

# University of Exeter School of Biosciences



The University of Exeter School of Biosciences works to solve real-world problems through engagement with industry, regulators and policymakers.

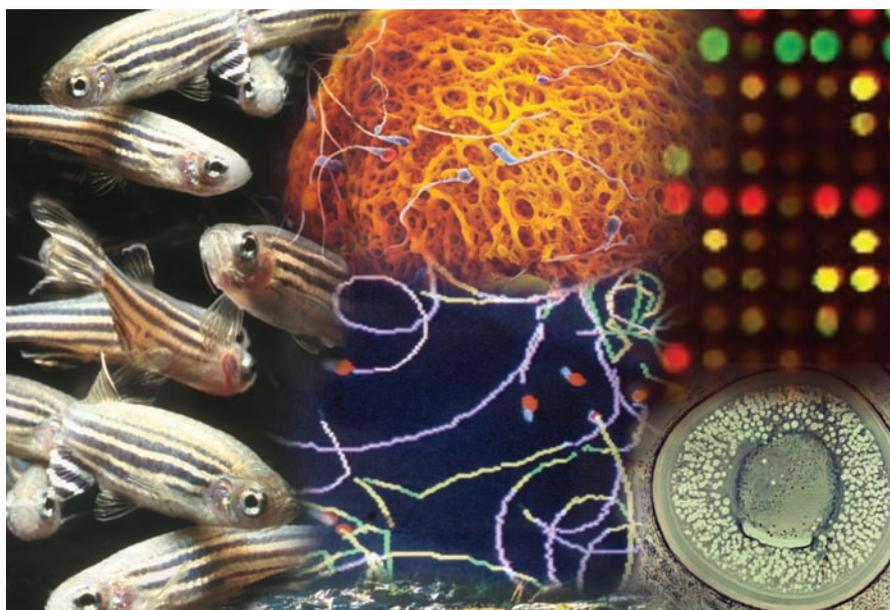
The University of Exeter School of Biosciences is a rapidly expanding centre for biological research with major programmes in systems biology, evolutionary ecology, behaviour, conservation, disease and ecotoxicology.

We deliver impact through extensive engagement with industry, government regulators and policymakers to provide innovative solutions to real world problems. We also interact strongly with schools to inspire the next generation of bioscientists and to promote a wider understanding of biology and its importance to society.

## Delivering Impact

We have embedded impact activities into the career development of academic staff and researchers - the importance of these activities is formally recognised through our revised annual Performance and Development Review which has now been adopted university-wide. Through this review process, all academic staff reflect on impact activities, identify future pathways to impact and develop a structured action plan to achieve these goals. We explicitly celebrate and reward impact activities as an essential facet of research and scholarship. We have also introduced impact activities into postgraduate student training and the professional development of postdoctoral research staff, to ensure that the next generation of scientists are aware of the importance of using their research to deliver social, economic or policy benefits to the UK.

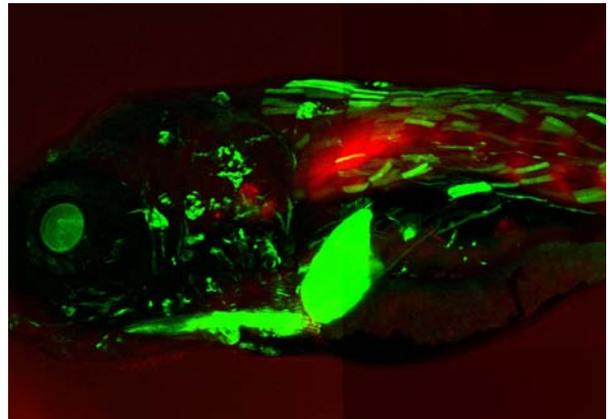
We believe that the key to achieving impact from excellent research is to ensure that academic staff recognise that these activities are of equal importance - and are equally valued by the institution. We demonstrate our commitment to achieving impact through the changes we have made to our Performance and Development Review process, and by the way in which we rigorously evaluate impact activities, share best practice among staff and celebrate success. We encourage all staff and research students to see impact as a natural and seamless continuum of their research interests and activities and work closely with the University's Research & Knowledge Transfer Department to achieve this goal.



Integrative systems approaches are used to link how chemicals in our environment induce effects on reproduction, and the molecular mechanisms through which they operate using the zebrafish model.

## Screening water for industrial pollutants

Professor Charles Tyler studies the impact of industrial pollutants on the environment. His research involves developing chemical screening and testing methods, as well as mechanistic studies of the effects of chemicals on fertility of aquatic organisms. An external evaluation of the impact of this research by DTZ, using HM Treasury "Green Book" methods, identified £16M of benefits to water quality by removal of river pollutants, £440K per year through the social value of reduced environmental damage, £80K per year through safeguarding commercially valuable fish and £54M per year through safeguarding associated angling and tourism industries.



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Zebrafish have been genetically engineered so that tissues affected by oestrogen-like chemicals in the environment glow green. This provides insight into what types of health effects might result from these exposures

## Schools' biodiesel project

Since 2008, the School of Biosciences has worked closely with Axe Valley Community College in a project to create biodiesel from used vegetable oil. Our team, funded by the Royal Society, was one of only four school partnerships to feature at the Royal Society 350th Anniversary Summer Science Exhibition. Dr Clive Butler and Dr Nicky King who coordinates Biosciences' widening participation and schools liaison activities, collaborated in designing and building a biodiesel conversion plant to produce and sell biofuel, encouraging student entrepreneurship. The impact of the project extended beyond the local community – schemes have been established by other schools, and it is now an exemplar for schools engagement via the National HE-STEM network.



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Axe Valley Community College students creating biodiesel from used vegetable oil with help from Hugh Fearnley-Whittingstall

## Contact

Professor Gero Steinberg, Head of Biosciences  
School of Biosciences,  
College of Life and Environmental Sciences,  
Geoffrey Pope Building,  
University of Exeter,  
Stocker Road, Exeter,  
EX4 4QD



**Website:** [www.biosciences.exeter.ac.uk](http://www.biosciences.exeter.ac.uk)

**Email:** [G.Steinberg@exeter.ac.uk](mailto:G.Steinberg@exeter.ac.uk)

**Tel:** +44 (0)1392 725171

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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.