



# Three PhD fellowships on the Biological Production and Consumption of Volatile Compounds

Center for Volatile Interactions, Department of Biology  
Faculty of SCIENCE

University of Copenhagen

Three fully financed 3-year PhD positions on the biological production and consumption of volatile compounds are offered at the Department of Biology, University of Copenhagen, Denmark. The positions will be based at the newly established Center of Excellence ("*Center for Volatile Interactions*") funded by the Danish National Research Foundation.

Start date is April 1, 2023 or as soon as possible thereafter.

## The Center for Volatile Interactions (VOLT)

Biogenic volatile organic compounds (VOCs) have a profound impact on local and regional climates. Yet, there is high uncertainty of this impact due to the lack of reliable estimates for natural emissions and uptake of these reactive volatiles. All organisms produce, and some consume, mixtures of diverse volatile compounds such as VOCs, reactive nitrogen gases (e.g., HONO), and sulfur/halogenated compounds (e.g., DMS and methylhalides). However, biological sources and sinks of volatiles, other than terrestrial plants, remain poorly characterized. In VOLT, we focus on VOC transformations associated with soil, cryptogams, freshwater, seawater, and glacial ice environments, as well as plant leaf and rhizosphere microbial communities. The work will encompass field, experimental, and laboratory work and include rate measurements, experiments with stable isotopes, and molecular analyses to assess volatile production/consumption processes and identify the organisms involved.

## Who are we looking for?

The three PhD students focus each on one environment/organism, i.e. the Position 1 could focus for example on soils, Position 2 on cryptogams and Position 3 on seawater. We are looking for enthusiastic and ambitious candidates with a MSc degree in biology (e.g., ecology, microbiology, molecular biology), environmental science, chemistry or similar fields obtained by the application deadline. Experience with gas measurements and analyses,

microbial ecology, stable isotope labeling, multivariate statistics, and/or molecular biology is an asset. Fluency in written and spoken English is required. The main criterion for selection will be the research potential of the applicant; i.e. scientific publications will be a strong asset.

### **Our group and research - and what do we offer?**

The successful candidates become an integrated part of the *Center for Volatile Interactions*. We offer creative and stimulating working conditions in a dynamic, collaborative, and international research environment. The Center is housed in Universitetsparken, Copenhagen, where we have laboratory facilities and state-of-the-art instrumentation for analyses of volatile compounds, molecular analyses of microbial community structure and activity, as well as incubation and climate chamber facilities. Marine Biological Section, located in Elsinore, provides state-of-the-art facilities for molecular and process based studies of marine microorganisms.

**Supervisory team** depends on the specific position, and includes Prof. Anders Priemé (Section of Microbiology, E-mail [aprieme@bio.ku.dk](mailto:aprieme@bio.ku.dk)), Assoc. Prof. Kathrin Rousk (Terrestrial Ecology Section, E-mail [kathrin.rousik@bio.ku.dk](mailto:kathrin.rousik@bio.ku.dk)), Prof. Lasse Riemann (Marine Biological Section, E-mail [lriemann@bio.ku.dk](mailto:lriemann@bio.ku.dk)), and Prof. Riikka Rinnan (Terrestrial Ecology Section, E-mail [riikkar@bio.ku.dk](mailto:riikkar@bio.ku.dk)). In addition, the candidates will be able to collaborate within VOLT and with center's international collaborators.

### **The PhD programme**

#### **Qualifications needed**

To be eligible for the regular PhD programme, you must have completed a degree programme, equivalent to a Danish master's degree (180 ECTS/3 FTE BSc + 120 ECTS/2 FTE MSc) related to the subject area of the project. For information of eligibility of completed programmes, see [General assessments for specific countries](#) and [Assessment database](#).

#### **Terms of employment**

Employment as PhD fellow is full time and for maximum 3 years.

Employment is conditional upon your successful enrolment as a PhD student at the PhD School at the Faculty of SCIENCE, University of Copenhagen. This requires submission and acceptance of an application for the specific project formulated by the applicant.

Terms of appointment and payment accord to the agreement between the Danish Ministry of Taxation and The Danish Confederation of Professional Associations on Academics in the State. The position is covered by the Protocol on Job Structure.

#### **Responsibilities in the PhD programme**

- Carry through an independent research project under supervision
- Complete PhD courses corresponding to approx. 30 ECTS / ½ FTE
- Participate in active research environments, including a stay at another research institution, preferably abroad
- Teaching and knowledge dissemination activities
- Write scientific papers aimed at high-impact journals
- Write and defend a PhD thesis on the basis of your project

## **We are looking for the following qualifications:**

- Professional qualifications relevant to the PhD project
- Relevant publications
- Relevant experience and skills
- Other relevant professional activities
- Curious mind-set with a strong interest in biosphere-atmosphere interactions and the ecology of the relevant organisms
- Good language and communication skills

## **Application and Assessment Procedure**

Your application including all attachments must be in English and submitted electronically by clicking APPLY NOW below.

### **Please include:**

1. Motivated letter of application (max. one page)
2. Brief outline for the specific PhD project you are interested in, including research questions and suggestion for methods (max. 1 page)
3. Curriculum vitae including information about your education, experience, language skills and other skills relevant for the position (max. 2 pages)
4. Original diplomas for Bachelor of Science or Master of Science and transcript of records in the original language, including an authorized English translation if issued in another language than English or Danish. If not completed, a certified/signed copy of a recent transcript of records or a written statement from the institution or supervisor is accepted.
5. Publication list (if possible)
6. Contact details of two persons for references

### **Application deadline:**

The deadline for applications is 5 February 2023, 23:59 GMT +1.

We reserve the right not to consider material received after the deadline, and not to consider applications that do not live up to the abovementioned requirements.

### **The further process**

After deadline, a number of applicants will be selected for academic assessment by an unbiased expert committee. You are notified, whether you will be passed for assessment.

The assessor will assess the qualifications and experience of the shortlisted applicants with respect to the above mentioned research area, techniques, skills and other requirements. The assessor will conclude whether each applicant is qualified. The assessed applicants will have the opportunity to comment on their assessment. You can read about the recruitment process at <https://employment.ku.dk/faculty/recruitment-process/>.

Interviews with selected candidates are expected to be held in March 2023.

### **Questions**

For specific information about the PhD fellowships, please contact the center director Riikka Rinnan or one of the other supervisors.

General information about PhD study at the Faculty of SCIENCE is available at the PhD School's website: <https://www.science.ku.dk/phd/>.

The University of Copenhagen wishes to reflect the surrounding community and invites all regardless of personal background to apply for the position.

## SØG STILLINGEN

*Københavns Universitet giver sine knap 10.000 medarbejdere muligheder for at udnytte deres talent fuldt ud i et ambitiøst, uformelt miljø. Vi sikrer traditionsrige og moderne rammer om uddannelser og fri forskning på højt internationalt niveau. Vi søger svar og løsninger på fælles problemer og gør ny viden tilgængelig og nyttig for andre.*

### Info

**Ansøgningsfrist:** 05-02-2023

**Ansættelsesdato:** 01-04-2023

**Arbejdstid:** Fuldtid

**Afdeling/Sted:** Department of Biology