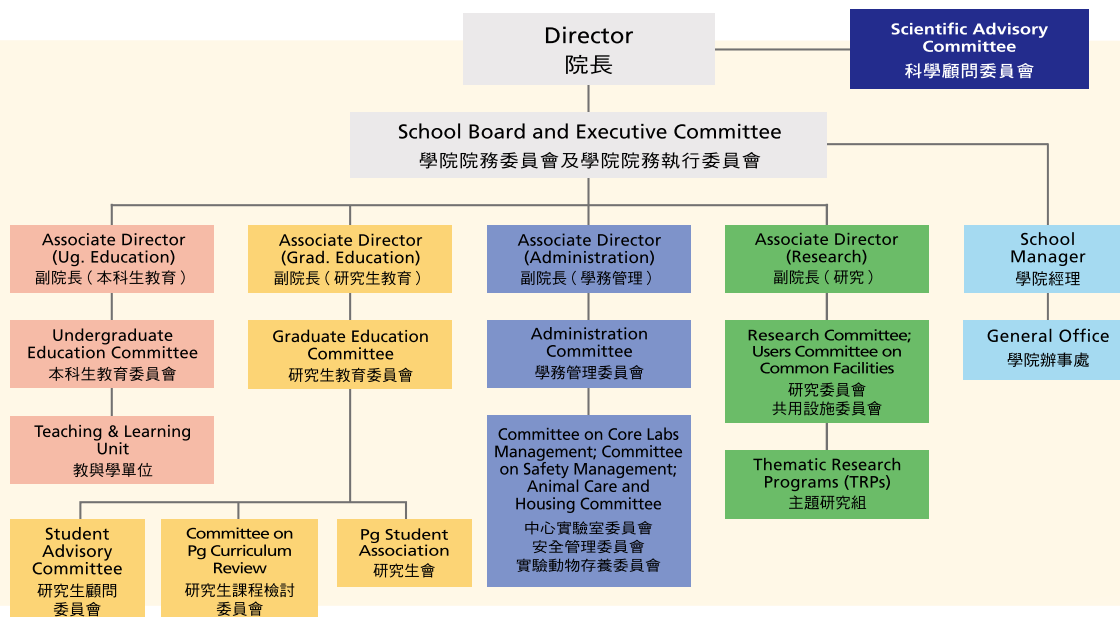
願景

生物醫學學院致力培育通曉當前生物醫學發展的醫生、護理工作者及精於從事前沿科研的科學人員，以減輕疾病為人類帶來的痛苦為鵠的。展望未來，本學院矢志成為享譽國際的研究單位，並成為香港及中國地區特定生物醫學領域的科研領導者。

使命

- 引進嶄新科技及跨學科協作，從而倡導前沿生物醫學研究
- 為臨床轉化研究提供平台，促進基礎科學研究人員與臨床醫生之間的跨學科協作
- 提升研究與本科教學之間的協同效益
- 為香港、中國、亞洲，以至全球培育新一代的基礎科研人員及醫師科學家





Scientific Advisory Committee

A Scientific Advisory Committee has been formed to advise the School Director on areas of strategic importance to the future development of the School, e.g. its organizational structure and policies, scientific directions, and the performance of individual Thematic Research Programs (TRPs), etc. The current membership is as follows:

Chairperson

Prof. Owen M. RENNERT, M.D., National Institutes of Health, U.S.A.

Members

Prof. LAW Ping-Yee, Ph.D., University of Minnesota, U.S.A.
 Prof. James R. LUPSKI, M.D., Baylor College of Medicine, U.S.A.
 Prof. Vassilios PAPADOPOULOS, D.Pharm., Ph.D., McGill University Health Centre, Canada
 Prof. Rocky S. TUAN, Ph.D., University of Pittsburgh School of Medicine, U.S.A.

Staff Establishment

As of June 2012, we have a total of 155 staff members in the School, distributed as follows:

- 44 Academic Staff
- 18 Administrative, Executive, IT and Clerical Staff
- 9 Teaching Fellow & Instructors
- 55 Research & Technical Personnel supported by the School
- 17 Research Assistant Professors & Research Personnel hired by individual academic staff
- 12 Supporting Staff

Among our 44 academic staff, 26 are at the rank of Professor, 9 are Associate Professors, 6 are Assistant Professors and the remaining 3 are Research Assistant Professors. The research interests and selected publication list of our academic staff can be found at <http://www.sbs.cuhk.edu.hk/StaffList.asp>.

