



MEDICAL UNIVERSITY
OF VIENNA

Annual Report
2021



EDITORIAL



INNOVATIVE APPROACHES TO HEALTHCARE



Welcome to our building site!

As you can see on the cover, construction work is already well under way on more than 90,000m² of new facilities that will shape the future of medicine. MedUni Vienna is continuing to set the tone and drive innovation in Austria, and implementing numerous initiatives designed to bolster the city's reputation as a highly attractive medical hub.

One of our goals is to move away from reparative medicine and focus more strongly on prevention. Above all, we aim to become a leading centre for precision medicine as well as personalised diagnosis, treatment and preventive measures tailored to factors that are specific to each individual patient. Funded by the European Recovery and Resilience Facility, the Eric Kandel Institute – Center for Precision Medicine is central to achieving this goal. The facility will take shape over the next few years.

MedUni Vienna will also continue to lead the way in terms of its commitment to meeting its responsibilities towards society. The wide-ranging achievements and extensive expertise of our employees enable us to make a vital contribution to public healthcare, health promotion, as well as medical communication and training. This annual report highlights the broad spectrum of outstanding achievements by members of the university.

Professor Markus Müller
Rector, Medical University of Vienna

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*Eva Trifina-Mikosch, Teaching Center
Carmen Schweicker, Department of Medicine I
Martin Schepelmann, Center for Pathophysiology,
Infectiology and Immunology*

CLEAR FOCUS

MedUni Vienna is the largest medical education institution in the German-speaking countries and one of Europe's top biomedical research institutions.



EVIDENCE-BASED MEDICINE

Evidence-based knowledge vs. fake news: the coronavirus pandemic has underlined just how important facts backed up by empirical data are. MedUni Vienna's work has always been guided by the latest scientific findings, meaning that the university plays a leading role in teaching, research and patient care, and in terms of sharing this knowledge with the public.

In the top 100

worldwide in the medicine category of leading university rankings, and one of Europe's most highly respected centres of medical training and research since the university was founded

In the medical sector, digitalisation has opened up a whole new world of possibilities, with numerous potential benefits in terms of diagnosis and treatment. The combination of big data and artificial intelligence has enabled medical scientists to uncover previously hidden patterns and relationships. At MedUni Vienna and University Hospital Vienna this generates added value specifically for patients, in the shape of preventive medicine, new treatment options for rare diseases and precision medicine tailored to individual needs.

Leveraging mutual synergies

In order to generate new insights, MedUni Vienna takes steps to smooth the way for the sharing of knowledge between research, teaching and patient care – a reflection of the university's responsibilities towards

society. One of the key focuses of this knowledge-based approach is building on mutual synergies. The outcome, as Aristotle put it, is that the whole is more than the sum of its parts.

Generating knowledge

Basic research lays the foundations for the process of generating scientific insights. In this respect, MedUni Vienna places a particular emphasis on research in immunology, cancer/oncology, medical neuroscience, cardiovascular medicine, medical imaging and transplantation medicine. In each of these fields, dozens of working groups cooperate on interdisciplinary and translational projects. This collaboration drives progress in research and benefits both patients and students.

Putting knowledge to use

MedUni Vienna physicians working



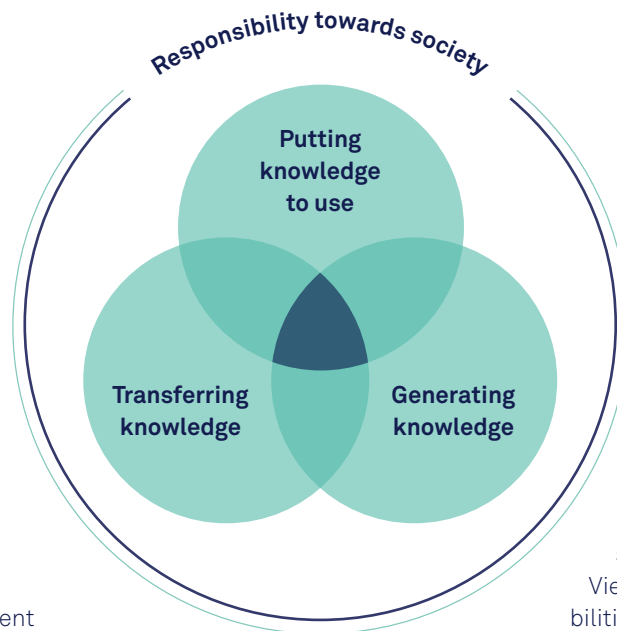


6,190
employees

at University Hospital Vienna deliver outstanding care from a regional, national and international point of view. The hospital focuses primarily on delivering high-quality tertiary medical care, as well as offering secondary and primary care, and is responsible for a large proportion of the health services provided in the city. Every year, the various departments at MedUni Vienna and University Hospital Vienna handle about one million outpatient appointments.

Transferring knowledge

Students at MedUni Vienna can choose from a huge range of courses, including the Medicine and Dentistry degree programmes, doctoral studies, as well as the Medical Informatics and



Molecular Precision Medicine master's programmes. The university also offers a wide range of continuing education courses. Students at University Hospi-

tal Vienna reap the benefits of synergies between research, teaching and patient care.

Responsibility towards society

Especially in an age when changes come thick and fast, it is important to provide the public with information and guidance based on the latest scientific findings. As a leading scientific institution, MedUni Vienna is well aware of its responsibilities in this area and capitalises on its medical expertise in various ways, ranging from information and preventive care aimed at the general public, through to economic and location-related impetus as a result of knowledge and technology transfer, which would be impossible without the research that underlies it.

SETTING PRIORITIES



STUDYING MEDICINE

7,825
students

Medicine is a highly diversified field that now also covers topics such as prevention, which is aimed at safeguarding health (salutogenesis), and harnessing digitalisation in order to detect and treat disease. And MedUni Vienna's wide-ranging curriculum reflects this diversity, with undergraduate and master's degree programmes, postgraduate continuing education courses and PhD programmes.

- Medicine degree programme
- Dentistry degree programme
- Medical Informatics master's programme

- Molecular Precision Medicine master's programme
- PhD programmes (20 research themes)
- Applied Medical Science doctoral programme (ten research themes with a focus on clinical research)
- 31 postgraduate programmes

109 teaching hospitals and 86 general medical practices in Austria and numerous teaching hospitals abroad are accredited for clinical practice training.

MedUni Vienna has set up five research clusters and one research platform where interdisciplinary collaboration is the watchword.

Immunology Research Cluster

As the coronavirus has brought home once again, infectious diseases are among the biggest threats to human health. Besides this, immunology also focuses on defective immune system responses behind various conditions such as diabetes, arteriosclerosis, chronic polyarthritis, allergies and inflammatory bowel disease. Against this backdrop, the Immunology Research Cluster brings together researchers specialising in allergies, inflammation and infectious diseases, and develops new diagnosis and treatment concepts.

Cardiovascular Medicine Research Cluster

Cardiovascular diseases remain the most common cause of death in Austria, and research at the Cardiovascular Medicine Cluster centres on diagnostics and treatment for these conditions. Researchers at the cluster also examine topics related to epidemiology and genetics.

Cancer Research and Oncology Research Cluster

Based at the Comprehensive Cancer Center (CCC), a joint MedUni Vienna and University Hospital Vienna facility, the Cancer Research and Oncology Research Cluster combines interdisciplinary care for cancer patients with research and research-led teaching. This promotes the development of innovative diagnostic and treatment methods.

Medical Imaging Research Cluster

Research in this cluster is geared towards achieving advances in morphological, functional and molecular imaging, with a view to enabling the diagnosis and treatment of disease at an earlier stage. The aim is also to promote long-term improvements in individual risk assessment and the monitoring of treatment in the context of personalised medicine.

Medical Neuroscience Research Cluster

Here, the focus is on research into the various conditions that affect the nervous system. The cluster has built a strong international reputation thanks mainly to its research into Alzheimer's, depression, multiple sclerosis and pain.

Transplantation Research Platform

University Hospital Vienna, MedUni Vienna's university hospital, is one of the world's leading centres for transplants. The Transplantation Research Platform is an integrative initiative designed to support networking between academic staff and promote research into transplantation at MedUni Vienna. It aims to increase the output of high-quality research findings on this topic.



SHAPING THE FUTURE


Paradigm shifts in the world of medicine and changing conditions for teaching: MedUni Vienna is facing these challenges head-on and responding with a clear strategy.

Thomas Pezawas, Department of Medicine II

Madalina Mirea, Center for Pathobiochemistry and Genetics






Thanks to the Eric Kandel Institute – Center for Precision Medicine at MedUni Campus AKH, the Austrian capital will become a major centre for personalised prevention and treatment.

Markus Müller,
Rector



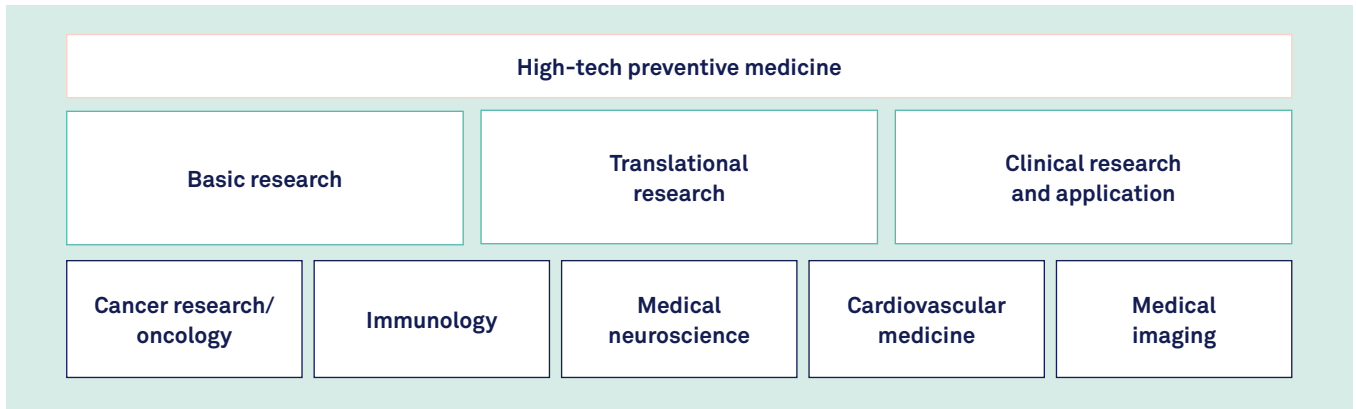
SETTING CLEAR OBJECTIVES

MedUni Vienna is playing a proactive role in shaping the future, and sending clear signals when it comes to medical research, as well as training for health sector staff, and patient care.

“Maintaining and restoring health through expertise and innovation” – this goal is central to MedUni Vienna’s mission statement. Due to demographic changes, the health system is coming under increasing pressure, and in response MedUni Vienna is redoubling its efforts in this regard, placing a stronger emphasis on prevention while also driving the paradigm shift towards personalised, precision medicine. This combination has the potential to deliver sizeable gains in quality of life for the public and significantly reduce the financial burden on the health system.

Degrees with a strong hands-on element

Since the start of the pandemic, the university has adopted a blended learning approach, with e-learning, distance learning and web-based formats used for some parts of the degree programmes, while practical elements – a key component of the Medicine programme – were held with strict safety and hygiene measures in place. Medicine has always been a hands-on science, and many skills can only be learned by means of practicals. That said, MedUni Vienna will continue to offer digital teaching in future, especially as this has advantages for students in employment and those with children.



Implementing high-tech preventive medicine is one of MedUni Vienna's most important development goals. And the university's research focuses play a central role in achieving this goal.



✓
✓
With its strong international element, the Molecular Precision Medicine master's programme brings together teaching staff from basic, translational and clinical research, who share their comprehensive expertise on future prospects for medicine with students.

Anita Rieder,
Vice Rector for Education



Sophisticated curriculum

Research-led teaching and international quality standards form the foundations for medical training at MedUni Vienna. The cutting-edge, integrated curriculum rests on the expertise of the university's researchers and teaching staff who share their specialist theoretical and basic knowledge and experience of clinical practice. The Medicine degree programme is accredited in accordance with the World Federation of Medical Education's Global Standards for Quality Improvement: Basic Medical Education. Certified according to the same standards, the Dentistry programme curriculum is designed to prepare students for the strong practical focus in the dentistry profession, with courses held at MedUni Vienna's modern teaching and learning facilities at the University Clinic of Dentistry Vienna.

Clinical practice, future trends and soft skills

The accreditation of more than 100 teaching hospitals and 80-plus general practice training surgeries in Austria (see page 24), as well as numerous teaching hospitals abroad, ensures the quality of clinical practice training for future physicians. The Medicine degree programme also addresses future trends such as virtual reality, simulation-based training and precision medicine, as well as soft skills, such as empathetic patient support and students' social engagement.



✓
✓ *The initiatives implemented by our research clusters promote cooperation and excellence, and underpin our strengths in translational research. Our new research facilities will provide the space that is urgently required for their work.*

Michaela Fritz,
Vice Rector for Research and
Innovation



Laying the foundations: research

Fundamental new scientific insights are preparing the ground for the imminent shift away from reparative medicine towards preventive healthcare. These insights are vital for the progress which MedUni Vienna is committed to achieving through its wide-ranging research projects.

High-tech preventive medicine

Thanks to its research clusters (see page 11), MedUni Vienna can capitalise on outstanding expertise in cancer research/oncology, immunology, cardiovascular medicine, medical imaging and medical neuroscience. Built on these clusters, MedUni Vienna's strengths lie in the interplay between basic biomedical research and translational and clinical research. The emerging trends of personalised medicine and digital medicine are among the key threads running through research at all of the clusters. All activities fall within the scope of the overriding strategic objective of implementing high-tech preventive medicine.

Research focuses

Alongside the research clusters, the Transplantation Research Platform and the Comprehensive Centers (see page 19), MedUni Vienna has defined a series of other research focuses. These



✓
✓ *In 2021, we put in place the financial framework for the period to 2024, laying the foundations for developing the university's infrastructure in the future. Even now, the numerous construction projects paint an impressive picture of what the MedUni campus of the future will look like.*

Volkan Talazoglu,
Vice Rector for Finance



include patient safety, microbiome research (performed in cooperation with the University of Vienna), orphan and rare diseases, gender medicine, metabolism and endocrinology, artificial intelligence and data-based medicine, regenerative medicine, and RNA biology and epigenetics.

