



MEDICAL UNIVERSITY
OF VIENNA

Building towards the medicine of the future



2023 Annual Report

EDITORIAL

SHAPING THE FUTURE OF MEDICINE

“The best way to predict the future is to create it.” True to this quote from Abraham Lincoln, we constantly live up to our responsibility to provide the best possible conditions for internationally competitive research, teaching and patient care – not just now, but also in the future. The various construction projects that moved from the planning to the implementation stage in 2023 represent a key milestone in our university’s history that will have a lasting influence on the treatment we provide to patients.

The largest development project at any of Austria’s universities at present is **MedUni Campus Marianengasse**. In the future, thousands of researchers and students will be based at this state-of-the-art campus, working at the leading edge of medical expertise and developing groundbreaking solutions. The centrepiece of our infrastructure development drive is the **Eric Kandel Institute – Center for Precision Medicine**. Here, the focus is on research into fundamental molecular mechanisms, which will enable the development of personalised diagnostics, therapies and preventive measures. Meanwhile, the **Center for Translational Medicine** will enable us to achieve our objective of integrating research findings into clinical practice quickly and effectively for the good of the patients we look after. Bundling expertise from several leading universities at the



Ignaz Semmelweis Institute for Infection Research is intended to put us in a position to overcome the challenges that lie ahead in the field of infectious diseases.

I would particularly like to thank all of our employees who are playing a part in this unique phase in our university’s development – while also ensuring that we do not lose sight of present-day demands.

A handwritten signature in dark blue ink, appearing to read 'Markus Müller'. The signature is stylized and fluid, with a long horizontal stroke extending to the left.

Professor Markus Müller
Rector, Medical University of Vienna



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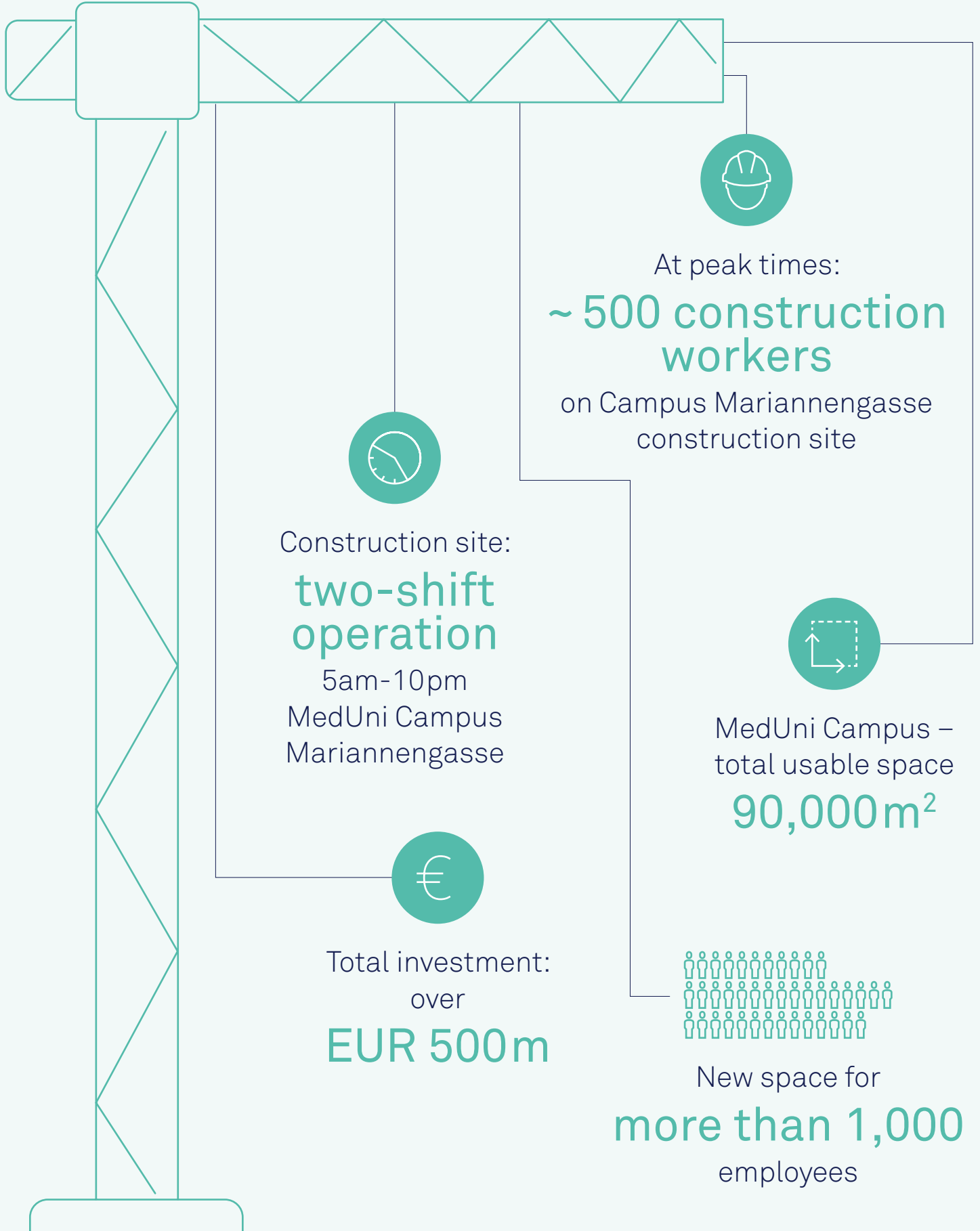
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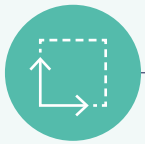
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At peak times:
~ 500 construction workers
on Campus Mariannengasse
construction site



Construction site:
two-shift operation
5am-10pm
MedUni Campus
Mariannengasse



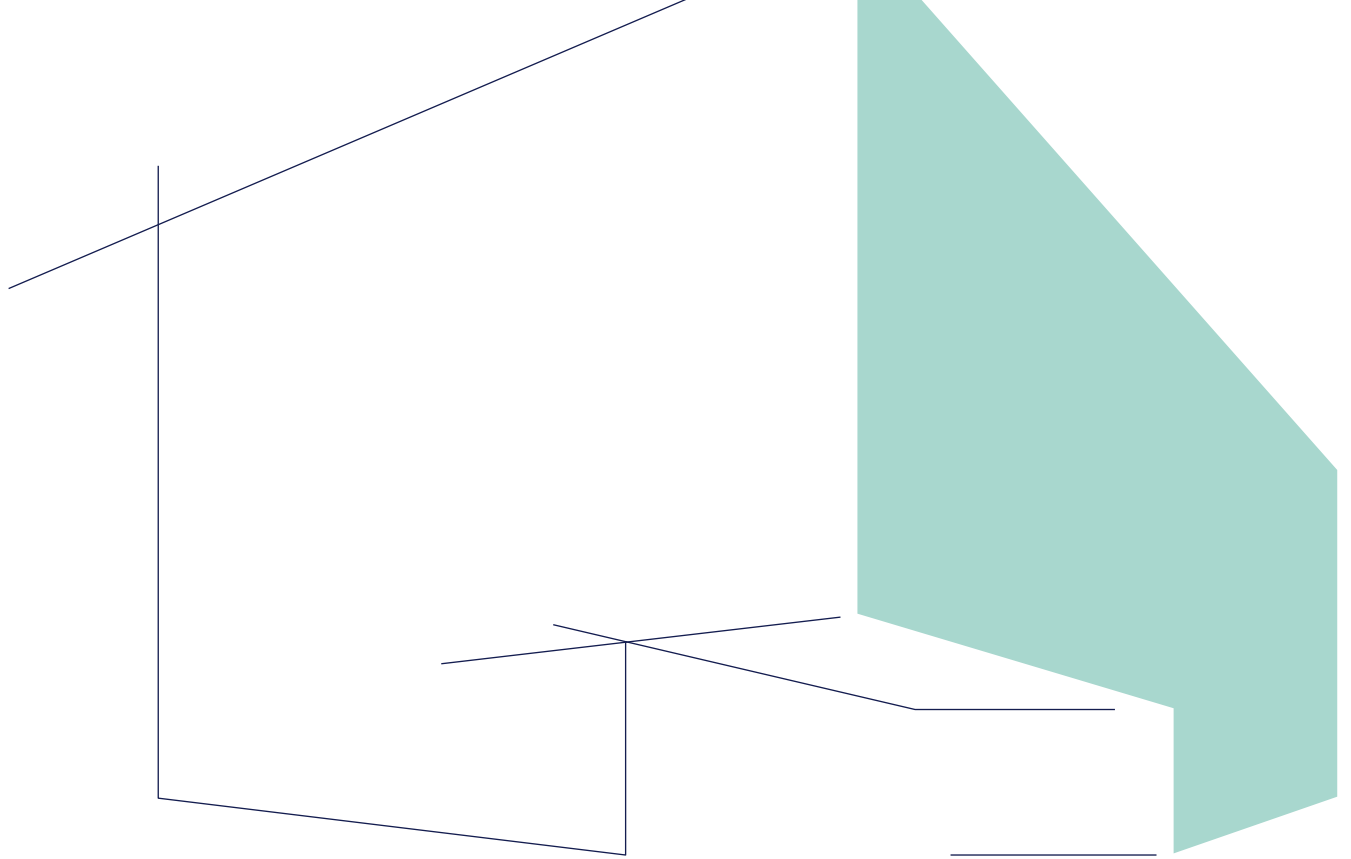
MedUni Campus –
total usable space
90,000m²



Total investment:
over
EUR 500m



New space for
more than 1,000
employees



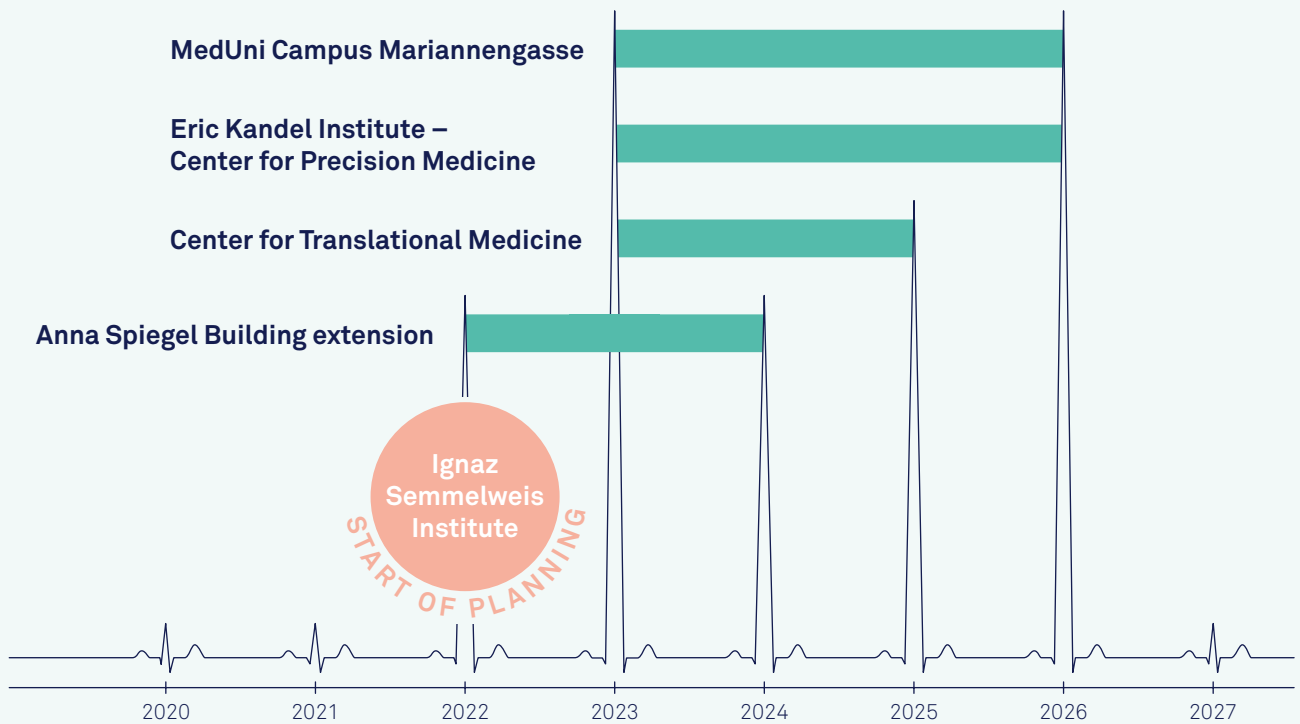
BUILDING TOWARDS THE MEDICINE OF THE FUTURE

Cutting-edge resources. All of the projects that make up MedUni Vienna's infrastructure development initiative took shape even more clearly in 2023. With these developments, the university is laying the ideal foundations for interdisciplinary research, high-quality teaching and education, and innovative patient care.

MedUni Vienna has more than 8,000 students, making it one of the largest medical schools in the world, and by far the biggest in Europe. Among the world's leading advanced research facilities, it also provides all of the medical personnel for University Hospital Vienna, which is one of the largest hospitals anywhere on the globe – and one of the best. What's more, the university is implementing fundamental changes that, once completed, will mark the beginning of a new era in its history. MedUni Vienna is currently modernising and expanding its infrastructure through a range of construction projects. Several historic buildings will be repurposed from 2026 onwards. The majority of our preclinical facilities in particular date back to the mid-19th century and are spread throughout the city. As a result, the creation of an integrated campus, with the various buildings just a short distance apart, providing even more opportunities for networking and professional exchange, has been a long-standing goal of MedUni Vienna.



TIMELINE FOR THE NEW BUILDINGS



Center for
Technology
Transfer
PLANNING PHASE



The major new construction projects at MedUni Vienna were in full swing in 2023.

Nine cranes on site

If you had taken a stroll around MedUni Campus AKH towards the end of 2023, you would have seen nine construction cranes. They are symbolic of the fact that MedUni Vienna is currently in the midst of its largest infrastructure development project since University Hospital Vienna was built, and also a sign of the significant progress that has been made recently. After a long preparation phase and careful planning, the implementation stage kicked off on several construction sites in 2023. Excavation work was completed and foundations laid, followed by the start of construction of the buildings themselves. In spite of challenges such as rising inflation and the energy crisis, the projects proceeded on schedule.

In 2024, the shells of the buildings at MedUni Campus Mariannengasse, the Centres for Precision Medicine and Translational Medicine, and the extension to the Anna Spiegel Building will become plain for all to see. The state-of-the-art campus will offer smart, joined-up logistics, as well as 90,000m² of space – more than the sum total currently at MedUni Vienna’s disposal. “We’re building an attractive location, especially for creative young people who want to realise their potential here at MedUni Vienna and tackle the challenges that the future has in store,” explained Rector Markus Müller.

The foundation stone for MedUni Campus Mariannengasse was laid on 17 January 2023: (from left to right) Rector Markus Müller, former Rector Wolfgang Schütz, Vice Rectors Volkan Talazoglu and Anita Rieder, Thomas Glanzer and Hans-Peter Weiss (both BIG).

MedUni Campus Mariannengasse

We began plotting a course towards development of the new campus a decade ago. In 2013, MedUni Vienna capitalised on the opportunity to acquire a 10,600m² plot of land, close to MedUni Campus AKH, from energy company Wien Energie for EUR 46m. In consultation with the Austrian Federal Ministry for Science, Research and Economy, the land was sold to government real estate company Bundesimmobiliengesellschaft (BIG) in 2015. Planning began that same year and the project was officially approved in September 2017. Now, MedUni Campus Mariannengasse – the largest development project currently under way at an Austrian university – is taking shape in the heart of a highly built-up part of





The campus will include a canteen and a cafeteria that will also be open to local residents and the general public.

~ 35,000
m²

Usable space

EUR
395m

Investment

2023

Start of
construction

Scheduled
completion

2026

Divided into general, teaching and research sections, the state-of-the-art **MedUni Campus Mariannengasse** will eventually accommodate around 750 researchers and 2,000 students.

MedUni Campus Mariannengasse will feature fully equipped teaching facilities with contemporary designs.

Also open to the public, the spacious ground-floor area is an ideal place to meet other people and take time out.





Volkan Talazoglu
Vice Rector for Finance

»After the long hours invested by everyone involved in designing the buildings, and in spite of the numerous challenges they faced, it's an absolute pleasure to see the buildings growing taller day by day.«

the city. Various MedUni Vienna centres and institutes will be brought together at the 35,000m² site, with links to modern teaching facilities. Turn to page 22 for more information on this core project and its importance for degree programmes at MedUni Vienna.

Located in Vienna's ninth district, one of the key benefits of this large-scale development is the creation of leading-edge facilities for MedUni Vienna's research into personalised and digital medicine. In future, researchers at the site will develop diagnostic approaches, treatments and preventive measures tailored to individual factors. This focus is geared towards facilitating identification of the causes of a particular disease at the molecular level and using this knowledge to give patients more targeted, personalised treatment in future.

Eric Kandel Institute – Center for Precision Medicine

The university's core personalised medicine facility is the Eric Kandel Institute – Center for Precision Medicine. Conclusion of the construction contract between the federal government, the City of Vienna and the university, and adoption of a corresponding resolution by the city council on 24 November 2022, meant that all of the official requirements for the

"I'm delighted that the new Center for Precision Medicine – a key project for the future of the Medical University of Vienna – will bear my name," commented Nobel Prize winner Eric Kandel at the celebration to mark the start of construction work on 27 January 2023.



start of construction in 2023 had been fulfilled. A ceremony to mark this milestone took place on 27 January, with Vienna-born Nobel Prize winner Eric Kandel himself on hand. This was followed by the groundbreaking ceremony on 15 December 2023, in the presence of Austrian Federal Minister for Education, Science and Research Martin Polaschek, Mayor of the City of Vienna Michael Ludwig, MedUni Vienna Rector Markus Müller and University Hospital Vienna Director Herwig Wetzlinger. The costs of around EUR 90m will largely be covered by EU funding – amounting to EUR 75m – and Austrian federal government financing, as well as donations. Details of the focus of this key project for the university's future and the progress made on construction work can be found on page 30 onwards.



The new building will feature modern offices and infrastructure for various highly specialised research teams.

The **Eric Kandel Institute – Center for Precision Medicine** is dedicated to research into the mechanisms behind diseases, which will generate basic principles for diagnosis, treatment and preventative measures geared towards individual factors.

~ 6,000
m²
Usable space

EUR
103m
Investment



Interdisciplinary cooperation and the exchange of ideas are the lifeblood of research. The architectural design takes this into account and includes attractive shared spaces. The centre's proximity to University Hospital Vienna is intended to ensure that physicians responsible for patient care can collaborate closely with basic researchers.

2023
Start of
construction

Scheduled
completion
2026



The foundation pit for the Center for Translational Medicine was completed and the base plate laid in mid-October 2023.

Center for Translational Medicine

Another facility where the emphasis is on practice-led research will be connected structurally with the Eric Kandel Institute: the Center for Translational Medicine. Establishment of the Center will allow MedUni Vienna to meet its objective of increasing the degree of integration between basic and clinical research, with a view to adopting new findings swiftly in patient care. With around 14,000m² of space, it will be a place of professional exchange, with facilities for teaching, conferences, laboratories and clinical trials. The foundation stone was laid on 13 March 2023 as part of the Day of the Medical University of Vienna celebrations. Turn to page 48 for more information about the centre, which will bring fresh impetus to the university's patient-focused research.

