

A position is available for a **Research Associate (Postdoc)** to conduct research on fish biology, disease and bioinformatics, in the topic:

### **Minimising the Impacts of Intensive Aquaculture in the face of Climate**

#### **Change**

Institutions Involved: Cardiff University, Swansea University and Aberystwyth University  
Collaborators: Natural Resources Wales (NRW), Cardiff Harbour Authority (CHA), Wye & Usk Foundation (WUF), Natural Aptitude, Fishgen, Skillfish, Pontus Aqua, CIBIO

Worldwide demand for fish and shellfish has increased 9% annually over the last few decades and is expected to reach c. 180 million tons by 2015, most of which will have to come from farmed fish, as the majority of wild fisheries are either stagnant or grossly over-exploited. However, to achieve long-term sustainability and meet food security demands, aquaculture needs to diversify and to step-up the domestication of aquatic species, which will have to thrive on less food, less space, and less water, all compounded by warmer temperatures and disease. The AquaWales Research Cluster combines academic (Swansea, Cardiff and Aberystwyth Universities) and non-academic participants, including stakeholders and local government involved in policy and regulation, and will target these challenges by capitalising on the diverse and complementary expertise of the group (from behavioural ecology to genomics, citizen-science and fisheries policy). We will use a multidisciplinary approach to disentangle the basis of domestication and the response to crowding (stress and parasite susceptibility), an aspect often neglected in breeding programs, and to investigate the potential effects of climate change on the risk of expansion and establishment of non-native aquatic species associated with aquaculture and fisheries using state-of-the-art methods. Specific aims include to:

1. bridge, for the first time, the behavioural, genetic and environmental (epigenetic) components of fish undergoing domestication
2. disentangle the role of domestication in disease resistance in response to stress and temperature change, and
3. model pathways of introduction and dispersal of aquaculture-related invasive species (AIS) under different environmental conditions, combining state-of-the-art methods for early detection (environmental DNA) and citizen science.

The Research Associate will work in collaboration with a Research Associate based at Swansea and 2 PhDs affiliated with this research cluster; the Research Associate must also be prepared to work for short periods of time in Swansea and/or Aberystwyth. The main tasks of the Research Associate will be to work on the relationship between domestication and disease resistance under stressful conditions of crowding and disease in tilapia and salmon, developing infection protocols, culture assay methods and performing genomic/transcriptomic analyses. The successful candidate will have a PhD in related subject area or relevant industrial experience, experience in two of the following fields, fish behaviour, epidemiology, genetics/genomics background or experience programming in R/Python and proven ability to publish in international journals. This is a full-time position, fixed-term until 30 September 2018 Salary: d'ž"31,342 - d'ž"37,394 per annum (Grade 6). It is not anticipated that an appointment will be made above 6.31, currently d'ž"32,277 per annum. Closing data for application:

**Wednesday 21st January, 2015**

Please use the following link to apply: Cardiff University - Job details Cardiff University - Job details Job Details: Vacancy Number 2951BRResearch AssociateA position View on [krb-sjobs.brassring.com](http://krb-sjobs.brassring.com)

For additional information please contact:

[CableJ@cardiff.ac.uk](mailto:CableJ@cardiff.ac.uk)

and/or

[orozco-terwengelpa@cardiff.ac.uk](mailto:orozco-terwengelpa@cardiff.ac.uk)