



DEVELOPING SCOTLAND-CHINA RELATIONS

NSFC-RSE-CAS

New Paradigms for Future Collaboration in Science and Innovation

High-Level Forum, 2nd - 5th December 2015, Scotland



Delegation:

Professor LIU Congqiang

Vice-President (NSFC)

Ms FAN Yingjie

Director, Division of Europe, Bureau of International Cooperation (NSFC)

Minister Counsellor Mr JIANG Sunan

The Embassy of the People's Republic of China
Science & Technology Bureau (London)

Mr GUO Dongbo

Second Secretary, The Embassy of the People's Republic of China
Science & Technology Bureau (London)

Professor WANG Yongtian

Beijing Institute of Technology

Professor LI Yinxiang

Guangzhou Institute of Biomedicine and Health, Chinese Academy of Sciences

Professor MA Jianguo

School of Electronic Information Engineering, Tianjin University

Professor Jay Siegel

School of Pharmaceutical Science and Technology, Tianjin University

Professor XU Lijun

Beihang University

Professor ZHENG Tao

Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences

Summary

The **RSE** hosted the second NSFC–RSE–CAS Forum, drawing on key high-level experts to attend the jointly-partnered workshop with the **National Natural Science Foundation of China** and the **Chinese Academy of Sciences**.

The planned outcomes of the programme continue to be:

- To develop a platform for regular dialogue between leading experts in Scotland and China, over and above existing NSFC-RSE-CAS activities
- To create a foundation for future Scotland-China collaboration in research and innovation
- To identify ways to increase investment in research through these partnerships
- To make a meaningful contribution to the creation and growth of successful economies both in Scotland and China.

A two-day workshop was facilitated between the RSE and three of the **Scottish Innovation Centres**; namely, Centre for Sensor and Imaging Systems, Industrial Biotechnology and Stratified Medicine Scotland.



Scotland-China Collaboration in Research and Innovation

The high-level Forum provided a platform for distinguished experts from Scotland and China to meet and continue to advance collaborations.

Representatives from the RSE, NSFC, CAS, Embassy of the People's Republic of China, Consulate-General of the People's Republic of China in Edinburgh, Scottish Government, Scottish Funding Council, Scottish Enterprise, Scottish Innovation Centres and partners, Connected Scotland partners, China-Britain Business Council, and Friends of the Society – Corporate Partners (Shepherd and Wedderburn LLP) all contributed to ensure the continued support of this joint-working initiative.

Programme of Events

On arrival, the delegation was met at Edinburgh Airport and escorted to the George Hotel for a welcome Dinner hosted by the RSE Vice- President (International).

At the welcome dinner an array of topics were discussed, and of special interest was the research on the effects of the heavy smog in Tier 1 cities over recent years in China and certain steps the Government is taking to rectify the situation over the long term.

On the first full day, an opening ceremony was held at RSE with short and very informative presentations given by key representatives of the Innovation Centres and Scottish Enterprise.

The delegation was then hosted by the three Innovation Centres, showcasing their impressive facilities in Glasgow. The delegation was welcomed by **CENSIS** and **IBioIC**, followed by an overview presentation from CENSIS CEO, Mr Ian Reid. A tour of the Inovo building was facilitated, along with demonstrations of the lab space and the new Connected Devices Development Centre, which created a substantial amount of interest amongst the delegation. A lunch was very kindly hosted at the Inovo Building by CENSIS and IBioIC.

