



UNIVERSITY OF TARTU



Faculty of  
Medicine



**The Faculty of Medicine of the University of Tartu offers a wide variety of academic programmes and a diverse group of research institutes. All with a focus on interdisciplinary approaches to solving complex medical and health problems.**

The Faculty of Medicine has been the springboard for Estonian doctors and medical researchers since the founding of alma mater in 1632. We are committed to improving the health of Estonians and beyond through studies, trainings for medical staff, scientific developments, and social responsibility.

An education from one of our institutes prepares our students to be outstanding leaders in the field of health care and medicine. Our alumni make up 99% of Estonian doctors, dentists, and pharmacists. They also account for the majority of renowned exercise and sport scientists, physiotherapists, and sports coaches in Estonia.

It is important for us to discover solutions for unsolved challenges and find answers for the questions that matter. That is why we encourage our students, staff, and alumni to explore new possibilities and continuously improve their knowledge and skills.

We have more than 600 employees and many of them are renowned experts in medicine or highly regarded exercise and sport scientists. We are proud to say that our medical researchers are leaders in their field. Thanks to them, the University of Tartu is among the top 1% of the world's most influential research institutions in the field of clinical medicine and in the field of molecular biology and genetics.

In addition to scientific studies, many of our researchers are public opinion leaders who are active in media and belong to different advisory boards whose decisions influence Estonian health policy.

Each person's journey and experience with the Faculty of Medicine is unique. Experience the university yourself, build your own connections, and see where your journey leads.

**We warmly welcome you to the University of Tartu!**



Professor **Margus Lember**,  
*Dean of the Faculty of Medicine*



# Facts & Figures

## **Institutes**

Institute of Biomedicine and  
Translational Medicine  
Institute of Family Medicine and  
Public Health  
Institute of Pharmacy  
Institute of Clinical Medicine  
Institute of Dentistry  
Institute of Sport Sciences and  
Physiotherapy

## **Tartu University Hospital**

Only university hospital in Estonia  
Estonia's biggest hospital  
Consists of 17 clinics  
More than 4300 employees  
500,000 outpatients per year  
40,400 inpatients per year

## **Clinics**

The Institute of Clinical Medicine consists of 19 departments, which are responsible for conducting teaching and research within their respective disciplines.

## **Centres**

National Centre of Translational and  
Clinical Research  
Laboratory Animal Centre  
Move Lab

## **Students & Employees**

### **2000 students**

- > 150 international students

### **620 employees**

- > 280 academic staff



The Old Anatomical Theatre of the University of Tartu was built for the Faculty of Medicine in 1805. Even though neither medical study nor research is conducted in the building any longer, it is a symbol for Estonian medicine as it has played a prominent role in the history of medical science.

It has been a workplace for many prominent doctors and scientists of the 19th century, for example outstanding psychiatrist Emil Kraepelin, surgeon Nikolai Pirogov, physiologist Alexander Schmidt and medical scientist Nikolai Lunin.



# Study programmes

**Our programmes are designed to train students into highly skilled medical specialists who can provide top quality medical assistance utilising modern achievements in medicine.**

## 2 bachelor's programmes

- › Exercise and Sport Sciences
- › Physiotherapy

## 4 integrated programmes of bachelor's and master's studies

- › Medicine
- › Medicine in English
- › Dentistry
- › Pharmacy

## 4 master's programmes

- › Public Health
- › Nursing Science
- › Physiotherapy
- › Exercise and Sport Sciences

## PhD

- › Exercise and Sport Sciences
- › Medicine
- › Neurosciences
- › Pharmacy

All 4 PhD programmes are taught both in Estonian and in English.

## Residency

The University of Tartu is the only university in Estonia which provides residency training.

- › 44 different programmes, including 3 dentistry specialisation programmes.
- › The duration of residency is 3-5 years depending on the specialty.
- › Almost 700 residents are in training.

There are no tuition fees for residents during the postgraduate medical training.

