Medical and Dental Sciences

Advancing our research engagement in China

Committed to meaningful collaborative partnerships that promote excellence in basic and clinical science to improve global human health, the College of Medical and Dental Sciences has been engaging Chinese partners as that country continues to develop its capacity in education and research.

The College plays a pivotal role in the University's most significant engagement in China to date – The University of Birmingham Guangzhou Centre. This landmark partnership with the Guangzhou Municipal Government launched in September 2011. Since then , it has facilitated the colleges activities in Guangzhou and other parts of China.

Our aims are to help provide solutions to important scientific, clinical and public health questions in China, to contribute to the establishment of important infrastructure (eg population cohorts and clinical trials unit) and to train the next generation of research and healthcare workers. Our scientific programmes span the entire range of research, from laboratory to the bedside and the population. We help train PhD students, postdoctoral researchers, general practitioners (GPs) and GP trainers.

Professor KK Cheng, Professor of Public Health and Primary Care and the College's champion for its engagement in China "To achieve our diverse objectives, our partners include not only universities but also research institutes, hospitals, primary care centres and government agencies in China.."

Speaking about our flagship development in Guangzhou at a visit in 2013, The Rt Hon David Willetts, Minister for Universities and Science, described our approach as *'nothing short of inspirational'*.

Examples of ongoing research projects

The Guangzhou Biobank Cohort Study (GBCS)

GBCS is a collaborative research project monitoring 30,000 men and women over 50 in Guangzhou. It is a pioneering project and the largest of its kind in south China. The main long-term aim of the study is to examine the effects of genetic and environmental influences on health and chronic disease development, particularly circulatory disease, chronic respiratory disease, cancer and dementia. Since its inception in 2003, GBCS has established itself as a major research resource, with over 100 papers published. The study has also been a successful platform for postgraduate research training.

The Born in Guangzhou Cohort Study (BiGCS)

The aim of this study is to understand the genetic and environmental determinants of maternal health, foetal growth, birth outcomes and development of diseases in children. Commenced in 2011, this birth cohort aims to recruit 30,000 pregnant women over a period of five years. There have been approximately 5000 deliveries, with children up to 2 years of age. A large volume of data has been collected from a number of stages throughout pregnancy, during delivery and after birth. The purpose-built biobank now houses almost 300,0000 samples.

Birmingham-Guangzhou Brain and Cognition Centre

This Centre is developing a large-scale research programme to improve the assessment and treatment of stroke and neurological conditions in China including tumours, traumatic head injury, and dementia. This will involve developing – within a Chinese context – the novel behavioural screening procedures created in Birmingham that efficiently measure a range of cognitive problems after brain injury; implementing procedures for advanced brain imaging to provide new biomarkers of functional recovery after brain injury; and developing computerised forms of cognitive screening for bedside testing and rehabilitation. The Centre will also market the new diagnostic tests and deliver training programmes to benefit clinicians and patients.

University of Birmingham – Guangzhou Institute of Biomedicine and Health (GIBH) joint initiative

In April 2012, the University and GIBH signed a memorandum of understanding to launch a new joint initiative. GIBH has a strong international reputation in the generation and manipulation of pluripotent stem cells, while Birmingham has unrivalled experience and resources in the area of cell-based therapy for pre-clinical testing in animal models and subsequent trials in man. The initiative will focus on the application of stem cell biology to regenerative medicine and novel therapies to modify the body's response to organ injury with the hope of eventually establishing a joint Centre for Stem Cell Biology and Regenerative Medicine.

Professor Jonathan Frampton (/staff/profiles/iandi/frampton-jon.aspx) , Director of Research and Knowledge Transfer and Professor of Stem Cell Biology, leads the collaboration with GIBH.

Professor Frampton is a stem cell biologist. His primary area of interest is in how stem cells operate in adults. Jon's research involves examining the processes that regulate stem cells to determine how these fail during ageing or as part of disease processes, especially in cancer.

Professor Jonathan Frampton "The initiative is firmly grounded in shared scientific interests and the objective to translate discoveries into patient benefit, and we believe this joint initiative will be a model for international research collaboration at the highest level. We will each gain from the other's expertise and specialist resources to enable delivery of cutting-edge research outcomes."

Developing general practice in China

One of the pillars in the ongoing healthcare reform in China is to develop general practice. Birmingham has the longest track record and most extensive links in China among British (and probably for all foreign) universities in this field. KK Cheng is the Founding Head of General Practice at Peking University Health Science Centre (PUHSC). In addition to academic links, the School of Health and Population Sciences (HaPS) has also been collaborating closely in the field of general practice and community healthcare with municipal health bureaux in major Chinese cities including Beijing, Shanghai and Guangzhou. In April 2014, a Memorandum of Understanding was signed between University of Birmingham, Health Education England, PUHSC and the National Steering Committee for Medical Professional Degree Education of China. This provides a strong national platform for developing further links in general practice training in China.

New agreements with Chinese Institutions

Open all sections

A Study Abroad Agreement was signed with South China University of Technology(SCUT), Guangzhou in December 2012, and we look forward to welcoming students from SCUT to come and spend a year at Birmingham.

We signed a Memorandum of Understanding with Central South University in Changsha in November 2012 to collaborate in the areas of Medicine and Engineering

Famous Chinese Alumni

Honorary doctorate awarded to China's SARS hero

Professor Zhong Nanshan, a leading figure in the combat of the 2003 SARS epidemic in China, was recently awarded an honorary degree by the University of Birmingham at a special graduation ceremony in Guangzhou.

Head of the Guangzhou Institute of Respiratory Diseases and probably the most high profile public face in the war against SARS, Professor Zhong is a recipient of numerous honours and has received wide recognition for his work, including the Presidency of the Chinese Medical Association between 2005 and 2010. In 2009, Professor Zhong was honoured as one of China's top 100 most influential citizens during the 60 years since the founding of the People's Republic.

During the 2003 outbreak of SARS, as the leading respiratory clinician in Guangzhou, Professor Zhong, together with his team, proposed to admit all the critical SARS cases in Guangdong province into his institute. Through unravelling the nature of the virus, Professor Zhong helped bring calm to the nation and enabled a greater disaster to be averted.

Professor Zhong has conducted groundbreaking research in asthma and, most notably, chronic obstructive pulmonary disease (COPD), a major cause of death in China. Under his leadership, the Guangzhou Institute of Respiratory Diseases became the first of its kind in China to be designated Key State Laboratory of Respiratory Diseases.

Officiated by the Vice-Chancellor Professor David Eastwood, Professor Zhong's graduation ceremony was part of a University of Birmingham biomedical research forum taking place in Guangzhou. During the forum, senior academics from the College of Medical and Dental Sciences and the College of Life and Environmental Sciences presented research highlights in areas such as human disease modelling, clinical trials, translational medicine and cognitive neuroscience.

Student Exchange and Mobility

Sun Yat-sen University (SYSU) is UoB's partner institution in Guangzhou China. SYSU is offering 2 tuition free places on its International Summer Programme (ISP) to UoB students. The ISP runs from June30-July 18.

For more information please visit the **SYSU website (http://summerprogram.sysu.edu.cn/)**

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