



Medical University of Vienna

Annual Report 2013

Medical University of Vienna

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Foreword

Young, successful and forward-looking



In 2014, MedUni Vienna celebrates its tenth anniversary. We have taken this as an opportunity to embark upon a brand development process, begun in 2013, with the aim of further raising and sharpening the University's profile – and in turn improving our position in competing for third-party funding and for the best academic talent, helping to make Vienna even more attractive to researchers.

In 2013 we also passed an important milestone in the University Medicine Vienna 2020 project, reaching agreement with the City of Vienna on joint operational management by MedUni Vienna and Vienna General Hospital from 2015. This opens the way for the shared planning of services, budgets and human resources, and for us to exploit synergies and prepare ourselves for future challenges. It will also help to underpin the status of MedUni Vienna as one of the world's most highly regarded medical schools, and of Vienna General Hospital as one of Europe's leading hospitals.

A key characteristic of MedUni Vienna is its international outlook. We have been collaborating with the renowned Johns Hopkins University for some time, and a joint workshop organised under this partnership will bring American know-how in patient safety to Europe. Further strategic partnerships – including with Asian universities – are currently at the development stage.

MedUni Vienna is already regarded as one of the best young universities in the world. Work by its researchers was again published in leading journals in 2013, and they can point to outstanding achievements during the year despite being at a disadvantage by international standards in terms of general environment. Their achievements are summarised in the Highlights section of the annual report. They are also reflected in the continuing advances made by MedUni Vienna in international higher education rankings.

However, success in 2013 was not limited to scientific output – progress was also made in teaching, the University's third key area of activity alongside research and patient care. For the first time, a standardised entrance test was used as part of the undergraduate admissions process for all three of Austria's medical universities. The test will be evaluated on an ongoing basis and adapted to requirements as necessary. This marks another important step forward in quality assurance for the medical curriculum, as does the introduction of the clinical practice year, for which the preparations were made in 2013 so that it can begin in the 2014/15 winter semester for medical students entering their final year of studies.

All of these forward-looking, quality-focused measures will help to ensure that our young university maintains its outstanding international reputation in the future, as it continues to develop its activities.

A handwritten signature in blue ink, appearing to read "Wolfgang Schütz".

Wolfgang Schütz
Rector, Medical University of Vienna

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**Human ingenuity in the service
of human health –
our commitment to success**

Human ingenuity for health

Health plays a key role in our lives from the moment we are born. Without it, we can never develop to our full potential. At MedUni Vienna, all our efforts are focused on the improvement of human health. The University is internationally respected for the medical education it provides, as well as its achievements in research into diseases and the best possible treatment for people who are unwell. The central focus always remains the same: the human being and the power of human ingenuity.



Optimal diagnosis and treatment combined with world class research and teaching: everything that MedUni Vienna does is directed towards improving human health.

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Against a background of international competition between universities and the struggle for external funding, competing for the best talent is becoming ever more important. For MedUni Vienna, this means asking ourselves what we need to do strategically to attract outstanding researchers, and how to create the environment that supports this.

Ten years of MedUni Vienna – in an excellent position by international comparison

Since separation from the University of Vienna and the formation of an independent university in 2004, the Medical University of Vienna has consistently improved its position in the internationally recognised Times Higher Education World University Ranking, despite the low level of funding it receives in comparison with other top universities.



Oswald Wagner

Chair of the Senate
of MedUni Vienna

Success comes from creating the right environment

MedUni Vienna is ranked 51st worldwide in the Times Higher Education World University Rankings' Clinical, Pre-Clinical and Health category, thanks to the outstanding scientific performance of its staff. This is an excellent jumping off point for the further development of our University.

To support this process, in 2013 the Senate began to reorientate itself to contribute more to the University's strategy. A working group for research strategy was established, to come up with ideas for improving the overall environment at the University in support of scientific research. The objectives are to intensify cooperation between preclinical and clinical activities, to provide assistance in the construction of the new campus, and to simplify administrative processes. In teaching, 2013 saw the initiation of the Forum MedUni project, in which students will work together with the Rectorate on improvements to the curriculum.

Among newer universities, MedUni Vienna shot up the rankings in the Times Higher Education 100 Under 50 to place 36, from place 49 in the previous year. And in its comparison of all medical schools worldwide, the Times Higher Education World University Ranking placed MedUni Vienna 51st, meaning that going into its 10th anniversary year in 2014, the University is poised to make the transition to being one of the elite top 50.

Human ingenuity powering success

What are the underlying reasons for this upward trajectory? Various factors are responsible for the good position MedUni Vienna finds itself in. One important driver is the dynamism that has characterised the University since it was established in 2004. MedUni Vienna is also one of Europe's biggest research organisations and the most important medical education establishment in the German-speaking world, as well as Austria's leading health care services provider through Vienna General Hospital, the university hospital. Its five research clusters – for allergies/immunology/infectious diseases, cancer research/oncology, neuroscience, cardiovascular medicine, and imaging – play a key role in defining the University's research profile, as does the formation of specialised centres based on the clusters. The first of these, the Comprehensive Cancer Center Vienna (CCC), has been

highly successful in all its areas of activity – research, teaching, and treatment – from the day it was established in 2010. Combined with an excellent (and continually improving) research performance, the resulting critical mass of medical knowledge and expertise makes Vienna a magnet for teachers, researchers and students from Austria and all over the world. In short, MedUni Vienna harnesses the power of a great deal of human ingenuity.

Internationally respected centre of scientific activity

The international recognition that researchers at MedUni Vienna have earned over the centuries, and particularly in the last two decades, has made a major contribution to enhancing Vienna's attractiveness as a location for research. Like almost no other city in the world, Vienna has taken a grand tradition and transformed itself into a modern, attractive and competitive centre of scientific activity. This is due not least to the large number of major medical congresses that take place in Vienna, as well as the international attention attracted by the work of researchers at MedUni Vienna.

The highest quality of life in the world

MedUni Vienna's efforts to attract even more human ingenuity are



The Austrian capital has historically been one of Europe's most important centres of science and research, and medicine has played an especially important role in establishing its reputation.

supported by the strong position enjoyed by the Austrian capital in general. More than 2.5 million people live in the Vienna area, which is located in the geographic heart of Europe and offers excellent transport links to the rest of the world. In addition, Vienna can point to a variety of soft factors that make it an ideal location and that are rarely found combined in this way anywhere else in the world. These include the Vienna Woods (often referred to as the green lungs of the city), the high level of social protection, the very low levels of crime for a global

city, and a diverse range of world class cultural and leisure attractions. As a result, Vienna was ranked as having the highest quality of living out of 223 cities worldwide by the 2014 Mercer Quality of Living Survey. Published annually, the survey regularly places Vienna in the number one spot.

The Vienna School of Medicine

The Austrian capital has a long tradition of being one of the most important centres of science and research in Europe, and medicine has played

an especially important role in establishing its reputation. The original medical faculty of the University of Vienna was founded around 650 years ago. Researchers over the years and at what today is MedUni Vienna have been responsible for a multitude of medical discoveries and innovations. Known as the Vienna School of Medicine, it has become famous far beyond Austria's borders for outstanding research.

The Josephinum: symbol of a tradition in medical science

The Josephinum has a special place as part of MedUni Vienna's cultural heritage – not only because of the historical, architectural and cultural significance of the building itself and its original collections, but also as an institution that administrates, maintains and presents all of the University's historic holdings. One of the impressive aspects of MedUni Vienna's rich cultural legacy is that it consists of collections built up over many centuries. Accumulated in the course of the day-to-day work at the University in science, teaching, research and health care, they tell the story of its development in a large variety of different ways. To highlight this, the Josephinum's external communications were fully revamped in 2013. Its public presence as the historic entrance to the Medical University of Vienna is now stronger than ever



The Josephinum – the historic entrance to the Medical University of Vienna.

– thanks also to a new exhibitions concept.

Due to its history, its geographical position and that fact that many high profile international organisations have chosen to locate their headquarters here, Vienna has traditionally been defined by cultural diversity and dynamism. Against this background, MedUni Vienna sees diversity in all senses as a competitive advantage, and brings scientists from all over the world together under one roof. So that all of this intellectual and creative potential can develop as fully as possible, the University supports the individual strengths of its diverse staff. Tapping this rich seam of human ingenuity will further strengthen the University as an organisation.

MedUni Vienna is focusing on new initiatives in the areas of organisational culture and human resource

development in order to attract the best talent. As part of this, employees of the University have the opportunity to build on their skills and acquire new expertise – in line with the requirements of an expert organisation – within an innovative, modern and academic lifelong learning scheme, developed on the basis of the latest pedagogical thinking.

Measures to further increase attractiveness

Fully aware of its rich heritage, MedUni Vienna works continually to improve its international position. A project to analyse, define and develop the University's core values is under way, with a view to sharpening its profile. The results of this brand development activity will enhance MedUni Vienna's image and in turn further increase its attractiveness.



Erhard Busek

Chair of the MedUni Vienna University Council

Improvements have been made, but major tasks lie ahead

The University Council supports MedUni Vienna in its continuing pursuit of improvements. In 2013, these were accompanied by a number of challenges: in securing the funding base, in the University's relationship with the City of Vienna, and in addressing the quality of academic education. Progress was made in a number of areas, for instance cooperation with the other medical schools in Austria. A key task that lies ahead of us is to overcome the challenges with regard to additional clinical expenses. The internal discussions on this issue mean that we are well prepared to continue to put MedUni Vienna in the best position possible.



Close cooperation between MedUni Vienna and Vienna General Hospital means that the latest discoveries directly benefit patients big and small.

Translational research – from the research laboratory directly to patients

A combined total of around 3,000 researchers and doctors currently work at MedUni Vienna, many of whom come from countries other than Austria. Their scientific achievements benefit patients directly, since the University closely integrates basic research with clinical application.

In practice, this means that the latest research findings of clinical studies are integrated directly into patient care for some 670,000 patients

a year treated in the 29 university departments and clinical institutes. Due to the considerable medical benefits, this translational approach to research and medical treatment forms a core part of the cooperation between MedUni Vienna and Vienna General Hospital. MedUni Vienna concentrates on work in five research clusters, which have been established to pursue clinical research and promote its integration with basic medical research, and which serve as the foundation for the formation of interdisciplinary clinical centres.

University Medicine Vienna 2020

MedUni Vienna will play an even more important role internationally in the future, as a centre of excellence. This will result from strengthened co-operation between MedUni Vienna and Vienna General Hospital. The two organisations' collaboration in support of human health will be further intensified by a project initiated in 2012, University Medicine Vienna 2020. An agreement reached by the joint operational management of MedUni Vienna and Vienna General Hospital in 2013 paves the way for a significant step forward in the joint development of the two organisations from 2015 onwards. In addition, MedUni Vienna has put in place measures to support talented researchers, it offers performance-based career models for doctors, and it participates in a variety of international networks and partnerships with institutions outside the education sector.

A further initiative, aimed at promoting holistic and personalised medicine, is the formation of interdisciplinary clinical centres. The first of these, the Vienna Comprehensive Cancer Center (CCC), was established in 2010. It integrates patient care, teaching and research 'under one roof', in close collaboration with self-help programmes and neighbouring institutions, such as the Ludwig Boltzmann Institute, IMBA, Max F. Perutz Laboratories (a joint venture

with the University of Vienna), IMP and CeMM. This unique approach allows efforts in the fight against cancer to be coordinated and focused in a new way. Bringing together expertise from different medical disciplines opens up possibilities for much more effective patient diagnosis and treatment, particularly for cancer patients. As part of the overarching University Medicine Vienna 2020 project, the next step will be to establish centres for neurology and cardiovascular medicine along the same lines. Planning and

implementation of clinical centres is overseen by the Scientific Advisory Board, which is composed of international experts.

Modern curriculum and new entrance examination

MedUni Vienna has built up a strong reputation in teaching over the last few years, not least thanks to its innovative curriculum. The Medicine degree programme centres on small group learning and clinical practice,



Christiane Druml

Vice Rector for Clinical Affairs

Safeguarding quality in all areas

A major negotiating success was achieved with the agreement in principle between Vienna General Hospital and MedUni Vienna on responsibilities in clinical operations. The agreement sets out which tasks can be performed by qualified nursing staff when approved in writing by a doctor. This is a vital consideration, because patient care at a university hospital has to involve cooperation between nursing staff and university medical staff.





Karin Gutiérrez-Lobos
Vice Rector for Education,
Gender and Diversity

Education, diversity and family in focus

In 2013, we were able to establish the joint admissions process for applicants to medical studies, MedAT, which was used for the first time at all three of Austria's medical universities. We also received two accolades in recognition of our diversity management activities: the Austrian Administration Award, presented by the Federal Chancellery, and the meritus award for exemplary diversity management in respect of sexual orientation. Our commitment to being a family-friendly university was demonstrated by a number of measures, such as the opening of the Martha Wolf Kindergarten and provision of advisory services for family caregivers. Human resource development and student services were certified in 2013 for the second time.

allowing students to acquire integrated expertise. In 2013, the practical component of the Medicine degree programme was enhanced with the addition of a clinical practice year, which will be implemented starting with the 2014/15 academic year. Interpersonal skills are part of the curriculum from the first semester onwards, and innovative course elements such as exercises with patient actors help students to develop an appropriate professional manner. A new, uniform aptitude test for applicants has been developed together with the medical universities of Graz and Innsbruck, and was used for the first time in 2013, with successful results.

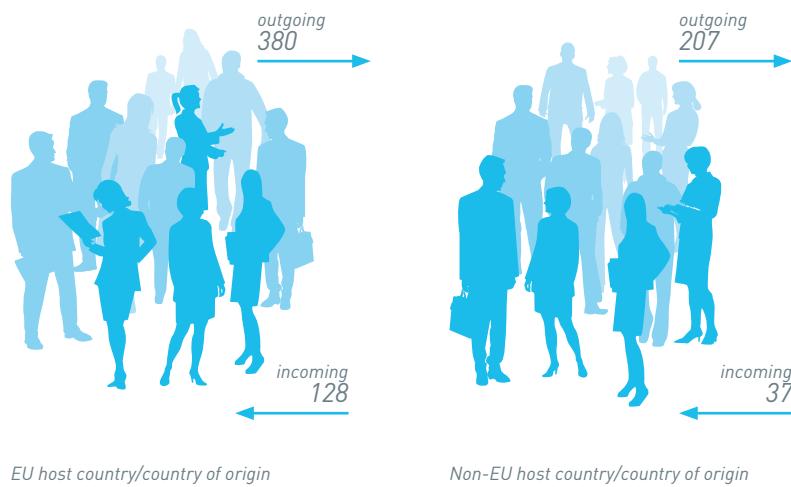
About 7,500 students from Austria and abroad are currently enrolled in programmes at MedUni Vienna. In addition to degree programmes in medicine and dentistry, the University offers an attractive range of specialist and continuing education opportunities for prospective and established medical professionals, as well as for students from other scientific disciplines. This includes doctoral research and PhD programmes, a master's programme in medical informatics and a number of postgraduate continuing education courses. More than 1,300 postgraduate researchers are enrolled in the PhD and doctoral research programmes, which have grown rapidly in the short time since they were introduced. Many of these researchers are

completing their doctoral studies as employees of the University. MedUni Vienna's successful student exchange programmes – including study abroad scholarships, visiting researcher programmes and partnerships with other universities – are being expanded to further strengthen international ties.

Gender, diversity and ethics: living up to our social responsibility

As part of fulfilling its social objectives, MedUni Vienna pursues gender mainstreaming programmes, with two specific measures already in place – a programme entitled 'The family-friendly university', and a mentoring programme. The University also actively promotes diversity in the student body and research faculty. Gender medicine research, begun under a newly created professorship in 2010, is progressively integrated into the curriculum. Also of social significance is a research project investigating cases of malaria therapy at Klinik Hoff, to determine whether treatment practices were ethically in accordance with scientific standards of the times. To achieve clarity and transparency on this issue, MedUni Vienna set up an expert panel in early 2012, tasked with investigating the period between the end of the Second World War and the establishment of the Ethics Committee at the medical faculty of the University of Vienna.

Students in mobility programmes



Markus Müller
Vice Rector for Research

Impressive research performance under difficult conditions

MedUni Vienna's research performance has consistently improved since 2004, and ranks highly among other leading medical institutions in Europe. Since the 2008 financial crisis and the deterioration of the economic climate, the overall environment for researchers in Austria has become increasingly difficult, as is apparent from the public debate about funding for universities, hospitals and schools. This makes the outstanding work of all our staff even more noteworthy. Despite the challenging conditions, they continue to contribute their great creative and intellectual capacity for the benefit of society.

National and international cooperations stimulate research activity

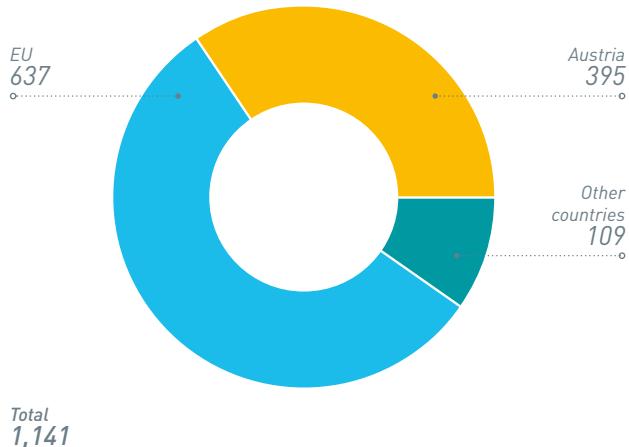
MedUni Vienna's scientists benefit from research links with other world class institutions, in particular in the fields of allergies, immunology and infectious diseases, cancer research, neuroscience, cardiovascular medicine, and imaging. Various international research consortia and multicentre clinical trials are coordinated by the University's researchers in these five focus areas, which also form MedUni Vienna's research clusters. An important role is played by projects that win competitive funding from the European Commission. 2013 saw the start of 23 such projects with MedUni Vienna participation.

In 2012, MedUni Vienna began a partnership with Johns Hopkins University, a renowned US institution. The focus of the cooperation is patient safety, and in 2014 a jointly held

course will bring US expertise in this field to Europe. Teacher, student and researcher exchanges are also planned, as well as joint symposiums bringing together academics from both universities. MedUni Vienna is also collaborating with a major Asian university: it recently concluded a research and teaching cooperation agreement with Nanyang Technological University, Singapore (NTU). As part of the cooperation, experts from Austria will provide support for the establishment of a medical imaging centre in Singapore. A joint Medical Technology PhD programme is currently in the planning stage.

Another important cooperation, with the Province of Lower Austria, was concluded in November 2013. The MedAustron project will see one of the most advanced therapy and research centres in the country established in Wiener Neustadt, focusing on cancer treatments using

Cooperation agreements



Collaborative agreements with 1,141 different partner institutions mean that the University is part of a highly diversified research network.

ion beams. MedAustron Research is headed by two joint professorships, one funded by Lower Austria and one by MedUni Vienna, and will facilitate research projects in medical radiation physics, radiobiology and experimental physics. Further partnerships with Austrian universities and other institutions, companies engaged in research, and international research institutes are planned.

Also in November 2013, the foundations were laid for a successful start for the Karl Landsteiner University of Health Sciences in Krems, when it received official accreditation. MedUni Vienna is a partner in this enterprise. Karl Landsteiner University brings together the key health policy fields of medicine, neurorehabilitation, and psychotherapy and counselling. The goal is to provide students in the different degree programmes with an interdisciplinary combination

of professional communication and problem-solving skills. Medical engineering and health economics will both be cornerstones of the curriculum at Karl Landsteiner University, which has a clear international focus. Courses began in 2013 and will be expanded in 2014.

MedUni Vienna and the University of Vienna pool resources for molecular biology research at Max F. Perutz Laboratories, a joint venture between the two institutions. Interdisciplinary collaboration with University of Vienna institutes also takes place in combined research groups. The Messerli Research Institute, which carries out research into human-animal interaction and is funded by the Messerli Foundation, is operated jointly by MedUni Vienna, the University of Veterinary Medicine, Vienna and the University of Vienna. MedUni Vienna's dedication to pursuing academic links

with other institutions is also reflected in Austria in its involvement in the Ludwig Boltzmann Institutes and Clusters, as well as the coordination of a number of Austrian Science Fund special research programmes. The culture of collaboration with other universities is to be expanded yet further in future.

Third-party funding a key source of finance

At a time when public purse strings are tight, cooperation with non-academic organisations is especially important. The significance of external sources of finance is therefore increasing – and this is an area in which MedUni Vienna can point to considerable success. Third-party funding attracted by the University has doubled since 2004. Currently, independently acquired finance of this kind represents roughly a fifth of all funding for research and teaching activities. With a view to further increasing external finance, the University has set up an academic-private partnership programme, to create conditions that actively support patenting and commercialisation of research discoveries.