New infrastructure

The construction plans for the MedUni Campus AKH and MedUni Campus Mariannengasse (see page 32) are part of MedUni Vienna's continuing drive to enhance scientific excellence and apply research findings in patient care. By 2026, a total of EUR 75m received from the European Resilience and Recovery




MedUni Vienna has assumed responsibility for sharing knowledge with the community and playing a part in health promotion efforts aimed at the general public, with an emphasis on gender equality and sustainability.

Maria Sibilia,
Chair of the Senate




University Hospital Vienna, MedUni Vienna's university hospital, is currently ranked among the top hospitals in the world, which underlines the university's outstanding international profile.

Eva Dichand,
Chair of the University Council



Facility and generated from fundraising activities will be invested in the Eric Kandel Institute – Center for Precision Medicine, which is also currently at the planning stage. The Center for Translational Medicine is already under construction.

2022-24 performance agreement

MedUni Vienna and the Austrian Federal Ministry of Education, Science and Research concluded a new performance agreement in autumn 2021. Compared with the 2019-21 period, the 2022-24 performance agreement includes a 12.6% increase in the university's budget. "Although this is lower than the 15.1% rise agreed for 2019-21, this is a highly satisfactory outcome in view of the total additional funding available to all universities nationwide," said Rector Markus Müller. Stipulated

in 2020, the establishment of the Ignaz Semmelweis Institute, an academic centre focused on infectious diseases, also forms part of the agreement. The institute – an intrauniversity unit – will take shape over the coming years.

Responsibility towards society

MedUni Vienna sends out various different signals that underline its commitment to meeting its responsibilities towards society. Besides medical care, conducting research aimed at driving advances in medicine, and providing high-quality training for health service staff, MedUni Vienna is also dedicated to promoting gender equality, gender mainstreaming, diversity and gender medicine. It also places a strong emphasis on sustainability and climate protection, with a view to achieving the goal of becoming a green university.



Our new centres will help to bridge the gap between preclinical and clinical operations, enabling us to implement research findings as quickly as possible for the good of patients.

Oswald Wagner,
Vice Rector for Clinical Affairs

PREPARING FOR THE WORST

An emergency situation involving a newborn, or a patient in the trauma room following an accident – since 1 June 2021, staff have been able to prepare for this and various other eventualities at the University Simulation Center Vienna. Located at Floridsdorf Hospital, the training facility was set up by MedUni Vienna in cooperation with the Vienna Healthcare Group. The expertise and practical experience that the Medical University of Vienna has built up is shared with employees from other hospitals in the form of true-to-life exercises designed to prepare staff for potential emergencies. The new centre has a total of 1,000m² of space where a host of different scenarios can be simulated and a range of training options offered that cover all medical professions.

A leading university hospital

University Hospital Vienna has more than 400 specialist outpatient clinics that provide patients with a broad spectrum of outstanding healthcare services. In the second year of the Covid-19 pandemic, the hospital was again able to offer comprehensive medical care.

University Hospital Vienna is responsible for a large proportion of the primary care provided in the city. The hospital's outpatient and specialised clinics handle about one million appointments every year, while around 80,000 people are treated as in-patients. This means that the hospital occupies a unique position in the regional and national healthcare system. Numerous investments are planned with a view to expanding this expertise (see page 32).

Conclusion of new plant agreement under the Hospital Working Hours Act

A new plant agreement regulating the working hours of physicians and dentists in the patient care segment was concluded, pursuant to the Krankenanstalten-Arbeitszeitgesetz (Hospital Working Hours Act), replacing the previous agreement which expired on 31 December 2021. The new agreement, which will apply from 1 January 2022 to 31 December 2023, still allows for personal opt-outs and, as a result, standby duty. Among other measures, the agreement also provides for a one-time payment to all hospital physicians, as well as an increase in the remuneration for standby duty (supplementary allowance) from 1 January 2022. This will help to safeguard MedUni Vienna's position as an attractive employer.



✓
✓ *University Hospital Vienna is currently ranked 27th among the world's leading hospitals. This is a clear indication of the high-quality care provided by members of all the professions working at the hospital.*

Herwig Wetzlinger,
Director, University Hospital
Vienna



COMPREHENSIVE CENTERS

MedUni Vienna's three Comprehensive Centers reflect the growing importance of the interplay between research, teaching and patient care. The aim of this in-depth collaboration is to bring about advances in translational medicine, which generates mutual benefits for patients and researchers.

Comprehensive Center for Pediatrics (CCP)

The CCP, a European showcase project, brings together experts in prenatal care, paediatrics and adolescent medicine at a single location, and facilitates cooperation between them. The focus is on interdisciplinary exchange, which in turn guarantees optimum medical care for patients. At the heart of the CCP are the five divisions of the Department of Pediatrics and Adolescent Medicine, including St. Anna Children's Hospital, as well as the Division of Obstetrics and Feto-Maternal Medicine, the Division of Pediatric Surgery and the Department of Child and Adolescent Psychiatry.

Comprehensive Cancer Center (CCC)

The CCC brings together all of the professionals working at MedUni Vienna and University Hospital Vienna who are involved in the treatment of cancer patients, as well as cancer research and teaching in this field. This enables the centre to combine interdisciplinary patient care with clinical and basic research, alongside world-class academic teaching. The outcome is innovative diagnostic and treatment methods that directly benefit the CCC's patients.

Comprehensive Center for Cardiovascular Medicine (CVC)

The CVC provides care for sufferers of cardiovascular diseases, and conducts clinical and basic research. Patients benefit from improved diagnostic and treatment procedures which begin with the involvement of primary care specialists. As cardiovascular diseases and their consequences are among the most common causes of death, diagnosis, treatment and targeted research require particularly close cooperation between physicians from various fields.

*Tim Dorittke, Medicine student
Theresa Maiss, Dentistry student
Till Buschhorn, Medicine student
Nina Rahimi, PhD student, MDPHD
programme of excellence, Department of
Medicine I*



A CAREER IN MEDICINE

Knowledge and understanding, clinical skills, communication abilities, good medical conduct and other professional competencies are the foundations of the MedUni Vienna degree programmes, and form the basis of a successful career in medicine.



KNOW-HOW THE KEY TO SUCCESS

Up-to-date knowledge and skills, outstanding and dedicated teaching staff, a broad selection of study programmes and pioneering learning tools: during the pandemic, this recipe continued to lay the foundations for outstanding training and first-class career prospects.





Thanks to blended learning – a balanced mix of digital content, in-person teaching and a strong practical element – MedUni Vienna was able to provide an effective basis for successful study.

The experiences and measures of 2020 set the tone for the return of regular teaching in the second year of the Covid-19 pandemic. The majority of students got to grips with the pandemic extremely well, although some found the changeover to online teaching difficult at times. But thanks to the dedication, expertise and outstanding teamwork of all involved, the university maintained its excellent graduation rate.

Teaching task force

Another important part of this was the Covid-19 prevention task force headed by Anita Rieder, MedUni Vienna's Vice Rector for Education. The group of experts got together once a week to discuss all of the latest developments and identify teaching solutions to reflect the current situation. This committee involved all of the relevant stakeholders, including the Senate chair and curriculum commissions of all degree and continuing education programmes, curriculum directorates, the Teaching Center, the Studies and Examinations Department, the pandemic physician, specialist doctors, the MedAT team, the works council, representatives of the Legal Department and

Corporate Communications as well as building, security and infrastructure management.

Record attendances at lectures

And, as in 2020, in order to safeguard wellbeing, MedUni Vienna organised a combination of in-person teaching and distance learning for students in 2021. "Investments in online teaching are paying off and also bearing fruit in terms of teaching quality," Anita Rieder confirmed. One positive side effect was that lectures were better attended during times of distance learning, with the new teaching tools clearly making the learning experience even more attractive.

Safe MedAT entrance exam

On 21 July 2021, 6,278 prospective students participated in the MedAT selection process at MedUni Vienna, for which heightened hygiene and safety measures were in place. In total, 740 study places for the Medicine and Dentistry programmes were available at MedUni Vienna in the 2021/22 academic year. As in the previous year, the university's selection process took place at two locations to reduce concentrations of people



Medicine works on and for people. As a result, the MedUni Vienna curriculum has a clear focus on clinical practice.

and to make it as easy as possible for candidates from the west of Austria and abroad to attend. 4,697 took the entrance examination at Messe Wien and 1,581 at Messezentrum Salzburg. The 3G rule applied during the examination, meaning that it was only open to candidates who were vaccinated, had proof of recovery or could present a negative test result.

Primarily in-person teaching

For the approximately 8,000 students at MedUni Vienna, the 2021/22 winter semester got under way with courses primarily held in person. While clinical practice exercises had returned as in-person events at an earlier stage, students were able to attend the majority of courses on site in lecture theatres at the start of the semester. Only larger theoretical lessons conducted in a lecture format continued to be held as live broadcasts or as on-demand streams at the start of the winter term.

Programme of excellence in general practice

In their sixth and final year, medical students at MedUni Vienna gain practical clinical experience working in teams at the university's departments, as well as

accredited teaching hospitals and doctor's surgeries. During this clinical practice year, students also have access to general practices and primary care centres as part of a programme of excellence. A special grant for general practice was introduced in 2018 in collaboration with the Austrian public health insurance fund ÖGK and the City of Vienna, with ÖGK Lower Austria following suit in 2021.

Best practice for Austria

Over the space of just a few years, the clinical practice year in General Practices and Primary Care Centres has turned into a major success story. More and more MedUni Vienna students are building up experience alongside general practitioners while they are still studying. And for the first time, all of the available slots were filled in 2021. The plan is to roll out the successful Viennese model to the rest of the country.

ARS DOCENDI PRIZE

A MedUni Vienna teaching project came in for special recognition at the Ars Docendi awards, winning the Learning Outcome-Oriented Teaching and Examination category. The team comprising Paul Supper, Iris Acker, Patric Kienast, Florian Simon Linke, Andrea Praschinger and Anahit Anvari-Pirsch won the award for their Introduction to Clinical Practice with Three-Step Peer Teaching Key Feature Cases project, which is part of an elective taken in the fifth year of the Medicine degree programme at MedUni Vienna.

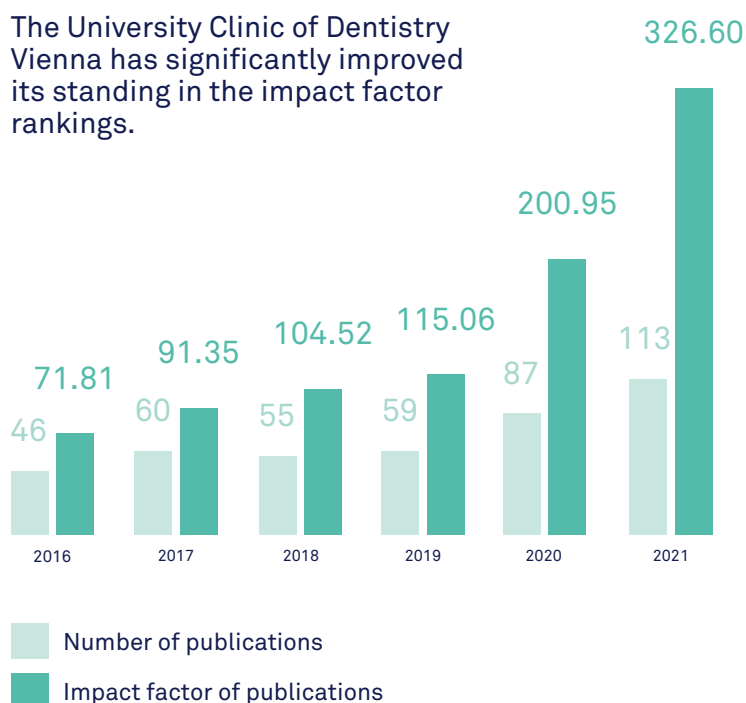


650 MedUni Vienna graduates received their diplomas at formal degree presentation ceremonies hosted at the Vienna Konzerthaus on 25 and 26 October. For the first time dentistry, doctoral and PhD graduates were also presented with their degrees.

DENTAL EXCELLENCE

The University Clinic of Dentistry Vienna is a leading international institution – its research activities have earned it a place in the top three in the German-speaking countries. Optimally aligned to the needs of dental practice, the teaching curriculum is also outstanding. Recent additions include the introduction of a logbook for the 72-week internship, which is designed to help assess the quality of the individual student's clinical activities. The catalogue that monitors the quality of performance is still in place. A specially developed, strict testing and hygiene plan for the special requirements of dentistry ensured that the practical exercises and the 72-week internship were able to be conducted in-person despite the pandemic.

The University Clinic of Dentistry Vienna has significantly improved its standing in the impact factor rankings.



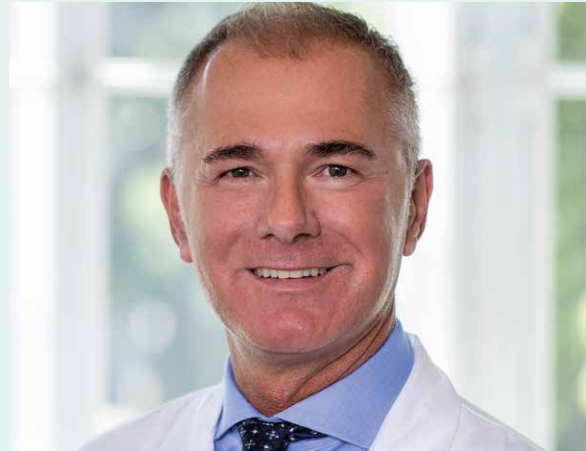
NEW EXPERTISE

MedUni Vienna reinforced its teaching, research and clinical staff in 2021 with the appointment of 19 new professors.



Wilhelm Behringer

Joining MedUni Vienna from Jena University Hospital and an expert in the treatment of seriously ill patients, Wilhelm Behringer was appointed Professor for Emergency Medicine and took over the management of the Department of Emergency Medicine.



Herbert Kiss

An expert in perinatology, he took up the Obstetrics and Feto-Maternal Medicine professorship and heads the Division of Obstetrics and Feto-Maternal medicine.



Dan Rujescu

A specialist in genetics, epigenetics and neurobiology of psychiatric disorders, he comes to MedUni Vienna from the Martin-Luther-University Halle-Wittenberg and is now Head of the Division of General Psychiatry at the Department of Psychiatry and Psychotherapy.



Oliver Strobel

Previously of the Heidelberg University Hospital, Oliver Strobel took over the Chair in Visceral Surgery at MedUni Vienna and is the new Head of the Department of General Surgery.

