

Final Report

Name of BritInn Fellow: Andrea Garvetto

Home Department: Scottish Association for Marine Science

Home University: University of the Highlands and Islands

Guest Department: Microbiology **Guest University:** University of Innsbruck

From: 08/10/2018 **Until:** 19/10/2018

Title of the Research Project: **Microeukaryotes as parasites**

Report about visit and future plans (max. 200 words, English):

Thanks to a **BritInn** fellowship PhD candidate Andrea Garvetto (Scottish Association for Marine Science) spent a two week research stay at the University of Innsbruck, Department of Microbiology, hosted by Ass. Prof. Mag. Dr Sigrid Neuhauser. During his PhD Andrea studied the interaction between chytrid and oomycete parasites and diatom hosts, in marine and freshwater environments. He focused on the diversity and ecology of these parasites using molecular and microscopy techniques applied to cultured material, as well as single-cell techniques on isolates from the field. Results have been presented at University of Innsbruck during the talk: "**Single cell approaches to investigate microeukaryotic ecology and diversity: a case study involving parasitic oomycetes and chytrids**". The two weeks spent at the department of Microbiology also aimed at establishing a long-term collaboration with Ass. Prof. Mag. Dr Sigrid Neuhauser. Dr. Neuhauser's team is active in researching the biodiversity, ecology and physiology of phytomyxid parasites (Rhizarian, Cercozoa) infecting plants and algae. A first draft for a future collaborative project to investigate the diversity and impact of eukaryotic parasites on photosynthetic heterokonts in diverse environments worldwide has been produced, with the possibility of establishing cultured model systems to further investigate the physiology of these overlooked interactions.

Picture Credits: The chytrid *Zygorhizidium affluens* infecting the diatom *Asterionella formosa*, bright field (left) and Calcofluor White staining in epifluorescence (right).

