



RESOURCE

THE NEWSLETTER OF SCOTLAND'S NATIONAL ACADEMY

Successes Supported by RSE

Craig Hamilton
Intense Photonics



John Nicholls
Photonic Materials

Jeff Wright
Micro Emissive Displays



Shane Sturrock
Edinburgh Biocomputing Systems

£5.5M Boost for Creation of Scottish Businesses from Scottish Enterprise

The RSE scheme to foster the creation of new businesses in Scotland is to receive a £5.5 million boost following the expansion of the RSE and Scottish Enterprise *Enterprise Fellowship* programme.

This will enable the Society to award 80 new *Enterprise Fellowships* to deserving academics who wish to set up a business in Scotland. The Enterprise Fellowships provide the financial support, business training and the expert advice needed to turn innovative ideas into potentially world-leading products. Launched at The Royal Society of Edinburgh's George Street Offices in March, the new package of support will dramatically expand the highly successful programme which has already helped to create 7 new companies and over 420 highly-skilled new jobs in Scotland.

The Enterprise Fellowships scheme, run by the RSE and funded by Scottish Enterprise began in 1997. It supports outstanding researchers in developing spin-out companies and also aims to raise understanding of commercialisation in Scottish universities and research institutes. This funding will enable the scheme to offer Fellowships in the additional categories of: Software/E-commerce/M-commerce, Forest Industries, Food, Tourism, Electronics, and Creative Industries, as well as those already offered for Opto-electronics, Energy, Biotechnology, Communication Technology and Microelectronics.

Professor Neil Hood, Deputy Chairman of Scottish Enterprise, said: *The Enterprise Fellowships have very quickly proved their worth as a way of converting innovation into businesses, and we are very pleased to be funding the second phase of the programme. We look forward to the next wave of technology-led businesses that have the power to transform Scotland's economy.*



Prince Hassan of Jordan on
Jews, Muslims and
Christians



J K Rowling elected to
Honorary Fellowship



Lord Sutherland of
Houndwood, becomes
President-elect

First Words



The Royal Society of Edinburgh (RSE) is Scotland's National Academy of Science & Letters. It is an independent body with charitable status. The Society organises conferences and lectures for the specialist and for the general public. It provides a forum for informed debate on issues of national and international importance.

Its multidisciplinary fellowship of men and women of international standing provides independent, expert advice to key decision making bodies, including Government and Parliament.

The Society's Research Awards programme annually awards around £1 million to exceptionally talented young academics and potential entrepreneurs to promote commercial exploitation of inventiveness and boost wealth-generation.

The RSE is active in classrooms from the Borders to the Northern Isles, with a successful programme of lectures and hands-on workshops for primary and secondary school pupils.

The Royal Society of Edinburgh, working as part of the UK and within a global context, is committed to the future of Scotland's social, economic and cultural well-being.

The Society is deeply saddened by the death of Her Majesty Queen Elizabeth, The Queen Mother, who was Patron of the Society for over 50 years. Our sympathies go to Her Majesty The Queen and to The Royal Family.

In this Jubilee Year of Her Majesty The Queen's accession to the throne, however, the Society goes from strength to strength, albeit with a modest corebudget from the public sector.

Our Foot and Mouth Inquiry, which has been supported by independent charitable trusts and individual donations is working well and is expected to report in late June. The report on Infectious Salmon Anaemia has gone to press; the review of Mediation and the Health Services in Scotland, recently published, has been much welcomed. New international agreements with other leading National Academies have been established.

Good progress has been made in the establishment of the Scottish Science Advisory Committee, which the Scottish Executive has asked the RSE to set up.

Finally, I greatly welcome the decision of the Fellowship to elect Lord Sutherland of Houndwood as my successor. I have worked closely with him before and his clear thinking and acumen will be of great benefit to the Society as it seeks to return more to its original aims, serving as an independent and high quality think tank for the "new" Scotland. The Society has the vision but it currently lacks the necessary funding. That is something we must seek to address.

Sir William Stewart, FRS, FRSE, President

International Activities

At the end of March, Lord Wilson of Tillyorn who succeeded Professor Andrew Miller as International Convener in October 2001, led a small delegation to China to ratify a Memorandum of Understanding between the Society and the Chinese Academy of Sciences.

The Memorandum will promote and strengthen scientific co-operation between both sides, and will facilitate exchange visits of scholars and researchers to and from Scotland and China. More widely it aims to raise the profile of Scotland academically and to support its increasing international profile within the devolution settlement.

Lord Wilson is a former Governor of Hong Kong and has extensive experience of South East Asia.



Lord Wilson of Tillyorn (left) and Professor Lu Yongxing, President, CAS, sign the Memorandum of Understanding, watched by Professor Wilson Sibbett and Zhang Xinggen, Assistant Director General, CAS Bureau of International Cooperation. Photo by Graeme Herbert.

Election of New RSE President

Lord Sutherland of Houndwood to be next President of RSE

The distinguished academic Lord Sutherland of Houndwood has been made President-elect of the Society, following elections held at the RSE on Monday 4th March. Lord Sutherland who is currently the Principal and Vice-Chancellor of the University of Edinburgh will formally take over as RSE President when Sir William Stewart demits office this October. This highly prestigious post has been held by other such distinguished figures as Sir James Hall, Sir Walter Scott, Thomas Stevenson and Lord Kelvin. The post is unpaid; the term lasts for up to 3 years.

Prior to becoming Principal of The University of Edinburgh, Lord Sutherland was Vice-Chancellor of the University of London and is a former HM Chief Inspector of Schools in England. A member of the Board of the Higher Education Funding Council for England (HEFCE), Lord Sutherland also sits on the Government's Council for Science and Technology. He chaired the recent Royal Commission on the Long Term Care of the Elderly, and last year, The House of Lords Appointments Commission named the then *Sir Stewart* Sutherland as one of 15 new independent life peers.