SECTION 98 UNIVERSITIES ACT PROFESSORSHIPS

Christoph Bock

The bioinformatics expert and genome research is the new Professor of Medical Informatics.

Georg Langs

The head of the Computational Imaging Research Lab took up his post as Professor of Machine Learning in Medical Imaging.

Gerhard Prager

The head of the Obesity Outpatients Clinic at the Division of General Surgery took over the Chair in Bariatric Surgery at MedUni Vienna.

SECTION 99 UNIVERSITIES ACT PROFESSORSHIPS

Hendrik Jan Ankersmit

A specialist in translational surgery research, Ankersmit took up the post of Professor of Thoracic Surgery.

Oskar Aszmann

The respected bionic reconstruction specialist was appointed Professor of Plastic Surgery.

Cihan Ay

The internationally respected thrombosis and blood coagulation expert was awarded a professorship in haematology.

Kaan Boztug

The rare diseases specialist was named Professor of Child and Adolescent Medicine.

Wulf Haubensak

A brain researcher, he specialises in circuit mechanics of emotional behaviour and is now Professor of Neuronal Cell biology.

Bernd Jilma

The Deputy Head of the Department of Clinical Pharmacology was appointed Professor of Internal Medicine and Clinical Pharmacology.

Oliver Kimberger

Now Professor of Perioperative Information Management at MedUni Vienna, Oliver Kimberger specialises in patient safety.

Jürgen Knoblich

The molecular biologist and neuronal stem cell specialist now holds the professorship for synthetic biology.

Karl Kuchler

Antifungal immunity and the virulence of pathogenic fungi are among the special focuses of the new Professor of Molecular Biology.

Rupert Lanzenberger

An expert in psychiatric imaging, Rupert Lanzenberger is now Professor of Clinical Neurosciences.

Thomas Leonard

Specialising in the molecular mechanisms behind signal transfer in cells, Leonard holds a professorship in molecular biology.

Peter Valent

Clinical and clinically experimental haematology expert Peter Valent took up the haematology professorship.

LIFELONG LEARNING

Graduation is just the start – which is why MedUni Vienna offers a wide variety of master's programmes resulting in an MPH, MAS, MClintDent, MDSc or MBA, as well as certificate courses and continuing education courses providing an academic qualification.

All of these part-time postgraduate courses provide excellent training, with expert teaching staff from Austria and abroad, as well as cooperations with other leading universities and institutions.

Master of Science (MSc)

- Ergonomics and Fitness for Work
- Occupational and Organisational Medicine
- Clinical Research
- Forensic Sciences
- Gender Medicine
- Healthcare Facilities
- Critical Care Nursing
- Interdisciplinary Pain Medicine (ISMED)
- Professional Interaction and Counselling
- Psychotherapy Research
- Study Management
- Toxicology
- Traditional Chinese Medicine (TCM)
- Transcultural Medicine and Diversity Care

Master of Public Health (MPH)

- Public Health

Master of Business Administration (MBA)

- Health Care Management (MBA)
- Health Care Management (HCM-AE)

Master of Advanced Studies (MAS)

- Insurance Medicine

Master of Clinical Dentistry (MClintDent)

- Endodontology
- Esthetic Dentistry
- Periodontology and Implantology

Master of Dental Science (MDSc)

- Prosthodontics

Continuing education courses with certification

- Occupational Medicine
- Occupational Health Professional
- Medical Hypnosis
- Medical Physics
- Study Management
- Medical Hypnosis for Dental Care

Certificate courses

- Crisis Intervention and Suicide Prevention
- Sleep Coaching
- Clinical Trials Assistant



MEDICAL INFORMATICS

Students on the Medical Informatics master's programme can specialise in bioinformatics, neuroinformatics, clinical informatics, informatics for assistive technology or public health informatics. The programme focuses on research-related, medical or clinical scenarios, according to their needs. Communication skills are a core element of the programme.





MOLECULAR PRECISION MEDICINE

Launched in autumn 2021 and offered in collaboration with the University of Vienna, the pioneering Molecular Precision Medicine master's programme gives students a thorough grounding in the fundamentals of pathogenesis, the development of therapies, and concepts of precision medicine and bioinformatics. The overarching aim: to gain a better understanding of and bring about improvements in the biological efficacy of new treatments. The new programme is part of the university's investments in precision medicine as part of its strategic focus on the healthcare of the future.

RESEARCH CAREER GOALS

In addition to its Medicine and Dentistry degrees, MedUni Vienna provides a wealth of opportunities for postgraduate specialisation with a broad choice of doctoral and PhD programmes. Around 1,300 young scientists are currently enrolled on these programmes, which are tailored to individual interests. The PhD programmes are aimed at enhancing skills in independent scientific research, and focus on basic research and training for young academics. The doctoral programmes are an alternative that provide application-led training in applied medical sciences.

PhD programmes

- Cell Communication in Health and Disease
- Endocrinology and Metabolism
- Immunology
- Inflammation and Immunity
- Integrative Structural Biology
- Malignant Diseases
- Medical Imaging
- Medical Informatics, Biostatistics and Complex Systems
- Medical Physics
- Molecular and Cellular Control of Tissue Homeostasis in Health and Disease – TissueHome
- Molecular, Cellular and Clinical Allergology
- Molecular Drug Targets
- Molecular Mechanisms of Cell Biology
- Molecular Signal Transduction
- Neuroscience
- RNA Biology
- Signaling Mechanisms in Cellular Homeostasis
- Vascular Biology

Applied medical sciences doctoral programmes

- Biomedical Engineering
- Cardiovascular and Pulmonary Disease
- Clinical Endocrinology, Metabolism and Nutrition
- Clinical Experimental Oncology
- Clinical Neurosciences (CLINS)
- Mental Health and Behavioural Medicine
- POeT – Programme for Organ Failure, Replacement and Transplantation
- Preclinical and Clinical Research for Drug Development
- Public Health
- Regeneration of Bones and Joints

Joint PhD programmes

- Molecular Biosciences (in collaboration with the University of Vienna)
- NTU Singapore at MedUni Vienna (in collaboration with Nanyang Technological University)

BUILDING ON SUCCESS



At MedUni Campus Mariannengasse, new facilities designed to lay the foundations for yet more world-class research, teaching and innovation will take shape over the next few years. This construction project is a high-profile sign of MedUni Vienna's goal of enabling patients to benefit as quickly as possible from basic-research findings.

Neda Krcic, Building, Security and Infrastructure Management

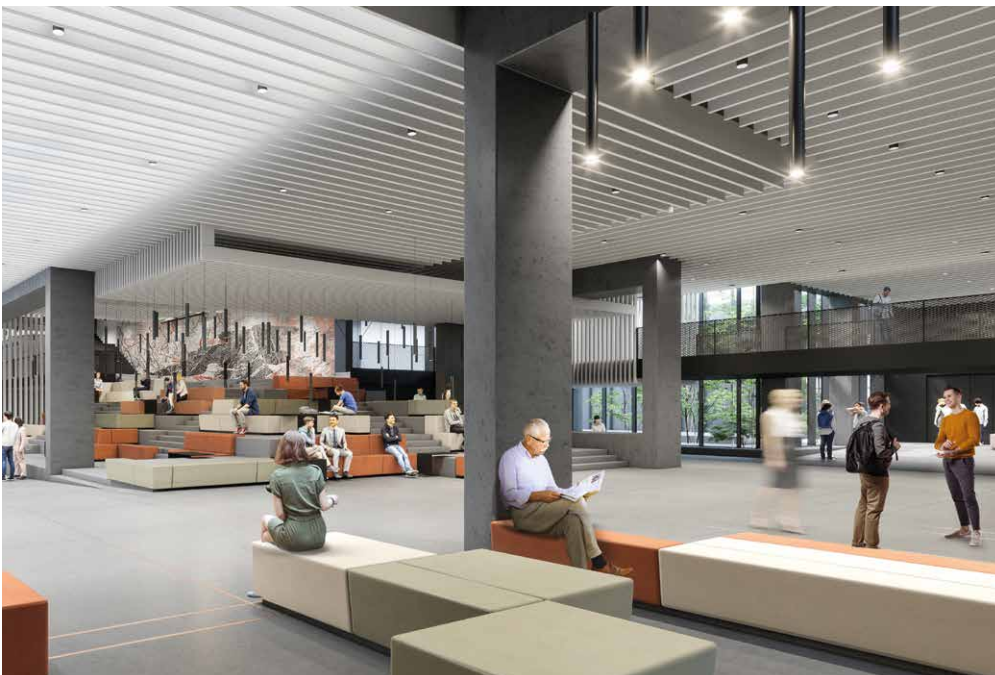
Christine Lath, Universities Division, Bundesimmobiliengesellschaft m.b.H.

Volkan Talazoglu, Vice Rector for Finance



RESHAPING MEDICINE

Modern buildings and state-of-the-art facilities are the hardware that help to provide an ideal environment for lecturers and students, researchers, administrative and care staff, as well as doctors and patients. A comprehensive programme of investment is the prologue to the latest chapter in MedUni Vienna's success.



As part of this development, construction of the Eric Kandel Institute – Center for Precision Medicine is under way at the MedUni Campus AKH (see photo above right).

MEDUNI CAMPUS

The university has been steadily developing its research facilities for many years now. The latest additions are the Center for Translational Medicine, the Eric Kandel Institute – Center For Precision Medicine, and the Technology Transfer Center, all of which are now under construction. Modern teaching and research infrastructure is also taking shape at MedUni Campus Mariannengasse.

Demolition work connected with the construction of MedUni Campus Mariannengasse started in early July and had largely been completed by the end of 2021. “The new site will have around 35,000m² of space, with room for some 2,000 medicine students and 750 staff from MedUni Vienna. The new campus is right next to the university’s existing facilities and will bring together MedUni Vienna’s preclinical institutes at a single location,” said Volkan Talazoglu, Vice Rector for Finance.

The buildings that make up MedUni Campus Mariannengasse will comprise long-standing properties that have been preserved and refurbished, as well as a new build. In total, around EUR 340m is being invested in the development.

Bundling world-class strengths

In order to give it an open feel, the campus will feature four courtyards where natural light can fill the interior of the site. MedUni Campus Mariannengasse will provide state-of-the-art facilities for teaching and top-class research that meets the highest international standards, creating an inspirational learning and working environment. In terms of its functionality, the campus is split into general, teaching and research areas. “Our primary goal is to enable patients to reap the benefits of basic research as quickly as possible. Bundling our strengths at MedUni Campus Mariannengasse will bring us a major step closer to achieving this. All in all, we will be creating an outstanding setting for world-class research,

PRECISION MEDICINE

The concept of precision medicine has brought about a paradigm shift in medical care. Determined by genetics and environmental influences, every individual’s disposition towards illness is totally unique. This means that precision medicine based on specifically defined individual and molecular factors is the optimum approach for treatment and prevention.

teaching and innovation,” Rector Markus Müller explained.

Eric Kandel Institute – Center for Precision Medicine

Further progress has also been made on detailed planning for the Center for Translational Medicine and the Center for Precision Medicine at MedUni Campus AKH. The decision to build the Eric Kandel Institute – Center for Precision Medicine was taken in April 2021. The EUR 75 million required for the development will come from the European Resilience and Recovery Facility as well as from donations raised from MedUni Vienna’s fundraising activities. Due for completion by 2026, the new research centre will feature cutting-edge infrastructure and outstanding facilities for up to 240 researchers.

The new building will be named after Nobel laureate Eric Kandel. Born in Vienna in 1929, he was forced to flee the Nazi regime and settled in the USA. Kandel’s work revolutionised our understanding of the formation of short-term and long-term memories. “I am extremely honoured that the new precision medicine facility at the Medical University of Vienna will be named the Eric Kandel Institute – Center for Precision Medicine,” said Kandel, who has an honorary doctorate from the university. “The establishment of the centre will ensure that the Medical University of Vienna remains in the vanguard of medical care and research worldwide.”

HIGH-IMPACT RESEARCH

Thanks to the boundless curiosity and tireless work of its researchers, MedUni Vienna plays a world-beating role in many areas of scientific research, providing crucial inputs that further medical understanding along the way.





*Merit Alwine Hildebrandt, Center for Anatomy and Cell Biology
Gerald Timelthaler, Center for Cancer Research
Dominik Kirchhofer, Center for Cancer Research*

RESEARCH HIGHLIGHTS

For MedUni Vienna, combining basic research with practical clinical applications is part and parcel of its daily work. This benefits patients and researchers alike. The following pages give an overview of some of the latest research projects.



*Kristeli Eleftheriou, Center for
Anatomy and Cell Biology
Hamid Reza Mansouri Khosravi,
Center for Anatomy and Cell
Biology*

CHILDREN



Early detection of abnormal developments

Affecting almost one percent of all newborns, heart defects are among the most common types of congenital abnormalities. Often, they are associated with other anomalies such as abnormal developments in the brain or other organs. Foetal MRI, a magnetic resonance imaging procedure that can be performed on the unborn child, can detect these abnormalities at an early stage. In a recent study published in the highly respected *Journal of the American College of Cardiology*, the team headed by lead author Gregor Dovjak from the Department of Biomedical Imaging and Image-guided Therapy in collaboration with the Division of Obstetrics and Feto-Maternal Medicine (senior author Barbara Ulm) demonstrates the importance of foetal MRIs in the diagnosis of congenital abnormalities.

Valuable addition to ultrasound

“Currently, foetal MRI is not universally used for prenatal assessment of fetuses with cardiac defects. However, our results suggest that foetal MRI is a useful complement to ultrasound,” explained Gregor Dovjak. According to the study, the MRI revealed at least one other abnormality

in almost 57% of fetuses with heart defects, and approximately a quarter of all fetuses had structural brain abnormalities. This reliable prenatal imaging allows abnormalities to be identified and further treatment steps initiated at an early stage. One of the major foetal MRI centres in Europe is located within the Department of Biomedical Imaging and Image-guided Therapy, where several such scans are performed on a daily basis.

Gut bacteria influence brain development

Extremely premature infants are at a high risk for brain damage. Researchers at the University of Vienna and the Medical University of Vienna have now found possible targets for the early treatment of such damage outside the brain: bacteria in the gut of premature infants may play a key role. The research team found that overgrowth of the gastrointestinal tract with the *Klebsiella* bacterium is associated with an increased presence of certain immune cells and the development of neurological defects in premature babies. The study (in which Angelika Berger and Lukas Wisgrill of the Division of Neonatology, Pediatric Intensive Care and Neuropediatrics at the Medical University of Vienna played a major role) was published in journal *Cell Host & Microbe*.

