

University of Turku, Finland

Master's Degree Programme in Biomedical Sciences

Professor Ullamari Pesonen

Head of the MDB / Drug Discovery and
Development

Vice President of the Programme Board



UNIVERSITY
OF TURKU



**Multidisciplinary.
International.
Research university.**

TURUN YLIOPISTO
VAPAAKANSAN LAHJA
VAPAALLE TIETEELLE

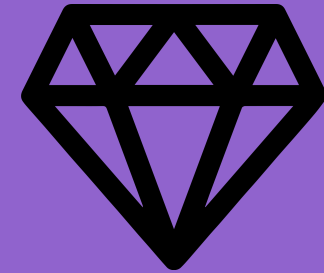
Multidisciplinary

7

FACULTIES



Faculty of Education
Faculty of Humanities
Faculty of Law
Faculty of Medicine
Faculty of Science and Engineering
Faculty of Social Sciences
Turku School of Economics



University
of Turku is
among the
top 1% in the
world

QS World University Rankings
2018

International

The University of Turku is a popular destination for exchange, degree studies and doctoral studies

We collaborate with over 400 universities worldwide and offer our students a wide selection of courses and programmes taught in English

- > utu.fi/degrees
- > utu.fi/study

10 %

**INTERNATIONAL
STUDENTS
FROM OVER 100
COUNTRIES**

600

**INCOMING/OUTGOIN
G
EXCHANGE
STUDENTS YEARLY***

* Longer than 3 months exchange

Research

We conduct research and work towards a better future and well-being

We promote free, effective and open science

Our research is multidisciplinary and international aiming towards new, interdisciplinary initiatives

18 Doctoral Programmes

>utu.fi/research

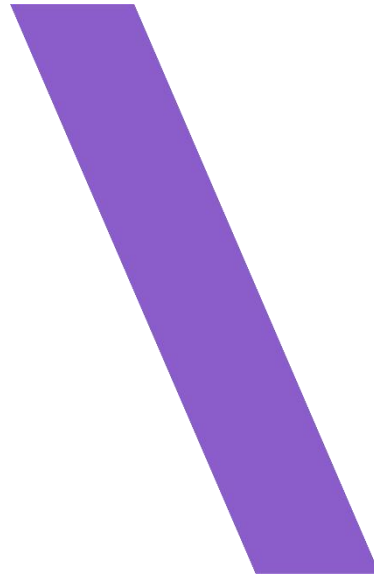
6 000

**SCIENTIFIC
PUBLICATIONS
ANNUALLY**

95%

**OF INTERNATIONAL
STUDENTS CHOSE
US DUE TO HIGH-
QUALITY
RESEARCH**

International Master's Degree Programme in Biomedical Sciences



Biomedical Imaging

**Drug Discovery and
Development**

**Medicinal and
Radiopharmaceutical
Chemistry**

**Molecular
Biotechnology and
Diagnostics**

Major structure of Master's Degree Programme in Biomedical Sciences (120 ECTS)

Major subject studies, mandatory courses 36 - 62 ECTS	
Master's Thesis 40 - 45 ECTS Thesis plan, seminar and practical laboratory part (20 - 25 ECTS) Written Thesis (20 ECTS)	
Elective studies > 5 ECTS	Language studies 5 - 8 ECTS

