

# University of Liverpool School of Biological Sciences

The School of Biological Sciences, University of Liverpool, is promoting a culture to foster research impacts from all the School's staff and activities, starting at undergraduate level. Strategic international links are yielding new opportunities for collaborations, as are links with schools and museums closer to home.

At the School of Biological Sciences, University of Liverpool, our impact strategy has been to engender culture change throughout all of our everyday activities.

We involve our entire staff in this from academics through to technicians and administrative staff, as well as undergraduates and postgraduates. We have developed new activities and links with local schools, museums and other local and national agencies and have strategically developed a range of international partnerships to facilitate new research collaborations, exchange schemes for students and joint international training programmes.



As part of the School's internationalisation strategy, undergraduates and postgraduates can undertake their research projects in various institutions across the globe. University of Liverpool student, Kevin Lee (2nd from left) is pictured with members of the research group of Dr Honglada Thoetkiattikul (far right) of the Enzyme Technology Unit, BIOTEC, Thailand.

## Delivering Impact

Procedures to facilitate delivery of Impact include:

- creation of an Impact Working Group and an Impact Officer post
- incorporation of impact activities into personal development review, workload distribution and impact databases
- establishment of an impact seminar series given by industrialists and policy makers
- enhanced interactions with the local biocubator to provide training, industrial networking and contact with start-up companies
- external profiling of research through the University Business Gateway
- prioritisation of studentship support to PhD projects with industrial partners
- an internationalisation strategy that facilitates staff, researchers and students to collaborate with institutions worldwide
- development of regional events including museum exhibitions, botanic garden biodiversity events, open science lectures, pub discussions on topical science, and collaborations with local schools

We have been successful in embedding a culture that values all types of impact from research and have seen up to a ten-fold increase in staff activities in these areas over the last two years. Almost all academic staff have been involved in these activities and we have also had participation from postdoctoral researchers and postgraduates.

We have publicised and disseminated our impact activities through our new research newsletter and impact website as well as university publications. Our strategy to recognise and encourage the potential impact of our research has been devised to be fully sustainable and impact activities are now firmly on the agenda of our staff and students.

## Encouraging students to think about impact

One of our strategic aims is to engender the value of impact in our undergraduate and postgraduate students, who will become the next generation of scientists. We have developed a new series of activities to do this. These include final-year undergraduate projects working with teachers and pupils at local schools to develop new educational resources, projects with local museums and international internships – especially in developing countries. Our students also actively promote science and society discussions on topical issues with members of the public. We have developed joint, international PhD projects, to give our students first hand experience of global scientific problems and the competitive international jobs market.



Honours students at the School worked with World Museum Liverpool on the interactive Plantastic exhibition about the importance of plants. Following great success in Liverpool, the exhibition is now on tour in Europe

## Sequencing the wheat genome

In 2010, wheat production dropped by 6 % and food prices rose by 20 %. This has highlighted how vulnerable the global population still is to climate change and fluctuations in food demand. At the University of Liverpool, we have sequenced the genome of bread wheat and all the data generated has been made available to the scientific community. These data are being used by us in partnership with wheat breeders to identify genetic differences between wheat varieties and develop molecular markers that can be used to rapidly accelerate breeding programmes.



The published wheat genome, sequenced by the School, together with Bristol University and the John Innes Centre, will help in breeding more stress resistant varieties of wheat

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The BBSRC Excellence with Impact 2011 scheme ran from 2008 to 2010. It was developed to reward and esteem those university departments most active in embedding a culture that recognises and values the achievement of impact alongside excellent research.