科學顧問委員會

本學院特別設立科學顧問委員會，旨在就各重要的策略性範疇向本院院長提供意見，例如學院架構及政策、科學發展方向及主題研究組的表現等。此顧問委員會的現任成員如下：

主席

美國國立衛生研究院
Owen M. RENNERT 教授

會員

美國明尼蘇達州大學羅秉義教授
 美國貝勒醫學院 James R. LUPSKI 教授
 加拿大麥吉爾大學健康中心
 Vassilios PAPADOPOULOS 教授
 美國匹茲堡大學醫學院段崇智教授

教職員編制

截至 2012 年 6 月，本學院共有 155 名教職員，其分佈如下：

- 44 名教學人員
- 18 名行政、資訊技術及文書人員
- 9 名特任導師及導師
- 55 名由學院聘請的研究及技術人員
- 17 名由個別教學人員聘請的研究助理教授及研究人員
- 12 名支援性員工

在 44 位教學人員中，有 26 位為教授、9 位為副教授、6 位為助理教授及 3 位為研究助理教授。有關本學院教師的研究領域及其代表性著作列表，可瀏覽本學院網頁 <http://www.sbs.cuhk.edu.hk/StaffList.asp>。



The School has adopted a research theme-based approach as its operational model in the hope of facilitating translational and interdisciplinary research. Specifically, the following five Thematic Research Programs (TRPs) have been established:

本學院的科研架構以「主題研究組」為單位，成立了五個「主題研究組」，以促進跨學科及從基礎到臨床的轉化研究。它們包括：

■ Cancer and Inflammation

- ◆ Effects of inflammatory microenvironment on carcinogenesis in different organs, particularly the prostate and gastrointestinal tract
- ◆ Roles of hormone and nuclear receptors, signaling molecules, and non-coding RNA in cancer development and inflammation
- ◆ Genomics and proteomics in cancer and inflammation
- ◆ Application of biological molecules and natural products in cancer treatment and prevention
- ◆ Interactions between inflammatory cells and cancer



■ 癌症與炎症

- ◆ 炎症微環境對前列腺、腸胃及各器官癌發生的影響
- ◆ 荷爾蒙（激素）、核受體、信號分子和非編碼 RNA 在癌發展與炎症中的角色
- ◆ 癌症與炎症的基因和蛋白組學
- ◆ 生物分子與天然產品在癌症治療和預防方面的應用
- ◆ 炎性細胞與癌症的相互作用

■ Neuro-degeneration, -development and Repair

- ◆ Development and aging of human CNS
- ◆ Effects of drugs of abuse on the nervous system
- ◆ Directional signals on development and effects of retinoic acid
- ◆ Repair of the nervous system
- ◆ Areas of neuropharmacology, behaviour and drug discovery



■ 神經退化、發育及修復學

- ◆ 人類中樞神經系統的發育與老化
- ◆ 濫用藥物對神經系統之影響
- ◆ 轉向信號對維他命 A 酸的發展與影響
- ◆ 神經系統的復修
- ◆ 神經藥理、行為與藥物研發

■ Reproduction, Development and Endocrinology

- ◆ Biology of reproductive epithelia
- ◆ Germ cell developmental genomics and genetic regulation
- ◆ Organogenesis, embryogenesis, and fetal development in health and disease
- ◆ Mechanism of hormone actions in health and disease, including diabetes
- ◆ Hypothalamic-pituitary-gonad axis in health and disease



■ 生殖、發育及內分泌學

- ◆ 生殖性上皮細胞生物學
- ◆ 生殖細胞發育基因組學及調控
- ◆ 器官發生、胚胎發育及胎兒成長的健康與疾病中的研究
- ◆ 賀爾蒙（激素）在健康與疾病（包括糖尿病）中的作用機制
- ◆ 下丘腦內垂體生殖腺軸椎的健康和疾病

■ Stem Cell and Regeneration

- ◆ Control factors for stem cell proliferation and differentiation
- ◆ Signals controlling stem cell recruitment and homing in development and diseases
- ◆ Translational research in regenerative biology



■ 幹細胞與再生醫學

- ◆ 幹細胞增生與分化的調控因數
- ◆ 發育與疾病過程中的幹細胞調動和返巢信號的控制
- ◆ 再生生物學的轉化研究

■ Vascular and Metabolic Biology

- ◆ Vascular ion channel physiology
- ◆ Novel signaling pathways in endothelial cell dysfunction, diabetes and hypertension
- ◆ Lipid metabolism, metabolic disorder and therapeutic intervention
- ◆ Renal pathophysiology in cardiovascular diseases
- ◆ Cardiovascular inflammation, remodeling and pharmacology



■ 血管及代謝生物學

- ◆ 血管離子通道生理學
- ◆ 內皮細胞失調、糖尿病及高血壓中的信號轉導
- ◆ 脂質代謝、代謝疾病與治療
- ◆ 心血管疾病的腎臟病理生理學
- ◆ 心血管之炎症、重塑與藥理

The five TRPs have attracted more than fifty clinical investigators in the Faculty of Medicine as well as researchers from other institutions to join as Associate Members. The membership list of each TRP with research interests, selected publication list and contact information can be found at <http://www.sbs.cuhk.edu.hk/Research.asp>.

上述五個「主題研究組」吸引了五十多位來自醫學院臨床學系及其他學院的科研人員成為聯繫成員。各主題研究組的成員名單、研究領域、代表性論文及其聯絡資訊詳列於 <http://www.sbs.cuhk.edu.hk/Research.asp>。

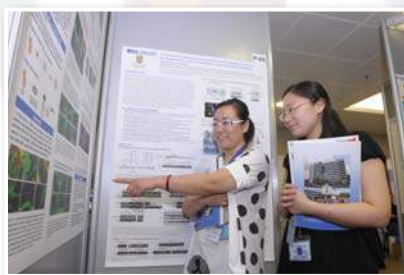
Through the Graduate Division of Biomedical Sciences, our School continuously devotes substantial efforts and resources in training high-calibre postgraduate students with in-depth theoretical knowledge and advanced research skills. Following the launch of the articulated M.Phil. - Ph.D. programme in 2010/2011, more flexible study modes with a range of theme-based research topics across different disciplines have been provided for students' selection according to their research interests.



透過成立生物醫學研究生學部，本學院持續地投放大量資源，以培育精通理論基礎與先進科技技術的研究生。由 2010/2011 學年開始，本學院提供碩士—博士銜接課程，配以靈活的修業模式與一系列主題研究課題，讓研究生在不同領域中按照自己的興趣選擇研究方向。

Strong academic links with research and higher education institutes have been established nationally and internationally to provide students with global perspectives and cutting-edge research training. The National Institutes of Health (NIH) Graduate Partnerships Program, U.S.A., and the Collaborative Partnership with the School of Basic Medical Sciences, Zhejiang University, China are a few examples. The annual Postgraduate Research Day has been also organized by our postgraduate students to provide themselves an interactive platform where they can display their creativity and hard-work, share their achievements with their peers and supervisors, and showcase their talent through displaying of posters and oral presentations.

Details on our postgraduate education are available at <http://www.sbs.cuhk.edu.hk/Postgraduate.asp>.



本學院亦跟國際及區域研究機構與高等學術院校建立合作伙伴關係，共同提供研究訓練，培訓學生成為具備全球性視野的科研人員。與美國國立衛生研究院轄下國家兒童健康及人類發育研究所開辦的研究生聯合培養計劃、與中國浙江大學合作提供博士前培訓課程都是其中的例子。每年由研究生籌劃的研究生日，旨在創造一個互動的交流平台，讓學生透過牆報展示及口頭報告，與同輩及導師分享以自己的創造力和努力得來的研究成果。

有關本學院的研究生教育可參考：<http://www.sbs.cuhk.edu.hk/Postgraduate.asp>.



Our School offers medical and non-medical courses to different programmes within or outside the Faculty of Medicine, including MBChB, Nursing, Pharmacy, Biology (Human Biology stream), Chinese Medicine, Food & Nutritional Sciences and Biomedical Engineering programmes. We also offer two University General

Education courses, namely Perspectives in Medical Sciences and Perspectives in Clinical Sciences, to all undergraduate students.

The Teaching and Learning Unit (T&L Unit) has been established to develop and promote the use of effective tools and good practices for advancement of teaching quality and enhancement of student learning. The T&L Unit has been actively involved in the development of different animated teaching courseware and other teaching- and learning-related initiatives for promoting good pedagogical practices in the School.

Details of our undergraduate education are available at <http://www.sbs.cuhk.edu.hk/Undergraduate.asp>.