Center for Technology Transfer

The new Center for Technology Transfer is among the other facilities that will be built at MedUni Campus AKH. It will provide an ideal setting where life science companies – from start-ups and innovative SMEs to specialist service providers as well as big-name national and international pharmaceutical and medtech businesses – can collaborate effectively with teams from MedUni Vienna. Part of a complex alongside the Eric Kandel Institute – Center for Precision Medicine and the Center for Translational Medicine, it will enable researchers from various disciplines to cooperate closely and share insights with counterparts from other professions. Based on a stakeholder process, the design phase began in 2019. The date for the start of construction is still to be determined.

The Center for Translational Medicine was showcased at a special ceremony to mark the Day of the Medical University of Vienna on 13 March 2023. Vienna Executive City Councillor for Health Peter Hacker, Austrian Science Minister Martin Polaschek, University Hospital Vienna Director Herwig Wetzlinger and MedUni Vienna Rector Markus Müller (from left to right) attended the ceremony.



The MedUni Vienna Brass Ensemble provided the musical accompaniment for the visit to the construction site.





Filled with natural light and featuring inviting spaces, the new research facility is designed to promote exchange between researchers from different disciplines.

~ 14,000
m²

Usable space

EUR
120m

Investment

The **Center for Translational Medicine** will help to build bridges between basic research and application, with a view to characterising diseases in line with the latest standards and using the findings to rapidly devise effective therapies.



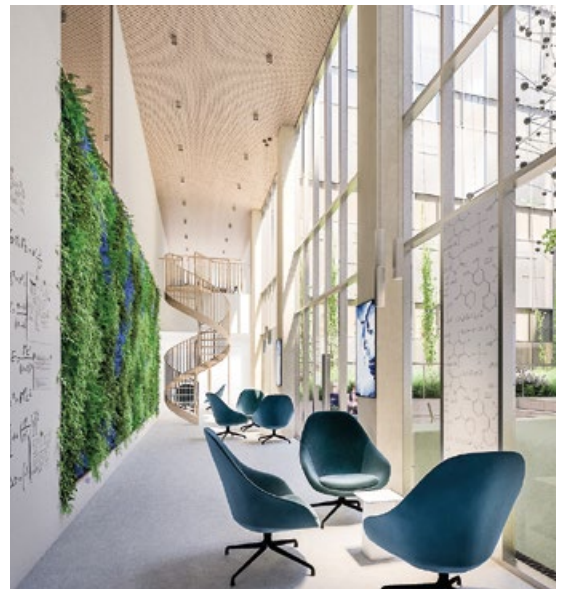
Besides modern office and lab spaces, the building will house a clinical centre for phase I and II trials including a ward for trial subjects.

2023

Start of construction

Scheduled
completion
2025

The open gallery will feature workspaces and a library. There is also a 1,000-capacity lecture theatre for teaching and conferences.



Extension to the Anna Spiegel research building

In construction terms, the greatest progress has been made on expanding the Anna Spiegel Building, which will house highly sophisticated and expensive equipment, as well as the experts who use it. Currently based at University Hospital Vienna, the surgical research laboratories of 12 departments are due to move into the new facility in 2024. In anticipation of their move to the new labs, staff who will relocate there joined other members of the university at a special celebration on the construction site on 14 September 2023. The building shell was completed at the end of November 2023. The new facilities will meet the very latest standards. The fit-outs have been planned down to the last detail in consultation with representatives of the departments involved, to ensure that the lab designs satisfy all of their requirements.



Ignaz Semmelweis Institute for Infection Research

Developed by MedUni Vienna in cooperation with the medical universities of Graz and Innsbruck, the Faculty of Medicine at Johannes Kepler University Linz and the University of Veterinary Medicine Vienna, the Ignaz Semmelweis Institute for Infection Research will serve as a flagship institute in the fight against infectious diseases. These conditions are still among the most common causes of death worldwide, and they are on the rise in Central Europe due to various factors, including travel and the climate crisis. The development project was launched in September 2022 and reached the start-up phase in 2023. The functional concept for the new spaces is already in place: the plans foresee a facility at the MedUni Vienna campus that is fully equipped to carry out research into infectious pathogens – making it the only centre of its kind in Austria. Sylvia Knapp, an infection biology specialist at MedUni Vienna, was named Interim Director by the five participating universities and is coordinating the project. The new organisational structure that came into effect on 1 January 2024 included the Ignaz Semmelweis Institute for Infection Research and the Max Perutz Labs as interuniversity organisational units.

Several staff members got an early glimpse of their future workplace at a special celebration held on 14 September 2023 at the building site for the Anna Spiegel Building extension.



*The guests were welcomed by Med-
Uni Vienna Rector
Markus Müller and
University Hospital
Vienna Director
Herwig Wetzlinger.*

The extension to the **Anna Spiegel Building** will feature cutting-edge infrastructure for the surgical research laboratories of 12 departments that are currently based at University Hospital Vienna.

~ 4,700
m²
Usable space

EUR
24m
Investment



Out of all the construction projects currently under way at MedUni Vienna, the Anna Spiegel Building is the closest to completion.



Teams focused on basic clinical research will work here.



The researchers can look forward to state-of-the-art laboratories and offices tailored specifically to their needs.

2022
Start of
construction

Scheduled
completion
2024

Development strategy

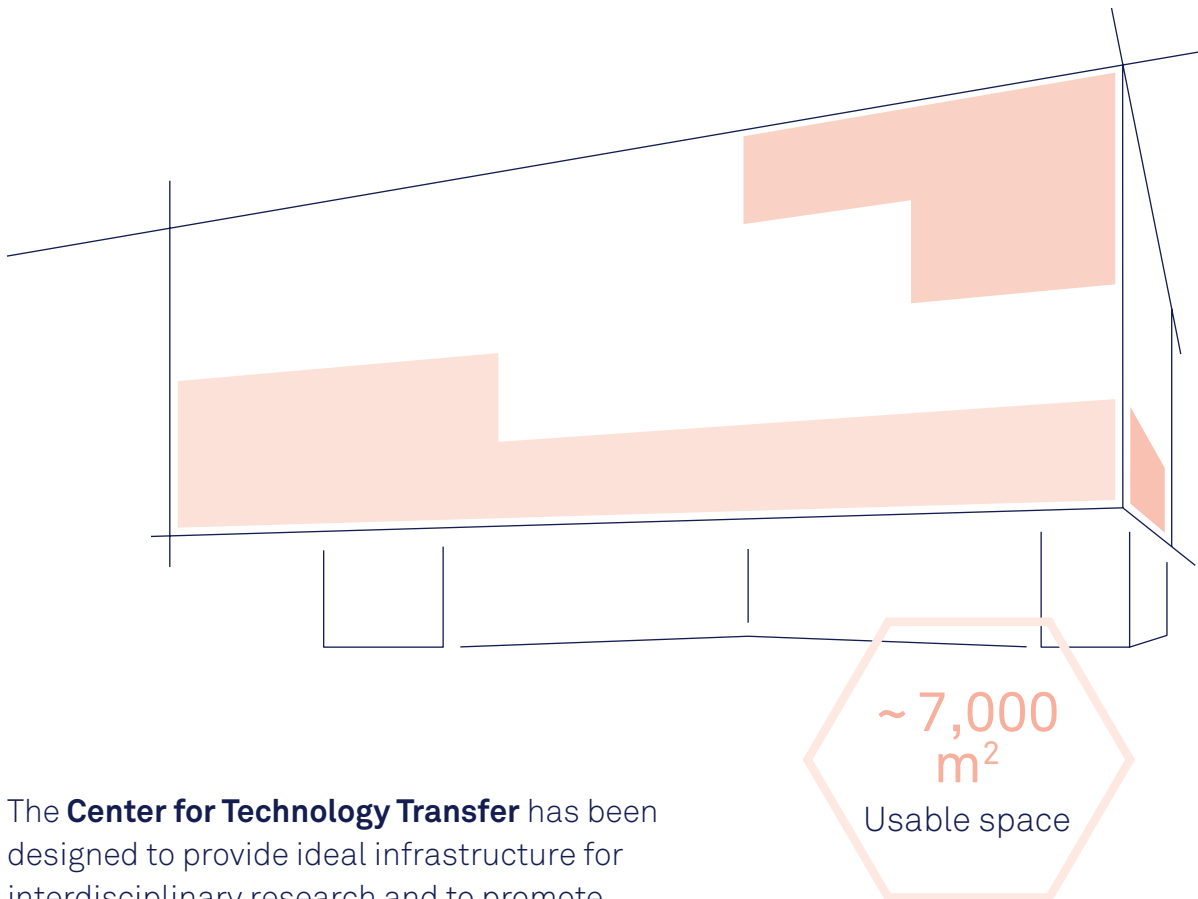
All of the new buildings currently planned or under construction will make a significant contribution to achieving MedUni Vienna's mission. The university's mission statement includes a commitment to "maintaining and restoring health through expertise and innovation."

Accordingly, the infrastructure projects were also incorporated in the Medical University of Vienna Development Plan 2022-2027. The objectives in the Plan include:

- on-schedule construction of MedUni Campus Mariannengasse
- completion of the Center for Translational Medicine

- construction of the Eric Kandel Institute – Center for Precision Medicine
- establishment of the Ignaz Semmelweis Institute for Infection Research, in order to strengthen Vienna's standing as a medical research location
- enhancement of activities carried out with industrial partners, including through the Center for Technology Transfer.

The Development Plan 2025-2030, which is based on these targets, was adopted at the end of 2023. A key strategic document focusing on the period to 2030, the Development Plan outlines MedUni Vienna's comprehensive portfolio of services as well as the targets that the university has set itself.



The **Center for Technology Transfer** has been designed to provide ideal infrastructure for interdisciplinary research and to promote cooperation with start-ups as well as established pharmaceutical and medtech companies.



Future trends and digital technologies are also feeding into teaching – the photo shows first-semester students taking part in a VR-based anatomy practical.

The **Ignaz Semmelweis Institute for Infection Research** will bolster research into infectious diseases in Austria by bundling expertise from the medical universities of Vienna, Graz and Innsbruck, the Faculty of Medicine at Johannes Kepler University Linz and the University of Veterinary Medicine Vienna.

~ 5,000
m²

Usable space
(planned)

~ EUR
60m

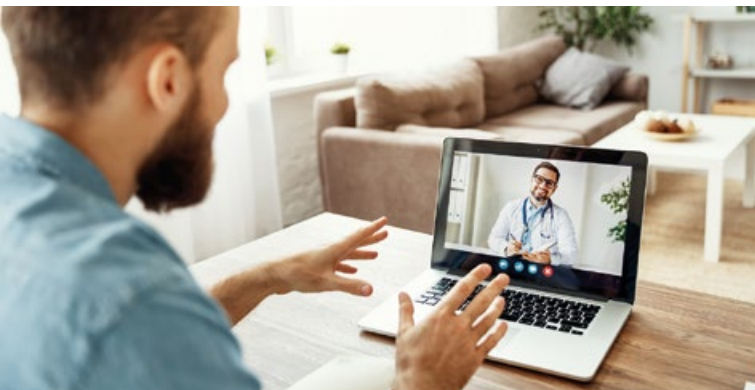
Investment
currently under
negotiation

1 Jan.
2025

Establish-
ment

2023

Creation of
space and
functionality
concept



Groundbreaking research cluster

One of MedUni Vienna's major strengths is the interplay between basic biomedical research and translational and clinical research. Medicine is increasingly shifting away from a focus on purely reparative treatment approaches and towards prevention, with a view to stopping diseases from developing in the first place. Molecular-biological omics technologies – a result of the Human Genome Project – and high-performance tools that allow for big-data analysis hold the prospect of undreamed-of opportunities. The future trends of personalised and digital medicine clearly stand out as interdisciplinary topics running through all five research clusters as well as the Transplantation research platform (turn to page 45 for more information), while high-tech preventive medicine is also playing an increasingly important role.

Modern, high-performance infrastructure will help to further enhance the degree of scientific excellence at MedUni Vienna and make it a more attractive location for high potentials. In tandem with the construction of physical buildings, a digital



High-tech medicine is not only being put to effective use at MedUni Vienna; it is also contributing to and shaping advances in areas such as robotics and telemedicine.

medicine hub is also taking shape – a transformation that took root at the university some time ago. A dedicated task force has been set up to define and coordinate digitalisation-related measures.

Future teaching methods and course contents are being aligned with the requirements of digital medicine, and will involve hybrid teaching, simulations, virtual and augmented reality, fine-tuning the teaching culture, and also interprofessional education. Research teams are making use of artificial intelligence in order to develop new diagnosis and treatment approaches for specific diseases. Meanwhile, telemedicine applications are giving patients low-threshold access to effective medical care and consultations.

In all of these innovative projects and infrastructure investments, MedUni Vienna's core activities will remain unchanged: research, teaching and patient care will continue to play a part in enhancing medical and scientific quality in equal measure in the future, and will generate synergy effects – the only difference being that they will have more space to do so. Expansion of the facilities available for pioneering medical advances will put MedUni Vienna in a position to carry on effectively addressing the challenges we currently face and to decisively shape 21st-century healthcare.

Teaching – promoting excellence in degree programmes and training

Research-led teaching, international quality standards and modern curriculums are the cornerstones of the training that MedUni Vienna provides. The university is building new infrastructure and creating additional space for the transfer of leading-edge knowledge, with a view to ensuring high-quality teaching operations.







TAKING SHAPE: AN INTEGRATED CAMPUS

MedUni Campus Mariannengasse. State-of-the-art teaching and research infrastructure is being put in place at the new site. Significant progress was made on the project in 2023.

Located in the middle of a highly built-up part of the city, it is the largest development currently under way at any of Austria's universities. MedUni Campus Mariannengasse in Vienna's ninth district will serve as an attractive, multifunctional education hub where around 2,000 students will attend courses and study, complete with spaces where they can spend their free time.

"MedUni Vienna has always wanted to have an integrated campus. And outstanding foundations are now being laid for world-class research and teaching. This will enable us to further consolidate our position as a leading medical education institute and research centre moving forward," explained Rector Markus Müller.



Anita Rieder
Vice Rector for Education

» One of the world's largest medical schools, the Medical University of Vienna put in a strong showing in the global rankings once again in 2023. Adapting systematically to contemporary requirements enables us to maintain our high standards. And MedUni Campus Mariannengasse is a pioneering step towards providing forward-looking education. «

Alongside teaching operations, MedUni Campus Mariannengasse will also bring together preclinical organisational units that were previously spread across the city. About 750 researchers from the Centers for Physiology and Pharmacology, Anatomy and Cell Biology, Pathobiochemistry and Genetics, Medical Physics and Biomedical Engineering, and Cancer Research will relocate to the new campus in 2027. They will not only work here, but will also benefit from direct exchange with students and teaching staff, as well as from the campus's cutting-edge infrastructure.

Sophisticated architecture

The site will feature a combination of long-standing buildings that have been preserved and remodelled, as well as a distinctive new build. Intensive construction work was carried out and significant progress made during 2023: from the laying of the foundation stone on 17 January to completion of the excavation works – which included casting the foundation plate – at the end of December.

It's a complex project, not only in terms of its scale, but also as far as the architectural design is concerned: four basement levels were completed one after another, using a cut-and-cover technique identical to the approach used in underground train line construction. This involved installing 150 temporary pillars that were gradually replaced by permanent supporting walls. The work had reached such an

advanced stage by the end of 2023 that above-ground work could begin. If the rest of the project proceeds on schedule, the shell will be completed by late 2024 and MedUni Campus Mariannengasse will become fully operational in October 2027.

The building will be divided into three sections: one for teaching, one for research and another, general, section. The ground-floor level of the main building will feature three large lecture theatres, with additional seminar and training rooms on the first and second floors. Students will also be able to take advantage of recreational areas and learning zones designed to promote interaction. There will be a cafeteria on the ground floor of this listed building, while research teams will be based between the third and seventh floors. A public pathway running right across the campus from Spitalgasse towards Lazarettgasse will shorten the walk from the Altes AKH site to University Hospital Vienna.

Energy-efficient cooling

Another stand-out feature is the district cooling station. Energy supplier Wien Energie will install Vienna's eighth high-performance district cooling station on site at MedUni Campus Mariannengasse, at a cost of around EUR 20m. The largest consumer of cooling energy from the station will be the 35,000m² campus itself. In addition, the station will supply sustainable district cooling for critical infrastructure, including research facilities as well as hospitals and clinics in the region, and also extend the district cooling network in Vienna's ninth district, Alsergrund.

An important step, since district cooling uses 70% less energy and generates 50% less CO₂ compared with conventional climate-control systems. The innovative, energy-efficient technology is an important element in the creation of contemporary infrastructure for students, teaching staff and researchers.

» The Medical University of Vienna sets benchmarks for medical research, teaching and patient care. And thanks to innovative training programmes it will play an even more decisive part in the evolution of the health system in future. «

Maria Sibilia
Chair of the Senate



MedAT AND SEMESTER KICK-OFF

Admissions. Large numbers of applicants took part in the MedAT admissions process once again in 2023. In all, 760 prospective physicians started their degrees at MedUni Vienna in October.

The joint MedAT tests for the medical universities in Vienna, Innsbruck and Graz and the Faculty of Medicine at Johannes Kepler University Linz were held on 7 July. 15,400 applicants registered and 11,735 took the exam. At MedUni Vienna, 5,851 people sat the test – out of the 7,537 who originally registered to do so.

Participants in the structured admissions procedure are not only required to have a basic knowledge of biology, chemistry, physics and maths, but also text comprehension, cognitive, social and emotional skills. The latter were given an increased weighting in 2023. The tests for the Dentistry and Medicine degree programmes are largely identical; however, instead of text comprehension and the ability to recognise implications, Dentistry programme applicants have to



Welcoming the White Coats: 680 first-semester Medicine students and 80 Dentistry freshers started their degrees in autumn 2023.

demonstrate their manual dexterity, wire-bending skills and their ability to produce mirror images of certain shapes.

“Welcome, White Coats!”

Candidates with an Austrian university entrance qualification filled 583 of the 680 places on the Medicine degree programme. They also accounted for 60 out of a total of 80 places on the Dentistry programme, which is not covered by the quota regulation. Rector Markus Müller addressed the new first-semester students at the traditional White Coat Welcome event on 4 October. The students received their first MedUni Vienna doctor’s coats, and also took the opportunity for a spot of networking.



FULLY-CERTIFIED DEGREE PROGRAMME

Independent accreditation. MedUni Vienna’s Medicine degree programme received unconditional reaccreditation last year – and is also recognised in the USA.

Audited in accordance with international standards, the Medicine degree programme was awarded unconditional accreditation in summer 2023. According to the opinion issued by accreditation agency AHPGS, the curriculum provides “training with a strong practical element, combined with social, ethical and emotional aspects, as well as innovations in digital teaching and simulation”. MedUni Vienna undergoes accreditation voluntarily: initial accreditation was obtained in 2011, with the first reaccreditation audit taking place in 2016.

