BIOCITY TURKU
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UNIVERSITY OF TURKU

Åbo Akademi

BioCity Turku

ACADEMIC EXCELLENCE IN LIFE SCIENCE AND MEDICINE

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Dear reader,

It is my pleasure to introduce you to BioCity Turku, an organization promoting and coordinating research in the fields of life sciences and molecular medicine in Turku. As an umbrella organization, we are proud to facilitate the integration of science at both of the city's universities, the University of Turku and Åbo Akademi University.

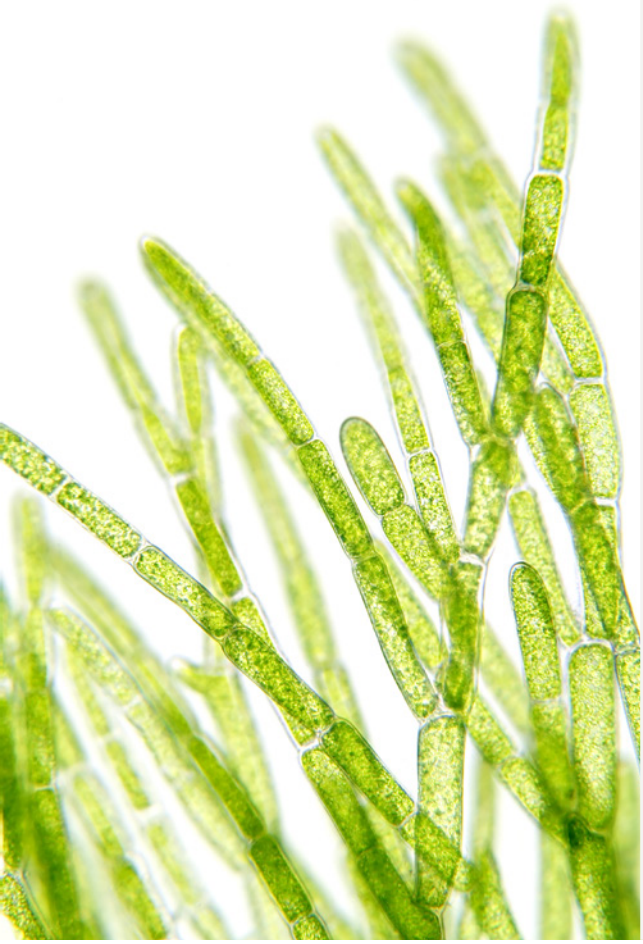
At BioCity Turku, we are committed to advancing bioscience research at both national and regional levels. In the Turku region, we have a unique opportunity to foster networking and collaboration, not only within and between the two universities, but also between the universities and the Turku University Central Hospital and a thriving local business community. As a founder member organization of Biocenter Finland, we are also part of a larger national network dedicated to the advancement of biosciences.

Our main objectives are to provide a channel for inter-disciplinary collaboration between scientists, to serve as a local advocate for life sciences, and to facilitate the optimal use of resources, such as research infrastructure. Currently, we coordinate research performed by over 1000 researchers and graduate students in more than 140 research groups.

We look forward to collaborating with you in the future!

Sincerely,

Scientific Director of BioCity Turku
Klaus Elenius
MD, Professor of Medical Biochemistry



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BioCity Turku – Optimal platform for interdisciplinary collaboration

BioCity Turku is a joint organization of the University of Turku and Åbo Akademi University, supporting and coordinating bioscience research in the Turku region.

The two universities share one campus area in a historical location of the city of Turku (est. 1229). BioCity Turku is operating on the same campus area where Elias Tillandz initiated empirical life science in Finland. Today the scientific research in BioCity Turku follows the same avenue. The same campus additionally houses the Turku University Central Hospital (TYKS).

Research groups working in these organizations are also active members in the BioCity Turku research programs. Programs strengthen the multidisciplinary and interdisciplinary research collaboration within the Turku campus. BioCity Turku research programs consist of several active research groups representing different research units, faculties, hospitals and universities.