Sir William Stewart congratulates Lord Sutherland of Houndwood on becoming his successor. [photo by Gary Doak]

Election of New Fellows of the RSE

"The Society has been strengthened by the election to the Society of over 60 outstanding individuals from the sciences, technology and engineering; from medicine and from the business world, from the media and from literature and the arts and humanities. It is this cornucopia of such talent and expertise which must lie at the heart of a modern RSE." **Sir William Stewart, President**

Honorary Fellows

GORDON, Gerald Henry, Temporary High Court Judge; **NURSE**, Paul Maxime, Nobel Prize in Physiology or Medicine, Director-General (Science), Cancer Research UK; **ROWLING**, Joanne Kathleen, Author; **SHARP**, Phillip Allen, Nobel Prize in Physiology or Medicine, Director, The McGovern Institute for Brain Research, Massachusetts Institute of Technology, USA.

Corresponding Fellows

HAAKONSSON, Knud, Professor of Philosophy, Boston University; **HALL**, Peter Gavin, Professor of Statistics, Australian National University, Canberra; **MILLER**, David Andrew Barclay, Director, E.L. Ginzton

Laboratory; W. M. Keck Foundation Professor of Electrical Engineering, Stanford University; **ROSS**, Sydney, Chemistry Department, Rensselaer Polytechnic Institute, USA; Founder, James Clerk Maxwell Foundation.

Fellows

ALESSI, Dario Renato, Principal Investigator and Honorary Reader, MRC Protein Phosphorylation Unit, University of Dundee; **ARMSTRONG**, Richard, Music Director, Scottish Opera; **ARTHUR**, John Willins, Technical Director, Thales-MESL Ltd; **BAUCKHAM**, Richard John, Professor of New Testament Studies and Bishop Wardlaw Professor, University of St Andrews; **BELL**, David Nevin Fraser,

Professor of Economics, University of Stirling; **BLOW**, John Julian, Director, Cancer Research UK Chromosome Replication Research Group, Professor of Chromosome Maintenance, University of Dundee; **BOYD**, Ian Lamont, Director, NERC Sea Mammal Research Unit, Gatty Marine Laboratory; Professor of Biology, University of St Andrews; **BROADIE**, Sarah, Professor of Philosophy, University of St Andrews; **BROWN**, Alice, Professor of Politics and Vice Principal, University of Edinburgh; **BURT**, Peter Alexander, Deputy Chairman, HBOS plc.; **BYRNE**, Richard William, Professor of Evolutionary Psychology, University of St Andrews; **COLLIER CAMERON**, Andrew, Reader in Astronomy, University of St Andrews;

CONNELL, John Muir Cochrane, Professor of Endocrinology, University of Glasgow;

DARGIE, Henry John, Consultant Cardiologist, Western Infirmary, Glasgow; Honorary Professor, University of Glasgow; **DELLA SALA**, Sergio, Professor of Neuro-Psychology, University of Aberdeen; **DRYSDALE**, David Douglas, Professor of Fire Safety Engineering, University of Edinburgh;

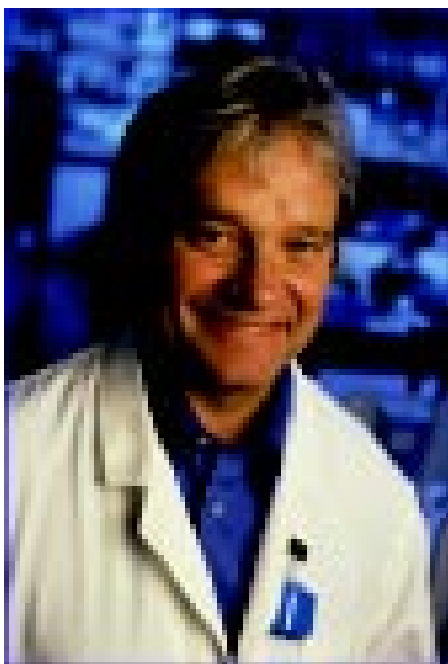
EARNSHAW, William, Professor and Wellcome Principal Fellow, University of Edinburgh; **EDWARDS**, Kevin John, Professor in Physical Geography, University of Aberdeen;

GRETTON, George Lidderdale, Lord President Reid Professor of Law, University of Edinburgh;

HALLETT, Christine, Deputy Principal, University of Stirling; **HAMNETT**, Andrew, Principal and Vice Chancellor, University of Strathclyde; **HARRISON**, Andrew, Professor of Solid State Chemistry, University of Edinburgh;

HART, Robert Albert, Professor of Economics, University of Stirling;

HENDRY, David Forbes, Professor of Economics, University of Oxford;



Sir Paul Nurse, Hon FRSE, Nobel Prizewinner in Physiology or Medicine and Director-General (Science), Cancer Research UK. Photo courtesy of Cancer Research UK.

HENTON, Margaret Patricia, Chief Executive, Scottish Environment Protection Agency;

JENCKS, Charles, Writer, Critic, Artist, Architect; **JOHNSTON**, Derek William, Professor in Psychology, University of St Andrews;

KENNEDY, Malcolm William, Chairman, PB Power Ltd; **KIDD**, Colin Craig, Reader in History, University of Glasgow; **KRAUSS**, Thomas, Professor of Optoelectronics, University of St Andrews; **KUKSIN**, Sergei Borisovich, Professor of Mathematics, Heriot-Watt University;

LAMB, Jonathan Robert, Professor of Respiratory Science, University of Edinburgh; **LANGLANDS**, Alan, Principal and Vice-Chancellor, University of Dundee; **LAW**, Robin, Professor of African History, University of Stirling; **LINKLATER**, Magnus Duncan, Columnist, "The Times" & "Scotland on Sunday";

