Collaborative Research at Queen Mary
- The China Connection

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22 November 2007
Outline

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Overview - Queen Mary’s Academic Sectors

Science & Technology

Humanities, Social Sciences and Law

School of Medicine and Dentistry
Overview - Queen Mary’s China Connection

Physical Sciences and Engineering
- Computer Science
- Electrical Engineering
- Engineering
- Material Science
- Physics
- Biological and Chemical Sciences

Barts and the London Queen Mary's School of Medicine and Dentistry
- Institute of Cancer
- Institute of Cell and Molecular Science
- The Institute of Health Sciences Education (IHSE)
Education & Training Programs

- In 2004, Queen Mary launched two joint degree programmes with Beijing University of Posts and Telecommunications (BUPT)
  - Telecommunication Engineering with Management
  - e-Commerce Engineering with Law
- Currently attract over 1300 students and this number is set to rise to 2000 in 2008
Education & Training Programs

- In 2005, the Institute of health Sciences Education (IHSE) won the bid from the Royal College of General Practitioners (RCGP) to host a training programme for primary care doctors and health service managers from Zhejiang province.
- China - UK Community Health Services Conference was held in Hangzhou in 2006.
- Nurse teachers from the Hangzhou Normal University visit the IHSE and City University the for training in curriculum development in 2006.
Joint Research Programs

● Space Technology
  ● QMUL and its Chinese partners was funded by an International Research Program Grant from China National Space Administration (CNSA) for a total of 19.5 million RMB covering a wide range of technology areas
    ● Space Bioreactor Platform for Cell and Tissue Engineering
    ● Effects of Microgravity on Cardiovascular Systems
    ● Nanopropulsion and its applications
    ● Space Telecommunication
Joint Research Programs

- Space Technology
  - Partners in this program include
    - Professor Wen Wang/Professor John Stark, School of Engineering and Materials Science, Queen Mary
    - Professor Xiaodong Chen, Department of Electric Engineering, Queen Mary
    - Beihang University
    - Beijing University of Post & Telecommunication
    - Huazhong University of Science & Technology
    - Southern Medical University
Joint Research Programs

- **Cancer Research**
  - April 2006, Sino-Britain Research Centre for Molecular Oncology established in Zhengzhou University
  - 3 EU-China grants and substantial support and investment from Henan Province
  - Development of novel virus based cancer therapy lead by
    - Prof. Nick Lemoine
    - Dr. Yaohe Wang
  - Potential ICUK support: short term staff exchange
Joint Research Programs

● Nano Technology
  ● Novel molecular nano materials which has the potential to greatly improve biomedical NMR imaging.
  ● The program is led by:
    ● Dr. John Dennis, Department of Physics, Queen Mary
    ● Beijing Institute of Chemistry, Chinese academy of Science
    ● Southwest University of Science & Technology
  ● Potential ICUK support: PoC fund to support process scale up
Joint Research Programs

- Nano Technology
  - Novel antiviral nanomaterials
    - Dr. Guogang Ren, School of Engineering and Material Science, Queen Mary
    - Nankai University
    - Beihang University
  - Potential ICUK support: PoC fund to support toxicology study
Joint Research Programs

- Environment and Sustainable Development
  - School of Biological and Chemical Sciences is embarking on a joint research program on aqua ecosystems in China, led by
    - Prof. Allan Hildrew, School of Biological and Chemical Sciences, Queen Mary
    - Institute of Hydrobiology, Chinese Academy of Science
  - Potential ICUK support: network building through partnership grant
Joint Research Programs

- Queen Mary and BUPT set up a joint research laboratory in 2003. The collaboration is led by Prof. Xiaodong of Queen Mary.
- In 2006, the QM-BUPT joint laboratory participated in the EU-China Grid Inter-Networking program:
  - Grid foundations: architecture, design and development of technologies and systems for the Grid.
  - Grid-enabled applications and services for business and society: promote global adoption of Grid environments and tools.
Showcase of Joint Innovation (1)

Department of Engineering, Queen Mary
Led by Prof. Wen Wang

Huazhong University of Science & Technology
Southern Medical University

Soft Tissue Image Technology

• Tissue modeling software enables quantitative analysis of soft tissue imaging that can be incorporated into existing Ultrasound and X-ray systems.
• Significant commercial interests both from the UK and China.
• Potential ICUK support: PoC fund to support the incorporation of the software into hardware systems for clinical demonstration in patients.
A new generation microsomal vaccine capable of inducing anti-HBV and cancer immune responses:

- reverse tolerant state of viral or cancer specific T lymphocytes
- Results from animal models showed high efficacy
- IP protected technology
- Potential ICUK support: PoC fund to support clinical trial in China
- China has the largest population of HBV adult carriers
Summary

- Queen Mary has already forged strong connections with Chinese Universities in
  - Education & Training
  - Academic Research
  - Technology Development

- ICUK will provide a platform to strengthen existing collaborations, facilitate technology commercialisation; it will also help open future opportunities in all the above areas
Thank you
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