The existence of one compact, multidisciplinary campus area is the major strength of science in Turku and, in this magnitude, is also unique in Finland. The geographical structure of our campus presents us with an optimal platform for inter-disciplinary collaboration and to facilitate the integration of science.

BIOCITY TURKU ACTIVITIES

Frontiers of Science

We arrange every semester Frontiers of Science seminars, which brings our researchers together to listen to prominent international scientists.

BioCity Symposium

Annual BioCity Symposium, a series of meetings organized since 1991, has become the most important get-together in the fields of biosciences and molecular medicine in Turku. The symposium gathers together hundreds of participants each year and offers talks from top-level international researchers.

› Read more: **biocityturku.fi/biocityturkuevents**

Elias Tillandz publication prize

The best publication prize of BioCity Turku has been named after Professor Elias Tillandz who was the first empirical life scientist in Turku. His life's work was a combination of medicine and biology, and his research also aimed at new innovations in the treatment of human diseases.

Elias Tillandz has been considered to be the "father of botany" in Finland because he published in 1673 the first botanical study, "Catalogus plantarum, tam in excultis, quam in cultis locis prope Aboam superiore aestate nasci observatarum", and also because he established the first academic botanical garden in Turku (1678). His book was the first academic publication written in Turku, being based on the scientist's own observations.

BIOCITY TURKU RESEARCH PROGRAMS

BioMed

Biomaterials and Medical Devices Research Program

The BioMed research program supports the basic and applied research efforts under the umbrella of biomaterials and medical devices. The goal of the BioMed program is to promote collaboration of research groups in University of Turku and Åbo Akademi University on research and education of biomaterials and medical device fields and to raise the excellence of its scientific quality. The BioMed program aims to provide a strong interactive platform to assist the researchers and students to collaborate and be exposed to broader scientific, industrial and technological communities.

› **Read more:** **biomaterials.utu.fi**

CellCom

Cell Communication Research Program

The Cell Communication research program gathers researchers and clinicians from University of Turku, Åbo Akademi University, and Turku University Central Hospital with common interest in cellular signaling and communication ranging from basic mechanisms to clinical translation. The program members support each other in gaining and maintaining scientific excellence and in translating their results for the benefit of both patients and the society in large.

› **Read more:** **biocityturku.fi/cellcom**

CompLifeSci

Computational and Molecular Methodologies for Life Sciences

The CompLifeSci research program advances research on life science methodology. The program supports networking and training within the local research community as well as industry collaborations in Turku region and thrives to facilitate timely adoption and dissemination of state-of-the art methods in the rapidly evolving life sciences.

Contact us: complifesci-coordinator@utu.fi

› **Read more: biocityturku.fi/complifesci**

Field of View

Turku Biological and Medical Imaging Research Program

Field of View is a BioCity Turku research program focusing on imaging and how it can be applied in meaningful biological and medical discoveries. Field of View brings together imaging applications, methodology and analysis expertise and facilitates multi-disciplinary collaboration across different application areas and approaches within the Turku campus.

› **Read more: bioimaging.fi/field-of-view**

BIOCITY TURKU RESEARCH PROGRAMS

MIRP

Microbes and Immunity Research Program

MIRP is a highly multidisciplinary, translational and collaborative research program targeting the major areas of microbiology, infection immunity, and infectious diseases. MIRP includes researchers working on basic science related themes, on clinical aspects of infectious diseases, and on topics where basic science observations are translated into clinically useful practices. MIRP is likely to contribute to better knowledge of microbes and diseases caused by them, understanding of disease mechanisms in infectious diseases, and to improvement of patient care and diagnostics of infectious diseases.