Studying and working in the USA

In November 2023, AHPGS also received

recognition status from the World Federation for Medical Education (WFME) and is now authorised to carry out WFME accreditations. As a result, the MedUni Vienna Medicine degree programme is listed in the Educational Commission for Foreign Medical Graduates’ (ECFMG) Medical Schools Eligible for 2024 Pathways database, which allows MedUni Vienna students and graduates to study, work and carry out research without restrictions in the USA. “This approval shows that MedUni Vienna’s Medicine degree meets the highest international standards,” commented Vice Rector for Education Anita Rieder.



Physicians in training at MedUni Vienna practice bedside manner with patient actors. The students hold consultations with the actors and receive valuable feedback that enables them to enhance their communication skills.

ADDRESSING PREJUDICE THROUGH EDUCATION

Developing good bedside manner. Training with patient actors helps to avoid immigration bias and improve pain treatment among vulnerable patient groups.

Prejudice can have a significant influence on patient care, particularly when patients are suspected of exaggerating feelings of pain. A study by the Teaching Center and the Department of Emergency Medicine found that, when confronted with actors playing patients with migrant and non-migrant backgrounds in the Medical Communication course, MedUni Vienna students treated both groups appropriately, in line with the pain intensity reported by the patients. The study observed more than 600 second-year students.

The researchers found differences in the choice of pain treatment as well as a gender effect: although female and male patients received the same treatment, female students assessed patients' level of pain as more severe and also prescribed pain medication more frequently than their colleagues. The results were identical for students with migration backgrounds and students with Austrian roots.

European Journal of Emergency Medicine

TREATING CARDIAC ARREST

Life-saving. An elective provides first-aider training to students who then share their knowledge of basic resuscitation with people living in Vienna.

In heart attack cases, rapid assistance can save lives. Every minute that goes by without performing cardiac massage cuts the chance of survival by about 10%. Introduced 20 years ago, the Learning by Teaching Life-Saving Immediate Measures elective has been a huge success with students from all year groups. Following courses with experienced trainers from Austrian cardiac arrest awareness association PULS, the students pass on their know-how to members of the public – in 2023, training sessions were held at a range of different events, including the Danube Island Festival, while students also visited the Donauzentrum shopping centre on 16 October to mark World Restart a Heart Day.

GRADUATION CELEBRATION

The graduation ceremonies for a total of 626 graduates of the Medicine and Dentistry degree programmes took place on 29 November 2023 in the beautiful surroundings of Vienna's Konzerthaus. The degree certificates were presented by Rector Markus Müller and Vice Rectors Anita Rieder, Michaela Fritz and Volkan Talazoglu. In all, around 8,000 guests attended the ceremonies in honour of the physicians of the future.



The applause rang out after more than 600 new doctors took their academic oath.

AWARD-WINNING TEACHING

Outstanding knowledge transfer. MedUni Vienna paid tribute to teaching staff who use innovative methods, while the Medical Humanities project was among the nominees at the Ars Docendi awards.

Honorary awards for innovative curriculum development and teaching excellence were presented in March as part of the Day of the Medical University of Vienna. Among the recipients was Harald Kittler of the Department of Dermatology – he and his team created an interactive setting for online teaching, which involved recording, editing and producing 60 hours of lecture materials over the course of six weeks, in a studio that they set up themselves. The honorary award for teaching excellence went to Heimo Lagler, Lorenz Schubert and Manuel Kussmann from the Department of Medicine I. They provide students on the Antimicrobial Chemotherapy elective with important practical insights using interactive clinical case studies.

Ars Docendi state award

The Federal Ministry of Education, Science and Research presented the first Ars Docendi state prize for teaching excellence in 2013. This year, MedUni Vienna's Medical Humanities project was shortlisted and also received a special commendation in the Learning Outcomes-Oriented Teaching and Examination Culture category. The project is designed to strengthen students' abilities by discussing challenging situations with them, including settings where they experience language barriers or feelings of disgust, and allowing them to use various forms of expression, such as illustrations, prose, comic strips and music. These methods have been integrated into compulsory courses and rolled out to a wide range of different teaching elements.



Official recognition for outstanding work: (from left to right) Ruth Koblizek, Ruth Kutalek and Eva Masel with Science Minister Martin Polaschek

Undergraduate degree programmes

- Medicine
- Dentistry

Master's degree programmes

- Medical Informatics
- Molecular Precision Medicine
(in collaboration with the University of Vienna)

PhD programmes with a focus on basic medical research

- Cardiovascular Tissue Regeneration and Repair
- Cell Communication in Health and Disease*
- Endocrinology and Metabolism
- Immunology
- Infection Biology
- Malignant Diseases
- Medical Imaging
- Medical Informatics, Biostatistics & Complex Systems
- Medical Physics
- Molecular Drug Targets
- Molecular Mechanisms of Cell Biology*
- Molecular Signal Transduction
- Molecular, Cellular and Clinical Allergology
- Neuroscience
- RNA Biology
- Signaling Mechanisms in Cellular Homeostatics
- Vascular Biology

* Programme being phased out, no new admissions

Doctoral programmes in applied medical science with a focus on clinical research

- Biomedical Engineering
- Cardiovascular and Pulmonary Disease

STUDYING MEDICINE AND DEEPENING KNOWLEDGE

Diverse curriculum. Prospective MedUni Vienna students can choose from a broad range of courses, including the Medicine and Dentistry degree programmes, as well as a diversified selection of doctoral and PhD programmes and master's degrees. The portfolio also includes continuing education courses that enable professionals to enhance their expertise.

- Clinical Endocrinology, Metabolism and Nutrition
- Clinical Experimental Oncology
- Clinical Neurosciences (CLINS)
- Epidemiology
- Mental Health and Behavioural Medicine
- Musculoskeletal and Dental Research
- Preclinical and Clinical Research for Drug Development
- Programme for Organ Failure, Replacement and Transplantation (POET)
- Public Health

Joint PhD programmes

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

Postgraduate programmes

- Advanced Diseases – Master of Science (MSc)
(Continuing Education)
- Work Capability and Integration Management
- Occupational Medicine
- Occupational Health Assistant
- Clinical Research
- Endodontology
- Esthetic Dentistry
- Forensic Sciences
- Gender Medicine
- Traditional Chinese Medicine (TCM)



- Health Care Management (HCM-MBA)
- Healthcare Facilities
- Intensive Care
- Interdisciplinary Pain Medicine
- Clinical Academic Psychotherapeutic Propaedeutic and Medical Humanities (KAPP-MH) – MSc
(Continuing Education)
- Crisis Intervention and Suicide Prevention
- Master of Advanced Studies (MA) in Insurance Medicine
- Master of Applied Medical Aesthetics (MSc)
- Master of Public Health
- Medical Hypnosis
- Medical Physics
- MSc in Occupational and Organizational Medicine
- Periodontology and Implantology
- Prosthodontics and Interdisciplinary Therapy Concepts – Academic Expert (AE) or Master of Dental Science (MDSc)
- Psychotherapy: Psychoanalytic/Psychodynamic Methods (ULG-PPPM)
- Psychotherapy: Behavioural Therapy
- Psychotherapy Research
- Sleep Coaching – AE or MSc (Continuing Education)
- Study Management – Academically Certified Study Manager (AE)/MSc in Study Management
- Substance Use Disorders – MSc (Continuing Education)
- Toxicology
- Transcultural Medicine and Diversity Care – AE or MSc
(Continuing Education)

Research – new boost for science

Precision medicine is driving a paradigm shift in medical care. To take this approach to the next level and ensure that it continues to play a key role in shaping the future of medicine, MedUni Vienna is putting in place the optimal infrastructure for translational, interdisciplinary research.







A SINGLE SITE DEDICATED TO PERSONALISED MEDICINE

Eric Kandel Institute – Center for Precision Medicine. By the end of 2026, around 200 researchers will move into the new facility where they will have access to all of the infrastructure required for developing a full range of preventive, diagnostic and treatment methods that are tailored to the precise needs of individual patients.

“MedUni Vienna is well on the way to becoming an international leader in precision medicine thanks to this magnificent, state-of-the-art new building and the outstanding centre it houses. Congratulations!” said Eric Kandel in a video message. The Centre for Precision Medicine – named after Eric Kandel, a Nobel Prize winner from Vienna, who uncovered a number of key mechanisms behind

memory formation – is helping to underpin Vienna’s pioneering role as a centre of science while ushering in next-generation medical standards for the treatment of patients.

The centre is dedicated to identifying the underlying mechanisms behind diseases and promoting the development of diagnoses, treatments and

preventive measures that are tailored to individual factors. Personalised medicine can be used to treat numerous conditions, including cancer, cardiovascular diseases, mental illnesses and metabolic, respiratory and infectious diseases. The centre's proximity to University Hospital Vienna will also mean that physicians responsible for patient care can collaborate closely with basic researchers.

Renowned geneticist Josef Penninger, who accepted a professorship in personalised medicine at MedUni Vienna at the beginning of July 2023, is helping to shape the centre. He is using genetics and precision medicine to conduct research into how groundbreaking therapies can be derived from individual factors. Successful identification of a protein that plays a key role in breast cancer is just one example of his pioneering work. A number of new drugs have already been developed on the basis of his research findings.

From planning to implementation

Realisation of the new centre got under way in 2023, with a formal ceremony on 27 January in the presence of Eric Kandel, Federal Minister for Education, Science and Research Martin Polaschek, the Mayor of the City of Vienna Michael Ludwig, MedUni Vienna Rector Markus Müller and University Hospital Vienna Director Herwig Wetzlinger. Around 70% of the construction costs will be financed by the European Union. MedUni Vienna reached the first of four milestones set by the EU Commission once construction officially began following a groundbreaking ceremony in December 2023. The foundations have been laid and the building shell is due for completion in the



Michaela Fritz

Vice Rector for Research and Innovation

» MedUni Vienna recruited a number of outstanding researchers in 2023. And, with the help of the new research infrastructure at our fingertips, our growing faculty will be able to build on its three research pillars – excellence in basic, translational and clinical research. «

course of 2024. If everything continues according to schedule, the Centre for Precision Medicine will open at the end of 2026.

Further progress on the budget for the centre was also made in 2023, when an increase in funding was announced in the wake of intensive negotiations with the federal government, meaning that the project will be completed according to the original scope.

Hub for digital medicine

The Eric Kandel Institute – Center for Precision Medicine will provide cutting-edge facilities for research into digital and personalised medicine, which uses techniques such as genome sequencing and molecular imaging to identify conditions that vary from person to person. With more than 6,000m² of usable space, the new building will have enough room for a number of highly specialised units. Around 500m² will be set aside for computer-aided biomedicine projects, technology platforms and a biobank.

This personalised approach to treatment is already being put into practice day in day out across a broad range of disciplines at the various MedUni Vienna and University Hospital Vienna departments. MedUni Vienna is also creating the physical conditions to ensure that it is in an even stronger position internationally as a driving force in precision medicine and able to continue to develop pioneering methods and anchor these even more firmly in the healthcare landscape.

» The outstanding reputation of University Hospital Vienna largely hinges on the exceptional performance of its doctors – all of whom are appointed by the Medical University of Vienna. With this in mind, MedUni Vienna is doing everything it can to ensure that it remains an attractive employer for the very brightest minds. «

Eva Dichand

Chair of the University Council



IDENTIFYING SKIN CANCER WITH AI

Dermatology. Artificial intelligence (AI) is already being deployed to diagnose skin cancer. Various studies are exploring how targeted reinforcement learning is able to increase accuracy as well as investigating whether humans or machines are more reliable.



An international team led by Harald Kittler from the Department of Dermatology investigated the potential of reinforcement learning as a way to enhance the effectiveness of AI diagno-

sis. Rather than simply labelling results as correct or incorrect, they were also rewarded or penalised using a points system based on outcomes and decisions stemming from the diagnosis. This approach proved successful, as reflected in a 12% increase in dermatologists' correct skin cancer diagnosis rate.

Nature Medicine

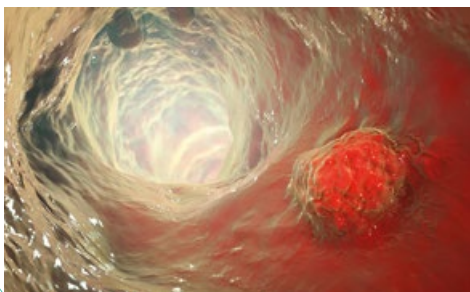
Human vs. system

Also led by Harald Kittler, an Austrian-Australian team compared the accuracy of diagnosis and treatment recommendations from two different

algorithms used in smartphone apps with those issued by doctors. The study found that although AI performed well when it came to diagnosis, the physicians were significantly better than the digital tools when it came to making treatment decisions. The study was carried out under realistic clinical conditions at two skin cancer centres: the Department of Dermatology at MedUni Vienna and the Sydney Melanoma Diagnostic Centre in Australia.

The Lancet Digital Health

INNOVATION AGAINST METASTATIC COLORECTAL CANCER



A new treatment concept delivers significantly improved prognoses for patients with metastasised colorectal cancer. The global SUNLIGHT study, led by Gerald Prager of the Department of Medicine I and MedUni Vienna and University Hospital Vienna's Comprehensive Cancer Centre Vienna, combines targeted therapy with oral chemotherapy. The combined treatment achieves decisive benefits both in terms of survival rates and quality of life.

New England Journal of Medicine

BIG LEAP FORWARD IN SMALL CELL LUNG CANCER

Owing to its strong tendency to metastasise, small cell lung cancer is associated with a high mortality rate. Research conducted by scientists at the Department of Thoracic Surgery is contributing significantly to a better overall understanding of this type of cancer. Working alongside peers from Sweden, the Czech Republic, Hungary and the USA, the team was able to demonstrate that cases of small cell lung cancer can be divided into subgroups that differ in terms of clinical behaviour, an insight which could form the basis for new therapeutic approaches.

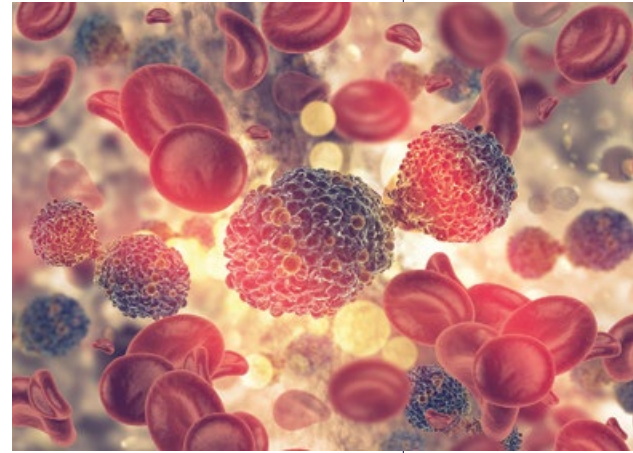
CA: A Cancer Journal for Clinicians



PREDICTING THERAPEUTIC BENEFITS OF BLOOD CANCER TREATMENTS

An international research team headed by first author Barbara Kieseewetter from the Division of Oncology, Department of Medicine I, developed a predictive tool for blood cancer, closing a gap in the process. Based on an instrument established in 2015 by the European Society for Medical Oncology (ESMO-MCBS), which evaluates the clinical benefit of new cancer therapies but had previously only been used for solid tumours, the newly validated tool (ESMO-MCBS:H v1.0) can be used for all major malignant diseases of the haematopoietic system.

Annals of Oncology



NEW TREATMENT FOR MALIGNANT BRAIN TUMOUR

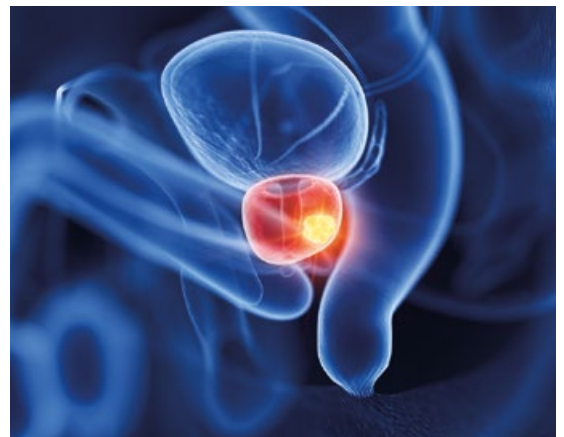
Medulloblastomas are the most common malignant brain tumours in children and adolescents. In around a quarter of cases, the tumour recurs in spite of surgery, radiotherapy and chemotherapy, with no curative treatment option available to date. But a study led by MedUni Vienna demonstrated that anti-angiogenic therapy – which is administered as a low-dose medication – can increase survival rates among patients with a recurrence of this type of cancer. By primarily targeting the cancer environment, this treatment approach effectively starves the cancer.

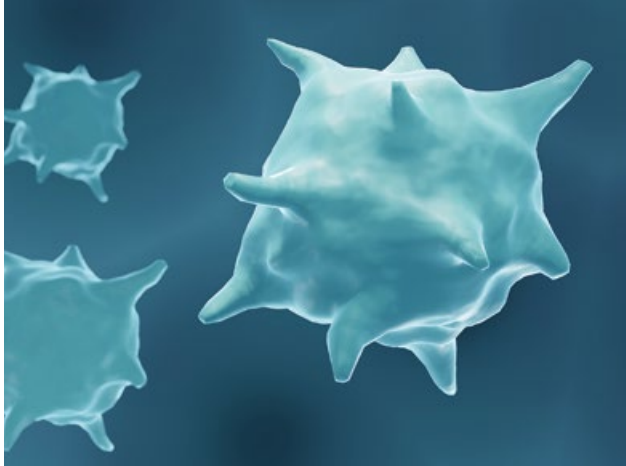
JAMA Oncology

DIABETES DRUG TO TREAT METASTATIC COLORECTAL CANCER

Patients with localised prostate cancer have a good chance of survival. However, mortality rates among those with advanced, metastatic forms of the condition remain high. An international team headed by Lukas Kenner from MedUni Vienna's Department of Pathology and the Vetmeduni Division of Laboratory Animal Pathology discovered that the loss of the signalling pathway between the STAT3 and IL6 proteins can lead to massive tumour growth and metastases. The type 2 diabetes drug metformin, which is used to regulate glucose levels, can significantly inhibit the progression of STAT3-positive prostate cancer.

Molecular Cancer





MACROPHAGES IN THE GUT

Immune cells. Macrophages are an essential part of the body's immune defence system. A pair of research projects have provided fresh insights into the role they play in the gut, with potential therapeutic approaches now being derived from these findings.

A team of researchers from MedUni Vienna and the Austrian Science Fund (FWF)-sponsored SFB F83 Immunometabolism special research programme has succeeded in describing a process known as the “commensal metabolism” of macrophages for the first time. These “metabolic factories” are essential for the renewal of the epithelial cells on the intestinal surface, which takes place every four to seven days. They produce high levels of the metabolic products spermidine and spermine, and enable all the other tissue cells in the organ to perform their actual functions more effectively by relieving the burden placed on them.

