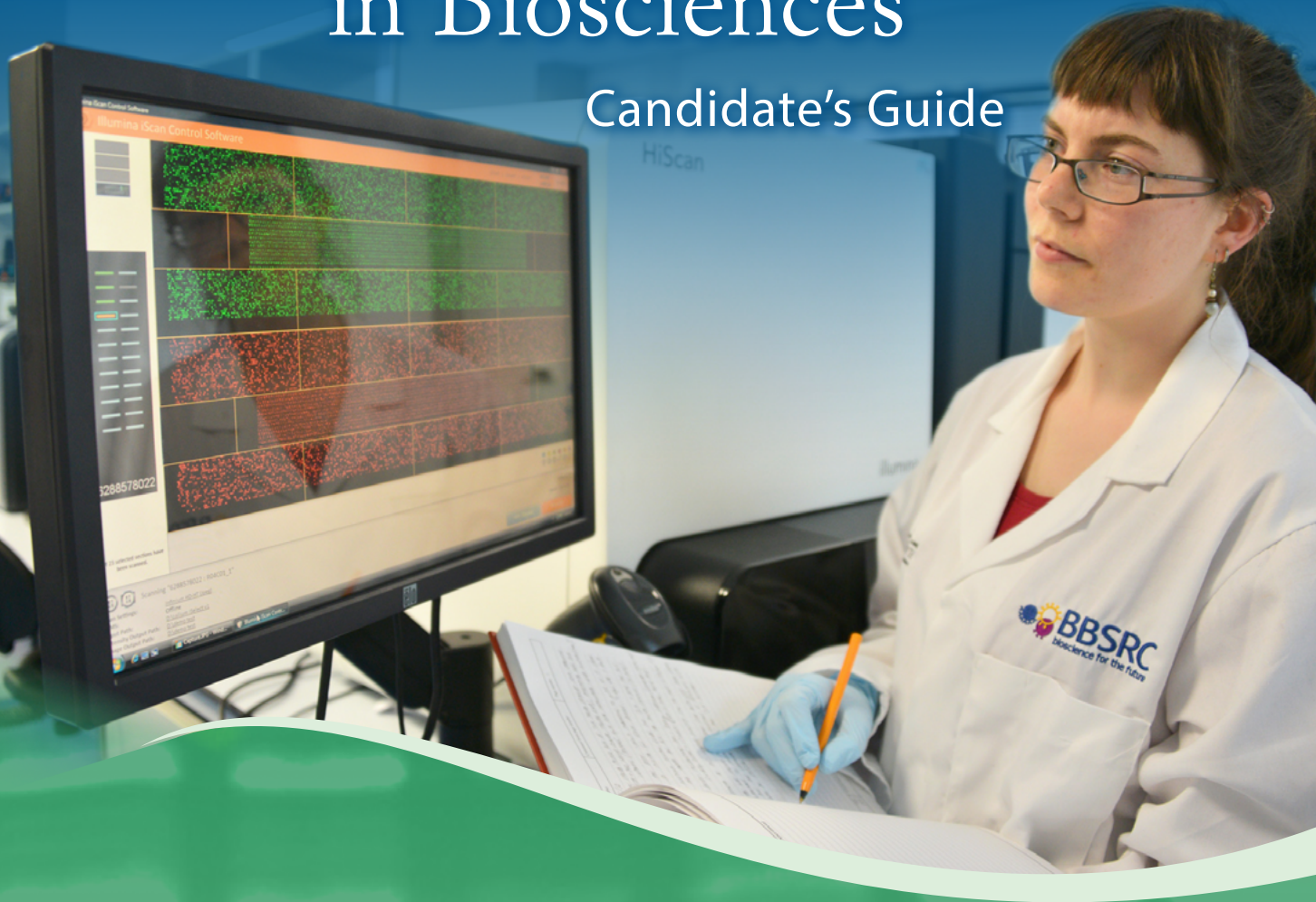


# PhD, MPhil, DAg in Biosciences

Candidate's Guide



Interested in a career in biological research?

Want to get that one step ahead in the job market?

