REPORT ON POGO-SCOR FELLOWSHIP PROGRAMME

Supervisor's Report (Host Institution)

Name of Trainee: Miss Charissa Ferrera

Supervisor (Parent Institution): Dr. Gil Jacinto

Supervisor (Host Institution): Dr. Andy Rees

Dates of Training: 5th October 2009 to 18th Dec. 2009

Subject of Training: Nitrogen cycling and underway pCO₂ analysis in the Atlantic Ocean (research cruise AMT 19)

1) Please provide a brief description of the activities during the training period.

Pre-cruise: Unfortunately due to problems with visas and flight arrangements Miss Ferrera only arrived in the UK a week before joining the ship. This was unfortunate as it curtailed a number of training exercises that had been planned. During this week Miss Ferrera was introduced to personnel involved with her project and other seagoing colleagues, she was briefed on the methods and health and safety aspects associated with techniques she would employ at sea which included her assisting in the set up and deployment of the autonomous pCO₂ system onboard ship. Two days of this week were used to participate on a Maritime and Coast Guard Agency approved training course on ‘Sea Survival and Safety’ which is a mandatory requirement for sailing on UK research vessels.

During-cruise: Following some initial training Miss Ferrera took full responsibility for sample collection and processing associated with the determination of nitrification and nitrogen uptake rates. This involved an arduous routine of pre-dawn sampling, sample incubation, filtration and collection of material using solid-phase extraction. Alongside these activities she was able to observe at close quarters the activities of her colleagues involved in nutrient, chlorophyll and oxygen analysis and the determination of primary production rates. In partnership with one of the ships technicians Charissa assisted in the observation and maintenance of the underway autonomous pCO₂ system.

Post-cruise: This was a long cruise (50 days at sea plus 3 days either side for travelling and mobilisation) which due to the proximity of Christmas limited the time available in the laboratory to 2 weeks. During this time Miss Ferrera received training in the processing of extracted samples which included removal from SPE columns, purification using HPLC, analysis using GC-MS and preliminary data analysis. Further to this she worked on the analysis and quality control of pCO₂ data.

2) Please provide your comments on the performance of the trainee.

Charissa Ferrera was an exceptional candidate who was a joy to work with. She was enthusiastic, hard working and very well organised. She arrived with a good working knowledge of seagoing biogeochemistry and she applied herself well to the challenges that she was confronted with. Her work was all performed with care and attention to detail and I have no doubts whatsoever that she will be successful and productive in her future career. This could have been a difficult environment for Charissa to have been in for such a long time, however she integrated easily with all onboard ship and in the laboratory and her company was enjoyed and respected by all around her.

3) Is this exchange likely to lead to future collaboration with the trainee’s parent institution?

I will endeavour to maintain contact with Miss Ferrera and will actively seek funding to enable her to continue in the analysis of samples collected through to completion. Even without this she will be involved in the continuation of this project remotely and will co-author any publication from this work. Whilst this
fellowship provides a fantastic opportunity to the fellow and great benefit to host and parent institutes, it does not foster close relationships between the two institutes and so in the short-term I envisage contact on a personal basis with Miss Ferrera, which may, or may not lead to greater collaboration in the future.

4) Please provide your comments on the Fellowship Programme.
This is a great opportunity to all involved, and I encourage its continuation strongly

Please return completed form by facsimile to +44 1752 633 101
OR send by e-mail to: pogoadmin@pml.ac.uk