







Following eyes, nose and ears in previous years, the 2014 annual report features a versatile sense organ – skin. In people and also in animals, skin performs a series of communicative functions. It registers stimuli such as touch, pain, pressure, warmth and cold. Skin also separates inside from outside and thus serves as a barrier organ. Standing in for all the animals studied, researched or treated at the Vetmeduni Vienna, the ones in the photos above display fur, bristles, feathers and carapaces.



Content

04 Opening words

- 04 University Council
- 05 Senate

06 Editorial

08 Facts and Figures

12 Education

- 12 Well prepared for professional life
- 14 Tactical academics
- 16 Clinically proven hands-on education
- 18 Outstanding students
- 20 International University

22 Research

- 22 One Health Research for Animal and Human Health
- 24 Current research topics
- 28 Competitive advantage through cooperation
- 30 New research projects
- 32 The world of science on campus
- 34 Honours for researchers
- 35 External scientific prizes

38 University Clinics

- 38 The University Clinics the "General Hospital" for Animals
- 42 Back to the Alma Mater

44 Appointments & Personnel

- 44 New professorships
- 45 Employment at the Vetmeduni Vienna
- 46 A new office

48 Public relations

- 48 Out of the ivory tower into dialogue with the community
- 50 International media presence
- 54 The Vetmeduni Vienna invites...
- 56 A continuous history

58 Organisation

Opening words

Leading the way

The University of Veterinary Medicine, Vienna has been in a pioneering role since its founding in 1765. In the Habsburg Empire, it served as a model for veterinary schools. Numerous veterinary-medical educational facilities were founded based on the Viennese model. Its teachers and graduates at that time travelled throughout Europe to disseminate knowledge about epidemics and animal health.

Much has changed since then. Still today, however, the Vetmeduni Vienna occupies this unique and highly responsible position. As Austria's sole veterinary university, it is responsible for the education of veterinarians in Austria and makes a substantial contribution to safeguarding domestic public health. Its graduates contribute research-based and state-of-the-art knowledge to the economy, agriculture and society; both animals and people benefit from their competencies.

The Vetmeduni Vienna knows how to take up current and socio-politically relevant issues. The area of human-animal relationships - to name just one example - amply shows the many levels on which societal developments unfold. Questions of ethics in human-animal relationships or why certain animals are designated for food production, others as experimental animals and still others as pets always require a conversation between science and the populace. A society without open dialogue will find it very difficult to answer many guestions. The results of scientific inquiry provide a compass for orientation on an individual and a personal level, as well as in the broader public realm, which in turn serves as a basis for (political) decision-making.

As a research university, the Vetmeduni Vienna is a source of innovation. Without research, the economy is deprived of an



important wellspring for innovation. The combination of basic research and applied clinical research leads to cutting edge solutions for animal health. The Vetmeduni Vienna works at this junction together with a host of industry partners. Only close collaboration with the business sector can ensure that initial research interests will lead to a marketable product.

Despite never-ending changes influencing higher education policy and finances, the Vetmeduni Vienna is committed to fulfilling its broad spectrum of tasks in the areas of education, research and medical care.

The University strives towards continuous development and improvement and is committed to progress. Sufficient public financing is an indispensable requirement for a university to be able to grow in accordance with its profile and strengths, for it to be able to attract talent in research, teaching and to its university clinics and remain compelling at an international level. Thus, the political sphere bears a great deal of responsibility for providing universities with the means for staying internationally competitive and poised to meet future challenges. Only such support will enable the Vetmeduni Vienna to continue its pioneering role into the future.

Edeltraud Stiftinger

Head of the University Council

Positive energy is the most important resource

In the last year, we heard and read much about the tightening of the resources available to the University. This spurred me to think about the resource I consider to be the most important, which is the positive inner energy I bring to my daily work as a researcher, educator and Chair of the Senate.

While it is not helpful to indulge one's sensibilities in one's professional career, it is also not helpful to ignore this part of one's life. Most people have the desire to be perceived as human beings. From this we derive a great deal of positive energy that makes it possible for us to reach our goals and take pleasure in achieving them. In times of increased competition for funds, it is obvious that performance must be measurable at universities too. Thus, to visualize and quantify successes, performance indicators and goals are stipulated and reward systems are introduced. A person's positive inner energy, however, is not quantifiable; it is replenished and proliferates through personal and professional successes, through recognition and positive feedback, but is stunted or even lacking altogether if it is not cultivated. Accordingly, one's own positive energy can be influenced only to a limited extent with numbers games.

A positive attitude is a prerequisite for progress and productive teamwork in the University and the Senate. For only people who find joy in their work and are strengthened and energized by it can accomplish something extraordinary. Achievement and recognition are thus assured and, in turn, provide impetus for new deeds.



Occasionally hears rumours that fun and work are mutually exclusive.

But only when we take joy in our work do we have the positive inner energy not only to accomplish, but to truly achieve something. In the coming years this will be our most valuable resource, the one we will need in order to meet our stipulated objectives. I wish the University and the readers of this report an ample supply of energy for meeting the challenges of the future. I look forward to our successful cooperation.

Anja Joachim

Chairwoman of the Senate

Editorial

Visible successes

Reviewing the year 2014 in fast-forward – that's what we aim to do with this annual report. Since there is not nearly enough room here to highlight all of last year's activities, only a few select excerpts are included from teaching, research and the University Clinics.

Many successes realized by the University in 2014, which thus became outwardly visible and tangible, entailed years of preparation. Numerous professors dedicated many months of work to the new, reformed veterinary medicine curriculum, which was launched in October 2014. This marked the attainment of a significant milestone, even though this reform will lead to further innovations, among them the implementation of new evaluation processes designed to ensure educational quality over the long term, and pave the way for continuing development. Only in this way will we be able to do the best possible job of preparing our students for the challenges inherent in the practices of veterinary medicine and science.

The Office of the Rector of the Vetmeduni Vienna (from left to right):



Patience is essential in the area of research as well. In a society constantly on the lookout for novelty and the newest sensation, one might surmise that research, too, can deliver new breakthroughs "on command". Competition is intense and never before have researchers around the world generated so much knowledge in so little time. Nonetheless, research takes a lot of time, including time for setbacks on the path to success. This makes us all the more proud of the many papers published by our researchers in top scientific journalstrending upward annually. The many funding approvals for new and large-scale research endeavours provide evidence that this successful course is sustainable. Among these are the Christian Doppler (CD) Laboratory for Innovative Poultry Vaccines opened in 2014 under the auspices of the Clinical Unit for Poultry Medicine - the first CD Laboratory at one of our University Clinics.

In 2014 the University Clinics looked after more than 45,000 animal patients – more than ever before. Reorganization brought about improved services, thus guaranteeing medical care that meets the highest scientific standards, while also being efficient and customer-oriented. Whether in teaching, research or clinical services, steady progress and improvements show up in all areas of the University.

We are convinced that the Vetmeduni Vienna has set a good course. For this we thank the involvement and tireless dedication of all our colleagues; without them, we would not be what we are today: a unique university for veterinary medicine that time and again proves that it can hold its own in an internationally competitive realm.

We wish to thank all of our partners in the scientific, business and political arenas for their support and the trust they have placed in our University; it is our hope that they continue to bestow these on us. We present some of the fruits of these labours in this report in the hopes that our readers will find the material presented herein to be both enjoyable and informative.

Sonja Hammerschmid Rector Otto Doblhoff-Dier
Vice-Rector for Research and
International Relations

Christian MathesVice-Rector for Resources

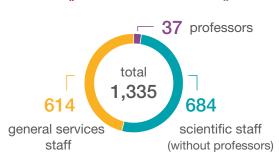
Petra Winter
Vice-Rector for Study Affairs and
Clinical Veterinary Medicine

Facts and Figures



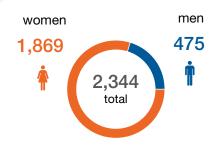
Staff

837 498





Students





Courses of study

- Diploma and doctoral programmes in veterinary medicine
- Bachelor's and master's programmes in biomedicine and biotechnology
- ➤ Bachelor's programme in equine sciences*
- European master's programme in comparative morphology**
- Interdisciplinary master's programme in human-animal interactions
- Master's programme in wildlife ecology and wildlife management*
- > PhD programme
 - * In cooperation with the University of Natural Resources and Life Sciences, Vienna
 - ** In cooperation with the Universities of Antwerp (Belgium), Giessen (Germany), Poznań (Poland) and Naples (Italy)



Animal patients

In 2014

45,339 animal visitors

were cared for in five species-specific University Clinics.



University Clinics



Poultry and Fish



Small Animals



Horses



Swine



Ruminants



Research

The research activities of the Vetmeduni Vienna are concentrated around the following core topics:

- Endocrinology
- Nutrition physiology
- Infectious diseases (fish, poultry, swine)
- Food microbiology and risk analysis of animal-based food products
- Population genomics
- Translational medicine (transgenic models) in infectious diseases, inflammation and cancer research
- Behavioural biology and behavioural ecology (incl. cognition)
- Wildlife ecology and medicine

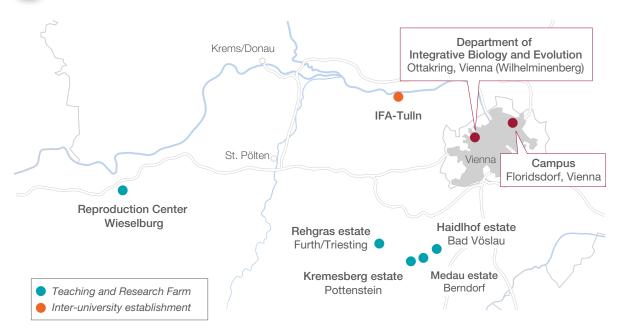


Internationally accredited by EAEVE

The Vetmeduni Vienna has been internationally accredited since 2013. This evaluation by the European Association of Establishments for Veterinary Education (EAEVE) is valid across Europe and applies to clinical education and university-wide quality assurance. Only a handful of the 98 veterinary medical schools of higher education in Europe can claim such full accreditation.