**This PhD/MPhil/DAg  
could be your passport to success.**

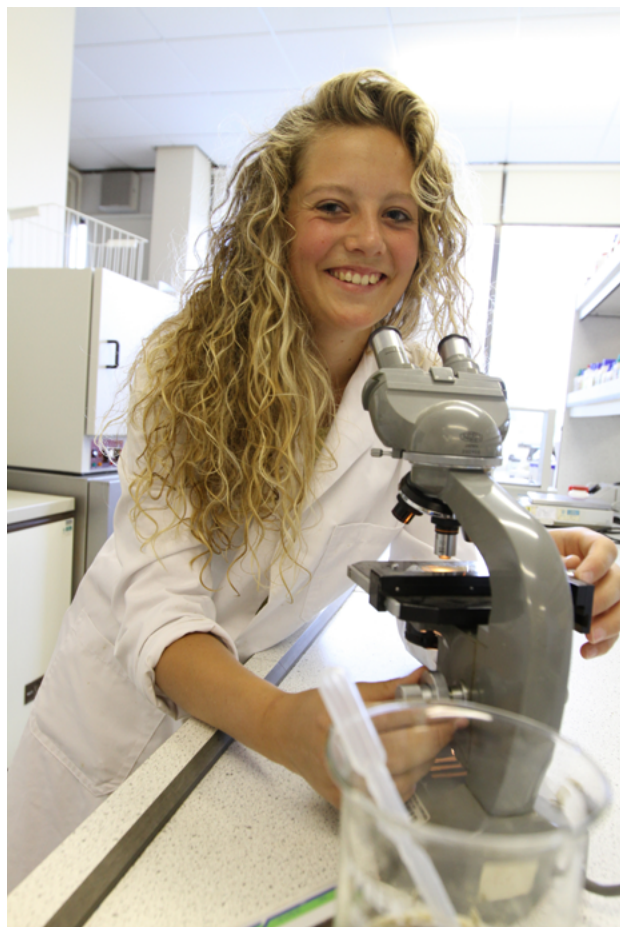


# Candidate's Guide to Research Postgraduate Studies in Biosciences

## ***Become a part of world-leading research***

The Institute of Biological, Environmental and Rural Sciences, Aberystwyth, UK, offers you the opportunity of a professional training and supervision to become 21st century research scientists.

Our PhD, MPhil and DAG schemes will provide you with a wide set of skills necessary to excel in high-level positions in scientific research careers inside and outside academia.



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## Introduction

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*“Success is a science; if you have the conditions, you get the result”, Oscar Wilde*

If you are holding this booklet, you probably already are considering a career in scientific research and/or academia. This brochure is designed to give you a flavour of research Postgraduate courses in IBERS, by detailing the learning activities and course set-up, informing about possible research areas and possibilities the research degrees will provide for your future. If you have any further enquiries regarding the courses please contact Professor Paul Shaw ([pws3@aber.ac.uk](mailto:pws3@aber.ac.uk)), Director of Postgraduate Studies for IBERS, or Michelle Allen ([myd@aber.ac.uk](mailto:myd@aber.ac.uk)), Postgraduate Coordinator for IBERS..



## Studying in IBERS

Rated 'Excellent' in the most recent national Teaching Quality Assessment exercise, with 360 members of staff teaching 1350 undergraduate students and more than 150 postgraduate students, IBERS is the largest department of *Aberystwyth University*, which has a proud history dating back to 1872. Established in 2008 by merging together *The Institute of Grassland and Environmental Research* (originally the *Welsh Plant Breeding Station* established in 1919) and *Aberystwyth University's Institute of Biological and Rural Sciences*, IBERS is a unique department in the UK that combines outstanding academic research and teaching traditions with direct interaction with commercial and governmental bodies.

Our vision is to convert the "grand challenges" of food, water and energy security in the 21<sup>st</sup> Century into sustainable and prosperous opportunities for society. Having expertise in agricultural, rural, environmental and biological science disciplines IBERS scientists and staff are working closely with businesses to translate science-led innovations at a range of levels from genes and molecules to organisms and ecosystems into solutions, new products and services for a sustainable knowledge-based bio-economy. Postgraduate students are a fundamental part of this vibrant scholarly environment, and benefit from state-of-the-art facilities and guidance by experienced staff with international research reputations.



## IBERS Awards

In the latest Research Assessment (REF 2014) of UK Universities 84% of our publications were ranked as either 'World Class' or 'Internationally Excellent', and 76% of our Impact studies were ranked as "World Leading". IBERS received the Queen's Anniversary Prize for Higher and Further Education in recognition of its research achievements in 2009, and the first BBSRC Excellence with Impact Award for cultural change and research excellence in 2011. In 2013, IBERS was awarded the prestigious *Outstanding Contribution to Innovation and Technology* award at the *Times Higher Education Awards* for its research excellence in breeding and development of High Sugar Grasses.