Cell Metabolism

Iron uptake vehicle

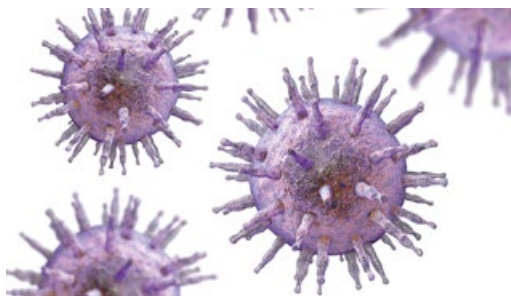
A team led by Nyamdelger Sukhbaatar and Thomas Weichhart from the Center for Pathobiochemistry and Genetics discovered that a malfunction or hyperfunction of certain immune cells in the intestine has an important role to play in iron absorption in the body. Macrophages in the duodenum eat away transferrin – the molecule responsible for transporting iron – causing iron to remain in the intestinal cells rather than entering the bloodstream. Macrophages are also activated as a result of fasting, food intake or an intestinal infection, and the amount of transferrin in the intestine changes. These findings represent a paradigm shift, as it was previously believed that transferrin was evenly distributed throughout the body and did not play a role in iron regulation.

Blood

IMMUNE RESPONSE TO EPSTEIN-BARR VIRUS DISCOVERED

A research team led by Elisabeth Puchhammer-Stöckl from the Center for Virology has identified a specific immune response to the Epstein-Barr virus (EBV). Medical science has not yet been able to fully explain why a first-time EBV infection triggers no symptoms whatsoever in most people, but causes infectious mononucleosis (IM) in a minority of cases. Thanks to the study findings, researchers have identified the cause of this phenomenon as well as a potential new target for the development of vaccines.

Blood



UNCOVERING THE GENETICS OF THE IMMUNE SYSTEM

With significant involvement from MedUni Vienna, a research team from the USA has analysed the molecular structures of human T cells and described in detail for the first time how the immune system works. To achieve this, the scientists delved deep into the DNA of T cells and were able to identify certain nucleotides that have a bearing on how immune cells react to stimuli. Ralf Schmidt from the Department of Laboratory Medicine was one of the first authors. The results have the potential to help pinpoint new therapies for autoimmune diseases and cancer.

Nature



GENETIC DEFECT DISRUPTS BLOOD FORMATION AND IMMUNE SYSTEM

In their quest to identify the origin of puzzling symptoms exhibited by four children, researchers from St. Anna Children's Cancer Research Institute, the Austrian Academy of Sciences' (ÖAW) CeMM Research Center for Molecular Medicine and MedUni Vienna ended up discovering a completely new disease. To begin with, a young patient from Spain presented with severe inflammation in various organs such as the kidneys, intestines, and skin. Genome sequencing uncovered a severe defect in DOCK11, a gene which is involved in cell communication and which had not been previously associated with any human disease.

New England Journal of Medicine



CAUSE BEHIND LOSS OF VACCINATION PROTECTION IDENTIFIED



People who are treated with TNF- α inhibitors for autoimmune diseases such as Crohn's disease or rheumatoid arthritis lose their vaccination protection significantly earlier than average. This is due to the fact that the strong inflammatory situation inhibits the production of memory B cells in the lymph nodes. Conducted by the Center for Pathophysiology, Infectiology and Immunology in cooperation with the Division of Gastroenterology and Hepatology at the Department of Medicine III, a study has now decoded this mechanism and highlighted the importance of regular boosters for those affected.

eBioMedicine

IMMUNOSUPPRESSION FOR TRANSPLANTATION

Antithymocyte globulin (ATG) is administered to patients prior to transplant surgery to help prevent the new organ from being rejected. A research team at MedUni Vienna has reappraised the immunosuppressive effect of ATG and identified a previously unknown mode of action: ATG triggers a significant change in the gene signature of monocytes, and PD-L1 surface expression on monocytes can still be detected several days after ATG treatment. This indicates that ATG has a more immunosuppressive effect than originally believed, which opens up a new starting point for further research.

Cells





RISK OF LIVER DISEASE

In check. What is the risk of complications for patients with liver disease? Three studies offer improved approaches when it comes to assessing the patient's situation.

Liver stiffness is often measured in everyday clinical practice as a way of assessing the severity of chronic liver disease and identifying the most effective therapies to treat it. A team from the Department of Medicine III investigated this in more detail over an observation period of around six years, conducting 8,561 non-invasive measurements on 2,508 chronic liver disease patients. They tracked the progression of the disease and determined the extent to which changes in liver stiffness were a predictor of complications or mortality. Liver decompensation in particular – which manifests as a build-up of fluid in the abdomen or bleeding in the oesophagus or stomach – significantly worsens the prognosis. The study showed that monitoring the progression of liver stiffness over time was a better predictor of the risk of liver decompensation than individual measurements. Knowing the personal risk profile of patients opens the door for initiating optimised, personalised treatment measures.

Gastroenterology

Training an algorithm

A new, easy-to-use algorithm demonstrates how likely patients suffering from liver cirrhosis are to develop hepatic decompensation, and in doing so enables early detection of the condition. Researchers in Thomas

Reiberger's research group at CeMM, MedUni Vienna and the Ludwig Boltzmann Institute for Rare and Undiagnosed Diseases (LBI-RUD) trained various machine learning models with blood test parameters from people with compensated cirrhosis, with a view to detecting heightened hepatovenous pressure gradient (HVPG) values.

Journal of Hepatology

Evaluating variceal haemorrhages

More than half of all patients with advanced liver disease also have varicose veins in the oesophagus and stomach. And over a fifth of these patients experience bleeding into the digestive tract, which is a life-threatening complication. The work conducted by a team of international researchers headed by Lorenz Balcar and Mattias Mandorfer, both from the Department of Medicine III, has now improved the system for assessing the mortality risk of variceal bleeding. Their study identified a previously undefined group of patients that could benefit from liver stents to relieve portal hypertension. An important intervention given that varicose veins in the oesophagus and stomach are caused by increased pressure in the portal vein.

Journal of Hepatology

TREATING HEPATOCELLULAR CARCINOMA



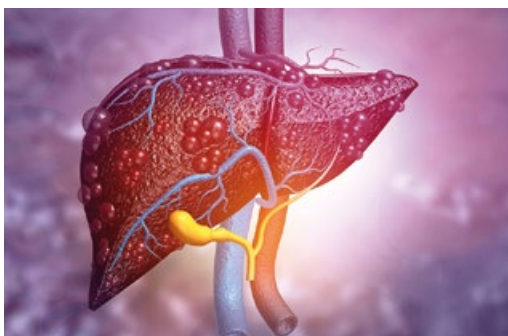
Systemic therapy of advanced hepatocellular carcinoma has developed at an unprecedented pace over the last five years. Because tyrosine kinase inhibitors have dominated the field for more than a decade, immunotherapy with immune checkpoint inhibitors has established itself as the main component of first-line systemic treatment for this type of cancer. But implementing immunotherapy in routine clinical practice brings a number of challenges with it. In a Lancet viewpoint, Matthias Pinter and Bernhard Schreiner from the Department of Medicine III ran the rule over the key issues associated with this treatment.

The Lancet Gastroenterology and Hepatology

TRACKING ALCOHOLIC LIVER DISEASE

Despite advances in treatment, early liver transplantation is still the only way to cure alcoholic liver disease. A team led by Tim Hendriks from the Department of Laboratory Medicine, working alongside their counterparts from the University of California San Diego, discovered a mechanism that contributes to disease progression. Patients with alcohol-associated hepatitis exhibit an accumulation of polymeric immunoglobulin receptor (pIgR) and immunoglobulin A (IgA) in the liver, which is an indicator of errors in IgA transport and secretion.

Gut



LUNG AND HEART AFFECTED

A long-term analysis by Christian Gerges and Irene Lang from the Department of Medicine II revealed that one third of patients with chronic thromboembolic pulmonary hypertension (CTEPH) also suffer from left heart disease. Yet to be taken into account in diagnosis and treatment, identification of this overlap will require an expansion of the guidelines. As part of their research, the team analysed precise haemodynamic measurements using right and left heart catheters from 611 patients.

Journal of the American College of Cardiology



ANTIBIOTIC DOSE FOR PNEUMONIA

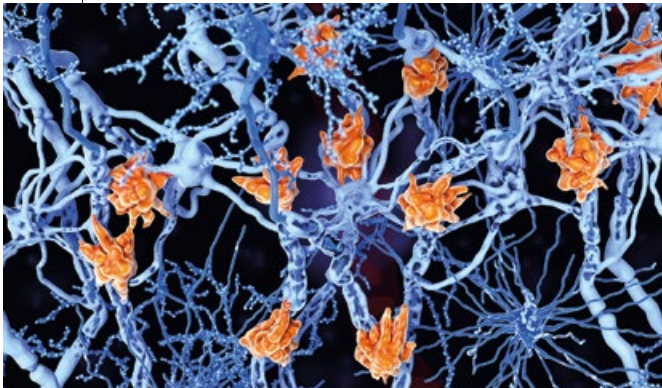
The course of intubated ICU patients is often complicated by ventilator-associated pneumonia. For the treatment administered to be successful, the antibiotic needs to reach the affected lung tissue in sufficient concentrations. A team led by Edda Tschernko from the Department of Anesthesia, Critical Care and Pain Medicine analysed the concentration of the antibiotics linezolid and ceftaroline in an animal model. They found that during the acute phase, the antibiotic concentration was higher in the inflamed tissue than it was in the healthy lung tissue.

American Journal of Respiratory and Critical Care Medicine

POSSIBLE BASIS FOR MS VACCINATION FOUND

Multiple sclerosis (MS) is a chronic inflammatory autoimmune disease in which the Epstein-Barr virus (EBV) plays an as yet unexplained role. What remains unclear is why almost everyone becomes infected with the virus at some point in their lives, but that it only triggers MS in a small number of people. A team from the Center for Virology and the Department of Neurology at MedUni Vienna has now identified a number of mechanisms that provide protection against an EBV-induced autoimmune reaction and potentially against MS, too – introducing possible points of departure for the development of an MS vaccine.

Cell



MRI SHOWS GLUCOSE METABOLISM IN THE BRAIN



A newly developed MRI imaging technique now makes it possible to observe glucose metabolism and the activity of neurotransmitters in the brain without using radioactive substances. A non-invasive method, it uses deuterated glucose and gives clinicians innovative insights into brain metabolism. A better understanding of brain functions can be essential for developing new treatment strategies for patients with various conditions, including Alzheimer's and brain tumours.

Nature Biomedical Engineering



FINDING THE CAUSE OF AUTISM

Is there a weak point in the brain that leads to autism? A research group headed by Jürgen Knoblich of the Department of Neurology, IMBA – Institute of Molecular Biotechnology and ETH Zurich has developed a new approach that combines brain organoids with complex genetics. The technology allows for comprehensive testing of the effects of multiple mutations in parallel and at the single-cell level, which makes it possible to identify vulnerable cell types and gene regulatory networks that underlie autism spectrum disorders.

Nature

HEART VALVES IN FOCUS

In cases where the tricuspid valve fails to close properly, blood is able to flow back from the right ventricle into the right atrium, which results in cardiac insufficiency. A multidisciplinary team of electrophysiology, interventional cardiology, imaging, and heart surgery experts led by Martin Andreas from the Department of Cardiac Surgery provides an overview of diagnostics as well as the mechanisms and therapeutic options for tricuspid valve disease. Cardiac implantable electronic devices (CIEDs) are playing an increasingly important role in treatment.

European Heart Journal



UNDERSTANDING THE MECHANISMS BEHIND ATHEROSCLEROSIS

Triggered by the accumulation of plaque on the inner arterial walls, cardiovascular diseases are responsible for about one third of deaths worldwide.

A team led by Christoph Binder from the Department of Laboratory Medicine identified immune cells in atherosclerotic vascular changes. The macrophage subgroup produces complement factor H (CFH), which restricts certain immune cells' ability to eliminate dying cells, which aggravates atherosclerotic plaque. If, however, CFH is absent, it has a positive effect on the progression of the disease.

Immunity

GLOBAL RESUSCITATION DRIVE



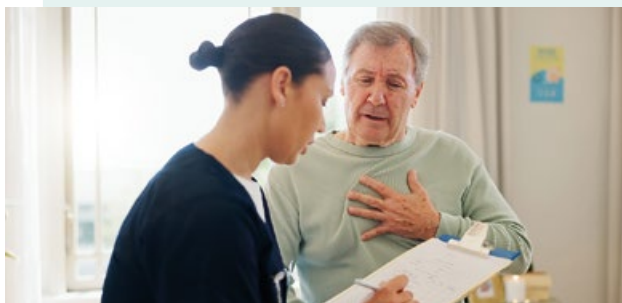
Resuscitation guidelines – such as those issued by the European Resuscitation Council (ERC) – were developed with resource-rich environments in mind. But conditions vary significantly from country to country, and even countries with a lot of resources can still have areas where resources are limited. An expert statement issued under the auspices of MedUni Vienna has paved the way for revising international resuscitation recommendations. These changes are an essential step towards ensuring that as many lives as possible can be saved in the wake of a cardiac arrest, regardless of the location of the individual.

The Lancet Global Health

STUDY CONFIRMS VIENNA PREDICTION MODEL

Patients with venous thrombosis or pulmonary embolism with no clear triggering cause are at a high risk of recurrence. Within five years, about a third will suffer another venous thromboembolism, and around 4% of them will die from a pulmonary embolism. A prediction model identifies venous thromboembolism patients who have a low risk of recurrence and may not need to take anticoagulation drugs over the long term as a result. A large-scale clinical study has since confirmed the validity of the Vienna Prediction Model developed at MedUni Vienna.

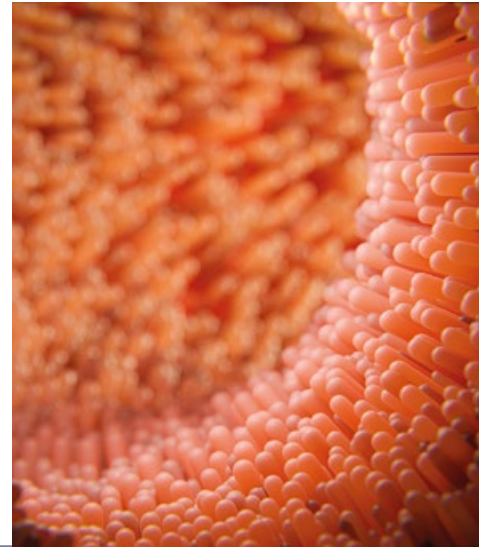
European Heart Journal



NEW IMAGING TECHNIQUE FOR CROHN'S DISEASE

In patients with Crohn's – a chronic inflammatory bowel disease – constrictions in the bowel, known as strictures, cause painful cramping and digestive issues. An interdisciplinary group at MedUni Vienna has conducted research into an imaging technique that makes it easier to distinguish between inflammation and fibrosis. A novel nuclear medicine tracer binds to the fibroblast activating protein (FAP) of the connective tissue cells which lead to the development of fibrosis in the intestinal wall.

Radiology



TREATING GESTATIONAL DIABETES EARLIER



The Austrian Mutter-Kind-Pass (Mother-Child Pass) provides for gestational diabetes testing between the 24th and 28th week of pregnancy, meaning that any treatment can only be initiated once this stage has been reached. But now an international study involving a team of researchers from MedUni Vienna has demonstrated for the first time that treating gestational diabetes at an even earlier stage also helps to protect babies and mothers from developing complications. The new findings provide the foundation for revising the current guidelines for gestational diabetes.

New England Journal of Medicine

INVESTIGATING NOISES IN INCUBATORS

While research into the effects of a noisy environment in the neonatal intensive care unit has already been conducted, the effects of the noises resonated by the incubators in which premature babies spend their first weeks or months have yet to be investigated. Working alongside colleagues from Vienna, Hamburg, Munich and Osnabrück, a team from MedUni Vienna discovered that although the incubators are able to muffle some sounds, the low-frequency droning noise they resonate can damage the babies' hearing. The consequences can last a lifetime.

Frontiers in Pediatrics



NEW THERAPEUTIC APPROACH FOR JOINT DISEASE

Osteoarthritis (OA) has long been regarded as the result of age-related wear and tear. However, the degradation of joint cartilage is now increasingly being associated with inflammatory and metabolic processes. A MedUni Vienna-led research team has made major progress when it comes to understanding the disease, and discovered that cartilage samples from affected humans and mice exhibit elevated levels of c-Fos. Secreted by the cartilage cells in response to OA signals, this protein plays a role in protecting the cartilage.

Annals of Rheumatic Diseases



CBD NOT EFFECTIVE AS A PAINKILLER

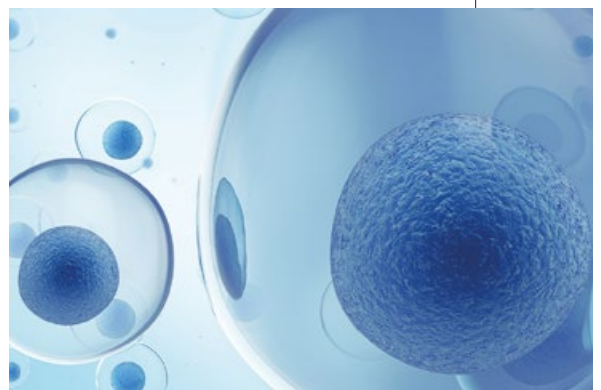
Cannabidiol (CBD) is sometimes marketed as a painkiller for various conditions including osteoarthritis in the knee. In a placebo-controlled clinical trial on humans, pain researchers at the Department of Anesthesia, Critical Care and Pain Medicine were able to demonstrate for the first time that CBD's efficacy as a pain medication cannot be sufficiently proven – even at high doses. The study involved 86 men and women, with an average age of around 63, who suffered from severe pain due to knee joint wear, a condition known as gonarthrosis.

The Lancet Regional Health – Europe

LIPID CHEMISTRY DETERMINES THE SHAPE OF A CELL NUCLEUS

The nucleus of a cell is surrounded by a spherical double membrane known as the nuclear envelope. This structure is elastic enough to adapt to the changes in shape that cells undergo as they move through tissue, but still rigid enough to maintain the integrity of the nucleus. A study by Anete Romanauska and Alwin Köhler from the Max Perutz Labs revealed that the chemistry of the membrane lipids is crucial. If this chemistry is disrupted, the nuclear membranes become stiff and can rupture, causing the nuclei to lose their typical round shape as a result.

Nature Cell Biology



VIRUSES AS A TREATMENT FOR ATOPIC DERMATITIS

Up to 15% of children and 5% of adults suffer from atopic dermatitis. A research team led by Wolfgang Weninger from the Department of Dermatology discovered previously unknown phages on skin samples from patients that are not found in healthy individuals. Their presence could potentially explain why the skin microbiome of people with atopic dermatitis has an overpopulation of *Staphylococcus aureus* bacteria. Phages that specifically target this bacterium are a promising therapy option.

Science Advances



SUICIDE RISK AMONG WOMEN IN HEALTHCARE



For the first time in Austria, a team led by Claudia Zimmermann from MedUni Vienna's Center for Public Health investigated the risk of suicide for members of various healthcare professions and other highly-qualified professions. While the suicide risk among male doctors, tax advisors and auditors is significantly lower than in the general population, the researchers found that it was higher for female doctors, dentists, veterinarians and pharmacists. Greater awareness and specific prevention measures can help to improve the situation.

