

Christmas BRoadCast



Wishing all on campus a Happy Christmas and Enlightened New Year!

Richard Dyer retires as Director

Richard Dyer BSc, MSc, PhD, Director and Chief Executive of the Babraham Institute since 1993, retires from the Institute in December 2005.

Richard obtained his PhD from the University of Bristol in 1972, moving to Babraham in 1974 as a member of the research group of the then newly appointed Director, the late Sir Barry Cross. His research speciality was to understand how hypothalamic neurons regulate the secretion of gonadotrophic hormones to control the female reproductive cycle. He became Head of the newly created Department of Neuroendocrinology at the Institute in 1985 and then, in 1991, Associate Director of the Babraham end of the two-site Institute of Animal Physiology & Genetics Research (together with what is now the Roslin Institute). His career at Babraham has included the awards of the Annual Medal of the Society for Endocrinology and the Medal of the Polish Physiological Society, sabbatical working visits in France and Germany, acting as a visiting consultant for the World Health Organisation in Shanghai, China, and teaching roles held in Jesus College and the Department of Physiology in the University of Cambridge.

More recently he has been an Executive Board member of the European Science Foundation and ESF Vice-President for the past two years. He has been on the University of Cambridge Challenge Fund and Chairman of the Board of Babraham Bioscience Technologies Ltd. Although standing down from this latter role, he will remain on the BBT Board as a non-executive Director for an interim period.

And welcome

Philip Ingham, FRS, has been appointed Director of the Institute and will take up his post at Babraham in September 2006. John Bicknell will be the Acting Director for the interim period and we wish him every success in this role.

A developmental geneticist, Professor Ingham is an international authority on genetic factors and signalling pathways that control embryonic development, using two model species – *Drosophila* and the tropical zebrafish, *Danio rerio*. His discovery of the protein called Hedgehog, has illuminated the processes governing cell organisation within different tissues of developing fruit fly embryos. Abnormalities in the regulation of this pathway can lead to the formation of several types of tumour. He was one of the first to adopt the zebrafish as a model for the genetic analysis of vertebrate development.

Professor Ingham's postdoctoral career took him to the Laboratory of Eukaryotic Molecular Genetics in Strasbourg, the Imperial Cancer



Richard Dyer's directorship is widely recognised as having transformed the Institute into the internationally-renowned centre for biomedical research and start-up biotech company incubation that it is today.

The recent BBSRC Visiting Group assessment of the Institute "applauded the Director on his visionary leadership which had created an environment which attracted world-class scientists working in highly productive partnerships."

This is a truly fitting note on which to depart the Institute. Our thanks go to Richard from all staff, present and past, and our best wishes go with him for his new role as Chief Executive of the Biosciences Federation.

Research Fund (ICRF) at Mill Hill, London - now Cancer Research UK, the MRC Laboratory of Molecular Biology, Cambridge, and the ICRF Developmental Biology Unit, Oxford before becoming a Principal Scientist at the ICRF in London. He was appointed Professor of Developmental Genetics at the University of Sheffield in 1996 where he established the Centre for Developmental Genetics within the School of Medicine and Biomedical Science.

"This is an extraordinarily positive appointment for Babraham. Professor Ingham brings world class leadership in an area of science where the Institute is already very strong. I share the excitement of my colleagues about the choice of my successor and wish him the very best of good fortune as Babraham's next Director" said Richard Dyer.



BBT News

First tenants move into Minerva

Babraham Bioscience Technologies Ltd (BBT) is delighted to welcome the first two tenants into Minerva. Cambridge Biotechnology Ltd, a drug-discovery research company developing novel therapeutics for the treatment of pain, inflammation and obesity, moved into the customised, state-of-the-art facilities in November. Cyclacel, the Dundee-based biopharmaceutical company dedicated to the discovery, development and commercialisation of novel, mechanism-targeted drugs to treat human cancers, has also moved into Minerva from the Bioincubator facilities.

Dr Peter Richardson, Managing Director of CBT said, "Moving to new facilities at Babraham represents a major new phase in the growth of CBT. The new laboratories will provide CBT's drug discovery team with excellent working conditions and will ensure optimal efficiency and safety for all research staff. A location on the Babraham Research Campus also benefits from the proximity of a host of innovative biotech companies and prestigious academic groups which provides an optimal environment for a company such as CBT to thrive."

