

Biochemistry, Genetics & Microbiology

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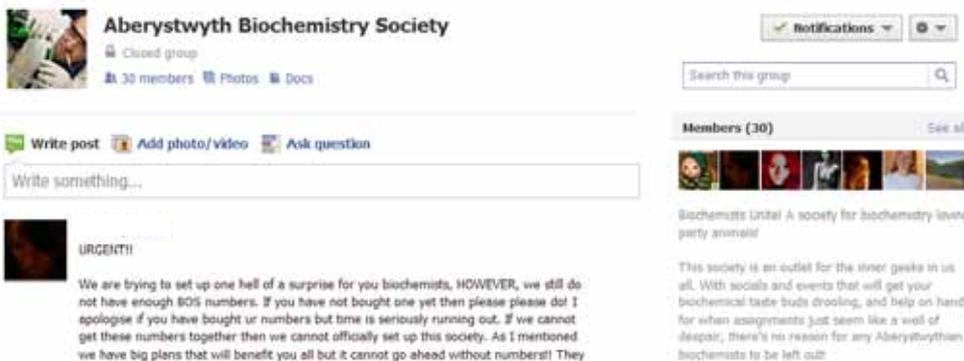
NEWSLETTER

Spring 2012

IBERS Institute of Biological,
Environmental and Rural Sciences

Aberystwyth Biochemistry Society

Biochemistry students have clubbed together to form the Aberystwyth Biochemistry Society, which includes members from all three year groups and members of staff. In addition to organising social events such as bar crawls, trips and movie nights, the group has arranged seminars and has also competed successfully for funding from the UK Biochemical Society to host an All-Wales Student Biochemistry Conference in 2012. See the group's Facebook page at <http://www.facebook.com/groups/181264605291433/>



Aberystwyth graduates continue their studies

Many of our students who graduated this summer with molecular bioscience degrees have gone on to further study across the UK, including at Oxford. This year 3 Biochemistry graduates have secured MSc places while 2 others have gone on to study for doctorates, at Aston, Aberystwyth, and Oxford Universities. Other graduate destinations included teacher-training, school laboratory technicianing and pharmacy management.



Stuart Thomas, Heather Currinn and Daniel Robinson (left to right) with Dr Dave Whitworth at graduation this summer. The three Biochemistry graduates are among those who went on to further studies.

Undergraduate research into 'famous' fungus

Second year Microbiology student Chris Gajda is getting to grips in the lab with a rare fungus found recently in Worcestershire. The powdercap strangler is actually a fungus growing parasitically on another fungus and is so rare that the discovery of 9 mushrooms has featured on the

BBC. Chris is performing a genetic analysis of those very fungi to uncover the biology of this fascinating organism. Find out more about the powdercap strangler here: <http://www.bbc.co.uk/nature/1602997>

List of Courses

BSc

Biochemistry C700
Genetics & Biochemistry CC47
Genetics C400
Microbiology C500
Zoology & Microbiochemistry CC35
Life Sciences C990

Interested?

Phone **Chantal Thomas** on **01970 621904**
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Professor Mike Young retires



In August 2011 Mike Young retired as Professor of Microbiology at Aberystwyth. Mike had been with the

Department since 1977, during which time he investigated the genetic basis of dormancy in clostridia, and identified growth-promoting proteins of actinobacteria, which are now being used as agents within vaccines against TB. We wish him a happy retirement.

Fungal foray on Radio 4

Dr Gareth Griffith, Senior Lecturer in Microbiology at Aberystwyth was recently joined by Radio 4's Paul Evans for a waxcap hunt in West Wales. The search was on for exotic species such as the ballerina waxcap and other indicators of soil ecosystem health. You can hear the programme on iPlayer: <http://www.bbc.co.uk/programmes/b0171yqt>.

IBERS Microbiologists chill out

PhD student Jenny Bussell (Aberystwyth Biology graduate) and Dr Arwyn Edwards spent much of this summer on an expedition to the High Arctic islands of Svalbard to investigate how microbes are speeding up the rate at which Arctic glaciers melt. A few days later Arwyn set off again to an



Austrian glacier in the Tyrolean Alps. Early results from the project suggest glaciers in the Alps are home to an impressive range of microbes; further work is planned to see how these microbes survive the harsh winter and revive in the spring.

Microbiologist Dr Arwyn Edwards appointed as new Lecturer



Arwyn is an Aberystwyth graduate and completed his PhD in Microbiology under the supervision of Dr Gareth Griffith. During the last academic year Arwyn was appointed as a Lecturer in Biology (Welsh Medium). We all welcome Arwyn to his new position and wish him every success in both his teaching and his research into the microbial communities of glaciers and ice-sheets.

Genetics student publishes in international scientific journal

During the last academic year, work undertaken by Alice Evans (BSc Genetics) during her third year undergraduate research project was published in the journal *FEMS Microbiology Letters*. Alice's research investigated the characteristics of genes that conferred social behaviour to the predatory soil bacterium *Myxococcus xanthus*, and she found that 'social' genes differed in several ways from genes that granted more 'selfish' behaviour. Find Alice's paper here: <http://www.ncbi.nlm.nih.gov/pubmed/20807238>

Globe-trotting Microbiology students

This year saw several postgraduate microbiology students travelling around Europe, with trips to Estonia to train in using cloud-computing for ecological research using PlutoF (Tony Callaghan and Brian Douglas), and to Svalbard to undertake fieldwork (Jenny Bussell).



Brian and Tony (2nd and 3rd from right respectively) enjoying Estonian refreshments.

New practical-based modules

For the first time this year, our first year students will take a new completely practical module, focusing on the manipulation of DNA and cloning. In the Molecular Lab Skills module, students will do a practical each day, throughout the first week of the second semester. For the remainder of the semester, students then explore the



First year students during a biochemistry practical

theory and results of the experiments as small groups with their academic tutor. Second year Microbiology students will also benefit from a new entirely laboratory-based module 'Practical Skills in Microbiology', a counterpart to the corresponding modules for Biochemistry students 'Practical Skills in Biochemistry' and 'Biochemistry in Practice'.

Numbers of students studying 'molecular bioscience' continue to increase

In September 2011 we welcomed our new first year students to Aberystwyth, many of whom have chosen to study varied aspects of 'molecular bioscience', including 22 biochemists, 24 geneticists and 10 microbiologists. There are now more than 100 students at Aberystwyth currently studying for degrees in Genetics, Microbiology and/or Biochemistry - around twice the number of students that were studying for the same degrees only 5 years ago. Such an increase in student numbers has enabled us to develop innovative teaching sessions on key 'molecular' topics, and allowed a community of 'molecular bioscience' students to coalesce as a distinct group within the Department. We're committed to helping this community flourish over coming years and are looking forward to working with the students to further develop exciting opportunities within their courses.



Second year Biochemistry students relax between reactions

Aberystwyth graduate organises prestigious international course

Dr Chris Toseland graduated with a degree in Biochemistry from Aberystwyth 6 years ago and is currently an EMBO Research Fellow at



the Ludwig Maximilians Universität in Munich. He is now organising an EMBO course for next June, on Transient Kinetic Methods applied to Biological Macromolecules, in Canterbury. EMBO (European Molecular Biology Organisation) is a European funding agency for scientific research, with a particular remit to support early-career scientists. You can find out more about Chris's course here: <http://events.embo.org/12-kinetics>