COVID-19

Causes of thromboses after vaccination

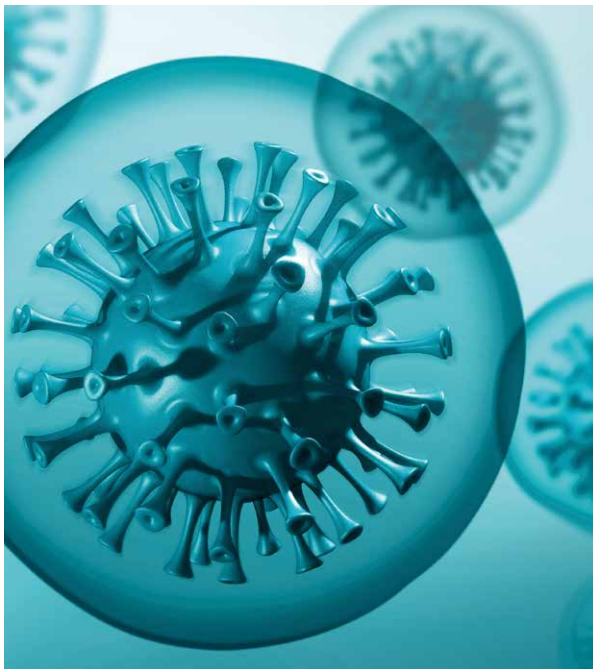
In April 2021, an international research team including a group of blood coagulation experts from MedUni Vienna identified the cause of very rare clotting complications following vaccination against Covid-19. According to the findings, these are similar to a side effect observed in treatment with heparin, known as autoimmune thrombocytopenia. This was the conclusion reached by a group of researchers headed by lead author Andreas Greinacher (Institute of Immunology and Transfusion Medicine at Greifswald University Hospital) and co-authors Paul Kyrle and Sabine Eichinger (MedUni Vienna). It is thought that a scientific explanation for possible rare complications after administration of a vaccination has never been delivered as quickly as in this case.

New England Journal of Medicine

Effect of Covid-19 vaccination on cancer patients

The risk of infection with SARS-CoV-2, and of a more severe Covid-19 disease course, is higher in cancer patients – which is why vaccination is recommended. However, little is known about how well cancer patients respond to the vaccination. In a study, an interdisciplinary research team from MedUni Vienna working at University Hospital Vienna under Matthias Preusser showed that the type of cancer therapy influences the immunological response to the vaccination: chemotherapy patients had lower antibody levels than patients undergoing targeted treatment with medication administered in the form of injections or infusions.

JAMA Oncology



Key enzyme for Covid-19 treatments

The ACE2 enzyme found in body cell membranes normally plays a role in regulating blood pressure and warding off cardiovascular disease. The SARS-CoV-2 coronavirus uses it as the entry receptor to infect cells. Until now, it had been assumed that the concentration of the enzyme would decline in the case of a Covid-19 infection, which is why a new medication (genetically engineered ACE2) was developed with the aim of increasing its presence. A team led by Manfred Hecking and Roman Reindl-Schwaighofer from the Department of Medicine III's Division of Nephrology and Dialysis demonstrated in a major clinical trial that rather than dropping, concentrations can actually increase following infection with the coronavirus.

American Journal of Respiratory and Critical Care Medicine

COVID-19



Lancet study of European coronavirus strategy

How should Europe address the Covid-19 pandemic going forward? What strategy should it follow and what risks need to be taken into account? To help answer these questions, a group of European researchers from a range of disciplines – including MedUni Vienna epidemiologist Eva Schernhammer – drew up a detailed joint analysis of the situation, which they published in August 2021. While the pandemic is not yet over, it is possible to envisage its end, the report said: “Measures to curtail its spread can be lifted as soon as vaccination rates are high enough and the vaccines remain effective in the face of new variants. But until that point the goal should be to develop a common European approach that keeps the social and economic costs for Europe and the world as low as possible.”

The Lancet/The Lancet Regional Health – Europe

Selection guidelines for lung transplants

In May 2020, a 44-year-old woman with a severe case of Covid-19 became the first patient in Europe with the disease to receive a lung transplant, with the procedure carried out by a team led by Konrad Hötzenecker from the Department of Thoracic Surgery. The lung transplant programme is now playing a leading role in an international consortium involving experts from the USA, Europe and Asia – on the basis of expertise developed at MedUni Vienna, a total of around 40 transplants have been conducted in Covid-19 patients. And the consortium has now presented the first general selection criteria for lung transplants in Covid-19 patients.

Lancet Respiratory Medicine

GENOME

Affordable method of sequencing individual cells

RNA sequencing is a powerful technology for studying cells and diseases. In particular, single-cell RNA sequencing helps uncover the heterogeneity and diversity of our body. This is the central technology behind the Human Cell Atlas’s quest to map all human cells. However, single-cell RNA sequencing reaches its limits in very large projects, as it is time-consuming and very expensive. But this is set to change in future: to address these challenges, scientists from the research group headed by Christoph Bock, principal investigator at the CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences and professor at MedUni Vienna, developed an efficient new method for sequencing very large numbers of single cells.

Nature Methods

LIVER

Liver transplants: improving waiting list mortality

In transplantation medicine, the lead priority is ensuring that donor organs are assigned to patients who need them most urgently. In a large-scale, joint international project conducted by the Medical University of Vienna and the Mayo Clinic in Rochester (USA), researchers from the Department of General Surgery and the Division of Gastroenterology and Hepatology at MedUni Vienna's Department of Medicine III have made a significant step forward to improve prediction of survival among patients on the waiting list for liver transplants thanks to the inclusion of additional laboratory parameters. The study was led by principal investigator Patrick Starlinger from MedUni Vienna's Department of General Surgery, who is currently also working at the Mayo Clinic.

Journal of Hepatology

Synthetic bile acids boost immune system

Primary sclerosing cholangitis (PSC) is a rare, chronic inflammatory disease of the bile ducts and is difficult to treat. Studies led by Michael Trauner, Head of MedUni Vienna's Division of Gastroenterology and Hepatology (Department of Medicine III), have shown positive effects from the administration of synthetically produced bile acids and bile acid receptor agonists. A recent joint study by Trauner and immunologist Nicole Boucheron shows for the first time that the synthetically manufactured bile acid Nor-UDCA (Nor-ursodeoxycholic acid) also acts directly on the immune system and CD8-T cells, which are misdirected in PSC. This can reduce tissue-damaging inflammation.

Journal of Hepatology

BRAIN

New biomarker for brain disease CALD

X-linked adrenoleukodystrophy (X-ALD) is the most common monogenetic disorder of the white matter in the brain. Highly variable, it ranges from slowly progressive adrenomyeloneuropathy (AMN) to life-threatening inflammatory brain demyelination (CALD). In their studies, a group of researchers under Johannes Berger (Center for Brain Research) identified serum neurofilament light chain (sNFL) as a possible biomarker for monitoring neurodegeneration. The results of the study reveal that sNFL in the blood reflects inflammation and progression of the disease in CALD patients, giving it the potential to help simplify clinical decision making and the development of treatment.

Nature Communications

Score rates immune therapy for liver cancer

To help advance personalised medicine, also known as precision medicine, the Liver Cancer (HCC) Study Group Vienna, led by Matthias Pinter from the Division of Gastroenterology and Hepatology at MedUni Vienna's Department of Medicine III, is primarily focusing on identifying patient groups who could benefit particularly well from specific forms of treatment. There are still no established biomarkers to predict the success of immunotherapy in liver cancer patients. In a multi-centre study led by Matthias Pinter, a score based on simple laboratory parameters has now been developed to predict outcomes in liver cancer patients receiving immunotherapy.

Journal of Hepatology

IMMUNOLOGY

New insights into virus-induced microcephaly

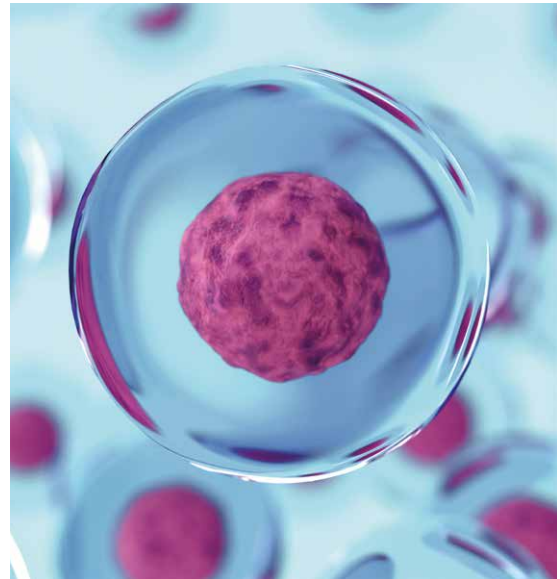
A viral infection in early pregnancy is one of the main causes of microcephaly. But it is still largely unclear just how viruses impair brain development. A study led by Jürgen Knoblich examined the underlying mechanisms behind microcephaly caused by the zika virus (ZIKV) and herpes simplex virus (HSV-1). The researchers found that both viruses were highly efficient at replicating in the cerebral organoids and slowing their growth by causing cells to die. ZIKV and HSV-1 each trigger different cellular reactions during the process.

Cell Stem Cell

Antiretroviral treatment lowers cancer risk in HIV patients

HIV patients have a higher risk of developing skin cancer and cancer of the mucous membrane even in cases when the human immunodeficiency virus is no longer detectable in the blood thanks to treatment with antiretrovirals. A study by the Department of Dermatology led by Simona Saluzzo and Georg Stary, in collaboration with the Ludwig Boltzmann Institute for Rare and Undiagnosed Diseases and the CeMM Research Center for Molecular Medicine, showed that the point at which the antiretroviral treatment begins can have a bearing on tumour development. "We were able to show that there are differences in the tissue-specific immune response depending on how soon antiretroviral treatment began after an HIV infection was diagnosed," Georg Stary summarised.

Immunity



Previously unknown rare disease discovered

A team of Vienna-based researchers and their international partners discovered a previously unknown, rare blood formation and immune system disease which is caused by a congenital defect in the transcription factor Helios – which is named after the Greek sun god. In their publication, the team led by Kaan Boztug (MedUni Vienna, Scientific Director of St. Anna Children's Cancer Research and Director of the Ludwig Boltzmann Institute for Rare and Undiagnosed Diseases) defined previously unknown functions of Helios in the activation of immune responses and in the immune balance. According to lead author Tala Shahin, the new insights could in future be used in the targeted treatment of immune deficiency and malignant tumours.

Science Immunology

CANCER

Possible origin of neuroblastoma discovered

Neuroblastoma is a childhood cancer that is especially prevalent in children aged two to three and can be fatal. Since the tumour cells resemble certain cells in the adrenal glands, a joint research group from MedUni Vienna's Center for Brain Research and the Swedish Karolinska Institute investigated the cellular origin of these cells and sympathetic neurons during the embryonic development of the human adrenal glands. During their investigations, they discovered a previously unknown cell type that might potentially be the origin of the tumour cells.

Nature Genetics

Cervical cancer: new radiotherapy technique increases chances of survival

Patients with locally advanced cervical cancer benefit significantly from an innovative radiotherapy technique co-developed by MedUni Vienna under the direction of Richard Pötter and Christian Kirisits. The technique provides better tumour control and produces fewer side effects. This is substantiated by the results of the prospective, international, multi-centre study EMBRACE I, conducted under the direction of the Department of Radiation Oncology at MedUni Vienna and University Hospital Vienna's Comprehensive Cancer Center (CCC). Presented at the European Radiation Oncology Conference, the results represented the world's first reliable data on a personalised radiation oncology treatment concept for cervical cancer.

Lancet Oncology

Oncology: a pioneer in precision medicine

According to Statistics Austria, the number of people dying from cancer in the country has been declining for around two decades. Reasons include earlier diagnosis and improved treatment. On World Cancer Day on 4 February 2021, a group of cancer experts from MedUni Vienna explained how the ongoing development of precision medicine has played a significant part in this trend. The term precision medicine applies to a range of processes that extend from molecular biological analysis of cancer tissue to advancements in imaging and digital analysis of data using machine learning, and help medical experts arrive at a suitable course of treatment.

Breast cancer study sets new international standards

A MedUni Vienna study group became the first in the world to investigate the optimal duration of long-term anti-hormone therapy for the treatment of post-menopausal breast cancer. Conducted between 2004 and 2017, the ABCSG 16/S.A.L.S.A. study ended in June 2020. The results were published in the internationally respected New England Journal of Medicine.

New England Journal of Medicine

CANCER

New therapeutic approach to pancreatic cancer

The most widespread form of pancreatic cancer, pancreatic ductal adenocarcinoma (PDAC), is usually divided into two subtypes: classical and basal. The latter is highly aggressive and tends towards early metastasis. The study team led by the Center for Cancer Research shed light on the mechanisms that lead to such aggressive metastasis in the basal subtype of ductal adenocarcinoma. Published by lead author Bernhard Klösch from the Center for Cancer Research, the results are contributing to a better understanding of the disease and opening up fresh points of departure for treatment.

Gut



Record donations at the 15th Cancer Research Run

49 teams, 28 sponsors and cooperation partners and around 2,000 runners supported cancer research at MedUni Vienna by participating in the 2021 Cancer Research Run. Together, they raised EUR 233,507, setting a new record in the process. The proceeds will be used to support and launch additional cancer-related research projects.



Breast cancer: innovative concept optimises treatment

A new guide to breast cancer treatment has been published to help ensure optimal preparation prior to surgery. An international working group has developed a medical concept to follow women through from the point of diagnosis, via chemotherapy, right through to the operation itself, thereby preventing unnecessary mastectomies. The final version of this guide was agreed at a consensus meeting between leading experts and patient advocates in Lucerne, hence the decision to name the compendium of recommendations The Lucerne Toolbox. The project was led by Peter Dubsy (Department of General Surgery) and Katja Pinker-Domenig (Department of Biomedical Imaging and Image-guided Therapy) from MedUni Vienna.

Lancet Oncology

HEART



Mitral regurgitation – an underestimated risk

The severity of mitral regurgitation in patients with chronic cardiac insufficiency is underestimated and as such the condition is rarely treated. This was the conclusion of a study conducted by a working group led by Philipp Bartko and Georg Goliäsch of the Division of Cardiology at the Department of Medicine II. Previously regarded as a sign of progression of heart insufficiency in many cases, mitral regurgitation was not seen as a treatable condition in its own right. The study findings show that mitral regurgitation occurs far more frequently in patients with chronic heart insufficiency than previously thought and that it has a particularly adverse impact on patients' long-term prognoses.