MacDONALD, Ronald, Professor of International Finance, University of Strathclyde; **MACKAY**, Eileen Alison, Non-Executive Director, Royal Bank of Scotland Group, Edinburgh Investment Trust, Scottish Enterprise (Edinburgh & Lothian), Scottish Financial Enterprise; **MAIZELS**, Richard Michael, Professor of Zoology, University of Edinburgh; **McCRONE**, David, Professor of Sociology and Co-Director, Institute of Governance, University of Edinburgh; **MEEK**, Donald Eachann Macdonald, Professor of Scottish and Gaelic Studies, Edinburgh University; **MELHAM**, Thomas Frederick, Professor of Computing Science, University of Glasgow; **MOLCHANOV**, Ilya, Professor of Applied Probability, University of Glasgow; **MORGAN**, Peter John, Director of the Rowett Research Institute; **MULGREW**, Bernard, Professor of Signals and Systems, University of Edinburgh;

NORRIE, Kenneth McKenzie, Professor of Law & Head of the Law School, University of Strathclyde;

PITTS, Nigel Berry, Director, Dental Health Services Research Unit, Chief Scientist Office; Director, Centre for Dental Innovations, University of Dundee;



Acclaimed children's author, J K Rowling, Hon FRSE.
Photo by William de la Hey. This photograph is not to be reproduced.

PLANT, Jane Ann, Chief Scientist, British Geological Survey;

RICE, Susan, Chief Executive, Lloyds TSB Scotland; **RITCHIE**, Ian Cleland, Director, Scottish Institute for Enterprise, Scottish Enterprise; non-executive Director SCRAN, Channel 4 Television, EPIC Group plc, Mindwarp Pavilion Ltd; non-executive Chairman of Active Navigation Ltd.; Digital Bridges Ltd, Voxar Ltd.; Deputy Chairman of VIS Entertainment plc.

SECKL, Jonathan Robert, Moncrieff-Arnott Professor of Molecular Medicine, University of Edinburgh; **STEEDMAN**, Mark Jerome, Professor of Cognitive Science, University of Edinburgh;

VARDY, Alan Edward, Research Professor in Civil Engineering, University of Dundee, Consulting Engineer;

WHITE, Stephen Leonard, Professor of International Politics, University of Glasgow; **WOOLLINS**, John Derek, Professor of Synthetic Chemistry, University of St Andrews.

RSE in action

Mediation and the Health Services in Scotland

The RSE Working Group established to examine the scope of mediation to resolve disputes between patients and the health services in Scotland has completed its work. Its report - *Encouraging Resolution* was published in February.

The report concludes that mediation should have a role to play, in particular in relation to medical negligence disputes, and that it can improve the dispute resolution process. It contains a number of recommendations to give effect to this conclusion. These are mainly directed at the Scottish Executive, the Courts in Scotland, and the Medical Defence Organisations.

In launching the report, RSE Vice President Lord Ross, who chaired the Group said:

A greater use of mediation will not take place unless there is a change in attitudes, culture and education. This applies to everyone, but above all there must be political will for change. There must also be co-operation and action by all the organisations to which the recommendations in this Report have been addressed. I hope that politicians, these organisations and the public will study the Report, and that those who are able to do so will give effect to its recommendations. It would be unfortunate if Scotland was to continue to lag behind other countries in recognising that there is a place for mediation in the field of medical negligence claims.

A copy of the Mediation report can be obtained from Graeme Herbert, Mediation Group Secretary : mediation@royalsoced.org.uk or from the RSE Web site

Infectious Salmon Anaemia

The RSE's independent working party, set up to assess the science behind legislation governing the control of Infectious Salmon Anaemia, has concluded its inquiry. Chaired by Professor Roderick MacSween, the committee has been investigating this virus which is a blight to one of Scotland's most important industries.

From a small number of experimental farm units on the West Coast in the 1960s, the Scottish salmon farming industry has expanded exponentially. It now makes a major contribution to the Scottish economy, producing fish for the food chain and also rearing broodstock genetically selected to improve the yield and quality of fish and for supply to other countries in which salmon farming is an important industry.

Atlantic salmon both in the wild and in fish farms are subject to a number of infectious diseases. The first outbreak of so called infectious salmon anaemia occurred in Norway in 1984. In 1998/1999 a number of farms in Scotland

were affected by the virus and the European Commission was required to develop and introduce methods to control the disease. This has been successful and there have been no further outbreaks in Scotland since 1999. This is in contrast to Norway and Canada where the disease has been controlled but not eradicated.

The culling methods employed in Scotland do have economic consequences for the farming industry and, in addition, such methods were seen as a threat to the broodstock industry representing, as it did, a big exercise and investment in genetic selection.

The Royal Society of Edinburgh determined that it would be important to examine the scientific basis on which the European Commission's proposals were founded, which it could do from a wholly independent position, drawing on the expertise of its own Fellowship.

The deliberations of the Working Party have resulted in the publication of a

Foot and Mouth Inquiry

The RSE's independent Inquiry into Foot and Mouth Disease, begun in November 2001, is well on course to providing a wide-ranging report on the science of FMD as well as its effect on the rural and tourist economies of Scotland.

A considerable body of written evidence has been received in response to the public appeal made at the outset. A wide range of individuals and bodies have given oral evidence and met with members of the committee. Well attended and often moving, lively Public Meetings have been held in Dumfries and Galloway, and the Borders - the two areas in Scotland which had cases of FMD - giving an opportunity for those directly affected to relate their experiences.

Donations towards the costs have been received from a wide range of charitable bodies and individuals.

The report is scheduled to be ready by the end of June and will be widely available.

Further information is available from the RSE website or by e-mailing footandmouth@royalsoced.org.uk

comprehensive report, based on evidence from within the industry; from those regulating the control of infectious salmon anaemia and other fish diseases, and from all countries in which there is a salmon farming industry and in which disease control measures have been introduced.