# Research in the Faculty of Medicine

## Lead research areas:

1. psychiatric and neurodegenerative disorders (disease models, molecular genetics, and clinical aspects of psychiatric and neurodegenerative disorders);
2. immune-inflammatory disorders (disease models, immunopathogenesis, molecular genetics, and clinical aspects of diabetes, atherosclerosis, chronic inflammatory epithelial diseases);
3. infections (neonates and paediatric infectious diseases, infections in immunocompromised persons, pharmacokinetics and -dynamics of antibiotics);
4. infertility;
5. risk-taking health related behaviours; environmental and occupational health risks, health technology assessment;
6. the impact of movement on a person throughout their lives;
7. social, clinical, and physical pharmacy;
8. oral health.





Research activities in the Faculty of  
Medicine are organised into 8 areas.



# Institutes

“Fool-proof laws are designed for fools only.”



**Professor Eero Vasar**  
*Head of the Institute*  
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# Institute of Biomedicine and Translational Medicine

**The aim of the institute is to conduct biomedical research by studying the fundamental concepts of biomedicine and by translating these results into clinical practice. The institute is responsible for teaching the preclinical subjects in the curricula of medicine, dentistry, and pharmacy. The institute is involved in all Faculty of Medicine master and doctoral degree studies as well as residency training.**

The departments at the institute have diverse research interests with a particular focus on molecular medicine, the causes and mechanisms of diseases, and how to apply this knowledge in the prevention, diagnostics, and treatment of diseases. The institute conducts innovative, cross-disciplinary scientific projects in the sphere of translational biomedicine.

The institute values high quality, international research that provides innovative solutions for healthcare and medical

education. For its teaching and research tasks, the institute works together with various partners both in and outside the university including: Tartu University Hospital, Estonian Genome Center, healthcare specialists, and other medical organisations.

Thanks to the high quality research at the Institute, the University of Tartu is among the top 1% of the world's most influential research institutions in the field of molecular biology and genetics (ISI Web of Science).

# The Institute of Family Medicine and Public Health

**The mission of the institute is to provide education, research, and development as well as necessary services to the community in the fields of family medicine, public health, and nursing. Members of the institute are oriented to finding solutions for real-life problems in public health and the primary healthcare sectors. There are strong ties between the institute and national government through policy analysis.**

The institute includes The Centre for Health Technology Assessment. The results of the Centre's research are used by the Estonian Health Insurance Fund to make health care policy decisions regarding the addition of new diagnostic and treatment options to the list of health care services. The institute also assists the Ministry of Social Affairs in making decisions on the reimbursement of pharmaceuticals and on public health interventions.

The main research areas at the Institute of Family Medicine and Public Health are:

- › risk-taking health related behaviours;
- › risk factors of noncommunicable and communicable diseases (HIV);
- › environmental and occupational health risks and related intervention strategies;
- › health technology assessment, medicine, and public health.

“If you are interested in providing knowledge, skills, and experience for practicing public health, family medicine and nursing science, expert decision-making, implementation of health care related decisions, health promotion, and research in the fields of primary health care and public health, you can contact us.”



**Professor Ruth Kalda**

*Head of the Institute*

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“Pharmacy has a long and dignified history at the University of Tartu, the independent Institute of Pharmacy (since 1842) has been one of the most prominent centers of pharmaceutical sciences in Europe. With our good and motivated colleagues, we carry on this tradition in all fields of pharmacy: in pharmaceutical technology with physical pharmacy, nanotechnology and biopharmacy, in pharmacognosy with pharmaceutical analysis, and in social pharmacy with clinical pharmacy.”



**Professor Ain Raal**

*Head of the Institute*

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# Institute of Pharmacy

**The Institute of Pharmacy is the leading higher-education teaching unit and Estonia's leading centre of pharmacy research. The mission of the institute is to advance the pharmaceutical sciences by conducting high-standard research work and providing research-based education to master's and PhD students.**

**The education and research work in pharmacy at the University of Tartu combines a broad range of scientific disciplines that are critical to drug discovery, physical materials research (drugs and excipients), pharmaceutical formulation development, manufacturing process research, and drug therapy.**

The current research topic areas include (but are not limited to):

- › phytochemical analysis and bioactivity of herbal materials and substances;
- › chemical drug analysis;
- › physical pharmacy;
- › molecular-based pharmaceutical technology;
- › modern pharmaceutical manufacturing technologies (electrospinning and 3D printing);
- › nanotechnology-based drug delivery systems and their biological effects and safety on humans;
- › development of medication use review services in community pharmacy setting;
- › evaluation of safe use of medicines by older patients.