British Medical Journal

Cytokine APRIL protects against atherosclerotic cardiovascular disease

Atherosclerosis, a chronic inflammatory disease, causes heart attacks and strokes, making it the second most common cause of death worldwide. The condition is primarily attributable to the accumulation of LDL cholesterol and immune cells in the inner layer of arteries, which results in the build-up of atherosclerotic plaques. Researchers from the Department of Laboratory Medicine of the Medical University of Vienna in collaboration with colleagues from the University of Lausanne (Switzerland) and the University of Cambridge (UK) have identified a cytokine called A Proliferation Inducing Ligand (APRIL) that plays a major protective role against the formation of these plaques.

Nature

Myocardial angiotensin metabolism in heart insufficiency

The angiotensin II (AngII) peptide hormone is a tissue hormone. It is a vital element in the renin-angiotensin-aldosterone system (RAAS) which plays a key role in blood pressure regulation and water and electrolyte balance in humans. A study led by Noemi Pavo from the Division of Cardiology (Department of Medicine II) investigated RAAS regulation of human myocardial tissue in heart insufficiency. According to the study, in end-stage cardiac insufficiency the heart is flooded with considerable volumes of classic RAAS metabolites, while AngIII could prove to be an unrecognised mediator of damaging effects to the cardiovascular structure.

Journal of the American College of Cardiology

HEART



Increased risk of vascular occlusions in cancer patients

Active cancer is a known risk factor for arterial and venous thrombosis. MedUni Vienna has now performed the first population-based study to analyse the risk of venous thromboembolism, pulmonary embolism, heart attack and stroke. This nationwide undertaking enabled the MedUni Vienna research team, led by Ella Grilz, Ingrid Pabinger and Cihan Ay from the Division of Hematology and Hemastaseology of the Department of Medicine I, to show that there is a higher risk of arterial and venous thromboembolism in cancer patients in all age groups.

European Heart Journal

Drugs able to slow progression of cardiac hypertrophy in dialysis patients

Patients with chronic kidney dysfunction frequently develop thickening of the heart muscle, a condition also known as left ventricular hypertrophy. This is particularly pronounced in renal dysfunction patients who require dialysis. The danger of this cardiac hypertrophy lies in the considerable associated increase in the risk of acute cardiovascular disease. Haemodialysis patients have a number of risk factors for developing this form of cardiac hypertrophy. One of those is elevated levels of the protein fibroblast growth factor 23 (FGF23). However, FGF23 can be influenced by drugs in various ways. This was the central finding of a study conducted at the Division of Nephrology and Dialysis of MedUni Vienna's Department of Medicine III by the working group led by Katharina Dörr and Divisional Head Rainer Oberbauer.

Circulation Research

BIONICS

Prosthetics and body to work together tangibly in future

In future, high-tech prosthetics will be integrated into the skeleton, controlled by rerouted nerve signals in the muscles and supported by high-performance algorithms to provide feedback to the user and make them feel like they are part of the body. This is the vision outlined by a team of experts headed by Oskar Aszmann from the Department of Plastic, Reconstructive and Aesthetic Surgery in a scientific article published in Nature Biomedical Engineering. Aszmann believes that there are very high hopes for direct skeletal fixation (DSF), or osseointegration. DSF is a surgical procedure that aims to attach the arm or leg prosthesis to the body as closely as possible.

Nature Biomedical Engineering



WORLD-CLASS MEDICINE

Markus Mach, Department of
Cardiac Surgery
Alexandra Andreeva, PhD
student, Department of
Cardiac Surgery
Anna Bartunek, Department
of Anaesthesia, Intensive Care
Medicine and Pain Medicine
Martin Andreas, Department
of Cardiac Surgery

Outstanding medical achievements are rooted in innovation and the skills of the individual physicians involved. It is on this basis that we offer our patients access to the most advanced and effective diagnostic and treatment processes, while continuing to drive forward medical advances on the international stage.



Cochlea implantation surgery using new high-tech robot

ONE OF THE BEST HOSPITALS IN THE WORLD

University Hospital Vienna ranked 27th in the list of the best hospitals in the world in a survey published in US news magazine Newsweek in March 2021. MedUni Vienna sees this latest success as confirming its duty to continuously improve the hospital's performance.

The Newsweek ranking analysed 2,000 hospitals in 25 countries, and with its top 30 finish, MedUni Vienna's University Hospital is officially among the best of the best worldwide. The survey was based primarily on three sources of data: recommendations by an international team of experts, patient surveys and health-care key performance indicators (KPIs).

On 17 September – International Patient Safety Day – MedUni Vienna and University Hospital Vienna launched a joint campaign entitled “Our Anti-Virus Programme”, which provided information about the key hygiene measures in place at the hospital.



Expansion of paediatric surgery centre now complete

Against the backdrop of the mounting challenges due to the pandemic, completion of the project to expand the paediatric surgery centre marked another important step in MedUni Vienna's development. The new facility sets the first milestone in the establishment of a new parent and child centre. It will elevate care and treatment for children, adolescents and pregnant people in the greater Vienna area to a new level. Inspired by an approach which sees the “specialists come to the children”, surgical services for children and teenagers as well as pre- and post-treatment care have now been largely brought together under one roof.

Transplantation medicine: two donor organs optimised at once

MedUni Vienna has an excellent international reputation as a leading centre of transplantation medicine. Ex-situ organ perfusion of donor organs is one of the most promising innovations in this area. The process involves flushing explanted donor lungs or donor livers with special solutions in specially designed machines and continuously monitoring their function. This provides the opportunity to accurately assess organs of borderline quality and observe them over several hours before

approving them for transplantation. In March 2021, two donor organs from the same donor were perfused in parallel in the newly established perfusion room at University Hospital Vienna.

Operation using high-tech robot

In October 2021, the Department of Otorhinolaryngology performed one of the world's first operations using spectacular, new fully automated robotic technology. During the minimally invasive cochlear implant operation, the high-tech device automatically used a feed of accurate data to provide precise access to the inner ear.

This high degree of automation and precise navigation offer a glimpse into the future of robot-assisted surgery.

Certified as reanimation centre

For the first time, also in October, an Austrian medical institution has been certified as a Cardiac Arrest Center in accordance with the specifications of the German Council for Resuscitation. Coordinated by the Department of Emergency Medicine, MedUni Vienna and University Hospital Vienna now boast the only certified centre in Austria for the care of patients following resuscitation.



Participation in the international campaign “Orange the World” sent out a strong signal against violence against women: during the 16 Days Against Violence (25 November to 10 December), certain buildings on the shared site, including the main building of University Hospital Vienna and the Rectorate building of MedUni Vienna, were bathed in orange light.

WORKING TOGETHER

International and national partnerships and cooperation projects pave the way for scientific excellence and enable research at the very highest level. The resulting insights directly benefit patients and help to keep people healthy.



MEDIZINISCHE
UNIVERSITÄT WIEN

*Jürgen Alphonsus, Department of
Orthopedics and Trauma Surgery*
*Mina Obradovic, Department of
Anaesthesia, Intensive Care Medicine
and Pain Medicine*
Katharina Fuchs, Legal Department





PARTNERSHIPS AND NETWORKS

National and international research partners and cooperations are an important success factor. MedUni Vienna's networks provide lots of impetus and help propel researchers towards their ambitious strategic goals.

*Neda Krcic, Claudia Schuster, Jakob Lengger,
Building, Security and Infrastructure Management*



MEDUNI VIENNA'S NATIONAL RESEARCH PARTNERS

Cooperation is an essential aspect of research: within the university, at the national level and internationally (see page 77 for a list of international cooperation partners).



SUBSIDIARIES AND SHAREHOLDINGS

ACOmarket GmbH

Established together with five other Austrian universities to bundle digital activities, this company is a central IT service broker and service provider.

Alumni Club

This postgraduate knowledge, dialogue and career platform for MedUni Vienna graduates, students and staff also involves the general public.

CBmed GmbH – Center for Biomarker Research in Medicine

Besides MedUni Vienna and Graz's three universities, CBmed's shareholders include the Austrian Institute of Technology (AIT) and Joanneum Research, as well as numerous partners in science and industry.

Forensisches DNA-Zentrallabor Wien GmbH (DNA Central Laboratory)

The DNA Central Laboratory's principal services are trace analysis and forensic DNA analysis in relation to criminal and parentage investigations.

Josephinum – Collections of the Medical University of Vienna

The Josephinum keeps the university's medical legacy alive. It houses MedUni Vienna's medical history collections, as well as operating a museum and staging exhibitions to make them accessible to the public.

Karl Landsteiner Privatuniversität für Gesundheitswissenschaften GmbH

MedUni Vienna is one of the four maintaining bodies of the private Karl Landsteiner University of Health Sciences in Krems.

Max Perutz Labs Support GmbH

This joint facility operated in cooperation with the University of Vienna works in cutting-edge areas of life sciences, for example investigating the structure of essential cell molecules.

Medical University of Vienna International GmbH (MUVI)

This international healthcare consultancy is specialised in providing management, knowledge transfer and medical education solutions.

University Clinic of Dentistry Vienna GmbH

With around 400 employees, the University Clinic of Dentistry – a subsidiary of MedUni Vienna – is one of the largest and most advanced university dental hospitals in Europe.



VIENNA SCIENCE AND TECHNOLOGY FUND (WWTF): ALMOST EUR 7 MILLION FOR PRECISION MEDICINE

The precision medicine call issued by the WWTF saw funding of EUR 6.87m allocated to eight projects in 2021. Seven of the grants went to research teams at MedUni Vienna: Lukas Wisgrill (Department of Pediatrics and Adolescent Medicine), microbiomes in preterm infants; Monika Resch (Department of Pediatrics and Adolescent Medicine), intraventricular haemorrhage; Adelheid Wöhrer (Department of Neurology), longitudinal tumour evolution; Georg Langs (Department of Biomedical Imaging and Image-guided Therapy), breast cancer diagnostics; Manfred Hecking (Department of Medicine III), automated haemodialysis treatment; Rainer Oberbauer (Department of Medicine III), individualised risk assessment of rare genetic kidney disorders; and Dietmar Herndlner-Brandstetter (Department of Medicine I), development and testing of novel cancer immunotherapies.



CITY OF VIENNA MAYOR OF VIENNA FUND

The Mayor of Vienna's Medical-Scientific Fund provides financial support for a host of scientific research projects at MedUni Vienna. In addition, the City of Vienna Fund for Innovative Cancer Research provides funding for innovative interdisciplinary cancer research.

SPECIAL RESEARCH PROGRAMMES FUNDED BY THE AUSTRIAN SCIENCE FUND

The Austrian Science Fund (FWF) is Austria's central funding body for the promotion of basic research. Equally committed to supporting all areas of science, its activities are exclusively aligned to the standards of the international scientific community. The Special Research Programmes (SFBs) play a leading role in promoting world-class research.

The following SFBs are based at MedUni Vienna:

- **Myeloproliferative Neoplasms**
(Project Manager: Peter Valent, Department of Medicine I)
- **Inflammation and Thrombosis**
(Project Manager: Johannes A. Schmid, Center for Physiology and Pharmacology)
- **Histone Deacetylases as Regulators of T Cell-mediated Immunity in Health and Disease**
(Project Manager: Wilfried Ellmeier, Center for Pathophysiology, Infectiology and Immunology)
- **RNAdeco: Chemical Decoration of RNA**
(Project Manager: Michael F. Jantsch, Center for Anatomy and Cell Biology)
- **Metabolic Regulation of Tissue Integrity**
(Project Manager: Thomas Weichhart, Center for Pathobiochemistry and Genetics)

LUDWIG BOLTZMANN INSTITUTES

The Ludwig Boltzmann Gesellschaft (LBG) initiates new research topics in medicine and life sciences. The LBG is an important partner for MedUni Vienna for externally financed research, with the following Ludwig Boltzmann Institutes (LBIs) located at the university:

- **LBI for Digital Health and Patient Safety**
(Heads: Harald Willschke and Maria Kletečka-Pulker)
- **LBI Applied Diagnostics**
(Head: Markus Mitterhauser)
- **LBI for Rare and Undiagnosed Diseases**
(Head: Kaan Boztug)
- **LBI for Arthritis and Rehabilitation**
(Head: Günter Steiner)
- **LBI for Hematology and Oncology**
(Head: Peter Valent)
- **LBI for Cardiovascular Research**
(Head: Johann Wojta)

MAX PERUTZ LABS VIENNA

This joint venture between the University of Vienna and MedUni Vienna focuses on solving scientific problems at the intersection of biology and medicine. Around 400 scientists from 40 different countries work at Max Perutz Labs, conducting research to develop mechanistic understanding of biomedical processes and connecting basic research with topics relevant to human health.

The research programmes at Max Perutz Labs centre on four focus areas:

- Mechanistic cell and developmental biology
- Chromatin, RNA and chromosome biology
- Infection and immunity
- Structural and computational biology



EUROPEAN UNIVERSITY HOSPITAL ALLIANCE

The European University Hospital Alliance (EUHA) comprises nine leading European hospitals with a proven track record in healthcare, teaching and research, and which work together with the goal of improving current and future patient outcomes. MedUni Vienna is a founder member through University Hospital Vienna.

CD LABS ENHANCE APPLIED RESEARCH

The Christian Doppler Laboratories (CD Laboratories) conduct applied basic science at the highest level in the form of cooperation projects with innovative commercial partners. Jointly run by MedUni Vienna, partners in industry and the Christian Doppler Research Association, the Christian Doppler Laboratories focus on the continued enhancement of scientific discoveries. The CD Laboratory for Personalized Immunotherapy, which centres on the advancement of immunomodulating cancer treatments, and the CD Laboratory for Artificial Intelligence (AI) in Retina opened in 2021.