Sites of the Vetmeduni Vienna





Inter-university and inter-institutional establishments

- Messerli Research Institute (together with the Medical University of Vienna and the University of Vienna)
- Graf Lehndorff Institute for Equine Science (together with the Brandenburg Stud Farm Foundation in Neustadt (Dosse), Germany)
- Inter-university Department for Agrobiotechnology (IFA Tulln) (together with the University of Natural Resources and Life Sciences, Vienna)





Well prepared for professional life

Today's labour market demands graduates with a first-rate education. Long learning curves are passé. Good clinical skills and highly developed social skills are expected from the first day on the job. For this reason the Vetmeduni Vienna relies on competency-based learning.

The new curriculum: autonomous attainment of learning objectives

In the winter semester of the 2014/2015 academic year, a new curriculum was put in place for the diploma programme in veterinary medicine. First- and third-semester students now pursue a streamlined curriculum focused on core competencies for veterinary medicine. This means that students begin to take clinical courses earlier, perform their studies in a more interdisciplinary fashion and more frequently work autonomously towards attaining their learning objectives. They solve clinical cases alone or in small groups and thus learn to work in a solution-oriented way.

The principle of learning objectives is embedded throughout the curriculum. Fifteen working groups made up of a total of 130 educators define the necessary competencies for every stage of the curriculum. Students must demonstrate whether they have reached the learning objectives by taking multiple-choice tests on an electronic testing platform acquired for this purpose. On Q[kju:]-Online, questions do not pertain to a specific discipline, but to a learning objective. The question about the physiological processes for breathing applies equally to physics, biochemistry, physiology and anatomy. In this way, knowledge is conveyed thematically and no longer by discipline.



Courses of study

- ➤ Diploma and doctoral programmes in veterinary medicine
- ➤ Bachelor's and master's programmes in biomedicine and biotechnology
- Bachelor's programme in equine sciences*
- ➤ European master's programme in comparative morphology**
- Interdisciplinary master's programme in human-animal interactions
- Master's programme in wildlife ecology and wildlife management*
- ➤ PhD programme
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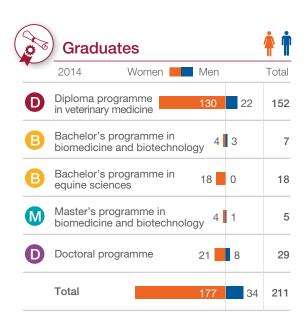
Applying factual knowledge

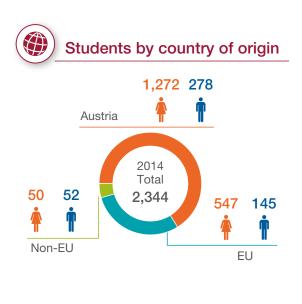
As a quality assurance measure, the Office of the Vice-Rector for Study Affairs and Clinical Veterinary Medicine has initiated the so-called competence check. This online test ascertains the students' self-assessment and also determines how well the curriculum conveyed a certain competency. (How do I rate my competency in taking a patient's case history? Did I learn this competency through my coursework?) In this way, the respondents assess not only their acquired factual knowledge, but also their understanding of how to apply this knowledge in different situations. It also serves as a tool for teachers to evaluate students. During the 2013/2014 academic year, the competence check went through a live trial during normal operations. Beginning with the next academic year, it will be performed on a regular basis in the 6th and 10th semesters.

Quality management in the Alps

At the Alpbacher Higher Education Symposium in August 2014, Vice-Rector Petra Winter, together with educational psychologist Christiane Spiel, presented the veterinary medical competence check. The topic of quality management in teaching was received by the Alpbacher audience with a great deal of interest.

Additionally, the University continually evaluates the quality of courses by surveying students and teachers and offering an optional exam for students to test their knowledge. Students assess their academic progress once a year by taking the progress test in veterinary medicine.







Tactical academics

With regard to teaching, the Vetmeduni Vienna is ahead of the curve. To remain in a forerunner position, the University offers a platform for educational topics and honours outstanding teachers with prizes.

Impulse for university-level teaching

Committed lecturers, who can apply state-ofthe-art educational insights to their classes are the foundation for excellent teaching. Valuable information about educational topics is provided at monthly "Impulse Breakfasts", so that educators keep abreast of the latest developments in the field. These breakfasts feature internal experts, as well as external specialists from institutions such as the Medical University of Vienna, the VetSuisse Faculty of the University of Zurich or the Centre for Educational Didactics and Methodology at the Zurich University of Applied Sciences. The lectures are recorded on video and may be downloaded over the Internet at any time.

Prizes for successful teachers

To emphasize the importance placed on teaching, the Vetmeduni Vienna annually honours its best teachers and instructors. Representatives from the Office of the Vice-Rector for Study Affairs and Clinical Veterinary Medicine, students and the previous year's honourees take part in selecting the winners. Monetary prizes amounting to about 12,000 euros are awarded by the Department of Cultural Affairs of the City of Vienna.



First place in the category Senior Teachers of the Year (with habilitation) in 2014 was awarded to Eva Eberspächer of the Clinical Unit for Anaesthesiology and perioperative Intensive-Care Medicine.

First place in the category Junior Teachers of the Year was awarded to Frank Künzel of the Clinical Unit for Internal Medicine Small Animals.

The category Instructor of the Year honours veterinarians from outside of the University who educate students in the framework of their mandatory internships. First place went to Kurt Ganzberger of the Veterinary Centre in Essling.

The Vetucation® Award singles out particularly innovative e-learning projects. In 2014 this award went to Anja Joachim and Katja Silbermayr (both from the Institute of Parasitology) and Alexandra Scope (Clinical Unit for Internal Medicine Small Animals). (Photo left to right: Katja Silbermayr, Alexandra Scope)









Clinically proven – hands-on education

The new curriculum emphasizes practical, hands-on education. Working first on dummies, then on live animals – students of veterinary medicine learn hands-on skills. Modern IT systems simplify the students' daily routines.

Practicing on a canine dummy

Only part of the Vetmeduni Vienna education takes place in lecture halls and seminar rooms. Students first work towards attaining clinical proficiency in the VetSim training centre. In specially outfitted practice rooms, students working alone or in the context of a course can practice taking blood or measuring a pulse on a canine dummy. In 2014 a decision was reached to acquire a birth assistance simulator, on which students can practice birthing a calf. Practicing these and other skills on models also makes sense for reasons of animal welfare. Once the manoeuvres have become automatic through practice on a "phantom" animal, students can broaden their clinical skills at the University Clinics on campus and also at the University's four agricultural facilities in Lower Austria.

The number of students is limited

Hands-on work is only possible in small groups, which is why the Vetmeduni Vienna for a long time has carried out a multi-step acceptance process for all the courses of study offered. In addition to performance on a knowledge test, the candidate's grades, statement of motivation and career experience are weighed. If an applicant still hasn't made the short list by then, he or she can try to secure a spot by participating in a personal interview.

Good-bye paper – electronic, not bureaucratic

Beginning with the 2014/2015 winter semester, the Vetmeduni Vienna instituted an electronic student identification card. The VetmedCard allows electronic communication of admissions status directly at the Student Services terminal. University Clinic shifts also can now be planned with electronic support. Students use a central calendar to manage their mandatory day and night shifts in the framework of their clinical exercises. The clicker system used in the lecture halls of the Vetmeduni Vienna has already proven its worth. Teachers can use this classroom response system to actively involve even large groups in classroom instruction. Students answer multiple choice questions by pushing a button. They select their answer by pressing on the clicker and a short time later can see if their answer was correct. The new curriculum mandates interactive classroom instruction in the lessons.

Studies and career options – the University informs

The University offers many informational events to apprise attendees of the manifold possibilities for studies at the Vetmeduni Vienna and, hence, the wide range of career options available to graduates. Last year students again presented the available courses of study at established academic fairs throughout Austria. At the Master21 informational event held at the Vetmeduni Vienna campus in January 2014, professors and students together shared information about the master's degree programmes at the Vetmeduni Vienna. And adolescents could once again take part in the weeklong Science Camp on campus and gain insight into farm animal medicine.



	Courses of study	† †	Applicants		†	Admissio	ns
	2014	Total	Women	Men	Total	Women	Men
D	Diploma programme in veterinary medicine	1,311	1,077	234	203	159	44
B	Bachelor's programme in biomedicine and biotechnology	135	94	41	27	17	10
B	Bachelor's programme in equine sciences	74	70	4	25	23	2
M	Master's programme in human-animal interactions	41	39	2	13	12	1
M	Master's programme in biomedicine and biotechnology	55	37	18	14	11	3
	Total	1,616	1,317	299	282	222	60

Admissions for the master's programme in wildlife ecology and wildlife management and the master's programme in comparative morphology are not administered by the Vetmeduni Vienna, so no data are available.



Outstanding students

Exceptional student achievement deserves recognition. Here are the most significant honours awarded in 2014.

Students of the Year

The students with the best performance in an academic year are awarded the distinction Students of the Year. The Office of the Rector uses grade point average and number of years of study as evaluation criteria. In 2014 the following students won the 1,000-euro prize (from left to right): Magdalena Kyora (veterinary medicine), Hanka Lange (veterinary medicine), Claudia van Zadelhoff (veterinary medicine), Benjamin Spurny (bachelor's degree programme in biomedicine and biotechnology).





