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Scientific Report: Thermal adaptation and tolerance of vulnerable life stages

The main aim of my visit was twofold. On one side, the visit was intended to invest time in implementing another proposal submitted to the ThermAdapt Scientific Committee, while, on the other hand, it was also intended to foster the scientific links between the visiting scientist and the researchers of the group of Professor Portner at the Alfred Wegener Institute (AWI).

During the visit it was possible to rethink and refine the Workshop "Vulnerable life stages under siege of climate change. Synergic approaches of physiology and ecology in marine species" (Science Meeting Proposal No 2770), according the evaluations of the ThermAdapt Scientific Committee. Since the Committee asked to broaden the proposed attendance, the tentative title of the proposed Workshop was in fact changed into "The effects of climate change on vulnerable life traits of aquatic ectotherms: towards an integrated approach". The new proposal will no longer focus on marine species but will encompass contributions on ectotherms living in all aquatic environments. The conclusions of the team of workers involved in the de novo preparation of the workshops, with the aim of a more general understanding of susceptibility of climate change and species tolerance, were that it appears particularly relevant to focus our attention on vulnerable life traits of ectotherms and to broaden the scientific approach to all the ontogenetic levels. The present visit allowed to propose a Scientific Meeting that will actually be a call to bring together researchers from a wide range of theoretical and experimental fields, from physiology to evolutionary ecology, from behavioural biologist to ecological modelers, in order to build up a new integrated approach to the study of ecosystem responses and species resilience to climate change based on the importance of the weakest traits of species life cycles.

Tentatively, the Meeting will be held in Bremerhaven with a total of 30 speakers of which 6 Keynote speakers will be selected, while at least the same number of poster presentations are expected. It was already possible to contact some European scientists to be invited as Keynote speakers, as they will also act as Symposium Coordinators and will be part of the Steering Committee, together with the three Organisers.

The obvious output of this visit will be to present as soon as possible a modified proposal of the Workshop, to be evaluated by the ThermAdapt Scientific Committee. Moreover, and since the contributions to the Workshop will be published in International Journals to be selected, the contribution of the proposer of the current project will of course acknowledge ESF.



As concerns the second aim of the visit, the fostering of collaboration between the partners involved, the visiting scientists and a Marie Curie Post-Doctoral Fellow of Prof. Portner group were able to present a scientific proposal to the start up meeting of the RV Polastern Expedition ANT-XXVII/3 which will take place from 08/02 to 18/04/2011, held at AWI on the 26/02/2010. The proposal, titled "Cardiovascular system in Antarctic Amphipods" was accepted and two berths on the RV Polastern are now reserved for the researchers in charge. This new project will thus strongly foster the scientific relationships between the University of Florence and the AWI, opening new research scenarios for both partners.

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