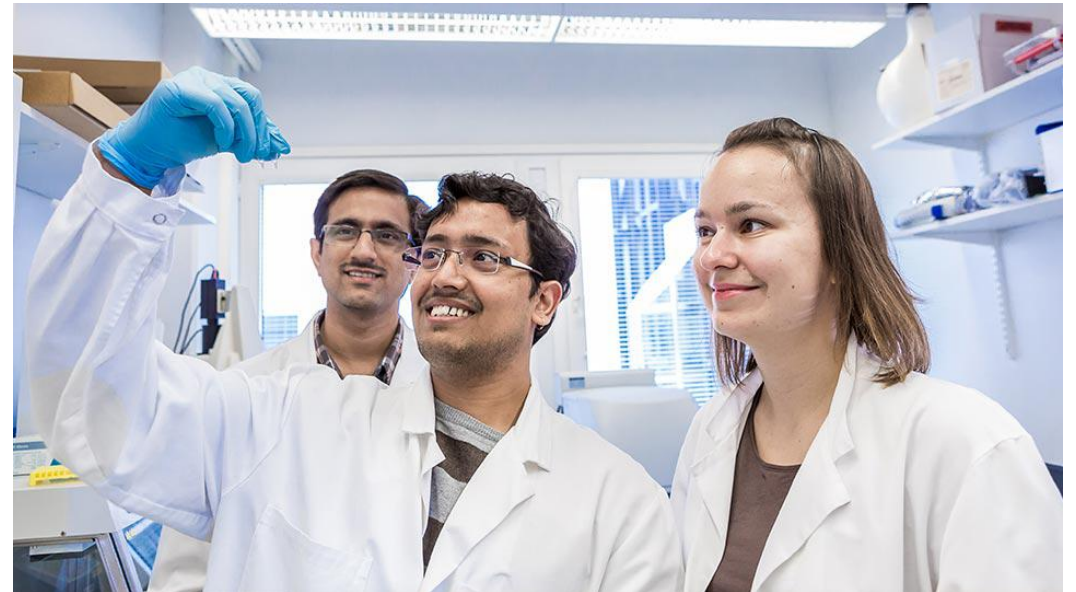
Possible Supplementary studies:

- 0 - 18 ECTS, not part of the Degree credits

* Number of credits in each category varies between the tracks

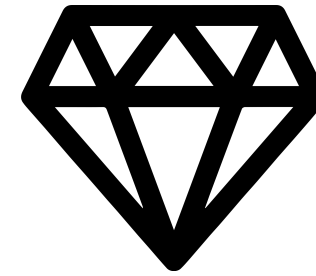
Biomedical Imaging

- Highly interdisciplinary and international
- Research facilities include a wide array of state-of-the-art imaging technologies ranging from atomic level molecular and cellular imaging to whole animal imaging, clinical imaging (e.g. PET) and image analysis.
- You will learn about different imaging modalities and modern imaging technologies



Did you know?

- Winner of the 2014 Nobel Prize in Chemistry Stefan Hell did his original discoveries on STED microscopy at the University of Turku
- Turku is a leader of the Euro-BioImaging infrastructure network which provides imaging services for European researchers



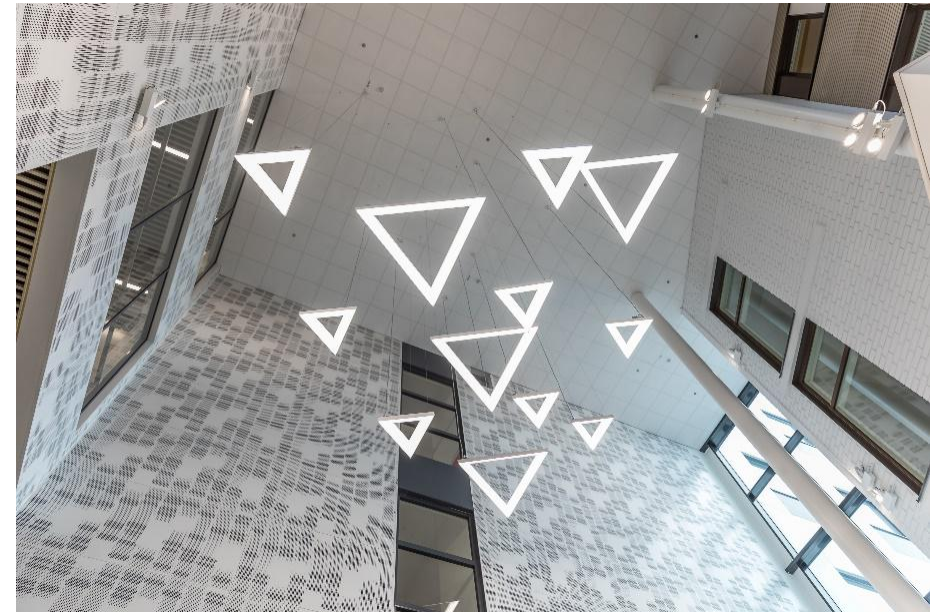
Nobel Stefan Hell

Nobel prize 2014



Drug Discovery and Development

- You will get a deep understanding of up-to-date methods applied to identify and validate new drug targets as well as screening novel molecules
- Studies provide knowledge of technological innovations as well as methods of clinical drug research and development phases, clinical trial design, study planning and biostatistics
- You will learn about drug regulatory science and pharmacovigilance
- Track uses external experts from industry as teachers



Did you know?