Basic research that leads to commercial success

The Christian Doppler Laboratories (CDLs) have been successfully facilitating collaboration between research

and industry for many years. MedUni Vienna is currently responsible for operating ten CDLs, where university researchers work closely with private sector partners to develop innovative solutions for commercial purposes.



Research activities at MedUni Vienna generate many new insights.



Franz Wurm
Vice Rector for Finance

2013 closed successfully and on budget

Despite a marked increase in competition for external funding, in 2013 MedUni Vienna notched up further achievements in research and teaching, and performed better in a variety of university rankings – as well as returning to the black after two consecutive years in which an overall financial loss was reported. This was due in part to the improved budgetary situation after the budget was appropriately adjusted for the period 2013–15, and also to the efforts of all staff to be cost aware. As a result we are able to look forward optimistically to 2014, despite the challenging environment.

Highlights



**That was the year that was –
an overview of the main news
stories and developments in
2013**



New guidelines for good scientific practice

The rules on what constitutes good scientific practice at MedUni Vienna were fundamentally redrawn in 2012 before being presented to the public at the start of 2013.

The main aim of the project to reformulate the guidelines was to ensure that all staff members are aware of the rules they have to follow and understand the potential consequences

of any failure to observe them. In the introduction to the new regulations, MedUni Vienna Rector Wolfgang Schütz talks about the increasing numbers of scientific errors and transgressions worldwide: "Accusations of bad scientific practice – whether justified or not – represent an enormous burden for everyone involved and have the potential to damage the reputation of the university."

According to Christiane Druml, Vice Rector for Clinical Affairs at MedUni Vienna, a great deal has changed in recent years. While confidentiality was previously the guiding principle in clinical studies, today transparency is the watchword. The new guidelines are designed to support individual researchers, while also helping them to exercise their statutory rights. "Thanks to the guidelines, everyone knows what their rights and

responsibilities are. The general public can rest assured that research carried out at MedUni Vienna is being conducted properly, transparently and methodically in full accordance with international standards," the Vice Rector for Clinical Affairs explains.

Integrated and transparent research

MedUni Vienna's Ethics Committee was set up in 1978. It plays a major role in ensuring that ethical standards are maintained in scientific studies, and has made a significant contribution to the integrity of medical research. All clinical research projects must be submitted to the Ethics Committee before going ahead, to ensure that the rights of subjects and patients participating in the study are protected. Since 2004 the Ethics Committee has maintained Austria's first public register of clinical studies.



○ RHEUMATISM THERAPY: LESS IS MORE

Treating moderately active rheumatoid arthritis with the etanercept, a tumour necrosis factor inhibitor, delivers excellent results in more than 80 percent of patients, which can be sustained with a half dose of medicine just as effectively as with a full dose. These are the latest results of a study headed by Josef Smolen, head of the Division of Rheumatology at MedUni Vienna, and published in leading medical journal, *The Lancet*.

Brains in a state of anxiety can become accustomed to fear

Everyday social situations are a source of fear for patients suffering from social anxiety disorder – and now researchers have found a way to disarm at least part of this anxiety network.

In Ronald Sladky's study, which was headed by Christian Windischberger (Center for Medical Physics and Biomedical Engineering), functional magnetic resonance tomography was used at MedUni Vienna's High Field Magnetic Resonance Centre of Excellence to monitor changes in brain activity in patients and a control group of healthy subjects as they were exposed to images of different faces.

Contrary to what was previously supposed, constant exposure to the subject matter not only led sufferers to identify a solution to the problem more quickly, but also led to their bypassing a number of regions of

the brain that are typically overactive among those with the disorder. According to Ronald Sladky, these findings could provide the trigger for the development of personalised training programmes which help sufferers to cope better with situations that trigger the disorder in their everyday lives.

The study stems from an interdisciplinary research project involving the Center for Medical Physics and Biomedical Engineering and the University Department of Psychiatry and Psychotherapy. The aim of the co-operation is to bring about a greater neuroscientific understanding of psychiatric illnesses and pave the way for

the development of new therapies and diagnostic approaches.

Medical neuroscience research cluster

The research cluster reflects the traditionally broad spectrum of neuroscience and psychosocial science research activities at MedUni Vienna. The research groups working at the cluster cover a broad spectrum of neuroscience disciplines comprising anatomy, physiology, immunology, cell biology, pathology, pharmacology and molecular genetics, as well as clinical disciplines relating to neurology, paediatric neurology, neuroradiology, neurosurgery, ophthalmology, psychiatry and psychotherapy. MedUni's research work is renowned internationally, particularly when it comes to Alzheimer's, depression, multiple sclerosis and pain.



○ CUDDLING WORKS – BUT ONLY AMONG INTIMATES

Cuddling can help to reduce stress, anxiety and fear, lower blood pressure and improve overall wellbeing and the memory. However, these positive effects only work when cuddling a person whom the subjects knows well. Cosying up to strangers can have the opposite effect, cautions Jürgen Sandkühler, head of MedUni Vienna's Center for Brain Research.

ScientMedNet mentors kick start careers

There is a long tradition of mentoring in science. In a new partnership with the Alumni Club, ScientMedNet is channelling its energy into supporting young doctors and the next generations of scientists at the start of their careers.



The ScientMedNet mentoring programme was set up by the Human Resource Development office in close cooperation with the Medical University of Vienna Alumni Club. Alumni Club members take an active role in the programme both as mentors and participants in the scheme. The next cycle starts in 2014.

Katharina Mallich-Pötz, head of Human Resource Development at MedUni Vienna, explains what the ScientMedNet programme and the Alumni

Club cooperation is all about: "Young doctors and up-and-coming scientists are given the necessary career development support through one-on-one contact with mentors. Mentors have a science and research background or work in hospitals and everyday medical practice, meaning that they cover a very broad range of specialisms."

Mentoring puts the focus on personal exchange with an expert chosen by the individual participants themselves. According to Lydia Taus from the Human Resource Development office, knowledge transfer takes a highly personalised format thanks to the tandem approach (one mentor, one participant). Those involved in the scheme particularly benefit from the fact that the mentor is able to provide direct support on individual issues. They also receive additional help with specific work-related topics, something that participants find particularly helpful in their careers.

Spotlight on Human Resource Development

The "Career Development at University through Coaching, Mentoring et al" meeting drew attention to a range of individualised career development options inspired by the principles of life long learning. A number of "internal conflict advisers" were trained in 2013 to reduce workplace tensions and conflicts, in order to provide staff at MedUni Vienna with informal and basic support in situations that are difficult for them to come to terms with on their own. MedUni Vienna's human resource management and development were once again audited and certified by AQA Focus Audit during the year.
www.meduniwien.ac.at/pe

○ NEW COOPERATION WITH GONDAR UNIVERSITY

MedUni Vienna and Gondar University in Ethiopia signed a cooperation agreement in a move that reflects the former's new focus on Africa. The cooperation, which includes a student exchange programme, aims to promote mutual knowledge transfer.

○ CHILD HEALS MOTHER DURING PREGNANCY

Different results reported by a working group led by Markus Hengstschläger (Institute of Medical Genetics at MedUni Vienna) have led to an exciting new hypothesis: stem cells from the child travel via the amniotic fluid to the mother's body during pregnancy to support the regeneration of damaged tissue.

Previously unknown immune defect discovered

Severe autoimmunity in childhood can be a sign of a primary immune defect (PID) – as reported by a research group comprising staff from MedUni Vienna, the Austrian Academy of Sciences (ÖAW) Centre for Molecular Medicine (CeMM) and St. Anna Children's Hospital.

The previously unknown B-cell defect in a 13-year-old male patient was identified using a process known as next generation sequencing. This method enables scientists to identify

changes in genetic make-up within a few days. The study was published in top journal, *Blood*.

"Our discovery came as a great relief to the family, as it finally shed light on the boy's condition," explains Kaan Boztug, who treats seriously ill children in his role as a doctor at the Department of Paediatrics and Adolescent Medicine. As a researcher at CeMM he uses cutting-edge genetic technology to look for the molecular causes behind immune disorders.

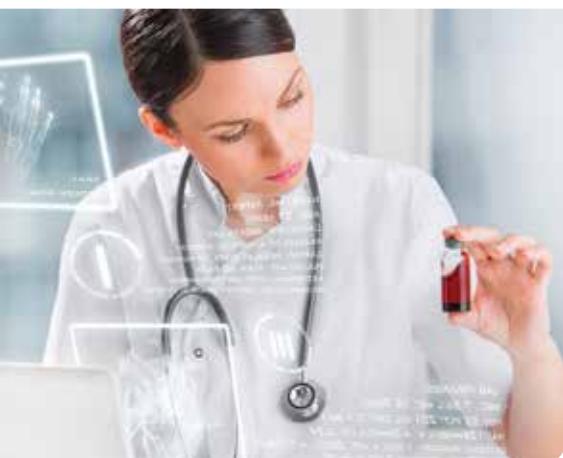
In this particular case the team discovered a defect in the PRKCD gene. This leads to a dysfunction in the way that B-lymphocytes – sometimes referred to as antibody factories – are regulated. The outcome is severe autoimmunity which had previously only been treatable with cortisone.

Identifying the precise gene defect meant that it was possible for the boy to embark on an individual course of therapy for the first time.

Rare diseases – surprisingly common

The majority of immune disorders are categorised as rare diseases. But the sheer volume of these disorders means that they are more widespread than most people realise. In light of this, MedUni Vienna took the decision to bundle resources and competences at the Vienna Center for Rare and Undiagnosed Diseases with the support of Vienna General Hospital and CeMM. Patients under treatment have access to broad-based interdisciplinary clinical care. The centre is also involved in a range of internationally competitive research activities which help to drive forward the diagnosis and treatment of these types of illnesses.

www.meduniwien.ac.at/cerud



JÜRGEN SANDKÜHLER IN SCIENCE AND THE JOURNAL OF NEUROSCIENCE

Jürgen Sandkühler, head of the MedUni Vienna Center for Brain Research, was appointed to the editorial board of *Science* for the seventh year in a row. In January 2013 the leading scientist was also appointed to the editorial board of the *Journal of Neuroscience*, the official organ of the Society for Neuroscience in Washington, DC.

New tumour diagnostics visualise complex changes

A team led by Markus Hengstschläger, who heads the Institute for Medical Genetics, developed a new method to flag up complex enzyme deregulations in individual cells. This advance is expected to lead to more targeted treatment of cancer in future.



Healthy cells are transformed into tumour cells when enzymes are changed, or deregulated. These changes can take on various guises and affect a number of different aspects such as the quantity of enzymes, enzyme activity, localisation of the enzyme within the cell, and also fluctuation of the enzyme during the cell cycles. To date, the majority of analysis would only look at one of these factors at a single time.

The new method now makes it possible to trace several dimensions of

enzyme deregulation, and using significantly less sample material than before. As Hengstschläger explains: "The earlier and more sensitively that we can identify tumour-inducing changes in enzymes in cells, the sooner we can implement the necessary therapeutic measures and monitor and demonstrate the cellular effects of tumour medicine."

Published in the respected Nature Protocols journal, the new method is based on flow cytometry. This high-tech measurement technique can analyse a range of different properties in multiple cells simultaneously. Next, the Vienna-based scientists led by Markus Hengstschläger want to test the newly developed models on a large number of differently deregulated cells of the type that are characteristic of individual tumour diseases.

GENDER GAP IN NETWORKS

The way that men and women organise themselves in networks is fundamentally different. This is the result of a study conducted by MedUni Vienna's Institute of Complex Systems under the leadership of Stefan Thurner and Michael Szell. "Female networks are stable and provide solidity in society, while male networks are more disparate – but the information flow is more efficient," Thurner explains.

New app gives individual pollen warnings

At the start of the pollen season the MedUni Vienna Austrian pollen warning service unveiled a global first. The new app takes the personal reaction profiles of individual sufferers into account, enabling it to issue customised pollen warnings.

Although pollen becomes airborne at the same time, allergy sufferers' reactions vary from person to person. Some people experience serious symptoms, while others are barely affected. A new free app published by the MedUni Vienna pollen warning service now takes that into account to calculate personal exposure: a tailor-made pollen alarm including a forecast for the coming three days.

Personal symptom data are aligned to a certain reaction profile and broken down into four categories, similar to skin UV types. The general forecast (ratings from "no" to "very high" pollen count) is revised upwards or downwards according to the skin type. If the integrated GPS feature is set in advance, the pollen warning automatically updates to reflect conditions at the new location.

Uwe E. Berger, head of the MedUni Vienna Austrian pollen warning service: "Our app gives allergy sufferers immediate access to a quick overview of which of the 12 key allergy triggers are currently in the air, where they are, and in what concentration. And it is precisely aligned to the allergy sufferer's personal reaction profile."

The personalised pollen warning is the first application of its kind anywhere in the world. Versions for iPhone and Android mobiles and various other mobile devices can be downloaded free of charge from the respective app stores or via the pollen warning service site. Available in German and English, the innovative service extends beyond Austria's borders and can also be used by sufferers in Germany and France.

www.pollenwarndienst.at



○ RUDOLF VALENTA – FIRST INVENTOR OF THE YEAR

Rudolf Valenta from the Department of Pathophysiology and Allergy Research was crowned MedUni Vienna's Inventor of the Year 2012 – the first recipient of the award which was established by the Rectorate to draw attention to the work of successful inventors. The head of the Department of Immunopathology was responsible for the largest number of successfully licensed inventions.

RESEARCH, 18 MARCH 2013

Kidney disease: defective gene regulation identified as trigger

A previously unknown mechanism in the regulation of gene expression was discovered at the MedUni Vienna Clinical Institute of Pathology. This leads to the development of a dangerous chronic kidney disease, focal segmental glomerulosclerosis (FSGS).

Primary FSGS is a serious and currently untreatable kidney disease. It leads to nephrotic syndrome with serious oedema which can persist until kidney function is completely destroyed. According to Dortscho Kerjaschki, head of the Clinical Institute for Pathology at MedUni Vienna: "The build up of non-excretable substances in the blood of the patient – substances that would otherwise be passed in urine – poisons the entire organism and can only be prevent through dialysis or a kidney transplant."

In cooperation with the research group led by Javier Martinez at the

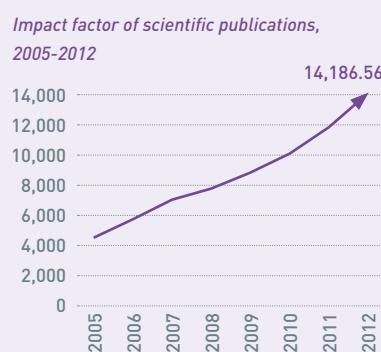
Institute of Molecular Biotechnology (IMBA), scientists at MedUni Vienna were able to identify the direct cause of the damage in the majority of cases. They demonstrated massive overproduction of a specific micro RNA (mir-193a) which then switches off the entire programme of coordinated gene regulation for the cells affected. The kidney cells were so badly damaged that they led to a complete collapse in filtration and destroyed the blood-urine barrier.

The study was published in the highly-respected *Nature Medicine* journal. With an impact factor of 22.4, this publication is the most competitive journal in translational medicine. The Clinical Institute of Pathology at the Medical University of Vienna, one of the largest centres of its kind in Europe, carries out around 1,600 kidney biopsies every year. Around 50 of these examinations result in the diagnosis of FSGS.

Strong, constantly improving publication rates

Publication in scientific journals and citations in publications are the most important quantifiable parameters for measuring researchers' academic achievements. The scientific value of the magazines is reflected in its impact factor. The top ten medical journals include *Nature Medicine*, *The Lancet* and the *British Journal of Medicine*. Researchers at MedUni Vienna have constantly improved their impact

factor ever since it separated from the University of Vienna in 2004 (2012: 14,186.56).



HEPATOBILIARY: UNEXPLAINED MYSTERY SOON TO BE SOLVED

The liver disease primary sclerosing cholangitis is currently incurable. A study headed by Michael Trauner, head of MedUni Vienna's Division of Gastroenterology and Hepatology, gives strong grounds for hope that the disease can be cured using synthetic bile acid.

ESR GOLD MEDAL GOES TO JOHANNES LAMMER

At the 2013 European Congress of Radiology (7-11 March in Vienna) Johannes Lammer, head of MedUni's Division of Cardiovascular and Interventional Radiology, was presented with the European Society of Radiology (ESR) Gold Medal, the highest accolade awarded by the society.

New University Council for 2013-2018

The new Medical University of Vienna University Council was appointed on 18 March for its new tenure from 2013 to 2018.

The five-person committee comprises Erhard Busek, the former Austrian Vice Chancellor and Minister of Science, and Chairman of the Institute for the Danube Region and Central Europe; Elisabeth Hagen, the Managing Director of the Vienna Institute for International Economic Studies; Veronika Sexl, Chair of Institute for Pharmacology and Toxicology at the Vienna University of Veterinary Medicine; Walter Dorner, the former President of the Austrian Medical Chamber; and Robert Schwarcz, a neuroscientist at the University of Maryland, Baltimore, USA.

Two new members of the University Council

Erhard Busek and Elisabeth Hagen, who were nominated by the Federal Government, were both incumbent council members at MedUni Vienna. The MedUni Vienna Senate nominated the former MedUni Vienna professors Veronika Sexl and Walter Dorner as new members.

Busek reappointed chairman

The four members already nominated to the council voted to appoint the respected neuroscientist Robert Schwarcz to the committee at the constituent meeting on 18 March 2013. Like Busek and Schwarz, Hagen was

an incumbent MedUni Vienna University Council member. Erhard Busek was reappointed chairman of the council, an office which he has held since 2008. Elisabeth Hagen is the deputy chairwoman.



From left to right: Walter Dorner, Elisabeth Hagen, Erhard Busek, Veronika Sexl and Robert Schwarcz

◉ BREAST CANCER THERAPY SLOWS BONE METASTASIS AND PROTECTS BONES

A research team led by Michael Gnant from MedUni Vienna's University Department of Surgery discovered two further positive effects of Everolimus, a medicine which has already been put to successful use in breast cancer hormone therapy. "The medicine also slows the development of bone metastases, which are directly linked to breast cancer," Gnant explains. A protective effect for bones was also determined in connection with osteoporosis.

The common cold: immunisation a real possibility

Until now, there has been no way to determine which antibodies are needed to combat the various types of rhinoviruses that cause the common cold. This could be achieved using an antibody test developed at MedUni Vienna.



A step forward of this kind in research and treatment has the potential to be groundbreaking, because a cold is not always just a cold: rhinoviruses are also a major cause of

acute exacerbations of asthma and chronic obstructive pulmonary disease (COPD). As part of an EU project called Predicta, Rudolf Valenta, head of the Division of Immunopathology at MedUni Vienna, and his team have developed a rhinovirus chip. "Initial tests give us reason to hope that by using this to identify the rhinovirus responsible for an exacerbation of asthma or of COPD, we can develop a vaccine against the common cold," Valenta explains.

In other words, you could say that the chip is an antibody test for colds. It allows the researchers to categorise the large number of rhinovirus strains, filtering for those that are the most dangerous. In a similar procedure to that used for flu vaccination, at-risk groups can then be identified for immunisation. As Valenta explains, "If a rhinovirus is identified, we know it is the cause of the acute episode. And if we know what strain it is, we can immunise against it." The primary objective is not to stem the common

cold itself, but to prevent acute exacerbations of asthma and of COPD, which remains incurable.

Immunology Research Cluster

Defective immune system responses are the cause of widespread conditions such as rheumatoid arthritis, arteriosclerosis, diabetes mellitus, allergies and inflammatory bowel disease. Infectious diseases are also a growing problem. The complexity of immunological disorders calls for a multidisciplinary approach. The Immunology Research Cluster brings together research into allergies, inflammation and infectious diseases, and develops new diagnosis and treatment concepts.

cluster.meduniwien.ac.at/irc

REMEMBERING THE ANSCHLUSS, 75 YEARS ON

On the 75th anniversary of the Anschluss, when Austria was annexed to Germany, MedUni Vienna Rector Wolfgang Schütz commemorated the great loss suffered by the medical faculty of the University of Vienna as a result of the expulsion and murder of Jewish and dissident academics.