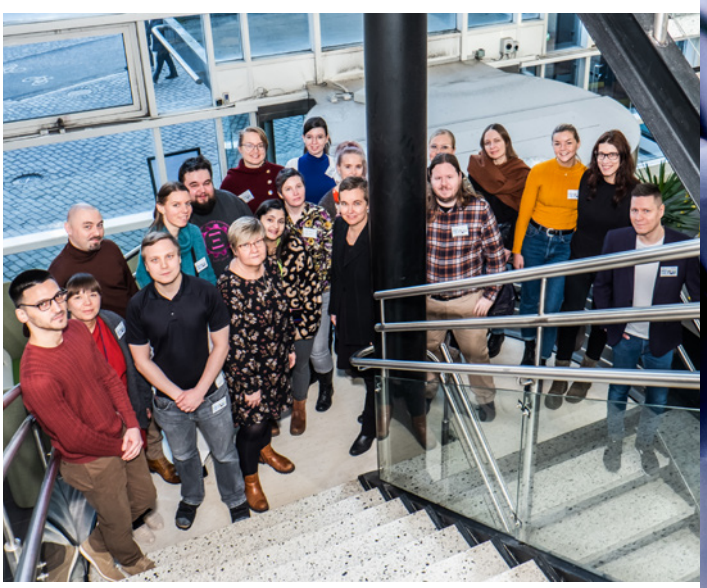
› Read more: biocityturku.fi/mirp

MIST

The Multiverse of Immune System

The MIST research program consists of groups who are leveraging omics technologies and computational approaches to study different aspects of immune regulation. Our common goal is to achieve a more comprehensive understanding of how the immune system works in health and disease. With the MIST research program, we are advancing the next generation of multidisciplinary medical research.

› Read more: mist.utu.fi



SmartBIO

Advanced Bioresources and Smart Bioproducts

SmartBIO research program accelerates innovation in nature-inspired emerging technologies and sustainable circular bioeconomy strategies to support the transition towards a fossil-free society. SmartBIO consists of active, multidisciplinary research groups from both University of Turku and Åbo Akademi University who utilize the synergy emerging from combining basic research with applied science and engineering, as well as extensive cooperation with industry.

› Read more: smartbio.fi

TREMENDO

Etiology, Prevention and Treatment of Metabolic, Endocrine and Developmental Disorders

TREMENDO is a translational research program that combines preclinical molecular and mouse modeling with human cohort studies. Our aim is to understand the mechanisms and etiology of metabolic, endocrine and developmental disorders, and to develop better means for their treatment and prevention. The focus areas include diverse endocrine tissues, hormone-regulated diseases, obesity, metabolic and cardiovascular disorders, nutrition, and early development and growth.

› Read more: biocityturku.fi/tremendo

Turku Bioscience

Turku Bioscience (previously known as Turku Centre for Biotechnology) is an advanced core facility and research centre hosted jointly by University of Turku and Åbo Akademi University. BioCity Turku shares a common board with Turku Bioscience.

The Centre was established in 1992 to facilitate research infrastructure services and scientific interactions across departments and within the two universities. This concept has proved to be highly efficient especially in optimizing the coordinated acquisition of cutting-edge instruments and providing technology services by open access principles. The Centre offers services to both academic and commercially-oriented research projects.

Our aim is to provide complete packages of service expertise and know-how to provide both academic and corporate research groups the tools and means to shorten the runway from an initial discovery to the take-off of a success story. To this end, we aim to stay at the frontiers of new technologies and research and we are also actively facilitating interactions and joint projects between academia and industry.

We very much welcome you to contact or visit the Centre if you have a research problem or if you want to access specific technologies or infrastructure services. We are always open to new ideas and are excited to discuss research projects or new technologies that you think would be important for the community.