Talented students scholarship

Students in the second or third segment of their course of studies, who are taking the standard course load and earn particularly good grades, can apply for a 2,000-euro talented students scholarship endowed by the Society of Friends of the Vetmeduni Vienna. Recipients of this year's stipend are (from left to right): Svenja Springer, Claudia Lecher and René Rosenauer (not pictured).

"Würdigungspreis" of the Federal Ministry of Science

For her outstanding academic achievement, Angela Lemke, graduate of the master's degree programme in biomedicine and biotechnology, received the 2,500-euro award "Würdigungspreis" of the Federal Ministry of Science. (Pictured with Heribert Wurz, deputy head of the higher education section of the Federal Ministry of Science, Research and Economy)



DMW

Award of Excellence

In 2014 Evelyne Mann-Selberherr of the Institute of Milk Hygiene of the Vetmeduni Vienna was the recipient of the 2,500-euro Award of Excellence. Every year the Federal Ministry of Science honours the 40 best doctoral candidates in Austria. (Pictured left to right: Elmar Pichl, head of the higher education section of the Federal Ministry of Science, Research and Economy; Evelyne Mann-Selberherr, PhD adviser Martin Wagner)



Vetmeduni Success Scholarship

Doctoral candidate Ursula Glantschnigg received the Vetmeduni Vienna's Success Scholarship. She is writing her dissertation on the topic of feline epilepsy at the University Clinic for Small Animals; the University will support her in this endeavour for an entire year with a stipend of 14,000 euros.



International University

The Vetmeduni Vienna is the only higher education institution for veterinary education in all of Austria. Being able to study at partner institutions in other countries, complete an internship or conduct research is almost a must nowadays in the field of veterinary medicine.

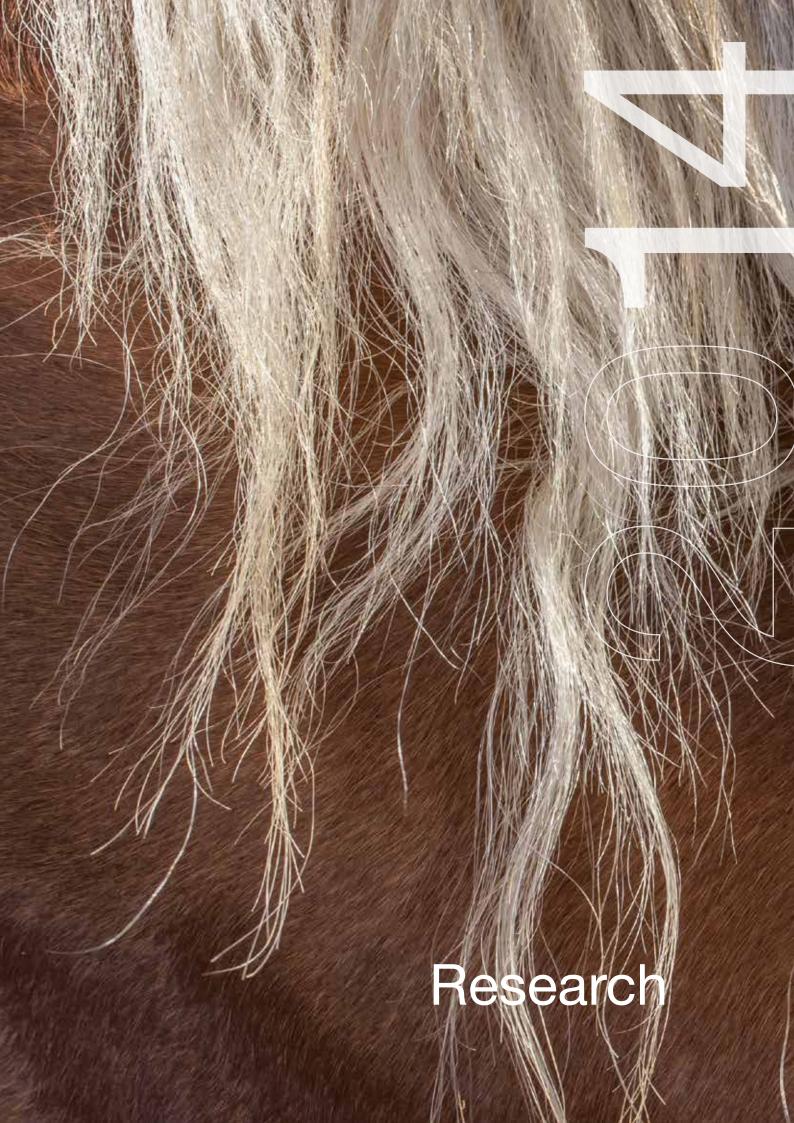
In 2014 the Vetmeduni Vienna committed its internationalization strategy to paper. It establishes the importance of international networking in the areas of teaching, research and patient care. In the new curriculum for veterinary medicine, a built-in "mobility window" virtually issues a formal invitation to spend time abroad:

In the fifth year of study, a time span of 14 weeks is deliberately cleared of classes and examinations, so that students can more easily partake in clinical internships or research sojourns at other universities.

The mandatory clinical internships are particularly well suited to studying abroad. Some students of veterinary medicine even have the possibility of working with exotic animals, in South Africa for example.



Christina Bredtma



Research

One Health – Research for Animal and Human Health

Veterinarians' work takes place where animals, humans and the environment intersect. Their research efforts foster animal health and contribute to food safety. Newly developed treatment methods are beneficial for humans as well as animals. One Health is the name of this strategy.

Vaccinations for chickens and turkeys

Chickens and turkeys ought to be happy and healthy. Since the use of medications in food animals is strictly regulated within the EU, prevention is becoming increasingly more important. So that animals do not become sick in the first place, the team in the Clinical Unit for Poultry Medicine is doing research on vaccines to protect against certain infectious diseases. In the Christian Doppler Laboratory (CD

Laboratory), which was opened officially in March 2014, the researchers on Professor Michael Hess's team are working towards developing marketable vaccines for blackhead disease (histomoniasis) and adenovirus infections. Funding from the Federal Ministry of Science, Research and Economy, the sponsor of the CD programme, and industry partner Vaxxinova have been successful in keeping the research results achieved to date on track.



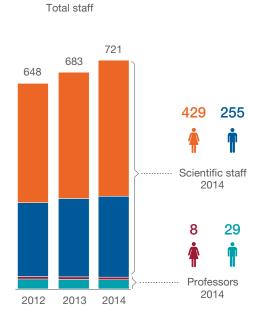
Honorary guests at the opening of the CD Laboratory (from left): Rector Sonja Hammerschmid; Michael Hess (head of the laboratory); Ulrike Unterer (Christian Doppler Research Association); Jan Wesjohann (from the industry partner EW Group); Ulrich Herzog (Federal Ministry of Health); Vice-Rector Otto Doblhoff-Dier

Big data in the byre

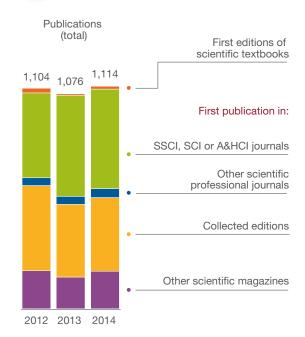
Milk's journey from healthy cows to a safe nutritional item is being scientifically overseen via a new project. Named ADDA (Advancement of Dairying in Austria), the project seeks to improve the quality of milk production and is supported by a consortium of numerous partners from science, agriculture, industry and the public sector. Launched in September 2014, this major project investigates the future implementation of data management in agricultural operations – for "big data" may be found there as well. A milk cow is precisely monitored and delivers large data volumes:

composition of feed, quality of raw milk, breeding value and state of health are routinely recorded. What conclusions can be drawn from analysing these data streams is the subject of investigation by researchers working on this new project, which is financially supported by the Austrian Research Promotion Agency (FFG) and funding from project partners. Other key topics in milk production and thus, of the ADDA project, are: healthy udders, optimal breeding and safe and high-value feed. The project is being coordinated by Professor Martin Wagner of the Vetmeduni Vienna's Institute of Milk Hygiene.











Current research topics

Vetmeduni Vienna researchers were especially active in 2014 and successfully applied for research funding for a plethora of projects. Below is a listing of selected projects.

On heart and bones

Heart failure is one of the most widespread illnesses affecting humans in the western world. In order to develop suitable treatments, the molecular mechanisms underlying disease progression must be precisely understood. In her project. Olena Andrukhova from the Unit of Physiology, Pathophysiology and Experimental Endocrinology focuses on the recently discovered correlation between cardiovascular pathophysiology and mineral metabolism. The hormone FGF23, which is formed in the bone marrow and normally regulates vitamin D production in the kidneys, is central to investigating the causes of heart attacks. Research shows that when rats and mice have acute myocardial infarctions, the concentration of FGF23 circulating in the blood was significantly elevated, while the level of vitamin D had dropped. This research project will study the

role of elevated FGF23 after a heart attack. The roles played by renal reabsorption of sodium and vitamin D production should be elucidated in this complex interaction as well.

Protein research for healthy rainbow trout

Enteric redmouth disease (ERM) is a disease in rainbow trout caused by the bacterium Yersinia ruckeri. This disease leads to significant economic losses in the aquaculture business. Thus it is urgently necessary to understand the biochemical changes taking place in diseased fish. Gokhlesh Kumar of the Clinical Unit of Fish Medicine and his team are investigating those proteins in fish that bring about biochemical changes in tissues and cells. The project aims to compare and study the protein profiles of infected and not infected rainbow trout. This should make it possible to clarify the biochemical changes and to analyse the mechanisms of action of the proteins whose expression has been altered due to the infection. In the future, it should be possible to use the proteins identified in this way for the development of biomarkers and treatment approaches.