Shining a light on brain tumours

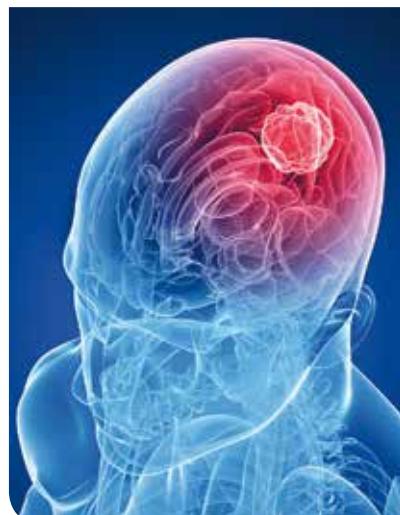
Stereotactic biopsy is an established standard procedure for diagnosis of primary central nervous system lymphoma and certain types of brain tumours called gliomas. A new process developed by the University Department of Neurosurgery is literally shedding light on these tumours for the first time.

Normally, tissue samples acquired by means of such a procedure need to be examined for tumorous cells by a neuropathologist. In order to be certain of arriving at the right diagnosis,

multiple biopsies are necessary, to extract multiple tissue samples. But using a fluorescence marker called 5-ALA, the correct tissue for removal during the biopsy can be targeted and an accurate diagnosis can be made immediately, in the operating theatre. During the operation, a blue light is emitted from the operating microscope, causing tumorous cells to fluoresce red when 5-ALA has been administered.

Interdisciplinary collaboration the key to success

Published in *Neurosurgical Review*, the study was a multidisciplinary collaboration between specialists in neurosurgery, neuropathology, oncology, radiotherapy, radiodiagnostics, and the Comprehensive Cancer Center (CCC) at MedUni Vienna. It is a product of the Clinical Neurosciences (CLINS) doctoral programme at the



University Department of Neurosurgery. Study author Georg Widhalm is one of the first four people to graduate from the CLINS programme, together with Andreas Hahn (psychiatry), Angelika Mühlbner-Fahrngruber (paediatrics) and Adelheid Wöhrer (neuropathology).

Doctoral Programme in Applied Medical Science

This doctorate degree programme is aimed at further developing independent scientific research by students in the medical profession and associated professions. Part of the curriculum focuses on practical training, so that students are able to acquire clinical skills. The research element of the course is equivalent to a PhD, culminating in an original dissertation, with the aim of publication in respected journals. Interdisciplinary cooperation is a particularly important theme, with the intention of supporting the diffusion, development and management of professional medical practice.

HISTORICAL COMMISSION EXAMINES 11,000 PATIENT RECORDS

The independent historical commission charged with investigating post-war research and patient care practices at the University of Vienna's medical faculty is fully on schedule, one year after it was set up in spring 2012. This was highlighted by the head of the commission, Gernot Heiss, in an initial report on the commission's work.

Targeted treatment of tumour cells

An interdisciplinary team of scientists at the the Comprehensive Cancer Center Vienna (CCC) are cooperating on the EXACT study to establish a system for individualised cancer treatment for the first time in Austria – a change in the approach to cancer therapy that is giving hope to patients in cases where other options have been exhausted.

Cancer sufferers who cannot be helped using conventional therapies receive individualised treatment as part of the EXACT study. The researchers conduct a wide range of additional examinations and tests in order to gather as much detailed information about the patient's condition as possible. This centres on extensive analysis of tissue samples, to examine carcinomas for characteristic gene mutations and protein expression.

New applications for approved cancer drugs

As a result, new uses can be found for cancer medication that has already been approved and found to be effective. This approach avoids the costly and very lengthy process of developing new drugs. Above all, patients acquire a new outlook in a short space of time.

Not all cancers are the same

Gerald Prager, a MedUni Vienna Professor based at the Department for Internal Medicine I, explains the approach behind the study: "We learned that not all cancers are the same,

and that the different types cannot simply be categorised according the organs of the body." A therapy that is effective for specific forms of breast cancer may also be successfully used to treat stomach cancer, if the tumour has certain characteristics. "Malignant cells can carry highly specific characteristics – on the surface or inside the cell. The latest drugs can then be used in targeted therapy."

Interdisciplinary specialist collaboration

Specialists from a diverse range of disciplines – including pathology, oncology, bioinformatics and molecular biology – are cooperating on

Cancer Research/ Oncology Research Cluster

The Comprehensive Cancer Center Vienna (CCC) is the Cancer Research/Oncology Research Cluster's most impressive achievement to date. It links together all the disciplines engaged in cancer research and cancer treatment at MedUni Vienna. A joint facility of

MedUni Vienna and Vienna General Hospital, the CCC combines expert interdisciplinary patient care with clinical and basic research, and world-class academic teaching. Patients benefit from the innovative procedures and technologies – both in diagnosis and therapy – available to the experts working at the CCC thanks to the close links between care and scientific research.
www.ccc.ac.at

"COOL" HEARTS BEAT LONGER

The life saving effects of controlled hypothermia in cases of sudden cardiac death are being researched at MedUni Vienna. A study financed by the Austrian Science Fund and carried out at the University Department of Emergency Medicine will look at whether such treatments can be optimised by simultaneously applying invasive resuscitation techniques.



implementation of the project at the CCC. Research is also being carried out in France, Germany and the USA based on similar concepts to the one behind the EXACT study. "We find ourselves in the midst of a change in the way that cancer is treated," commented Präger. The Professor firmly believes that individualised treatment is set to become a standard approach:

"We will know a lot more about the tumour, and about which treatments are effective and how. Based on this we can carry out detailed diagnostics and provide targeted treatment."

Better prognoses for patients with few remaining options

Christoph Zielinski, oncologist,

head of the Department for Internal Medicine I at MedUni Vienna, and head of the CCC, underlines the direct benefits of the study for participating patients: "In the EXACT project we want to demonstrate that by applying such a system, we can prolong the time until the disease progresses by 30% in patients for whom we no longer have any conventional treatment options. For these patients, this would be a fantastic result."

Interdisciplinary tumour boards at the CCC

As diagnosis and treatment of tumour diseases becomes more complex, the integration of specialist expertise from different medical disciplines is growing in importance. At the CCC, this expertise is bundled in interdisciplinary tumour boards, which mostly meet once a week and are made up of experts from a variety of disciplines. The benefit of these conferences lies in the high quality of the decision-making process conducted by an interdisciplinary team of specialists.

PAIN HAS MANY DIMENSIONS

This is the conclusion of a study published in the highly-regarded journal Pain, and conducted by a group of pain researchers at MedUni Vienna led by Burkhard Gustorff, head of the Interdisciplinary Pain Medicine (ismed) continuing education course. According to the study, pain is not one dimensional, but is a combination of inflammatory reactions and processes in the central nervous system and memory cells.

RESEARCH, 10 MAY 2013

Ticks: effective vaccination against Lyme disease in sight



In Austria, each year around 16,000 people contract Lyme borreliosis following a tick bite. Roughly one in five ticks carries the *Borrelia burgdorferi* bacteria, which causes Lyme borreliosis, commonly known as Lyme

Lyme borreliosis can be treated effectively using antibiotics, but up until now there has never been an immunisation to protect against the disease. A multi-centre study involving MedUni Vienna has proven the effectiveness of a possible borreliosis vaccine.

disease. A phase I and II clinical trial tested the safety and effectiveness of a new multivalent recombinant vaccine consisting of a manufactured substance, OspA. The results were highly encouraging: the vaccine can offer effective protection from Lyme borreliosis, immunising against the dominant strain of the bacteria in Europe.

Protein molecules provide effective protection

OspA is a protein molecule that sits on the surface of the *Borrelia* bacteria. When administered intravenously, it is identified as a foreign substance by the immune system, triggering an

immune response and leading to the formation of defence molecules that provide protection from the bacteria by acting in the tick itself, which draws in the molecules when feeding on blood.

Lancet publication

The findings of the study were published in leading scientific journal *The Lancet Infectious Diseases*. A MedUni Vienna team made up of staff from the Department of Clinical Pharmacology, led by Markus Müller, and the Institute of Specific Prophylaxis, headed by Herwig Kollaritsch, collaborated with study centres in New York, Mainz and Tübingen, and a team from Baxter AG.

GENETIC TEST QUANTIFIES RISK OF BREAST CANCER RELAPSE

Researchers from the Austrian Breast & Colorectal Cancer Study Group (ABCSG) have investigated the accuracy of prognoses provided by the PAM50 genetic test, in order to more accurately determine the risk of relapse in patients with hormone dependent breast cancer, the most common form of mammary carcinoma. The results, presented at the IMPAKT breast cancer conference organised by the European Society for Medical Oncology (ESMO), were highly encouraging.

New image for the Josephinum

Two exhibitions – Amazing Models, and Ophthalmophantom and Bullet-Finder – drew public attention to the Josephinum in 2013, and the institution's external communications were completely revised with the introduction of a new corporate identity.

From 24 May to 26 October 2013, MedUni Vienna presented a collection of historical anatomical models at the the Josephinum, in cooperation with Museum Boerhaave (Leiden, Netherlands), and the Luigi Cattaneo anatomical wax museum (Bologna, Italy). The Amazing Models exhibition showed how the human body was discovered culturally and scientifically in Europe.

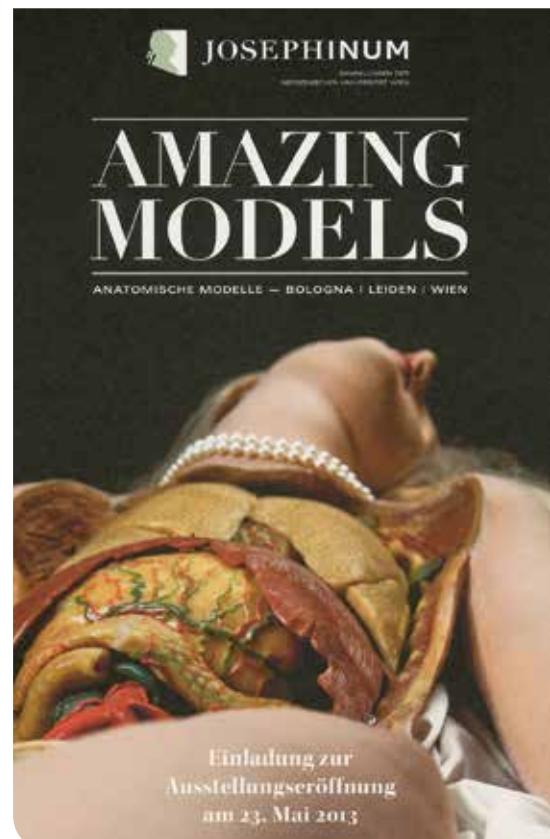
For Christiane Druml, Vice Rector of MedUni Vienna, the exhibition was important for more than one reason: "Amazing Models marked the beginning of a new era for the Josephinum. We want to present the treasures of medical history that are preserved here more actively, and more attractively, than they have been in the past, and bring this rich cultural heritage to life."

Close on the heels of Amazing Models, the Ophthalmophantom and Bullet-finder exhibition opened, running from 6 December 2013 to 5 October 2014 and showcasing the

Josephinum's unique collection of medical instruments alongside a new work by Austrian artist Tillman Kaiser. The artistic intervention marks the beginning of a planned series of cooperations with contemporary artists, which aims to take the traditional links between science and art at the Josephinum into the future.

Support the Josephinum: friends association and sponsorship

In connection with the Josephinum's reorientation and revamped external communications, a friends association was established in 2013 to help support the work of the institution financially. The initiative complements the existing sponsorship model, which offers the opportunity to sponsor the Josephinum's valuable books and world famous wax models. This is important, considering that the oldest book in the library originates from 1478, and the wax models were made in the 18th century – meaning that maintaining these treasured collections is important and very costly.



MARKUS PECK-RADOSAVLJEVIC NEW SECRETARY GENERAL OF THE EASL

Markus Peck-Radosavljevic, deputy head of MedUni Vienna's Division of Gastroenterology and Hepatology, has been appointed Secretary General of the European Association for the Study of the Liver (EASL), making him the first Austrian to hold this position at the organisation.

RESEARCH, 18 JUNE 2013

High tech for improved retinal therapy

MedUni Vienna plays a leading role in the investigation and treatment of retinal diseases. The opening of a new Christian Doppler Laboratory (CDL) serves to strengthen its position in the field.



The new CDL for Ophthalmic Image Analysis (OPTIMA) is headed by Ursula Schmidt-Erfurth, Head of the Department of Ophthalmology and Optometry, and is working on novel, individual courses of treatment for retinal diseases. MedUni Vienna's Center for Medical Physics and Biomedical Engineering under Wolfgang Drexler is collaborating with the eye clinic on

the development of new optical coherence tomography (OCT) technologies and computer programmes.

These are based on algorithms developed by Viennese researchers as part of the worldwide VIEW study. The retinal data from the study were analysed in MedUni Vienna's Vienna Reading Center, which is home to the new CDL. The researchers are using the algorithms to build computer programmes with which allow ophthalmologists to search thousands of items of data in a matter of seconds. "This ensures accurate diagnosis, the correct prognosis and proper control of the course of therapy. In future, treatment will only be given where it really makes sense, and it will be tailored to the patient's individual circumstances," explains Schmidt-Erfurth.

At the same time the new CDL is driving forward the development of non-invasive OCT, which makes it possible to detect the slightest changes in the retina at a very early stage.

CDLs at MedUni Vienna

The Christian Doppler Laboratories are dedicated to application-orientated basic research, collaboration between universities and industry, and technology transfer. CDLs are set up for a limited period of time to address a specific issue and are designed to serve a bridging function between basic research and industrial application.

www.cdg.ac.at

- CDL for the Development of Allergen Chips
- CDL for Immunomodulation
- CDL for Molecular Cancer Chemoprevention
- CDL for Cardiac and Thoracic Diagnosis and Regeneration
- CDL for Laser Applications in Medical Technology II
- CDL for Cardio-Metabolic Immunotherapy
- CDL for Recovery of Extremity Functions
- CDL for Medical Radiation Research for Radiation Oncology
- CDL for Ophthalmic Image Analysis (OPTIMA)
- CDL for Ocular Effects of Thiomers

(from 1 January 2014)

MESERLI RESEARCH INSTITUTE OPENS NEW LABORATORY

In May 2013 the Messerli Research Institute opened a new laboratory on the Vetmeduni Vienna Campus, a joint venture between Vetmeduni Vienna, MedUni Vienna and the University of Vienna headed by Erika Jensen-Jarolim. It specialises in comparative medicine, with the aim of speeding up the development of drugs for both human and animal patients. It focuses on research into allergies and cancer.

Epilepsy: mystery of drug resistance solved

Scientists at MedUni Vienna played a major part in developing an innovation that provides promising new approaches to the treatment of epilepsy patients suffering from drug resistance.

A European research team involving scientists from MedUni Vienna has created a new protocol for positron emission tomography (PET). For the first time, it is now possible to produce images of the activity of the P-glycoprotein (Pgp) drug transporter at the blood-brain barrier.

This is important because roughly a third of all epilepsy sufferers do not respond to treatment with anti-epileptic drugs. Overactivity of the Pgp drug transporter at the blood-brain barrier in epileptic brain tissue was suspected to be a possible cause. This theory has now been confirmed by the researchers' findings, which were published in the renowned medical journal, *The Lancet Neurology*. Patients could in future be treated with a substance suppressing the overexpression of Pgp that is responsible for drug resistance.

A research team headed by Oliver Langer and Martin Bauer of the Department of Clinical Pharmacology (headed by Markus Müller) at MedUni

Vienna made a major contribution to scientific investigation of the hypothesis. As part of the EU Euripides Project, a total of 13 European partners participated. In addition to the University Department of Clinical Pharmacology, Austria also contributed the expertise of the Austrian Institute of Technology (AIT).

Networked research

MedUni Vienna collaborates in a wide range of research projects both nationally and internationally. The principal partners in Austria are the University of Vienna and Vetmeduni Vienna, and among other activities the three universities operate joint research facilities such as the Max F. Perutz Laboratories and the Messerli Institute. In Austrian Science Fund (FWF) special research programmes and in the Ludwig Boltzmann institutes, fundamental medical research is carried out on the basis of national networks, and in the Christian Doppler Laboratories many application-orientated basic research projects



are undertaken in collaboration with industry. MedUni Vienna's scientists also participate in international research networks with other world class institutions, in particular in the fields of allergies, immunology and infectious diseases, cancer research, neuroscience, cardiovascular medicine, and imaging.

BREAST AND OVARIAN CANCER: GENE CHANGES SUBSTANTIALLY INCREASE RISK

With a sample group of more than 100,000 patients from Europe, the USA and Asia, the world's largest multicentre study of breast and ovarian cancer has been completed. This international project arose from a European initiative and has provided clear evidence of the link between changes in the TERT gene and the increased likelihood of breast and ovarian cancer. MedUni Vienna's Department of Gynaecology and the Comprehensive Cancer Center Vienna (CCC) both took part in the study.

New professors at MedUni Vienna

In 2013 MedUni Vienna widened its scientific scope by creating four additional professorships. The chairs are in imaging, health economics, oncology and neuroscience. Two of the professors appointed also took on management responsibilities for important clinical departments.

Thomas Beyer – first Professor of Physics of Medical Imaging

Thomas Beyer assumed the new chair at the beginning of March 2013. The physics of medical imaging is concerned with hybrid imaging (PET/



CT or PET/MR), and the chair is located at the Center for Medical Physics and Biomedical Engineering. Hybrid imaging involves the combination of two complementary imaging techniques, one from nuclear medicine and one from radiology. The information gathered in such techniques helps to improve diagnosis and can be used in new therapy approaches, especially in oncology. Thomas Beyer was born in 1970. He studied physics in Leipzig, completed his PhD at the University of Surrey in England, and gained his

post-doctoral teaching qualification in 2006. Beyer helped to develop the world's first combined PET/CT system in the USA.

Shahrokh Shariat, Professor for Urology and head of the Department of Urology

For Shahrokh Shariat, becoming head of the Department of Urology on 1 June 2013 marked a return. He studied at MedUni Vienna before moving to the USA and becoming one of the world's best known urologists. Shariat is the foremost expert in urological oncology, and his aim is "to make the Department of Urology at MedUni Vienna one of the world's leading urology clinics." Shariat was born in 1973 in Iran, and came to Vienna as a child.



After graduating from MedUni Vienna, he moved to the USA, where from 2010 to 2013 he headed the Bladder Carcinoma Center at Weill Medical College of Cornell University in New York.

Marcus Hacker appointed Professor of Nuclear Medicine

On 1 July 2013 Marcus Hacker took over responsibility for the Division of Nuclear Medicine, which forms part of the Department for Radiology and Nuclear Medicine. His specialisms are cardiovascular imaging, in vivo imaging of cells and inflammatory



processes, and oncological imaging and therapy. His previous appointment was as head of pre-clinical imaging at

○ STEPHAN DOERING NEW PRESIDENT OF SIGMUND FREUD GESELLSCHAFT

Stephan Doering, head of the Department for Psychoanalysis and Psychotherapy at MedUni Vienna, is the new president of the Sigmund Freud Gesellschaft. It was founded in 1968 to provide interdisciplinary support for the work of Sigmund Freud and the discoveries of psychoanalysis, to encourage further development of the ideas and to make them accessible to a wider public.

the Department for Nuclear Medicine, University Hospital of Munich (LMU). Hacker was born in 1969, studied Medicine in Erlangen and Munich, completed his doctorate in 2002, and gained his post-doctoral teaching qualification in nuclear medicine at LMU in 2008.

Judit Simon – first Professor for Health Economics

Judit Simon took up the post of Professor of Health Economics at MedUni Vienna in mid-October 2013. MedUni Vienna is the first Austrian university to establish a chair in this subject. Simon was born in Hungary. Before being called to Vienna, she carried out research and teaching at University College London (UCL), the London School of Economics (LSE) and the Health Economics Research Centre (HERC), Nuffield Department of Population Health, Oxford University. She will also continue as an associate member of the research team



in Oxford, and expects closer collaboration to develop between Oxford University and MedUni Vienna. According

to Simon, health economics is not primarily concerned with the finances of health care systems, and is focused on assessing and researching the costs and the value of various forms of treatment.

Walter Berger first Professor of Applied and Experimental Oncology

Biologist Walter Berger became Professor for Applied and Experimental Oncology at MedUni Vienna's Institute for Cancer Research on 1 November 2013. The focus of the profes-



sorship is on the use of translational research to develop improved systemic cancer therapies. The new post was advertised internationally, and is one of the two newly created chairs intended to reinforce the University's expertise in oncology and cancer research. Berger was born in 1963, has conducted research at Cambridge University in England, and in 2001 gained his post-doctoral teaching qualification at the University of Vienna. In 2010 he was made deputy head of the Institute for Cancer Research in the Department of Internal Medicine

I of MedUni Vienna. Berger is also an active member of the Comprehensive Cancer Center Vienna (CCC).

Tibor Harkany – first Professor of Molecular Neuroscience from 1 November 2013

The current focus of Tibor Harkany's work at the Center for Brain Research is research into the effects of drug consumption by expectant mothers on the brain development of their unborn children, and the possible long-term consequences.