In 2021, the following CD labs were based at MedUni Vienna:

- **Artificial Intelligence in Retina**
(Project Manager: Hrvoje Bogunovic, commercial partner: Heidelberg Engineering GmbH)
- **Personalised Immunotherapy**
(Project Manager: Matthias Preusser, commercial partner: Roche Austria GmbH)
- **Multimodal Analytical Imaging of Aging and Senescence of the Skin**
(Project Manager: Florian Gruber, commercial partner: Chanel Parfums Beauté)
- **Portal Hypertension and Fibrosis in Liver Disease**
(Project Manager: Thomas Reiberger, commercial partner: Boehringer-Ingelheim)
- **Arginine Metabolism in Rheumatoid Arthritis and Multiple Sclerosis**
(Project Manager: Gernot Schabbauer; commercial partner: Boehringer Ingelheim International GmbH)
- **Applied Metabolomics**
(Project Manager: Alexander Haug, Lukas Kenner, commercial partner: Siemens Medical Solutions USA, Inc.)
- **Molecular Stress Research in Peritoneal Dialysis**
(Project Manager: Klaus Kratochwill; commercial partner: Zytotoprotect GmbH)
- **Clinical Molecular MR Imaging**
(Project Manager: Siegfried Trattning; commercial partner: Siemens AG Österreich)
- **Innovative Optical Imaging and its Translation to Medicine**
(Project Manager: Rainer Leitgeb, commercial partners: Carl Zeiss Meditec Inc., Exalos AG)
- **Ocular and Dermatological Effects of Thiomers**
(Project Manager: René Werkmeister, commercial partner: Croma-Pharma Gesellschaft m.b.H.)



In 2021, a MedUni Vienna researcher once again achieved considerable success within this elite alliance when Tibor Harkany (Center for Brain Research) won a EUR 2.5m ERC Advanced grant for his 'Life-long cross-generational priming of the hypothalamus for obesity' (FOODFORLIFE) research project.

PAN-EUROPEAN COOPERATION

MedUni Vienna participated in a total of 86 EU-funded projects in 2021.

- 70 in the core Horizon 2020 Framework Programme (Health, ERC, MSCA, ICT, FET Open, etc.)
- 13 projects in the Innovative Medicines Initiative 2 (IMI2) programme
- One project in the 3rd Health Programme
- Two projects in programmes of the Directorate-General for Justice and Consumers

11 MedUni Vienna researchers currently coordinate EU consortiums with partners from European and other countries.

14 projects commenced in 2021.

NEW ERC GRANTS SECURED

European Research Council (ERC) grants are among the largest of their kind and represent a widely recognised commendation for scientific excellence.

Starting Grants

Christoph Bock, EpigenomeProgramming
Institute of Artificial Intelligence/Center for Medical Statistics, Informatics and Intelligent Systems, period: 2016-2021

Andreas Bergthaler, CMIL
Institute of Hygiene and Applied Immunology/Center for Pathophysiology, Infectiology and Immunology, period: 2016-2021

Synergy grants

Joanna Loizou, DDREMM
Center for Cancer Research, in collaboration with ETH Zurich and University of Cambridge, period: 2020-2026

Igor Adameyko (coordinator), KILL-OR-DIFFERENTIAT
Division of Neuroimmunology/Center for Brain Research, in collaboration with Harvard Medical School, Karolinska Institutet and Institut Curie, period: 2020-2026

Oskar Aszmann, Natural BionicS
Department of Plastic, Reconstructive and Aesthetic Surgery, in collaboration with Istituto italiano di tecnologia and Imperial College London, period: 2019-2025

Consolidator Grants

Kaan Boztug, iDysChart
CeMM and MedUni Vienna, period: 2019-2024

Alwin Köhler, NPC-BUILD
Division of Molecular Cell Biology/Center for Medical Biochemistry, period: 2018-2024

Christoph Bock, EPI-CART
Institute of Artificial Intelligence/Center for Medical Statistics, Informatics and Intelligent Systems, period: 2021-2026

Advanced Grants

Maria Sibilía, TNT-TUMORS
Center for Cancer Research, period: 2016-2022

Tibor Harkany, Secret-Cells
Division of Molecular Neurosciences/Center for Brain Research, period: 2016-2021

Giulio Superti-Furga, Game of Gates
CeMM and MedUni Vienna, period: 2016-2021

Erwin Wagner, CSI-Fun
Department of Dermatology, period: 2018-2023

Henriette Löffler-Stastka, Curriculum Director for Postgraduate Education, Department of Psychoanalysis and Psychotherapy

Regina Klaus, International Master's Programs in Dentistry, University Clinic of Dentistry Vienna

Anna Tmej, Clinical Health Psychologist, Department of Psychoanalysis and Psychotherapy



ACTING RESPONSIBLY

As Austria's largest medical science institute, MedUni Vienna is also actively involved in areas outside its core research, teaching and patient care operations, and takes targeted action aimed at promoting an interest in medicine and an understanding of science.



RESPONSIBILITY TOWARDS SOCIETY

MedUni Vienna is well aware of its responsibilities towards the community and has launched a variety of initiatives – including the KinderuniMedizin (Children’s Medical University) and the Josephinum, as well as activities organised by the Alumni Club, both on the university’s own initiative and through partnerships – where MedUni Vienna experts present and share health-related insights in a clear and accessible form. The achievements of numerous researchers have also raised the university’s profile among the general public.

The Obesity Action Day, the Cancer School, the Breast Cancer Forum launched in 2021, as well as long-standing partnerships with Minimed and Vienna’s adult education colleges: all of these activities are designed to provide participants with hard facts from the latest scientific findings. The experts on hand also take time to field questions from the audience. The switch to online-only formats due to the pandemic has made it easier for the public to access such events – the various online Health Evening discussions staged in 2021 racked up more than 18,000 clicks. Optimised for use on social media, the one-minute #expertcheck videos, which each take a brief look at a specific question, were viewed more than 100,000 times on channels including Facebook and YouTube.



2021 PANDEMIC FORUM

Titled “Going viral: how a pandemic challenges society as a whole”, the international 2021 Pandemic Forum on 5 November focused on the difficulties for society posed by the coronavirus pandemic and its effects. The topics under discussion included pandemics throughout history, as well as the interpersonal, societal, political and economic aspects of social and mental distancing in present-day society. Featuring a high-calibre panel of international experts, the conference was staged as a hybrid event, with participants attending in person in the Van Swieten Saal and a live stream also available. The forum was organised by MedUni Vienna and its Alumni Club in collaboration with the University of Vienna.

ESSENTIAL REQUIREMENTS FOR THE NEW EPIDEMICS ACT

The Covid-19 pandemic has underlined the need to reform Austria’s Epidemiegesetz (Epidemics Act), which dates all the way back to 1913. How has the current legislative situation evolved over the years and what should a future law on pandemic responses look like? This and other questions were examined from an interdisciplinary perspective during an event held in the Van Swieten Saal at MedUni Vienna on 28 September 2021. National

Health Council President and MedUni Vienna Rector Markus Müller, Karl Stöger, Deputy Head of the Department for Ethics and Law in Medicine at the University of Vienna, and Christiane Druml, UNESCO Chair of Bioethics at the Medical University of Vienna and Chairperson of the Austrian Bioethics Commission gave their views on the basic principles for addressing future outbreaks of infectious diseases from a medical, ethical and legal viewpoint. The panel discussion was broadcast live from the Van Swieten Saal in order to reach as wide an audience as possible.



THE RESEARCHERS OF THE FUTURE

MedUni Vienna is involved in the Vienna Children's University – the wide-ranging schedule gives budding physicians and researchers a chance to build up a picture of and gain a feel for the medical profession. The young researchers ventured out into the world of medicine at MedUni Vienna in 19 small-group, in-person workshops held on 14 July 2021, and also online with the help of 40 or so live streams and other content provided over the course of a week.

NEW GUIDES

The latest addition to MedUni Vienna's series of guides, published in cooperation with Manz-Verlag, was *Der Darm – warum er so wichtig ist und wie er gesund bleibt* (The Bowel – Why it is so important and how to keep it healthy), written by Eva Untersmayr-Elsenhuber (Center for Pathophysiology, Infectiology and Immunology) and Monika Ferlitsch (Division of Gastroenterology and Hepatology at the Department of Medicine III). The second edition of *Pollen und Allergie* (Pollen and Allergy) by Katharina Bastl and Markus Berger (both from the Austrian pollen warning service at MedUni Vienna's Department of Otorhinolaryngology) also appeared in bookshops. The new version focuses particularly on climate change and Covid-19.



SCIENCE SENDS A SIGNAL

A string of awards presented to MedUni Vienna experts and young researchers underlines the importance of evidence-based science.



Anton Laggner and Markus Müller

GRAND DECORA- TION OF HONOUR IN SILVER

Hans-Georg Eichler, Professor of Clinical Pharmacology at MedUni Vienna, received the Grand Decoration of Honour in Silver for Services to the Republic of Austria. The award came in recognition of the role he has played in the international development and approval of medications. He was appointed Chair of the Ethics Committee for the medical faculty at the University of Vienna in 1996, and from 2003 to 2007 he served as Vice Rector for Research and International Relations at MedUni Vienna. In 2007 he became the first Austrian to hold the position of Chief Medical Officer at the European Medicines Agency (EMA), remaining in the post until 2021.

Another recipient of the Grand Decoration of Honour in Silver for Services to the Republic of Austria was Anton Laggner, Emeritus Professor of Emergency Medicine at MedUni Vienna, who was singled out for his achievements in that field. Laggner was appointed Full Professor of Emergency Medicine in 1991. Over the following three decades, he and his team at MedUni Vienna established and successfully drove forward the development of the “Vienna school of emergency medicine” in patient care, research and teaching.

COVID COMMUNICATIONS EXPERT OF THE YEAR

After being named Scientist of the Year in 2020, Elisabeth Puchhammer-Stöckl received another accolade in 2021. At its annual Austrian Communication Day, the Public Relations Association Austria (PRVA) presented the Head of the MedUni Vienna Center for Virology with a special award for her communications work in connection with Covid-19.

GRAND DECORATION OF HONOUR IN GOLD

Katja Pinker-Domenig, former Associate Professor in the Department of Biomedical Imaging and Image-guided Therapy at MedUni Vienna, who is currently Professor of Radiology at Memorial Sloan Kettering Cancer Center and Weill Cornell Medical College in New York, USA, was presented with the Grand Decoration of Honour in Gold for Services to the Republic of Austria. Pinker-Domenig is highly respected internationally for her achievements in breast cancer research, which have set new standards in patient care, research and teaching.

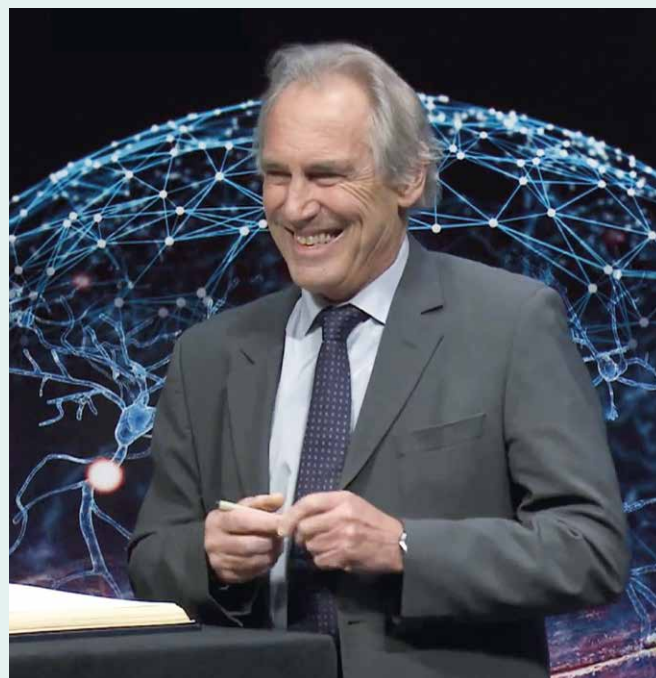


SUPERBRANDS PERSONALITY OF THE YEAR

Thomas Staudinger, an intensive care specialist at the Department of Medicine I and head of one of the intensive care units at University Hospital Vienna was named Personality of the Year at the Superbrands Gala in November 2021. The panel of judges singled him out as a role model for his work in providing the public with information about the coronavirus. And MedUni Vienna once again received the Superbrands Austria Award, reflecting its strong brand image.

NATIONAL ACADEMY OF SCIENCES

Biochemist and geneticist Erwin F. Wagner from MedUni Vienna's Department of Dermatology and Clinical Institute of Laboratory Medicine was elected to the US National Academy of Sciences (NAS) as an international member. Wagner is one of the top biochemists and genetic researchers in the field of cancer biology and tumour development. His work is primarily concerned with gene function in healthy and pathological conditions.



PAUL WATZLAWICK RING OF HONOUR

In April 2021, complexity researchers Stefan Thurner and Peter Klimek, both from the Complexity Science Hub Vienna (CSH) at MedUni Vienna, were presented with the Paul Watzlawick Ring of Honour, which is awarded by the Vienna Medical Chamber. The researchers have used big data and other data sources provided by various public authorities and institutions to forecast future developments in the coronavirus pandemic. To do so, they take various types of information and potential influences into account.



Honoured for outstanding academic achievements – from left to right: Stefan Böhm, Christian Nitsche, Mayor of Vienna Michael Ludwig, Arthur Hosmann, and MedUni Vienna Rector Markus Müller

SUB AUSPICIIS PRAESIDENTIS DOCTORAL GRADUATIONS

At the start of November, Mayor of Vienna Michael Ludwig – standing in for the President of Austria – presented two MedUni Vienna graduates with Sub Auspiciis Praesidentis Rei Publicae honorary rings at an academic ceremony held in the Van Swieten Saal. The recipients, Christian Nitsche and Arthur Hosmann, both received distinctions for their doctoral studies at the Medical University of Vienna. MedUni Vienna Rector Markus Müller and Curriculum Director Stefan Böhm also congratulated the pair.

VERONIKA FIALKA-MOSER DIVERSITY AWARD

MedUni Vienna presents the Veronika Fialka-Moser Diversity Award specifically with a view to promoting debate on the topic of diversity at the university. The award is also intended to honour outstanding achievements in this regard and draw attention to examples of diversity at work. It is named after Professor of Physical Medicine Veronika Fialka-Moser, in recognition of her years of commitment to diversity management at MedUni Vienna.

First prize in the research category went to Sebastian Schnaubelt, while a team of researchers comprising Galateja Jordakieva, Lovro Markovic, Sebastian Jensen, Maren Jeleff-Entscheff, Ruth Kutalek, Richard Crevenna and Stefan Riedl took joint second place. Igor Grabovac took the honours for his contribution to teaching activities, ahead of Andrea Berzlanovich in second, with Natalija Frank and Andreas Ronge taking third place.



Guido Gualdoni (Division of Nephrology and Dialysis, Department of Medicine III) and Johannes Stöckl (Institute of Immunology) were named MedUni Vienna Inventors of the Year for 2020. The researchers were behind the successful enhancement of an invention designed to inhibit rhinovirus infections in the course of setting up the spin-off company G.ST Antivirals.