## Facilities and Structures

IBERS, with the support of BBSRC and the Welsh Government, has made substantial investment in new research and service facilities, and is currently developing a £36 million Innovation Campus to further develop our extensive links with industry. Staff and students both enjoy access to a formidable range of world-leading equipment in first-class modern laboratories. In addition, the geographic location of the Institute brings unrivalled access to natural habitats and managed landscapes. All of this is complemented by the excellent library resources (including the adjacent National Library of Wales) and IT network available at the University. Graduate students in IBERS have a collective home-base in a new Postgraduate Centre. In addition to its extensive farms and laboratories, the Institute has key service facilities for research, including:

- Next Generation DNA sequencing and transcriptomic Centre
- Bioinformatics Suite
- Mass Spectrometry and Analytical Units for advanced metabolomics
- The National Phenomics Centre for automated plant phenotyping
- Advanced Microscopy and Bio-Imaging Laboratory (field emission, scanning electron, laser scanning and confocal microscopes)
- Biological modelling laboratory integrating data in spatial and temporal dimensions
- Air-conditioned aquaria with both freshwater and sea water circulation systems
- Dedicated equine research and training centre, including an international-sized indoor arena, horse walker and DIY livery facilities
- Animal houses suitable for experimental work with both laboratory and farm animals, with a number of independent environmentally-controlled rooms and integral laboratories and a new milking research parlour
- Extensive contained growth rooms and glasshouse complexes
- 12 farms (1000ha) with sheep, beef and dairy commercial/ research stocks and arable crops



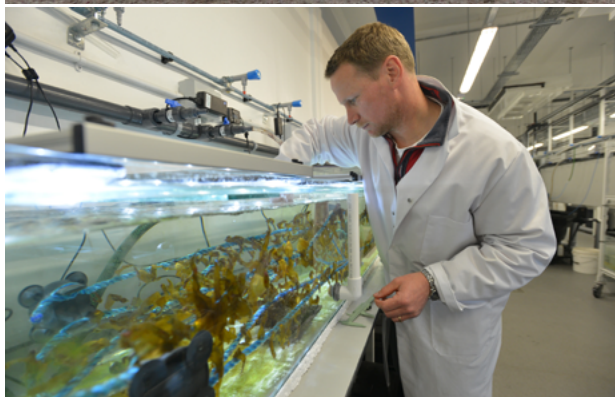
**CEUKF** (Centre of Excellence for UK Farming) is a joint initiative between IBERS and NIAB TAG, with seed funding provided by *Waitrose*, aiming to create a profitable and sustainable agricultural industry driven by innovation, long-term thinking and climate change action.

**BEACON** (Bio-refining Centre of Excellence) is led by Aberystwyth University in collaboration with partners at Bangor and Swansea Universities, aiming to develop renewable energy and assist in transition to a low carbon economy, with an overall objective of mitigating the impact of climate change.

**WISE** (Welsh Institute for Sustainable Environments) Network provides a unique opportunity for business to work in partnership with Aberystwyth, Bangor, and Swansea Universities. More than 500 companies have increased their financial success and reduced their environmental impact.

**AIEC** (Aberystwyth Innovation and Enterprise Campus) will serve as a platform to develop and evaluate new plant, microbial and animal production systems and will enhance our joint working with business, including accommodating start-up companies, and allow us to offer new interdisciplinary training.

**Pwllpeiran Upland Research Platform:** the only dedicated upland research station in England and Wales, working to improve the viability of farming the uplands of Wales.



## How will it Benefit your Career

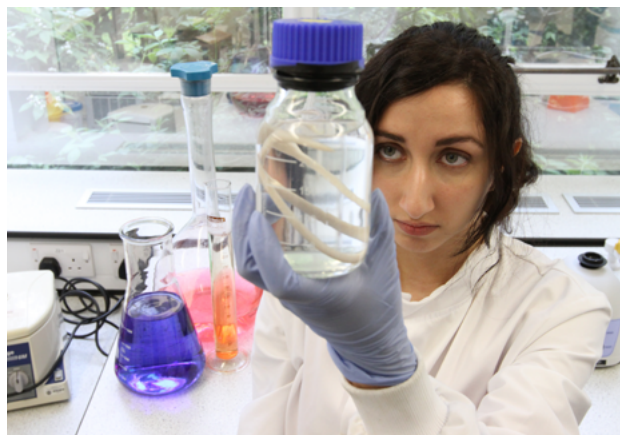
*“Political revolutionaries turn the world upside down. Scientific ones more often turn it inside out”*

The Economist

While excellence in research remains the sine qua non of IBERS PGR programmes, they are designed to provide training for both academic and non-academic employment. Although the most important thing for a PhD graduate is to become a competent practical researcher, students gain other competencies for high-level positions in careers outside academia in contemporary knowledge-based society. These include:

- solution finding for complex problems by critical analysis;
- logical problem evaluation and appropriate transfer of new technology;
- synthesis of new ideas;
- ability to sustain high level learning throughout your career;
- effective leadership and communication skills;
- ability to supervise work of others and ability to teach;
- project management, etc.

It may seem that “University Professor” is the one and ultimate outcome of a PhD. Even though this is often true and a PhD/ MPhil provides the ideal base for an academic career, our students also have chosen to do their degrees in order to enhance their career prospects towards other avenues and have gone on to a wide range of jobs: direct research (academic, clinical, industrial and contract), research management, clinical positions, higher education teaching, funding organizations, scientific writing, scientific consultancy, in vitro diagnostics, specialist laboratories, evidence-based policy making, spin-off businesses, marketing, sales, customer and technical support, communications (internal, external), regulatory, quality control, quality assurance, patents.