Another focus area for him and his team is to provide target audiences with appropriately tailored information about the dangers of drug consumption. Tibor Harkany was born in 1972 in Hungary. His previous appointment was as Professor of Cell Biology at the University of Aberdeen (2007–2013). Since 2011 he has been Professor of Neurobiology at Karolinska Institutet in Stockholm, Sweden. Before that he worked as senior scientist and assistant professor at the same institute.



○ TREATING CANCER: MUTATED GENE DETERMINES SUCCESS OR FAILURE OF CHEMOTHERAPY

A mutation of the p53 gene determines whether chemotherapy can be used successfully to treat cancer. Several studies with more than 600 patients have shown a definite correlation between the genetic marker and response to chemotherapy, according to Daniela Kandioler of MedUni Vienna's Department of Surgery, who led the studies. This should make prognoses of the effectiveness of treatment more reliable in future, and also help to identify patients that might be harmed by treatment.

Highlights

RESEARCH, 25 JUNE 2013

Addiction: amphetamines only work if “well greased”



Harald Sitte and Stefan Böhm of MedUni Vienna's Center for Physiology and Pharmacology investigated how amphetamines function in the brain. They found that they are only effective if the cell membranes of the serotonin transporter are “well greased” with the membrane lipid PIP2.

Sitte's group, together with the researchers working with Gerhard Ecker (University of Vienna), also identified the binding site for PIP2 on the serotonin transporter. Sitte: “To have demonstrated the importance

MedUni Vienna researchers have successfully identified an important mechanism in the working of amphetamines. This may lead to new treatment options for the rising number of people suffering from amphetamine addiction.

of the membrane lipid to the working of amphetamines is a major step towards being able to treat addiction to these substances.”

The study has been published in the renowned scientific journal PNAS, and is the fruit of many years of research collaboration with scientists at the University of Vienna and Vanderbilt University in Nashville, USA. The research also forms part of a FWF

special research programme coordinated by Harald Sitte and supported by the Austrian Science Fund.

Young scientists in the Molecular Drug Targets doctoral programme run by MedUni Vienna and the University of Vienna have also made significant contributions to the success of the research: they are employed in the various working groups while doing their PhDs.

PhD Symposium 2013

MedUni Vienna's Young Scientist Association (YSA) held the ninth YSA PhD Symposium on 19 and 20 June 2013. This annual symposium is a forum for the exchange of ideas, and offers students an ideal

opportunity to present their work to a wider public. The increasing number of scientific contributions – in 2013 there were more than 300 presentations – is testimony to the growing importance of doctoral studies at MedUni Vienna.
meduniwien.ac.at/ysa

BREAST CANCER: NEW GENE TEST MEASURES RISK OF METASTASES

Breast cancer patients whose lymph nodes have already been attacked are generally given preventive chemotherapy. Researchers at the Comprehensive Cancer Center Vienna (CCC) have discovered that the risk of metastasis can be measured using a new multigene test. Patients not at risk can in future be spared the unpleasant side effects of chemotherapy.

3 JUNE 2013

DANIELA POLLAK-MONJE QUIROGA SELECTED AS OUTSTANDING SCIENTIST

Daniela Pollak-Monje Quiroga, researching in the Division of Neurophysiology and Neuropharmacology of MedUni Vienna, was selected by the Austrian Science Fund (FWF) as one of the 35 most outstanding scientists in Austria under the age of 35.

5 JUNE 2013

When stress makes you fat – cause of fat distribution discovered

Scientists at MedUni Vienna's Clinical Institute of Laboratory Medicine have identified a mechanism that, in the presence of stress, is partly responsible for the migration of body fat to the abdomen.

Researchers led by Martin Bilban and Harald Esterbauer of the Clinical Institute of Laboratory Medicine discovered a mechanism that is stimulated by the production of glucocorticoids – otherwise known as stress hormones.

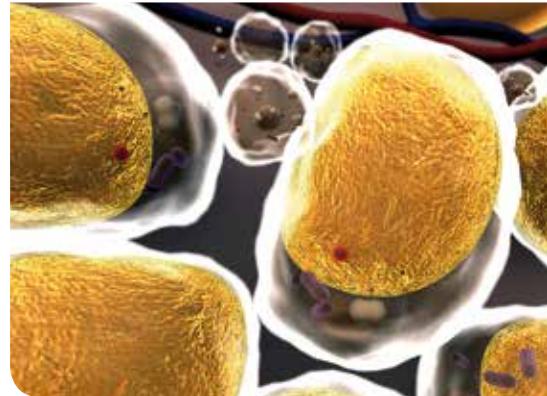
The glucocorticoid-dependent LMO3 gene and the 11HSD1 enzyme are the deciding factors, and together

play an important role in redistributing fat towards the belly. As a general principle, fat deposits can be divided into two types: visceral abdominal fat inside the body and subcutaneous fat deposited under the skin. Too much belly fat – typical in males – increases the risk of serious problems such as type 2 diabetes, stroke, cardiovascular disease, and several forms of cancer.

Doctoral and PhD programmes

More than 1,000 early stage researchers are currently engaged in PhD or other postgraduate doctoral studies at MedUni Vienna, with an international contingent of around 30%. PhD students are fully integrated into research groups, and

their studies lay the foundations for their subsequent research specialisation. On receiving their PhD they already have several publications to their name, often in leading journals. Admissions to the doctoral research programmes funded by the Austrian Science Fund (FWF) are subject to a two-stage selection process that incorporates international review.



Discovering how this mechanism works could help in the development of therapies for treating metabolic syndrome (abdominal obesity, high blood pressure, raised triglyceride levels in the blood, insulin resistance). It is conceivable that the accumulation of visceral fat could be prevented and controlled by blocking LMO3.

The current study was conducted by PhD student Josefine Lindroos as part of the Cell Communication in Health and Disease doctoral programme. The study was published in leading journal *Cell Metabolism*, with the publishers commenting that the article was the highlight of the issue.

PET AND MRI GIVE VIEWS INSIDE THE BRAIN

Researchers at MedUni Vienna and the University of Vienna use imaging techniques to search for changes in the human brain. Magnetic resonance imaging (MRI) and positron emission tomography (PET) can be used to identify neurobiological markers for psychological disorders such as depression, Alzheimer's and anxiety disorders. This could help to treat these illnesses more precisely and on an individual basis, and to identify those at risk at an earlier stage.

Clinical skills examination celebrates successful premiere

In Austria's most detailed objective structured clinical examination (OSCE) project to date, 640 fourth-year medical students practised clinically relevant skills, submitting themselves for testing at 16 stations on an examination circuit.



Another major step in underpinning and improving quality standards in medical education in 2013 was the introduction of an integrated, introductory practical clinical skills course at the end of the eighth semester. The OSCE examination prepares the students for their clinical training in the third phase of their medical education, and with its introduction MedUni Vienna is setting new standards in medical studies in Austria.

The examiners at the various testing stations combined questions on clinical theory with practice scenarios and case studies. In the two-week practical phase, the students were able to hone their clinical skills in routine and emergency situations. At the end of June, MedUni Vienna's examiners collected the more than 10,000 answers from the five-minute tests.

The OSCE project was successfully implemented by Günther Körmöczi as coordinator and Werner Horn as deputy curriculum director for medical

studies. OSCE is an internationally recognised, standardised and objective training and examination system.

E-learning in the medical curriculum

In phase one and two of the current Medicine degree programme, teaching is organised into thematic blocks. Students also learn important clinical skills in small-group courses, known as line elements. The fifth and sixth years are concentrated on practical clinical teaching, which takes place at Vienna General Hospital as well as other teaching hospitals in Austria and abroad. To ensure that in this system all students have the same access to teaching, in 2013 e-learning was introduced for all modules in phase three of the curriculum.

JOHANNES WANCATA NEW IFPE PRESIDENT

The head of the Division of Social Psychiatry, part of the Department of Psychiatry and Psychotherapy at MedUni Vienna, was elected as the new President of the International Federation of Psychiatric Epidemiology (IFPE). The other members of the Executive Committee are Kathleen Merikangas (USA), George Patton (Australia) and Francois Chapireau (France).

Perfect start for the new MedAT admissions process



For the first time, the admissions process used the same tests for medicine (MedAT-H) and dentistry (MedAT-Z) at all three universities. The jointly developed process consists of a knowledge test, a text comprehension test and a test assessing cognitive abilities and skills. Applicants to the dentistry programmes were also required to demonstrate manual dexterity.

The 1,500 available places – 740 at MedUni Vienna, 400 at the Medical University of Innsbruck and 360 at the Medical University of Graz – were

On 5 July 2013, 8,364 would-be students – 4,883 women and 3,481 men – took the new entrance tests for medicine and dentistry studies at Austria's medical universities in Vienna, Graz and Innsbruck.

allocated on the basis of rankings drawn up from the test results. Of the successful candidates, 724 were women (48.3%) and 776 were men (51.7%). The quota regulation embodied in the Universities Act 2002 was also taken into account: at each university 75% of the places are reserved for candidates who have completed their secondary education in Austria,

20% for candidates from EU Member States, and 5% for candidates from other countries.

While the new students were celebrating their success, the universities were already focusing on the admissions process for 2014, which will additionally take social competence into account.

How fair can selection processes hope to be?

Several international experts addressed this question at a meeting of Universities Austria (UNIKO) on 11 April 2013. Karin Gutiérrez-Lobos, Vice Rector of MedUni Vienna and Chair of the UNIKO task force on Gender and Diversity,

gave the welcoming address. She was followed by Diane F. Halpern, a former president of the American Psychological Association, who argued that a biopsychosocial model allows insight into cognitive differences between the sexes, and then by Lothar Schmidt-Atzert, an expert on psychological diagnostics from Philipps-Universität Marburg, as well as others.

PHÖNIX FRAUEN PRIZE GOES TO XIBER SCIENCE

On 18 June 2013, this prize was awarded to Sonja Reingruber by Karlheinz Töchterle, Austria's Minister for Science and Research. As founder and manager of XIBER Science GmbH she played a major role in putting the scientific foundations of the organisation in place, and setting up the commercial organisation. The company began as a team spun off from MedUni Vienna, and has developed a new therapy approach for the treatment of potentially lethal multiple organ failure.

Highlights

○ ADMINISTRATION | PARTNERSHIPS, 15 JULY 2013

Alois Stöger lecture at KinderuniMedizin

Austrian Minister of Health Alois Stöger gave an introductory lecture on "The basics of a healthy life" at the week-long Children's Medical University at MedUni Vienna.



Some 150 children aged between seven and 12 attended the official opening in the MedUni Vienna lecture centre in Vienna General Hospital. Roughly 4,500 children and young people took part in the eleventh Vienna Children's University, around 2,000 of them at KinderuniMedizin – the Children's Medical University. All told, there were 472 lectures and demonstrations at five universities and one university of applied sciences to choose from.

MedUni Vienna's Vice Rector Karin Gutiérrez-Lobos was responsible for the programme at the Children's Medical University. As part of the opening ceremony she awarded certificates to particularly committed lecturers who had participated over the last ten years – Daniela Dörfler, Piero Lercher and Bettina Weidinger.

At the official opening Alois Stöger emphasised the value of the Children's Medical University: "It is never too early to start thinking about health and the healthy life, and the Children's Medical University is an excellent place to begin. It's

a considerable challenge to discuss complicated topics with children at their level. Even if they don't all study medicine later on, they're getting information that will be useful all through their lives."

www.kinderuni.at

MedUni Vienna goes public

In addition to the Children's Medical University, MedUni Vienna provides a wide range of information for the general public. The series of Health Talks begun in 2012 continued successfully in 2013, covering such topics as diseases of the retina, high blood pressure, breast cancer and diabetes. The Cancer School organised by the Comprehensive Cancer Center Vienna (CCC) focuses on disseminating information about cancer and its prevention.

www.cancerschool.at

○ CESAR AWARD FOR LUKAS KENNER

Lukas Kenner from MedUni Vienna's Clinical Institute of Pathology received the prestigious CESAR Award for his paper, PDGFRB blockage for treatment of anaplastic large cell lymphoma ALCL. MedUni Vienna applied for patents on the work in the USA, Australia, Japan and Europe in 2010. Anaplastic large cell lymphoma (ALCL) is a highly malignant form of lymphoma.

Important wheat allergy trigger discovered

Sandra Pahr of the Institute of Pathophysiology and Allergy Research at MedUni Vienna has isolated one of the proteins in wheat that is a major factor in severe allergic reactions – which, in extreme cases, can result in death.

The protein responsible, Alpha Erothionin (Tri a 37), actually has a different and useful function: it protects the wheat against pests, which is why it is present in large quantities. It can however cause severe allergic reactions in humans, as Sandra Pahr of the group led by Rudolf Valenta, head of immunopathology at MedUni Vienna, found while in the course of her doctoral thesis.

Her discovery will provide the basis of a new allergy test to precisely identify patients that do in fact suffer from wheat allergy. It is very difficult to identify people suffering from wheat allergy using existing allergy tests, since cross-reactions and reactions to

carbohydrates mean that roughly 50% of pollen allergy sufferers are also diagnosed as suffering from wheat allergy. Separate identification of this protein will in future make accurate patient profiles possible, so as to be able to create personalised therapies and diet recommendations.

Pahr's study, which was conducted within the University's Immunology Research Cluster and published in the Journal of Allergy and Clinical Immunology, also produced another important finding: patients who have an allergen-specific antibody (IgE) against Tri a 37 in their blood are four times more likely to have a severe allergic reaction to eating wheat.



NEW SIMULATOR FOR CRANIAL SURGERY

A brain simulator has recently been introduced at MedUni Vienna for training in microsurgical operating procedures. The University Department of Neurosurgery is so far the only place in Austria to use a Neuro Touch simulator, and much of the know-how that went into the development of this new technology came from Vienna.

17 JULY 2013

FACTOR RESPONSIBLE FOR IMPAIRED IMMUNE RESPONSE IN PNEUMONIA IDENTIFIED

Macrophages play an important role in defending against bacteria and pathogens by activating inflammatory processes. In the case of pneumonia, which is caused by pneumococcal bacteria, this immune response function is hampered and blocked by the protein lipocalin 2, as discovered by researchers working under Sylvia Knapp, head of the infection biology laboratory in the Department of Internal Medicine I.

18 JULY 2013

Risk calculator for venous thromboses

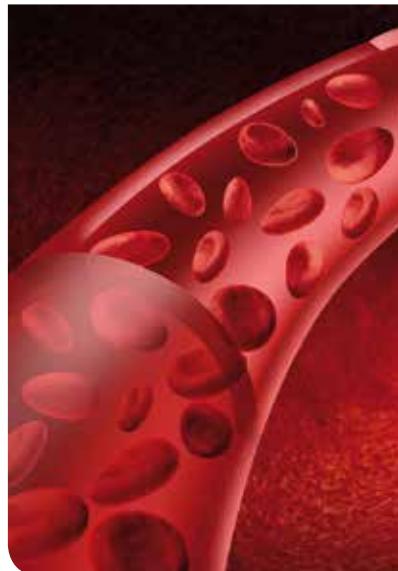
Researchers at MedUni Vienna have developed a risk calculator that enables doctors to estimate the risk of potentially fatal thrombosis recurrence more accurately.

In Austria around 15,000 people a year develop a venous thrombosis, which can result in a pulmonary embolism. People who have survived one thrombosis or pulmonary embolism run the risk of a recurrence of the event. The anticoagulation clinic within the Department of Internal Medicine I of MedUni Vienna and Vienna General Hospital are now using the Vienna Prediction Model, which enables doctors to estimate this risk more accurately. The new risk calculator was developed as part of the world's largest study of thrombosis, the Austrian Study on Recurrent Venous Thromboembolism (AUREC).

Reduced risk thanks to shorter treatment

The three determining factors of the prediction model are: "the sex of the patient, the place where the thrombosis occurred, and a biomarker called D-dimer," according to Sabine Eichinger-Hasenauer of the Department of

Internal Medicine I. D-dimers are fragments of degraded fibrin. The level of D-dimers in the bloodstream is very important for a diagnosis confirming or excluding the possibility of deep vein thrombosis and pulmonary embolism, and for prognosis of the risk of recurrence. Patients benefit from shorter courses of treatment with anticoagulants and the resulting reduction in the high risk of bleeding associated with long-term therapy.



Cardiovascular medicine

In addition to cardiovascular disease, the principal objects of the Cardiovascular Cluster's research are imaging and non-imaging diagnosis, together with epidemiological and genetic issues. The Cluster is also well known for its fundamental research into vascular

biology and thrombosis, and its interdisciplinary work ranging from biomechanics to gene and stem cell therapy. As with MedUni Vienna's other four research clusters, the aim is to develop a structure similar to that of the Comprehensive Cancer Center Vienna (CCC).
cluster.meduniwien.ac.at/cvc

Researchers in MedUni Vienna's Clinical Institute of Pathology in cooperation with a group at the University of Basel have developed a possible new approach to the treatment of breast cancer. They demonstrated the activation of the protein receptor RET (rearranged during transfection) on the surface of mammary cancer cells. High levels of this protein are associated with lower survival rates among breast cancer patients, meaning this could be a new and attractive therapeutic target for selected groups of sufferers.

Causes of skin inflammation in cancer therapy identified

Anti-EGFR cancer therapy is highly effective, but the skin is often so strongly affected by rashes that patients consider breaking off treatment. Researchers at the Institute for Cancer Research have discovered what is responsible for the uncontrolled inflammation.

Cell growth is triggered by messenger substances that dock onto special proteins on the surface of the cells – the epidermal growth factor receptors (EGFR). These receptors occur in increased numbers on the surface of almost all cancer cells, and lead to uncontrolled cell growth.

In targeted anti-EGFR cancer therapy these protein receptors are switched off to restrict the growth of the tumour. EGFR, however, also controls many processes in the skin, and the result of their absence can be severe rashes, which are frequently so excruciating for patients that they even consider breaking off the treatment.

A research team led by Maria Sibilia, head of the Institute for Cancer Research at MedUni Vienna and deputy head of the Comprehensive Cancer Center Vienna (CCC) was successful in demonstrating in an in vivo study that after the EGFR receptors are switched off, the functioning of the skin barrier is impaired and can more easily be

penetrated by pathogens, resulting in a higher incidence of skin inflammations. Sibilia commented: "Now that we know what the mechanism is, we should be able to develop salves or creams to strengthen the skin's barrier functions and reduce these side effects."

The study included as partner the team headed by Bernhard Homey, Director of the Dermatology Clinic at Düsseldorf University, which was able to confirm the results in clinical investigations on human skin.



REGINA SOMMER – AUGUST'S FEMTECH EXPERT OF THE MONTH

The head of the Water Hygiene group of MedUni Vienna's Institute for Applied Immunology is the FEMtech expert for August. The FEMtech award, awarded monthly by the Austrian Ministry for Transport, Innovation and Technology (bmvit), recognises the outstanding achievements of a woman in research and technology.

Highlights

○ ADMINISTRATION | PARTNERSHIPS, 29 AUGUST 2013

Vienna General Hospital and MedUni Vienna en route to a new future

Starting in 2015, Vienna General Hospital and MedUni Vienna will for the first time manage their operations jointly. Services, staff and budgets will be planned together.

MedUni Vienna and the Vienna General Hospital together are among Europe's leaders in patient care, research and teaching. To make sure that Vienna remains an outstanding centre for medicine, MedUni Vienna and the City of Vienna have formally

agreed on the principles of their future cooperation. The agreement comes into effect at the start of 2015.

"University medicine in Vienna stands for excellent patient care, outstanding research and innovative teaching, and is the joint responsibility of the City of Vienna and the Republic of Austria. At Vienna General Hospital, these three aspects are tightly interwoven, and our task is to ensure that the ties become even stronger. This is why the City of Vienna and MedUni Vienna are establishing an entirely new basis for enhanced cooperation," explained executive city councillor Sonja Wehsely.

"For the Medical University of Vienna the closest possible cooperation with one of the biggest hospitals in the world is a major factor in ensuring that research, teaching and clinical care are all of the highest quality. Our current declaration of intent

will help to make certain that Vienna continues to be one of the premier locations internationally in many areas of research," said Wolfgang Schütz, Rector of MedUni Vienna.

University Medicine Vienna 2020

University Medicine Vienna 2020 is a joint MedUni Vienna and Vienna General Hospital project to further develop existing structures. The challenge in the Medical Masterplan part of the project is to align the research and teaching focus with patient care and the MedUni Vienna development plan. The strategic objective of the Interdisciplinary Centres element is to position the Medical University of Vienna and Vienna General Hospital as international leaders in patient care, research and teaching. The first phase, Operational Management, will be implemented in 2015 (more information on page 66).