Today, the Institute of Pharmacy has modern equipment and facilities for studies, innovative and accessible laboratories, and

highly valued teachers, researchers and professors. For continuous improvement of the teaching and research activities, the institute collaborates with many domestic/international public and private partners from a wide range of scientific disciplines. The curriculum in pharmacy is organised in competency-based modules to support professional development. The most recent courses implemented in the curriculum are for example the lecture courses in clinical pharmacy, industrial pharmacy, pharmaceutical nanotechnology and pharmaceutical entrepreneurship. The number of courses given in English language is also steadily increasing.

The University of Tartu was ranked in the 101–150 range in Pharmacy & Pharmaceutical Sciences in the Shanghai Ranking (ARWU) in 2019, and in the 251–300 range in Pharmacy & Pharmacology in the QS University Rankings by Subjects in 2018.

# Institute of Clinical Medicine

**The Institute of Clinical Medicine is responsible for the teaching, research, and development activities for the clinical disciplines. Most of the clinical subjects of the medical curricula are taught at the institute and it is the main coordinator of residency training, clinical doctorate (PhD) studies, and continuous medical education at the University of Tartu and in Estonia. Clinical research conducted by medical students in Tartu builds a strong footing to gain international prominence as a doctor or researcher.**

Education and research are undertaken in close collaboration with the Tartu University Hospital, which is the largest provider of medical care in Estonia.

Most of the institute's academic staff, including 20 professors and 31 associate professors are clinicians, who hold different positions at the Tartu University Hospital. In the beginning of 2020, the institute opened the Simulation Centre, where students, residents, nurses, and doctors can practice their clinical skills using phantoms and simulators. The institute is also developing a Patient Safety Research Centre for Estonia.

Thanks to the high quality research, the University of Tartu belongs to the top 1% of the world's most influential research insti-

tutions in the field of clinical medicine (ISI Web of Science). To ensure high-quality clinical research, the newest department of the institute – the Clinical Research Centre – advises scientists in filing different applications, writing grant proposals, and managing research projects. The institute's academic staff is leading approximately 30 different scientific projects.

As an academic knowledge centre in clinical medicine, the institute has representation in advisory bodies in the Ministry of Social Affairs, Estonian Health Insurance Fund, and National Health Board. The representatives of the institute also belong to the National Councils of Clinical Guidelines and Health Care Quality Indicators.

# Departments and Centres of the Institute of Clinical Medicine

**The institute consists of 19 departments, which are responsible for conducting teaching and research in following disciplines:**

- › Department of Anesthesiology and Intensive Care
- › Department of Hematology and Oncology
- › Department of Surgery
- › Department of Pulmonology
- › Department of Oto-Rhino-Laryngology
- › Department of Pediatrics
- › Department of Dermatology and Venereology
- › Department of Obstetrics and Gynecology
- › Department of Neurology and Neurosurgery
- › Department of Psychiatry
- › Department of Radiology
- › Department of Ophthalmology
- › Department of Internal Medicine
- › Department of Sports Medicine and Rehabilitation
- › Department of Cardiology
- › Department of Traumatology and Orthopedics
- › Department of Clinical Genetics

The institute has two important centres:

- › Centre of Continuing Education
- › Clinical Research Centre

**“Institute of Clinical Medicine – from clinical research to high-quality medical care.”**



**Professor Joel Starkopf**  
*Head of the Institute*  
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# Institute of Dentistry

**The Institute of Dentistry of the University of Tartu is the only institution that offers Master's level dental education in Estonia. The alumni of the Institute of Dentistry are well recognised in Estonia and abroad.**

The institute is responsible for the theoretical and practical training of future dentists.

The study programmes are in line with international standards and modern teaching technologies. It is important to understand, that dentistry is not just about restoring teeth – the patients oral health is inseparable part of their general health.

The specialty is divided into four major areas: oral and dental diseases, prosthetic dentistry, oral and maxillofacial dental surgery, pediatric dentistry incl. orthodontics and prevention of dental diseases.

The institute works in close co-operation with the Tartu University Hospital Stomatology Clinic, which is the main place of practice for dental students. Most of the researchers and teaching staff are

practicing dentists, orthodontists or oral and maxillo-facial surgeons.