Pathways for breast cancer genesis

High-throughput technologies have identified new genes with potential relevance for the treatment of many tumours. Studies show that changes in the so-called JAK/STAT signalling pathways play a significant role in the emergence of breast cancer and in the growth of tumours. Thus far, the exact function of JAK/ STAT in the development of breast cancer is not well known. The working group around Zsuzsanna Bago-Horvath at the Institute of Pharmacology and Toxicology is searching for the molecular factors leading to the development of breast cancer. The focus is on the proteins STAT1 and IRF-1 (interferon regulatory factor 1). Both play an important role in cell proliferation and in the interaction between tumour cells and the immune system. The goal of the new project is to research the reciprocal interaction between STAT1 and IRF-1 and to investigate its significance for tumour growth and the efficacy of breast cancer treatments.

Coding native species

The goal of the "Austrian Barcode of Life" (ABOL) project is to digitize the biological diversity of Austria's fauna and flora across its entire bandwidth. All of Austria's animal, plant and mushroom species are to be catalogued via DNA barcoding and made available in an online database. The DNA sequence (barcode) determined through this process is unique to each species and functions as a signature. Anja Joachim of the Institute of Parasitology is heading up the ABOL pilot project "Parasitic Worms". Most parasitic worms, for example tapeworms and roundworms, are characterized by high adaptability to and longevity in their host. Parasitic worms in wild animals have not been thoroughly researched in Austria. Surveying genetic diversity should make it easier in the future to identify relationships, discover new species and classify all forms of life in a genetic network. The Vetmeduni Vienna is implementing the ABOL project in cooperation with the Natural History Museum of Vienna, the University of Graz and the Tyrolean State Museum.

DNA barcoding is a molecular-biological method for the determination of species. To do so, DNA is isolated from the cells of an organism. A certain segment of DNA, the DNA barcode, serves as a signature for a particular species and is stored in a database. The database in turn can be used to match tissue samples to a species.

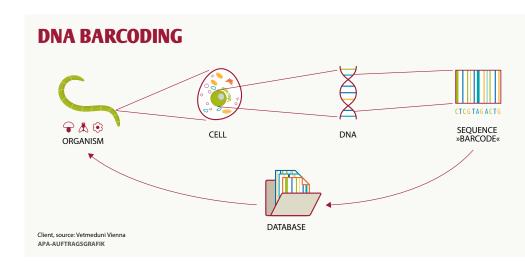




Photo: @ Heik

Tendon injuries – healing without scarring

Tendon injuries are among the most frequent injuries to the musculoskeletal system in humans, and also in horses. Athletes are especially often subject to such injuries. With the treatments currently available, injured tendon tissue does not fully heal in adult humans or animals. By contrast, tendon injuries in foetuses regenerate without scarring. In adult organisms there is always scarring. Tendons are less elastic; as a consequence, reinjury rates are high. Thus the treatment of tendon injuries in the field of sports medicine is problematic in horses and also in humans. Florien Jenner, head of the University Equine Clinic, and her team are doing a comparison of tendon healing in adult and foetal organisms with the goal of identifying key factors differentiating the ways foetal and adult tendons heal. Furthermore, the team is studying whether the knowledge generated by their research has future applicability for treatment. Sheep are being used as stand-ins for horses and humans.

Underrated pigs?

Pigs are very social animals. They live in communities, learn from one another, cooperate and are thus in a position to act strategically. In a comprehensive project, the Messerli Research Institute of the Vetmeduni Vienna is undertaking an initial study of the social and intellectual abilities of free-range pigs. The wellbeing of the pigs and the interpretation of the research results from an ethical perspective are part of this interdisciplinary study, in which all three units of the Messerli Research Institute are involved (Comparative Cognition, Comparative Medicine and Ethics and Human-Animal Studies). The pigs to be investigated belong to the Kunekune breed. Originating in New Zealand, these pigs are kept in pastures and natural social groups at the Vetmeduni Vienna's Haidlhof Teaching and Research Farm. Keeping pigs in this way provides a diverse and natural environment in which the animals can fully utilize their abilities - an essential prerequisite for generating valid research results. The project is being led by Ludwig Huber of the Unit of Comparative Cognition.



Sport horses are particularly prone to tendon injuries. Florien Jenner and her team are studying the rudiments of tendon healing.

More mobility for farrowing sows

One day prior to giving birth, pregnant sows become restless. They prepare a nest for their offspring. Sows in the gestation crate systems typically used today cannot adequately indulge in this genetically programmed flurry of activity. They are confined in narrow crates to minimize the risk of smothering their piglets. This dramatically reduces their wellbeing, however. The Pro-SAU project is investigating measures for improving the sows' situation with the goal of finding a common denominator between livestock farmers' economic interests and the animals' wellbeing. Under the direction of Johannes Baumgartner of the Institute of Animal Husbandry and Animal Welfare, the researchers are evaluating four types of farrowing crates with confinement periods of varying lengths of time. A control group will not be confined at all. The objective is to determine the shortest possible confinement period and the most suitable gestation crate types with the stipulation that piglet mortality may not increase in comparison to permanent confinement of sows. Agricultural chambers, agricultural operations and crate manufacturers are taking part in the evaluation together with the research institutions.

Mating and brooding behaviours in fish

Some animals raise offspring to which they are not related. Explaining this behaviour represents a singular challenge for evolutionary biologists. Together with her colleagues, Franziska Lemmel-Schädelin of the Konrad Lorenz Institute of Ethology is studying the ecological and social environmental factors of this broodcare helper behaviour in fish. Since there has been no comprehensive explanation to date for this phenomenon in the animal kingdom, the researchers plan to alter the environmental conditions around a monogamous species of fish in ways that induce the fish to begin to develop broodcare helper behaviours and polygamy. They subsequently plan to perform the same set of experiments on a polygamous species of fish with broodcare helper behaviour. These experiments are designed to identify key factors that induce and enable various mating and brooding systems.



o: © Felizitas Steindl / Vetmeduni Vienr



Competitive advantage through cooperation

Cooperation is the name of the game in the international competition for research funding. Moreover, complex research questions can only be answered by reaching across interdisciplinary boundaries. Networking is of particular importance for Austria's sole veterinary medical university.

The Haidlhof research station studies social behaviour

The Haidlhof research station in Lower Austria, a successful alliance between the Vetmeduni Vienna and the University of Vienna, has become an international showcase for comparative behavioural research. Scientists from Europe, America, Asia and Australia come to Haidlhof to do research on the intelligence and social behaviour of keas (alpine parrots), ravens and, more recently, free-range pigs. Extensive renovations began there in 2014, financed with structural funding for higher education awarded in 2013 by the Federal Ministry of Science. The fully equipped bioacoustics laboratories and the adapted stalls will be finished in 2015.

Proper handling of wild birds

To what does one need to pay attention when coming into contact with wild birds? Which infectious diseases can wild birds transmit to humans? The trans-border project "Training Centre for Avian Medicine" (TAV) sought to answer these and countless other questions; it concluded in the year 2014 with a scientific symposium at the Vetmeduni Vienna. The main goal of the Czech-Austrian alliance between the Vetmeduni Vienna (University Clinic for Poultry and Fish) and the University of Veterinary Medicine and Pharmaceutical Sciences in Brno and the State Veterinary Institute Jihlava was to analyse zoonotic pathogens in the border region and to formulate a set of preventive behavioural recommendations for the populace.



On 1 October 2014, world-renowned chimpanzee researcher Jane Goodall visited the Haidlhof research station. In October, Vice Chancellor and Minister of Science Reinhold Mitterlehner and Governor Erwin Pröll saw the internationally recognized behavioural research projects for themselves.

Poultry research between Vienna and Keszthely

Despite being located in adjacent countries, the Vetmeduni Vienna and the Georgikon Faculty of the University of Pannonia in Keszthely, Hungary, only came together through the EU-financed project "Centre of Excellence for Poultry" (CEPO). Through CEPO, the Hungarian researchers contributed their know-how about improvements in poultry nutrition, while the Viennese scientists weighed in with their experience in animal health and their knowledge of molecular biology. After more than three years, the project concluded in June 2014 with a closing conference in Vienna. The result of the collaboration: exchange of knowledge and experience between students and teachers of both countries, advising poultry operations, joint authorship of scientific papers and many useful personal contacts.

What is a sunset in the Alps worth?

Fresh air, clean water and avalanche protection have an economic value. In this regard the Alps render so-called ecosystem services. The EU greenAlps project was concerned not only with the economic utilization of the alpine landscape, but also with the value of nature in and of itself, with the value of a living creature or a pageant of nature. In the fall of 2014, a conference was held in Chambery, France, to wrap up the two-year-long project, which included substantial participation by scientists from the Vetmeduni Vienna's Research Institute of Wildlife Ecology. The greenAlps project partners formulated ten recommendations designed to help policymakers make sustainable and efficient decisions to preserve biodiversity in the Alps.

A specialized research facility for horses

In 2014 researchers at the Graf Lehndorff Institute for Equine Science decided to find out whether it makes a difference if a horse is ridden by a man or a woman. This joint research facility of the Vetmeduni Vienna and the Brandenburg Stud Farm Foundation in Neustadt (Dosse), Germany, reached a definitive conclusion: none. In their published paper the researchers showed that it makes no difference whether a show horse is ridden by a man or a woman; the stress parameters remain the same. Other topics studied by this specialized research facility are reproduction and breeding (managing the birth and adapting the newborn to his environment, bacterial genetic infections in horse breeding), also horse husbandry and animal welfare (gender-based behavioural differences in colts and fillies). The Graf Lehndorff Institute is also actively involved in the education of students of veterinary medicine and equine science.