The delegation proceeded to tour the very impressive **Queen Elizabeth University Hospital** and the **SMS-IC** facility on site. Presentations were given on the following topics:

- An environment for bringing Industry, Academia and NHS together
- SMS-IC overview
- Informatics infrastructure at SMS-IC
- Funding opportunities – a perspective

A formal dinner was hosted by the RSE in Glasgow City Centre, before travelling back to Edinburgh. On the second day, **Parallel Workshops** took place at the RSE to discuss and identify potential projects for collaboration. Very thorough presentations and discussions were held throughout the day, concluding with opportunities identified and potential areas which need funding support, including projects for agreed collaboration. The Scottish Innovation Centres brought with them more of their own high-level research experts, together with those from various Scottish Universities and their Industry partners. **Two of the Innovation Centres identified projects which they are currently implementing and the third was establishing contacts to potentially host a separate workshop in China during 2016.**

An informal farewell Dinner was hosted by Sir David Wallace, RSE Deputy-President for all workshop participants. Consul General Mr PAN Xinchun from the Consulate-General of the People's Republic of China in Edinburgh kindly attended and met with the high-level Forum participants.

The delegation spent their final day in Scotland visiting Stirling Castle and Loch Lomond.

Special Issue of *Science Scotland*

The RSE previously produced a Special Issue of *Science Scotland* in both English and Mandarin to help promote greater awareness of Scotland's Innovation Centres at home and abroad. A **new edition** is now in progress and is expected to be published before the next high-level Forum meets.



What Next?

Following this Forum meeting, it is proposed that the RSE will lead the 3rd NSFC - RSE - CAS High-Level Forum delegation during Spring/Summer 2016 in China, to offer opportunities to additional Scottish Innovation Centres while providing continuation for previous collaborations.

The RSE, with the support of the Scottish Funding Council, will continue to develop these forums in conjunction with NSFC and CAS, while exploring the possibility for greater commercialisation of research. Achieving this outcome will also require sustained involvement from Scottish partners such as Scottish Enterprise and Scottish Development International.

It is clear that both governments, relevant public bodies and partners in Scotland and China continue to value the importance of these relations.

Wednesday 2nd December 2015

Welcome Dinner

Thursday 3rd December 2015

SESSION 1 – OPENING CEREMONY

A Platform for Developing Scotland–China Relations in Science & Innovation

Location: Wellcome Room East, The Royal Society of Edinburgh

Opening remarks and presentation by Professor Tariq Durrani, RSE Vice-President (International), followed by a welcome from Professor LIU Congqiang, Vice-President, NSFC.

Short and very informative presentations or talks were given by the following speakers;

Minister Counsellor Mr JIANG Sunan

Science, Technology and Innovation Collaboration between China and the UK

Dr Stuart Fancey (Scottish Funding Council)

Scottish innovation landscape and international remit of Scottish Innovation Centres

Dr Mark Beggs (Stratified Medicine Scotland Innovation Centre)

SMS-IC Brief Overview

Professor Ivan Andonovic (Innovation Centre for Sensor and Imaging Systems)

CENSIS Brief Overview

Dr Ian Archer (Industrial Biotechnology Innovation Centre)

IBioIC Brief Overview

Ms Eleanor Mitchell (Scottish Enterprise)

Supporting business links between China and Scotland

Mr James Brodie (China–Britain Business Council)

Supporting business links between China and Scotland

Ms Joanna Boag-Thomson (Shepherd and Wedderburn LLP)

Developing collaborations, protection and enforcement of intellectual property rights

A well-represented audience was in attendance.

SESSION 2 – VISITS TO SCOTTISH INNOVATION CENTRES

Location: Inovo Building, Glasgow

Innovation Centre for Sensor and Imaging Systems

CENSIS Key participants:

Mr Ian Reid, CEO
Professor Ivan Andonovic, CENSIS Board
Ms Siân Williams, Business Development Manager

RSE participants:

Professor Tariq Durrani, Vice-President (International)
Mr Alan Salonika, International Relations Manager
Ms Karen Sim, Events Officer (International)

Industrial Biotechnology Innovation Centre

IBiOLC Key participants:

Dr Ian Archer, Technical Director
Dr Paul Hudman, Business Development Manager

RSE participants:

Professor Tariq Durrani, Vice-President (International)
Dr William Duncan, Chief Executive
Mr Alan Salonika, International Relations Manager
Ms Karen Sim, Events Officer (International)

Location: Queen Elizabeth University Hospital

Stratified Medicine Scotland Innovation Centre

The delegation was welcomed by Dr Mark Beggs and Dr Carol Clugston, followed by a tour of the very impressive Queen Elizabeth University Hospital and the SMS-IC facility on site.