BBT has now secured leases for 90% of the space with a serious expression of interest in the last remaining unit, with the expectation that Minerva will be fully occupied by February 2006.

Bridging the academic and commercial divide

CellCentric Ltd, a leading company in the commercial exploitation of epigenetics and cell fate control mechanisms, is collaborating with Wolf Reik's group, following investment from the Rainbow Seed Fund. CellCentric was founded on the research of Prof. Azim Surani FRS, at the Gurdon Institute, Cambridge, with initial funding from Avlar BioVentures and the Providence Investment Trust.

Will West, CellCentric's Chief Operating Officer said, "Understanding epigenetics will have a major impact on generating truly innovative products for human healthcare. Within a short time, CellCentric has established itself as a significant player, commercially focused on taking forward the science from world leaders in the area. A new relationship with The Babraham Institute will not only bring in one of the major centres in the world for epigenetics, but will also allow directed research to be funded to produce non-clinical products in the near-term."

Bioincubator developments

The Babraham Bioincubator currently houses 23 bioscience ventures employing over 150 staff and occupying all of the 30,000 sq ft of bioscience facilities. BBT has welcomed five new companies to the Babraham Bioincubator over the last 9 months: Antitope Limited, Colonix Limited, Population Genetics Technologies Limited, Cambridge Theranostics and JAS Biologicals Limited. Zettlex Limited has just agreed licence terms and they will move in during late January 2006.

Antitope's objective is to develop novel proprietary T cell based technologies that will supersede existing approaches in the screening of biologics for immunogenicity. Colonix is a medical diagnostics research business, currently researching methods for mass screening for colorectal diseases. Population Genetics Technologies is developing technology invented by Nobel Laureate, Sydney Brenner, for obtaining sequence information from thousands of genomes simultaneously. Cambridge Theranostics has identified a sub-set of Chlamydia antibodies from atherosclerotic lesions that have bacteriolytic catalytic properties ("abzymes"). JAS Biologicals undertakes development and registration of vaccines against important human and veterinary viruses for local and international markets.

During this time we have also seen four companies graduate from the bioincubator: Acaris, MRCgeneservice, Probe and Proteom.

Bio-business events

In December, BBT hosted an event to highlight sources of funding and grants that are relevant to biotech and medtech companies. Attended by over 50 participants, the different funding options available to commercial ventures were outlined along with links to funding that supports collaboration between academia, industry and networks in the region. More events are planned for 2006, providing the perfect opportunity to find out more about the commercial aspects of the life science industry, funding mechanisms and networks that assist the translation of science into successful ventures. To be included on mailings, contact Nicky Kinsey.

Conference news

Two conferences organised by Babraham scientists took place during the summer months attracting delegates from a broad international base.

The first was the 'Epigenetics and the Dynamic Genome' Conference, organised by Anne Corcoran, Gavin Kelsey, Peter Fraser, Wolf Reik. Held at Babraham and Homerton College, the conference brought together about 170 scientists from all over the world with 42 international speakers presenting their latest, and often unpublished, results on epigenetics and genome dynamics.

Sir John Gurdon delivered the keynote lecture on nuclear reprogramming in *Xenopus* and the prominent themes at the meeting were: chromatin organisation and gene expression; stem cells, reprogramming, and cell plasticity; chromosome dynamics and higher order structure, DNA dynamics and repair; imprinting and development; and epigenomics and disease. Thanks to the excellence of the speakers and participants, and the generous support from the European Science Foundation and other sponsors, this was an excellent and highly successful meeting.

The FEBS Europhosphatases Conference 2005, organised by Denis Alexander, Edgar Da Cruz e Silva (Universidade de Aveiro, Portugal) and Joaquin Arino (Universidad Autonoma de Barcelona, Spain) took place at Churchill College in July, drawing over 170 delegates. A highlight of the conference was its focus on phosphatases as an enzyme class, drawing people from a wide range of disciplines: neuroscientists, immunologists, plant biochemists, developmental biologists, bioinformaticists, cell biologists, medical scientists as well as from the biotech and pharmaceutical industries.



Celebrations and Awards

'Nobel of the East'

Mike Berridge was awarded the prestigious Shaw Prize in July 2005, for his pioneering work in the field of cell signalling. Hailed as the Nobel Prize of the East, this international accolade consists of three annual prizes in the fields of life science and medicine, astronomy and mathematical sciences, each bearing a monetary award of US \$1 million.