Life science network BIOS supports bee research

The *Varroa* mite plays a central role as a honeybee pest, since it destroys the bee brood and transmits dangerous viral illnesses. In a research project sponsored by BIOS Science Austria, the Vetmeduni Vienna's Institute of Virology, in cooperation with the Austrian Agency for Health and Food Safety (AGES), is investigating the interplay between viruses, bees and *Varroa* mites. The BIOS Science Austria Association bundles research activities in the life sciences in Austria. The Vetmeduni Vienna is one of the founding members, along with AGES, the University of Natural Resources and Life Sciences and the Federal Ministry of Life and its agencies.



Photo: @ Micha

New research projects

The following new research projects at the Vetmeduni Vienna either began or received funding approval in 2014.

Funding agency	Title	Project leader
BMLFUW	Development and Evaluation of a feeding strategy based on sugar-rich hay for dairy cows in early lactation	Qendrim Zebeli
BMLFUW	Wolf-hunt communication	Felix Knauer
BMLFUW	Diagnosis and prevention of the genetic defect in the PSSM complex in breeding Austrian Noriker horses	Gottfried Brem
BMLFUW	Evaluation of farrowing pens with temporary crating of the sow	Johannes Baumgartner
BMLVS	Identification of a papillomaviral aetiologic of equine ocular squamous cell carcinoma	Sabine Brandt
BMWFW	The Austrian Barcode of Life	Anja Joachim
BMWFW	National hub of the european biobanking and biomolecular resources Research infrastructure BBMRI-ERIC	Ingrid Walter
Canine Health Foundation American Kennel Club	Identification of a Lipid Receptor in the Canine Endometrium to Support Non-Invasive Therapy in Pyometra	Cordula Bartel
CDG	CD Laboratory for innovative Poultry Vaccines	Michael Hess
DFG	Phänotypische Variation	Christian Schlötterer
EU - LIFE +	Population Level Management and conservation of brown bears in northern Dinaric Mountains and Alps	Felix Knauer
FFG	Development of a vaccine strategy to combat neonatal Isosporosis in pigs	Anja Joachim
FFG	Herbs & Milk - Project: Investigations of volatile compounds on phytogenetic feed additives, milk and cheese	Bettina Fähnrich
FFG	ADDA - Advancement of Dairying in Austria	Martin Wagner
FFG	Establishing a scoring scheme in order to monitor health of laying hens at slaughter	Beatrice Grafl
FFG	Tailor-made oncyolytic viruses in cancer immunotherapy	Sabine Brandt
FWF	Investigating the role of PIDDosome	Veronika Sexl
FWF	Stat1ioning Irf1 in mammary tumorigenesis and therapy response	Zsuzsanna Bago-Horvath
FWF	Role of FGF23 in Acute Myocardial Infarction	Olena Andrukhova
FWF	Population genetics of piRNAs iin Drosophila	Andrea Betancourt
FWF	Wolbachia infection Dynamics in evolving Drosophila populations	Christian Schlötterer
FWF	Between the Aphrodite temple and the late aechaic house II	Gerhard Forstenpointner
FWF	Proteomics of rainbow trout in Response to Yersinia ruckeri	Gokhlesh Kumar
	Ecological constraints and flexibility of fish breeding	Franziska Lemmel-Schädeli

Funding agency	Title	Project leader
FWF	Effects of PUFA on hibernation and aging	Sylvain Giroud
FWF	The Lacanian animal	Herwig Grimm
HSJS	Does Light Pollution affect the Breeding Performance of wild Blue Tits (yanistes caeruleus) in the Viennese Forest?	Katharina Mahr
KELDAT	Comparison of different didactic strategies in education of clinical lameness detection and -graduation in horses	Theresia Licka
KELDAT	Does self instructed learning of Basics Ventilation concepts and skills by means of a novel Simulator improve competencies of undergraduate students?	Yves Moens
MS	Socio-cognitive abilities of pigs	Ludwig Huber
NFB	Oviductal molecules in reproduction	Corina Mayrhofer
NÖ	Black grouse - habitat Evaluation (GIS modelling) as a Basis for Habitat improvement and conservation as well as restocking/reintroduction of black grouse in the Waldviertel region	Susanne Reimoser
OeAD	A sweet treat for cows	Annabella Khol-Parisini
OeAD	Tendon Injuries – scaring repair and scarless regeneration	Florien Jenner
WKW	Innovative method of estrogen measurement for oestrus detection in cattle	Karen Wagener

N.b. The table shows a partial list of research projects that received funding approval in 2014. Due to confidentiality clauses, not all projects could be listed.

BMLFUW Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management

BMLVS Austrian Federal Ministry of Defence and Sports

BMWFW Austrian Federal Ministry of Science, Research and Economy

CDG Christian Doppler Research Association

DFG German Research Foundation

EU - LIFE + LIFE + programme of the European Commission

FFG Austrian Research Promotion Agency

FWF Austrian Science Fund
HSJS Vienna Anniversary Foundation

HSJS Vienna Anniversary Foundation for Higher Education

KELDAT Centre of Excellence for E-Learning, Didactics and Educational Research in Veterinary Medicine funded by the VW/Mercator Foundation

MS Messerli Foundation

NFB Research and education society of Lower Austria

NÖ Province of Lower Austria

OeAD Austrian Agency for International Mobility and Cooperation

WKW Economic Chamber Vienna



The world of science on campus

Coming into contact with researchers around the world is an important prerequisite for a scientific career. This is made possible not only through sojourns abroad, but also by participating in international conferences hosted by one's own university.

United against epizootic diseases and antibiotic resistance

In a networked world, topics in the field of veterinary public health can only be tackled internationally. In February the Institute of Veterinary Public Health at the Vetmeduni Vienna, together with the Austrian Agency for Health and Food Safety (AGES) and the Federal Ministry of Health, organized a high-powered continuing education event. More than 250 guests from all areas of veterinary medicine took part in the Veterinary Public Health Symposium, which focused on topics of epizootic disease monitoring and the use of antibiotics in livestock.

The human-animal relationship viewed globally

In July 2014 the Messerli Research Institute of the Vetmeduni Vienna together with the Work Group for Human-Animal Relationships at the University of Vienna hosted a satellite meeting in the framework of the 23rd Annual ISAZ (International Society for Anthrozoology) Conference. Key themes were cognitive and behavioural research, also comparative medicine and ethics. The anthrozoologists discussed the cognitive abilities of different species and the consequences for our dealings with animals, the moral capabilities of animals and the exploitation or anthropomorphizing of animals.



<arin Bayer / Vetmeduni Vienna



Efficacious medicinal plants

Taking as its motto "Innovation along the supply chain", in September 2014 the Institute of Animal Nutrition and Functional Plant Compounds organized a professional conference about medicinal and herbal plants. This forum for interdisciplinary scientific exchange on the topic of phytopharmacology drew much notice and attracted over 100 participants from Austria and neighbouring countries. The conference made important contributions towards enabling scientific insights to be converted into product innovations and towards integrating research along the entire supply chain. The challenge in phytopharmacology lies in producing an end product that is both efficacious and homogeneous.

Therapy with dogs

Animal-supported therapy opens numerous scientifically proven options for working with sick people and people in difficult life situations – be it in schools, in the social-pedagogic and psychotherapeutic or other realms. The necessary prerequisites for deploying animals in a species-appropriate manner and for improving human-animal interactions was the topic of discussion by national and international experts at the 7th International Animals as Therapy Symposium, held in September 2014 on the Vetmeduni Vienna campus.

50 years of anaesthesiology in Europe

In September 2014 the European Association of Veterinary Anaesthetists (AVA) celebrated its 50th anniversary jubilee at the Vetmeduni Vienna. The celebration took place in the framework of the AVA's autumn conference, which, with its many presentations, discussions, poster presentations and an attractive supplementary programme, again enticed numerous experts from around the world to visit Vienna. The conference was organized by the Clinical Unit of Anaesthesiology and perioperative Intensive-Care Medicine.



noto: © AV



Honours for researchers

Veronika Sexl appointed to the EMBL Council

Since May 2014 Veronika Sexl, Professor of Pharmacology and Toxicology at the Vetmeduni Vienna, has been one of two Austrian delegates to two renowned international research organizations. She was appointed as a scientific adviser to the Council of the European Molecular Biology Laboratory (EMBL) and to the Council of the European Molecular Biology Conference (EMBC). Her assignment: to help shape the strategic and scientific direction of these organizations.

Scientific prizes awarded by the Office of the Rector

At the summer festival, it has become a tradition for the Office of the Rector to honour the staff members of the year for excellence in the following areas: "Third-party fundraising", "Citations" and "Inventor of the Year". The prizes are awarded in two age groups in the clinical and non-clinical institute categories.