## Postgraduate Research Degrees

*“I have no special talents. I am only passionately curious”*

Albert Einstein

We offer several routes to Postgraduate Research degrees to cater for your needs:

**MPhil - a one-year Research Masters degree programme (2 years part-time)**

**PhD - a three-year Doctorate degree programme (5 years part-time)**

**DAG – a Distance Learning Professional Doctorate degree programme (5-7 years)**

Whatever discipline you choose, you will be taught and supervised by experienced staff with international research reputations and a background of working and training within their industry. Alongside our cutting-edge facilities and the fantastic natural habitats nearby, IBERS provides a truly 21<sup>st</sup> century postgraduate experience and a structured course consisting of:

### *Supervisor-supported research project*

Doctor of Philosophy requires the production of a written dissertation of around 40,000 to 80,000 words and an oral examination (*viva voce*). The MPhil/ PhD candidate is expected to undertake a preliminary literature search and review to identify a gap in knowledge as the starting point of the research work. Depending on the subject, it normally involves data/sample collection and experimentation (field- or laboratory-based), data analysis (*in silico* work) and production of manuscripts. The candidate is supported and guided by a team of 2 or more supervisors via regular meetings and one-to-one training.

### Taught Component

As part of on-going Research Training, all newly registered PhD/MPhil/DA<sub>G</sub> students must successfully complete a course in statistics as part of their probation year, as well as a range of Professional Development modules provided by the **AU Graduate School** ([www.aber.ac.uk/en/grad-school/](http://www.aber.ac.uk/en/grad-school/)). The Researcher Development Programme is a series of generic and subject-specific modules to help you complete your studies and further your career. Addressing the various aspects of the Vitae Researcher Development Framework ([www.vitae.ac.uk](http://www.vitae.ac.uk)) and supported by staff from across the university, it covers aspects such as ethics, quantitative and qualitative methods, public engagement, impact of research, writing school, viva preparation, and leadership.

### DA<sub>G</sub> Scheme

The BBSRC-funded **ATP for Sustainable and Efficient Food Production** is a partnership between IBERS-Aberystwyth University, Bangor University and NIAB-TAG, supported by a number of industrial partners. The scheme provides a unique web-based training opportunity for full-time professionals working with and within the extensive beef, sheep and dairy supply chains, allowing them to access the latest relevant research and training via workshops and distance-learning modules. Find out more: <http://www.atp-pasture.org.uk/en/>

## Funding

IBERS and AU are committed to helping high quality students to find suitable funding for their studies, and provide a range of scholarships and other opportunities:

### IBERS PhD Studentships

Fully-funded studentships cover UK/EU tuition fees and a maintenance grant (currently £14,057 per year) for up to three years. Applicants from outside the EU would be required to cover the difference between the UK/EU and International student tuition fees.

### Dr Owen Price PhD Scholarships

The Dr Owen Price bequest supports the education of Welsh PhD students, and cover UK/EU tuition fees and a maintenance grant (currently £14,057 per year) for up to three years.

### AU Doctoral Career Development Scholarships (DCDS)

These highly competitive scholarships cover Home/EU postgraduate tuition fees (and President's Awards for Overseas student fee support), a travel/research fund of £500 per year, and a subsistence allowance of £14,057 per year for three years.

### Grant-funded PhD's

Please see our webpage for regular updates for the UK/international research council grant-funded PhD/MPhil opportunities: <http://www.aber.ac.uk/en/ibers/ibers-pg-study/postgraduate-research/>

### DA<sub>G</sub> Bursaries

If you are employed full time within the UK agri-food sector you may qualify to receive a bursary. Sectors which qualify include: supermarket supply chain advisors, farmers and farm managers, agri-supplies, vets, agri-environmental advisors, agricultural consultants. We regret that those employed in publicly funded posts do not qualify for bursaries. Please contact us to find out if you are eligible: <http://www.atp-pasture.org.uk/en/>





## IBERS Research Areas

Research postgraduate training is completed with supervisors within research groupings aligned with one or more of IBERS' three core research **themes**:

### ANIMAL & AQUATIC SCIENCE

*Evolutionary biology, aquatic ecology, animal nutrition and genetics, biomedical and veterinary parasitology, bioinformatics.*

#### Research groups:

ANIMAL SYSTEMS – producing quality animal products, feeding systems that improve animal health, and of systems to deliver productivity with environmental protection;

HERBIVORE GUT ECOSYSTEMS – factors affecting gut microbiology of herbivores for the development of sustainable agricultural systems;

PARASITOLOGY AND EPIDEMIOLOGY – molecular and biochemical parasitology, and the landscape/ spatial epidemiology of vector borne diseases;

AQUATIC, BEHAVIOURAL & EVOLUTIONARY BIOLOGY – inter-disciplinary approaches into how animals adapt to their environment.

