Meet the researchers at BIO-UCPH

October 30 2017

Department of Biology
BIO-UCPH at a glance

- The Department of Biology is part of the Faculty of Science
- > 475 employees - ~ 90 faculty, 85 post-docs/research assistants, 160 PhD-students, 140 technical staff
- Annual turnover of ~ 45 mio. EUR
BIO-UCPH

Wide spectrum of disciplines within the biological sciences

Aquatic biology
Behavioral biology
Biodiversity
Bioinformatics
Biochemistry
Biology
Biotechnology
Botany
Cancer research
Cell biology
Conservation biology
Ecology
Endocrinology
Evolutionary biology
Genome research
Genetics
Microbiology
Molecular biology
Molecular biomedicine
Molecular neurobiology
Physiology and genetics
Protein chemistry
Plant physiology
Population biology
Zoology
Education at BSc, MSc and PhD levels

Four study programmes (∼ 2000 students):

- Biochemistry – BSc & MSc (115)*
- Biology – BSc & MSc (219)*
- Molecular Biomedicine – BSc & MSc (57)*
- Bioinformatics – MSc (50)**

Annual production of ca. 300 BSc, 220 MSc og 50 PhD’s

*Numbers in parentheses are BSc uptake numbers in 2017 - ** MSc uptake
August Krogh (1874 – 1949)
Nobel Laureate 1920

Ole Maaløe (1914 – 1988)
“The Copenhagen school”
Scientific output

Publications

IF > 20

Nature Medicine
Nature Biotechnology
Cell Stem Cell
Annual Review of Plant Biology
Nature Nanotechnology
Science
Cell
Nature Genetics
Nature
Nature Reviews Genetics
International/National ranking

- **KU (University of Copenhagen)**: 36 (201 - 250)
- **AU**: 88 (101 - 150)
- **DTU**: 109 (151 - 200)
- **SDU**: 161 (201 - 250)

Other Danish universities include the University of Copenhagen.
BIO-UCPH – Industry collaboration

<table>
<thead>
<tr>
<th>Region</th>
<th>Sum</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DK</td>
<td>93</td>
<td>16,7</td>
</tr>
<tr>
<td>EU</td>
<td>147</td>
<td>26,3</td>
</tr>
<tr>
<td>EU (-DK)</td>
<td>54</td>
<td>9,7</td>
</tr>
<tr>
<td>Austral-Asia</td>
<td>220</td>
<td>39,4</td>
</tr>
<tr>
<td>Rest of World</td>
<td>2</td>
<td>0,4</td>
</tr>
<tr>
<td>Total</td>
<td>558</td>
<td>100</td>
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</tbody>
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http://www1.bio.ku.dk/collaboration/
BIO-UCPH – Expert knowledge and technology

BIO-UCPH is the internationally leading Department of Biology at the University of Copenhagen. The field of biological sciences at the University is positioned among the top 2 to 9 best performing European academic institutions, depending on the ranking system applied. Discipline-specific impact analysis confirms BIO-UCPH’s research as leading across disciplines from molecules to ecology. More info

BIO-UCPH is committed to collaboration with external partners and is internationally oriented. From 2010-2015, the Department has had more than 248 collaborative interactions with companies resulting in 178 joint publications. More info

In addition, there has been numerous public sector interactions with universities, hospitals, public institutions such as ministries, as well as NGOs. Around 75% of all BIOs publications include
Search for researchers and keywords

microbiology

Submit

A search in BIO-UCPHs database returns

<table>
<thead>
<tr>
<th>Researcher:</th>
<th>Contact data for researchers with names or keywords matching the search terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCPH home page:</td>
<td>A link to UCPHs official researcher homepage incl. publications for each researcher identified</td>
</tr>
<tr>
<td>ORCHID:</td>
<td>A link to the ORCHID profile of each researcher identified</td>
</tr>
<tr>
<td>Google Scholar:</td>
<td>A link to a customized Google Scholar search returning publications matching both a) researcher names from BIO-UCPHs database AND b) keywords identified from full text publication searches by Google Scholar</td>
</tr>
<tr>
<td>Keyword matches:</td>
<td>Keyword overview of researcher focus and research industry relevance for researchers with keywords matching search terms</td>
</tr>
</tbody>
</table>