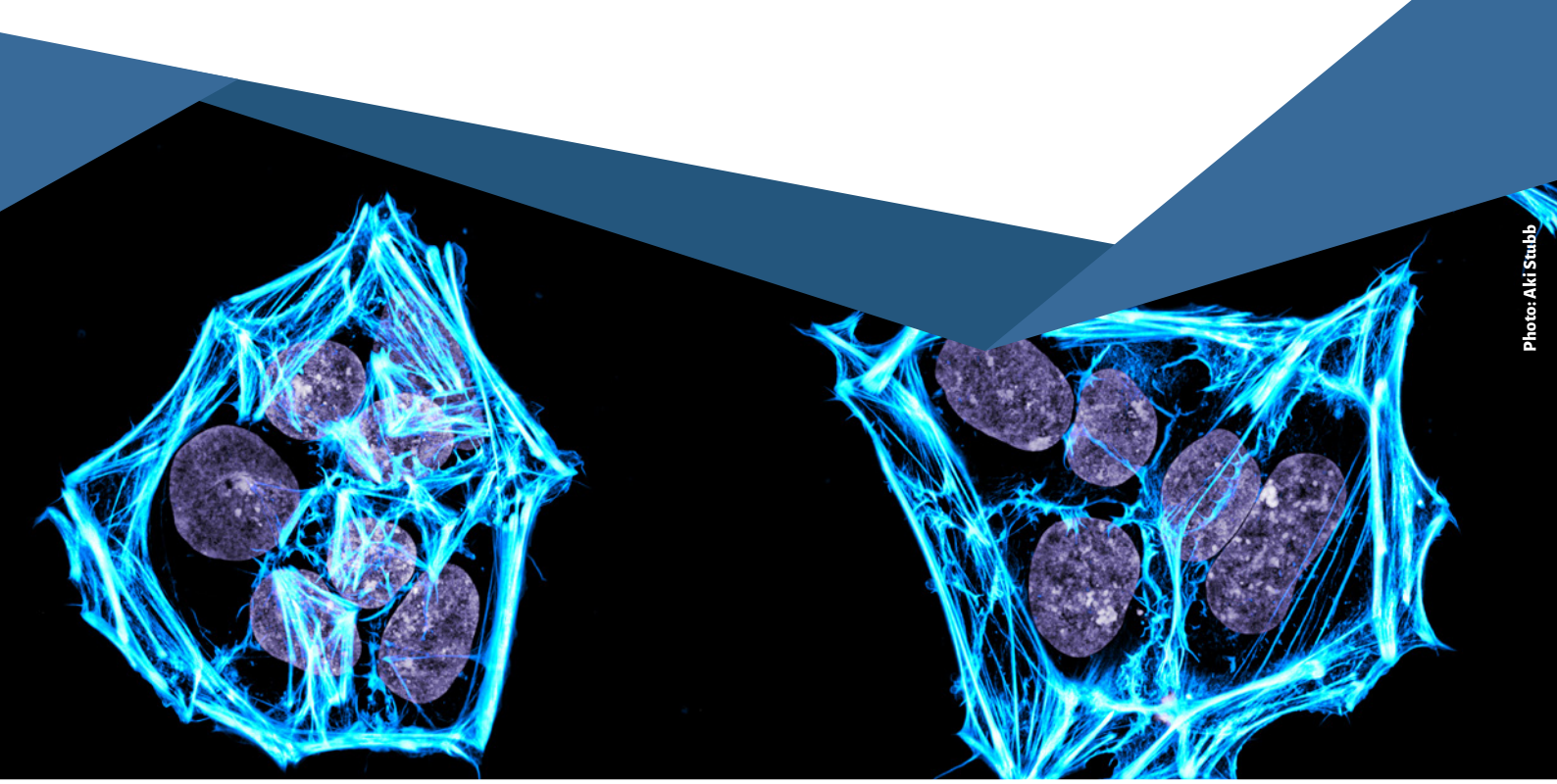
Stay tuned and stay in touch! We have the means to help you in your research and together we may be able to take your ideas to completely new horizons.

› Read more: bioscience.fi

WATCH
OUR VIDEO!

OUR THREE MAJOR FUNCTIONS ARE:

- to offer technology and research services
- to provide advanced training and education in technologies that relate to our core facilities
- to host leading basic research that relates to our key technology and infrastructure areas



Turku BioImaging

Turku BioImaging (TBI) is a multi-disciplinary science and infrastructure umbrella that develops bioimaging and unites imaging expertise in Turku and Finland. Imaging is one of the focal research methods for most of the BioCity Turku scientists, and Turku has world-class imaging facilities.