- Drug Discovery and Development track is a part of the NordBioMed network
 - Network has been established to develop biomedical education in Nordic countries
- Expert in Drug Discovery and Development can work as
 - Project manager
 - Medical liaison
 - Scientific/technical advisor
 - Research director
- Over 50% of DDD graduates continue to PhD studies



**Karolinska
Institutet**



UNIVERSITY OF
EASTERN FINLAND



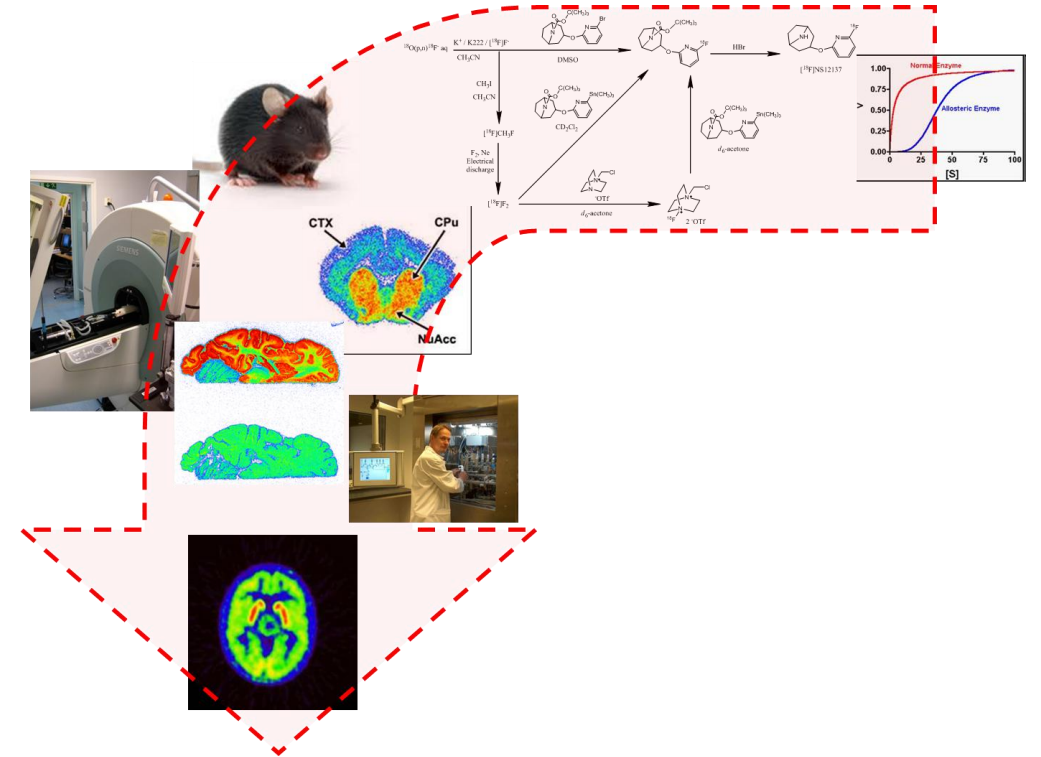
Medicinal and Radiopharmaceutical Chemistry

- Studies give you a deep understanding of theoretical and practical issues in drug screening, identification, design, synthesis and targeting
- With us, you will learn to master the state-of-the-art methods needed for the full identification of drug molecules and for their quantitation from different types of tissues and metabolite mixtures
- Our approach gives you strong hands-on knowledge on medicinal chemistry



Did you know?