Established in 2002 under the auspices of the now 97-year old Sir Run Run Shaw, a Hong Kong Martial Arts movie magnate and television producer, The Shaw Prize honours individuals who have achieved significant breakthroughs in academic and scientific research, and whose work has resulted in a positive and profound impact on mankind.

The demonstration that the molecule inositol trisphosphate, better known as IP₃, activates calcium release, was a major breakthrough in understanding how a cell translates chemical stimuli at its external surface into an intracellular chemical language that enables the cell to elicit a physiological response. These breakthroughs have had a profound influence on diverse areas of biomedical research such as cell proliferation, fertilisation, neural activity, memory and learning, metabolism and muscle contraction.

Mike's discovery of the key role that calcium plays in regulating cellular activity and orchestrating the complexities of cellular communication has given insight into some of the physiological processes behind medical conditions like hypertension, cardiac arrhythmia and heart failure, cancer and bipolar disorders such as manic depressive illness.

A Hong Kong TV company visited the Institute in the summer to make a documentary about Mike's work and life story. And in September, Mike visited the University of Hong Kong to receive the award at a rather flamboyant ceremony he likened to the Oscars.

Birthday for Babraham Nursery

On Saturday 3rd September the Nursery celebrated its 15-year anniversary with a birthday barbeque and musical entertainment by the children. Since the doors opened in 1990 with three children, the nursery has flourished and now provides top quality day care for 85 children. After the tree planting ceremony, executed expertly by Richard Dyer, the children performed 'transport-inspired' songs and released helium balloons to celebrate the occasion. Willing parents found themselves lured into the stocks, while children enjoyed face painting, a magic show, a bouncy castle and super slide along with several games and competitions.



Babraham in the media

Babraham scientists have been making their mark in the media in the past months. November saw Wolf Reik featured in BBC Horizon's documentary about epigenetics – the ghost in your genes. For those who missed the screening, we have a copy available for loan. BBC Countryfile visited the Institute to discuss farmyard intelligence and emotional recognition with Keith Kendrick, which was followed, in December, by an interview with BBC radio Cambridgeshire's Naked Scientist programme, a talk-back radio show, broadcast across eastern England every Sunday from 6-7pm. The show aims to strip down science, making it fun and accessible to all. If anyone is interested in appearing on the show, please contact Claire Cockcroft.

Next year there will be more opportunities for media training, including the possibility of arranging a BBSRC-run training course on campus – please email Claire Cockcroft with expressions of interest.

Public engagement activities and awards

Will Davies has recently carried off the first prize in the National *Brain-Science* writing competition, for 'a newspaper-style science article written by a scientist about their own work'. His article 'Battle for the Brain' is featured on:

<http://www.youramazingbrain.org.uk/>

Earlier in the year Will was a finalist in Daily Telegraph/BASF Young Science Writer competition and a finalist in the British Association for the Advancement of Science's Perspectives poster competition. This scheme encourages scientists to explore the social and ethical implications of their research and communicate these to a wider audience.

Mike Coleman recently published an article in New Scientist with Kate Bendall, 'Keeping your Nerves' and for others interested in finding out how the science media operates, the BA Media Fellowship Scheme will be accepting applications from February. The Fellowships, intended to improve understanding of the workings of the media among practising scientists, social scientists and engineers, provide 3 to 8 week placements with national press, broadcast or internet journalists. Contact Claire Cockcroft for further details.

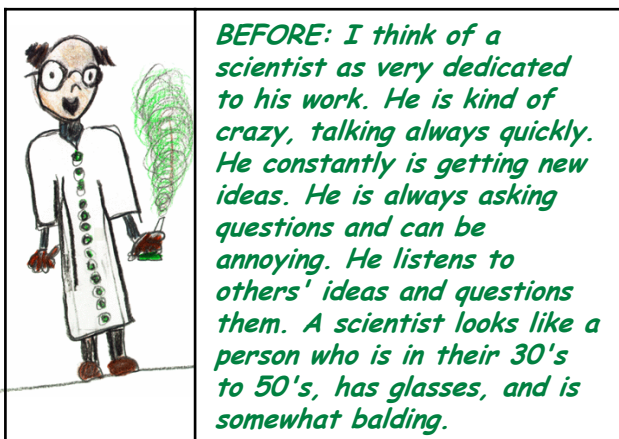
Gresham College

Keith Kendrick has been renewed as the Gresham Professor of Physics, in which capacity he gives about five public lectures annually on a variety of scientific themes. In October Keith delved into 'The left, right and centre of male and female brain politics' and last week's lecture 'Music, art and the brain', examined what makes the brain responsive to music and art; whether or not brains of highly artistic individuals are different in some way; and if listening to music or learning how to play it or sing is beneficial to mental functioning.