### BIOLOGY & HEALTH

*Evolution, ecology and genetic diversity of natural and agricultural systems, including improvement of crops and breeding systems, metabolomics.*

#### Research Groups:

MICROBIOLOGY – ecological, physiological and metabolic capabilities of micro-organisms, and impact on humans, domesticated animals, plants and the natural environment;

DIET AND HEALTH – linking plant/ animal breeding and chemical phenotyping of food raw materials with causal relationships between diet and health;

NUTRITION & PHYSIOLOGY – human physiological and diet factors that directly or indirectly influence physical or psychological performance in sport, exercise and health;

EXERCISE & HEALTH – the causes of activity limitation, and the effects of physical activity and lifestyle on human health outcomes.

### AGRICULTURAL & ENVIRONMENTAL SCIENCE

*Practical solutions for climate change mitigation through high yielding energy crops, and understanding the impacts of environmental change on plants.*

#### Research Groups:

BIOMASS CONVERSION AND BIOREFINING – processing and microbial conversion of biorenewable materials;

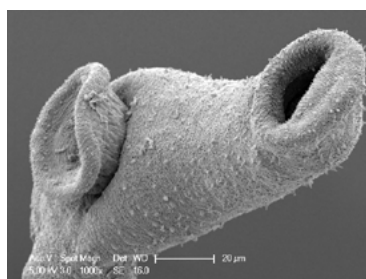
ENERGY CROP BIOLOGY, BREEDING & MODELLING – understanding and manipulating the growth and breeding of biofuel crops;

ECOLOGY – how climate change variables (temperature, CO<sub>2</sub>, ocean acidification and UV radiation) impact on ecosystems;

PUBLIC GOOD & ABIOTIC STRESS PLANT BREEDING – crop genetic improvement to support multifunctional land-use, alleviate environmental impacts, and coping with climate change;

BREEDING METHODOLOGIES – plant and animal breeding through novel technologies for genotyping and phenotyping, the genetic basis of traits useful to breeders;

PLANT GENOME AND CHROMOSOME BIOLOGY – genomic, cytogenetic and bioinformatic analyses of novel crop plant phenotypes.



## Research Projects

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Staff within IBERS can offer a wide range of project ideas for talented students wishing to pursue an MPhil or PhD study. A list of supervisors and potential project areas can be found here: <http://www.aber.ac.uk/en/ibers/ibers-pg-study/postgraduate-research-opportunities/potential-phd-projects/>

Also look for research ideas within our research clusters at: <http://www.aber.ac.uk/en/ibers/research/research-groups/>

### Industrial Links

PhD students will also have career development opportunities through being exposed to industry and other relevant employment sectors during their training.



## What our current PG Students are doing

IBERS has a large and vibrant community of over 150 postgraduate students, each a key contributor to our international reputation for fundamental and applied research excellence. A few examples of current students and their projects:



**CHARLIE LONG** – KESS funded MPhil “*Campanula patula*: distribution and conservation genetics of an endangered UK plant species”

An MPhil between Aberystwyth and the National Botanic Garden of Wales was my golden ticket to the exciting, creative and collaborative world of research. I was able to make the

most of the sophisticated sequencing kit in the labs, work with experts across the department, and cram in a summer-long field survey exploring hidden corners of the landscape and meeting the most interesting people along the way. Aided with training and conference funding from the Wales KESS (Knowledge Economy Skills Scheme), and getting stuck in with all sorts of public engagement and educational events, these experiences culminated in my current venture as a conservation skills trainee with *Herefordshire Nature Trust*.

**JARISHMA K. GOKUL** - National Research Foundation (NRF) Doctoral Study Abroad Scholarship funded PhD “A Systems Biology Approach to Supraglacial Ecosystems”

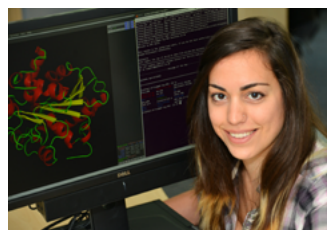
In my PhD, I endeavour to understand the role of cryoconite holes (cylindrical depressions in the supraglacial zone) in Arctic and Alpine regions, from individual cryoconite holes to entire ice-sheets by employing traditional and cutting-edge molecular research techniques. This will reveal the ecology and metabolic pathways of the ecosystem, and their global influence on climate change. The state-of-the-art facilities at IBERS, in addition to the exceptional staff, students and academics that are well prepared to offer guidance and assistance, have made my journey towards a PhD a particularly delightful one. **After spending only a year here at Aber, it is quite apparent to me that IBERS is an exceptional institute with a modus operandi that strives to have their students unleash their full potential.**



When considering the future, my passion and interest in polar research will allow me to pursue a lifelong dream – contributing to the enhancement of knowledge of pristine ecosystems, and highlighting their importance globally. And who knows, maybe one day my polar experience may slide into astrobiology territory, and I may be part of a NASA research team too!