Psychiatry Research

ARTIFICIAL INTELLIGENCE INFLUENCES TRIAGE

During the Covid-19 pandemic, various AI-based systems were developed to help triage patients. A study by the Data working group, led by Oliver Kimberger from the Department of Anesthesia, Critical Care and Pain Medicine, revealed that the probability of survival as calculated by AI had a significant influence on doctors' decisions. Although the doctors mostly rejected these AI recommendations or chose a compromise, 30% followed the suggestions made by artificial intelligence in full.

Journal BMC Medicine



NEW CHRISTIAN DOPPLER LABORATORIES

Researching in teams. Four new Christian Doppler Laboratories – or CD Laboratories for short – opened in 2023. The underlying approach at the labs: outstanding scientists conduct application-orientated basic research at the highest level, in cooperation with innovative companies. By focusing on translation, new insights gained from basic research can be applied to clinical settings as quickly as possible.

Christian Doppler Laboratory for MR Imaging Biomarkers (BIOMAK)

This CD Laboratory, which opened at the end of March 2023, is conducting research into new indicators for magnetic resonance imaging to help detect diseases such as osteoarthritis as early as possible, and improve the diagnosis of rare diseases and the planning of neuro-surgical interventions. MR-based biomarkers are valuable tools in precision medicine as they facilitate the visualisation of pathological changes in the body and determine the characteristics of the affected tissue without the need for invasive biopsies.

Project leader:

Wolfgang Bogner, Department of Biomedical Imaging and Image-guided Therapy

Partner companies:

Siemens Healthcare Diagnostics GmbH, Brainlab AG and Snke OS GmbH, Vitalflo Int. Ltd.

Christian Doppler Laboratory for Minimally Invasive Cardiac Surgery

Cardiac surgery is the best treatment option for conditions such as heart valve insufficiency and coronary heart disease. In many cases, procedures can already be performed using minimally invasive approaches by operating through a small opening. This CD Laboratory, which opened in April 2023, is researching new techniques aimed at further reducing the physical toll and risk for patients.

Project leader:

Martin Andreas, Department of Cardiac Surgery

Partner company:

LSI SOLUTIONS INC.

Christian Doppler Laboratory for Machine Learning for Precision Imaging

Launched in June 2023, this CD Laboratory aims to develop improved prediction models for lung cancer and its personalised treatment through the use of artificial intelligence. To help it accomplish its goals, radiological and pathological images, as well as molecular data from lung cancer patients, will be linked using new machine learning methods.

Project leaders:

Georg Langs and Helmut Prosch, Department of Biomedical Imaging and Image-guided Therapy

Partner company:

Siemens Healthineers

Christian Doppler Laboratory for Mechanical Circulatory Support

Opened on 20 November 2023, this laboratory is researching how implantable blood pumps can be used in children with failing hearts. Already a standard treatment option for adults, these pumps are a tried-and-tested permanent solution that enhances quality of life. The aim is to quickly transfer research findings into clinical practice with a view to reducing the complication rate and increase the chances of recovery in as many cases as possible.

Project leader:

Marcus Granegger, Department of Cardiac Surgery

Partner company:

Berlin Heart GmbH

OTHER CD LABORATORIES OPERATIONAL IN 2023:

- Immunometabolism and Systems Biology of Obesity-Related Diseases
- Inner Ear Research: Protection and Regeneration
- Artificial Intelligence in Retina
- Personalised Immunotherapy
- Multimodal Analytical Imaging of Aging and Senescence of the Skin
- Portal Hypertension and Fibrosis in Liver Disease
- Applied Metabolomics
- Arginine Metabolism in Rheumatoid Arthritis and Multiple Sclerosis
- Molecular Stress Research in Peritoneal Dialysis

ERC GRANTS FOR WORLD-CLASS RESEARCH

As part of the **GLUCO-SCAN** biomedical research project, **Wolfgang Bogner**, a physicist at MedUni Vienna's Center of Excellence for High-Field MR, and his group are developing a new method of magnetic resonance-based whole-body imaging that is able to visualise the metabolism of glucose throughout the body. Unlike current procedures, this method does not use radioactivity and promises to be much less complicated and potentially even more cost effective. He was awarded an **ERC Consolidator Grant** of EUR 2.5m for a five-year period for this project.

Third-party funding. Two researchers at MedUni Vienna received prestigious grants from the European Research Council (ERC) in 2023.

Bernhard Baumann, a physicist at MedUni Vienna's Center for Medical Physics and Biomedical Engineering, received a EUR 150,000 **Proof of Concept Grant** from the ERC. In the **OPTIMEYEZ** project, he and his team are conducting ongoing research into optical coherence tomography, which was first initiated in 2015 with an ERC Starting Grant (OPTIMALZ project). The one-and-a-half-year project aims to extend the imaging portfolio to cover additional disease applications, improve technological aspects and make the imaging platform accessible to industrial partners.

ONGOING ERC PROJECTS IN 2023:

STARTING GRANTS:

Sarah Melzer, PeptidesAndFear
Division of Neuronal Cell Biology, Center for Brain Research
Period: 2022-2027

Dimitris Tsiantoulas, The B-Miracle
Department of Laboratory Medicine
Period: 2023-2027

Thomas Vogl, EarlyMicroAbs
Center for Cancer Research
Period: 2023-2028

CONSOLIDATOR GRANTS:

Christoph Bock, EPI-CART
Institute of Artificial Intelligence, Center for Medical Data Science
Period: 2021-2026

Wolfgang Bogner, GLUCO-SCAN
Department of Biomedical Imaging and Image-guided Therapy
Period: 2023-2028

Kaan Boztug, iDysChart
Department of Pediatrics and Adolescent Medicine
Period: 2019-2025

Alwin Köhler, NPC-BUILD
Division of Molecular Cell Biology, Max Perutz Labs
Period: 2018-2025

ADVANCED GRANTS:

Tibor Harkany, FOODFORLIFE
Division of Molecular Neurosciences, Center for Brain Research
Period: 2022-2026

Eva Schernhammer, CLOCKrisk
Division of Epidemiology, Center for Public Health
Period: 2022-2027

Erwin Wagner, CSI-Fun
Department of Dermatology
Period: 2018-2024

SYNERGY GRANTS:

Igor Adameyko (coordinator), KILL-OR-DIFFERENTIATE
Division of Neuroimmunology, Center for Brain Research (in collaboration with Karolinska Institutet and Institut Curie)
Period: 2020-2026

Oskar Aszmann, Natural BionicS
Department of Plastic, Reconstructive and Aesthetic Surgery (in collaboration with Imperial College London and Fondazione Istituto Italiano di Tecnologia)
Period: 2019-2025

PROOF OF CONCEPT GRANTS:

Bernhard Baumann, OPTIMEYEZ
Center for Medical Physics and Biomedical Engineering
Period: 2023-2025

Tibor Harkany, SECRET-DOCK
Division of Molecular Neurosciences, Center for Brain Research
Period: 2022-2024

MEDUNI VIENNA RESEARCH CLUSTERS

Clear focus. MedUni Vienna bundles its competencies in five research clusters and a research platform, which all carry out interdisciplinary, interdepartmental research.

Immunology Research Cluster

In this research cluster, allergies, inflammations and infections are the subject of networked research activities that are conducted with the goal of developing new diagnostic and therapeutic concepts. Its focus is on basic, translational and clinical research, and the creation of structure-building measures to make even better use of synergies between scientists and to support innovative research activities.

Immunology Research Cluster

Besides cardiovascular disease, the principal objects of the cluster's research are imaging and non-imaging diagnosis, in addition to epidemiological and genetic issues. The cluster is also well known for its basic research in various areas including vascular biology and thrombosis, as well as a high degree of interdisciplinary collaboration.

Cancer Research and Oncology Research Cluster

The Comprehensive Cancer Center (CCC) combines interdisciplinary care for cancer patients with research and teaching at the highest level. Patients benefit from the innovative procedures and technologies available to the experts working at the CCC thanks to the close links between care and scientific research.

Medical Imaging Research Cluster

Medical Imaging brings together the institutes and research facilities involved in imaging at MedUni Vienna in six areas of specialist research. The focus is on carrying out research into and achieving advances in morphological, functional and molecular imaging, so as to be able to diagnose and treat diseases at an earlier stage.

Medical Neuroscience Research Cluster

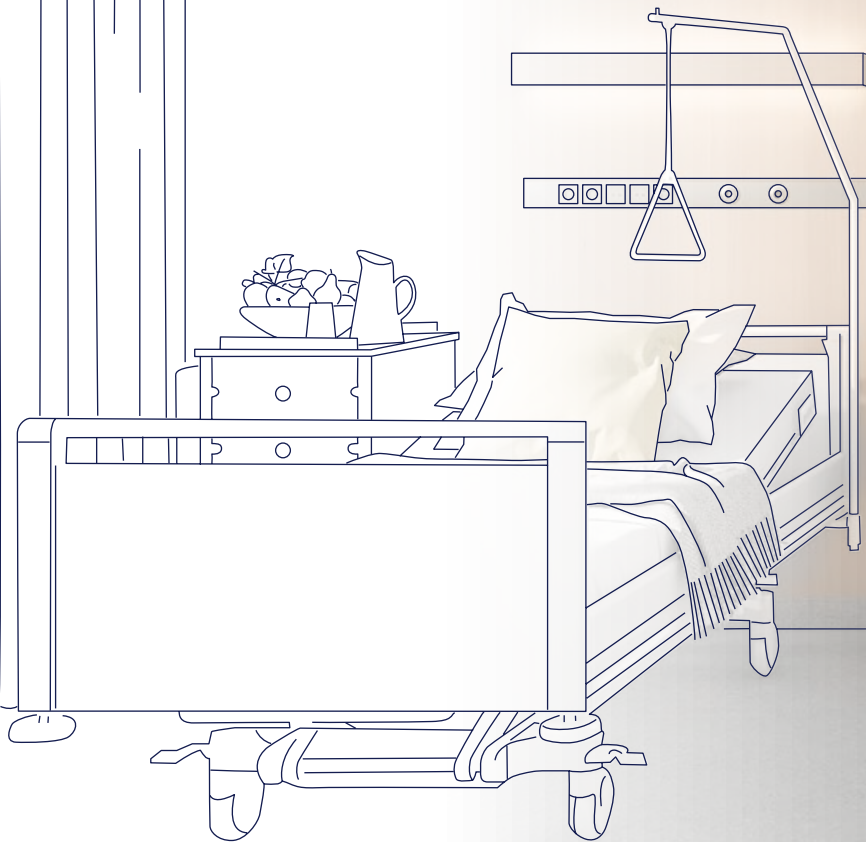
The broad spectrum of neuroscience and psychosocial science research activities at MedUni Vienna is reflected in this cluster. MedUni Vienna's research is recognised around the world, particularly when it comes to Alzheimer's, depression, multiple sclerosis and pain. The overriding aim is to gain insights that lead to a better understanding of the pathophysiology of nervous system disorders, which in turn will enable more effective diagnosis and treatment.

Transplantation Research Platform

University Hospital Vienna is one of the world's leading centres for transplants. The MedUni Vienna Transplantation Research Platform is an integrative initiative designed to support networking between academic staff, with the aim of increasing the output of high-quality transplantation research at the university.

Innovative patient care

From prevention to precise diagnosis and effective treatments: MedUni Vienna and University Hospital Vienna form a major clinical institute that provides patients with world-class care. Both facilities also play a part in developing innovations, which adds to the portfolio of procedures and therapies.







BUILDING BRIDGES FROM RESEARCH TO PATIENT CARE

Center for Translational Medicine. MedUni Vienna is currently building a new research facility that puts the emphasis squarely on benefits for patients. Construction work began in 2023.

From the lab to the hospital bed and back again: the new Center for Translational Medicine will create the infrastructure required for optimum translational research. The centre is designed to characterise diseases in accordance with the latest standards and capitalise on basic research findings for the benefit of patients as quickly as possible, in the form of innovative diagnostic and treatment methods. At the same time, MedUni Vienna researchers will be able to build on University Hospital Vienna's experience of treating patients.

"The new centre embodies the principle of 'from bench to bedside and back again', which MedUni Vienna has already implemented successfully in many areas. It's another important factor in strengthening Vienna's position as an innovation hub and further enhancing the high-quality healthcare available to the city's population," as Rector Markus Müller explained on 13 March 2023, when the project was presented as part of the Day of the Medical University of Vienna, with Austrian Science Minister Martin Polaschek, Vienna Executive City



Herwig Wetzlinger

Director, University Hospital Vienna
(a business unit of the Vienna Hospitals Association)

» University Hospital Vienna has been able to build on its leading role since the restructuring of the joint operational set-up with MedUni Vienna. A lot of energy has been put into making internal organisational structures even more professional, while the building modernisation initiative has also been implemented. As a result, University Hospital Vienna will be able to carry on delivering top-class services for patients in future and safeguard its strong position. «



Oswald Wagner

Vice Rector for Clinical Affairs

» With departments run in conjunction with MedUni Vienna, University Hospital Vienna is one of the world's top hospitals. MedUni Vienna's translational research approach enables rapid integration of basic research findings in clinical applications, and plays a major part in securing the hospital's leading position. «

Councillor for Health Peter Hacker and University Hospital Vienna Director Herwig Wetzlinger in attendance.

Infrastructure for clinical trials

The site will feature all of the facilities required for practice-led research. Alongside offices and laboratories, there will also be a good manufacturing practice (GMP)-compliant facility for cell therapies, radiopharmaceuticals and biologicals, core facilities with high-end analytical equipment, animal accommodation with preclinical imaging capabilities, and a biobank. The core element of the new development is a clinical centre for phase I and II trials including a ward for trial participants, which will allow innovative treatments to be tested directly on site while also collecting data on their efficacy and tolerability.

As a hub connecting research, patient care and teaching, the strategic focus of the Center for Translational Medicine is underlined by its location on Lazarettgasse, to the south of the main University Hospital Vienna building: it will be built between the hospital and MedUni Campus Mariannengasse, and the architectural design also includes a physical link to the Eric Kandel Institute – Center for Precision Medicine. This will enable staff to leverage synergies between the various facilities and further unlock the potential of personalised medicine.

Successful start to building work

2023 was a decisive year for the Center for Translational Medicine, as the project moved from the planning to the

implementation stage. Funded by the Austrian federal government and the City of Vienna, work progressed on schedule: the foundation pit was completed and the foundation plate laid in mid-October 2023, bringing the first phase of construction to a conclusion. After this, the above-ground construction work started.

The figures are remarkable: around 30,000 cubic metres of earth was moved during the excavation, with the site secured by a combination of 350 bored and deep piles. The foundation plate was made from around 4,000 cubic metres of cement and 500 tonnes of rebar steel. With the construction work already in full swing, detailed planning of the centre's medical and laboratory technology facilities began.

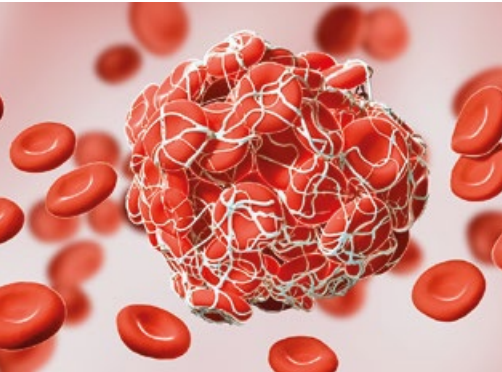
Enabling close interaction

From an architectural standpoint, the building is designed as a place for sharing information and ideas, with inviting spaces filled with natural light. Two levels will be open to the public, featuring a large conference space with several event rooms, as well as a 1,000-capacity lecture theatre, attractive lobby, light-filled gallery and a cafeteria. The offices, labs, service areas, and rooms for patients are located on the upper floors.

Due for completion by 2025, carefully thought-through infrastructure covering some 14,000m² will facilitate knowledge transfer and promote innovative new developments to enable more effective treatment of diseases.

FIVE SURGICAL PREMIERES

Innovative procedures. In 2023, University Hospital Vienna successfully performed several new surgical procedures for the first time in Austria and, in some cases, anywhere in the world. We present five examples.



First surgical atrial appendage closure

The left atrial appendage is a small protrusion in the left atrium of the heart where blood clots often form in cases of atrial fibrillation. In an endoscopic procedure carried out for the first time in Austria, a team from the Department of Cardiac Surgery closed the appendage using a clip. This reduces the risk of strokes in patients with atrial fibrillation by as much as 95%. After the operation, the use of blood-thinning medications can be significantly reduced or even stopped altogether.

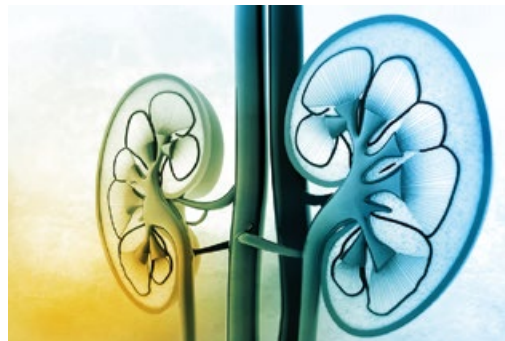


Custom aortic prosthesis

In March 2023, surgeons from the Division of Vascular Surgery (Department of General Surgery) and the Division of Cardiovascular and Interventional Radiology (Department of Biomedical Imaging and Image-guided Therapy) implanted an aortic prosthesis that had been specially made for its 62-year-old recipient. The patient had an abdominal aortic aneurysm that extended as far as the renal arteries, meaning that it was not possible to use a stent graft.

Robot-assisted kidney transplant

Since January 2023, the Department of General Surgery's Division of Transplantation has been carrying out kidney transplants with the help of the DaVinci robot. Deployed for the first time in Austria, the technology delivers significant benefits for organ recipients, including a lower rate of complications, less pain and shorter hospital stays.

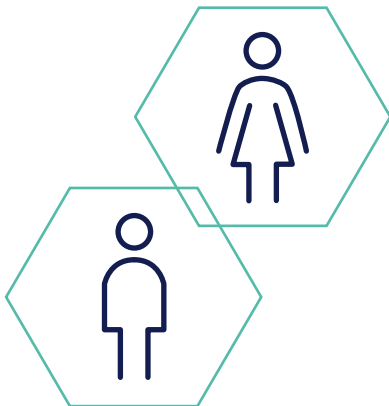


New procedure for faecal incontinence

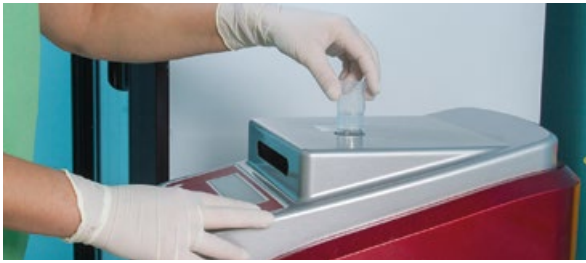
In a world first, a new anal band made from elastic material was implanted in a patient at the Department of General Surgery in April 2023. The band seals the anus more effectively than previous methods, which in turn enables controlled bowel movements. A study taking place at a total of six sites in Spain, Germany and Vienna will investigate how the operation influences patients' quality of life.

First brain pacemaker implantation

For the first time in Austria, a team from the Department of Neurology and Department of Neurosurgery implanted a pioneering brain pacemaker or responsive neurostimulator in August 2023 – a highly promising treatment for people with epilepsy. This involves positioning fine electrodes precisely over the region of the brain where epileptic seizures originate, which removes the need to open the skull.



