Darlithydd ymchwil mewn Geneteg Foleciwlar ac Ailgyfuno
(Cyfnod penodol am 3 blynedd yn y lle cyntaf)
Sefydliad y Gwyddorau Biolegol, Amgylcheddol a Gwledig (IBERS)
Graddfa 7 neu 8: £30, 870 - £35,788 neu £36,882 - £44,016 y flwyddyn (yn ddibynnol ar brofiad)

Yn rhan o'r gwaith sy'n mynd rhagddo i ddatblygu'r Sefydliad, rydym am benodi Darlithydd ymchwil mewn Geneteg Foleciwlar ac Ailgyfuno i gychwyn ar raglen ymchwil i ailgyfuno meiotig, gan ganolbwyntio ar rygwellt a rhywogaethau cysylltiedig. Nod yr ymchwil yw datblygu dealltwriaeth o effeithiau amrywio drwy ailgyfuno ar sut mae plasm cenhedlu gweiriau yn datblygu ac, yn y pen draw, i allu llywio ailgyfuno er mwyn gwella plasma cenhedlu. Bydd y dulliau o weithio yn cynnwys manteisio ar amrywiadau genetig sy'n sail i reoliadau meiotig a defnyddio asiantau cemegol a ffisegol a allai ddylanwadu ar safle ac amledd yr ailgyfuno. Bydd disgwyl i'r sawl sy'n cael y swydd fesur pa mor effeithiol yw'r gwahanol ddulliau o weithio wrth ddylanwadu ar ailgyfuno gan ddefnyddio dulliau moleciwlar, yn enetig a seitogeneteg ar lefelau'r genoteip unigol a'r boblogaeth. Disgwylir y bydd gan ymgeiswyr ddiddordeb byw mewn rhoi technolegau modern a dulliau hysbysegol ar waith.

Ariennir y swydd hon drwy ein grant cyllid strategaeth gan y BBSRC ym maes Geneteg a Genomeg Cnydau, ac fe ddisgwylir y bydd y swydd hefyd yn cyfrannu at y grant hwnnw.

Am fanylion pellach cysylltwch â'r Athro Wayne Powell (wap@aber.ac.uk) neu Dr Ian Armstead (ipa@aber.ac.uk).

Cyf: IBERS.11.10
Dyddiad cau: 27 Mai 2011
Dyddiad cyfweliad: Wythnos yn dechrau 27 Mehefin 2011

NODYN: Nodwch gyfeirnod y swydd ar flaen yr amlen ac ar y ffurflen gais os gwelwch yn dda.

Dylid llofnodi'r ffurflen gais ar ôl ei llenwi ac yna ei dychwelyd i'r **Tim Recriwtio Adnoddau Dynol** drwy e-bost, ffacs neu post.

Sefydliad Dwyieithog sy'n gweithredu Cynllun laith Gymraeg.
Ymroddedig i Gyfle Cyfartal.

Tîm Gweithredol: swyddi@aber.ac.uk / Ffôn: 01970 621591 / Ffacs: 01970 622975
Am fwy o wybodaeth ac am ffurflen gais ewch i www.aber.ac.uk/hr

A FYDDECH GYSTAL Â NODI NA CHYDNABYDDIR CEISIADAU AC EITHRIO PAN DDERBYNNIR AMLEN WEDI EI CHYFEIRIO A'I STAMPIO GAN YR YMGEISYDD. FEL ARFER FE BENODIR I SWYDDI O FEWN 4-6 WYTHNOS WEDI'R DYDDIAD CAU. GALL YMGEISWYR NA FYDDANT WEDI DERBYN LLYTHYR ODDI WRTH Y BRIFYSGOL ERBYN Y DYDDIAD HWNNW RAGDYBIO NAD YW EU CEISIADAU YN CAEL EU HYSTYRIED YMHELLACH AC NA FYDDANT YN DERBYN GOHEBIAETH BELLACH.

Lecturer in Molecular Genetics and Recombination
(Fixed Term for 3 years in the first instance)
Institute of Biological Environmental and Rural Sciences
Grade 7 or 8: £30, 870 - £35,788 or £36,882 - £44,016 per annum (dependent on experience)

As part of its ongoing development is seeking to appoint a research Lecturer in Molecular Genetics and Recombination to initiate a programme of research into meiotic recombination focussing on ryegrass and related species. The aim of this research will be to develop an understanding of the effects of variation in recombination on grass germplasm development and, ultimately, to manipulate recombination for germplasm improvement. Approaches will include the exploitation of underlying genetic variation in meiotic controls and the use of

chemical and physical agents which may influence both the position and frequency of recombination events. The post-holder will be expected to calibrate the effectiveness of different approaches to influencing recombination using molecular genetic and cytogenetic approaches at both the individual genotype and population levels. An active interest in applying modern technologies and informatic approaches is expected.

This post will be funded by and expected to contribute to our ongoing strategic funding grant from BBSRC in the area of Crop Genetics and Genomics.

For further details contact Professor Wayne Powell (wap@aber.ac.uk) or Dr Ian Armstead (ipa@aber.ac.uk).

Ref: IBERS.11.10
Closing date: 27 May 2011
Interview date: Week commencing 27 June 2011

NOTE: Please put the post reference on the front of your envelope and on your application form.

Completed Applications Forms should be signed and returned to the **Human Resources Recruitment Team** by e-mail, fax or post.

Bilingual Institution which operates a Welsh Language scheme.
Committed to Equal Opportunities.