**RICARDO MANUEL FERNANDES DA COSTA** – IBERS Scholarship PhD “Analysis of the plant cell wall glycome to optimise bioenergy and biorefining applications of biomass feedstocks”

My research interests address the multidimensional effect of plant cell wall chemical composition on the efficiency by which wall biomass can be used to produce liquid biofuels, as well as a whole range of biomaterials. My PhD project with the award winning BEACON programme focuses on the analysis of the plant cell wall glycome in relevant lignocellulosic biomass crops, combining cell biological, biochemical and molecular approaches. The outcomes of this study will provide essential information on tailoring more efficient strategies to optimise the biorefining of specific cell wall types. After completion of my PhD I would like to continue being involved in cell wall and biofuel research. For this, I intend to apply to postdoctoral and consultancy positions at academic or private institutes. **In the long term, I intend to use what I have learned during my time with IBERS to either teach at a university or to be head of a research laboratory.**



**STEFANI DRITSA** – HPC Wales funded PhD “Improving thermostability and catalytic activity of lipases through computational modelling”

A dream is not impossible to achieve. It just needs a lot of hard work. **Aberystwyth University has provided me with the opportunity to accomplish my professional dream.** The PhD project I was accepted on to seemed like the one that

would guide me to attain all the knowledge and experience I was most interested in. Enzyme design in bioinformatics was a flame that kept igniting my passion for biology and the use of computers in science. It might sound very poetic, but, to me, that is how passion would sound like. The project turned out to be the best educational choice I have made thus far, and as I proceed with my studies, I realize that an academic career is the type of professional future that would suit best my personality. Considering the choice of projects, the excellent support of my supervisors and IBERS, and the opportunities of promoting my research within and outside the University, I would without a doubt make the same choice of applying for a research degree here.

A PhD feels like life on a small scale: it teaches you to become a confident scientist; to trust yourself in knowledge, skills and decision making; to learn how and where to find inspiration; to be the inspiration; to push your own limits and break them. It teaches you that you will make it because you can and that your dreams are achievable. And it definitely feels better when you have the support and the facilities to excel in it as in Aberystwyth University and, of course, in a beautiful area by the sea.

**ALLY EVANS** – KESS PhD  
“Artificial coastal defence structures as surrogate habitats for natural rocky shores: giving nature a helping hand”

Having worked as a marine biologist for a few years in the public and NGO sectors, I began to realise that a PhD was the key to the next step in my career. I was extremely fortunate that IBERS valued my varied work experience and publication history and offered me this KESS-funded studentship. **I have relished every moment of the last three years, during which I have spent long glorious weeks doing fieldwork around the Welsh coast and even longer weeks in the lab and in the office working up data.** This variety in research has been a great relief and very rewarding. Since I am KESS-funded, I work in collaboration with industry consultants (Marine Ecological Solutions Ltd.) as well as my academic supervisors. The main output of the research will be an engineering design tool that will predict the ecological outcomes of new coastal defence schemes, based on the size, shape, material of structures used. **Most recently I had the opportunity to travel to Australia to present my habitat enhancement work to the *International Temperate Reefs Symposium*, which has opened up new avenues for investigating post-doctoral funding opportunities, but with the applied nature of my research I will also be employable in the public and private sectors if I choose.** This is a very fortunate and exciting position to be in – now just the small task of completing the PhD!

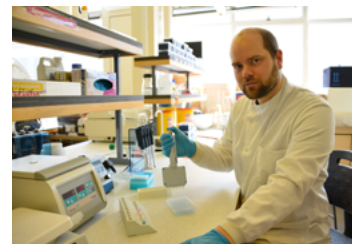


**MAX BLAKE**  
– Leverhulme Trust funded PhD  
“Population Genetics and Genomics of the Noble Chafer”

I came to IBERS from a background in pure

Zoology and conservation, to learn the methodologies and techniques of population genetics that apply to invertebrate conservation. **The research community within IBERS is extremely diverse, which helps a lot when you are considering new techniques in your work.** I've really enjoyed being an active part of IBERS, helping with outreach projects to local schools as well as in teaching undergraduates. These are all areas outside of the PhD that it is important to be involved in to improve your future prospects, particularly if you are looking beyond research and into lectureships and teaching positions. Learning how to incorporate genetics into population and natural resources management has been a key part of my education here, and I have been invited to give lectures in various settings on invertebrate conservation and management from a genetics point of view. I hope to continue this theme of research into the future in a post-doc position, potentially in the same research group here in IBERS.