AI-BASED TISSUE ANALYSIS DURING OPERATIONS



Stimulated Raman histology allows for rapid tissue testing during operations.

A laser-based imaging technology developed in the USA, known as AI-supported stimulated Raman histology, was used for the first time in Europe at the Department of Neurosurgery. Tumour tissue is removed during surgery and analysed directly in the operating theatre. Within just a few minutes, neuropathologists receive details of the histological findings, which provide vital information for determining the surgical strategy. This approach is much faster than manual analysis, which takes about 30 minutes on average.

CUTTING EMISSIONS FROM ANAESTHESIA AND INTENSIVE CARE MEDICINE

Anaesthetic gases are responsible for a large proportion of a hospital's CO₂ emissions, with devices such as heart-lung machines requiring particularly large amounts of energy. A multi-disciplinary team from the Division of General Anaesthesia and Intensive Care Medicine (part of the Department of Anaesthesia, Critical Care and Pain Medicine) investigated climate protection in the context of patient safety and has implemented initial emissions-reduction and waste-management measures. Eliminating use of nitrous oxide alone helps to cut emissions by around 1,000 tonnes of CO₂-equivalent.

NEW PRE-KIDNEY TRANSPLANT ENZYME THERAPY

A new enzyme therapy enabled a highly immunologically sensitised patient to undergo a kidney transplant – the first time this approach has been used in Austria. The treatment cleaves all antibodies in the patient, opening up a window of about a week when immunosuppression can be adjusted, in order to ensure that the new organ is not rejected. The patient was discharged a mere two weeks after the transplant, with the new kidney functioning properly. This novel therapy has only been used on a handful of people worldwide.



Imlifidase, an innovative new enzyme therapy, increases the chances of successful transplantations for highly immunologically sensitised patients.

ENT: SIGNIFICANTLY SHORTER OPERATIONS

Flap surgery is a complex microsurgical procedure used in the treatment of head and neck cancer. Tissue is taken from one part of the body, reattached to the blood stream under a microscope and then transferred to a different part of the body. Two teams carry out the procedure simultaneously: one removes the tumour and the surrounding lymph nodes, while the other lifts the skin flap and prepares it prior to transplantation. An evaluation by the Department of Otorhinolaryngology revealed that this can considerably reduce the length of an operation.

HEALTHY DIET CUTS RISK OF DIABETES

At least 75% of cases of type 2 diabetes could be avoided with a healthy lifestyle, while adopting a plant-based diet cuts the risk by 24%. However, a large-scale cohort study headed by Tilman Kühn of the Center for Public Health also showed that the preventive effects only develop if consumption of industrially processed and high-sugar foods is reduced. People who eat a plant-based diet tend not to be overweight, so they benefit from improved metabolism as well as liver and kidney function.

Diabetes & Metabolism



RISE IN COLORECTAL CANCER AMONG YOUNG MEN



The rate of colorectal cancer and its precursors among 45 to 49-year-old males is similar to that for women who are ten years older.

A study led by Monika Ferlitsch from the Department of Medicine III showed that the prevalence of colorectal cancer and precursors of the disease is on the increase among men under 50, but not among women. Sedentary lifestyles, unhealthy eating habits, obesity and diabetes are all potential causes. The evaluation looked at 296,170 colonoscopies of asymptomatic women (150,813) and men (145,357) carried out for colorectal cancer screening purposes between 2008 and 2018. 3.8% (11,103) of the people screened were under 50. The Austrian National Cancer Screening Committee is now advising people to have check-ups from the age of 45, as opposed to 50.

JAMA Network Open

OBESITY INCREASES RISK OF MENTAL DISORDERS

Obesity sufferers have a significantly higher risk of developing mental illness than people with normal body weights, according to a study carried out by MedUni Vienna and the Complexity Science Hub Vienna. The researchers analysed data from all inpatient hospital stays in Austria between 1997 and 2014 with a view to identifying potential concomitant diseases and gender-specific differences. It was found that a diagnosis of obesity was highly likely to precede diagnosis of a mental health disorder, with the exception of conditions on the psychosis spectrum. Obese women had a higher risk of developing all mental disorders except schizophrenia and nicotine addiction.

Translational Psychiatry

REVOLUTIONARY ULTRASOUND TREATMENT

Movement disorders such as tremors can be treated at the Department of Neurosurgery without opening up the brain and without anaesthesia. The approach, called transcranial MR-guided focused ultrasound therapy (TK-MRgFUS), combines two technologies: the region of the brain responsible for the disorder is identified using magnetic resonance imaging, while focused ultrasound heats and destroys the affected tissue. Patients are held in place during the procedure by a head ring, but remain conscious and responsive throughout.

THREE NEW COMPREHENSIVE CENTERS

Interdisciplinary care. MedUni Vienna's Comprehensive Centers are specifically designed to promote networking between specialist and professional groups in the various divisions and departments. Three new Comprehensive Centers were set up in 2023.

Comprehensive Center for Inflammation and Immunity

People suffering from immune-mediated inflammatory disease and immunodeficiencies present a range of symptoms that pose significant challenges for the health system. It is particularly important to provide patients with interdisciplinary treatment. The Comprehensive Center for Inflammation and Immunity supports collaboration between the different MedUni Vienna and University Hospital Vienna facilities and professional groups who treat these patients. Measures focused on prevention, diagnosis, management, treatment, knowledge sharing and research help to ensure the provision of optimum care at the hospital.

Comprehensive Center for Musculoskeletal Disorders

Musculoskeletal conditions are the main cause of chronic pain, impaired motor function and low quality of life worldwide. They are affecting more and more people, especially as populations grow older. The Comprehensive Center for Musculoskeletal Disorders focuses on bundling world-class medical competences, as well as comparing and standardising treatment pathways in order to avoid duplications and deliver greater clarity for patients.

Comprehensive Center for Chest Diseases

Lung cancer is one of the most common malignant tumour diseases in Austria. Studies have shown that mortality rates increase if there is a delay in initiating treatment after diagnosis. This means that interdisciplinary cooperation is essential in order to treat patients as quickly as possible. The focus of the new Comprehensive Center for Chest Diseases is on bundling and expanding expertise on lung diseases. This is reflected in the establishment of tumour boards and other interactive structures, which enable lung disease experts to network more closely.

OUR OTHER COMPREHENSIVE CENTERS:

- Comprehensive Cancer Center
- Comprehensive Center for Cardiovascular Medicine
- Comprehensive Center for Clinical Neurosciences and Mental Health
- Comprehensive Center for Infection Medicine
- Comprehensive Center for Pediatrics
- Comprehensive Center for Perioperative Medicine



The Lancet Commission report was presented at a symposium at the Josephinum on 9 November 2023. From left to right: Richard Horton, Sabine Hildebrandt, Herwig Czech, Christiane Druml, Markus Müller, Miriam Sabin and Shmuel Reis.

REPORT ON NAZI MEDICAL CRIMES

Historical research. An international report by respected specialist journal The Lancet provided a comprehensive analysis of the involvement of people in the healthcare professions in the crimes of the National Socialist (Nazi) regime, and how it continues to have an impact today.

The report of the “Lancet Commission on Medicine, Nazism, and the Holocaust: historical evidence, implications for today, teaching for tomorrow” documents the medical atrocities committed under the Nazis and during the Holocaust, as well as the impacts of these crimes on the present day, in a completely new way. The report was presented at a symposium at the Josephinum on 9 November 2023. Numerous leading researchers from a range of disciplines contributed to the project, including medical historian Herwig Czech from MedUni Vienna.

Millions of Jews fell victim to Nazi terror – 9 November marks the anniversary of the November pogroms, which marked a brutal escalation of anti-Jewish persecution. After 1933, countless people were also forcibly sterilised and systematically murdered under the mantle of radical eugenics, termed racial hygiene.

The role of medicine

The National Socialist era provides well-documented historical examples of how medicine was involved in assaults and crimes against vulnerable individuals and groups. People in healthcare professions played a key role in formulating, supporting and implementing the Nazi regime’s anti-Semitic, racist and inhumane policies. They carried out forced sterilisations, coerced and often fatal human experiments and medically assisted killings in concentration camps. They also supported “euthanasia” killing programmes as well as the selection of prisoners for murder in extermination camps.



The Nuremberg Trials, which began on 20 November 1945, were tasked with gathering irrefutable evidence of the crimes of the Nazi regime.

The Holocaust and other mass murders under the Nazi regime would have been scarcely conceivable without the involvement of members of the medical profession. Aktion T4 alone – a precursor to the murder methods used in the extermination camps – resulted in the loss of hundreds of thousands of disabled people’s lives, including thousands of patients from the Am Steinhof sanatorium and nursing home in Vienna.

Yesterday and today

“What happened in Europe during the Second World War still has far-reaching implications for the medical profession today,” said Lancet Commission Co-Chair Herwig Czech, one of the study’s three lead authors. “Confronting what happened to medicine during this period is crucial for ethical healthcare practice and essential for understanding potential dangers in medicine today,” he added.

Appointed by the respected international scientific journal it is named after, the Lancet Commission hopes that its report will provide reliable, up-to-



Medical historian Herwig Czech is Professor of the History of Medicine at MedUni Vienna.

date historical documentation and a thorough analysis of the effects. “This topic should be part of the teaching curriculum for healthcare professionals all over the world. The aim is to promote ethical behaviour, moral development, the courage to stand up to anti-Semitism, racism and other forms of discrimination, as well as the development of a historically aware, compassion-based professional identity,” Herwig Czech noted.

SELIGMANN FRAGMENTS BACK IN VIENNA

The search for clues. MedUni Vienna received a donation of skull fragments said to be from the composer Ludwig van Beethoven, which have been added to the Josephinum’s collections.

“We gratefully accept these fragments and vow to store them responsibly. Our collections at the Josephinum are the ideal place for this,” said Rector Markus Müller. Paul Kaufmann, who acquired the bone pieces from his mother’s estate, entrusted the relics to MedUni Vienna in July 2023. His great-uncle Franz Romeo Seligmann (1808-1892), a Viennese doctor, medical historian and anthropologist, took possession of the bone fragments with a view to studying them following the reburial of Beethoven’s remains in 1863. They stayed within the family, who later fled the Nazis, and were latterly kept by Kaufmann in the USA.

Additional historical research

Forensic pathologist Christian Reiter had already analysed the putative Beethoven fragments in the past, and believes the story of their origin is credible. “In the course of further investigation, including DNA analysis, we will get even closer to answering the question of whether they actually do come from Ludwig van Beethoven. Whatever the outcome, we are very grateful to Mr Kaufmann for bringing these historic pieces back to Vienna.”



The skull bones, stored in a casket engraved with the word “Beethoven”, are now part of the Josephinum’s collections – an ideal location given that Beethoven’s personal physician, Johann Adam Schmidt, was a professor here.



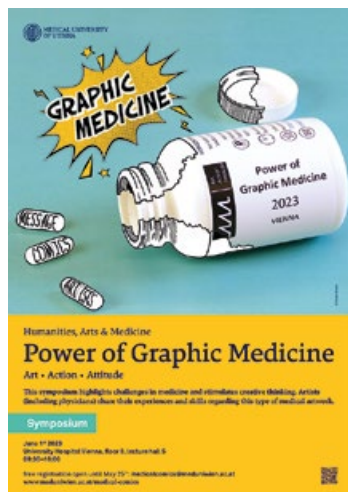
The fragments were handed over at a press conference at which the latest information was also shared with the public.

DIALOGUE WITH THE POPULATION

A hands-on approach to medicine. As a leading repository of knowledge and flagship institution in the Austrian healthcare system, MedUni Vienna lives up to its social responsibility and engages with the public through a range of activities. By bringing children and adults closer to research and medicine it is helping to boost health literacy in society.

MEDICAL COMICS SHOW PAIN

An established art form in their own right, medical comics play an important role in the interactions between doctors and patients – and in education, too. The third part of the Art – Action – Attitude exhibition series focusing on pain ran at MedUni Vienna until the end of June 2023. As co-initiator Eva Katharina Masel from the Department of Medicine I explained: “Medical comics illustrate the challenges encountered in everyday medical life in a particularly practical way, which facilitates a shift in perspective. It’s easier to empathise with the other person, as visual language conveys emotions more effectively.”



SIGHT AND SOUND

MedUni Vienna uses various entertaining podcasts and videos to share medical content. Examples include:

- **Hörgang:** MedUni Vienna successfully continued its joint podcast with the Springer Verlag publishing house. In the podcast, experts from research and clinical practice share insights into their work and run the rule over a broad range of topics such as AI in dermatology, palliative medicine and the history of Viennese medicine.
www.springermedizin.at/podcast-hoergang
- **Short videos:** Besides tried-and-tested formats such as #expertchecks and Researcher of the Month, MedUni Vienna introduced two new video categories in 2023: “Meet our Profs”, in which new professors introduce themselves, and “60 Seconds of Science”, where ground-breaking new studies are explained in one minute.

TEDDY BEAR HOSPITAL VISIT

Hundreds of children once again visited the Teddy Bear Hospital in Vienna – now in its 20th year – from 5 to 7 December 2023. A cooperation project run jointly by MedUni Vienna, the Austrian Medical Students’ Association (AMSA), the Vienna Medical Chamber and the Academic Association of Austrian Pharmacists, it gives the children an opportunity to get involved as assistant doctors. Working alongside the Teddy Docs (students from MedUni Vienna) they examined, treated and operated on their cuddly toys in the outpatient clinics. This gives the children an enjoyable, hands-on experience that teaches them about clinical routine, lets them learn lots of interesting facts and helps them overcome their fear of doctors and hospitals.



Austrian Medical Chamber President Johannes Steinhart and MedUni Vienna Curriculum Director Anita Holzinger were also permitted to assist with X-rays and operations.

FASCINATING EVENT FORMATS

In 2023, MedUni Vienna shared information on health topics at a variety of talks, webinars and discussion rounds:

- The **Cancer School** at the MedUni Vienna and University Hospital Vienna Comprehensive Cancer Center (CCC) is a series of talks aimed at anyone who wants to learn more about cancer. The new school year got under way on 3 October 2023 with the topic of artificial intelligence and cancer.
- Experts from MedUni Vienna discussed a wide range of topics with guests, including heart health and dementia at the **Kurier Health Talk**.
- As part of the **@VHS Science** cooperation between MedUni and Vienna's VHS adult education centres, medical and research content was shared with audiences in an accessible and captivating format.



Kurier Health Talk on dementia with Elisabeth Stögmann from MedUni Vienna's Department of Neurology (left).

- Experts from MedUni Vienna gave webinars once again in 2023 on **MeinMed.at**, a platform run by Regionalmedien Austria.
- Several **action days** informed the public about **key health topics** including the immune system, familial hypercholesterolaemia and ME-CFS.
- Various laboratories gave girls an insight into their work at the **Vienna Daughters' Day**.

TEACHING SCIENCE COMMS

As part of the ImmunoKomm project, a group of young people aged between 16 and 19 had the opportunity to showcase their skills as science communicators. The students designed creative print and social media articles relating to the development and regulation of T helper cells, which are essential for the formation of antibodies and the development of immunological memory. Initiated by Nicole Boucheron from MedUni Vienna's Institute of Immunology in cooperation with the Open Science association, the project's main goal was to kindle an interest in science among young people and raise their critical awareness of science communication.

HEALTH GUIDE

Health topics made simple and digestible: published by MedUni Vienna in cooperation with MANZ Verlag, the different guides provide valuable insights into the causes of illnesses and give helpful tips to sufferers and people who are interested in finding out more about them. Guides published in 2023:

- **Health in the Climate Crisis:** Hans-Peter Hutter and a team from MedUni Vienna's Center for Public Health took a look at the myriad effects of climate change on the environment, human health and wellbeing.
- **Cardiac Health:** Christian Hengstenberg of the Department of Medicine II and Division of Cardiology and a team of authors from MedUni Vienna provide a science-based overview of diseases of the cardiovascular system, and present some of the options for diagnosis, treatment and prevention.
- **Addiction:** Gabriele Fischer and Arkadiusz Komorowski from the Department of Psychiatry and Psychotherapy counter traditional ways of thinking about addiction with scientific facts.



SOCIAL MEDIA PRESENCE

MedUni Vienna is active on all social media channels, which it uses to present its work and engage with users.

It is also very successful on social media compared to other Austrian universities. It ranked fourth among its peers on Instagram and third on X (formerly Twitter).

Reach in 2023:

- Instagram: 16,794 followers
- LinkedIn: 27,482 followers
- X (Twitter): 9,475 followers
- Facebook: 20,297 followers
- YouTube: 3,160 subscribers

CHILDREN'S MEDICAL UNIVERSITY FOCUSES ON CLIMATE CRISIS

Nurturing young academics. Bringing the next generation into contact with the world of science at an early age – something that the Children's Medical University achieved once more in the summer of 2023.

In mid-July, children aged between seven and twelve with a thirst for knowledge again packed the lecture theatres at MedUni Vienna for the Children's Medical University. This time round, the curriculum covered health topics in the context of the climate crisis in various sessions including "Mentally strong against climate change", "How does the environment change our brain?" and "Clean water – healthy people". "The climate crisis and its impact on the environment and health are causing concern, particularly among children, which means that the subject is a correspondingly high priority at MedUni Vienna," said Anita Rieder, Vice Rector for Education at MedUni Vienna, confirming the importance of this year's focus. The young students were also given the opportunity to immerse themselves in the world of viruses and bacteria, find out more about human anatomy with a bone puzzle and even conduct their own scientific experiments.



Vice Rector Anita Rieder and Paul Plener with the young students of the Children's Medical University at the "Mentally strong against climate change" workshop.

Curiosity wins

A total of 3,123 children signed up to participate. There were 317 courses and a million "eureka" moments at seven locations – the formula for another successful Vienna Children's University in 2023. The event concluded with a formal graduation ceremony in the Main Ceremonial Hall at the University of Vienna, at which graduates received a certificate with the title Magister/Magistra universitatis iuvenum (Master of the Children's University) and delivered a solemn pledge to always remain curious.

SUCCESSFUL CANCER RESEARCH RUN

Charity event. The 2023 Cancer Research Run raised over a quarter of a million euros for various scientific projects.

Held on 7 October, the event attracted around 3,500 entrants who collected sponsorship money in aid of the cause. Acting as sponsors or cooperation partners, a total of 86 companies saw their teams take to the starting line. The impressive EUR 260,000 total raised by the runners will, as every year, go in full to projects run by MedUni Vienna's Cancer Research Initiative. Since its inception, the Cancer Research Run has helped fund more than 60 projects aimed at improving the diagnosis and treatment of tumour diseases.

Gateway to precision medicine

Operated as a joint facility of MedUni Vienna and University Hospital Vienna, the Comprehen-

sive Cancer Center (CCC) announces research grants from the Cancer Research Initiative every two to four years. Funding is currently being provided for 14 promising MedUni Vienna research projects that are primarily aimed at driving forward the development of personalised cancer therapies. The fact that cancer mortality is falling while the number of new cases is rising is largely attributable to advances in research – something made possible by investment in basic research.

Current projects funded under the initiative: www.meduniwien.ac.at/web/krebsforschungslauf/forschungsprojekte/





Numerous employees and individuals with an interest in dentistry attended the ceremony on 15 November where they were also able to compare notes.