ALUMNI CLUB – FOCUS ON PUBLIC HEALTH

Due to the pandemic, events with large numbers of participants were again not permitted in 2021. In response, the Alumni Club's #experttalkLIVE series presented information and discussions on topical issues in the form of a live stream. Viewers also had the possibility to put their questions to the experts. The highlights included a number of online talks that drew large audiences: 'Krise im Kopf', which looked at the emotional impact of the Covid-19 pandemic on children and young people and how it can be addressed; 'Coronas Vorläufer (Corona's Predecessors)', which covered pandemics from the Plague to Spanish flu; and 'Covid-19: Testing and Vaccination'.

'Career Paths in Pharmaceutical Medicine', an evening event held on 15 June 2021 in cooperation with the Austrian Association of Pharmaceutical Medicine, was also streamed live, with audience members again able to submit questions. Three guests from science, research and industry and a representative of a start-up spoke about their careers and answered questions.

The Alumni Club got the academic year off to a harmonious start with the now-traditional semester opening concert, which took place at the start of October in the Van Swieten Saal. In 2021 Ludwig van Beethoven took centre stage – with music courtesy of the Sinfonia Academica academic symphony orchestra, as well as presentations on the composer's various maladies, the event was a late addition to the Beethoven anniversary year in 2020.

On 10 November 2021, the Alumni Club held a memorable reunion event in the Van Swieten Saal. At a special ceremony, graduates from 1951, 1961 and 1971 received their golden medical diplomas from Rector Markus Müller. Graduates from 1981, 1991, 2001 and 2011 were also invited to the reunion.



Christoph Huber

Mitbegründer von BioNTech

UNIVERSITY DAY

Making Covid-19 vaccines available in such a short time was a key milestone in combating the pandemic. In this regard, the breakthroughs in mRNA technology were particularly eye-catching. To mark University Day at MedUni Vienna on 12 March, mRNA pioneer and BioNTech co-founder Christoph Huber gave the 2021 university lecture.

Mr Huber became a member of the six-person Scientific Advisory Board on 20 October 2021. In his new function he will advise the Rectorate at the Medical University of Vienna on strategic issues that will have a major bearing on the future, and his outside view will supplement the university's in-house expertise.

In addition, MedUni Vienna offered all staff the option to get vaccinated during the first few months of 2021. In combination with the vaccination drive for students, this simplified the process of implementing preventive measures at the university.



Researcher of the Month 2021

Auszeichnung für herausragende Forschungsarbeiten an der MedUni Wien



RESEARCHERS OF THE MONTH

This year's winners of the Researcher of the Month award were: Gabriela Sánchez Acosta, Raffaella Calabretta, Nikolaus Fortelny, Johannes Gojo, Venugopal Gudipati, Georg Györi, Ouafa Hamza, Leonhard Heinz, Roland Jäger, Andreas Kerschbaumer, Thomas Krausgruber, Stephan List Barth, Christian Nitsche, René Platzer, Christoph Rinner, Georg Semmler, Victoria Stary, Johanna Strobl, Evgenii Tretiakov, Elisabeth Waldmann and Max-Paul Winter. A best-of video published at the end of 2021 profiled the young academics who won the prize during the year and provided insights into their outstanding work.





*Human Salemi, International Office
Barbara Fahrenberger, International Office
Jessica Einzinger, Legal Department
Michael Hoschitz, Technology Transfer*

SOLID STRUCTURES

Cooperation between all of the professions in MedUni Vienna's organisational set-up is the cornerstone of the university's success. MedUni Vienna is an attractive employer for highly qualified staff from around the world.



ORGANISATIONAL STRUCTURE AS AT



31 DECEMBER 2021

University Council

5 members

Scientific Advisory Board

Organisational units with university management responsibilities (Infrastructure and services)

10 service departments

- University Management Office
- Human Resources
- Legal Department
- Corporate Communications
- Studies and Examinations Department
- Research Service, Knowledge Transfer and International Affairs
- Clinical Trials Coordination Centre
- Finance Department
- Facility, Security and Infrastructure Management
- IT Systems and Communications

4 staff units

- Internal Audit
- Evaluation and Quality Management
- Gender Mainstreaming and Diversity
- Controlling

Subsidiaries and shareholdings

- Alumni Club
- Medical University of Vienna International GmbH
- Universitätszahnklinik Wien GmbH
- Max Perutz Labs Support GmbH
- FDZ – Forensisches DNA-Zentral-labor GmbH
- CBmed GmbH
- Karl Landsteiner Privatuniversität für Gesundheitswissenschaften GmbH
- Josephinum – Medizinische Sammlungen GmbH
- ACOmarket GmbH

Committees

- Working Group on Equal Opportunities
- Works Council for scientific university staff
- Works Council for General University Staff
- Ethics Committee
- Data Protection Commission
- Arbitration Committee
- Students' Union (ÖH Med Vienna)
- Data Clearing House
- Ombudsman for Good Scientific Practice
- Intramural Committee for Animal Experimentation
- Advisory Board for People with Disabilities

Curriculum Directors

- Medicine
- Dentistry
- PhD Programme and Doctoral Programme in Applied Medical Science
- Medical Informatics master's programme
- Molecular Precision Medicine Master's Programme
- Continuing education courses



University management

• Rectorate

The Rectorate is the university's executive management body.

Prof. Markus Müller, Rector

Dr. Michaela Fritz, Vice Rector for Research and Innovation

Prof. Anita Rieder, Vice Rector for Education

Dr. Volkan Talazoglu, Vice Rector for Finance

Prof. Oswald Wagner, Vice Rector for Clinical Affairs

www.meduniwien.ac.at/rectorate

• University Council

The University Council is one of the University's three most senior management bodies, alongside the Rectorate and the Senate. Two of the Council's members are appointed by the Senate of the Medical University of Vienna, and two by the federal government. A fifth member is elected by these four members.

Dr. Eva Dichand (Chair)

Dr. Brigitte Ettl

Prof. Irene Virgolini

Prof. Reinhart Waneck

Prof. Thomas Zeltner

www.meduniwien.ac.at/university-council

• Senate

The Senate is made up of 13 representatives from among the university's full professors, six representatives of teaching and research staff, one representative of the general university staff and six student representatives, appointed by election or, in the case of student representatives, by delegation in accordance with section 25 Universities Act 2002.

PROFESSORS

Prof. Maria Sibilía (Chair)

Prof. Angelika Berger

Prof. Christoph Binder

Prof. Barbara Bohle

Prof. Renate Koppensteiner

Prof. Irene Lang

Prof. Klaus Markstaller (Third Deputy) until 25 June 2021

Prof. Michael Trauner (Third Deputy) from 25 June 2021

Prof. Bruno Podesser

Prof. Daniela Pollak-Monje Quiroga

Prof. Shahrokh Shariat

Prof. Harald Sitte

Prof. Rudolf Valenta

Prof. Ursula Wiedermann-Schmidt

TEACHING AND RESEARCH STAFF

Prof. Martin Andreas

Dr. Miriam Kristin Hufgard-Leitner

Dr. Regina Patricia Schukro (First Deputy)

Prof. Ivo Volf

Prof. René Wenzl

Prof. Birgit Willinger

STUDENTS

Eren Eryilmaz (Second Deputy)

Daniela Kitzmantl (until 19 November 2021)

Till Buschhorn (from 19 November 2021)

Isolde Kostner

Gesche-Magdalena Langer (until 19 November 2021)

Noam Hartman (from 19 November 2021)

Yannick T. Suhr

Berfin Sakar

GENERAL UNIVERSITY STAFF

Gerda Bernhard

REPRESENTATIVE OF THE WORKING GROUP FOR EQUAL OPPORTUNITIES

Prof. Alexandra Kautzky-Willer

www.meduniwien.ac.at/senate



Committees

- **Working Group on Equal Opportunities**

Chair: Prof. Alexandra Kautzky-Willer
 First Deputy Chair: Prof. Ulrike Willinger
 Second Deputy Chair: Irene Bednar
www.meduniwien.ac.at/equalopportunities

- **Works Council for Scientific University Staff**

Chair: Dr. Johannes Kastner
 First Deputy: Dr. Stefan Konrad
 Second Deputy: Dr. Sophie Pils
 Third Deputy: Prof. Michael Holzer
www.meduniwien.ac.at/wc-sus

- **Works Council for General University Staff**

Chair: Gabriele Waidringer
 First Deputy Chair: Gerda Bernhard
 Second Deputy Chair: Helga Kalser
www.meduniwien.ac.at/wc-gus

- **Ethics Committee**

Prof. Jürgen Zezula and Dr. Martin Brunner
www.meduniwien.ac.at/ethics

- **Intra-university Data Protection Commission**

Chair: Jessica Einzinger
 Deputy: Gordana Sikanic
www.meduniwien.ac.at/dbc

- **Advisory Board for People with Disabilities**

Chair: Prof. Richard Crevenna
 Deputy Chair: Prof. Johannes Wancata
www.meduniwien.ac.at/disabilities

- **Arbitration Committee**

Chair: Dr. Anna Sporrer
www.meduniwien.ac.at/arbitrationcommittee

- **Students' Union (ÖH Med Vienna)**

Until 30 June 2021

Chair: Johannes Schmid
 First Deputy: Yannick T. Suhr
 Second Deputy: Isolde Kostner
 General Secretary: Stefanie Ströhl
From 1 July 2021

Chair: Nicole Brunner
 First Deputy: Isolde Kostner
 Second Deputy: Florian Waldschütz
www.oehmedwien.at

- **Data Clearing House**

Chair: Dr. Thomas Wrba
 Deputy Chair: Jessica Einzinger
www.meduniwien.ac.at/data-clearing-house

- **Ombudsman for Good Scientific Practice**

Spokesperson: Prof. Elisabeth Förster-Waldl
www.meduniwien.ac.at/gsp

- **Medicine Curriculum Director**

Prof. Anahit Anvari-Pirsch
 Deputy: Prof. Franz Kainberger
 Deputy: Prof. Andreas Sönnichsen
 Deputy: Prof. Günther Körmöczi
 Deputy: Prof. Michaela Riedl

- **Dentistry Curriculum Director**

Prof. Anita Holzinger
 Deputy: Prof. Andrea Nell
 Deputy: Prof. Martina Schmid-Schwap

- **PhD Programme and Doctorate Programme in Applied Medical Science Curriculum Director**

Prof. Stefan Böhm
 Deputy: Prof. Sylvia Knapp

- **Medical Informatics Curriculum Director**

Prof. Georg Dorffner

- **Molecular Precision Medicine Master's Programme Curriculum Director**

Prof. Thomas Ashley Leonard
 Deputy: Prof. Ruth Herbst

- **Continuing Education Curriculum Director**

Prof. Henriette Löffler-Stastka
 Deputy: Prof. Martin Bauer

- **Intramural Committee for Animal Experimentation**

www.meduniwien.ac.at/intramural-committee-for-animal-experimentation/



Scientific Advisory Board

This external body advises the MedUni Vienna Rectorate on all matters related to research, with the aim of safeguarding the University's strategic positioning for the long term.

- **Joseph Thomas Coyle**
Professor of Psychiatry and Neuroscience, Harvard Medical School, Boston
- **Hedvig Hricak**
Chair, Department of Radiology, Memorial Sloan-Kettering Cancer Center, New York City
- **Christoph Huber**
Emeritus Professor of Hematology, Oncology and Immunology (from 20 October 2021)
- **Sarah König**
Head of the Institute of Medical Education and Education Research, Julius Maximilian University of Würzburg
- **Michael Roden**
Professor of Medicine, Scientific Director of the German Diabetes Center and Director, Institute for Clinical Diabetology, Heinrich Heine University Duesseldorf
- **Frederica Sallusto**
Professor of Medical Immunology at the ETH Zurich, Institute for Research in Biomedicine Bellinzona, Switzerland (until 30 June 2021)
- **Robert Schwarcz**
Professor of Psychiatry, Pharmacology and Pediatrics, Department of Psychiatry, University of Maryland School of Medicine

University Departments

MedUni Vienna's clinical division consists of 30 departments, including two clinical institutes. 11 of these comprise a number of different divisions (in accordance with section 31(4) Universities Act). Departments, institutes and divisions also serve as patient care departments (pursuant to section 7(4) Hospitals Act).

Department of Medicine I

Head: Prof. Herbert Watzke (until 30 September 2021)
Interim Head: Prof. Heinz Burgmann (from 1 October 2021)

- Division of Oncology
- Division of Hematology and Hemostaseology
- Division of Palliative Medicine
- Division of Infectious Diseases and Tropical Medicine
- Division of Cancer Research (not a patient care department pursuant to section 7(4) Hospitals Act)

Department of Medicine II

Head: Prof. Christian Hengstenberg

- Division of Cardiology
- Division of Angiology
- Division of Pulmonology

Department of Medicine III

Head: Prof. Alexandra Kautzky-Willer

- Division of Endocrinology and Metabolism
- Division of Nephrology and Dialysis
- Division of Rheumatology
- Division of Gastroenterology and Hepatology

Department of General Surgery

Head: Prof. Oliver Strobel

- Division of Visceral Surgery
- Division of Vascular Surgery
- Division of Transplantation

Department of Obstetrics and Gynecology

Head: Prof. Heinz Kölbl (until 14 September 2021)

Interim Head: Prof. Petra Kohlberger

(from 14 September 2021)

- Division of Obstetrics and Feto-Maternal Medicine
- Division of General Gynecology and Gynecologic Oncology
- Division of Gynecological Endocrinology and Reproductive Medicine

Department of Otorhinolaryngology

Head: Prof. Wolfgang Gstöttner

- Division of General Ear, Nose and Throat Diseases
- Division of Speech and Language Therapy

Department of Anaesthesia, Intensive Care Medicine and Pain Medicine

Head: Prof. Klaus Markstaller

- Division of General Anaesthesia and Intensive Care Medicine
- Division of Special Anaesthesia and Pain Medicine
- Division of Cardiac Thoracic Vascular Anaesthesia and Intensive Care Medicine

Department of Psychiatry and Psychotherapy

Deputy Head: Prof. Johannes Wancata

- Division of Biological Psychiatry
- Division of Social Psychiatry

Department of Pediatrics and Adolescent Medicine

Head: Prof. Susanne Greber-Platzer

- Division of Neonatology, Intensive Care Medicine and Neuropediatrics
- Division of Pediatric Cardiology
- Division of Pediatric Pulmonology, Allergology and Endocrinology
- Division of Pediatric Nephrology and Gastroenterology
- Division of Pediatrics with special focus on Pediatric Hematology-Oncology (St. Anna Children's Hospital)