**SIMON CAMERON**  
– APRS Research Studentship funded PhD  
“Charting Disease Changes in the Human Respiratory Metabolome and Microbiome”



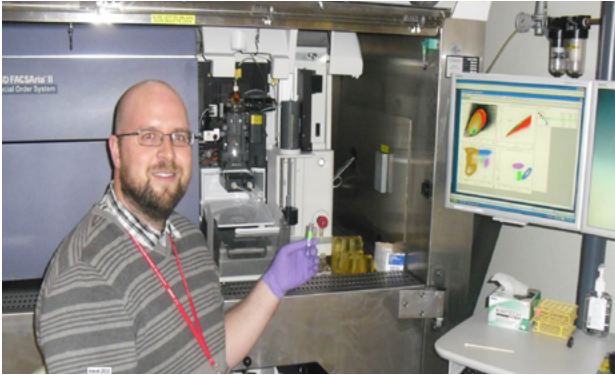
I completed my undergraduate degree at Aberystwyth, so I knew the strength of IBERS in a wide range of research areas. After just a few weeks of my first year, I knew I wanted to study for a PhD after I graduated. **When it came to deciding where to apply for studentships, IBERS was the top of my list.** I was fortunate to be awarded one of 12 APRS PhD studentships which gives me a stipend, pays my tuition fees, and an additional £500 a year to contribute to travel costs – enabling me to attend conferences both nationally and globally.

As a PhD student, the workload is very much different to when you are an undergraduate – but the rewards are well worth it. **The switch from learning about your subject area as an undergraduate, to making new discoveries as a postgraduate researcher is a great one and you really begin to appreciate what a career in research will be like.**

## What do our PGR Students go on to?

### Dr Phil Hexley

Director of the Flow Cytometry Core Facility, University of Nebraska Medical Center



I remember my first day at Aberystwyth, a fresh-faced undergraduate student thinking what a fantastic opportunity lay before me. Eight years later I was completing my work as a PhD student and moving on to new adventures. Only recently have I come to appreciate how this exciting time in Aberystwyth opened up new opportunities to me.

I have fond memories of the time I was lucky to spend in Aberystwyth. Not only the educational opportunities, but the unique location of the University, and the camaraderie that comes from living and working in such an environment stays with you for life. A picture still hangs on my wall, taken on the north beach sea front, of friends watching the Sun setting in the bay.

There are so many experiences I could talk about but the one that stands out is the opportunity to cultivate my presentation skills. First at local classes then building on this at national and international conferences. It is such a valuable skill and this experience was unforgettable. I felt very lucky to have such an involved and wonderful mentor throughout this time, Dr. Hazel Davey. Hazel was the single most significant person in me successfully completing my studies, and truly helped set my life in a direction I never really knew I could go.

I am now Assistant Professor in the Department of Pathology and Microbiology at the University of Nebraska Medical Center, in the USA. **There is no denying my life could have taken many paths. The opportunities and support that I had at Aberystwyth gave me the ambition to think big and the skills to act upon these.**

### Dr Liz Lewis-Reddy

Head of Living Landscapes at the Montgomeryshire Wildlife Trust, UK



I want to thank my supervisor for giving me the opportunity to work in the bat lab but I am looking forward to starting my PhD working with sheep." The laughter that rippled around the auditorium following the presentation of my MSc thesis was expected but my words were sincere. I was looking forward to starting the next stage of my academic career at Aberystwyth University.

The west coast of Wales was a long way away from my native Canada but I felt I was ready for the challenge. Enrolled as a part-time international student, I had seven years to complete my investigations into attempting to reconcile biodiversity and agricultural production. I made a number of good friends and the opportunity to be a part of an Institution that was awakening to the close links between a healthy environment and the economics of the farming industry stood me in good stead for my current career with the Wildlife Trusts.

**Over the past seven years, I have progressed through the ranks from project officer to manager of the Conservation department, and have often had cause to call on the skills and experience that I developed during my PhD, including the thicker skin!** Instead of spending my time pouring over a microscope in the lab I am out in the field at the coal face working to reconnect the economics of the farming industry with the functioning of the ecosystem that surrounds them. Times are changing for both conservation and agriculture and the challenges facing both sectors often seem insurmountable, but if there is one thing that completing a PhD has taught me it's that if you keep working at something, you'll get there in the end!



**Dr Gustavo Chemale**  
Head of the Forensic Genetics laboratory, Brazil National Institute of Criminalistics, Brazilian Federal Police.

I did not know Aberystwyth before I arrived in 2001 to do part of my PhD in the Molecular Parasitology lab, funded by a Brazilian studentship, but my time there was certainly an excellent

experience for me, both academically and intellectually. The town is amazing, with its history and nature - located by the coast is great for those who enjoy the outdoors and sea. We would also gather some friends for barbecues on the beach. It is a great place to make friends from all over the world.