NEW UNIVERSITY CLINIC OF DENTISTRY VIENNA CELEBRATES TENTH ANNIVERSARY

Anniversary. In mid-November, the University Clinic of Dentistry Vienna staged a formal ceremony to celebrate the first decade under its new set-up.

The facility was fully renovated and remodelled in a major refurbishment project that was completed in autumn 2013. And to mark the tenth anniversary of this milestone, the building hosted an event on 15 November 2023. Some 250 guests from research and teaching attended the ceremony in the University Clinic of Dentistry Vienna's main lecture theatre, where they listened to the speeches by clinic directors Thomas Stock and Andreas Moritz and MedUni Vienna Rector Markus Müller, as well as a presentation on the topic of artificial intelligence. The event concluded with refreshments and an opportunity for those present to network.

SUCCESSFUL “DAY OF THE MEDICAL UNIVERSITY OF VIENNA”

Tradition and a bright future. MedUni Vienna celebrated its foundation day on 13 March 2023 and offered a varied programme focusing on the challenges of the climate crisis.

The impacts of human-induced climate change can be seen in every region of the world, and have a significant influence on people's health and wellbeing. To mark its foundation day, MedUni Vienna put this topic in the spotlight with a packed agenda for its employees, students, alumni and supporters.

Climate Talk participants: Vice Rector Michaela Fritz, Karl Steininger from the University of Graz, Sigrid Stagl from the Vienna University of Economics and Business, Hans-Peter Hutter from MedUni Vienna and moderator Barbara Stöckl (from left to right).



From left to right: Rector Markus Müller with archaeologist Thomas Higham, who gave the university lecture, and Vice Rectors Michaela Fritz and Oswald Wagner.



Among the highlights was a live cochlear implant procedure. Broadcast in real-time from the operating theatre, the surgery was accompanied by expert commentary.

NEW PROFESSORS IN THEIR OWN WORDS

New expertise. In 2023, MedUni Vienna awarded 17 professorships to experts in their respective fields. Six of them outline their approaches in their own words.



Eva Compérat

Professor of Urology
Focuses: Bladder, prostate

In my area I find the sheer variety of research opportunities particularly interesting.

In my view, the greatest scientific achievement is molecular pathology.

What I like about my work is the innovation in bladder and prostate research.

I am currently working on purely pathological questions to help refine diagnosis.

Science is successful when people work together.



Clemens Aigner

Professor of Thoracic Surgery
Focuses: Thoracic oncology, functional thoracic surgery, lung failure, lung transplantation, trachea surgery, pulmonary hypertension surgery

In my area I find the combination of hands-on and intellectual work particularly interesting.

In my view, the greatest scientific achievement is the discovery of DNA and all the subsequent possibilities it opened up for personalised treatments.

I overcome challenges with my left hand (I'm left-handed).

I am currently working on multi-modal lung cancer therapies, isolated lung perfusion and surgical treatment of lung failure.

My favourite place at MedUni Vienna is the operating theatre.



Herwig Czech

Professor of History of Medicine
Focuses: Medicine and biopolitics under National Socialism, history of the Viennese Medical School since the Enlightenment

In my area I find the diversity of the issues that transcend the boundaries of individual disciplines particularly interesting.

In my view, the greatest achievement in medicine is the discovery and control of specific pathogens through bacteriology from around the middle of the 19th century.

What has really shaped me is the longer periods of time I spent in Mexico, France and the USA.

My favourite place at MedUni Vienna is the Josephinum.



Martin Fischer

Professor of Medical Education

Focuses: Curriculum development, clinical decision-making, case-based learning and assessment

In my area I find learning about learning particularly interesting.

What has really shaped me is my teachers' clinical mastery and the wisdom of my mentors.

I am currently working on personalised support offerings to help students solve simulated patient cases.

My favourite place at MedUni Vienna is the top floor of the Teaching Center.

Science is successful when you work in a good team and humility and serenity prevail.



Josef Penninger

Professor of Personalised Medicine

Focuses: Personalised medicine, functional genetics, tissue engineering, infection research, pregnancy and breast cancer

What has really shaped me is my mentors, who always believed in me, which encouraged me to broaden my research horizons.

Science is successful when it helps to explain diseases better.

What I like about my work is the daily interaction with our students and team members and their fantastic new ideas.

I am currently working on setting up the Eric Kandel Institute for Precision Medicine and establishing my research group at MedUni Vienna.

My most important tool is my computer.



Gregor Kasprian

Professor of Neuroradiology

Focuses: Paediatric neuroradiology, functional imaging, network medicine

In my area I find the rapid pace of technological development and its diagnostic and therapeutic applications particularly interesting.

What has really shaped me is the research work I did at Baylor College of Medicine in Houston, Texas.

Science is fascinating because we make the invisible visible.

I am currently working on the implementation of network medicine analysis methods in neuroradiology.

Science is successful when it is orientated towards the needs of our patients.

Section 99(1) Universities Act professorships

Judith Aberle
Virus Immunology

Harun Fajkovic
Urological-Oncological Surgery

Johannes Gojo
Paediatric Neuro-Oncology

Kathryn Hoffmann
Primary Care Medicine

Sabine Pleschberger
Endowed Professorship for Nursing Sciences

Section 99(4) Universities Act professorships

Martin Andreas
Professorship in the subject field Cardiovascular Medicine

Alice Assinger
Professorship in the subject field Cardiovascular Medicine

Egon Ogris
Professorship in the subject field Medical Biochemistry

Winfried Pickl
Professorship in the subject field Immunology focusing on Translational Immunology

Thomas Reiberger
Professorship in the subject field Gastroenterology and Hepatology

Gernot Schabbauer
Professorship in the subject field Immunology



SUCCESSFUL LUNG TRANSPLANT TRAINING FOR KIEV

Know-how transfer. The first lung transplant was successfully performed in Kiev in March 2023. Several months of training at MedUni Vienna and University Hospital Vienna’s Department of Thoracic Surgery ensured optimal preparations ahead of the procedure.

Lung transplantation ranks among the most complex medical procedures of all. Managed by MedUni Vienna and University Hospital Vienna, the Vienna Lung Transplant Programme has been providing structured training for colleagues from neighbouring countries for many years. As a result, independent lung transplant programmes have already been established in the Czech Republic, Hungary, Estonia, Slovenia, Croatia and Greece. And in 2021, a team from Kiev University Hospital took part in a training programme spanning

several months. However, the outbreak of war in Ukraine prevented the team from setting up its own transplant programme.

Boost from Vienna

Even so, the university hospitals in Vienna and Kiev remained in close contact, and the team in Ukraine was able to build up a waiting list for lung transplants. After meticulous preparation, the first successful lung transplant was carried out in Kiev on 21 March 2023. “The patient, a 50-year-

old man with fibrosis, is doing very well. We were able to extubate him just one day after the operation was performed. This would not have been possible without the help from Vienna,” said Vitali Sokolov, Head of the Department of Thoracic Surgery in Ukraine. “The fact that we are able to perform a complex procedure such as lung transplantation here is a strong sign of the positive thinking and perseverance of the Ukrainian people.”



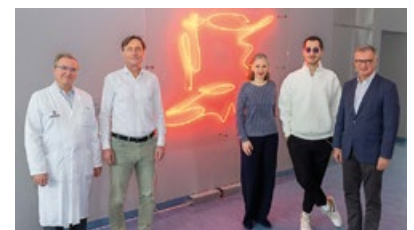
COVID MONUMENT TO HOPE UNVEILED

Martin and Gerda Essl donated the “Corona Monument of Hope” to MedUni Vienna as a token of their appreciation of its extraordinary medical care and research achievements during the pandemic. The five-metre-high ensemble of objects designed by artists Emmerich Weissenberger and Nora Ruzsics was unveiled at a ceremony on the square in front of University Hospital Vienna on 5 September 2023.

ARTWORK FOR MEDUNI VIENNA

Light and space were the central elements of Brigitte Kowanz’s work, which has gone on display in numerous exhibitions and museums around the world. A light object created by the artist – who passed away in 2022 and was decorated with the Grand Austrian State Prize in 2009 – was bequeathed to MedUni Vienna and permanently installed in the foyer of the art nouveau lecture hall. Her son Adrian Kowanz selected the installation, titled Exchange, specifically for the location: “Exchange in the sense of knowledge transfer in research and teaching at MedUni Vienna. Exchange is intended to create spaces for sharing ideas in the spirit of science, research and innovation.”

From left to right: Andreas Vychytil and Rainer Oberbauer from the Division of Nephrology and Dialysis, Department of Medicine III, with Vice Rector Michaela Fritz, Adrian Kowanz and Rector Markus Müller.



MEDICAL DEPLOYMENT IN ETHIOPIA

Committed. In October 2023 a team of plastic surgeons embarked upon a humanitarian mission to Tigray, providing treatment for people with war injuries.

A group of experts treated people in Ethiopia who had sustained serious injuries during the civil war in its northern Tigray region. Viktoria König, a specialist in plastic and reconstructive surgery at the Department of Plastic, Reconstructive and Aesthetic Surgery, as well as two plastic surgeons, an operating theatre nurse and an orthopaedic surgeon from the Czech Republic were part of the team. They performed a total of 20 major and 19 minor procedures over 12 days at the university hospital in the regional capital Mek'ele. The major operations



included a vascularised bone transfer and free flap plasty. "These operations are among the most demanding in plastic surgery," said Viktoria König.

Many patients had gunshot wounds that necessitated urgent reconstructive surgery. Conditions on the ground were a far cry from the standards at MedUni Vienna, as König confirmed: "Power cuts, cockroaches and birds in the operating theatre, as well as improvised solutions were very much the order of the day. Even so, we were still able to prove that a lot can be achieved with good will, flexibility and a strong ethical commitment. And the local staff were also very keen to learn and pick up new techniques."

The team comprised two plastic surgeons, an operating theatre nurse and an orthopaedic surgeon from the Czech Republic as well as Viktoria König from MedUni Vienna.



The surgeons operated on patients at the University Hospital in Mek'ele over the course of a fortnight. A total of three operating tables with anaesthesia equipment were available.



All patients were under 30, in some cases much younger.

DOUBLE TOP SPOTS

In the rankings. The Times Higher Education World University Rankings by Subject and ShanghaiRanking's Global Ranking of Academic Subjects both confirmed MedUni Vienna's credentials in 2023.

In the Times Higher Education rankings, which were published at the end of October 2023, MedUni Vienna placed 95th in the Clinical and Health subject group, making it the only Austrian university to make the world's top 100. The rankings are based on 18 indicators for research, teaching, citations, internationalisation and the acquisition of third-party funding from industry. The two most important factors are a survey of around 40,000 academics on the topics of teaching and research, and bibliomet-

ric indicators such as publications and citations. Together, they account for around one third of the final score.

A short time after, ShanghaiRanking's Global Ranking of Academic Subjects confirmed this top ranking, awarding MedUni a spot in the 76-100 bracket in its Clinical Medicine subject category. The university claimed top places in other categories, too: under Medical Technology, MedUni Vienna ranked an outstanding 28th worldwide, while it made the 51-75 band for Pharmacy & Pharmaceutical Sciences. The ranking compares over 5,000 universities and evaluates the individual disciplines, primarily according to research performance.

INVENTORS OF THE YEAR

Creating innovation. A research group from the Center for Medical Physics and Biomedical Engineering was awarded the Inventors of the Year title for their work on the development of plastics that are visible in magnetic resonance (MR).

Plastics cannot be rendered visually by standard magnetic resonance imaging (MRI) and this often poses a challenge in both research and everyday clinical practice as a result. Led by Ivo Rausch from MedUni Vienna's Center for Medical Physics and Biomedical Engineering, the team succeeded in developing a new type of light-curable plastic composite with add-ons that is capable of generating an MR imaging signal in standard MRI procedures – a breakthrough that earned the research group its Inventors of the Year accolade.



From left to right: Vice Rector Michaela Fritz, Andreas Berg, Ivo Rausch, Ewald Unger and Rector Markus Müller.

As these materials can also be 3D-printed, new prototypes can be created and customised rapidly for use in a variety of applications, as Ivo Rausch explained: “In my department, the material helps us to optimise work processes in various areas, including quality assurance and research. And we have also found other areas of application for it, too.” One such example is MR phantoms which could be produced for surgical planning and devices for MR-guided radiotherapy. The award clearly shows that the work done by the team in recent years has paid off and that they have succeeded in their goal of “turning an idea into a meaningful application”.

SYLVIA KNAPP RECEIVES CITY OF VIENNA AWARD

Sylvia Knapp, Professor of Infection Biology and Vice Curriculum Director for Doctoral Programmes at MedUni Vienna, was presented with the 2022 City of Vienna Award in the Medical Sciences category in honour of her achievements. The award ceremony took place in May 2023.



From left to right: Birgit Sauer, prize winner in the Humanities, Social Sciences, Cultural Studies and Law category, Andreas Richter, prize winner in the Mathematics, Computer Science, Natural Sciences and Technology category, Sylvia Knapp, prize winner in the Medical Sciences category, and Veronica Kaup-Hasler, City Councillor for Culture and Science.

RESEARCHERS OF THE MONTH IN 2023

Formed in 2004, an independent jury of MedUni Vienna professors honours the work of outstanding young scientists. In 2023, the following individuals were singled out for their research:

- Ines Garces De Los Fayos Alonso
- Bernhard Scheiner
- Matthäus Metz
- Iris Elisabeth Ertl
- Roman Romanov
- Rupert Bartsch
- Martin Schepelmann
- Katarina Kovacevic
- Pia Gattinger
- Tim Hendrikx
- Irina Gessl
- Joana Ferreira da Silva and Gonçalo Oliveira
- Ece Sakalar
- Daniel Mrak and Daniela Sieghart
- Christina Bal
- Theresa-Marie Dachs
- Lukas Hartl
- Christopher Fell
- Tanja Limberger

DORA BRÜCKE-TELEKY AWARD



From left to right: Beatrix Volc-Platzer with prize winners Jan Korbel, Barbara Katharina Geist and Máté Kiss, and Alumni Club President Harald Sitte.



From left to right: Sylvia Knapp, Michaela Fritz, Tim Hendrikx, Hannes Vietzen, Lalith Kumar Shiyam Sundar, Beatrix Volc-Platzer and Harald Sitte.

Prize worthy. The MedUni Vienna Alumni Club and the Society of Physicians in Vienna present the Dora Brücke-Teleky Award to authors of outstanding postdoctoral publications.

Three winners were announced at the award ceremony on 21 June 2023: Hannes Vietzen from the Centre for Virology, Tim Hendrikx from the Department of Laboratory Medicine and Lalith Kumar Shiyam Sundar from the Center for Medical Physics and Biomedical Engineering. On 27 November, three more postdocs received the Dora Brücke-Teleky Award: Jan Korbel from the Institute of the Science of Complex Systems at the Centre for Medical Data Science, Máté Kiss from the Department of Laboratory Med-

icine and Barbara Katharina Geist from the Department of Biomedical Imaging and Image-guided Therapy.

Role model

The award's namesake was one of the first women in Austria to be admitted to study medicine. She completed her medical studies in 1904 and went on to specialise as a gynaecologist and urologist. She was Vienna's first female school doctor and the first female member of the Society of Physicians in Vienna.

AWARD-WINNING DIVERSITY

Making diversity visible. MedUni Vienna honoured a number of projects that promote diversity in medicine in 2023 through the Veronika Fialka-Moser Diversity Award.

First place in the **Research** category went to **Sophie Pils** who demonstrated the efficacy of a simple, gender-neutral method for HPV screening in a study involving 200 trans people that uses a urine test rather than a physical examination. **Pia Baldinger-Melich** took second place with her research project, in which she analysed structural gender differences in brain MRIs. **Benjamin Spurny-Dworak's** findings based on the examination of the effects of gender-affirming hormone therapy on the brain's neurotransmitter systems earned him third place.

In the **Teaching** category, **Andrea Berzlanovich** and **Christian Berger** took first place for their seminar, which imparts fundamental insights into the forms and dynamics of violence. Second place went to **Anna Kittta** who is researching narrative medicine and offers an elective on the topic. Third place went to **Daniela Haluza** who gave a lecture on "One Health: an Integrative Transdisciplinary Approach to Health" as part of MedUni Vienna's Gender and Diversity lecture series, in which she highlighted the comprehensive impact of gender and diversity on health.



Prize winners in the Research category, from left to right: Sophie Pils, Pia Baldinger-Melich and Benjamin Spurny-Dworak. Pictured with Rector Markus Müller (left) and Vice-Rector Michaela Fritz (right).



Prize winners in the Teaching category, from left to right: Anna Kittta, Andrea Berzlanovich, Christian Berger and Daniela Haluza. Pictured with Rector Markus Müller (left) and Curriculum Director Anahit Anvari-Pirsch (right).

MEDUNI VIENNA'S NATIONAL RESEARCH PARTNERS

Strong together. MedUni Vienna cooperates with numerous partners, which is essential for research.



SUBSIDIARIES AND INVESTMENTS

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.

ITCC P4 gGmbH

ITCC-P4 gGmbH, a non-profit enterprise with private companies and academic centres as shareholders, provides academic institutions and pharmaceutical companies with a comprehensive repertoire of modern laboratory models of paediatric tumours.

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 services.

Universitätszahnklinik Wien GmbH

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

PAN-EUROPEAN COOPERATION

MedUni Vienna participated in a total of 94 EU-funded projects in 2023.

- 69 in the core Horizon 2020 and Horizon Europe framework programmes (Health, ERC, MSCA etc.) and an additional five Cancer Mission projects.
- 14 projects in the Innovative Medicines Initiative 2 (IMI2) programme/Innovative Health Initiative (IHI)
- 4 projects in the EU4Health Programme
- 2 projects in the DIGITAL Programme

12 MedUni Vienna researchers coordinated EU consortiums with partners from European and other countries.

31 projects commenced in 2023.