Wolfgang Schütz and Sonja Wehsely are agreed on joint operational management of Vienna General Hospital

○ WHY IMMUNISATION FAILS

Most people react satisfactorily to vaccinations and develop an adequate immune response to the relevant pathogen, but in some cases immunisation fails. The reasons for failure to develop satisfactory immunity in certain cases are not entirely understood. Researchers at MedUni Vienna's Institute of Specific Prophylaxis and Tropical Medicine have established that there is no uniform pattern, and that the causes depend on the type of immunisation and the type of person. Vaccination strategies have to be rethought to match.

Heart pumps: personalised medicine through precise monitoring

In patients with implanted heart pumps, a newly developed algorithm and a recording device will in future make it possible to monitor the performance of heart and pump with high accuracy, so that personalised therapies can be developed.

Heinrich Schima of the Center for Medical Physics and Biomedical Technology at MedUni Vienna explains the key issues in connection with heart pumps: "Is the heart recovering? Is it pumping blood through the aortic valve as well? Is it beating irregularly?" The new algorithm and the new recording device developed at MedUni Vienna in conjunction with the Ludwig Boltzmann Cluster for Cardiovascular Research help to answer these questions.

Developing an intelligent heart pump

According to Daniel Zimpfer, cardiac surgeon at MedUni Vienna's Department of Surgery, these new developments are linked to an ambitious goal: the development of an intelligent pump. Zimpfer: "At the moment, every pump implanted to support the heart operates with the same settings. The

pumps are not yet able to adjust the pumping performance automatically to match the individual's physical efforts. We are working to make this possible."

Vienna – top international centre for cardiovascular research

At present, data is still transferred from the pump via a cable. According to Zimpfer, in ten years' time at the latest everything could be implanted: the battery would then be charged using a type of wireless networking technology. Multicentre studies in Europe are already under way. MedUni Vienna's reputation means that it is always involved in these kinds of projects, together with centres in Berlin, Leipzig, Hannover and Newcastle.



○ FARMING POPULATION UNDERESTIMATES THE RISKS OF BEING OVERWEIGHT

Austria's farmers generally lead more healthy lives than they did ten years ago, but the dangers of being overweight are still taken too lightly. These are the two core findings of a study of health awareness in the farming population undertaken by MedUni Vienna's Centre for Public Health in conjunction with the Farmers' Social Insurance Fund (SVB).

Martha Wolf Kindergarten opens its doors

MedUni Vienna's new kindergarten in Van-Swieten-Gasse, which looks after employees' and students' children aged between 11 months and six years, opened in September 2013.



Left to right: Federal Minister for Women's Affairs Gabriele Heinisch-Hosek, Vice Rector Karin Gutiérrez-Lobos and Georg Kraft-Kinz of Raiffeisen Landesbank NÖ-Wien at the new kindergarten

Speaking at the official opening of the Monika Wolf Kindergarten, Federal Minister for Women's Affairs and the Civil Service Gabriele Heinisch-Hosek emphasised: "Education is the raw material for the future. And one thing is clear: kindergarten is the first and most important educational institution."

The new childcare facility is the latest addition to MedUni Vienna's range of services for working parents. Vice Rector Karin Gutiérrez-Lobos commented, "The University's new kindergarten is part of MedUni

Vienna's comprehensive portfolio of family-related services for all staff and students. Childcare facilities play a particularly important role when it comes to reconciling professional and study-related obligations with family commitments."

Children are entitled to a place at the kindergarten if at least one parent is employed by or enrolled at MedUni Vienna, and the occupation of the other parent is also part of the criteria. The kindergarten has space for 55 children. It was equipped with support from Raiffeisen-Landesbank

Niederösterreich-Wien and is operated in cooperation with the Vienna branch of childcare organisation Die Kinderfreunde. The facility is named after Martha Wolf (1882-1926) who received a doctorate from the University of Vienna in 1909 before going on to become Vienna's first female dentist.

Support for families

MedUni Vienna's wide-ranging definition of family covers parents and children, partners, siblings and grandparents, as well as relatives who require or provide care. Last year saw the establishment of an open group that gives employees with caring and assistance responsibilities in their families an opportunity to meet each other and share their experiences. On 7 November 2013, a high-level meeting entitled "Family-oriented management – a key success factor?" looked at the compatibility of work and family commitments, taking account of gender-based considerations.

○ EXECUTIVE CITY COUNCILLOR FOR PUBLIC HEALTH SONJA WEHSELY OPENS NEW AUTOMATED TESTING LINE

Blood and urine tests and much more besides: the specialists at Vienna General Hospital's Clinical Institute of Laboratory Medicine are under constant pressure to provide test results in the shortest possible time. A new, state-of-the-art automated testing line is helping with the workload. The line can process up to 7,600 samples every day, making it one of the largest in the world. Its ability to analyse numerous samples in parallel adds to its effectiveness.

Dementia – a condition with a variety of causes

With the exception of Alzheimer's disease, neurodegenerative conditions are more common among the elderly than previously thought. This opens up significant opportunities for increasingly personalised treatments, according to the Vienna Transdanube Aging (VITA) study.

Lead author Gabor G. Kovacs of MedUni Vienna's Clinical Institute of Neurology commented on the key study findings: "The VITA study reveals that in addition to typical Alzheimer-related changes, other neurodegenerative conditions – characterised by the formation of protein deposits – also occur in elderly people's brains."

The scientific team also found that combinations of various proteopathies, and of proteopathies with blood vessel disorders, are more frequent than had previously been assumed. In addition, the authors identified new kinds of diseases associated with dementia in ageing brains. In Gabor Kovacs' view, the factors behind these illnesses form the basis for more personalised and consequently more effective treatment of dementia sufferers.

The VITA study was published in leading scientific journal Acta Neuropathologica and was compiled by researchers from MedUni Vienna, the SMZ-Ost Donauspital hospital and the Ludwig Boltzmann Institute for Age Research. This long-term, pan-European study was headed by MedUni



Vienna and is a significant part of the EU's ongoing DEVELAGE project, which brings together eight research centres from six European countries. www.develage.eu

Medical congresses make Vienna an international conference hotspot

In 2013, Vienna played host to the European Congress of Radiology (ECR), the World Psychiatric Association International Congress and the European Society for Organ Transplantation (ESOT) Congress. Media attention focused in

particular on the 21st World Congress of Neurology, which drew leading international researchers to the Austrian capital from 21-26 September. The world's largest specialist neurology conference was organised in association with the Austrian Society of Neurology. The conference president was Eduard Auff, head of the Department of Neurology at MedUni Vienna.

HOLY WELLS AND HOLY WATER OFTEN CONTAMINATED

Water from holy wells in Austria contains faecal matter and nitrates, and is unsuitable for drinking, while holy water in churches and hospital chapels has extremely high levels of bacterial contamination. These were the principal findings of a study carried out by MedUni Vienna's Institute of Hygiene and Applied Immunology.

CHRISTOPH ZIELINSKI JOINS ESMO EXECUTIVE BOARD

Christoph Zielinski, head of the University Department of Internal Medicine I and the Division of Oncology at MedUni Vienna, was elected to the Executive Board of the European Society of Medical Oncology (ESMO) for 2014. He served as a member of ESMO's Scientific Committee in 2010 and was also the local officer for the 2012 ESMO conference in Vienna.

Highlights

○ ADMINISTRATION | PARTNERSHIPS, 23 SEPTEMBER 2013

Vienna Clinic of Dentistry reopens

Following a comprehensive refurbishment, upgrade and extension programme lasting several years, MedUni Vienna's Clinic for Dental Care opened its doors to staff, students and patients once again in September 2013.

In the course of the construction work, the 14,000 square metre listed building was fully refurbished. Restructuring of the various rooms resulted in a more efficient use of space, and a number of areas were combined.

The second major phase of the EUR 80 million investment involved construction of a 9,800 square metre extension in the courtyard of the complex. The treatment area, which includes individual rooms for the 25,000 or so patients treated at the clinic each year, is located on the ground and first floors. This layout is vital to the new unit system, where each student is

allocated a specific treatment room, learning about various specialisms under the supervision of the teaching staff. The building also houses the new specialised clinics for esthetic dentistry, endodontics, functional disorders, laser dentistry, hypnosis and periodontal surgery, which have been integrated into the unit. The lower level features seminar rooms and a 200-seat lecture theatre.

"The setting in which learning, teaching and research take place is vital. And the Clinic of Dentistry has created a highly effective combination of old and new elements," commented Austrian Minister of Science and Research Karlheinz Töchterle at the opening ceremony.



Left to right: Bundesimmobiliengesellschaft CEO Wolfgang Gleissner; Austrian Minister of Science Karlheinz Töchterle; Andresa Moritz, head of the Clinic of Dentistry; MedUni Vienna Rector Wolfgang Schütz; and Vienna Clinic of Dentistry CEO Benedikt Wildner

Sharper focus on medical practice

A number of important changes to the Dentistry degree programme were implemented in parallel with the reopening of the clinic. Under the 2012 amendment to the curriculum, courses in years 1 and 2 of the Dentistry programme will now take place separately from those in

the Medicine degree. The aim is to ensure a stronger focus on dental medicine and from the very beginning of the Dentistry degree programme. Students can now attend a new lecture on materials, held in cooperation with Vienna University of Technology, and complete an internship. Another major change to the curriculum was the addition of paediatric dentistry, which also includes an internship.

○ RECORD FIELD AT 7TH MEDUNI VIENNA CANCER RESEARCH RUN

Over 3,500 runners – a new record – took part in the 7th Cancer Research Run organised as part of MedUni Vienna's Cancer Research Initiative. The participants pounded the paths at the Altes AKH campus, and the entry fees were donated to cancer research.

○ OSWALD WAGNER APPOINTED NEW SENATE CHAIRMAN

At the constituent meeting of the Senate of MedUni Vienna, Oswald Wagner was elected chairman for the 2013-16 period. The head of the university's Clinical Institute of Laboratory Medicine took over from Eduard Auff, head of the Department of Neurology, who had succeeded long-serving chairman Arnold Pollak at the end of 2012.

Requirements for practical placements doubled: new teaching hospitals for 2013/14 transitional year

Following the introduction of the clinical practice year, in the 2013/14 academic year placements will be required for two year groups – the final intake of students under the old curriculum and the first intake under the new curriculum.



The introduction of the new clinical practice year led to a restructuring of the courses held in years 4 and 5. As a result, the university must provide placements for around 640 students in years 5 (the first intake under the new system) and 6 (the final intake under the old system), and it will not

be possible to offer placements in Vienna for all students.

In order to get around this problem, students enrolled under the new system will be able to complete their practice year at one of the MedUni Vienna's current teaching hospitals. The final group of students to register under the old set-up will also be allowed to complete their psychiatry, paediatrics and dermatology placements in Vienna, while students studying neurology, gynaecology, ophthalmology and ENT will be required to find places outside the city.

A number of partnership agreements have been concluded with teaching hospitals in Lower and Upper Austria and Carinthia. There is also the option of an internship abroad, for instance under the EU's Erasmus programme, which will then be

Clinical practice year from 2014/15

The 48-week clinical practice year that rounds off the medical degree programmes at all three medical universities in Austria will be launched on 1 August 2014. During the year, students will complete compulsory 16-week courses in internal medicine and surgery (including peri-operative care) at the training hospitals. Students have a free choice of specialisation in the remaining 16 weeks, with an internship at a doctor's surgery among the options. This focus is designed to give students a first-hand insight into day-to-day clinical practice during their final year.

meduniwien.ac.at/kpj

accredited. Measures aimed at supporting students with special requirements are also in place – sufficient places in the Austrian capital have been reserved for pregnant students, students with children, tutors, and those employed in the city.

MS: FUNCTIONAL CHANGES IN THE BRAIN PROMPT COGNITIVE DISORDERS

Multiple sclerosis (MS) often goes hand in hand with deteriorating cognitive performance and attention disorders. Using a meta-analysis of functional imaging data, researchers from MedUni Vienna's Department of Radiology and Nuclear Medicine showed that in MS patients these impairments appear to be the result of increased activation of the involuntary attention system.

MedUni Vienna leaps up international university rankings

In a 2013 worldwide comparison of medical universities – part of the Times Higher Education World University Rankings, the world's leading university survey – MedUni Vienna came in at an impressive 51st place in the Clinical, Pre-Clinical and Health category.



MedUni was also the best-placed Austrian university in the 100 Under 50 ranking, taking 49th spot. But a

comparison with the top universities shows clearly why Austrian higher education institutions are lagging behind. "We are at an acceptable level when it comes to citations, which is a factor we can influence, but in the research category our performance is disastrous," explained Markus Müller, Vice Rector for Research at MedUni Vienna. However, this is not a reflection of the state of research in Austria – far from it.

MedUni Vienna scored 68.3 out of a possible 100 points for the frequency of citations, compared with 95.4 for the European number one, Oxford University. But in relation to research, MedUni received only 15 points, well below the 98.5 posted by Oxford – this is because the evaluation focuses on the research budget and an institution's international

reputation, not the actual research performance. In other words, MedUni Vienna carries out excellent academic work in spite of its financial circumstances, although Markus Müller believes that substantial funding on a par with international standards will be the key to maintaining this level of performance.

MedUni Vienna also did well in a number of other leading university rankings. In the Medicine category of the QS World University Rankings, Austria's largest medical university improved to a rank of 51-100. MedUni Vienna's overall performance in the Shanghai Ranking saw it placed between 201 and 300, and the university gained significant ground to break into the top 300 institutions in the Times Higher Education World University Rankings.

○ RECURRENT WINTER DEPRESSION AFFECTS 200,000 AUSTRIANS

Around 200,000 Austrians suffer from recurrent winter depression during the dark months of the year. This was the outcome of an epidemiological study carried out by the Department of Psychiatry and Psychotherapy at MedUni Vienna. To date, there has been little research into the reasons for this recurrence, but the university's departments of Psychiatry and of Radiology and Nuclear Medicine are now collaborating to uncover one of the causes with the help of positron emission tomography (PET).

○ ANITA RIEDER AWARDED AUSTRIAN CROSS OF HONOUR FOR SCIENCE AND ART

Anita Rieder, head of the Centre for Public Health and the Institute of Social Medicine, and curriculum director for the Medicine degree programme at MedUni Vienna, has been honoured by the Austrian Federal Ministry of Science and Research for her outstanding achievements in the field of social medicine and presented with the Austrian Cross of Honour for Science and Art.

Project proposals for clinical research – MedUni leads the way

The medical universities of Vienna, Innsbruck and Graz, and Paracelsus Medical University in Salzburg, have secured EUR 2.7 million in funding over three years for a total of 15 academic clinical research projects. MedUni Vienna will implement seven of those projects.

The projects were submitted in response to the third call for tenders as part of the Clinical Research programme initiated by the Austrian Science Fund (FWF). The programme aims to drive progress in clinical research in Austria – until recently, such research was barely covered by the FWF's support mechanisms. Some 118 project proposals were submitted, with the potential subsidies totalling EUR 27.4 million. Of those, funding was provided for 15 projects on the basis of opinions from a committee of international experts.

The projects nominated for support include clinical studies in the fields of ophthalmology, obesity (bariatrics), dermatology, cardiology (heart surgery), cardiovascular disease, cancer research, psychiatry and neurology.

radiology, rheumatology, specific prophylaxis and transplantation. Seven projects will be carried out at MedUni Vienna, five at the Medical University of Innsbruck, two at the Medical University of Graz and one at Paracelsus Medical University.



Patient-centred research

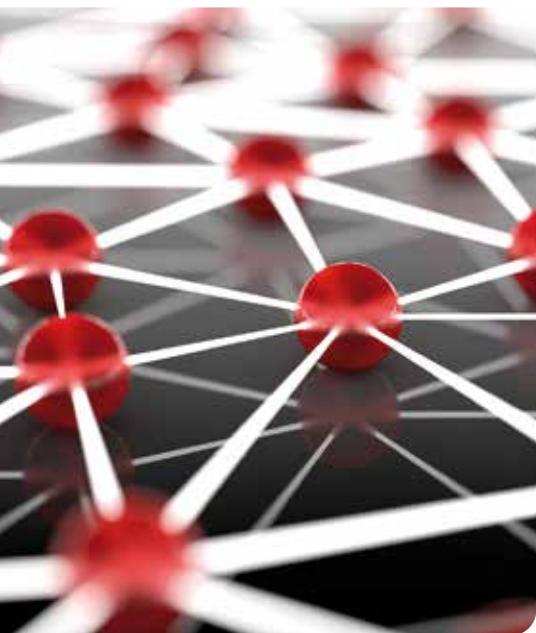
Clinical research is the world's fastest-growing academic disciplines – and Vienna is one of the leading research centres. This is mainly due to the outstanding expertise shared between MedUni Vienna and Vienna General Hospital, which as one of the largest hospitals in

the world is a unique resource that provides the steady stream of cases required to carry out numerous clinical studies. This is an advantage first and foremost for the patients who take part in such studies, as they benefit directly from the latest scientific insights and their prognoses for are usually more positive.

INFLUENZA PREVENTION: AUSTRIA LAGGING FAR BEHIND

According to a 2012 MedUni study, influenza causes around 1,300 deaths in Austria each year. And although most of these cases are avoidable, the country's immunisation rate is under ten percent, meaning Austria is trailing the rest of the world badly when it comes to influenza prevention. This was the result of a study compiled by MedUni Vienna's Centre for Public Health on acceptance of influenza vaccination in Austria between 1982 and 2011, which was published in leading journal *Vaccine*.

See you in LA: Austrian Science Talk in Santa Monica



Held under the motto "From vision to reality: Austria 2020", the 2013 Austrian Science Talk was organised by the Austrian Ministry for Transport, Innovation and Technology in conjunction with the Office of Science & Technology at the Austrian Embassy in Washington, DC. Marking the tenth instalment of this international

The MedUni Vienna Alumni Club held a reception at the Hilton Hotel Santa Monica on 11 October 2013 as part of the Austrian Science Talk.

scientific event, Vice Rector and Alumni Club president Karin Gutiérrez-Lobos spoke about career opportunities at MedUni Vienna and the medical University of Vienna International.

Alumni Club board member Dietrich Haubenberger presented the mentors and mentees supported by the organisation under its Austrian Scientists & Scholars in North America (ASCINA) programme. Salzburg-born Beate Lanske has been based at the Harvard School of Dental Medicine in Boston since 2002, and acts as mentor to Hermann Agis, who carries out research into oral tissue regeneration and bone healing at the University of Michigan Dental School. The second mentor was heart and lung transplant specialist Georg Wieselthaler of the University of California, San Francisco. His mentee, Georg Furtmüller, focuses on transplant surgery and microsurgery at Johns Hopkins University in Baltimore.

Alumni Club – a platform for graduates

In 2013 the Alumni Club offered its members a wide programme of events designed to help them keep in contact with their alma mater. The cross-generational network organised an Alumni Club lounge at the Physicians' Ball in Vienna, a walk through the Griechenviertel section of the city's first district, a matinee at the Lobmeyr Glass Museum, and an information evening on the mobile hospice service offered by the Caritas charity. 2013 also saw the inaugural Golden Diploma awards, organised by the Alumni Club in conjunction with the Austrian Medical Chamber. www.alumni-meduniwien.at (German only)

○ GEORG STINGL AT INSTITUTE OF MEDICINE OF THE US NATIONAL ACADEMIES

The head of the Division of Immunodermatology and Infectious Diseases of the Skin at MedUni Vienna was one of 70 new members elected to the Institute of Medicine (IOM) at the 43rd International Meeting of the Institute of Medicine of the National Academies in Washington, DC. Membership of the institute is regarded as one of the highest honours in the field of health and medicine and comes as recognition of outstanding achievements and dedication in a particular area of research.

Double honours: MedUni takes top awards for diversity management

At the start of May 2013 MedUni Vienna received the Austrian Federal Chancellery's Administrative Award for its diversity management activities. This was followed in October by a second accolade, the meritus diversity prize.



The Federal Chancellery presents its Administrative Award in recognition of forward-looking projects, innovative developments and successful modernisation processes. MedUni

Vienna beat off competition from a total of 81 applicants to take one of the four main awards, in the category "Management of gender, diversity and integration – options for administration in the future". Vice Rector Karin Gutiérrez-Lobos accepted the accolade at a ceremony at the Aula der Wissenschaften in Vienna's first district. The prize acknowledges the University's efforts to make diversity an integral part of its organisational structures and to prioritise the promotion of diversity.

