

**2022 NF-POGO Visiting Fellowship for
Ship-board Training**

Fellowship Report

Name of Trainee: Carola Ferronato

Name of Supervisor (Parent Institution): Valeria Guinder

Supervisor (Host Institution): M^a Ángeles Louro Pico and Marta M. Varela

Dates of Training: 15/2/2022 – 15/5/2022

Training topic: shipboard observational oceanography on the RADIALES research cruise

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:

The training included both shipboard and laboratory work at mainland. I participated in several daily RADIALES cruises in the coastal area of A Coruña. The training consisted in sampling and processing water samples for determination of planktonic abundances using automated cell counting Flow Cytometry, Flow Cam and ZooScan; concomitant to the sampling and analysis of physico-chemical parameters (temperature, conductivity, pH, inorganic nutrients, dissolved organic matter, etc.).

Also, I received complementary lab training in the estimation of picoplanktonic diversity by extracting genomic DNA using a phenol:chloroform method, 16S rRNA gene PCR previous to High Throughput Sequencing (HTS) analysis of the 16S/18S rRNA gene amplicons. Furthermore I have been doing some microbial activity measurements by leucine incorporation.

In addition, I participated in an ichthyoplankton research cruise on board the R/V Miguel Oliver, in which the main goal was to assess the biomass of some important commercial fishes of the NE Atlantic.

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

I would like to incorporate the use of Flow Cytometry and Flow Cam to my routine work at IADO (Instituto Argentino de Oceanografía). These techniques are highly adequate to complement my skills

in phytoplankton counting and identification and match perfectly with the research topic of my PhD thesis.

3) Please provide your comments on the Fellowship Programme.

Participating in this training fellowship has been a meaningful experience in several aspects of my professional career and personal development. This program is highly recommended as it provides an opportunity to strength capacities in ocean observational systems for young scientists and promote further international collaborations. In particular, I achieved a better understanding of the state-of-the-art techniques to study plankton dynamics. Also I feel now more confident in working on-board and planning a successful field sampling. I would like to thank to the POGO stuff for their assistance along this experience. Lastly, I am very grateful to my host supervisors and colleagues from the IEO for the great working environment, and to my parent supervisors at Argentina for their support.

PRINT NAME

Carola Ferronato

Date: 12/5/2022

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.

In this period of personal work, I emphasize Carola's high skills, as well as her great effort, motivation and interest in work. Carola has been able to plan and organize her tasks related to the training on board. During this time, she has also carried out analysis of plankton samples in our laboratory. She has also done a remarkable intellectual work with preliminary analysis of the data produced.

To date, she has shown a high level of performance and scientific skills, as well as being perfectly integrated into the Research Team of Planktonic Ecology and Biogeochemistry (EPB) group. Our laboratory has benefited greatly from her stay at IEO-A Coruña. I look forward to keeping in contact and perhaps working with Carola in the future.

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.

Carola applied her knowledge learned in the use of Flow Cytometry and Flow Cam-Ecotaxa to several areas at Instituto Argentino de Oceanografía (IADO). These techniques are highly adequate to complement her skills in pico- and microplankton determinations of abundance and taxonomic identification, which match perfectly with the research topic of her PhD thesis (“Distribution of phytoplankton in the northern shelf of the Argentine Sea in relation to hydroclimatic forcing”). We have also discussed with her some ideas that will help her to organize future publications she has going on in the framework of her PhD. I would happily look to other opportunities (e.g. postdoc fellowships) to continue to work with Carola on the plankton ecology topic.

3) Please provide your comments on the Fellowship Programme.

The fellowship work very well and it has been an unique research experience for her. This training gave Carola the chance to put into practice different methods of capture and analysis of planktonic and biogeochemistry samples that will serve her to complement her training in marine research. We highly appreciated having an extra pair of hands on –board the ship, but also Carola supported us new ideas.

PRINT NAME

Marta M. Varela, Investigador Científico de OPIs and M^a Ángeles Louro Pico, Técnico I+D+I.
Centro Oceanográfico de A Coruña. CN IEO-CSIC.

Date: 13-05-2022

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?

PRINT NAME

Valeria Guinder

Date: 14/05/2022

I agree with the above comments about the successful training of my PhD student Carola Ferronato during her stay at IEO. During her three months internship, we have been in close interaction and I am glad to see her enthusiasm and commitment with her scientific training. This experience has been very enriching for her career in biological oceanography, both in the professional and in the personal aspects. I am thankful to POGO and to the IEO staff for this opportunity for Carola -and other PhD students- from developing countries to learn state-of-the art techniques in marine science. In particular, she has gained experience in field sampling and in lab work for plankton study, using the most sophisticated techniques guided by specialists at IEO. I have no doubts that this POGO training has made a valuable contribution for her scientific skills and her doctorate at IADO on phytoplankton ecology.