LUDWIG BOLTZMANN INSTITUTES

The Ludwig Boltzmann Gesellschaft (LBG) supports new research approaches 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 for Applied Diagnostics**
(heads: Markus Mitterhauser and Gerda Egger)
- **LBI for Rare and Undiagnosed Diseases**
(heads: Kaan Boztug and Georg Stary)
- **LBI for Arthritis and Rehabilitation**
(head: Tanja Stamm)
- **LBI for Hematology and Oncology**
(head: Peter Valent)
- **LBI for Cardiovascular Research**
(head: Johann Wojta)

2023 IN BRIEF

University Clinic of
Dentistry Vienna

40,788

patients
(139,787 treatment sessions)

14
ERC grants

9
Comprehensive
Centers

13
centres of
medical science

13
Christian Doppler Laboratories

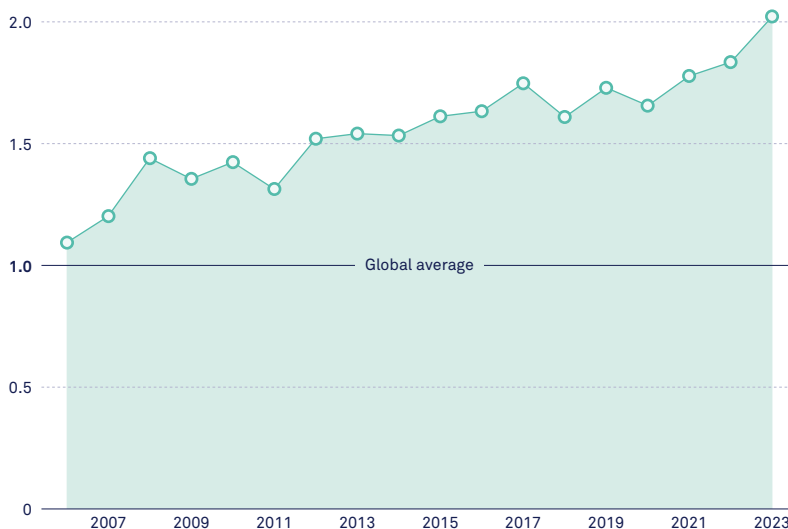
32
departments and
clinical institutes

6
Ludwig Boltzmann Institutes

16
patent
applications
4 patents granted
50 commercialisation
partners

Frequency of citations

compared with global average in the discipline concerned



Source: InCites Dataset and ESCI

43%

First and last authorships of original papers, reviews and letters

EUR
138.4m

Revenue

from R&D projects (133.8)
and donations (4.6)

Patient care
at University
Hospital Vienna

62,174

inpatients (cases)

538,478

outpatients (cases)

1,772,106

clinic appointments
incl. inpatients

46,020

operations

6,584

employees

incl. 4,491 researchers

5,148

academic
publications

8,580

students

185,144

citations of
publications,
2013-2022

International partners

Top 10 international research partnerships by number of publications

1,339	Charité University Hospital Berlin, Free University of Berlin, Humboldt University of Berlin
1,266	University of Hamburg, University Medical Center Hamburg-Eppendorf
1,179	Harvard University
1,143	Université Paris Cité
1,047	Charles University Prague
1,020	Ludwig-Maximilians-Universität Munich
1,008	Ruprecht Karls University Heidelberg
938	University College London
933	University of Zurich
909	Karolinska Institutet

Period: 2019-2023, source: InCites by Clarivate, figures as at 28 March 2024

ORGANISATIONAL STRUCTURE

Senate
26 members

Rectorate
Rector and 4 vice rectors

Medical science division

13 centres

- Anatomy and Cell Biology
- Physiology and Pharmacology
- Public Health
- Brain Research
- Pathobiochemistry and Genetics
- Medical Biochemistry
- Virology
- Forensic Medicine
- Pathophysiology, Infectiology and Immunology
- Medical Physics and Biomedical Engineering
- Medical Data Science
- Center for Biomedical Research and Translational Surgery
- Center for Cancer Research

Clinical division

30 university departments

- Medicine I
- Medicine II
- Medicine III
- General Surgery
- Obstetrics and Gynecology
- Otorhinolaryngology
- Anaesthesia, Intensive Care Medicine and Pain Medicine
- Psychiatry and Psychotherapy
- Pediatrics and Adolescent Medicine
- Biomedical Imaging and Image-guided Therapy
- Orthopedics and Trauma-Surgery
- Dermatology
- Radiation Oncology
- Urology
- Neurosurgery
- Oral and Maxillofacial Surgery
- Cardiac Surgery
- Thoracic Surgery
- Plastic, Reconstructive and Aesthetic Surgery
- Pediatric and Adolescent Surgery
- Emergency Medicine
- Neurologie
- Physical Medicine, Rehabilitation and Occupational Medicine
- Child and Adolescent Psychiatry
- Psychoanalyse und Psychotherapie
- Ophthalmology and Optometrics
- Department of Transfusion Medicine and Cell Therapy
- Hospital Epidemiology and Infection Control
- Clinical Pharmacology
- University Clinic of Dentistry Vienna

2 clinical institutes

- Laboratory Medicine
- Pathology

Organisational units with special service functions

- Comprehensive Cancer Center
- Comprehensive Center for Pediatrics
- Comprehensive Center for Cardiovascular Medicine
- Comprehensive Center for Perioperative Medicine
- Comprehensive Center for Infection Medicine
- Comprehensive Center for Clinical Neurosciences and Mental Health
- Comprehensive Center for Chest Diseases
- Comprehensive Center for Inflammation and Immunity
- Comprehensive Center for Musculoskeletal Disorders
- Core Facilities
- Core facility laboratory animal breeding and husbandry
- University Library
- Ethics, Historical Collections and the History of Medicine
- Teaching Center

AS AT 31 DECEMBER 2023

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 Affairs and Compliance
- 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
- ITCC-P4 gGmbH

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.

Term of office until 28 February 2023

Dr. Eva Dichand (Chair)
Dr. Brigitte Ettl
Prof. Irene Virgolini
Prof. Reinhart Waneck
Prof. Thomas Zeltner

Term of office from 1 March 2023

Dr. Eva Dichand (Chair)
Prof. Christoph Huber
Prof. Peter Husslein
Dr. Sigrid Pilz
Prof. Thomas Zeltner (Deputy Chair)

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.

Term of office 1 October 2022 until 30 September 2025

PROFESSORS

Prof. Maria Sibilina (Chair)
Prof. Angelika Berger
Prof. Christoph Binder
Prof. Barbara Bohle
Prof. Renate Kain
Prof. Irene Lang
Prof. Bruno Podesser
Prof. Shahrokh Shariat
Prof. Tanja Stamm

Prof. Michael Trauner (Third Deputy)
Prof. Edda Tschernko
Prof. Rudolf Valenta
Prof. Markus Zeitlinger

UNIVERSITY LECTURERS/ACADEMIC STAFF INVOLVED IN RESEARCH AND TEACHING, INCL. DOCTORS IN SPECIALIST TRAINING

Prof. Martin Andreas (*until 30 September 2023*)
Dr. Carina Borst (*from 1 October 2023*)
Dr. Miriam Kristin Hufgard-Leitner
Prof. Judith Rittenschober-Böhm
Prof. Ivo Volf (First Deputy *until 17 March 2023*)
Prof. René Wenzl
Prof. Birgit Willinger (First Deputy *from 5 May 2023*)

STUDENTS

Till Buschhorn (Second Deputy *until 9 October 2023*)
Noam Hartman (*until 9 October 2023*)
Isolde Kostner (*until 9 October 2023*)
Yannick T. Suhr (*until 9 October 2023*)
Nicole Brunner (*until 9 October 2023*)
Florian Waldschütz (*until 9 October 2023*)
Marius Polay (*from 9 October 2023*)
Yannick T. Suhr (Second Deputy *from 9 October 2023*)
Alexis Treitler (*from 9 October 2023*)
Carolin Vollbrecht (*from 9 October 2023*)
Sophie Weißgärber (*from 9 October 2023*)
David Zach (*from 9 October 2023*)

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. Daniela Marhofer
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: Ingrid Palzer (*until 30 September 2023*)
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
(*until 30 September 2023*)
www.meduniwien.ac.at/disabilities

• Arbitration Committee

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

• Students' Union (ÖH Med Vienna)

Term of office until 30 June 2023
Chair: Nicole Brunner
First Deputy: Isolde Kostner
Second Deputy: Florian Waldschütz

Term of office from 1 July 2023

Chair: Carolin Vollbrecht
First Deputy: Anant Thind
Second Deputy: Sophie Weißgärber
www.oehmedwien.at

• Data Clearing House

Chair: Jessica Einzinger
Deputy Chair: Dr. Michael Prinz
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

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Deputy: Prof. Franz Kainberger (*until 30 September 2023*)
Deputy: Prof. Günther Körmöczi
Deputy: Prof. Harald Leitich
Deputy: Prof. Michaela Riedl

• Dentistry Curriculum Director

Prof. Anita Holzinger
Deputy: Prof. Andrea Nell (*until 30 September 2023*)
Deputy: Prof. Andreas Schedle
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
Deputy: Prof. Georg Duftschmid

• 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. Karin Hoffmann-Sommergruber
(*from 17 March 2023*)

• 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 (until 1 February 2023)**

Emeritus Professor of Hematology, Oncology and Immunology

- **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

- **Robert Schwarcz**

Professor of Psychiatry, Pharmacology and Pediatrics, Department of Psychiatry, University of Maryland School of Medicine

Department of Medicine III

Head: Prof. Michael Trauner

- 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. Christian Singer

- 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

Interim Head: Prof. Edda Tschernko

- 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

(until 30 September 2023)

Deputy Head: Prof. Dan Rujescu-Balcu (from 15 March 2023)

- 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)

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

Interim Head: Prof. Heinz Burgmann

(until 30 September 2023)

- Division of Oncology
- Division of Hematology and Hemostaseology
- Division of Palliative Medicine
- Division of Infectious Diseases and Tropical Medicine

Department of Medicine II

Head: Prof. Christian Hengstenberg

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

Department of Biomedical Imaging and Image-guided Therapy

Head: Prof. Christian Herold (*until 30 September 2023*)

Interim Head: Prof. Marcus Hacker (*from 1 October 2023*)

- 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 (*until 30 September 2023*)

Interim Head: Prof. Paul Simon

Department of Thoracic Surgery

Head: Prof. Clemens Aigner (*from 1 July 2023*)

Interim Head: Prof. Konrad Hötzenecker, PhD

(*until 30 June 2023*)

Department of Plastic, Reconstructive and Aesthetic Surgery

Interim Head: Prof. Christine Radtke

Department of Pediatric and Adolescent Surgery

Head: Prof. Martin Metzelder

Department of Emergency Medicine

Head: Prof. Wilhelm Behringer

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 Transfusion Medicine and Cell Therapy

Head: Prof. Antonia Müller

Department of Hospital Epidemiology and Infection Control

Head: Prof. Elisabeth Presterl

Department of Clinical Pharmacology

Head: Prof. Markus Zeitlinger

University Clinic of Dentistry Vienna

Head: Prof. Andreas Moritz

Department of Laboratory Medicine

Head: Prof. Oswald Wagner

- Division of Clinical Virology
- Division of Clinical Microbiology

Department of Pathology

Head: Prof. Renate Kain

CENTRES OF MEDICAL SCIENCE

Center for Anatomy and Cell Biology

Head: Prof. Franz-Michael Jantsch (*until 28 February 2023*)

Prof. Wolfgang Weninger (*from 1 March 2023*)

- 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 Primary Care 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

- DNA – Zentrallabor

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 Data Science

Head: Prof. Martin Posch

- General Division of the Center for Medical Data Science
- 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
- Institute of Outcomes Research

Center for Biomedical Research and Translational Surgery

Head: Prof. Bruno Podesser

Center for Cancer Research

Head: Prof. Maria Sibilía

ORGANISATIONAL UNITS WITH SPECIAL SERVICE FUNCTIONS

Comprehensive Cancer Center

Prof. Shahrokh Shariat

Comprehensive Center for Pediatrics

Head: Prof. Angelika Berger

Comprehensive Center for Cardiovascular Medicine

Head: Prof. Günther Laufer (*until 30 September 2023*)

Interim Head: Prof. Christian Hengstenberg
(*until 1 October 2023*)

Comprehensive Center for Perioperative Medicine

Head: Prof. Oliver Strobel

Comprehensive Center for Clinical Neurosciences and Mental Health

Head: Prof. Thomas Berger

SERVICE DEPARTMENTS

Comprehensive Center for Infection Medicine

Head: Prof. Elisabeth Presterl (*until 30 June 2023*)
Prof. Heinz Burgmann (*from 1 July 2023*)

Comprehensive Center for Chest Diseases

(*new from 1 January 2023*)

Head: Prof. Clemens Aigner

Comprehensive Center for Inflammation and Immunity

(*new from 1 January 2023*)

Head: Prof. Daniel Aletaha

Comprehensive Center for Musculoskeletal Disorders

(*new from 1 January 2023*)

Head: Prof. Reinhard Windhager

Core Facilities

Head: Prof. Johann Wojta

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

Core facility laboratory animal breeding and husbandry

Interim Head: Prof. Wilfried Ellmeier

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

University Management Office

Head: Ingrid Riedel-Taschner

Human Resources

Head: Maria Eder

Legal Affairs and Compliance

Head: Prof. Markus Grimm

Corporate Communications

Head: Johannes Angerer

Studies and Examinations Department

Head: Harald Jäger

Research Service, Knowledge Transfer and International Affairs

Head: Dr. Michaela Fritz

Clinical Trials Coordination Centre

Head: Prof. Michael Wolzt

Finance Department

Head: Gerhard Hatzl

Facility, Security and Infrastructure Management

Head: Harald Trezza

IT Systems and Communications

Head: Christoph Wild

STAFF UNITS

Internal Audit

Head: Markus Künzel

Evaluation and Quality Management

Head: Dr. Katharina Stowasser-Bloch

Gender Mainstreaming

Head: Sandra Steinböck

Controlling

Head: Karin Fartacek

FINANCIAL STATEMENTS

I. STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2023

ASSETS

	31 December 2023 EUR			31 December 2022 EUR '000	
A. Fixed assets					
I. Intangible assets					
1. Concessions and similar rights, and licences thereto		605,066.02			376
<i>Acquired by purchase</i>	605,066.02				376
2. Rights of use		20,000,000.00	20,605,066.02	20,000	20,376
II. Property, plant and equipment					
1. Land, leasehold rights and buildings including buildings on third-party land		20,681,874.22			20,942
<i>a) Land value</i>	907,034.40				719
<i>b) Building value</i>	865,333.83				740
2. Plant and machinery		17,014,525.57			15,998
3. Scientific literature and other scientific media		9,305,866.42			8,744
4. Other plants, operating and office equipment		3,353,557.74			4,153
5. Advance payments and plants under construction		16,898,767.81	67,254,591.76	14,846	64,683
III. Financial assets					
1. Investments in subsidiaries and associates		649,739.00			649
2. Loans to subsidiaries and associates		49,727.35			660
3. Securities and similar instruments held as fixed assets		216,243,358.51	216,942,824.86	304,802,482.64	214,514 215,823 300,882
B. Current assets					
I. Inventories					
1. Operating resources		980,000.00			620
2. Services rendered to third parties not yet invoiced		113,178,330.55	114,158,330.55	96,436	97,056
II. Receivables and other assets					
1. Trade receivables		14,168,760.60			24,754
2. Receivables from associates		1,182,229.99			1,902
3. Other receivables and other assets		28,837,155.53	44,188,146.12	19,383	46,040
III. Securities and equity interests			6,746,690.24		7,104
IV. Cash and cash equivalents			228,748,918.96	393,842,085.87	174,961 325,162
C. Accruals and deferrals			5,766,525.28		2,233
TOTAL ASSETS			704,411,093.79		628,277

The 2023 financial statements were given an unqualified audit certificate by auditors Mazars Austria GmbH, Wirtschaftsprüfungs- und Steuerberatungsgesellschaft.

EQUITY AND LIABILITIES

	31 December 2023 EUR		31 December 2022 EUR '000	
A. Equity				
1. University negative equity		-8,334,166.31		-8,334
2. Net profit		33,705,368.30	25,371,201.99	25,317 16,983
<i>Profit brought forward</i>	25,317,551.84			18,808
B. Investment grants		31,052,850.13	30,169	
C. Provisions				
1. Provisions for severance payments		29,770,068.67		24,173
2. Other provisions		193,001,050.92	222,771,119.59	177,907 202,080
D. Liabilities				
1. Advances received		202,678,625.30		191,559
<i>Deductible from inventories</i>	101,251,373.85			88,066
2. Trade payables		14,299,526.39		28,721
3. Payables to associates		7,216,151.15		145
4. Other liabilities		39,622,122.90	263,816,425.74	25,351 245,776
E. Accruals and deferrals		161,399,496.34	133,269	
TOTAL EQUITY AND LIABILITIES		704,411,093.79	628,277	

Note regarding equity:

The university has reported positive equity every year since 2019. In 2023, equity stood at EUR 25.4m. 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 2023, positive equity in the meaning of section 16(2) University Financial Statements Order was EUR 56.4m (2022: EUR 47.2m).

II. STATEMENT OF PROFIT OR LOSS FOR 2023

	2023 EUR	2022 EUR '000
1. Revenue		
a) Revenue from Federal Government global budget allocation	562,856,349.07	528,649
b) Revenue from tuition fees	1,022,496.65	1,080
c) Revenue from postgraduate training programmes	2,309,829.27	1,879
d) Revenue pursuant to section 27 Universities Act	113,721,588.50	92,156
e) Reimbursements of costs pursuant section 26 Universities Act	17,810,746.52	15,516
f) Other revenue and reimbursements	18,269,244.85	17,092
<i>Revenue from federal ministries</i>	385,427.14	309
	715,990,254.86	656,372
2. Change in services rendered to third parties not yet invoiced		
	16,742,041.24	14,260
3. Other operating income		
a) Income from disposal or write-up of fixed assets (excl. financial assets)	347.31	3
b) Income from reversal of provisions	5,437,815.22	2,043
c) Other	22,407,470.57	16,044
<i>Reversal of investment grants</i>	10,137,421.23	10,161
	27,845,633.10	18,090
4. Expenditure for materials, consumables and purchased services		
a) Expenditure for materials and consumables	-22,053,119.08	-21,000
b) Expenditure for purchased services	-6,295,724.02	-5,397
	-28,348,843.10	-26,397
5. Staff costs		
a) Salaries and wages	-438,298,270.68	-391,485
<i>Refunds to the Federal Government for officials assigned to the university</i>	67,164,181.49	68,571
b) Expenditures for teaching according to use category 17 and 18 Hochschulstatistik- und Bildungsdokumentationsverordnung – UHSBV, BGBl. II Nr. 216/2019, current version	-1,666,948.91	-1,279
c) Cost of severance payments and payments to employee benefits funds	-13,096,047.23	-9,325
<i>Refunds to the Federal Government for officials assigned to the university</i>	-	0
d) Cost of pensions	-15,038,256.75	-13,299
<i>Refunds to the Federal Government for officials assigned to the university</i>	394,842.51	403
e) Social security contributions and other pay-related contributions	-85,395,532.73	-80,008
<i>Refunds to the Federal Government for officials assigned to the university</i>	14,058,694.63	14,354
f) Other employee benefits	-5,436,741.73	-5,514
	-558,931,798.03	-500,910

	2023 EUR	2022 EUR '000
6. Depreciation and amortisation	-24,382,102.05	-23,418
7. Other operating expenses		
a) Taxes other than those under item 13	-1,253,387.89	-1,088
b) Reimbursements to hospital operator pursuant section 33 Universities Act	-50,065,850.65	-50,089
c) Other	-66,873,824.34	-58,059
	-118,193,062.88	-109,236
8. Subtotal items 1 to 7	30,722,123.14	28,761
9. Income from financial resources and investments	5,852,148.61	2,317
a) Write-ups	208,679.23	0
10. Expenditure arising from financial resources and equity holdings	-26,797,016.81	-24,024
a) Write-downs	19,337.88	562
b) Expenditure arising from subsidiaries and associates	26,027,960.00	17,953
11. Subtotal items 9 to 10	-20,944,868.20	-21,707
12. Earnings before tax (sum of items 8 and 11)	9,777,254.94	7,054
13. Taxes on income and profit	1,389,438.48	-545
14. Profit after tax	8,387,816.46	6,509
15. Profit brought forward	25,317,551.84	18,808
16. Net profit for the year	33,705,368.30	25,317

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