

**2018 NF-POGO Visiting Fellowship for
Ship-board Training**

Fellowship Report

Name of Trainee: JGHAB AYMAN

Name of Supervisor (Parent Institution): Pr. Bouchta El Moumni

Supervisor (Host Institution): Dr. Maria Carmen García-Martínez.

Dates of Training: 12-07-2018/28-09-2018 (shipboard survey from 10 to 23 August 2018)

Section A

(To be completed by the fellow and returned to the POGO Secretariat)

Please note that this form will be passed on to the host and parent supervisor and when complete will be made publicly available on the [OTP](#) website;

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

After resolving some visa issues, I was able to start my fellowship at the IEO Malaga on July 12th, 2018. During the first month I got trained on how to get samples from Niskin bottles regarding the target analysis. I also got familiar with the instruments and materials that we were going to use in the survey such as Bongo net 20, Folsom separator, AFT spectrophotometer, Alkalinity titrator and SUNDANS (Surface Underway Dissolved CO₂ Analyzer).

On August 9th, I travelled to Palma de Mallorca, Spain, and joined the oceanographic vessel at night. The oceanographic survey started in the early morning in the next day from Mallorca and scanned almost all the Spanish Mediterranean coast. The cruise finished on August 23rd. 105 stations were visited during the 14 days that we spent in the sea. During the survey I sampled waters from the Niskin bottles, filtered and fixed samples to determinate pH, alkalinity, chlorophyll and nutrient concentration, phytoplankton (micro, pico and nanoplankton), and also obtained zooplankton samples using a Bongo net.

In addition to that, I had the chance to assist to the deployment of an international Argo float, and the control and lifting of the ATHAPOC deep mooring (2,300 m), as well as the HYDROCHANGES deep mooring (60 m).

2) What applications of the training received do you envision at your parent institution?

As I am using satellite estimate data, the surface chlorophyll, temperature and salinity data from this survey will be used to evaluate the accuracy of the data I have been using in my PhD research.

Research on oceanography and specially on climate driven impact on the sea are not well developed in Morocco, and I am currently starting to liaise between the Climate Change Group in the Spanish Institute of Oceanography (IEO), my University and the National Institute of Fisheries Research (INRH in Morocco) to promote research on this particular field.

3) Please provide your comments on the Fellowship Programme.

For me, this experience was extremely interesting, since I learned a lot of scientific sampling techniques, how to analyse samples and interpret the relevant data. This allowed me to get more knowledge of oceanography and especially of the Mediterranean Sea, which will help me in my thesis and my future investigations. It also opened more my appetite in studying the Ocean.

The fellowship was not only an opportunity for me to travel and see another level of scientific investigation, it provided me of an exposure to multidisciplinary approach of sea investigation and allowed me to build more self-confidence.

Signature
JGHAB AYMAN

Date: 31/10/2018

Section B

(To be completed by host supervisor and returned to the POGO Secretariat)

Please note that this form will be passed on to the parent supervisor and trainee and when complete will be made publicly available on the [OTP](#) website;

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

Ayman has been trained in the different on board sampling techniques that are carried out in the multidisciplinary monitoring surveys RADMED. During his fellowship he has had the opportunity to learn how to measure properly pH in marine waters (by spectrophotometry), alkalinity (titration), and the interchange of CO₂, between the sea surface and the atmosphere by a partial pressure analyzer.

2) Is this exchange likely to lead to future collaboration with the trainee's parent institution? If so please give example(s) of how this collaboration may be pursued.

This fellowship can be seen as an opportunity of collaboration with the University of Tangier. It has been the first time that a PhD student from this university has participated in a RADMED survey. We hope that some other students or young scientists from this University could also have the chance of participate in our surveys, or even to develop their research in collaboration with researchers of IEO centres.

3) Please provide your comments on the Fellowship Programme.

The Ocean Training Fellowship has demonstrated to be a perfect tool to train young scientists from developing countries. All the process has been very simple and efficient, and with very quick response to any inquiries.

Signature

María del Carmen García Martínez

Date: 06/11/2018

SECTION C

(To be completed by parent supervisor and returned to the POGO Secretariat)

Please note that this form will be passed on to the host supervisor and trainee and when complete will be made publicly available on the [OTP](#) website;

1) Do you agree with the above comments and do you have any additional feedback you wish to provide?

As a mentor teacher to Mr. Ayman, I confirm the above information and I attest to his seriousness and ability to carry out this project.

Signature

Bouchta El Mounni

Date: 13/11/2018