Dr Julian Barwell wins award

Dr Julian Barwell, a senior lecturer in Genetics recently won the University Hospitals of Leicester Caring at its Best Awards.

The award recognises those who achieve over and above the expected standard. Dr Barwell, who is heavily involved in HERO (Health Education Reaching Out), was highly commended for his outstanding work, 24/7 patient care and “passion for developing and improving service delivery and use of scientific knowledge in a productive way”. His commitment to educating the local community on simple steps that can help to reduce the risk of common chronic disease such as cancer is shown by his keen involvement in GENIE.

HERO is a health education programme developed by GENIE and jointly funded by the National Institute of Health Research Collaboration for Leadership in Applied Health Research and Care for Leicestershire, Northamptonshire and Rutland (NIHR CLAHRC-LNR).

Recently, HERO embarked on a new project working with Macmillan Cancer Support, the UHL Clinical Genetics, Clinical Dietetics, and Physiotherapy teams and the Chemoprevention team in the Department of Cancer Studies and Molecular Medicine to provide wrap-around support for families with inherited cancer. The project will include events for families focussing on cancer prevention strategies and survivorship issues, support groups, and one-to-one counselling.

Contact Us

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Clone That Gene

Recently GENIE, in collaboration with the East Midlands Science Learning Centre and Edvotek Europe Ltd, hosted a one-day Continuing Professional Development (CPD) course: Clone that Gene!

The course was developed by GENIE and specifically designed for post-16 Science teachers and technicians wishing to acquire practical experience of gene cloning to re-produce within their classroom. The course was attended by both teachers and technicians (including one international delegate), and provided experience of cutting edge laboratory techniques and examples of educational resources created by GENIE. The feedback from the attendees was overwhelmingly positive with all rating their experience as ‘very good’, and commenting: ‘Worth coming from Thailand for an excellent course that has enhanced my knowledge’ and ‘...ability to teach this topic. Brilliant’

The GENIE CETL plans to build on this success with additional CPD courses for post-16 Science teachers and Clone that Gene! Course will run again in summer 2012.

Award for GENIE’s Virtual Genetics Education Centre (VGEC)

GENIE’s VGEC recently won an award at the 2011 Jorum learning and teaching competition in Leeds. The competition, which was run in conjunction with the ALT-C conference, is designed to recognise exciting and innovative learning and teaching resources; which have been developed as open educational resources (OERs) and made freely available under a Creative Commons licence.

The judges commented that the VGEC was “comprehensive” and “full of rich content for learners of all ages”. Dr Mark Goodwin, who leads the VGEC project, commented that the award was recognition of the team’s success in creating accessible and effective resources for a range of users.

The VGEC is a GENIE project providing a collection of evaluated genetics-related OERs for teachers and students in schools and higher education, health professionals and the general public. The resources are free to re-use and re-purpose. The site was launched in December 2007 and receives tens of thousands of visitors every month from across the world. The VGEC team includes Dr Suzanne Lavelle, Dr Sarah Gretton and the Director of GENIE, Professor Annette Cashmore. Professor Cashmore agreed that the award was “fantastic recognition” of the VGEC, adding the site is “continuing to develop and grow” as more resources are added. VGEC website can be accessed at www.le.ac.uk/vgec

Jorum is a national initiative to collect and share OERs developed by universities and colleges across the UK.

Dr Gretton, Dr Goodwin and Dr Lavelle receive their award.
GENIE Student Diet article

The HERO team are working on a new project with others across the University (including the Student Healthy Living Service and Residential and Catering Services) to help first year undergraduate students get the advice they want about their eating and drinking habits.

The project is being led by Dr Nicola Suter-Giorgini and Dr Jo Singletary. Dr Singletary commented that:

‘Studies have shown that when young adults start university they develop poorer eating habits including a higher consumption of fast food, skipping meals and higher alcohol consumption. Some young adults don’t think about the longer-term health consequences of their diets and others are keen to receive advice and make changes’

Based on the results of their survey of first year students the team will be running interactive health workshops this term to address student’s concerns and to help them make positive changes. The team will evaluate their workshops and look for ways to best support the students in improving their diets.
The Epigenetic Mechanisms of Transgenerational Instability
Andre Gomes (Department of Genetics)

Ionising radiation can cause direct damage to biological material within cells. It can also cause indirect damage through the activation of a currently unknown mechanism that leads to genome-wide destabilisation of the irradiated cells. If this genomic instability reaches the germline (that is the genetic material that would be passed on to offspring), it can be transmitted across multiple generations in a process called transgenerational genomic instability. Transgenerational instability is characterised by genome-wide increases in mutation rates observed in the somatic and germline tissues of first and second generation non-exposed offspring of parents who may have received ionising treatment. An increasing body of experimental evidence suggests that transgenerational instability is caused by unknown epigenetic changes, induced in the germline of irradiated animals, being transmitted and manifested in their offspring. Epigenetic changes are changes which do not directly alter the DNA sequence.

As transgenerational instability may have a genome-wide expression, it is possible that inherited epigenetic changes may affect the expression of genes responsible for maintaining genomic integrity. The aim of this project is to establish whether paternal irradiation could result in the epigenetic changes in gene expression in the offspring using microarray techniques.

Public engagement lectures

We held the 3rd of our public engagement lectures in October 2011.

The speakers were Professor Anne Willis, Director of the MRC Toxicology Unit and Dr Colin Glen, postdoctoral scientist from the University of Leicester.

Professor Willis spoke on how the expression of genes can be altered following exposure to toxins, while Dr Glen explored the subject of mutations (in the real world and in comic books) and looked at a partial rehabilitation for the Lamarckian theory of evolution which had previously been discounted. As with previous events, the talks were very well received and promoted some interesting dialogue both during the talks and afterwards at the drinks reception.

Upcoming events

The next GENIE public lecture will take place on Tuesday the 9th October from 6.30pm, in the Frank and Katherine May Lecture Theatre on Lancaster Rd. The speakers will be Dr Flavinio Giorgini who will be speaking on ‘Targeting genes for therapy in neurodegenerative disease’ and Professor Rhona Borts, who will talk to us about ‘sex and the single yeast’ – both promise to be interesting talks.

For further details please check the GENIE website www.le.ac.uk/genie

Other news

In other news, GENIE (HERO) and the Clinical Genetics Team at the LRI recently secured some funding from MacMillan. Nearly £27,000 was received from Macmillan Cancer Support to work together on a wrap-around support service for families with inherited cancer. Families seen in the Clinical Genetics Department will be able to take part in support groups and counselling and attend events to find out about simple dietary and exercise steps that can be taken to reduce the risk of cancer, alongside the latest evidence on research into cancer prevention at the University.

Also, Professor Annette Cashmore was awarded £13,000 to develop the Virtual Genetics as an OER and Dr Mark Goodwin led a successful bid to the UK Higher Education Academy for funding for a project designed to help first-year undergraduates to take the first steps in terms of career planning.

Recent publications: