



# Early stage fellowship: Marine population genomics.

Advisors: Dr. Joe Hoffman (Bielefeld University, Germany)  
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and Dr Melody Clark (British Antarctic Survey, UK)

Funding is available for an early stage researcher (ESR) as part of a Marie Curie Initial Training Network. The researcher will be based in the Hoffman lab at Bielefeld University ([www.thehoffmanlab.com](http://www.thehoffmanlab.com)) and will also go on secondment to the Harper Lab at Cambridge University ([www.cai.cam.ac.uk/people/liz-harper](http://www.cai.cam.ac.uk/people/liz-harper)). This position provides an excellent opportunity for the candidate to obtain experience of diverse methodologies, from next generation sequencing to geometric morphometrics and scanning electron microscopy.

There is mounting concern over the acidification of the World's oceans. In the 250 years since the onset of the industrial revolution, atmospheric CO<sub>2</sub> levels have risen from 280 to 381 parts per million and average ocean pH has fallen from 8.16 to 8.05. Human-driven emissions of CO<sub>2</sub> continue to rise and have begun to outstrip even the most pessimistic of IPCC model scenarios. How will life in the oceans adapt to this changing environment? Particular concern has been expressed over organisms with heavily calcified shells such as molluscs, as their ability to extract carbonate ions from seawater and incorporate these into their skeletons may be compromised.

This position forms part of a Marie Curie Initial Training Network entitled CACHE: Calcium in a Changing Environment, funded by the EU (ref: 605051) and co-ordinated by the British Antarctic Survey. The aim of this network is to take a coordinated multidisciplinary approach to understanding calcium regulation and shell production in four commercially important shellfish species, the king scallop (*Pecten maximus*), the Pacific oyster, (*Crassostrea gigas*), the blue mussel (*Mytilus edulis*) and the soft shell clam (*Mya arenaria*). The network comprises 10 partners from 6 European countries, including research institutes, universities and commercial enterprises. Full details of the network can be found at [www.cache-ITN.eu](http://www.cache-ITN.eu).

The ESR will be expected to work with two other ESRs based in Bielefeld and Cambridge respectively. He or she will be involved in projects using population genomic approaches to (i) conduct a comparative analysis of the population structure of the four species along a European latitudinal cline; (ii) explore how stocking practices, hybridization, oceanographic barriers and life-history interact to shape population structure; (iii) determine the relative contributions of genotype and phenotypic plasticity to shell morphology and ultrastructure; (iv) test for signatures of selection at candidate genes involved in calcium regulation and deposition. There will also be scope for the ESR to explore their own related interests within the framework of this project.

We seek a bright and highly motivated candidate who holds a B.Sc. or equivalent in a relevant topic (e.g. marine biology, population or evolutionary genetics, bioinformatics). An M.Sc. would also be advantageous but is not necessary. The ideal candidate will have some practical experience of working in a genetics lab and / or strong quantitative skills including experience of working in R. Experience of next generation sequencing approaches is desirable although training can be provided. The candidate should also be able to work both independently and as part of a multidisciplinary team. A high standard of spoken and written English is required.

The ESR will join the Hoffman lab, a young and dynamic group comprising five PhD students and a postdoc. They will be based at the Department of Animal Behaviour at Bielefeld University ([www.uni-bielefeld.de/biologie/animalbehaviour/home.html](http://www.uni-bielefeld.de/biologie/animalbehaviour/home.html)). The department currently hosts six principal investigators, seven postdocs and over thirty PhD students. It offers a stimulating international environment and an excellent research infrastructure including brand new molecular laboratories and computing facilities. The working language of the Department is English. Bielefeld

is a city of 325,000 inhabitants with an attractive historical centre and easy access to the Teutoberger Wald for hiking and other outdoor pursuits. It offers a very high standard of living and is well connected to most major European cities.

This position offers a generous stipend of at least €3700 per month, including a mobility allowance, for a period of up to 18 months. Funding is also available for the fellow to attend at least one meeting in Portugal, and there may be opportunities for fieldwork in other European countries.

To apply for the position, please provide: (i) a letter of motivation including a maximum 2-page statement of your research interests, relevant skills and experience; (ii) a CV including any publications; (iii) names and contact details of three referees willing to write confidential letters of recommendation; (iv) for monitoring purposes only, please clearly state your nationality, sex, and where you saw the advert. All materials should be emailed **as a single PDF** to: joseph.hoffman@uni-bielefeld.de or david.vendrami@uni-bielefeld.de with 'CACHE application' in the subject line.

The application deadline is February 26<sup>th</sup> 2016. Interviews will take place immediately afterwards. We would like the fellow to start by May 2016 at the latest. For further information, please contact Joe Hoffman (e-mail: joseph.hoffman@uni-bielefeld.de; tel: +49(0)521 1062711, David Vendrami (david.vendrami@uni-bielefeld.de), or Liz Harper (e-mail emh21@cam.ac.uk, tel: +44(0)1223 333428).

Eligibility: Please note that this is an EU funded Marie Curie post and therefore certain eligibility criteria apply:

- The applicant must be in the first four years (full time equivalent research experience) of their research careers and not yet have a doctoral degree. This is measured from the date when they obtained the degree which would formally entitle them to embark on a doctorate.
- At the time of recruitment by the host organisation, researchers must not have resided or carried out their main activity (work, studies etc) in the country of their host organisation for more than 12 months in the 3 years immediately prior to the reference date.
- The candidate can be from any nationality, including non-EU.

The University of Bielefeld is an equal opportunity employer. We particularly welcome applications from women. Given equal suitability, qualifications and professional achievement, women will be given preference, unless particular circumstances pertaining to a male applicant apply.

For relevant publications, please see: Hoffman *et al.* (2010) *Marine Biology*, 157: 765–778 and Hoffman *et al.* (2011) *Marine Biology*, 158: 287–296.