We manage Euro-BioImaging Finland, coordinate funding acquisition for imaging instrumentation and services, provide image data analysis as a service, and operate an international MSc program in imaging. We also develop new imaging solutions and academia-industry collaborations, and we lead the Field of View research program and work in Global BioImaging. TBI is jointly operated by the University of Turku and Åbo Akademi University. TBI-associated imaging facilities provide open access services ranging from molecular and cellular imaging and high content analysis to whole animal and human imaging. Owing to its leading role in developing imaging infrastructures, education, analysis and Nobel-winning microscopy technology, Turku could be called European capital of imaging.

› **Read more:** **bioimaging.fi**

Euro-BioImaging Finland

Euro-BioImaging Finland provides international open access to biological and biomedical imaging technologies for academic and industrial users.

› **Read more:** **eurobioimaging.fi**

We are the Finnish service organization of Euro-BioImaging, consisting of two multi-sited Nodes: Finnish Advanced Microscopy Node and Finnish Biomedical Imaging Node. We link the major imaging centers from six universities and three university hospitals in Finland into one organization, providing unique 3D service packages for scientists. We are among the most popular Nodes in Euro-BioImaging, and in Finland our services are used by most life scientists. We also organize and develop imaging training. Euro-BioImaging Finland is managed by Turku BioImaging. Euro-BioImaging ERIC headquarters are also located in Turku.

InFLAMES

InFLAMES Research Flagship is an innovation ecosystem based on the immune system.

InFLAMES is a joint effort of University of Turku, Åbo Akademi University and the associated ecosystems in Turku. Many BioCity Turku researchers are involved with InFLAMES Flagship, which is funded by Academy of Finland's Finnish Flagship Programme.

Normal immune defense system is vital for health. Overactivity of the immune system leads to the development of autoimmune diseases, such as arthritis, multiple sclerosis and juvenile diabetes. Too weak immune system responses on the other hand predispose us to cancer and severe bacterial and viral infections. We believe that the solution to serious diseases and conditions lies in immunology.

The study area of the InFLAMES Flagship is in the heart of both host organizations University of Turku and Åbo Akademi University. It includes joint and coordinated efforts of more than 300 researchers. We combine immunological and related research to develop and introduce new therapies and diagnostic tools for the treatment of diseases, tailoring treatments to each individual patient. Our aim is drug development together with biotech and pharmaceutical companies. At the same time, we promote cooperation between academia and industry, create new business opportunities and boost the commercialisation of inventions.

› **Read more: inflames.utu.fi**

KUVA Åbo Academy

Welcome to Campus!

UNIVERSITY OF TURKU

Åbo Akademi

University of Turku and Åbo Akademi University share one campus area close to the center of the city of Turku and the Aura river. Other higher education institutions, Turku Science Park companies and the Turku University Central Hospital and also the important services are found close to the campus.

The campus area is Finland's oldest university campus: as the first university in Finland, the Academy of Turku was established here in 1640. Today the area is an international home area for tens of thousands students and staff. And there is something going on each day, e.g. international conferences, seminars, workshops, science events, academic celebrations and different kinds of training and courses.

› **Read more: utu.fi/en and abo.fi/en**


KUVA Turun yliopisto

CITY OF TURKU

City of Turku is an international and energetic centre of growth in the Baltic Sea area. The city is known for its archipelago which, according to many people, is the most beautiful archipelago in the world.

In addition to top class selection of education and magnificent the city provides a versatile livelihood structure and good services. Multiple choices to enjoy culture and take part in sports are also available.

There are around 184 000 residents in Turku. A large proportion of Turku residents are students. In addition to residents, students and companies, Turku attracts many tourists. The city is one of the most popular travel and congress destinations in Finland.

› **Read more:** **turku.fi/en**