The report will shortly be circulated widely amongst key stakeholders and the group hopes that its findings and recommendations will be seen as a contribution to ensure the future welfare of the salmon industry in Scotland.

Copies of the ISA report can be obtained from Dr Marc Rands (evidenceadvice@royalsoced.org.uk) or from the RSE Web site.

HRH Prince El Hassan bin Talal



Prince El Hassan Bin Talal of Jordan.

Photo by Gary Doak

“We have all been affected by the events of September 11th, but I hope not irreparably so. We are at a societal crossroads and we have the choice of moving away from each other or closer together. One is mutually assured destruction (MAD), the other mutually assured security (MAS). I believe we can achieve the latter because I believe in the concept of community and the propensity for good.

Quoting from the most recent document presented to the G8 countries by the Independent Bureau and Office for Humanitarian Assistance,

‘Hiding behind one excuse or other, governments tend to violate international human rights laws. International reprimands are often ignored.’

The problem is most acute when ‘non-state’ actors participate; those who don’t consider themselves bound by international law.

Jews, Christians and Muslims must insist that humanitarian factors be placed at the forefront of all considerations.

We must seek a new kind of politics, capable of ending humanity’s war with itself and nature: a politics for people, ‘anthropolitics’.

Ironically, in the Jordan/Israel negotiations, we encountered the fear of peace itself rather than a fear of war.

Christians, Muslims and Jews The Quest for Human Solidarity Address to the Society on 4 February 2002

All multilateral processes appear to include two stages.

The first is security; consider that in our region, \$300 billion has been spent on security in the last 10 years.

The second stage is the economy. Illegal migration from our countries catalysed discussion with the EU (after signing the Israel/Jordan Peace Treaty in 1994) for \$35 billion to assist development work to alleviate poverty for a decade. However, the EU said no, and today we are spending money on security forces, rather than encouraging illegal immigrants to stay in their own country.

Very little research is done on migration; only two universities in the Western world are active in this field. The issue of migration and refugees is a huge international problem.

Conflicts are often characterised by the inability of either side to recognise the suffering of the other. The Arab/Israeli conflict is a prime example. We need education exchange programmes such as the EU Socrates and Erasmus to begin to rectify the situation.

Interacting with each other and taking the best from each other is the way to progress. Islam teaches that God created mankind to comprise various religions, not a single one, and recognises Judaism and Christianity. I am proud to be a pluralist.

What place does a variegated experience of human religion serve in the great scheme of things? God’s command to all human communities on Earth is to vie with one another to do good works.

The Koran is clear that there should be no compulsion in religion. Solidarity among the faiths means that competing religions strive for the common good.

Christianity emphasised in the words of the Pope, ‘Faced with a world that too often denies justice with violence, we Christians base our hope on the merciful providence of God to reach the most hardened of hearts.’

These attitudes should inspire the Churches to a dialogue with other religions and cultures to reaffirm the values of human life.

The different fundamentalisms, including secularism, are tearing us apart, both within and between communities. Despite many conflicts, there are enough historical examples of peaceful co-existence of different religions for optimism, e.g. between Christians and Muslims in North Africa, and during the Crusades; in Andalusia in the Middle Ages, Jews, Muslims and Christians co-existed in peace for close to eight centuries.

I see the world as comprising one civilisation and ten thousand cultures rather than many civilisations. I believe in a continuous process of dialogue and interaction between the cultures. Islam is a broad religion that cannot be generalised. It is often presented as a global threat. Muslim societies have undergone centuries of change. This contradicts the fallacy that it is an unbending institution. Islam emphasises justice, benevolence, wisdom and compassion.

Given the inherent ambiguity of language, text-based religions inevitably lead to multiple interpretations. Furthermore any major religion is by definition a diverse institution. As with any text-based religion, there are anti-pluralist tendencies in Islam running in parallel with the pluralists. Unfortunately Islam is too often portrayed as being entirely hostile to the West; Islam equals extremism. I find this disturbing considering that Muslims comprise almost three quarters of the world’s refugees, those who are fleeing

conflict. Terrorism is committed by people from many different religious backgrounds, including secularists. Islamic terrorists are not considered as objects of piety within Islam.

Can we manage the transition from a culture of war to a culture of peace? I would like to hear Western leaders talking about revolutionising a law of peace, rather than the battlefield. We have to understand each other's cultures and respect them.

Wars will never end until justice prevails. I call for sustainable dialogue, not just sustainable development. Peace cannot be achieved by political and economic development alone, but requires the intellectual and moral solidarity of mankind. Education and interaction play major roles in dispelling bias and exclusiveness. In Istanbul, a Parliament of Cultures is to be established. People of different

cultures will be able to talk to each other rather than leaving the issue of crisis avoidance to governments alone.

Global inequality has grown in the last 20 years; the richest 350 people own more than 40% of the world's wealth. The crises in Bosnia and Afghanistan may have been avoided had we kept to the promises of United Nations in 1974 to donate 0.7% of GNP of the industrialised countries to the development of the disadvantaged countries. Today's 'angry neighbours' might have been friends and trading partners.

In the context of the Middle East the situation looks pretty bleak. The Palestinian territories comprise 64 different administrative entities, and I don't know how they are supposed to get their act together in order to turn back the tide of occupation. The arc of

crisis from Cairo down to the South of the Gulf and up to the North of the Caspian contains 70 and 40% of the world's oil and gas respectively. I would like to see a comprehensive OSC approach and a culture of compliance where state and non-state actors state very clearly their opposition to terrorism. The penetration of Islam by security forces can only serve the extremists. Israel is a democracy, but the increasing spiral of violence is being questioned by ordinary Israelis themselves. To quote a rabbi colleague, 'There are no simple answers to the political conflict, but there are possibilities of meeting each other at the level of religious understanding'.