Department of Biomedical Imaging and Image-guided Therapy

Head: Prof. Christian Herold

- Division of General and Paediatric Radiology
- Division of Cardiovascular and Interventional Radiology
- Division of Neuroradiology and Musculoskeletal Radiology
- Division of Nuclear Medicine

Department of Orthopedics and Trauma-Surgery

Head: Prof. Reinhard Windhager

- Division of Orthopedics
- Division of Trauma Surgery

Department of Dermatology

Head: Prof. Wolfgang P. Weninger

Department of Radiation Oncology

Head: Prof. Joachim Widder

Department of Urology

Head: Prof. Shahrokh Shariat

Department of Neurosurgery

Head: Prof. Karl Rössler

Department of Oral and Maxillofacial Surgery

Head: Prof. Emeka Nkenke

Department of Cardiac Surgery

Head: Prof. Günther Laufer

Department of Thoracic Surgery

Interim Head: Prof. Konrad Hötzenecker

Department of Plastic, Reconstructive and Aesthetic Surgery

Head: Prof. Christine Radtke

Department of Pediatric and Adolescent Surgery

Head: Prof. Martin Metzelder

Department of Emergency Medicine

Head: Prof. Anton Laggner (until 30 September 2021)

Head: Prof. Wilhelm Behringer (from 1 October 2021)

Department of Neurology

Head: Prof. Thomas Berger

- Division of Neuropathology and Neurochemistry

Department of Physical Medicine, Rehabilitation and Occupational Medicine

Head: Prof. Richard Crevenna

Department of Child and Adolescent Psychiatry

Head: Prof. Paul Plener

Department of Psychoanalysis and Psychotherapy

Head: Prof. Stephan Doering

Department of Ophthalmology and Optometrics

Head: Prof. Ursula Schmidt-Erfurth

Department of Blood Group Serology and Transfusion Medicine

Interim Head: Dr. Gerda Leitner (until 30 September 2021)

Deputy Head: Prof. Günther Körmöczi

Department of Hospital Epidemiology and Infection Control

Head: Prof. Elisabeth Presterl

Department of Clinical Pharmacology

Head: Prof. Markus Zeitlinger

Department of Laboratory Medicine

Head: Prof. Oswald Wagner

- Division of Clinical Virology
- Division of Clinical Microbiology

Department of Pathology

Head: Prof. Renate Kain

University Clinic of Dentistry Vienna

Head: Prof. Andreas Moritz



Centres of Medical Science

Center for Anatomy and Cell Biology

Head: Prof. Franz-Michael Jantsch

- General Division of the Center for Anatomy and Cell Biology
- Division of Anatomy
- Division of Cell and Developmental Biology

Center for Physiology and Pharmacology

Head: Prof. Michael Freissmuth

- Institute of Vascular Biology and Thrombosis Research
- Institute of Pharmacology
- Institute of Physiology
- Division of Neurophysiology and Neuropharmacology

Center for Public Health

Head: Prof. Anita Rieder

- Department of General Practice and Family Medicine
- Department of Social and Preventive Medicine
- Department of Environmental Health
- Department of Epidemiology
- Department of Medical Psychology
- Department of Health Economics

Center for Brain Research

Head: Prof. Thomas Klausberger

- Division of Neuroimmunology
- Division of Neurophysiology
- Division of Molecular Neurosciences
- Division of Neuronal Cell Biology
- Division of Cognitive Neurobiology
- Division of Pathobiology of the Nervous System

Center for Pathobiochemistry and Genetics

Head: Prof. Markus Hengstschläger

- Medical Genetics
- Institute of Medical Chemistry and Pathobiochemistry

Department of Medical Biochemistry

Part of Max Perutz Labs, a joint venture of MedUni Vienna and the University of Vienna for research in the field of molecular biosciences.

Head: Prof. Alwin Köhler

- Division of Molecular Biology
- Division of Molecular Genetics

Department of Virology

Head: Prof. Elisabeth Puchhammer

- Division of Applied Medical Virology

Department of Forensic Medicine

Head: Prof. Daniele U. Risser

Center for Pathophysiology, Infectiology and Immunology

Head: Prof. Ursula Wiedermann-Schmidt

- Institute of Pathophysiology and Allergy Research
- Institute of Immunology
- Institute of Specific Prophylaxis and Tropical Medicine
- Institute of Hygiene and Applied Immunology

Center for Medical Physics and Biomedical Engineering

Head: Prof. Wolfgang Drexler

Center for Medical Statistics, Informatics and Intelligent Systems

Head: Prof. Martin Posch

- General Division of the Center for Medical Statistics, Informatics and Intelligent Systems
- Institute of Medical Statistics
- Institute of Clinical Biometrics
- Institute of Biosimulation and Bioinformatics
- Institute of Medical Information Management
- Institute of the Science of Complex Systems
- Institute of Artificial Intelligence and Decision Support
- Institute of Outcomes Research

Department of Biomedical Research

Head: Prof. Bruno Podesser



Organisational Units with special Service Functions

Comprehensive Cancer Center

Head: Prof. Joachim Widder

Comprehensive Center for Pediatrics

Head: Prof. Angelika Berger

Comprehensive Center for Cardiovascular Medicine

Head: Prof. Günther Laufer

Core Facilities

Head: Prof. Johann Wojta

- Genomics: DNA analysis
- Genomics: genome analysis
- Imaging
- Proteomics
- Cell Sorting

Library

Head: Karin Cepicka

Ethics, History of Medicine and Historical Collections

Head: Dr. Christiane Druml

Teaching Center

Head: Prof. Anahit Anvari-Pirsch

- Postgraduate Education and Training Unit
- Research Unit for Curriculum Development
- Resources Management
- Curriculum Management
- Assessment and Skills
- Medical Didactics
- Digital Learning



Central Services

Administrative support

- University Management Office
- Human Resources
- Legal Department
- Corporate Communications
- Studies and Examinations Department
- Research Service, Knowledge Transfer and International Affairs
- Clinical Trials Coordination Centre
- Finance Department
- Facility, Security and Infrastructure Management
- IT Systems and Communications

Staff units

- Internal Audit
- Evaluation and Quality Management
- Gender Mainstreaming
- Controlling

IN BRIEF



6

LUDWIG
BOLTZMANN
INSTITUTES

Partners for research funded
by third parties



10

CHRISTIAN DOPPLER (CD)
LABORATORIES

enhance applied research

15

ERC GRANT HOLDERS

promote excellence

31

PATENT
APPLICATIONS

23

PATENTS
GRANTED

UNIVERSITY CLINIC OF
DENTISTRY VIENNA

38,250

patients

26,966

IF POINTS

Impact factors (IFs) of scientific publications

EUR 124.5m

REVENUE

from R&D projects and donations

INTERNATIONAL PARTNERS

Top 10 international research partnerships based on number of publications

791 Université de Paris

705 Harvard University

700 Free University of Berlin

675 Humboldt University of Berlin

664 Charité University Hospital Berlin

612 University of Hamburg

526 University College London

525 Ruprecht Karls University Heidelberg

523 University of Munich

517 Charles University Prague

2019-2021, source: InCites

4,930

ACADEMIC PUBLICATIONS

2,971

LEAD, SENIOR AND CORRESPONDING AUTHORSHIPS

PATIENT CARE* AT UNIVERSITY HOSPITAL VIENNA

61,016

inpatient cases

515,687

outpatient cases

1,738,848

clinic appointments

44,755

operations

* Patient care: 2021 figures

6,190

employees,
incl. 4,122
researchers

7,825

students

FINANCIAL STATEMENTS

I. STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2021

ASSETS

	31 December 2021 EUR			31 December 2020 EUR,000		
A. Fixed assets						
I. Intangible assets						
1. Concessions and similar rights, and licences thereto		426,364.40				334
<i>of which acquired by purchase</i>	426,364.40					334
2. Rights of use		20,000,000.00	20,426,364.40			20,000 20,334
II. Property, plant and equipment						
1. Land, leasehold rights and buildings including buildings on third-party land		17,203,873.23				17,097
<i>a) of which land value</i>	718,605.00					719
<i>b) of which building value</i>	800,029.93					860
<i>c) of which investments in third-party buildings and land</i>	0.00*)					15,519
2. Plant and machinery		14,975,743.93				14,089
3. Scientific literature and other scientific media		8,626,352.72				8,123
4. Other plants, operating and office equipment		3,677,065.43				3,747
5. Advance payments and plants under construction		11,847,829.53	56,330,864.84			9,439 52,495
III. Financial assets						
1. Investments in subsidiaries and associates		3,103,650.18				3,104
2. Loans to subsidiaries and associates		141,223.10				316
3. Securities and similar instruments held as fixed assets		155,876,151.62	159,121,024.90	235,878,254.14		134,967 138,387 211,216
B. Current assets						
I. Inventories						
1. Operating resources		620,000.00				620
2. Services rendered to third parties not yet invoiced		82,176,119.90	82,796,119.90			77,745 78,365
II. Receivables and other assets						
1. Trade receivables		14,962,959.22				14,700
2. Receivables from associates		1,432,504.15				2,709
3. Other receivables and other assets		19,363,922.04	35,759,385.41			27,247 44,656
III. Securities and equity interests			7,696,285.58			4,627
IV. Cash and cash equivalents			187,343,007.22	313,594,798.11		175,753 303,401
C. Accruals and deferrals			2,002,411.35		1,777	
TOTAL ASSETS			551,475,463.60		516,394	

*) not applicable according to 324. VO dated 19.07.2021

The 2021 financial statements were given an unqualified audit certificate by auditors Mazars Austria GmbH Wirtschaftsprüfungs- und Steuerberatungsgesellschaft.

PASSIVA

	31 December 2021 EUR		31 December 2020 EUR,000	
A. Equity				
1. University negative equity		-8,334,166.31		-8,334
2. Net profit		18,807,638.68	10,473,472.37	16,533 8,199
<i>profit brought forward</i>	16,532,804.23			8,625
B. Investment grants		30,329,924.84		30,733
C. Provisions				
1. Provisions for severance payments		21,267,344.84		20,944
2. Other provisions		170,732,344.65	191,999,689.49	170,473 191,417
D. Liabilities				
1. Advances received		164,718,004.41		158,434
<i>of which deductible from inventories</i>	76,114,711.90			74,079
2. Trade payables		21,471,250.75		15,797
3. Payables to associates		287,208.45		94
4. Other liabilities		25,083,960.19	211,560,423.80	22,897 197,222
E. Accruals and deferrals		107,111,953.10		88,823
TOTAL LIABILITIES		551,475,463.60		516,394

Note regarding equity:

The university has recognised positive equity since 2019. In 2021 equity amounted to EUR 10.5m. Irrespective of this, the *Universitäts-Rechnungsabschlussverordnung* (University Financial Statements Order) 2010 gives medical universities the option of capitalising investments relating to additional clinical expense, research and teaching as rights of use. As a result of capitalising these investments, taking into account investment grants recognised as at 31 December 2021, positive equity in the meaning of section 16(2) University Financial Statements Order was EUR 40.8m (2020: EUR 38.9m).

II. STATEMENT OF PROFIT OR LOSS 2021

	2021 EUR	2020 EUR,000
1. Revenue		
a) Revenue from Federal Government global budget allocation	495,841,265.49	478,381
b) Revenue from tuition fees	1,094,277.83	1,047
c) Revenue from postgraduate training programmes	1,743,439.62	1,503
d) Revenue pursuant to section 27 Universities Act	102,342,440.67	81,423
e) Reimbursements of costs pursuant section 26 Universities Act	15,193,258.26	16,006
f) Other revenue and reimbursements	16,187,337.50	15,152
<i>of which revenue from federal ministries</i>	409,700.95	705
	632,402,019.37	593,512
2. Change in services rendered to third parties not yet invoiced		
	4,430,998.80	12,899
3. Other operating income		
a) Income from disposal or write-up of fixed assets (excl. financial assets)	3,330.35	2
b) Income from reversal of provisions	2,905,434.60	3,312
c) Other	18,339,334.08	16,792
<i>of which from reversal of investment grants</i>	10,403,307.78	10,371
	21,248,099.03	20,106
4. Expenditure for materials, consumables and purchased services		
a) Expenditure for materials and consumables	-19,074,379.74	-17,373
b) Expenditure for purchased services	-5,435,832.77	-4,159
	-24,510,212.51	-21,532
5. Staff costs		
a) Salaries and wages	-370,098,653.29	-363,858
<i>of which refunds to the Federal Government for officials assigned to the university</i>	70,125,560.23	71,623
b) Expenditures for teaching according to use category 17 und 18 Hochschulstatistik- und Bildungsdokumentationsverordnung – UHSBV, BGBl. II Nr. 216/2019, current version	-1,684,386.00	-155*)
c) Cost of severance payments and payments to employee benefits funds	-6,212,282.64	-6,316
<i>of which refunds to the Federal Government for officials assigned to the university</i>	0.00	0
d) Cost of pensions	-12,305,902.19	-11,780
<i>of which refunds to the Federal Government for officials assigned to the university</i>	413,831.59	423
e) Social security contributions and other pay-related contributions	-76,886,288.68	-75,707
<i>of which refunds to the Federal Government for officials assigned to the university</i>	14,925,645.01	15,803
f) Other employee benefits	-11,973,466.05	-3,882
	-479,160,978.85	-461,698

*) Expenditure for external teaching staff

	2021 EUR	2020 EUR,000
6. Depreciation and amortisation	-22,866,496.92	-24,372
7. Other operating expenses		
a) Taxes other than those under item 13	-1,230,388.33	-1,485
b) Reimbursements to hospital operator pursuant section 33 Universities Act	-50,072,986.96	-50,083
c) Other	-62,178,399.68	-43,226
	-113,481,774.97	-94,794
8. Subtotal items 1 to 7	18,061,653.95	24,121
9. Income from financial resources and investments	2,598,730.87	2,617
a) of which from write-ups	457,807.44	8
10. Expenditure arising from financial resources and equity holdings	-17,819,906.16	-17,892
a) of which from write-downs	36,881.32	2
b) of which expenditure arising from subsidiaries and associates	17,733,999.00	17,890
11. Subtotal items 9 to 10	-15,221,175.29	-15,275
12. Earnings before tax (sum of items 8 and 11)	2,840,478.66	8,846
13. Taxes on income and profit	-565,644.21	-938
14. Loss/profit after tax	2,274,834.45	7,908
15. Loss/profit brought forward	16,532,804.23	8,625
16. Net profit/loss for the year	18,807,638.68	16,533

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