本學院亦為醫學院及大學內其他學院的本科生課程，提供醫學與非醫學的學科教學，當中包括內外全科醫學士、護理學、藥劑學、生物學（人類生物學專修）、中醫學、食物及營養科學和生物醫學工程學課程。除此之外，本學院亦為本科生開辦醫學科學觀及醫學科學探索兩門大學通識課程。

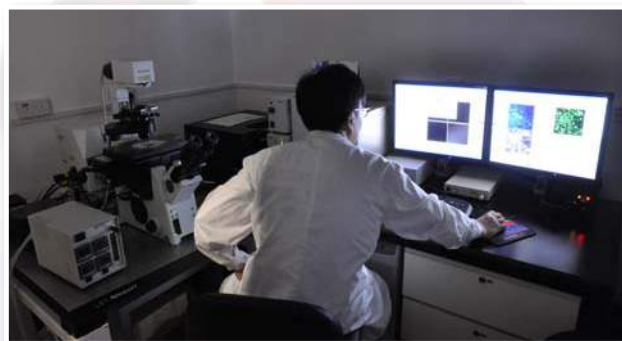
為了開發和推廣有效的教學工具和良好教學典範，以提升教學質素，並提高學生學習之果效，本學院特地成立了教與學單位。其成員一直致力開發不同的互動教材，並發展各種輔助教學的方法，從而推廣本學院的優質教學與學習，並推動教學人員的專業發展。



有關本學院的本科生教育可瀏覽：<http://www.sbs.cuhk.edu.hk/Undergraduate.asp>.

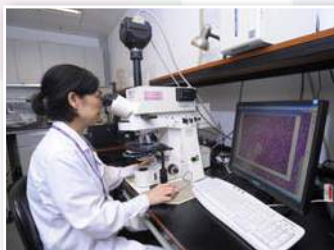
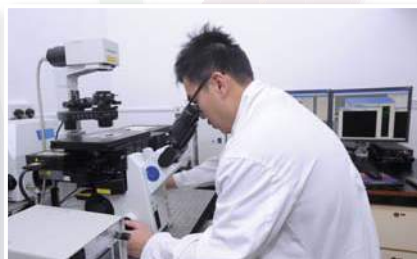
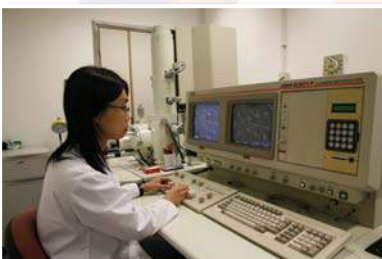
Four Core Laboratories have been established to serve as an extension of the research laboratories of individual investigators and augment their primary research expertise by providing specialized, state-of-the-art equipment, on-site training, and assistance from experienced technical staff when performing biomedical research. These include:

- Macromolecular & Microarray Core
- Flow Cytometry & Cell Culture Core
- Histology Core
- Microscopy & Imaging Core



本學院現在共有四所中心實驗室，為研究學者提供更大的實驗空間。中心實驗室除提供先進的設備外，亦安排了經驗豐富的專業技術人員為使用者提供協助和培訓，促進生物醫學研究。四所中心實驗室分別為：

- 大分子及基因表達中心實驗室
- 流式細胞儀與細胞培植中心實驗室
- 組織學中心實驗室
- 顯微及影像中心實驗室



A new Animal Holding Core has also been established in the second quarter of 2012 to provide our investigators centralized and high standard animal care and housing facilities, thus facilitating them in conducting more high-impact research.

With the planning and coordination of our School and the special funding obtained from the University, the CUHK Transgenic Core Service Centre (CUHK-TCSC) was officially open in October 2011. The Centre aims to provide all researchers in the University the technical knowhow and consultations on how to produce transgenic and knockout mice.

Researchers outside the School are welcome to make use of our core facilities. Interested parties may visit http://www.sbs.cuhk.edu.hk/Core_Labs.asp or http://www.sbs.cuhk.edu.hk/Core_Transgenic.asp.



為了向我們的研究人員提供高規格的實驗動物存養服務，方便他們進行更多具高影響力的研究，新的實驗動物存養中心設施已於 2012 年第二季啟用。

此外，由生物醫學學院牽頭及協調、並獲大學慷慨資助而建立的香港中文大學基因轉移服務中心已於 2011 年 10 月投入服務，旨在為本學院及大學

的科研人員提供培育基因剔除小鼠及轉基因小鼠專業技術指導等一系列服務。

我們歡迎非本學院的學術研究者使用我們的中心實驗室。有關詳情可參閱 http://www.sbs.cuhk.edu.hk/Core_Labs.asp 或 http://www.sbs.cuhk.edu.hk/Core_Transgenic.asp。



To strengthen the academic and scientific collaboration between our School and overseas universities and research institutes, we actively engage ourselves in developing collaboration with institutions renowned in different fields of biomedical sciences. As of June 2012, our School has signed Memoranda of Understanding (MOU) with the following overseas institutions:

- Center for Cellular and Molecular Engineering and Department of Orthopaedic Surgery, School of Medicine, University of Pittsburgh, U.S.A.
- Chinese Academy of Sciences, Guangzhou Institutes of Biomedicine and Health, China
- Institute of Materia Medica, Chinese Academy of Medical Sciences & Peking Union Medical College, China
- School of Basic Medical Sciences, Zhejiang University, China
- Shanghai Institute of Materia Medica, Chinese Academy of Sciences, China

Since its formation, our School has organized or taken part in numerous outgoing visits to partner institutions and received many academic visitors and scholars from abroad. Through these visits and meetings, our



investigators are enabled to exchange views and share experience with the overseas counterparts and incoming visitors in terms of research collaboration and provision of graduate or undergraduate education.

Individual TRPs have also successfully attracted many top-notch researchers and scholars from the mainland and overseas to have scholarly exchange with our investigators and postgraduate students. Each year, individual TRPs organize more than 40 theme-based seminars.

Details on our previous academic exchange activities and theme-based seminars can be found at <http://www.sbs.cuhk.edu.hk/Acalinks.asp> and http://www.sbs.cuhk.edu.hk/Seminar_Notices.asp, respectively.

本學院積極與享負盛名的國內及海外學術機構建立合作框架，藉此加強與其他大學及研究機構的學術與科研合作。由學院成立至 2012 年 6 月，我們先後與下列海外學府或機構簽訂了合作備忘錄：

- 美國匹茲堡大學醫學院細胞及分子工程中心和矯形外科學系
- 中國科學院廣州生物醫藥與健康研究院
- 中國醫學科學院暨北京協和醫學院藥物研究所
- 中國浙江大學基礎醫學系
- 中國科學院上海藥物研究所

生物醫學學院自成立以來，學術交流次數頻繁。除外訪海外合作夥伴外，我們亦接待了不少來訪的學者及訪問團，與他們就研究合作和提供研究生或本科生教育方面互相交流觀點與分享經驗。

個別的主題研究組亦成功吸引了很多內地和海外優秀的研究學者到訪，讓他們與本院的研究人員及研究生分享學術經驗。每年由個別的主題研究組舉辦的研討會超過四十餘場。

有關我們過往的學術交流活動及由個別的主題研究組舉辦的研討會，已分別上載於 <http://www.sbs.cuhk.edu.hk/Acalinks.asp> 和 http://www.sbs.cuhk.edu.hk/Seminar_Notices.asp。



The School of Biomedical Sciences has been successfully relocated to the fit-for-purpose designed Lo Kwee-Seong Integrated Biomedical Sciences Building at Area 39, Northside Research Campus since March 2012. The new research block has been named after the late Dr. Lo Kwee-Seong, Founder of the Vitasoy Group and the K.S. Lo Foundation, to commemorate the Foundation's philanthropy of donating HK\$150 million in support of developing biomedical sciences research at The Chinese University of Hong Kong. The nine-storey building with open-lab format and advanced research facilities provides an ideal environment that favours free scientific exchange and scholarly interaction among our investigators and students, and ultimately takes us to new heights of excellence in the years to come.

In addition, our School will continue to take different initiatives (e.g. introduction of incentive schemes; review of internal resource allocation; recruitment of new faculty; establishment of joint laboratories with partner and overseas institutions, etc.) so as to better prepare ourselves to opportunely respond to the many challenges arising from the fast-changing landscape of higher education such as the increased competitiveness in the local funding mechanism and the Research Assessment Exercise 2014, etc.

生物醫學學院在2012年3月順利喬遷至位於校園北部研究樞紐第39區的羅桂祥綜合生物醫學大樓。為答謝羅桂祥基金慷慨捐贈港幣1.5億，以支持香港中文大學在生物醫學科學方面的發展，新的研究大樓以維他奶集團及羅桂祥基金創辦人羅桂祥博士命名。這座九層高的研究型大樓，採用了開放式實驗室及中心設施模式的現代化設計，為我們的研究人員及學生提供優越理想的環境，促進彼此之間的科研與學術交流，從而帶領學院踏進一個在學術與研究方面都更為卓越的新紀元。

此外，學院會繼續採取不同的措施，如推行績效為本的獎勵計劃；檢討現行的內部資源分配機制；聘請新的教職員；與海外學府或學術機構攜手成立聯合實驗室等，為急劇轉變的高等教育大環境（如日趨競爭化的本地高等教育撥款機制、及2014年度的「研究評審工作」等）作出充分的準備，適時地應對各種挑戰。

Contact Us

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