Summarised text of a Lecture delivered at RSE on 4 February, by Prince El Hassan Bin Talal of Jordan

Spreading the Word

The RSE Young People's programme has been visiting Schools throughout Scotland in the past months. Following the Christmas Lecture in Dumfries and a lecture to Schools in Inverness in January, the RSE Roadshow set out for Eyemouth, Berwickshire on 19-21 March 2002.

Primary School children were entertained and enlightened by Professor Jack Carr, FRSE of Heriot-Watt University and Mrs Teresa Carr on the subjects of Codes and Circles and Funny Money and by Dr Maureen Cooper of Stirling University, who explained the science involved in making pizza dough and what this has to do with popcorn! Secondary school students were treated to a talk on the History of Colour, by Dr Greig Chisholm of Ciba Chemicals.

On 21 March, Professor Hugh Pennington FRSE, of the Food Standards Agency's Scottish Advisory Committee and University of Aberdeen delivered a public lecture on the issues surrounding Foot and Mouth, E-coli and BSE. Particularly apt since the 2001 Roadshow which should have been held in Eyemouth was cancelled due to the Foot and Mouth outbreak.

The previous week, on 14 March, Dr

Alan Jamieson of Lothian and Borders Police, talked to students at the Nicolson Institute, Isle of Lewis about *Death, Drugs and Dynamite!*, and explained how forensic scientists go about their work.

Five series of Saturday morning Science masterclasses have been running since early spring, for S1/S2 students in Glasgow, Edinburgh, Dundee, St Andrews and Aberdeen. (see page 9).

A Discussion Forum on the technology and ethics involved in *Therapeutic and Reproductive Cloning*, is to be held in Stirling on 18 June 2002. This will be followed by another on *Waste Management* in Aberdeen in September.



Above. The RSE Roadshow. A serious scientific investigation into Pizza Dough. [Photo by Harinee Selvadurai]

Left. Areas visited by the Young People's programme in recent months.

Map outline Reproduced from Ordnance Survey map data by permission of the Ordnance Survey. © Crown copyright 2001

FORTHCOMING EVENTS

TICKETS ARE REQUIRED FOR ALL RSE EVENTS. Please contact events@royalsoced.org.uk or see www.royalsoced.org.uk for further information

MAY

Thursday 16 at 7.00pm

King's College Conference Centre,
University of Aberdeen

JOINT PUBLIC LECTURE

The Emmigrant Experience: Scots, Irish and the USA 1850-1950

Professor Tom Devine FBA FRSE Hon MRIA. With our political leaders working hard to reach out to Scots and friends of Scotland abroad, Professor Tom Devine, asks why our ancestors left for the New World and how the Irish experience has provided the inspiration for strengthening our celtic connections.

In association with the University of Aberdeen to celebrate the visit of The Scottish Parliament to Aberdeen, 28-30 May 2002.

Free tickets available from Marketing Directorate, University of Aberdeen, Tel. 01224 272026.

Saturday 18 – Monday 20

JOINT CONFERENCE

The Artful Use of Light - Bicentenary of the Birth of David Octavius Hill

To mark the bicentenary of Hill's birth there will be a festival of events and exhibitions throughout the UK and USA ending with this three-day International Conference, which will examine all aspects of his work and life and will deal with many of the broad issues, aesthetic and technical relating to early photography in general. Supported by: Lloyds TSB Scotland, Heritage Lottery. Organised by: The Scottish Society for the History of Photography.



photo: The National Galleries of Scotland

Tuesday 28 9.30am - 5pm

JOINT SYMPOSIUM

Solutions to Health Through Gene Knowledge

This symposium will focus on the highly topical issue of genetics and its potential impact on world health. Academics at the forefront of genetic research in Scotland will lead a lively debate. The symposium will also discuss the genetics of colorectal cancer and the use of genetic knowledge in the improvement of drug therapy. Supported by the Academy of Medical Sciences.

JUNE

Tuesday 4 all day

SYMPOSIUM

The Increase in Allergic Disease: Environment and Susceptibility



The symposium aims to explain the rapid rise of asthma and atopy in the past 30 years; debate the likely contributions of the various environmental hypotheses, and identify the way forward in respect of both research and reduction of the incidence of these conditions.

Supported by The Carpet Foundation and Schering Plough

Thursday 13 at 5.30pm

BRUCE PRELLER PRIZE LECTURE

The Epigenetics of Disease

Professor Adrian Bird FRS FRSE, Institute of Cell and Molecular Biology, University of Edinburgh. The human genome contains about 35,000 genes, but a particular cell "expresses" only some of these – the remainder being "silent". Recent work has established that expressed and silent regions of a chromosome become chemically marked and that dedicated proteins recognise and interpret the marks. Professor Bird's laboratory identified proteins that bind to methyl group marks on DNA and lead to silencing of gene expression. Misregulation of this DNA methylation system has important medical consequences, including cancer and Rett Syndrome.

Wednesday 26 at 5.30pm

FISHER MEMORIAL LECTURE

The Realisation of Fisher's Research Programme

Professor Oliver Mayo, FAAS, CSIRO Livestock Industries Australia. R A Fisher (1890 – 1962) was one of the leading scientists of the 20th century, who laid the foundations of modern statistics and mathematical genetics. This lecture will consider the concepts which defined his research and how the ideas that he sowed have been cultivated by those who followed. Examples will be drawn particularly from Australia, where Fisher spent the last years of his life.

All meetings are held at 22-26 George Street, Edinburgh, unless otherwise stated.

CONTACT :Roisin Calvert, Events Manager OR Professor J S Beck, Programme Convener.
events@royalsoced.org.uk

JULY

Monday 1 at 5.30pm

PUBLIC LECTURE

Basic Science and the Wealth of Nations

Prof Ian Halliday FRSE, Chief Executive Officer, Particle Physics and Astronomy Research Council. There is an ongoing debate about the economic value of basic science. Using examples from Basic Physics Professor Ian Halliday will revisit the past and invite predictions of the future. What are the requirements to exploit knowledge? How can Scotland compete?