Operations Team: vacancies@aber.ac.uk / Tel: 01970 621591 / Fax: 01970 622975
For information and application forms please go to www.aber.ac.uk/hr

PLEASE NOTE THAT YOUR APPLICATION WILL ONLY BE ACKNOWLEDGED IF YOU PROVIDE A STAMPED ADDRESSED ENVELOPE. APPOINTMENTS ARE NORMALLY MADE WITHIN 4-6 WEEKS OF THE CLOSING DATE. IF YOU DO NOT RECEIVE A COMMUNICATION FROM THE UNIVERSITY BY THAT DATE YOU MAY ASSUME THAT YOUR APPLICATION IS NOT BEING FURTHER CONSIDERED AND NO OTHER COMMUNICATION WILL BE SENT.

Further Particulars (Yn Saesneg yn unig)

Aberystwyth University has a long and distinguished history of teaching and research in the fields of biology, agriculture and related disciplines. Established in 1872 as the University College of Wales Aberystwyth, the University has had a major global impact on agriculture, particularly upland and pastoral farming. The establishment of the Welsh Plant Breeding Station (WPBS) in 1919 made Aberystwyth a global force in the development of grasses and clovers for temperate upland agriculture. This tradition continues today with the formation in April 2008 of the Institute of Biological, Environmental and Rural Sciences (IBERS) from the fusion of the University Institutes of Biological Sciences and Rural Sciences with the former BBSRC funded Institute of Grassland and Environmental Research.

IBERS is also part of BEAA, a strategic partnership with Bangor University College of Natural Sciences (CNS). It is the largest multi-disciplinary bio-environmental grouping in the UK, and was created to provide internationally competitive strategic research and development capacity in Wales to address 21st century environmental challenges.

Agriculture will be important for providing solutions to key global challenges over the next fifty years, including the delivery of food, water and energy security. IBERS has expertise in crop genetics and genomics, with an emphasis on perennial out-breeders, that is recognised worldwide and attracts substantial Research Council income. Fundamental research underpins commercially successful breeding programmes for forage grasses, legumes and oats, together with a range of novel breeding related activities in other crops, including the energy grass *Miscanthus*. Breeding programmes are complemented by considerable expertise in high throughput phenotyping, currently focused on metabolomics and high dimensional data modelling, which aim to link genotype to complex traits in model species (*Arabidopsis* and *Brachypodium*), in crops and in plant-pathogen interactions.

IBERS employs >300 staff, has an annual turnover of £25 million and represents the largest land-based science department in the UK. There is an active programme of £10.3 million infrastructure investment in existing and new core facilities to support genomics, metabolomics and phenomics. The Translational Genomics Centre, currently under construction, will provide a focus for Next Generation Sequencing activities (including 454 and Illumina). The Metabolomics Centre is equipped with a range of robust, high mass accuracy and high sensitivity instruments supporting metabolite fingerprinting, metabolite profiling and targeted analysis including Orbitrap, FT-ICR-MS, GC-tof-MS and Triple Quad technology. The establishment of the Plant Phenomics Centre (see attachment at the end) expands the Institutes' already expansive capacity to provide controlled environment facilities for plant growth and trait analysis.

The 'data-rich' nature of modern biology demands closer collaboration between biologists, mathematicians and bioinformatics experts. IBERS will ensure that it is positioned to fully exploit emerging research opportunities through the coordinated establishment of a **Reader in Computational Biology/Bioinformatics** and a **Lectureship in System Biology** to link to the present post and collectively specialising in developing an informatics infrastructure for Phenomics Biology. These new staff will complement a recently appointed **Lectureship in Bioinformatics** (*New Generation Sequencing*) together with **Chairs in Crop Genetics and Phenotype Biology** and **Crop Genetics**. Further related research **Lectureships** have been established in **Statistical Genomics** and **Quantitative Genetics** to link extensive plant breeding activities to 'omics' technologies.

It is intended that these posts will strengthen linkages with the Department of Computer Science in areas of Computational Biology and particularly phenotype ontology development from automated non-invasive image analysis. A key mission of IBERS is to promote the integration of Phenomics, Metabololomics and Translational Genomics to support new generation crop plant and animal breeding programmes. A key component of this activity involves development of external collaborations with world-class systems biology centres. Wherever possible, this systems approach will be extended to landscape/spatial analysis with high dimension, large volume datasets now available from earth observation and environmental instrumentation in collaboration with Institute of Geography and Earth Sciences within AU.

In addition to new staff appointments, IBERS will create a new, computing facility that will be shared by scientists across IBERS computer-intensive research areas to achieve our goal of integrated science. The increased potential for cross-fertilisation, mutual support and novel insights is an important driver for this strategic development, as well as the capacity for processing very large datasets. The computing facility will be an open space of computer workstations, with spin out rooms. A high performance cluster will be available for modest parallel computing, along with data servers, 10^2 terrabyte storage and tape backup whilst within Aberystwyth University a 1000 node HPC is currently under development.

Job description

Since this is a research Lectureship, the post holder will have a primary role in leading research. However, the appointee may also be required to provide a limited amount of teaching within their own area of specialisation at both undergraduate and postgraduate levels.

Person Specification

Applicants will be assessed against the following criteria:

Essential criteria

- Recognised achievement in original research
- Recent, high quality publications suitable for inclusion in the forthcoming REF (the successor to RAE);

- In-depth knowledge of meiosis and recombination in plants
- Evidence of a strong commitment to collaborative, interdisciplinary research.
- Experience of relevant technological and bioinformatic tools and their application in plant genetic and genomic research

Desirable Criteria

- Understanding of grass comparative genetics and genomics
- Experience in attracting external grant income to support research;
- Good knowledge of the research priorities of a range of stakeholders and funding bodies;
- Invited presentations at international conferences, prizes, awards or other forms of external recognition
- Ability and willingness to contribute to the administration of the Institute, especially in research.