- Over 50% of currently described drugs originate from nature
- The importance of large biomolecules as therapeutics is increasing, which is one of the main research topics in MRC
- Turku PET Centre operates four cyclotrons for the fields of radio- and radiopharmaceutical chemistry and preclinical & clinical PET imaging



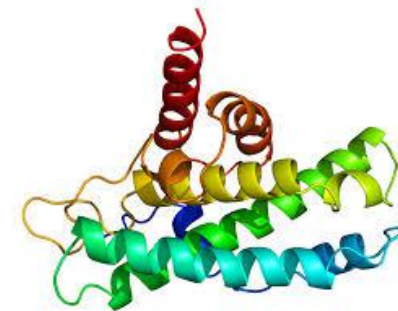
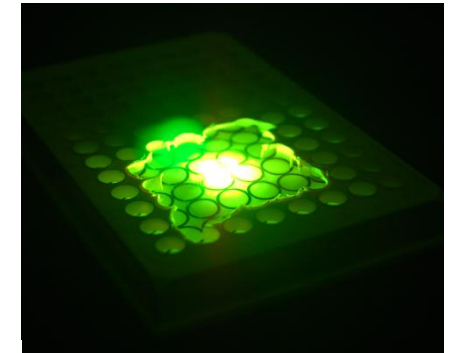
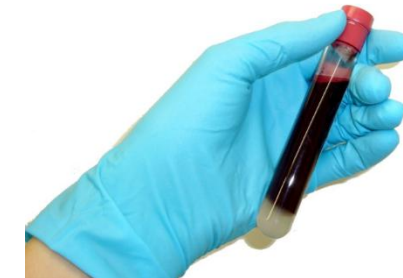
Molecular Biotechnology and Diagnostics

- Studies provide you with a broad understanding of
 - *in vitro* diagnostic technologies and their applications in clinical chemistry and beyond
 - Modern biotechnological methods to produce and engineer biomolecules
- You will learn how to combine the knowledge on biomarkers, biotechnological methods and assay concepts to solve demanding diagnostic problems
- Know-how on biomolecular engineering can be applied widely in the fields of diagnostics and drug development



Did you know?

- Several spin-off companies have been established based on the research done at the unit
- There a huge need for rapid diagnostics tests in medicine as well as environmental and food safety monitoring
- Engineered antibodies are increasingly utilized in diagnostics as well as in therapeutic applications





**Welcome to
apply
8 - 22 January 2020**

> utu.fi/degrees

Admission requirements

A nationally recognized Bachelor's degree, corresponding to at least 180 ECTS or to three years of full-time study

Excellent English language skills and a certificate that proves those skills in the required level

> <https://www.utu.fi/en/study-at-utu/language-requirements-for-masters-degree-programmes>

Track/programme specific admission requirements

The degree on basis of which you are applying to the track/programme must be in a relevant field of study

> See the programme pages at [utu.fi/degrees](https://www.utu.fi/degrees)

Scholarship and tuition fees

- Tuition fees will be charged from citizens of a country outside the European Union (EU) and the European Economic Area (EEA) or Switzerland
- UTU offers a scholarship programme for students who are subject to the tuition fees
- Scholarship will be granted to up to 30 % of the admitted students who are subject to tuition fees and have applied for a scholarship
- Number of scholarships changes annually
 - 2018 a grant was awarded to more than 60 students
- You can apply for a scholarship at the same time as applying for admission to one of our Master's degree programmes

> <https://www.utu.fi/en/study-at-utu/scholarships-and-tuition-fees>

- > studyinturku.fi
- > visitturku.fi/en

Turku, located in the Southwest Finland and founded in 1229, is the oldest city in Finland.

Welcome to the Student City of Turku

40,000
0 STUDENTS IN
HIGHER
EDUCATION



**UNIVERSITY
OF TURKU**

Contact us: admissions@utu.fi

Biomedical Sciences

Drug Discovery and Development & Biomedical Imaging: biomedicine@utu.fi

Medical and Radiopharmaceutical Chemistry & Molecular Biotechnology and Diagnostics:
master-sci@utu.fi