In the summer Keith repeated his Valentine's Gresham lecture, 'Addicted to love, beauty or sex' for Babraham staff. For more information about Keith's lectures, past or present see www.gresham.ac.uk and if there's one you'd like to hear, drop us a line.

Science & Society at Babraham

Babraham's Science & Society Programme goes from strength to strength with numerous activities arranged throughout the year, all helping to build bridges between the scientific community and society, particularly our local schools. But to make it really successful and to enable us to work with a wider range of public audiences, we need your support. Providing contact with real scientists is one of the valuable ways we contribute to schools and if anyone still remains to be convinced....



Dates for the Diary

NAGTY – 15th Feb 2006

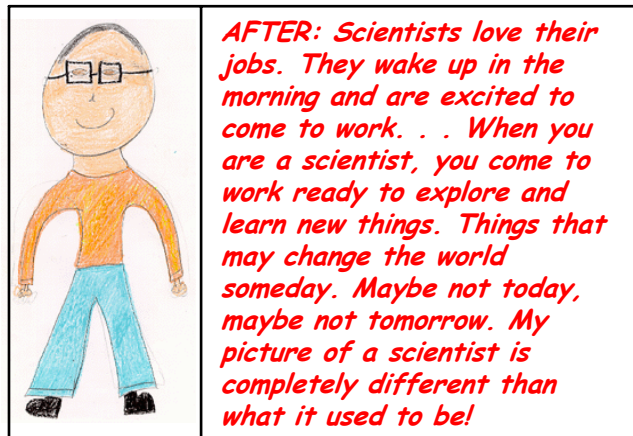
Schools' Day – Wednesday 15th March 2006

Cambridge Science Festival – 18th March 2006

Connexions work experience – May to July

Nuffield Bursary students – July and August

Why we have a science & society programme.



Enterprise Day

Fifty students from Manor Community College visited Babraham in July to get an insight into the world of science and to encourage them to have an enterprising outlook in their lives. With 'Enterprise' now in the National Curriculum, this visit exposed students to a range of careers, from catering to computing, science to security services, photography and nursery care. Students also did some hands-on science, extracting DNA from their cheek cells and preserving it in a glass pendant.

Mr Andy Price, Assistant Head Teacher said, "The visit to the Babraham Institute is a wonderful opportunity for our students to broaden their educational experience and deepen their scientific knowledge. There is also a great opportunity for them to work alongside personnel in almost every area of the Institute which will enhance their life skills".

A big thank you to all staff who took part in this event. We hope to run similar events for disadvantaged groups in the coming year.

How to get involved:

There are many fun, rewarding ways to get involved. We visit local primary and secondary schools and next year intend to run a pilot with Babraham nursery. Come and chat to Claire or Mike at any time.

During National Science Week, we run 'Schools' Day', enabling 150 students (GCSE and 6th form) to carry out science projects at the Institute. We have also run a similar event for the National Academy for Gifted and Talented Youth during half-term. This year we will also host a stand at the Cambridge Science Festival and will be looking to create interactive science presentations for other science festivals.

'Researchers in Residence', a national scheme run by the Wellcome Trust and Research Councils UK, aims to bring schools into closer contact with researchers and make science more stimulating by interacting with young positive role models passionate about science. Researchers spend 6 to 8 half days at their assigned school to assist in science projects, give lectures or develop learning resources. How the Researchers help is entirely up to the school and the scientist, but it is proving a rewarding experience for all.

Work experience is an excellent way for pupils to find out about the range of careers available on campus. Through Connexions, an advisory service for 13-19 year olds, we will provide placements across campus between May and July. The Nuffield Bursary scheme provides 6th formers with an unrivalled opportunity to experience real-life research, in 4-6 week project placements.

That's all for now. BRoadCast will be back in the New Year, reporting on events across the campus. If you have ideas for stories, or about the style/content, please contact Claire Cockcroft as we will be reviewing our internal publications in the New Year. Have a very happy Christmas and best wishes for 2006.