AUGUST

Thursday 22 /Friday 23 all day

CALEDONIAN RESEARCH FOUNDATION INTERNATIONAL CONFERENCE

Memory: Psychological Processes and Clinical Implications

2002 marks the 30th anniversary of Endel Tulving's first publications about the concept of "episodic memory". The conference will incorporate some discussion time for this rapidly progressing field, covering the relevant issues: the concept, the implications of the findings from developmental amnesia, imaging work and animal studies.

The second day of the conference will focus on three main topics:

the impact of stress and depression on memory function and the underlying mechanisms ; the impact of epilepsy; the consequences of neuro-degenerative disease.

For further information on the CRF conference information please contact the Special Projects Manager, Sandra McDougall, crf@royalsoced.org.uk. Tel. 0131 240 5000 or Fax. 0131 240 5024.



Young People

Free, fully organised educational activities for young people throughout Scotland

Startup Science Masterclasses. Saturday morning Science for S1/S2 students. Funded by Lloyds TSB Foundation for Scotland

University of Glasgow

20 April. *How to be a Weather Forecaster*

27 April. *How to be a Bridge Designer*

4 May. *How to be an Astronomer*

11 May. *How to be a Rocket Scientist*

University of St Andrews

27 April. *Bagpipes and Electrons* by Dr Bruce Sinclair

11 May. *Dinosaur Olympics* by Dr Ruth Robinson

18 May. *Chemical Cluedo: a murder mystery* by Dr Chris Baddeley

25 May. *Ships, Stars and Planets* by Dr Moira Jardine

Heriot Watt University

20 April. *Chemical Cluedo* led by Dr John Parker

27 April. *DNA Extraction Using Kitchen Chemistry* led by Dr Peter Morris

4 May. *The Game of Life* led by Professor Des Johnston

11 May. *The Mystery of Magnetism* led by Dr Mike Steel

University of Dundee

20 April *Having the heart to get a grip* by Professor Michael Rennie

27 April. *DNA detectives: a murder mystery* by Dr Carole MacKintosh

11 May. *Cells strutting their stuff* by Professor Birgit Lane

18 May. *What did you eat today?* by Dr Jillian Galbraith

Satrosphere/University of Aberdeen

2 March. *Materials* by Alan Foxton

16 March. *Perfumes and Smells* by Marcel Jaspers

23 March. *Water* by Lesley Glasser.

27 April. *How the Toadstool got its Spots* by Liz Holden

CONTACTS : Dr Harinee Selvadurai, Education Officer or Dr Lesley Glasser, Young People's Convener. education@royalsoced.org.uk



Bridge Building. Professor Miles Padgett, FRSE builds bridges with pupils from Millburn Academy Inverness.

Discussion Forum

18 June 2002 - Stirling. For S5/S6 students. Supported by the Darwin Trust.

To explain the technology behind therapeutic and reproductive cloning as well as discuss the ethical issues

Fundraising

Fellows' Donations The response from Fellows to the campaign has been very encouraging. Receipts, including tax relief and forward projections, are already at over £260,000. Responses to the most recent letter from Lord Ross and Sir Laurie Hunter are still coming in and the target of £400,000 is realistically in sight. We are most grateful to those Fellows listed below who have already made a direct contribution to the Appeal, recognising that some prefer to donate anonymously and others will make their financial contribution through different channels, e.g classics and comedy event. A full list of all supporters will appear in the autumn edition.

Classics and Comedy The "Classics and Comedy" fundraising dinner at the Royal Museum, Edinburgh on 21 June, being organised by Dr Sword and Dr Nimmo of Inveresk Research is proving very popular. Already nearly all of the tables have been taken up. There will be an auction on the evening under the theme of "Money can't buy" with some really intriguing lots.

Current Activities Our first aim is to develop partnerships with Trusts and Foundations, using the Society's expertise to help them achieve their objectives; an approach similar to that which created the £1million programme established with the Lloyds TSB Foundation for Scotland. The second area of focus is on the corporate sector where the Society wishes to create stronger and wider links and seek opportunities to increase the free reserves that will maintain its independent and impartial role.

The Marchioness of Aberdeen, Dr H M Adam, Professor J A Allen, The Viscount of Arbutnott, Sir James Armour, Sir Michael Atiyah, Sir Ivor Batchelor, Professor J S Beck, Professor R J Berry, Dr S Billington, Professor C C Bird, Dr E Blackadder, Professor J H S Blaxter, Sir Walter Bodmer, Sir Michael Bond, Professor F F Bonsall, Professor I A D Bouchier, Professor S H U Bowie, Mr A W Boyne, Professor J S Brimacombe, Professor A Broadie, Professor A J Brook, Professor E Brown, Professor J G Buchanan, Professor D T Burns, Sir John Cadogan, Professor R S F Campbell, Sir David Carter, Dr T C Carter, Dr A C Chandley, Professor W Cochran, Sir Philip Cohen, Professor J G Collee, Professor J J Connell, Sir Alan Cook, The Hon Dame Mary Corsar, Professor J M G Cowie, Professor G Y Craig, Sir John Crofton, Professor D W T Crompton, The Rt Hon Lord Cullen, Professor E G Cutter, Professor D Daiches, Professor J E Dale, The Hon Lord Davidson, Professor R J Donovan, Professor C P Downes, Professor R S Downie, Dr M R Droop, Professor C M Duffus, Professor E A V Ebsworth, Judge D A O Edward, Professor D Edwards, Sir Gerald Elliot, Baron Emslie, Professor D H Everett, Professor D S Falconer, Professor A E Fallick, Dr V C Farmer, Professor W E J Farvis, Dr B F Fell, Professor P B Fellgett, Professor M A Ferguson-Smith, Professor J R S Fincham, Professor C D Forbes, Professor J O Forfar, Professor R Foster, Dr J M Francis, Sir William Fraser, Professor S C Frazer, Sir Ronald Garrick, Professor A F Garvie, Professor R M Gaze, Professor C H Gimingham,