The Institute of Dentistry is known for its high-quality research in the fields of oral health. Most of the studies are focused on the prevention of oral diseases in different age groups in the Estonian population.

In Estonia, dental treatment is free of charge for children under the age of 19. That is why one of the missions of the institute is to raise awareness about the importance of oral health and to encourage children and parents to make regular visits to the dentist. From this perspective, research on the oral health of children is a priority.

The institute works in close collaboration with the Estonian Dental Association and Estonian Health Authorities.



“The Institute of Dentistry provides a high-level academic education and an open world view. The education here is broad-based and allows for the continuation of one’s studies in a desired speciality through residency or to dive deeper into the world of science. Our research focuses on oral health and interrelates to other areas of general medicine.”



**Associate Professor Ülle Voog-Oras**

*Head of the Institute*

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“Alumni of the institute include highly regarded athletes and sports scientists, physiotherapists, project managers in sports federations and municipalities, physical education teachers, and sports coaches.”



**Professor Priit Kaasik**

*Head of the Institute*

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# Institute of Sport Sciences and Physiotherapy

**The Institute of Sport Sciences and Physiotherapy has become a significant centre of sports science in Estonia and Europe. The teaching and research of the institute is incredibly diverse, ranging from the subtle aspects of sports psychology to the molecular mechanisms of muscle contraction.**

An important direction of the institute is research related to the development of physical working capacity. In order to ensure the better preparation of athletes and provide solutions to increase the efficiency of athletic training, several sports federations also cooperate in the field of training and testing.

The institute holds a unique climate laboratory, which aims to study the resistance and adaptation of the human body to different climatic conditions, like

freezing temperatures or desert heat. There is also a Move Lab that focuses on the mobility and physical activity of children in school.

Students have access to the university stadium and the modern sports and athletic halls of the University of Tartu Academic Sports Club. Physiotherapy students can develop practical skills at Tartu University Hospital and other health care institutions throughout Estonia.

# Tartu University Hospital

**Tartu University Hospital is the largest health care provider in Estonia. High-quality, tertiary medical care is offered in nearly all specialties. Tartu University Hospital is the only institution to perform organ transplantations in Estonia. Kidney, liver, pancreas, and lungs are harvested by university hospital transplant surgeon teams all over the country. Likewise, pediatric patients with congenital heart diseases are referred to Tartu University Hospital and the Centre of Clinical Genetics serves the entire Estonian population.**

Tartu University Hospital is the only academic hospital in Estonia. It plays a major role in both undergraduate and postgraduate studies within the medical fields. As the leading teaching hospital, all staff are trained to supervise students and residents from the Faculty of Medicine, nursing students, and colleagues from other hospitals.

The third important part is research. In addition to the everyday duties of serving patients and teaching future medical specialists, Tartu University Hospital integrates work with scientific research. Education and research are undertaken in close collaboration with

the Faculty of Medicine. The Faculty of Medicine and Tartu University Hospital are widely known for their clinical trials and clinical research on human health. In addition, the tight co-operation between the university and the university hospital creates mutual synergy between preclinical and clinical research.

The hospital also runs programmes of further education for employees of other hospitals and primary care units. The lecturers and researchers in Tartu have a long tradition of collaboration with colleagues from across Europe and elsewhere in the world.



The hospital's mission is to act as a leader in ensuring the continuity and development of Estonian medicine through high-level integrated medical treatment, training, and research.

# National Centre of Translational and Clinical Research

## Centres

**The general aim of the National Centre of Translational and Clinical Research (CTM) is to innovate and improve the quality of health research in Estonia. The centre brings together researchers working in different areas in health research and combines competencies from diverse areas of medical research.**

CTM boasts the best clinical research competence in Estonia and coordinates national and international cooperation between different stakeholders to ensure the best possible support from local infrastructure.

CTM acts as a partner for the state, businesses, and society to provide expertise in the field of health research.



CTM is financed by the European Regional Development Fund.

## Services of the centre:

- › 1 POC for all clinical research services for Estonia;
- › project management;
- › quality management;
- › monitoring of clinical research studies;
- › counselling applications for Ethics Committee and State Agency of Medicines;
- › overview and counselling about available research funding opportunities;
- › biobanking (outside of EGC);
- › creating databases in REDCap software;
- › various training and educational programs, including ICH GCP R2.