In 2005 I again joined AU as a Postdoctoral Research Assistant in Prof Peter Brophy's lab. After this I returned to Brazil with a job with the Federal Police as a Forensic Scientist. I learned a lot in Aber during my PhD and Postdoctoral training: **besides all the molecular techniques, I use a lot of what I learned at IBERS in my job today.** I would say: Enjoy your time in Aber! It is a great place to keep a good balance between study and life. Wales is a great country and you get to know people from different countries! You will find it very interesting and enriching..

**Dr James LaCourse**  
Lecturer in Parasitology, Liverpool School of Tropical Medicine

Having been to Aberystwyth many times as a child and having enjoyed the friendly town and beautiful Ceredigion countryside I was in no doubt about which university I wanted to visit first. After the informative tour and friendly welcome from staff and students, I was sure that the student-centred approach at AU would suit me. Seems I was right...

although I planned to stay in Aber for three years to complete my BSc in Biochemistry, I ended up staying on to complete a PhD too - I liked it so much!

Even now, many years later with my work having taken me away to Liverpool, I'm still in touch with friends from AU and maintain valuable research collaborations with IBERS staff. It's important to realise that support and connections with AU can continue way beyond the initial study. **I know that the friends and colleagues I first met at Aber have certainly helped me in my career at various points and no doubt will continue to do so in the future.** ... in fact, just talking about Aber again has got me thinking I need to sort another little trip there to visit a few old friends and colleagues!



## Key People



**Prof Michael Gooding**  
Institute Director & Professor of Crop Science

Mike has more than 25 years experience working in the field of crop science. Before being appointed in 2014 as Director of IBERS, he was Head of Department of Agriculture, Policy & Development at University of Reading.



**Prof Paul Shaw**  
Director of Postgraduate Studies & Professor of Population Genetics and Genomics

After a PhD in anthozoan ecological genetics at Swansea University, a series of postdoctoral positions with Royal Free Medical School London, Aberdeen University, Hull University, and Lecturer/Reader in Molecular Ecology at Royal Holloway University of London, Paul joined IBERS in 2011. His research interests are in understanding the distribution and maintenance of genetic biodiversity within species (particularly in aquatic systems), with the aim of defining mechanisms underlying population connectivity, evolution and speciation.



**Dr Hazel Davey**  
Deputy Director of Postgraduate Studies & Senior Lecturer in Biology

After a PhD on the flow cytometry of microorganisms at Aberystwyth University Hazel worked in a series of postdoctoral positions funded by the US Army, BBSRC and NERC. She was appointed as a RCUK Academic Fellow in 2005, a lecturer in 2010 and senior lecturer in 2012. Her research interests are in measuring and understanding heterogeneity in microbial populations, particularly with respect to their response to environmental and industrial stress.



**Mrs Michelle Allen**  
Postgraduate Co-ordinator

Michelle has been PG Administrator for 9 years, so she is a goldmine of information regarding postgraduate issues. Michelle deals with PG administrative matters, including admissions, progress monitoring, marketing and scholarships. Michelle is the first point of contact for any problems or queries.



**Prof Jamie Newold**  
Director of Research & Professor of Animal Science

After a PhD in gut lactic acid metabolism at Newcastle University, Jamie worked for 16 years at the Rowett Research Institute, before joining Aberystwyth University. His research interests focus on understanding and manipulation of gut ecosystems to improve animal productivity while reducing environmental impact of animal husbandry.



**Dr Rhys Thatcher**  
Biology and Health Theme Leader & Reader in Exercise Physiology

After a PhD in the effect of soccer matches on the immune system, and lecturing posts at University of Teeside and Kingston University, Rhys joined Aberystwyth University in 2003. He researches the role of exercise in the management of chronic disease states and is currently Vice Chair of Research and Development for the Hywel Dda Local Health Board.



**Prof Iain Donnison**  
Agricultural and Environmental Science Theme Leader & Professor of Plant Science

Iain's own research interests are flowering time, leaf senescence and how plant chemistry affects the conversion efficiency of energy crops. Iain is also keeping himself busy by being a member of IBERS Senior Management Team, IBERS Executive & Finance Committees and Director of Bio-refining Centre of Excellence (BEACON).



**Dr Pippa Moore**  
Animal and Aquatic Science Theme Leader & Reader in Marine Ecology

Since completing PhD in marine ecology and climate change (2005) through the Marine Biological Association and the University of Plymouth, Pippa has undertaken research into the impacts of climate change on UK rocky shores (MBA 2005–6) and coral reefs (University of Queensland, 2006–7), the feasibility of incorporating biological habitat enhancement in offshore and coastal engineering (U. Plymouth, 2007–8) and investigating fisheries impacts on seagrass assemblages (Edith Cowan University, Western Australia 2008–11).

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