SMS-IC Key participants:

Dr Mark Beggs, CEO
Dr Carol Clugston, COO MVLS College, University of Glasgow
Dr David Sibbald, Executive Chairman, Aridhia Informatics
Dr John Gordon, Entrepreneur in Residence, University of Glasgow

RSE participants:

Professor Tariq Durrani, Vice-President (International)
Dr William Duncan, Chief Executive
Mr Alan Salonika, International Relations Manager
Ms Karen Sim, Events Officer (International)

Presentations were made as follows:

Dr Carol Clugston

An environment for bringing Industry, Academia and NHS together

Dr Mark Beggs

SMS-IC overview

Dr David Sibbald

Informatics infrastructure at SMS-IC

Dr John Gordon

Funding opportunities – a perspective

Friday 4th December 2015

SESSION 3 – PARALLEL WORKSHOPS AT THE RSE

Three parallel workshop groups were held as follows:

SMS-IC

Lead **Dr Mark Beggs**

Topics: *Oesophageal Cancer & Rheumatoid Arthritis*

CENSIS

Lead **Professor Ivan Andonovic**

Topics: *Three Hyperspectral Imaging/ Remote Surveying Projects*

IBioIC

Lead **Dr Ian Archer**

Topics: *Synthetic Biology, Biocatalysis and biotransformations; including cell factories; and Integrated bioprocessing – upstreaming and downstream*

Saturday 5th December 2015

Cultural Visits

The RSE arranged a tour to Stirling Castle and Loch Lomond for the delegation.

Appendix

Developing Scotland– China Relations Summary of RSE Activity December 2014 – December 2015

In December 2014, the Royal Society of Edinburgh held a high-level Forum entitled *NSFC–RSE–CAS New Paradigms for Future Collaboration in Science and Innovation*, involving three of the Scottish Innovation Centres. This Forum explored opportunities for strengthening Scotland–China research collaboration and the commercialisation of research. During this visit, the RSE also met with the President of the National Natural Science Foundation of China (NSFC), Professor YANG Wei, and the President of the Chinese Academy of Sciences (CAS), Professor BAI Chunli, to discuss future collaboration in science and innovation and further develop their collaborative partnerships.

Following on from this visit, the RSE hosted two visits in Scotland from key individuals involved in these partnerships, Professor BAI Chunli and Professor LIU Congqiang, Vice-President, NSFC.

On 29 May 2015, Professor BAI Chunli visited the RSE to be formally admitted as an Honorary Fellow (the Society’s highest category of Fellowship) and to sign the Roll Book. During his visit, he travelled to Glasgow to meet with Scottish Government First Minister, Nicola Sturgeon MSP. A Dinner was then held in the evening, hosted by Sir John Arbuthnott, Past President of the RSE, and attended by RSE President, Dame Jocelyn Bell Burnell, senior RSE Fellows involved in the Society’s work with China and representatives from the three Scottish Innovation Centres – CENSIS, IBioIC and SMS-IC. Presentations were delivered at the Dinner by all three of the Scottish Innovation Centres.

Following Professor BAI’s visit, he noted that the RSE’s support of the collaboration with the Scottish Innovation Centres is of critical importance and that CAS looks forward to strengthening ties during the reciprocal workshops which were to be held later on in the year (December 2015).

A delegation from NSFC, led by Vice-President, Professor LIU Congqiang visited the RSE on **1–3 July 2015**. During their visit, they met with two of the Scottish Innovation Centres in Glasgow (CENSIS and IBioC) and met with the Cabinet Secretary for Education and Lifelong Learning, Angela Constance MSP. They also visited the Scottish Funding Council (SFC) and the Scottish Alliance for Geoscience, Environment and Society (SAGES). A Reception and Dinner were held at the RSE and included attendees from the British Council, SFC, SAGES, Scottish Enterprise, the Scottish Government and Mr PAN Xinchun, the Consul-General of The People’s Republic of China.