The meritus prize is awarded to organisations for outstanding achievements in diversity management in relation to sexual orientation. meritus aims to promote greater respect and tolerance in businesses, a stronger

focus on diversity in professional life, and efforts to combat prejudice and discrimination, as well as to raise the profile of companies that have already implemented diversity-related initiatives.

www.meduniwien.ac.at/pe/diversity

Sexual orientation not a private matter

In the course of an event entitled Don't ask – don't tell, held at MedUni Vienna in late June 2013, representatives of seven Austrian universities publicly discussed the issue of sexual orientation in the workplace for the first time. The main outcome and the key message put across by the speakers was that, "Sexual orientation is not a private matter. Only sexual acts can be purely private. Both managers and those affected have a part to play in achieving this goal."

MEDUNI VIENNA AND LOWER AUSTRIA JOIN FORCES ON MEDAUSTRON PROJECT

The memorandum of understanding signed by MedUni Vienna and the Lower Austrian government focused on the chairs in Radiation Biology and in Medical Radiation Physics and Oncotechnology at the new MedAustron facility. The University and the Province of Lower Austria will each finance one of the professorships. Currently under construction in Wiener Neustadt, MedAustron will provide cancer therapy and research in line with the highest international standards, and is only the fourth facility of its kind in the world.

13 NOVEMBER 2013

PROTEIN PLAYS UNEXPECTED ROLE IN SKIN CANCER

A study conducted by scientists from the University of Vienna's Max F. Perutz Laboratories (MFPL) and MedUni Vienna has revealed the surprising function of histone deacetylase 1 (HDAC1), a protein involved in gene regulation, in the development of skin cancer. The findings of the team, which was headed by Christian Seiser, suggest that caution is required when using HDAC inhibitors in cancer therapy.

15 NOVEMBER 2013

Low-impact rheumatism therapy including biological agents proves effective



This unexpected finding was the most important result in a study published in a leading scientific journal *The Lancet* and headed by Josef Smolen, head of MedUni Vienna's Division of Rheumatology. In the OPTIMA study, Smolen's team found that a six-month course of treatment with a common anti-rheumatism medication (Methotrexat) followed by combination treatment using a biological agent was equally effective in treating patients who do not respond well to Methotrexat as administering a combination of Methotrexat and the

Delaying the start of treatment for rheumatoid arthritis and administering a biological agent results in fewer side effects, lower costs and equally good results.

biological agent from the very beginning of therapy.

The team also discovered that after the combination of Methotrexat and the biological agent had been administered at an early stage, the latter was no longer required after six months. Commenting on the findings, Smolen said: "The possibility of switching from combination therapy back to non-biological therapy would be a paradigm shift in the treatment of rheumatoid arthritis." However, Smolen pointed out that further studies would be needed to confirm this hypothesis.

Some 250,000-400,000 Austrians – about 3-5 percent of the population – are affected by inflammatory rheumatism, while around 80,000 (or 1 percent of the population) have symptoms of rheumatoid arthritis.

A global leader in rheumatism research

MedUni Vienna is one of the world's leading centres of rheumatism research. Researchers from the university's Division of Rheumatology were also involved in drafting the new treatment guidelines of the European League Against Rheumatism (EULAR). Section head Josef Smolen has been the most widely cited rheumatologist in the German-speaking world for many years. He was ranked 13th in a recent worldwide Thomson Reuters ranking of citations of clinical researchers covering all groups of diseases.

MOLECULAR EFFECT OF PEPTIDES FROM AFRICAN MEDICINAL PLANTS UNCOVERED

Experts from the Center for Physiology and Pharmacology at MedUni Vienna, working in collaboration with an international team, have decoded the molecular effect of peptides from an African medicinal plant. The peptide analysed is similar to the human neuropeptide hormone oxytocin and binds to its receptors. This discovery could pave the way for new active substances. The study was published in the *Proceedings of the National Academy of Sciences (PNAS)* and edited by Robert Lefkowitz, winner of the Nobel Prize in Chemistry in 2012.

Recertification of Medicine degree programme

The curriculum for MedUni Vienna's Medicine degree programme was shown to have fulfilled both of the requirements for recertification.

The first of these was the implementation of an evaluation system for teaching, which had to be integrated into the University's online administrative tool. The second requirement, continuous renewal and involvement in quality management, is aimed at achieving constant improvements in the quality of teaching. The University was also required to show how the results of evaluations feed into the overall quality management system, and to what extent the plan-do-check-act (PDCA) cycle was adhered to.

Both of these conditions for recertification of the curriculum were met in full. The curriculum for the Medicine degree programme was accredited by the Certification and Accreditation Committee of Austrian quality assurance agency AQA for five years in 2011. The agency also recertified MedUni Vienna's human resource management structures in 2013.



Clinical practice – a focal point in the Medicine curriculum

The medical curriculum at MedUni Vienna focuses primarily on the integration of specialisations, problem-solving skills, methods-based examination, the calculation of educational capacity, and assessment and quality control. Teaching in phases one and two of

the programme is organised into thematic blocks. These are accompanied by small-group practicals and seminars (known as line elements) that illustrate the clinical applications of the knowledge acquired, and also include training in the necessary clinical skills. The fifth and sixth years of study focus on clinical practice, with teaching taking place at the Vienna General Hospital university departments and other training hospitals.

MEDUNI VIENNA AND FH CAMPUS WIEN SIGN PARTNERSHIP AGREEMENT

FH Campus Wien – Austria's largest university of applied sciences for health care studies – and MedUni Vienna are deepening their relationship. On 19 November 2013, representatives of both institutions signed a cooperation agreement aimed at effectively exploiting academic, HR and infrastructure-related synergies.

19 NOVEMBER 2013

400 MEDUNI VIENNA STUDENTS CELEBRATE GRADUATION

On 22 November 2013 some 400 graduates took their academic oath to the thunderous applause of their families and friends among the 8,000 or so guests at the ceremony. The new generation of scientists and doctors received their degree certificates from Rector Wolfgang Schütz and Vice Rector for Education, Gender and Diversity, Karin Gutiérrez-Lobos in the breathtaking surroundings of the Konzerthaus in Vienna.

22 NOVEMBER 2013

New register for clinical oncology studies

The new Comprehensive Cancer Center (CCC) Vienna register of studies lists all of the oncological trials in progress at MedUni Vienna. Besides promoting clinical and academic cancer research, this also helps to improve the quality of patient treatment.

Jointly established by MedUni Vienna and Vienna General Hospital, the CCC has developed Austria's first nationwide register of oncological clinical trials, based on data from the University's Ethics Committee.

As a result, all doctors, including practising oncologists and general practitioners, have access to basic

information on the studies under way at MedUni Vienna at any one time, allowing them to identify patients to participate in the studies where appropriate.

Enhancing clinical science and patient care

The register will simplify the search for suitable patients to take part in current and planned clinical trials, as well as promoting advances in clinical research into oncology. As Christoph Zielinski, head of the Department of Internal Medicine I, the Division of Oncology at MedUni Vienna, and the CCC explains: "Now that the University has a register of oncology studies, the next step of compiling a nationwide register has become more feasible and realistic. That would be a milestone in research and make a significant contribution to improving the quality of patient care." This is because patients who participate in trials are treated by specialist physicians, meaning that they receive exceptionally good care and can reap the benefits of cutting-edge therapies.



For further information on the CCC register of clinical studies visit
www.ccc.ac.at/aktuelle-studien/

IRENE LANG AND AHMAD JALILI NAMED TEACHERS OF THE YEAR

In 2013 MedUni Vienna presented the first ever Teacher of the Year awards in conjunction with the ÖH-Medizin students' union. The recipients as chosen by the students were Irene Lang, Professor of Vascular Biology and deputy head of the Division of Cardiology, and Ahmad Jalili, a specialist in the Division of Immunodermatology and Infectious Diseases of the Skin. The winners received their accolades as part of the graduation ceremony held at the Konzerthaus in Vienna.

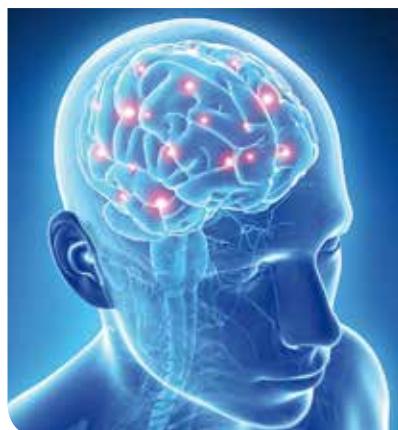
Missing “brake” in the brain causes overwhelming anxiety

Researchers at MedUni Vienna have uncovered a possible explanation for the mechanisms that can trigger social phobias and anxiety in the brain, namely the lack of an inhibitory synapse – or in other words, a brake.

An appropriate dose of anxiety can boost alertness and protect us against dangers. But an “overdose” can disrupt our sensory perception, producing a paralysing effect that stops us from enjoying life and can itself become a threat.

The amygdala and the orbitofrontal cortex in the brain’s frontal lobe form an important control loop that regulates our emotional state – in other words, the brain’s emotional control centre. Whereas this control loop was seen to have a calming effect on healthy people, the researchers discovered that in social phobia sufferers, the opposite was the case. They arrived at this conclusion with the help of functional magnetic resonance tomography (fMRT). In such patients an important inhibitory synapse was found to have changed – a possible explanation of why they are unable to control their fears.

The research team, headed by Christian Windischberger of MedUni Vienna’s High Field Magnetic Resonance Centre of Excellence, and working in cooperation with the University’s Center for Medical Physics and Biomedical Engineering and the University Department of



Psychiatry and Psychotherapy, also identified interactions between the parts of the brain when it comes to processing emotions.

Kick-off for medical imaging research cluster

Medical imaging is one of five research clusters at MedUni Vienna. The new Medical Imaging Cluster (MIC) was officially launched on 11 December 2013 at a kick-off event that included a presentation of the Medical Imaging Cluster nodes. The cluster brings together the MedUni Vienna institutes and research facilities involved in imaging, which are organised into six areas of specialist research, or nodes. The focus is on achieving advances in and carrying out research on morphological, functional and molecular imaging, with the aim of being able to diagnose and treat diseases at an earlier stage.

cluster.meduniwien.ac.at/mic

PREMIERE: ALUMNI CLUB ORGANISES ANNIVERSARY CELEBRATION AND CLASS REUNION

In 2013 the MedUni Vienna Alumni Club and the Vienna Medical Chamber organised a celebration in honour of those physicians who celebrated notable anniversaries of their graduation during the year. The first such event of its kind commemorated two 70th, one 65th, four 60th and nine 50th anniversaries.

RESEARCH, 10 DECEMBER 2013

Crossover transplantation cuts waiting times for donor kidneys

Diseased kidneys can be replaced by those from healthy, living donors whose tissue is compatible with that of the patient. However, this does not apply in around one-fifth of such cases. But crossover transplants can help to overcome the problem.

In November 2013 MedUni Vienna's Department of Surgery, headed by Ferdinand Mühlbacher, performed a successful crossover transplantation in collaboration with a team from the Department of Blood Group Serology and Transfusion Medicine, under the leadership of Gottfried Fischer and transplant nephrologist Georg Böhmig from the Department of Internal Medicine III.

The intervention was based on a new algorithm which gets around the problem of incompatibility by matching pairs of people (such as married couples, brothers, mothers and their children, and friends) who could come under consideration for crossover organ donation. This involves the donor, whose kidney is not suitable for the actual recipient, donating the organ to an ill recipient from another pair – a “stranger” – and at the same time

receives a kidney from the recipient's healthy partner.

The goal for the future is to build up a chain of crossover donors in Austria. Such chains are already in place in many countries. A nationwide programme involving the transplantation centres in Innsbruck, Graz, Linz and Vienna is due to be launched in 2014.



A leading centre for transplants

Thanks to MedUni Vienna's achievements, the Austrian capital is a world leader in terms of frequency and success rates for heart and lung transplants. To give an example: the Division of Thoracic Surgery

carries out over 100 lung transplants each year. MedUni Vienna's Department of Ear, Nose and Throat Diseases also leads the way in the development and introduction of cochlear implants, while the Division of Plastic and Reconstructive Surgery has a strong reputation in the bionic reconstruction of limbs.

ELISABETH PUCHHAMMER-STÖCKL NAMED NEW ESCV PRESIDENT

Elisabeth Puchhammer-Stöckl of the Medical University of Vienna's Department of Virology was elected President of the European Society of Clinical Virology (ESCV) in November 2013. The ESCV was formed in 1997 following the merger of the European Group for Rapid Viral Diagnosis and the European Association against viral diseases.

New research focus on thrombosis and inflammation processes

Headed by Johannes Schmid, Cellular Mediators Linking Inflammation and Thrombosis is a new FWF special research programme (SFB) launched by MedUni Vienna in 2013.

With funding of between EUR 1.8 million and EUR 5.8 million, the special research programmes are elite studies supported by the Austrian Science Fund (FWF). Initially lasting four years, these projects are able to bring together top-level research

teams consisting mainly of young doctoral candidates and post-doctoral scholars.

As part of the new SFB, Johannes Schmid and his team will be carrying out research into the cellular and molecular links between thrombosis and inflammation processes in co-operation with other interdisciplinary research groups and experienced clinicians. Their aim is to identify new strategies for combating conditions such as myocardial infarction, stroke and pulmonary embolism.

They will also compile a comprehensive collection of samples from patients and an accompanying electronic database. This will pave the way for a significantly more detailed analysis of biomarkers and their correlation in the course of thrombotic disorders. The new SFB will add another focus area to MedUni Vienna's cardiovascular medicine research cluster.



Special research programmes at MedUni Vienna

MedUni Vienna is currently heading four such FWF projects. Besides the Cellular Mediators Linking Inflammation and Thrombosis project, these include Myeloproliferative Neoplasms (project lead: Peter Valent), Molecular and immunological strategies for prevention, diagnosis and treatment of Type I allergies (project lead: Rudolf Valent) and Transmembrane Transporters in Health and Disease (project lead: Harald Sitte). MedUni Vienna has also joined forces with the city's University of Veterinary Medicine on the latter's special research programme, Jak-Stat – Signalling from Basis to Disease, led by Mathias Müller.

SFBs promote the formation of high-performance research groups in line with international standards, which in turn enable universities to focus on new fields of specialist research.

FASTER APPROVAL FOR HIGH-BENEFIT MEDICATIONS

Highly beneficial medicines should be approved even if there is a small degree of uncertainty surrounding the risks for patients. It would also be advisable to involve patients more closely in decision-making processes. These are the key findings of a recent European Medicines Agency paper co-authored by Brigitte Blöchl-Daum of the Department of Clinical Pharmacology at MedUni Vienna. The paper was published in leading journal *Nature Reviews Drug Discovery*.

“Blood Cancer” MPNs: discovery in Vienna brings hope to the world



The research team found that in around 15 percent of MPN sufferers, their illness is caused by a mutation affecting CALR, the gene that encodes the protein calreticulin. This discovery will revolutionise diagnosis and treatment options for millions of patients worldwide.

Once the CALR mutation had been identified, a diagnostic test was developed which will directly benefit

The discovery of a genetic mutation responsible for the onset of myeloproliferative neoplasms (MPNs) – types of blood cancer – is one of the most important findings in Austrian cancer research in recent years.

MPN sufferers. This is because the progression of the disease is milder in patients with such a mutation than is the case with the majority of those affected. Heinz Gisslinger, co-author of the publication and a haematologist at MedUni Vienna, commented: “MPN patients with a CALR mutation can now be given less aggressive therapies. And that brings substantial benefits for such patients.”

The groundbreaking results were produced by two research teams headed by Robert Kralovics of the Research Center for Molecular Medicine of the Austrian Academy of Sciences (CeMM) and Heinz Gisslinger of MedUni Vienna. People afflicted with a MPN suffer more frequently from thrombosis and in many cases develop hard-to-treat leukaemia. There are an estimated four million MPN patients worldwide.

Basic science meets clinical research

CeMM and MedUni Vienna are collaborating on a translational research project that aims to identify the molecular causes of major illnesses. The goal of this combination of basic and clinical research is to drive forward the adoption of personalised medicine and develop targeted treatments based on the genetic causes of disorders. “This kind of collaboration between systemic medicine and molecular medicine research, and between clinical and basic research, will grow in significance in the future,” said Markus Müller, Vice Rector for Research at MedUni Vienna.

OSWALD WAGNER RECEIVES CITY OF VIENNA PRIZE FOR MEDICAL SCIENCE

Oswald Wagner, who is head of MedUni Vienna’s Clinical Institute for Laboratory Medicine and was also appointed Chairman of the Senate in October 2013, has been awarded the City of Vienna prize for medical science. Wagner’s international distinctions include a full professorship in clinical chemistry and laboratory diagnostics at the University of Leipzig, where he also served as director of the Institute for Clinical Chemistry and Pathobiochemistry. He returned to MedUni Vienna to take over as head of the Clinical Institute for Medical and Chemical Laboratory Diagnostics in 1998.

Premiere: new valve for beating heart

Shortly before Christmas 2013, heart surgeons at MedUni Vienna and Vienna General Hospital achieved a breakthrough, as a male patient with a leaky aortic valve received the first ever biological heart valve to be implanted into a beating heart.



© JenaValve

The patient suffered from aortic insufficiency and was not suited to open heart surgery due to concomitant diseases. For this reason a transcatheter aortic valve implantation (TAVI) system was used.

The new TAVI system is the only method for the treatment of aortic insufficiency to have received CE approval under EU regulations. It involves

using a clipping mechanism to attach the prosthesis to the native valve leaflet – a mechanism which according to heart surgeon Wilfried Wisser from MedUni Vienna and Vienna General Hospital's Department of Surgery works in the same way as a paperclip.

The bioprosthesis is seen as extremely robust and also promotes the

long-term functioning of the aortic valves, says Günther Laufer, head of the Division of Heart Surgery at Vienna General Hospital/MedUni Vienna. The implant was fitted to a beating heart, which removes the risk of heart attack by maintaining the flow of blood. There is also no need for heart stimulation during the procedure.

50 years of heart surgery in Vienna

MedUni Vienna's first heart operation using a cardiopulmonary bypass pump took place in 1963 at Vienna General Hospital. And this particular golden jubilee was cause for celebration as fatality rates during operations have fallen significantly over the past 50 years. This is no surprise in light of the rapid strides

seen in heart surgery over the years. Nowadays, fatality rates in the first 30 days after heart surgery are 2-3 percent, but half a century ago this figure was as high as 30 percent. MedUni Vienna has played a substantial part in developing and enhancing the numerous technological achievements which have facilitated this progress, and will continue to do so. That is why the University is one of Europe's leading centres for heart operations.

○ TEDDY BEAR HOSPITAL DRAWS CROWDS OF "PATIENTS"

Around 1,000 children brought their cuddly toys to the teddy bear hospital on its first day. The event took place at the Vienna Medical Chamber on 16 and 17 December. The project is an Austrian Medical Students Association (AMSA) initiative organised in collaboration with MedUni Vienna, the Vienna Medical Chamber and the Austrian Pharmaceutical Students' Association, and it aims to allay any fears of a visit to hospital or a doctor among children aged between five and eight.

Degree programmes and continuing education



First-class education and training for medical research and clinical practice

MedUni Vienna offers a wide range of higher and continuing education courses for prospective and established medical professionals from Austria and abroad. Our degree programmes in medicine and dentistry, and our doctoral research and PhD programmes in 25 subject areas make up the core of our educational offering. The University also offers specialised part-time postgraduate continuing education courses and a master's programme in Medical Informatics.

Medicine and Dentistry degree programmes

Students on these programmes benefit from the University's innovative curriculum, which focuses on small-group learning and clinical practice.

The programme of studies was fully revised in 2002, when the University introduced a state-of-the-art curriculum, certified by the World Federation for Medical Education and based on integrated specialist knowledge.

A new admissions process for the Medicine and Dentistry degree programmes was introduced from the 2013-14 academic year. The entrance tests, MedAT-H (for medical degree applicants) and MedAT-Z (for dentistry degree applicants), assess related knowledge, text comprehension and cognitive abilities. MedAT-Z also includes practical tasks which test applicants' manual dexterity. The testing procedure is evaluated every year and adjusted to incorporate new requirements where necessary.

Students on the Medicine degree programme acquire the knowledge and understanding, clinical abilities, communication skills, training in professional medical conduct and other competencies they will need to complete their postgraduate training – in most cases as a general practitioner or as a specialist. The degree also provides a solid basis for a research career.

In the first two phases of the programme (covering the first four years), the curriculum is divided into thematic blocks, which are accompanied by small-group courses covering the clinical application of the theoretical knowledge students have gained. The fifth and sixth years of study focus on clinical practice, with teaching taking

place in the Vienna General Hospital university departments and at other teaching hospitals.

Dentistry became a degree programme in its own right in 2002, with the introduction of the new medical curriculum. In contrast to the Medicine degree, on completing the Dentistry programme graduates are fully qualified and licensed to begin practising independently.

