



# NIBIO

NORWEGIAN INSTITUTE OF  
BIOECONOMY RESEARCH

NIBIO's activities lie within agriculture, food, climate and the environment. The Institute conducts research and management support, and provides knowledge for use in national preparedness, governmental and district management, industry, and the society at large.

## PhD position in microalgae technology/beer brewing

This is a full-time 3-year position within microalgae technology and beer brewing. The position is part of the project ALGAE TO FUTURE. The applicants will be linked to Norwegian University of Life Sciences (NMBU) Faculty of Chemistry, Biotechnology and Food Science (KBM), and has to be qualified to the PhD program at KBM NMBU. See regulations [https://www.nmbu.no/en/research/phd/regulations\\_guidelines](https://www.nmbu.no/en/research/phd/regulations_guidelines) and required qualification [https://www.nmbu.no/en/research/phd/application\\_admission](https://www.nmbu.no/en/research/phd/application_admission). The PhD work will be supervised by researchers from NIBIO, NMBU and the consortium partner University of Wageningen, the Netherlands. The place of employment will be NIBIO, Department for Bioresources and Recycling Technologies at Ås.

### Job description

The project will develop three microalgal value chains demonstrating the potential of various uses of algal biomass rich in respectively starch, protein and polyunsaturated fatty acids, and the main topic for the current PhD task is production of microalgae for use in fermented beverage production. The specific challenges include the development of a cultivation process for selected food grade approved species of microalgae, where production of microalgae biomass with a product specific biochemical composition is essential. This includes biomass components with functionality resembling malt for beer production, such as high starch content combined with starch degrading enzymes. The algae biomass will be used in an ordinary or modified brewing process. Processing conditions will be monitored and product properties, such as aromatic profile, chemical composition and storage stability of the product will be evaluated.

### Qualifications

- | Master within algae technology, microbiology or biotechnology is required
- | Experience with microalgae cultivation is required, preferably including use of photobioreactors in lab scale
- | Experience within molecular biology and upscaling of algae production, will be considered advantageous
- | Fluency in written and oral English is required
- | Written and oral knowledge in the Norwegian or another Scandinavian language is advantageous

### Personal characteristics

- | Practical and analytical problem solving skills
- | Capacity to take initiative and to administer own progress with creativity and accuracy
- | Ability to work independently and in cooperation with others in a cross disciplinary environment
- | Enthusiasm for the scientific topic described above
- | Good relation- and communication skills

### Salary and benefits

- | The position is remunerated according to the Norwegian State Salary Scale in code 1017, salary grade 50-57 (NOK 436 900 - 490.900 per year) commensurate with qualifications and experience.
- | Membership in the Norwegian Public Service Pension Fund, which includes a good occupational pension scheme, occupational injury and group life insurance, and low-interest home loans.
- | We offer work in an exciting academic environment and opportunities for professional development.

### Contact persons

Research Manager/Department Head Trine Eggen, tel +47 909 97 074 or Department Head Stig Borgvang, tel +47 458 67 258.

### Please send your application with CV electronically via the link on this page.

Please submit diplomas and letters of recommendation as an attachment along with the electronic application/CV.

If you need assistance, filling in your application or CV on the website or general questions regarding the system, you can contact Jobbnorge at [kundeservice@jobbnorge.no](mailto:kundeservice@jobbnorge.no) or call +47 75 54 22 20.

### General information

- | In accordance with the Norwegian Civil Service equal opportunities policy, qualified candidates are encouraged to apply - regardless of age, gender, functional disabilities or national or ethnic background.
- | We would like to point out that information about applicants may be subject to public disclosure, in accordance with the Freedom of Information Act (*Offentlighetsloven*), Section 25. An applicant can request to be exempted from inclusion on a public list of applicants. If the request for confidentiality is denied, the applicant will be notified thereof.

#### **Information about the ALGAE TO FUTURE project**

The project is funded by Research Council Norway, and will run from 2017-2021. The project consortium consists of 21 partners from six countries, representing Universities, Research Institutes and Industry partners. The project aims at demonstrating the potential of use of microalgae for development of novel food and feed, produced in a sustainable and environmentally friendly way.

#### **About NIBIO**

*The Norwegian Institute of Bioeconomy Research (NIBIO) is one of Norway's largest research institutes. NIBIO has approximately 700 employees present in all parts of the country. Its main office is located at Ås in Akershus. NIBIO is owned by the Ministry of Agriculture and Food.*

*The **Division for Environment and Natural Resources** conducts research and commissioned work to better understand, exploit and sustain the environment and our natural resources. The Division work through integrated approaches to research questions related to soil, forestry and water, run-off from agricultural and forestry land, water quality and the management of land and water resources, land use, nature based cleansing solutions and other environmental measures, green environment and revegetation, biodegradable waste management and bioenergy. The Division has been successful in acquiring competitive grants and projects; and its employees collaborate actively both nationally and internationally.*

*The **Department for Bioresources and Recycling Technologies** conducts research, development and advisory assignments related to improving resource exploitation of organic waste and other bio-resources, as well as develop possibilities for exploiting micro-algae in producing bio-energy and other materials for the feed and food industry, based on micro- and molecularly based technologies/methods. We participate in a wide range of national and international projects including consortia where we coordinate actions funded by the Research Council of Norway, the Nordic Council of Ministers and EU's H2020 program.*

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