Professor W M Gordon, Professor N A R Gow, Professor D I Graham, Professor N B Graham, Mr I R Guild, Professor F D Gunstone, Dr A J Hale, Professor M J Hamlin, Professor D C Heggie, Professor A W Hendry, Professor P W Higgs, Dr A R Hill, Mr A V Holden, Sir Frederick Holliday, The Right Reverend R F Holloway, Professor P H Holmes, Professor M L Hooper, Professor J M Howie, Mr J H Hull, Sir Laurence Hunter, Sir Peter Hutchison, Sir Andrew Huxley, Dr N L Innes, Professor R D S Jack, Professor G Jahoda, Professor K James, Professor W F H Jarrett, Dr T L Johnston, Professor D S Jones, Professor M E P Jones, Professor R E Kendell, Professor A C Kennedy, Professor G W Kirby, Dr R C Kirkwood, Professor H J W Kleinpoppen, Professor A A Lacey, The Lord Laing Of Dunphail, Professor P T Landsberg, Professor W Ledermann, Professor M R Lee, Professor W R Lee, Dr G M Lewis, Dr A K Lough, The Hon. Sir William McAlpine, Professor Sir Neil MacCormick, Dr P McDonald, Lord MacFarlane Of Bearsden, Professor P W MacFarlane, Sir Ian McGregor, Professor D B McIntyre, The Very Rev Professor J McIntyre, Professor W McKane, Baron MacKay Of Clashfern, Sir Donald MacKay, Professor C A McKean, Professor M D McLeod, Professor J MacQueen, Professor Roderick MacSween, Dr N Mackie, Professor B E H Maden, Dr H S Marsden, Dr D Martin, Dr W B Martin, Dr C Masters, Rt Hon Bruce Millan, Dr B D Misselbrook, Miss B E Moon, Professor R G Moorhouse, Revd A Q Morton, Professor J L Murray, Professor M Murray, Dr A M Neville,

Baron Nickson, Professor S D Nisbet, Professor G B Ong, Dr A L Panchen, Professor D F Parker, Professor E M Patterson, Sir Bruce Pattullo, Professor L E Payne, Professor K J Peach, Dr J D Peacock, Mr F D Penny, Professor W S Pitcher, Professor M A Player, Dr J W Porteous, Professor L F Prescott, Professor J A Raven, Sir William Reid, Professor M J Rennie, Professor J Richmond, Professor D A Ritchie, Professor D F Roberts, Professor F W Robertson, Mr J D M Robertson, Sir Lewis Robertson, Professor J J Robinson, Mr L A L Rolland, The Rt Hon Lord Ross, Dr H E Ross, Professor W C Russell, Professor D H Saxon, Professor A I Scott, Mr J A Scott, Professor R D Scott, Professor P F Sharp, Sir John Shaw, Dr D M Shepherd, Professor A S Skinner, Professor B D Sleeman, Professor D M Sloan, Dr E B Smith, Professor G Smith, Mr J B Smith, Sir Robert Smith, Dr R H Smith, Professor W E Spear, Professor J I Sprent, Professor P Sprent, Professor K J Standley, Mr J Stevenson, Sir William Stewart, Baron Stewartby, Professor C J Suckling, Dr C E Taylor, Dr D Ter Haar, Mr C E Thompson, Professor J Tinsley, Baron Tombs Of Brailes, Professor G R Tristram, Sir David Tweedie, Professor P N R Usherwood, Professor A C Walker, Dr D A Walker, Professor D M Walker, Professor E K Walton, Professor A C Wardlaw, Dr C D Waterston, Professor J R L Webb, Professor T S West, Professor R J Wheeler, Professor A Whiten, Professor J H Williamson, Professor H W Wilson, Professor P N Wilson, Professor C R Wolf, Sir Ian Wood, Professor J A Wyke, Professor A H Wyllie, Sir Eric Yarrow, Sir Roger Young

Fellows' Notice Board

NEW YEAR HONOURS

We congratulate the following Fellows who were honoured in the 2002 New Year Honours List

Knights Bachelor

Professor Sir Graeme Catto
Sir Timothy Clifford
Professor Sir Alistair MacFarlane

Order of the British Empire

Commander (CBE)

Mr Giles Havergal
Professor Noreen Murray

Officer (OBE)

Professor Sally Brown
Professor Julian Jones

RSE DIRECTORY AND REVIEW 2002

Fellows will by now have received the RSE Directory, which lists information on the activities and office-bearers of the Society during the current Session. Please let us know of any corrections/amendments. Obituaries and reports of activities in the Session 2000-2001 will be presented in the new RSE Review, which will be printed in early summer.

AWARDS, APPOINTMENTS AND CITATIONS

Mario Conti, former Bishop of Aberdeen, has been installed Archbishop of Glasgow.

Professor Peter Denyer is now Honorary Professor in the Department of Electronics and Electrical Engineering at the University of Edinburgh

Professor Barry Kay was recently awarded LAUREA HONORIS CAUSA in Medicine and Surgery by the University of Ferrara, Italy

Professor Eric Priest is to be awarded the Hale Prize of the American Astronomical Society (AAS) for "his seminal contributions to investigations of the role of the magnetic field in solar activity and for his tireless advocacy of solar physics in all corners of the world."

Professor Colin Snape and his co-authors Carole McRae, Cheng-Gong Sun and **Professor Tony Fallick** have each been awarded an American Chemical Society Richard A Glenn award 2001 for their contribution "Use of Compound Specific Stable Isotope Measurements to Prove Anthropogenic PAH Formation in Environmental Samples".

