DLS Department of Life Sciences
www.aber.ac.uk/en/life-sciences/

Biochemistry, Biomedical Science, Genetics and Microbiology
Newsletter 2025

List of Courses

BSc Biochemistry; Biology; Biomedical Science; Genetics; Microbiology; Plant Biology
MBiol Biochemistry
MSc Biotechnology
MRes Biosciences; Parasite Control
Interested?
Email Prof. Dave Whitworth
dew@aber.ac.uk

Undergraduates inspire young scientists

In March, Aberystwyth University annually hosts a 3-day science festival as part of National Science and Engineering Week. Over 80 students and 20 staff from the Department of Life Sciences, organised and staffed 10 hands-on activities for primary and secondary school children, with 1600 school children visiting. Activities ranged from ‘Flowering clocks’, to ‘Immunity Jenga’, via ‘Eating insects’ and ‘Carbon snakes’. It was a great opportunity for our students to share their excitement about science with the scientists of the future.

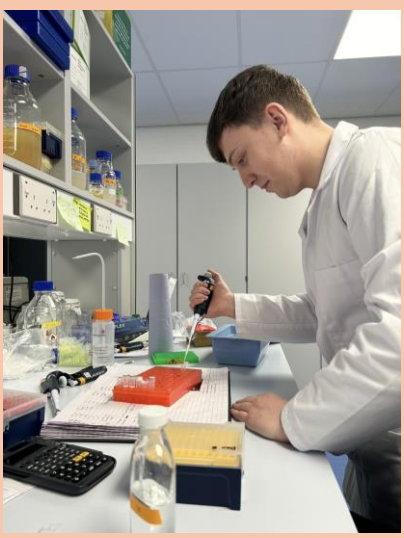
Biochemistry students Josh Jakso and Amy Deane join their tutor Dave Whitworth, preparing to enthuse visitors about chemistry with elephant’s toothpaste, self-inflating balloons and home-made lava lamps.

DLS lecturer wins Katharine Giles Award

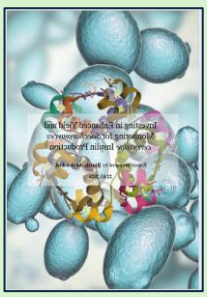
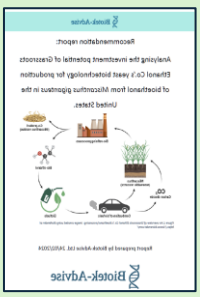
Dr Arwyn Edwards, a lecturer from the Department of Life Sciences, was awarded the Association of British Science Writers' Dr Katharine Giles Award for a recent article he wrote in The Conversation. The article detailed Dr Edwards and his students' work to study the microbes of the warming Arctic. The prestigious Dr Katharine Giles Award is made annually for the best article written by a professional scientist.

Genetics and Biochemistry student secures a prestigious global research internship

BSc student Dan Baker is currently completing the industrial placement of his Genetic and Biochemistry with Year in Industry degree. After completing his research placement with Dr Andrew Lloyd in IBERS (a research centre within Aberystwyth University), Dan will be taking up a fully funded 12-week Mitacs Globalink Research Internship in Manitoba, Canada to apply the techniques he learned in Andrew’s laboratory, including gene editing using CRISPR *cas9*. In Canada, Dan will be working in the research group of Dr Matthew Bakker, investigating species interactions that impact the sustainability and productivity of crops. Mitacs internships are highly competitive, subject to multiple rounds of interviews and open to undergraduates across Europe, the United States, Mexico and Pakistan to name a few, so Dan has done very well.



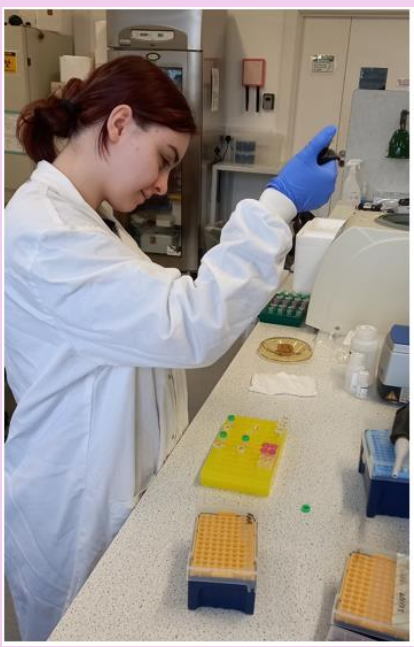


Biology, biochemistry, genetics and microbiology students develop business, research and writing skills

Through an assignment in their final year biotechnology module, students took the role of a consultant preparing a report for a potential investor. Under the guidance of both academic staff and specialists from the University's Careers Service, students chose and researched a biotechnology sector that was of interest to them. They investigated companies, competitors and recent research innovations while learning more about the reasons for product demand. This enabled and encouraged the students to look beyond the science to the potential application and commercialisation of research and innovation. Students noted that the skills they developed were relevant to preparation for job interviews and for performing to a professional standard in the workplace. They also enjoyed the flexibility that the assignment gave them to research something that interested them.

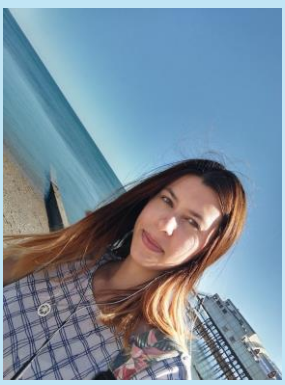
Investigating human parasite development



Schistosoma is a blood fluke responsible for the neglected tropical disease Schistosomiasis, affecting 240 million people globally. The one treatment is only affective against the adult stage of parasite – making understanding the development of the parasite in the human body imperative to treating the disease. After entry into the human host, the worm develops in the vascular system with direct contact with serum factors which influence and contribute to the development of the parasite. *In vitro* cultures use human serum (HS) to consolidate development and survival, whilst sera typically used in laboratory culture, like foetal bovine serum (FBS) do not promote such growth. To tackle this challenge, our student Madeleine McMath is currently on a year in industry placement as part of her degree scheme, supervised by Dr Russ Morphew and Prof Gabriel Rinaldi. She is using a proteomic approaches to study the components of serum and their involvement in either promoting or preventing parasite development. Madeleine is currently developing a wide skill set that will enhance her prospects upon completion of her degree. We are looking forward to the results of her efforts!

There and back again - one student's journey returns her to Aberystwyth

Iuliana Macovetchi learned about Aberystwyth University at home in Moldova in 2019. After graduating form school Iuliana looked for universities offering combined genetics and biochemistry degree schemes and was guided to look at Aberystwyth by her teacher, who had heard good things. Googling showed Aberystwyth to be beautiful, by the sea and with a castle. Moldova has many castles, but no sea and the latter sold it. Iuliana started her studies with us later that year, and really enjoyed her studies, both in lectures and laboratory classes.



A highlight of her studies was an introduction to neurobiology in one of her first-year modules, that led Iuliana to study for a Master's in Molecular Neuroscience at the University of Bristol in 2022. Iuliana decided to move back to Aberystwyth late last year, because the sea at Bristol just wasn't the same! She won a part-time 3-year post as a technical scientist on a project under the supervision of Dr. Ruth Wonfor, developing mammalian cell-culture for production of meat alternatives, and is applying for part-time PhD studentships with us. Its great that the University continues to be part of Iuliana's career story, and we wish her every success in the future.