The most third-party funds in 2013/2014 were acquired by:

- Knut Niebuhr, Institute of Animal Husbandry and Animal Welfare (category: non-clinical, > 35 years old)
- Hans-Peter Führer, Institute of Parasitology (category: non-clinical, < 35 years old)
- Michael Hess, Clinical Unit of Poultry Medicine (category: clinical, > 35 years old)
- Christina Nagel, Insemination and Embryo Transfer Platform (category: clinical, < 35 years old

The most citations in 2013/2014:

- Norbert Nowotny, Institute of Virology (category: non-clinical, > 35 years old)
- Katharina Brugger, Institute of Veterinary Public Health (category: non-clinical, < 35 years old)
- Christine Aurich, Insemination and Embryo Transfer Platform (category: clinical, > 35 years old)
- James Rushton, Clinical Unit of Small Animal Surgery (category: clinical, < 35 years old)

Inventor of the Year 2014:

- Armin Saalmüller & team, Institute of Immunology: Monoclonal antibodies against swine antigens (Soft Intellectual Property)
- Michael Hess & team, Clinical Unit of Poultry Medicine: Treatment of parasitic illnesses in birds (Hard Intellectual Property)

Honourees and nominees enjoy the recognition bestowed by the Office of the Rector through its scientific prizes

External scientific prizes

Award	Honouree	Organizational Entity
Agricultural Computer Science Prize 2014 by the German Association for Computer Science in the Agricultural and Nutritional Sciences for a dissertation	Beate Pinior	Institute of Veterinary Public Health
Animal Welfare Prize of the Austrian Federal Ministry of Health	Barbara Benett	Graduate of the University course "Studies in Cynology"
Armin Tschermak von Seysenegg-Prize of the Society of Friends of the Vetmeduni Vienna	Eva Maria Putz	Institute of Pharmacology and Toxicology
Award of Excellence of the Austrian Federal Ministry of Science (BMWFW)	Evelyne Mann-Selberherr	Institute of Milk Hygiene
Best clinical study at the annual conference of the Austrian Small Animal Veterinarians Association (VÖK)	Matthias Schweda	Clinical Unit of Small Animal Surgery
Best diploma thesis, awarded by the Austrian Buiatric Society (ÖBG)	Johanna Dietrich Johanna Glonegger-Reichert	both from the Clinical Unit of Ruminant Medicine
Best poster award by the German Society for Laboratory Animal Science (GV-SOLAS)	Sophie Schober, Thomas Kolbe and Thomas Rülicke	Institute of Laboratory Animal Science
Best poster (clinical case) at the annual conference of the Austrian Small Animal Veterinarians Association (VÖK)	Christa Horvath-Ungerböck	Clinical Unit of Internal Medicine Small Animals
Best resident presentation at the ANEMBE International Congress (National Association of Bovine Medical Specialists of Spain)	Alexandra Hund	Clinical Unit of Ruminant Medicine
Best resident presentation at the meeting of the European College of Veterinary Surgeons (ECVS)	Georg Haimel	Clinical Unit of Small Animal Surgery
Best scientific poster at the annual conference of the Austrian Small Animal Veterinarians Association (VÖK)	Nikola Katic	Clinical Unit of Small Animal Surgery
Dr. Hermann-Zittmayr Prize	Peter Rossmanith	Institute of Milk Hygiene
Dr. Maria Schaumayer Foundation – Outstanding PhD thesis	Evelyne Mann-Selberherr	Institute of Milk Hygiene
Friedrich Heuck Osteology Prize 2014	Olena Andrukhova	Unit of Physiology, Pathophysiology, and Experimental Endocrinology
Heimtierpreis (companion animal prize) 2014 of the Society of Friends of the Vetmeduni Vienna	Denise Aydinonat	Institute of Medical Biochemistry
Hygiene Prize of the Austrian Association for Hygiene, Microbiology and Preventive Medicine (ÖGHMP)	Stephan Schmitz-Esser	Institute of Milk Hygiene



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Award	Honouree	Organizational Entity
Josef Leibetseder Prize of the Animals as Therapy Association	Lisa Maria Glenk	Messerli Research Institute
Kardinal Innitzer Prize	Evelyne Mann-Selberherr	Institute of Milk Hygiene
Livestock Prize of the Society of Friends of the Vetmeduni Vienna	Dagmar Pieler Lukas Schwarz	Insemination and Embryo Transfer Platform University Clinic for Swine
Novartis Prize of the German Association for Pathology	Research group of Lukas Kenner	Pathology of Laboratory Animals
Prize for the best abstract – Austrian Society for Haematology and Oncology	Emir Hadzijusufovic	Clinical Unit of Internal Medicine Small Animals
Prize for the best poster in the field of ecology – German Zoological Society (DZG)	Jessica Svea Cornils	Research Institute of Wildlife Ecology
Prize of the Austrian Cynology Association (ÖKV) and the Red Paw Society – cancer research for animals	Judith Fazekas	Messerli Research Institute
RECOM Innovation Prize for the Centre of Excellence in Poultry (CEPO) project	Michael Hess and team	Clinical Unit of Poultry Medicine
Research stipend of the Lower Austrian Farmers Alliance	Salome Troxler	Clinical Unit of Poultry Medicine
Young Investigator Award of the American Society of Bone and Mineral Research (ASBMR)	Sathish Kumar Murali	Unit of Physiology, Pathophysiology, and Experimental Endocrinology
Young Scientist Award of the European Advisory Board on Cat Diseases (ABCD)	Katja Silbermayr	Institute of Parasitology
Young Scientist Award of the University Teachers Association of the Vetmeduni Vienna	Annika Posautz	Clinical Unit of Conservation Medicine



University Clinics Ity Clinics

The University Clinics – the "General Hospital" for Animals

Round-the-clock medical care, emergency treatment, deployment of professional expertise – the University Clinics of the Vetmeduni Vienna perform these and many other services for their animal patients every day, morning to night, all year long.

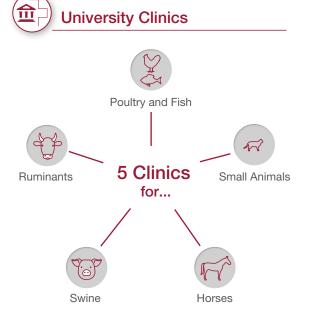
For special veterinary medical cases

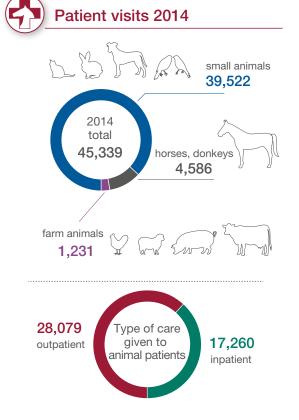
From dogs to geckos, chickens to cows – in 2014 more than 45,000 animal patients of all types received medical care at the University Clinics of the Vetmeduni Vienna. More than one third of these patients were admitted and cared for around the clock by veterinary medical specialists and animal care personnel.

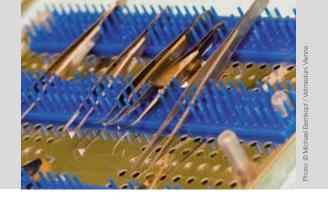
For special cases, each of the five speciesspecific Clinics employs specialized veterinarians, whose work utilizes the latest scientific findings. In addition to veterinary medical care and teaching, research is a central function of the University Clinics. New insights directly benefit animal patients.











Specialized veterinarians with international diplomas

Whether ophthalmology, reproductive medicine or small animal surgery - these and other specialized fields of veterinary medicine require further post-graduate education. The socalled residency education programmes are available to graduates of veterinary medical schools and allow them to acquire clinical and scientific expertise and to receive an international diploma. The Vetmeduni Vienna offers courses of study in 14 specialized areas - in accordance with curricula that are standardized across Europe. The individual European Colleges for Veterinary Specialisation responsible for a specific area of specialization define the educational standards for all veterinary residents in Europe and administer the final examination. Students who pass the examination at the end of a 3- to 4-year course of studies graduate with the title of diplomate. In 2014, the Vetmeduni Vienna employed 69 diplomates and 17 residents.



Residency programmes



ANIMAL REPRODUCTION **ECAR** (European College of

Animal Reproduction)

The Vetmeduni Vienna offers courses of study in 14 areas of specialization.



VETERINARY ANAESTHESIA AND ANALGESIA **ECVAA**

(Furopean College of Veterinary Anaesthesia and Analgesia)



POULTRY VETERINARY SCIENCE **ECPVS** (European College of

Poultry Veterinary Science)



EQUINE INTERNAL MEDICINE ECEIM

(European College of Equine Internal Medicine)



CLINICAL PATHOLOGY **ECVCP** (European College of Clinical Pathology)

PORCINE HEALTH MANAGEMENT **ECPHM** (European College of Porcine Health Management)



VETERINARY INTERNAL MEDICINE. COMPANION ANIMALS

ECVIM-CA

(European College of Veterinary Internal Medicine, Companion Animals)



VETERINARY PARASITOLOGY **EVPC**

(European Veterinary Parasitology College)



BOVINE HEALTH MANAGEMENT **ECBHM** (European College of Bovine Health Management)



VETERINARY SURGERY LARGE ANIMALS - EQUINE **FCVS** (European College of

Veterinary Surgery, Large Animals - Equine)



VETERINARY PATHOLOGY **ECVP** (European College of Veterinary Pathology)



VETERINARY INTERNAL MEDICINE COMPANION ANIMALS, ONCOLOGY ECVIM-CA, Oncology (European College of Veterinary Internal Medicine Companion Animals, Oncology)



VETERINARY SURGERY, SMALL ANIMALS **ECVS** (European College of Veterinary Surgery,

Small Animals)



VETERINARY OPHTHALMOLOGY **ECVO** (European College of Veterinary Ophthalmology)

Efficient care of animal patients

In order to provide optimal care to an evergrowing number of animal patients, the University Clinics went through a restructuring. In 2014 the University Equine Clinic completed a comprehensive reorganization. The Clinic took applicable measures based on a SWOT analysis and an employee questionnaire. Equine patients now go through a central admissions process. Responsibilities in the medical care teams were precisely defined. The result: more efficient procedures that are beneficial for patients, owners and referring veterinarians. The University also developed a new concept for the emergency room and for the intensive care station at the University Clinic for Small Animals. Plans include a central point of contact for animal owners, improved teamwork between different specialty outpatient services, centralized emergency admissions and intensive care unit, as well as a new surgical centre for small animals.