PhD and other doctoral programmes

More than 1,300 early stage researchers are currently completing PhD or other doctoral studies at MedUni Vienna. Roughly 30 percent of these are international students who value

the University's professional interdisciplinary environment. PhD candidates are fully integrated into research groups and their studies enable them to lay the groundwork for pursuing a research specialisation. On receiving their PhD they already have numerous publications to their name, often in leading journals. Admissions to the doctoral research programmes (DK) funded by the Austrian Science Fund are subject to a two-stage selection process involving international assessment.

Doctoral candidates at the University learn how to carry out scientific work independently. PhD programmes are geared towards a career in scientific research, while students in the applied medical science doctoral

programmes learn how to conduct professional scientific research as part of clinical practice. These post-graduate courses are open to graduates of subjects such as biology and chemistry as well as medical doctors.

Broad spectrum of practical continuing education

The University's portfolio of continuing education courses is growing rapidly. These part-time courses provide training in a range of specialised professional fields. Taught by experts from Austria and abroad, and conducted in cooperation with other universities and educational institutions, each continuing education course offers high-quality postgraduate training (see www.meduniwien.ac.at/ulg).

PhD programmes

- Molecular Signal Transduction
- Molecular Mechanisms of Cell Biology
- Medical Physics
- Neuroscience
- Malignant Diseases
- Endocrinology and Metabolism
- Vascular Biology
- Immunology
- Medical Informatics, Biostatistics and Complex Systems
- Inflammation and Immunity (IAI) (DK*)
- Cell Communication in Health and Disease (CCHD) (DK*)
- Molecular Mechanisms of Cell Signaling (DK*)
- Structure and Interaction of Biological Macromolecules (DK*)
- RNA Biology (DK*)
- Molecular Drug Targets (MolTag) (DK*)
- Molecular, Cellular and Clinical Allergology (DK*)

Applied medical sciences doctoral programmes

The applied medical sciences doctoral programmes provide in-depth training in applied biomedical research in the following areas:

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



Achieving more together – University Medicine Vienna 2020

Vienna General Hospital and the Medical University of Vienna have very close ties. Some 1,500 physicians from MedUni Vienna work in one of the biggest hospitals in the world, treating over 100,000 inpatients and around 540,000 outpatients each year, as well as conducting world-class medical research.

A major reason behind the success of this partnership is the exemplary combination of research, teaching and patient care at a university hospital, which generates countless benefits both for MedUni Vienna and its researchers, and for the hospital's

maintaining body, the City of Vienna. The university departments and clinical institutes stand out for the extensive and wide-ranging resources they make available, the large number of patients they treat, as well as the leading experts in medicine and related disciplines that they attract.

Balancing research, teaching and patient care

Striking a balance between their responsibilities is a major challenge for MedUni Vienna academics, mainly as a result of the organisational structure that includes two owners and

employers. The doctors at Vienna General Hospital are all MedUni Vienna staff, and their salaries are ultimately paid by the Federal Government. Nursing and administrative staff are employed by the City of Vienna, which – via the Vienna Hospitals Association – is the maintaining body of the largest hospital in Austria.

In practice, this set-up hinders the university's research and teaching activities, since the day-to-day running of the hospital takes up a major portion of doctors' time.

Shaping the future: University Medicine Vienna 2020

The existing structure is now being improved in a joint MedUni Vienna and Vienna General Hospital project, Universitätsmedizin Wien 2020, consisting of three focus areas: a medical masterplan, interdisciplinary centres and operational management.

Join operational management of Vienna General Hospital

In this regard a key milestone was reached in 2013 with the agreement to implement a new model for the co-operation between the two legal entities, the City of Vienna and MedUni Vienna, from 2015. This will give rise to a shared structure which will enhance the coordination of operations. Operational management of the Hospital presents an administrative challenge, since MedUni Vienna is funded by the Federal Government, and Vienna General Hospital by the City of Vienna. This means that joint decisions on the use of funding are a leading priority. The agreement is centred on achieving a balance between the different demands of research, teaching and patient care (see also page 46).

Stable foundations: the medical masterplan

The medical masterplan is designed to put clinical activities on a solid footing and strengthen the focus on providing patients with the best possible care. It also takes into account MedUni Vienna's strategic position in the portfolio of health services. The principal aim is to align the research and teaching focus of each department with patient care and the MedUni Vienna development plan.

Skills networks: interdisciplinary centres

The strategic objective of the centre-based organisational structure is to position the Medical University of Vienna and Vienna General Hospital as international leaders in patient care, research and teaching. Creating interdisciplinary centres will play a vital part in maintaining this leading position.

Currently, the University's clinical division and the Hospital are largely organised according to medical discipline. However, when it comes to research, teaching and patient care,

interdisciplinary collaboration is gaining in significance. The establishment of centres dedicated to different medical specialisms is intended to create new, stable links to existing organisational structures and facilitate effective interdisciplinary and interdepartmental cooperation.

The Comprehensive Cancer Center Vienna (CCC) has already illustrated what can be achieved by forming such centres. A joint facility of MedUni Vienna and Vienna General Hospital, the CCC combines high-quality patient care with clinical and basic research, and world-class academic teaching.

It has already succeeded in establishing connections between scientists within the University and pooling their research efforts, as well as creating links with other universities and internationally recognised extramural institutions conducting high-level research in the same areas.



MedUni Vienna is one of Europe's oldest universities, but also one of its newest. As a founding member of the Vienna Alma Mater Rudolfina in 1365, the University of Vienna's faculty of medicine was a widely recognised authority on matters relating to health as early as the Middle Ages. The history of the Medical University of Vienna therefore reaches back almost 650 years. This great medical science institution celebrates its tenth anniversary as a university in its own right in 2014, but its story begins earlier.

The invention of bedside teaching

Viennese medicine achieved international renown in the eighteenth century, after Empress Maria Theresa summoned the Dutchman Gerard van Swieten to the city, where he laid the foundations for what became known as the First Vienna School of Medicine. Leading physicians of the era who taught and carried out research in the Austrian capital included Anton de Haen, Maximilian Stoll, Lorenz Gasser and Anton von Störck, as well as Leopold Auenbrugger, the inventor of percussion as a diagnostic technique. The teaching model nowadays known as bedside teaching was developed in Vienna during this period, and it went on to become the dominant method of medical training all over the world.

Leading the world for centuries

The birthplace of medical specialisation

The opening of the General Hospital in 1784 gave doctors a new place to work, and the facility evolved to become Vienna's most important centre of medical research. In the course of the nineteenth century, the work of doctors such as Karl von Rokanitsky, Josef Skoda, Ferdinand von Hebra and Ignaz Philipp Semmelweis brought about the emergence of the Second Vienna School of Medicine. The application of basic science in medicine expanded and the first skin, eye, and ear, nose and throat clinics in the world were founded in Vienna as the Austrian capital became the birthplace of medical specialisation.

Viennese Medicine: Nobel prizes and a global reputation

At the start of the twentieth century, Viennese Medicine was very much at the top of its international game. Clemens von Pirquet coined the terms "allergy" and "serum sickness", Ernst Peter Pick conducted important experiments on chemical specificity in immune reactions, and the Vienna School of Dental Medicine (founded by Bernhard Gottlieb) enjoyed a golden age in the 1920s. The four Nobel Prizes awarded to Viennese doctors in the early part of the century (to Robert Bárány, Julius Wagner-Jauregg, Karl Landsteiner and Otto Loewi) are testament to the

groundbreaking work that was carried out during this period.

1938 – a year of tragedy

With the Anschluss of 13 March 1938, Austria became part of Nazi Germany, and medicine in Vienna entered its darkest period. More than half of the medical university lecturers – the majority of them of Jewish descent – were dismissed. Many highly respected researchers, doctors and students were forced to emigrate, died in the concentration camps or were killed in other tragic circumstances. A



memorial sculpture in the form of an open book at MedUni Vienna honours the memory of the victims of the Nazi era.

The new Vienna General Hospital: an ideal environment for world-class medicine

After 1945, the difficult process of rebuilding medical studies in Vienna began. The reputation of Vienna Medicine had, at least for the time being, faded markedly. In 1949, around three quarters of the medical faculty at the University of Vienna had to be removed from their posts due to their National Socialist sympathies, and they were replaced by a newly-trained generation of physicians. The impact of these two turning points in the history of Viennese medicine, coming as they did in the space of just a few years, was still being felt decades later. However, the official opening of the new Vienna General Hospital in 1994 provided new impetus. By 1996, all of the university departments had been brought together and expanded at the General Hospital site. This meant that Vienna's finest medical practitioners were based at a single, state-of-the-art university hospital, providing the ideal framework for clinical research.

Ten years of MedUni Vienna: autonomy promotes dynamism

Legal autonomy and the founding



The Anna Spiegel research building is home to the University's Center for Translational Research, integrating basic research with clinical applications. It is named after Anna Simona Spiegel-Adolf, who in the 1930s became the second woman to gain a post-doctoral lecturing qualification at Vienna's medical faculty.

of the Medical University of Vienna on 1 January 2004 triggered a new period of dynamic development. In terms of scientific output, the number of publications has risen markedly since then, as have impact factors. In teaching, a new, modern curriculum was implemented, and new courses are developed continuously. From the financial perspective, external funding increased enormously. The formation

of research clusters and interdisciplinary centres has raised MedUni Vienna's international profile in a wide range of fields. And with its major efforts to push forward joint operation of patient care together with Vienna General Hospital, the University has set in motion the establishment of a third Vienna School of Medicine in the twenty-first century.

Facts and figures



Aerial photographs © VAMED



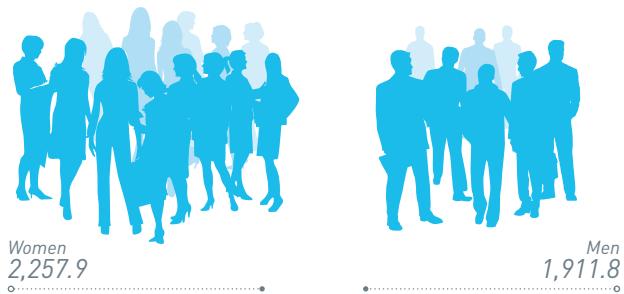
Facts and figures – MedUni Vienna in profile

Facts and figures

General

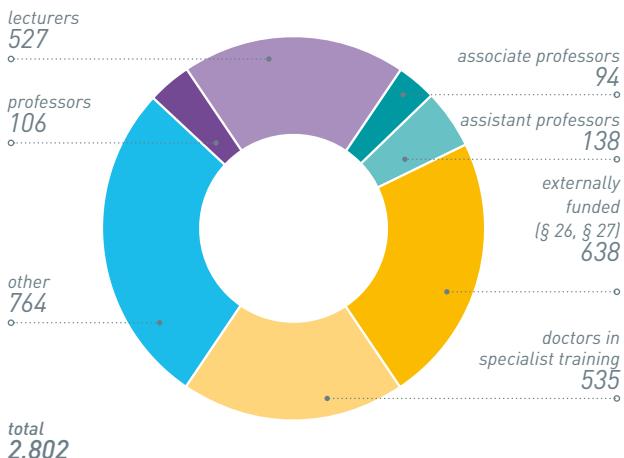
Human resources*

With 4,169.7 employees in 2013, MedUni Vienna is one of the largest centres of medical education and research in the German-speaking world.



* Full-time equivalent as of 31 January 2014

Academic staff*



(Woman: 1,260, Man: 1,542)

* Full-time equivalent as of 31 January 2014

29 university departments and twelve centres of medical theory

The core activities of research, teaching and patient care are organised into 29 university departments/clinical institutes and twelve centres for medical science.

Research

MedUni Vienna's research activities are summarised under the common theme of "Mechanisms, Prevention, Diagnosis and Treatment of Diseases" and are broken down into five designated areas of focus, or research clusters.

Focal areas of research (clusters)

- Allergies/Immunology/Infectious Diseases
- Cancer Research/Oncology (Comprehensive Cancer Center Vienna)
- Neurosciences
- Cardiovascular Medicine
- Imaging

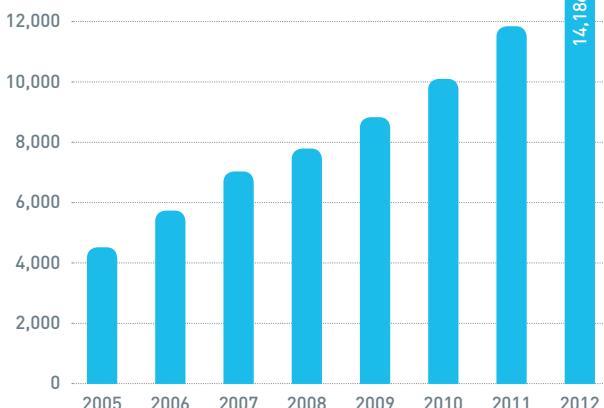
Research infrastructure

MedUni Vienna boasts an extensive research infrastructure that supports the work of individual research groups.

- Core Facility for Flow Cytometry
- Core Facility for Genomics
- Core Facility for Imaging
- Core Facility for Proteomics
- Institute of Medical Genetics
- Center for Medical Statistics, Information Technology and Intelligent Systems
- Clinical Trials Coordination Centre
- Medical Imaging Platform
- MedUni Vienna Biobank
- Preclinical Research for Facility
- University Library
- Centre for Medical Physics and Biomedical Engineering

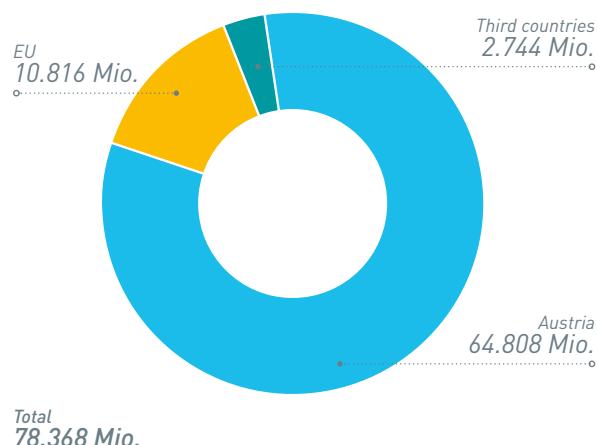
Impact of scientific publications from 2005–2012

Scientific output and the quality of research at the MedUni Vienna are constantly rising.



Third-party funding

External funding raised by MedUni Vienna pursuant to sections 26 and 27 Universities Act, together with donations, amounted to EUR 78.368 million in 2013. For the first time since separation from the University of Vienna in 2004, revenue from research grants and donations did not increase year on year.



Research project submissions to the Ethics Committee

- 202 study reviews pursuant to the Austrian Medicines Act
 - 120 study reviews pursuant to the Austrian Medical Devices Act
 - 808 other study reviews
-
- 1,130 approval applications for clinical research projects

Patient care

Clinical data from Vienna General Hospital

- 103,076 inpatients (cases)
- 553,235 outpatients (cases)
- 49,028 surgical procedures
- 1,557 doctors

Clinical data from Bernhard Gottlieb Clinic for Dental Care

- 103,419 patients (cases)
- of which 25,317 were new patients (cases)
- 82.5 patients/weekend (mean)
- 72.0 dentists (FTE)

Education

Courses offered by MedUni Vienna

- Medicine Degree Programme
- Dentistry Degree Programme
- Master's Degree in Medical Information Technology
- PhD programme (16 subject programmes)
- Applied Medical Science Doctoral Programme (10 subject programmes)
- Doctorate in Medical Science (currently being phased out)
- 16 postgraduate training programmes

14 teaching hospitals are accredited for clinical practice training. In addition, agreements have been concluded with 39 clinics and hospitals for the transition year before the clinical practice year.

Students (WS 2013)

	Female	Male	Total
Studying for a degree qualification	3,432	3,543	6,975
Other students participating	359	250	609
Total	3,791	3,793	7,584

Students by nationality

	Female	Male	Total
Austria	2,752	2,764	5,516
EU	651	712	1,363
Third countries	388	317	705
Total	3,791	3,793	7,584

Students in exchange programmes (outgoing/incoming)

	Female	Male	Total
Host country/origin in the EU	196/75	184/53	380/128
Host country/origin other	114/20	93/17	207/37
Total	310/95	277/70	587/165

Doctoral students

	Female	Male	Total
Austria	466	439	905
EU	117	85	202
Third countries	115	97	212
Total	698	621	1,319

Facts and figures

I. Balance sheet as at 31 December 2013

Assets

	31 December 2013			31 December 2012		
	EUR			EUR '000		
A. Fixed assets						
I. Intangible assets						
1. Concessions and similar rights, and licences thereto		1,294,519.09			1,362	
<i>of which acquired by purchase</i>	1,294,519.09				1,362	
2. Rights of use		20,000,000.00	21,294,519.09		19,700	21,062
II. Property, plant and equipment						
1. Land, leasehold rights and buildings including buildings on third-party land		56,979,907.31			9,283	
<i>a) of which land value</i>	47,545,900.41				587	
<i>b) of which building value</i>	1,126,611.62				1,182	
<i>c) of which investments in third-party buildings and land</i>	8,307,395.28				7,514	
2. Plant and machinery		9,131,544.17			10,259	
3. Scientific literature and other scientific data media		6,864,521.65			6,844	
4. Other fixtures and fittings, operating and business equipment		2,308,669.98			2,184	
5. Advance payments and assets under construction		2,323,043.23	77,607,686.34		1,803	30,373
III. Financial assets						
1. Investments in subsidiaries and associates		2,808,650.18			2,809	
2. Loans to subsidiaries and associates		1,394,108.83	4,202,759.01	103,104,964.44	985	3,794
						55,229
B. Current assets						
I. Inventories						
1. Inventories		403,755.87			284	
2. Services rendered to third parties not yet invoiced		88,761,124.13	89,164,880.00		80,922	81,206
II. Receivables and other assets						
1. Trade receivables		7,122,820.86			8,851	
2. Receivables from associates		1,106,336.38			1,135	
3. Other receivables and other assets		8,207,819.48	16,436,976.72		7,728	17,714
III. Securities			6,258,200.75			6,257
IV. Cash and cash equivalents			76,020,864.73	187,880,922.20	96,455	201,632
C. Prepaid expenses and deferred charges						
Total assets				1,287,694.56		1,295
				292,273,581.20		258,156

Financial statements

The 2013 financial statements were given an unqualified audit certificate by auditors Moore Stephens City Treuhand GmbH, Wirtschaftsprüfungs- und Steuerberatungsgesellschaft.

Liabilities

	31 December 2013			31 December 2012		
	EUR			EUR '000		
A. Negative equity						
1. Equity			-8,334,166.31			-8,334
2. Net loss			-13,447,603.07	-21,781,769.38		-18,265
of which loss/profit brought forward	-18,264,678.93				-7,375	-26,599
B. Investment grants						
			29,833,936.85			29,261
C. Provisions						
1. Provisions for severance payments			12,038,769.00			10,989
2. Other provisions			100,235,236.77	112,274,005.77		92,288
						103,277
D. Liabilities						
1. Bank borrowings			0.00			0
2. Advances received			129,616,565.98			123,154
of which deductible from inventories	88,761,124.13				80,922	
3. Trade payables			9,102,817.93			9,510
4. Payables to associates			147,182.23			112
5. Other liabilities			17,273,657.04	156,140,223.18		14,795
						147,571
E. Deferred income						
			15,807,184.78			4,646
Total liabilities				292,273,581.20		258,156
Contingent liabilities				98,749.00		99

Note regarding equity:

The University's negative equity figure results from the separation of the Medical University of Vienna from the University of Vienna on 1 January 2004 in accordance with the Universities Act 2002. In respect of Austria's constitutional guarantee for institutions and its incorporation into the Universities Act 2002, the Federal Government's resulting obligations to guarantee the continued existence of MedUni Vienna and to finance the University mean that, in all events, a positive going concern forecast may be given for the Medical University of Vienna. Equity including investment grants was positive as at 31 December 2013.