“In addition to their daily medical work, doctors and medical researchers need to do internationally recognised clinical research, for that they need a strong infrastructure and collaborative partners. That is where the National Center for Translational and Clinical Research as a support structure can help.”



**Katrin Kaarna**

*Head of the National  
Centre of Translational  
and Clinical Research*

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# Laboratory Animal Centre

**The centre comprises top-level infrastructure to develop and study advanced disease models and combines these research areas with modern bioimaging technologies. Its aim is to serve the regional needs for translational research and drug discovery.**

In the centre, the scientists develop and study advanced disease models with a specific focus on chronic immune/inflammatory diseases, neurological diseases, and tumor therapy. They combine these research areas with modern bioimaging technologies.

The centre offers services like:

- › pre-clinical drug efficacy testing;
- › customisable in vivo cancer models;
- › evaluation of novel anti-cancer therapies;
- › transgenic mouse and rat services;
- › magnet resonance imaging;
- › laboratory animal service;
- › the core facility of clinical genomics: different sequencing services;
- › toxicology services (GLP accredited);
- › cell culture and RNA services.

Laboratory Animal Centre is  
financed by the European  
Regional Development Fund.

“Laboratory Animal Centre provides  
world class scientific equipment and  
competence for pre-clinical research,  
which provides scientists better  
opportunities for research.”



**Mario Plaas**

*Head of the Laboratory  
Animal Centre*  
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A young girl with her hair in a ponytail, wearing a purple zip-up jacket and colorful floral leggings, is walking across a rope bridge at a playground. She is holding onto the blue ropes of the bridge. The background shows lush green trees and a clear sky. A large blue triangle is overlaid on the left side of the image, containing text and a portrait.

“There are almost 80 schools with more than 35,000 students participating in the programme. Move Lab supports the schools with various training modules, toolkits, expert advice, research, advocacy, and network activities.”



**Merike Kull**

*Head of the Move Lab*  
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# Move Lab

**Move Lab is a research and development unit of the Institute of Sport Sciences and Physiotherapy at the University of Tartu focusing on creating and applying evidence-based interventions that tackle the public health issue of physical inactivity.**

In recent years, the focus of Move Lab has been on physical inactivity of children.

In Estonia only 24% of children are active enough – i.e. moving at least one hour a day in a way that raises their heart rate and warms-up their muscles as suggested by WHO. The lifestyle of children is becoming more sedentary, the obesity rate is increasing, and different health risks are on the rise. Research has shown that one of the most effective venues to put a stop to these trends is through schools.

Move Lab's original physical activity intervention programme, Schools in Motion, uses a wholesome approach for designing a school culture that supports physical activity during the school day, which includes active travel, lessons and recess time both indoors and outdoors, and school events.

Research has confirmed the benefits:

- › **Physical activity:** 92% of schools' personnel found that after joining in the programme, there are more possibilities to be active;
- › **Changes in the physical environment of schools:** children are granted daily access to playing equipment and school rooms. Also, buildings and outdoor areas of schools are renovated and constructed based on activity principles;
- › **Improved initiative, wellbeing and learning abilities:** pupils' initiative and activities for active recess has increased, school fatigue has decreased, and pupils are more focused in academic lessons;
- › **Habit Building:** physical activity is seen as a "natural part" of school culture and is becoming a social norm.



## Quick facts

- › Belongs to the **TOP 1.2% of the world's best universities**
- › Est. **1632**
- › TOP 1% of the world's most-cited universities and research institutions in **10 research areas**
- › **52 scientists are in the top 1%** of the most-cited scientists in the world
- › **13 000** students
- › **2200** international students from **100** countries
- › **27** international bachelor's and master's programmes
- › **120** PhD theses defenses per year
- › **72** partner universities in **26** countries
- › Member of **the Coimbra Group**, **LERU** and **the GUILD**





## Contacts

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[www.ut.ee](http://www.ut.ee)

Ask about study options:

[ut.ee/ask](http://ut.ee/ask)

Information desk: +372 737 5100

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### Social media



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[university-of-tartu](https://www.linkedin.com/company/university-of-tartu)



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