



Vlaams Instituut voor de Zee vzw  
Flanders Marine Institute

# VACANCY

## Researcher molecular traits in plankton ecosystem functions and processes

### SITUATION

For 20 years, the Flanders Marine Institute (VLIZ) has been strengthening the accumulation of marine knowledge and the excellence of marine scientific research in Flanders. VLIZ is a coordination and information platform, a focal point for marine and coastal research, which also serves as an international contact point for marine science. Important activities are national and international networking, information and data management, scientific communication for policy and industry, education and the general public, and logistical support of marine research. Since 2017, the institute also initiates, promotes and executes innovative and multidisciplinary marine research, and this at the service of, in collaboration with or complementary to Flemish and international marine research groups.

To strengthen its research capacity, VLIZ is hiring 14 new colleagues in its Research Department. Join our multidisciplinary team in Oostende at the Belgian coast and be part of a new wave of marine research in Flanders. You will work in a unique institute in which your science will be supported by state-of-the-art data systems and services, research infrastructure, science communication and an extensive marine library. Moreover, VLIZ is part of a wide network of Belgian and international marine research groups, offering many opportunities for scientific collaboration.

In addition to these open positions, VLIZ sets up a recruitment reserve for potential temporary jobs. Opportunities may arise for the following profiles: ecological modeler, environmental data analyst/modeler with experience in R, marine biologist/taxonomist, molecular ecologist, marine geologist. Candidates with such a profile are encouraged to make a spontaneous application.

*For each function, VLIZ considers enthusiastic involvement, open servitude, excellent professionalism and integrity as important characteristics.*

### RESEARCHER MOLECULAR TRAITS IN PLANKTON ECOSYSTEM FUNCTIONS AND PROCESSES

Natural ecosystems are often too complex to study them under controlled laboratory conditions. Organisms interact with their environment in multifaceted ways. Our understanding of how species traits, species interactions and evolution of individual species contribute to ecosystem functions is therefore still very fragmentary. Nevertheless, we urgently need better insights in the functioning of ecosystems to predict how they will change under anthropogenic pressures such as global warming or ocean acidification.

In this research line, VLIZ aims to unravel important processes in natural plankton communities such as ecosystem functions, and mutualist and antagonistic interactions among different species using an ecosystems biology approach. Specifically, VLIZ wants to use high throughput sequencing to describe the composition (metagenomics) and functions (meta-transcriptomics) of plankton communities. This information will be used to model relevant ecosystem processes such as biogeochemical cycling. VLIZ is furthermore interested to investigate how such processes will alter under various scenarios of global change.

The study area is primarily the southern North Sea, where field surveys can readily be conducted to cover seasonal and spatial dynamics of plankton communities. Next to the regional focus, we will encourage collaboration in international consortia to work on global datasets. Within this context, VLIZ wants to address the following research questions:

- 1) How are plankton communities composed and which factors define their spatial and temporal dynamics?
- 2) Which key species and key traits can we identify using gene expression profiles?
- 3) How can we use meta-transcriptomics data in ecosystem models (e.g. to investigate biogeochemical processes)?
- 4) Can we use these models to predict the effect of anthropogenic change (e.g. global warming or ocean acidification)?

This project will be organised in collaboration with one or more Flemish university research groups. There will be a focus on high throughput sequencing and bioinformatics analysis. Mathematical modelling in a systems biology context will form another core of this research project.

*To develop this project, VLIZ hires a researcher in its Research Department. This research will be performed in close collaboration with a post-doctoral researcher working on the same research line.*

## MAIN RESPONSIBILITIES

- To plan and perform a research project on the use of meta-transcriptomics data to unravel ecosystem functions of diverse plankton communities. This involves the planning and performance of sampling campaigns, sample and data processing, data analysis, and modelling;
- To take initiative to discuss planning and report progress to the head of the research unit and collaborating scientists;
- To write high quality research manuscripts for submitting to peer-reviewed scientific journals;
- To supervise BSc and MSc students for job student, internship or thesis work;
- To interact and collaborate with colleagues at VLIZ to increase interdisciplinarity in various research projects;
- To possibly contribute to aspects of research and innovation projects in collaboration with partners from the Blue Economy;
- To present research at national and international conferences;
- To network at national and international level with other (marine) scientists;
- To contribute to events organized by the Department or the Institute, such as the VLIZ Marine Science Day.

## PROFILE

- MSc in Exact or Applied Sciences, including biology, bioinformatics and (bioscience) engineering, with a keen interest in molecular ecology and systems biology;
- Experience with handling DNA and RNA and experience with bioinformatics are a plus;
- Experience with mathematical modelling is a plus;
- Critical and creative;
- Scientifically integer;
- Open minded and taking initiative;
- Passionate scientist, keen to learn new skills and develop excellent research;
- Strong interpersonal skills, a motivated team player;
- Willing to work in an international context;
- Good oral and written English communication skills;
- Academic writing skills are a plus;
- Knowledge of statistics;
- Knowledge of marine ecology, microbiology and interpretation of gene-expression data is a plus.

## ADDITIONAL INFORMATION

For more information concerning this vacancy, please contact:

- Pascal Hablützel, head of the research unit Nature Changes & Solutions
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- Michiel Vandegehuchte, Research Director VLIZ
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## OUR OFFER

- We offer a challenging job in the dynamic environment of VLIZ
- A contract of two years as researcher, which will be followed by a new two-year contract in case of a positive evaluation. The salary follows the salary scales of scientific personnel in the Flemish Government. Through collaboration with academic research groups, the research may lead to a PhD at a Flemish University.
- Fringe benefits: holiday pay, end-of-year bonus, meal vouchers, hospitalization insurance, bike allowance, free public transport for home-work commuting and an attractive holiday arrangement.

## DOES THIS VACANCY APPEAL TO YOU?

Send in your cover letter and CV until May 15<sup>th</sup> 2019 (23:00 CEST):

- By post: Jan Mees, General director VLIZ, InnovOcean site, Wandelaarkaai 7, 8400 Oostende
- By mail: [jobs@vliz.be](mailto:jobs@vliz.be) with subject "13 NCS - Vacancy Molecular Traits"



Contact us by telephone on +32 (0)59 34 21 30.

*VLIZ promotes equality and diversity in the workplace. You will be recruited based on competencies. Qualities of people are decisive, regardless of gender, religion, ethnic origin, age, sexual orientation or any disability.*

## PROCEDURE

Based on the received motivation letters and CVs, a select group of candidates will be invited for a job interview. You will be informed by email. The job interviews take place in the offices of VLIZ.

Employment can start immediately after the selection procedure and ideally not later than 1<sup>st</sup> October 2019.

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