Professor Joan Stringer, will succeed Professor John Mavor as Principal of Napier University in December 2002.

FELLOWS DECEASED

It is with much regret that we record the deaths of the following Fellows :

Revd George W Anderson
Professor John G C Anderson
Professor John Berry
Professor John Erickson
Dr William H Holms
Sir Cyril Lucas
Professor James H Sang
Dame Sheila Sherlock
Professor Norman W Simmonds
Sir Frederick Stewart
Professor Herbert Whittington

SCOTTISH SCIENCE LIBRARY

The Scottish Science Library in the National Library of Scotland's Causewayside building is now closed. The RSE's Exchange Collection (at present housed in the Causewayside building) is, however, still available for consultation.

Fellows who wish to consult items in the collection should phone (0131 226 4531 - ask for Science Information) or email (science@nls.uk) in advance and material will be brought down for consultation in the General Reading Room, George IV Bridge.

A meeting with NLS staff will be held shortly to discuss future arrangements for the RSE's collection. Fellows will be kept informed.

STAFF NEWS

New Staff. Roisin Calvert, Events Manager; Kirsteen Francis, Central Services Assistant; Beth Owens, Research Fellowships/Foot and Mouth Assistant; Elizabeth Bigelow, Paulette Hughes and Margaret Tait, Receptionists; Colin Nelson, Facilities Assistant; Sarah Gilmore, Events Co-ordinator.

Departures. Elaine Hay, Research Fellowships Assistant (maternity leave); Wendy Saunders, Events Co-ordinator; Anna Whitehead, Events Assistant.

FELLOWS GOLF OUTING

This year the Fellows' Golf Outing will be at Glenberrie Golf Club, Larbert, on Tuesday, 13th August. Further enquiries to golf@royalsoced.org.uk or telephone Sandra McDougall on 0131 240 5000

SCOTTISH PARLIAMENTARY e-NEWS

The Royal Society of Chemistry produces a regular news bulletin containing updates from the Scottish Parliament, the Scottish Executive and the media on science issues. The Royal Society of Chemistry is now extending this service free of charge to members of the Royal Society of Edinburgh. Keep up to date by joining the list. To join either email willie.rennie@btinternet.com or phone Willie Rennie on 01383 839622.

Scottish Science Advisory Committee

The Scottish Executive published its first integrated science strategy : *A Science Strategy for Scotland*, in August 2001. As part of this strategy, the then Minister for Science, Wendy Alexander, announced that a Scottish Science Advisory Committee (SSAC) would be established under the auspices of the Royal Society of Edinburgh to provide independent advice to Scottish Executive Ministers on science strategy, science policy and science priorities.

Professor Wilson Sibbett CBE FRS FRSE, Wardlaw Professor of Physics at the University of St Andrews, was appointed, by the RSE, to chair the committee just before Christmas and becomes the chief adviser on science to the Scottish Executive. Professor Sibbett, who has extensive knowledge and experience of UK science policy, is a world authority in laser physics and optoelectronics.



The other members of the Committee (see below) were chosen by RSE Council in April from nearly eighty very high quality applications. Members are drawn from a range of sectors including: education, business, science communication, academia and research to ensure a broad but balanced representation of skills and expertise on the committee.

The Committee Secretariat is based in the Society's George Street offices. Leading the team is Dr Avril Davidson, who joins the SSAC from the University of Glasgow. She also spent two years on secondment to the Scottish Executive's Enterprise and lifelong Learning Department, where she worked on the development of *A Science Strategy for Scotland*. Avril is supported by Ms Tracy Rickard, who joins the SSAC from the Research Support Libraries Project based at the University of Edinburgh Library.

The Committee held its inaugural meeting at RSE on Tuesday 7 May and members were delighted that the newly appointed Minister, Iain Gray (above with Professor Wilson Sibbett and RSE President, Sir William Stewart), was able to meet them. [Photo by Gary Doak].

SSAC MEMBERS

Professor Geoffrey Boulton OBE: Vice Principal and Regius Professor of Geology and Mineralogy, University of Edinburgh. **Professor Jane Bower**: Professor of Entrepreneurship, Glasgow Caledonian University. **Dr Donald Bruce**: Director of the Society, Religion and Technology Project, Church of Scotland since 1992. **Professor Muffy Calder**: Professor of Computing Science, University of Glasgow. **Professor John Coggins**: Director, Institute of Biomedical and Life Sciences, Dean, Faculty of Biomedical & Life Sciences and Professor of Molecular Enzymology, University of Glasgow. **Dr Graham Durant**: Deputy Director, Hunterian Museum, University of Glasgow.

Professor Tariq Durrani: Deputy Principal and Professor of Signal Processing, University of Strathclyde. **Mrs Sarah Fletcher**: Principal Teacher of Physics, High School of Dundee. **Professor Margaret Gill**: Director of the Macaulay Land Use Research Institute, and Honorary Professor in the Department of Agriculture and Forestry at the University of Aberdeen. **Professor Peter Grant**: Head (designate for August 2002) of School of Engineering & Electronics, The University of Edinburgh. **Professor Sally Macintyre OBE**: Director, MRC Social & Public Health Sciences Unit, University of Glasgow. **Dr John Nicholls**: Chief Executive, Photonic

Materials Ltd., Bellshill. **Professor Andrea Nolan**: Dean of the Faculty of Veterinary Medicine and Professor of Veterinary Pharmacology, University of Glasgow. **Mr Ian Ritchie**: Entrepreneur. **Professor John Savill**: Professor of Medicine and Director of the MRC/ University of Edinburgh Centre for Inflammation Research. **Professor David Wallace CBE**: Vice Chancellor, Loughborough University. **Dr John Whitelock**: Team Leader, Applied Sciences, Fife College of Further & Higher Education.

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