http://www1.bio.ku.dk/collaboration/search-for-researcher/
<table>
<thead>
<tr>
<th>RESEARCHER</th>
<th>RESEARCHER INFO</th>
<th>RESEARCH KEYWORDS</th>
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<tbody>
<tr>
<td>ANDERS PRIEMÉ</td>
<td>UCPH home page</td>
<td>STRENGTHS AND METHODS: Microbial ecology - Soil nitrogen cycling - Soil microbial community structure analyses - Greenhouse gas emissions from soil</td>
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<tr>
<td></td>
<td>ORCID</td>
<td>FOCUS: Micr ial ecology - Permafrost microbiology - Microbial activity at low temperatures - Microbial activity and global change</td>
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<tr>
<td></td>
<td>Google Scholar</td>
<td>INDUSTRY POTENTIAL: Cold-active bio-molecules - Soil health monitoring and improvement - Plant growth improvement</td>
</tr>
<tr>
<td>MICHAEL THOMAS-POULSEN</td>
<td>UCPH home page</td>
<td>STRENGTHS AND METHODS: Host-symbiont evolution - Gut microbiology and molecular biology - Defensive symbiosis - Amplicon sequencing / genomics / metagenomics - Evolutionary medicine</td>
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<td>ORCID</td>
<td>FOCUS: Insect gut microb otas - Bacteria-derived antimicrobials - Assembly and stability of gut microb otas - Symbiotic plant biomass degradation</td>
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<td>Google Scholar</td>
<td>INDUSTRY POTENTIAL: Enzyme discovery - Antibiotics discovery - Microbiomes</td>
</tr>
<tr>
<td>NIELS-ULRIK FRIGAARD</td>
<td>UCPH home page</td>
<td>STRENGTHS AND METHODS: Photosynthetic microbes - Microbial metabolism (sulfur, carbon) - Microbial genetics - Anaerobic microbiology</td>
</tr>
<tr>
<td></td>
<td>Personal home page</td>
<td>FOCUS: E co physiology of cyanobacteri a and anaerobic phototrophic bacteria - Applications of microalgae and cyanobacteri a with respect to pigments, nutrients, and valuable metabolites including biofuels and heterologous bioproducts - Cultivation of microalgae, cyan</td>
</tr>
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<td></td>
<td>ORCID</td>
<td>INDUSTRY POTENTIAL:</td>
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Core infrastructure facilities

Center for Advanced Bioimaging (CAB)

The Center for Advanced Bioimaging (CAB) Denmark was funded by the programme for National Research Infrastructure, based on a proposal which gathered more than 50 research groups, mostly from University of Copenhagen, but also from DTU, AU, and SDU, around two main topics: the interaction between the cell and its microenvironment, comprising nutrients, ions and biomolecules, neighbouring cells, and symbiotic or pathogenic organisms, and genome dynamics including DNA replication and repair, cell cycle control, chromatin structure and transcription, which ultimately controls intracellular signalling and developmental processes. [Link to homepage]

Biocomputing Core Facility

Adding bioinformatics insights to wet-lab studies can significantly improve their impact, but few labs have the available funding to hire a full time bioinformatician. To address this need the department has established the biocomputing core facility, where the department's wet-lab researchers can go with jobs that require bioinformatics expertise. [Link to homepage]

http://www1.bio.ku.dk/forskning/core-facilities/
Access facilities in ISBUC

Modern structural biology often involves integration of data from multiple advanced experimental techniques. The laboratories involved in ISBUC host a number of advanced instruments that are accessible to academic users on a collaborative or fee-for-use basis. Find a list of the accessible instruments below along with terms of use and contacts.

- Center for Advanced Bioimaging (CAB) Denmark
- Centre for Medical Parasitology (CMP), University of Copenhagen
- Core Facility for Integrated Microscopy - CFIM
- CPR biophysics platform
- CPR Protein Crystallization Platform
- GPCRdb - GPCR X-ray construct design tool
- Molecular modelling & chemical design
- NMR-facility at Food Science
- Structural and Biological NMR Laboratory (SBiNLab)

http://isbuc.ku.dk/facilities/
That's all folks!