Facts and figures

II. Profit and loss account 2013

	2013 EUR	2012 EUR '000
1. Revenue		
a) Revenue from Federal Government global budget allocation	361,833,151.95	343,238
b) Revenue from tuition fees	699,493.17	80
c) Revenue from tuition fee compensation by Federal Government	5,117,021.17	4,731
d) Revenue from postgraduate training programmes	966,955.28	914
e) Revenue pursuant to section 27 Universities Act	63,568,125.83	64,964
f) Reimbursements of costs pursuant section 26 Universities Act	14,467,612.14	13,714
g) Other revenue and reimbursements	13,941,493.39	11,986
	460,593,852.93	439,627
2. Change in services rendered to third parties not yet invoiced		7,980
3. Other operating income		
a) Income from disposal and revaluation of fixed assets	607.23	0
b) Income from reversal of provisions	2,912,801.31	1,608
c) Other	12,360,452.99	12,338
<i>of which from reversal of investment grants</i>	9,851,987.69	9,573
	15,273,861.53	13,946
4. Expenditure for materials, consumables and purchased services		
a) Expenditure for materials and consumables	-10,477,650.07	-10,396
b) Expenditure for purchased services	-4,228,747.10	-3,546
	-14,706,397.17	-13,942
5. Staff costs		
a) Salaries and wages	-263,509,913.75	-263,217
<i>of which refunds to the Federal Government for officials assigned to the university</i>	73,342,059.24	76,041
b) Expenditure for external teaching staff	-100,916.96	-100
c) Cost of severance payments and payments to employee benefits funds	-4,731,780.88	-3,694
<i>of which refunds to the Federal Government for officials assigned to the university</i>	26,214.78	67
d) Cost of pensions	-7,200,093.87	-6,449
<i>of which refunds to the Federal Government for officials assigned to the university</i>	407,007.27	397
e) Social security contributions and other pay-related contributions	-60,756,939.97	-60,276
<i>of which refunds to the Federal Government for officials assigned to the university</i>	18,993,273.35	19,499
f) Other employee benefits	-2,306,231.58	-2,230
	-338,605,877.01	-335,966

	2013 EUR	2012 EUR '000
6. Depreciation and amortisation	-18,028,285.18	-17,708
7. Other operating expenses		
a) Taxes other than those under item 13	-479,035.80	-445
b) Reimbursements to hospital operator pursuant section 33 Universities Act	-51,419,069.78	-52,153
c) Other	-34,560,055.87	-45,145
	-86,458,161.45	-97,743
8. Subtotal items 1 to 7	25,907,885.58	-3,806
9. Income from financial resources and investments	940,825.00	2,418
a) of which from write-ups	102,096.86	94
b) of which from subsidiaries and associates	0.00	500
10. Expenditure arising from financial resources and equity holdings	-21,887,110.43	-9,162
a) of which from write-downs	95,857.30	21
b) of which expenditure arising from subsidiaries and associates	21,791,204.00	9,136
11. Subtotal items 9 to 10	-20,946,285.43	-6,744
12. Result from ordinary university activity	4,961,600.15	-10,550
13. Taxes on income and profit	-144,524.29	-340
14. Loss/profit after tax	4,817,075.86	-10,889
15. Loss/profit brought forward	-18,264,678.93	-7,375
16. Net loss	-13,447,603.07	-18,264

After two difficult years in 2011 and 2012 when Medical University of Vienna reported a loss, the University recorded a profit in 2013, which was made possible by an improved budget adjusted to conditions, as well as the cost awareness of University staff.

Despite a marked increase in competition for external funding, a high level of revenue was largely maintained, and the University achieved numerous successes in research and teaching, as well as improving its position in a number of university rankings. This trend is set to continue and we expect further success and a balanced budget in 2014.

Facts and figures

University management

• Rectorate

The Rectorate is the University's executive management body. It comprises the Rector and the four vice rectors (for Finance, Research, Clinical Affairs, and Education, Gender and Diversity).

O.Univ. Prof. Dr. Wolfgang Schütz,
Rector
Ao.Univ. Prof.ⁱⁿ Dr.ⁱⁿ Karin Gutiérrez-
Lobos, Vice Rector for Teaching,
Gender & Diversity
Dr.ⁱⁿ Christiane Druml,
Vice Rector for Clinical Affairs
Univ. Prof. Dr. Markus Müller,
Vice Rector for Research
Mag. Dr. Franz Wurm,
Vice Rector for Finance

• University Council

The University Council is one of the University's three most senior management bodies, together with 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.

University Council (until 1 March 2013)

Dr. Erhard Busek [Chair]
Dr. ⁱⁿElisabeth Hagen
Rudolf Klausnitzer
Dr. Johannes Strohmayer
Univ. Prof. Dr. Robert Schwarcz

University Council (from 1 March 2013)

Dr. Erhard Busek (Chair)
Dr. ⁱⁿElisabeth Hagen
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Veronika Sexl
Dr. Walter Dorner
Univ. Prof. Dr. Robert Schwarcz

• Senate

The Senate is made up of 13 representatives from among the University's professors, six representatives of university 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.

Senate (until 30 September 2013)

Professors:

O.Univ. Prof. Dr. Arnold Pollak
Univ. Prof. Dr. Michael Gnant
Univ. Prof. Dr. Eduard Auff (Chair)
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Anita Rieder*
Univ. Prof.ⁱⁿ DDr.ⁱⁿ Eva Piehslinger
Univ. Prof. Dr. Hubert Pehamberger
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Ingrid Pabinger
Univ. Prof. Dr. Wolfgang Gstöttner
Univ. Prof. Dr. Rudolf Valenta
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Veronika

Fialka-Moser
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Ursula
Schmidt-Erfurth
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Ursula
Wiedermann-Schmidt
Univ. Prof. Dr. Hans Lassmann
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Erika
Jensen-Jarolim

* (Seat not taken due to provisions in respect of incompatibility with the role of Curriculum Director.)

Academic research and teaching staff:

Ao.Univ. Prof. Dr. Ivo Volf (1st deputy)
Ao.Univ. Prof.ⁱⁿ Dr.ⁱⁿ Ulrike Willinger
Ao.Univ. Prof. Dr. Stephan Kettner
Ao.Univ. Prof.ⁱⁿ Dr.ⁱⁿ Henriette Walter
Ass. Prof.ⁱⁿ Dr.ⁱⁿ Marianne Winkler
Ao.Univ. Prof. Dr. Wolf-Dieter
Baumgartner

Students:

Christian Orasche
Philipp Wimmer
Barbara Horninger
Dr. ⁱⁿJudith Böhm (2nd deputy)
Michael Wagner
Mirijam Müller

General staff:

Gerda Bernhard

Co-opted from the Working Group for Equal Opportunities:

Univ. Prof.ⁱⁿ Dr.ⁱⁿ Alexandra
Kautzky-Willer

Administration

Senate (from 1 October 2013)

Professors:

O.Univ. Prof. Dr. Oswald Wagner (Chair)
Univ. Prof. Dr. Michael Gnant
Univ. Prof. Dr. Eduard Auff
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Veronika Fialka-Moser
Univ. Prof.ⁱⁿ DDr.ⁱⁿ Eva Piehslinger
Univ. Prof. Dr. Hubert Pehamberger
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Anita Rieder¹⁾
Univ. Prof. Dr. Siegfried Trattnig
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Irene Lang²⁾
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Renate Koppensteiner
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Elisabeth Presterl
Univ. Prof. Dr. Rudolf Valenta
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Ursula Wiedermann-Schmidt
Univ. Prof. Dr. Harald Sitte
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Sylvia Knapp

¹⁾ Currently a curriculum director and therefore unable to exercise her mandate due to the regulation on conflicts of interest. The mandate is exercised by Prof. Siegfried Trattnig.

²⁾ Currently a deputy curriculum director and therefore unable to exercise her mandate due to the regulation on conflicts of interest. The mandate is exercised by Prof. Renate Koppensteiner.

Academic research and teaching staff:

Ao.Univ. Prof. Dr. Ivo Volf (1st deputy)
Ass. Prof. Dr. Dietrich Haubenberger
Ass. Prof. Prof. Dr. Martin Frossard
Assoc. Prof. Dr.ⁱⁿ Diana Bonderman
Dr. Martin Andreas
Dr.ⁱⁿ Regina Patricia Schukro

Students:

Frédéric P.R. Tömböl
Lisa Ballmann (2nd deputy)
Dominik Otto (until 13 December 2013)
Matthias Schlechta (from 13 December 2013)
Abelina Zimba
Martin Schauperl
Mirjam Müller

General staff:

Gerda Bernhard

Co-opted from the Working Group for Equal Opportunities:

Univ. Prof.ⁱⁿ Dr.ⁱⁿ Alexandra Kautzky-Willer
www.meduniwien.ac.at/senat

Committees

• Arbitration Committee

Chair: Univ. Prof. Dr. Herbert Watzke
www.meduniwien.ac.at/schiedskommission

• Ethics Committee

Chair: Univ. Prof. Dr. Ernst Singer
Deputy Chair:
Univ. Prof.ⁱⁿ Dr.ⁱⁿ Hildegard Greinix
Deputy Chair: Univ. Prof. Dr. Jürgen Zezula
www.meduniwien.ac.at/ethik

• Works Council for General University Staff

Chair: Gabriele Waidringer
Deputy Chair: Gerda Bernhard
Deputy Chair: Helga Kalser
www.meduniwien.ac.at/br-ap

• Works Council for Academic Staff (from 5 December 2012)

Chair: Dr. Thomas Perkmann
1st Deputy Chair: Dr. Martin Andreas
2nd Deputy Chair: Ao.Univ. Prof. Dr. Peter Birner
3rd Deputy Chair: Ass. Prof. Dr. Ingwald Strasser
4th Deputy Chair: PAo.Univ. Prof.ⁱⁿ Dr.ⁱⁿ Anita Holzinger, MPH
www.meduniwien.ac.at/br-wp

Facts and figures

• Working Group for Equal Opportunities

Chair: Univ. Prof.ⁱⁿ Dr.ⁱⁿ Alexandra Kautzky-Willer
1st Deputy Chair: Ao.Univ. Prof.ⁱⁿ Mag.^a Dr.ⁱⁿ Ulrike Willinger
2nd Deputy Chair: Ulrike Stein
[www.meduniwien.ac.at/
gleichbehandlung](http://www.meduniwien.ac.at/gleichbehandlung)

• University Representation of students (ASU) (until 30 September 2013)

Chair: Christian Orasche
Deputy Chair: Birgit Ludwig
Deputy Chair: Philipp Wimmer

• University Representation of students (ASU) (from 1 October 2013)

Chair: Sarah Schober
1st Deputy Chair: Mathias Schneeweiß
2nd Deputy Chair: Myriam Müller
www.oehmedwien.at

• Advisory Board for People with Disabilities

Chair: Univ. Prof.ⁱⁿ Dr.ⁱⁿ Veronika Fialka-Moser
[www.meduniwien.ac.at/
behindertenbeirat](http://www.meduniwien.ac.at/behindertenbeirat)

• Intramural Data Protection Committee

Chair: DI Ernst Eigenbauer
Deputy Chair: Dr. Markus Grimm,
MBA
[www.meduniwien.ac.at/
datenschutzkommission](http://www.meduniwien.ac.at/datenschutzkommission)

• Medicine Curriculum Director

Univ. Prof.ⁱⁿ Dr.ⁱⁿ Anita Rieder
Deputy: Ao.Univ. Prof. Dr. Franz Kainberger
Deputy: Univ. Prof. Dr. Werner Horn
Deputy: Univ. Prof. Dr. Gerhard-Johann Zlabinger

• Dentistry Curriculum Director

Univ. Prof.ⁱⁿ Dr.ⁱⁿ Anita Holzinger,
MPH
Deputy: Univ. Doz. DI Dr. Reinhard Gruber
Deputy: Univ. Prof. Dr. Andreas Moritz

• PhD Programmes Curriculum Director

Univ. Prof. Dr. Stefan Böhm

• Continuing Education Courses Curriculum Director

Ao.Univ. Prof. Dr. Rudolf Mallinger

Scientific Advisory Board

Consisting of five members, this external body advises the Rectorate of the Medical University of Vienna on all matters related to research, with the aim of safeguarding the University's strategic positioning for the long term.

Frederica Salusto
Institute for Research in Biomedicine
Bellinzona, Switzerland

Hedvig Hricak
Head Department of Radiology
Memorial Sloan-Kettering Cancer Center
New York City

Joseph Thomas Coyle
Professor of Psychiatry and Neuroscience
Harvard Medical School

Fortunato Ciardiello
Professor for Medical Oncology
Seconda Università di Napoli

Departments

The MedUni Vienna organisational units performing clinical activities include 26 university departments and 3 clinical institutes. 12 of these departments and clinical institutes are further broken down into clinical sections (pursuant to section 31(4) UG). All departments, institutes and sections have the function of a clinical unit (pursuant to section 7(4) Austrian Hospitals Act, KAKuG).

Department of Medicine I

Head: Univ. Prof. Dr. Christoph Zielinski

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

Department of Medicine II

Head: O.Univ. Prof. Dr. Gerald Maurer

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

Department of Medicine III

Head: O.Univ. Prof. Dr. Josef Smolen

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

Department of Surgery

Head: Univ. Prof. Dr. Ferdinand Mühlbacher

- Division of General Surgery
- Division of Cardiac Surgery
- Division of Thoracic Surgery
- Division of Vascular Surgery
- Division of Transplantation
- Division of Plastic and Reconstructive Surgery
- Division of Paediatric Surgery

Department of Obstetrics and Gynaecology

Head: O.Univ. Prof. Dr. Peter Wolf Husslein

- Division of Obstetrics and Feto-maternal Medicine
- Division of General Gynaecology and Gynaecological Oncology
- Division of Gynaecological Endocrinology and Reproductive Medicine

Department of Ear, Nose and Throat Diseases

Head: Univ. Prof. Dr. Wolfgang Gstöttner

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

Department of Anaesthesia, Critical Care and Pain Medicine

Head: Univ. Prof. Dr. Jörg Michael Hiesmayr

- Division of General Anaesthesia and Intensive Care Medicine
- Division of Specialist Anaesthesia and Pain Medicine
- Division of Cardiothoracic and Vascular Anaesthesia and Intensive Care Medicine

Department of Psychiatry and Psychotherapy

Head: O.Univ. Prof. Dr. Siegfried Kasper

- Division of Biological Psychiatry
- Division of Social Psychiatry

Facts and figures

Department of Pediatrics and Adolescent Medicine

Head: O.Univ. Prof. Dr. Arnold Pollak

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

Department of Dermatology

Head: Univ. Prof. Dr. Hubert Pehamberger

- Division of General Dermatology
- Division of Immunodermatology and Infectious Diseases of the Skin

Department of Biomedical Imaging and Image-guided Therapy

Head: O.Univ. Prof. Dr. Christian Herold

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

Department of Radiotherapy

Head: O.Univ. Prof. Dr. Richard Pötter

Department of Trauma Surgery

Head: Univ. Lektor Priv. Doz. Dr. Stefan Hajdu, MBA

Department of Orthopedics

Head: O.Univ. Prof. Dr. Reinhard Windhager

Department of Urology

Head: Univ. Prof. Shahrokh Shariat (from 1 June 2013)

Department of Neurosurgery

Head: Univ. Prof. Dr. Engelbert Knosp

Department of Oral and Maxillofacial Surgery

Deputy Head: Assoc. Prof. Priv. Doz. DDr. Clemens Klug

Department of Emergency Medicine

Head: O.Univ. Prof. Dr. Anton Laggner

Department of Neurology

Head: Univ. Prof. Dr. Eduard Auff

Department of Physical Medicine and Rehabilitation

Head: O.Univ. Prof.ⁱⁿ Dr.ⁱⁿ Veronika Fialka-Moser

Department of Child and Adolescent Psychiatry

Head: O.Univ. Prof. Dr. Max Friedrich (until 30 September 2013)

Department of Psychoanalysis and Psychotherapy

Head: Univ. Prof. Dr. Stephan Doering

Department of Ophthalmology and Optometry

Head: Univ. Prof.ⁱⁿ Dr.ⁱⁿ Ursula Schmidt-Erfurth

Department of Blood Group Serology and Transfusion Medicine

Deputy Head: Ao.Univ. Prof. Dr.
Simon Panzer

Department of Clinical Pharmacology

Head: Univ. Prof. Dr. Markus Müller

Bernhard Gottlieb University Clinic for Dentistry

Univ. Prof. Dr. Andreas Moritz

Department of Hospital Epidemiology and Infection Control

Head: Univ. Prof.ⁱⁿ Dr.ⁱⁿ Elisabeth
Presterl

Department of Laboratory Medicine

Head: O.Univ. Prof. Dr. Oswald
Wagner

- Division of Medical-Chemical
Laboratory Diagnostics
- Division of Clinical Microbiology
- Division of Clinical Virology

Institute of Neurology

Deputy Head: Ao.Univ. Prof. Dr.
Johann Hainfellner

Department of Pathology

Head: O.Univ. Prof. Dr. Dantscho
Kerjaschki

Centers of medical theory

The medical science division is organised into centres and departments. While the departments - just like the university departments and clinical institutes - mainly only represent one scientific field, centres are subject to functional grouping in respect of research and teaching and represent a fusion of scientific disciplines in line with international best practice.

Center for Anatomy and Cell Biology

Head: O.Univ. Prof.ⁱⁿ Dr.ⁱⁿ Margit
Pavelka (until 30 September 2013)

- General Division of the Centre for
Anatomy and Cell Biology
- Division of Applied Anatomy
- Division of Systematic Anatomy
- Division of Cell and
Developmental Biology
- Division of Cell Biology and
Ultrastructure Research

Facts and figures

Center for Physiology and Pharmacology

Head: Univ. Prof. Dr. 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: Univ. Prof.ⁱⁿ Dr.ⁱⁿ Anita Rieder

- Division of General and Family Medicine
- Institute of Social Medicine
- Institute of Environmental Hygiene
- Division of Epidemiology
- Institute of Medical Psychology
- Ethics in Medical Research
- Department of Health Economics (from 1 October 2013)

Center for Brain Research

Head: Univ. Prof. Dr. Jürgen Sandkühler

- Division of Neuroimmunology
- Division of Neurophysiology
- Division of Biochemistry and Molecular Biology (from 1 November 2013)
- Division of Neuronal Cell Biology
- Division of Cognitive Neurobiology
- Division of Pathobiology of the Nervous System

Center for Pathobiochemistry and Genetics

Head: Univ. Prof. Mag. Dr. Markus Hengstschläger

- Medical Genetics
- Institute of Medical Chemistry and Pathobiochemistry

Center for Pathophysiology, Infectiology and Immunology

Head: Univ. Prof. DI Dr. Hannes Stockinger

- 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: Univ. Prof. DI Dr. Wolfgang Drexler

Center for Medical Statistics, Informatics and Intelligent Systems

Head: Univ. Prof. DI DDr. Wolfgang Dorda

- General Division of the Centre for Medical Statistics, Information Technology and Intelligent Systems
- Institute of Medical Statistics
- Institute of Clinical Biometrics
- Institute of Biosimulation and Bioinformatics

- Institute of Medical Information Management and Image Processing
- Institute of Medical Expert and Knowledge-Based Systems
- Institute of the Science of Complex Systems
- Institute of Artificial Intelligence

Department of Medical Biochemistry

Deputy Head: O.Univ. Prof. DI Dr. Roland Foisner

- Division of Molecular Biology
- Division of Molecular Genetics

Department of Forensic Medicine

Head: Univ. Prof. Dr. Daniele Risser

- DNA Central Laboratory

Department of Medical Education

Interim Head: Univ. Prof. Dr. Siegfried Meryn

- General Division of Medical Training
- Administration
- Curriculum Coordination
- Unified Patient Division
- Methods and Development
- Science and International Relations

Department of Virology

Head: O.Univ. Prof. Mag. Dr. Franz Xaver Heinz

- Division of Applied Medical Virology

Department of Biomedical Research

- Division of Laboratory Animal Science and Genetics
- Division of Decentralized Biomedical Facilities
- Division of Biomedical Research

Organisational units with special service functions

Comprehensive Cancer Center

Head: Univ. Prof. Dr. Christoph Zielinski

Core Facilities

Head: Ao.Univ. Prof. Dr. Johann Wojta

- DNA-Genomics
- GNA-Genomics
- Imaging
- Proteomics
- Cell Sorting

University Library

Head: Mag. Bruno Bauer

Collection and History of Medicine

Head: Dr.ⁱⁿ Christiane Druml

Service facilities

- Rector's office
- HR Department
- Legal Department
- Corporate Communications
- Studies and Examinations Department
- Research Service
- Clinical Studies Coordination Centre
- Finance Department
- Facility Management
- ITSC – IT Systems & Communications

Specialised Units

- Specialised Unit for Controlling
- Specialised Unit for Evaluation and Quality Management
- Specialised Unit for Gender Mainstreaming
- Specialised Unit for Process Management and Project Development
- Specialised Unit for Controlling
- HR Development

Subsidiaries

Bernhard Gottlieb Universitätszahnklinik GmbH

Max F. Perutz Laboratories GmbH (mfpl)

60 % University of Vienna
40 % MedUni Vienna

Medical University of Vienna International GmbH (MUVI)

Forschungsservice und -beteiligungs GmbH

Forensisches DNA-Zentrallabor Wien GmbH

Alumni Club

Credits

Credits

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