Back to the Alma Mater

Optimal patient care is best achieved when practicing veterinarians and university specialists work closely together. In order to facilitate a dialogue about issues arising in veterinary practice and the research findings of the University Clinics, the Vetmeduni Vienna organizes special events for veterinarians.

Continuing education in farm animal veterinary practice

The University Clinic for Ruminants and the University Clinic for Swine organized a series of events in 2014 for referring veterinarians and farmers:

- Conference on ruminant herd health management, held at the Vetmeduni Vienna's Kremesberg Teaching and Research Farm (February 2014)
- Presentation of particularly interesting cases at the University Clinic for Ruminants (November 2014)
- Vienna ruminant module on the topic of weaning and birth in milk cows, held at the Vetmeduni Vienna's Teaching and Research Farm (November 2014)
- 16th thematic evening on swine medicine at the University Clinic for Swine (December 2014)

Information for small animal veterinarians

Whether continuing education or knowledge exchange - the University Clinic for Small Animals opened its doors to practicing veterinarians by offering special events:

- A small animal surgery evening held at the Clinical Unit of Small Animal Surgery (October 2014)
- Continuing education in dermatology in the framework of the European School of Advanced Veterinary Studies (ESAVS) at the Vetmeduni Vienna (September 2014)
- Newsletter issued by the University Clinic for Small Animals with the latest information for referring veterinarians

Animal owners, well informed

In addition to the technical exchanges within the veterinary profession, the Vetmeduni Vienna also provides animal owners with current information emerging out of research and the Clinics. For more information, see the chapter on public relations.



Appointments & Personnel

New professorships

Three new professorships were created at the Vetmeduni Vienna in 2014. Cancer research, laboratory animal pathology and ornithology are the core topics of these newly appointed professors.

Lukas Kenner: Building bridges between human and veterinary medicine

Lukas Kenner took up his post as Professor of Pathology of Laboratory Animals at the Vetmeduni Vienna in February 2014. As a medical doctor and pathologist, he reinforces the Vetmeduni Vienna's expertise in laboratory animal pathology. His professorship is a double appointment with the Medical University of Vienna, co-financed by the Ludwig Boltzmann Gesellschaft (LBG) as an professorship. Lukas Kenner conducts research on mice, which function as models for various



human illnesses. The two main focal points of his research are prostate carcinoma and lymph node cancer. In order to investigate these tumours, Kenner and his colleagues developed transgenic mouse modelling systems that allow these malignant illnesses to be studied at a molecular level.

Richard Moriggl: Using mice to explain humans

Richard Moriggl also took up his post in February 2014 as Professor of Translational Methods in Cancer Research in a further double appointment with the Medical University of Vienna. He is a molecular biologist and has been a fixture in Austrian cancer research for years. Together with his team, Moriggl conducts research into various types of cancer and also into metabolic illnesses that contribute to the development of cancer. He is especially interested in kinases and transcription factors. One can imagine these receptors to be light switches



turning on and off certain genes. Moriggl uses mouse models to test therapeutic approaches for human cancers.

Leonida Fusani: Dances with birds

Leonida Fusani took up his professorship in physiology with a focus on ornithology in September 2014. He is a biologist investigating the evolutionary biological origins of avian behaviour. In the process, Fasani combines insights from classical behavioural research with findings from hormone research and the neurosciences. A trained pianist, he concentrates on acoustic communication and the courtship dance in birds, as well as on decision-making in migratory birds. Further to his research activities, Fusani is working on building the



first Austrian ornithological observatory, which he will also lead. A double appointment with the Medical University of Vienna, his professorship is established under the auspices of the Vetmeduni Vienna's Konrad Lorenz Institute of Ethology.

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Employment at the Vetmeduni Vienna

The most important resource at a university is its staff. For this reason, the Vetmeduni Vienna strives to provide a healthy and motivating working environment. The University champions the compatibility of career and family and fosters the professional and personal continuing development of its employees.



At the Uni with a binky and a laptop

The Vetmeduni Vienna employs a variety of measures to support its staff with balancing job and family. In October 2014, the University opened a new kindergarten on campus, which can be used by both students and employees. In addition, staff members' children between one and twelve years of age can be cared for on campus during summer vacation for a nominal charge to offset costs. Demand is increasing for this offering, which is unique among Austrian universities. Already back in 2010, the Vetmeduni Vienna received the "University and Family" federal seal of approval. This was recertified in 2014.

Develop personal and professional competencies

The Vetmeduni Vienna brings together scientists of all ages and from various disciplines from around the world. A rich continuing education palette accommodates the diverse backgrounds of the scientific and general services staff. 2014 saw an increase in the number of workshops offered in English, as well as basic courses in German for people for whom German is not their first language. Seminars on communication, workshops on constructive conflict management and specialized media training for the next generation of scientists were among the expanded offering of "soft skills" courses.

A new "finance minister"

In 2014 there was a change in the make-up of the Office of the Rector. On 1 October 2014, "finance minister" Josef Ebenbichler handed over the Office of the Vice-Rector for Resources to his successor Christian Mathes. At his farewell celebration in September, Ebenbichler raised a toast to the "five most exciting years of my life".

Career opportunities for up-and-comers

The career model of the Vetmeduni Vienna offers talented young scientists upward mobility. This includes so-called qualifying positions for the development of new professorships. Candidates for these positions must meet certain criteria, such as research experience, publication achievement, teaching experience, sojourns abroad and acquisition of third-party funding. In 2014, the following three candidates successfully prevailed in the selection process and are now assistant professors in their respective fields:



Olena Andrukhova – Unit of Physiology, Pathophysiology, and Experimental Endocrinology



Teresa Valencak – Research Institute of Wildlife Ecology

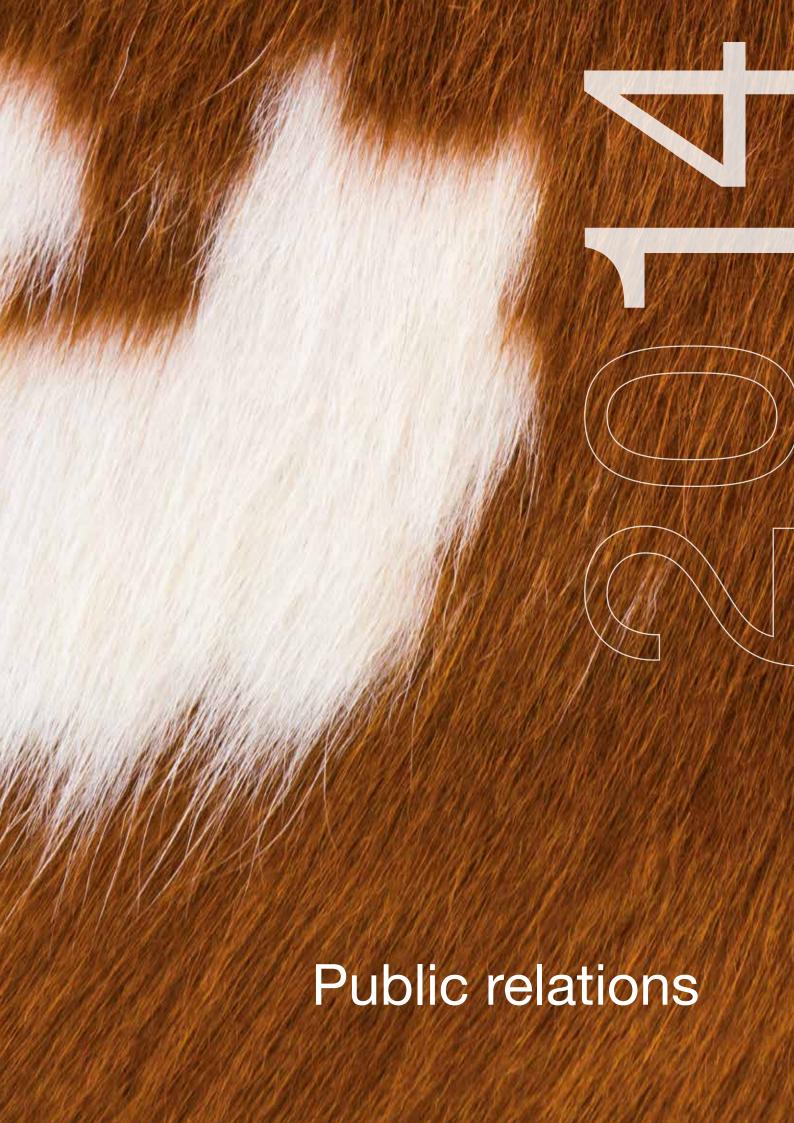


Andrea Ladinig – University Clinic for Swine

A new office

Tested: Animal-friendly housing systems

In March 2014, the office of the Specialist Advisor for Animal Husbandry and Animal Welfare, which had been conceived the year before, opened its doors on the campus of the Vetmeduni Vienna. Its mission: to test new housing systems for farm and companion animals. If these systems meet the legal requirements, they receive the animal welfare certification and may be sold on the Austrian market. The year 2014 was characterized by an intensive informational campaign for manufacturers, vendors and animal owners. The first assessments also took place. A newly outfitted stanchion barn for cows was tested and received a positive evaluation. The purpose of the test was to determine if the animals could stand up, lie down and clean themselves in keeping with the normal behavioural patterns of their species.