During the visit, Professor LIU Congqiang expressed a strong interest in attending the next *NSFC–RSE–CAS New Paradigms for Future Collaboration in Science and Innovation* reciprocal workshop, which was due to be held in Scotland and would involve the three Scottish Innovation Centres who attended the December 2014 visit in China (CENSIS, IBioIC and SMS-IC). Due to Professor LIU’s availability, it was decided that the next reciprocal workshop should be postponed to December 2015 to allow him to attend.

The RSE and the NSFC have a formal agreement, established to support research collaborations between Scotland and China. Under the terms of this agreement, the RSE and NSFC organise an annual workshop on a topic of interest to both countries.

The workshop took place in Beijing week commencing **24 August 2015**, and the title of the workshop was Sensors and Imaging Systems – Hyperspectral imaging technologies:

- Remote surveying of marine energy sites
- Land use monitoring
- Water body surveying including flood monitoring and prevention.

Workshop participants presented their work in this area, had time to discuss their work with the other participants, and explored opportunities for collaboration. There were approximately eight participants each from Scotland and China.

The Beihang University (BUAA) hosted the workshop and made for a very successful meeting with participants well matched from both sides, leading to excellent opportunities for collaboration.

Following on from this workshop, the intention is that participants will submit an application to the RSE-NSFC Joint Project Scheme to support a two-year research project in this subject area, based on the discussions that took place during the course of the workshop. The Joint Project funding is designed to facilitate international collaboration between researchers based in Scotland and China. The NSFC provides a similar level of funding to the Chinese counterpart. The funding may be seen as seed money to enable further collaboration and funding in the future. Further information on this Joint Project scheme and the application process is available on the RSE website.

On **7 October 2015**, the Commissioner General, Mr LEI Fengyun, from the China Association for International Exchange of Personnel's UK branch, visited the RSE to learn more about the activities of the RSE and discuss the upcoming 14th Conference on International Exchange of Professionals, to be hosted in Shenzhen during April 2016.

A 21-strong high-level delegation from the Jiangsu Provincial Academy of Social Sciences, led by its President, Mr WANG Qingwu, met with both the RSE and the David Hume Institute on **19 October 2015**, at the RSE. Presentations were made by all three organisations, followed by discussions on how each organisation operates and their contributions to society.

The *NSFC-RSE-CAS New Paradigms for Future Collaboration in Science and Innovation* High-Level Forum was hosted by the RSE on **2 – 5 December 2015**.

Useful Links

The Royal Society of Edinburgh (RSE)
www.royalsoced.org.uk

National Natural Science Foundation of China (NSFC)
www.nsfc.gov.cn

Chinese Academy of Sciences (CAS)
www.cas.cn

Scottish Government
www.gov.scot

The Embassy of the People's Republic of China in the United Kingdom
www.chinese-embassy.org.uk

Scottish Funding Council (SFC)
www.sfc.ac.uk

Innovation Centre for Sensor and Imaging Systems (CENSIS)
www.censis.org.uk

Stratified Medicine Scotland Innovation Centre (SMS-IC)
www.stratmed.co.uk

Industrial Biotechnology Innovation Centre (IBioIC)
www.ibioic.com

Connected Scotland
www.connectedscotland.org

China–Britain Business Council (CBBC)
www.cbbc.org

Friends of the Society (FoS)
www.royalsoced.org.uk/573_FriendsoftheSociety.html

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Contact: Alan Salonika, International Relations Manager

The Royal Society of Edinburgh
22 – 26 George Street, Edinburgh EH2 2PQ

T +44 (0) 131 240 2785

E asalonika@royalsoced.org.uk

W www.royalsoced.org.uk