Public relations relations

Out of the ivory tower – into dialogue with the community

The knowledge generated at the University ought to benefit society. For this reason the Vetmeduni Vienna engages in social discourse across a broad bandwidth. "Responsible Science", i.e., the inclusion of the community in research endeavours, is more than just a slogan for the University.

Third Mission possible

The Vetmeduni Vienna is well aware of its "third mission", meaning its role as a social and economic actor. In the Clever Dog Lab, the University provides direct tie-ins to research projects for the local populace. In order to determine the cognitive and emotional abilities of dogs, dog owners are invited to take part in studies together with their four-legged friends. In 2014 the activities of the Clever Dog Lab were re-

ported in numerous national and international media outlets and taped by three film teams. The University also is an active participant in social discourse centred on questions of animal welfare, animal epidemics and the human-animal relationship. The treatment of animal patients at the University Clinics is also of great regional significance, to name just a few examples.



2014



60

press releases about research topics



129 campus tours



with a total of **2,357** participants



9 booths at academic fairs or animal shows

Scientific communication

While researchers make their findings available to other researchers in scientific journals, the field of scientific communications makes these results accessible for the general public. Besides relying on classical media strategies such as press releases and press conferences, the Department of Corporate Communications leverages Twitter, Facebook and YouTube, in addition to print media and events, as ways to inform the public about the ongoing research activities of the University. Exclusive interviews with individual researchers and project presentations to a select audience enable journalists and scientists to communicate directly. The University's own journal "VetmedMagazin" also covers research topics and news from the University Clinics.

Modern dog training – enlightenment for journalists

Sometimes dogs behave differently than their owners expect. In order to make them obedient, dog trainers such as the self-proclaimed "dog whisperer" Cesar Millan employ pain and fear. These antiquated behavioural methods are not in accordance with Austria's Animal Protection

Act. Behavioural specialists of the Vetmeduni Vienna made this very clear on the occasion of the American television star's visit in autumn 2014. Modern dog training rewards good behaviour and does not in any way induce fear or stress. Animal-welfare-certified dog trainers work exclusively through the principle of positive reinforcement.

In February 2014, Minister for Health Alois Stöger awarded the first federal animal welfare certifications to dog trainers. The examination for becoming animal welfare-certified is administered by the Messerli Research Institute of the Vetmeduni Vienna.



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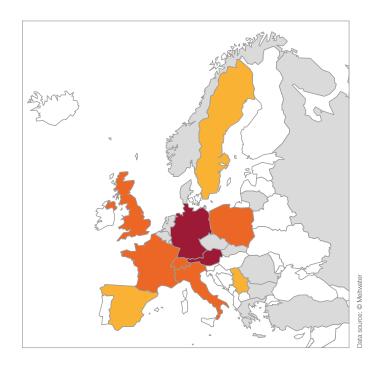


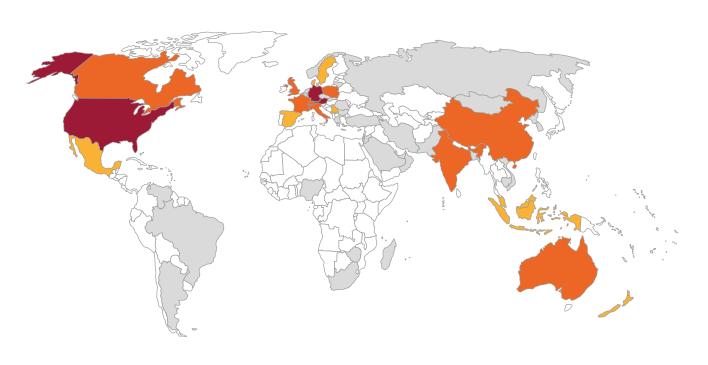
International media presence

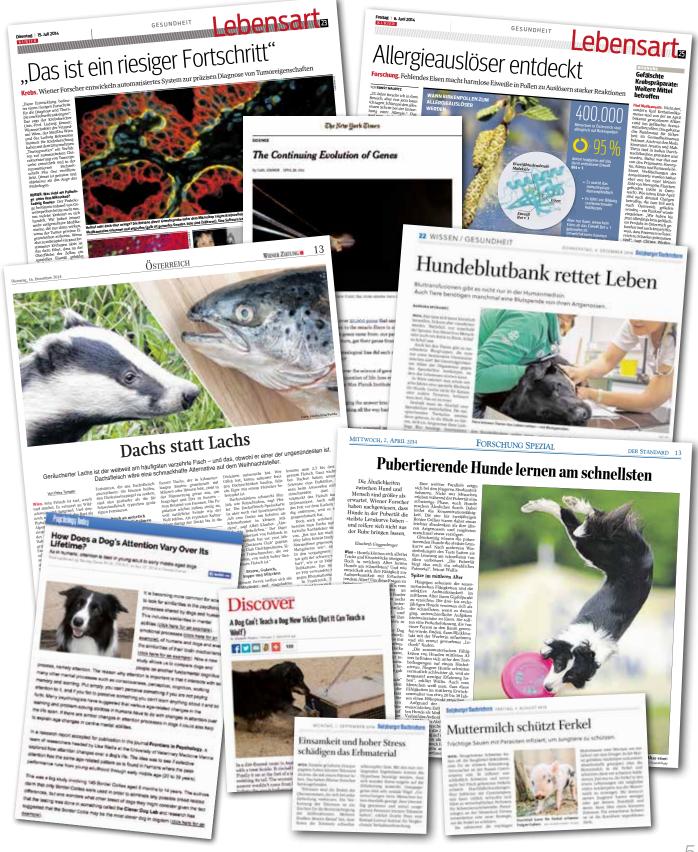
In 2014, the media in more than 50 countries worldwide reported on the research results of the Vetmeduni Vienna. The greatest echo outside of Austria could be heard in Germany and the USA.

Key:

- Very high resonance (>200 reports)
- High resonance (21-200 reports)
- Medium resonance (6-20 reports)
- Low resonance (1-5 reports)









der Forschung

Warum Winterschlaf jung hält

Leider nur bei Gartenschläfer gilt: Je länger sie schlafen, desto ülter werden sie

52





The Vetmeduni Vienna invites...

Open houses for animal lovers and interested parties – in 2014, the University again hosted many events for the general public. Here, a selection.

Open House - come on in...

With more than 4,000 attendees, the Open House on the campus of the Vetmeduni Vienna set a new record. The University Clinics and research institutes gave insight into their work at 50 different stations: What does surgery on a cat look like, which learning tests can clever dogs perform, why must horses go to the dentist and how does a wound get properly sutured? On 24 May 2014 visitors got answers to these and many other questions.



© Hait Hochnauser / Vetmedu







Ralf Hochhauser / Vetmeduni Vier

Equine symposium

What owners can do for their elderly horses was the topic of the 4th Symposium of the University Equine Clinic in October 2014. In the last ten years, the number of equine patients over 20 years of age has increased by a factor of six worldwide. This trend was confirmed by the interest generated by the symposium, which drew around 700 attendees.

Vetmeduni Vienna's Children's University

Asking questions, being curious, having fun – this is what the Children's University is all about. The Vetmeduni Vienna participated for the third time in the summer academics programme for children between seven and twelve years of age. In lectures and seminars, 1,500 children learned how a cow's stomach functions, how a foal "comes into being" or how you can make your own sausage.

The first New World Camelid Symposium

Not only Science Buster Heinz Oberhummer raises alpacas. Many Austrians similarly keep llamas and alpacas. Thus, the University Clinic for Ruminants sees more and more of these animals as patients. At the first New World Camelid Symposium, held in March at the Vetmeduni Vienna, camelid owners learned how to maintain the health of their fluffy pets.

Exchange with veterinarians

The Vetmeduni Vienna places great value on the exchange of knowledge in the field of veterinary medicine. For more on this, see the chapter on University Clinics.







Photo: © Vetmeduni Vier



A continuous history

The Vetmeduni Vienna used the occasion of its 250-year anniversary as an occasion to conduct in-depth research into its history. The Austrian Science Fund (FWF) is funding a project whereby the Vetmeduni Vienna can assess its National Socialist past.

A worthy jubilee

"I have decided to order a teaching school for healing livestock diseases to be erected here." The history of today's Vetmeduni Vienna began on 24 March 1765 with these words by the Empress Maria Theresia. What took place in the 250 years following this date was a topic of study for a group of historians and veterinarians in 2014. The results will appear in a commemorative publication showing the evolution of the Imperial Royal School for Horse Cures and Operations to today's University. Preparations for the multi-faceted jubilee festivities were already in full swing in 2014.

An FWF project fills in the gaps about the NS era

Scant historical details are available about the Vetmeduni Vienna's National Socialist past. A three-year research project sponsored by the FWF means to change all that. In November 2014, a project to delve into the years from 1933 to 1955 began under the leadership of contemporary historian Lisa Rettl. Together with the Austrian Research Agency for Post-War Justice, Rettl is exploring the following themes: personal entanglements between people affiliated with the University and the National Socialist movement; task areas of veterinary medical personnel at the SS and the Wehrmacht. The historians are also interested in the post-war years of the University. The results will be published in a journal once the project concludes.





Organisation ISation

Organisational chart of the University of Veterinary Medicine, Vienna

Institute of Population Genetics **Biomedical Sciences** Department of Biomodels Austria Platform Bioinformatics and Biostatistics Institute of Animal Breeding and Institute of Pharmacology and Institute of Medical Biochemistry Institute of Laboratory Animal Institute of Physiology Platform Genetics Science Pathophysiology and Biophysics Clinical Pharmacology Physiology und Biophysics Toxicology Reproductive Biology Molecular Genetics Experimental Endocrinology Physiology, Pathophysiology, and Translational Methods in Cancer Department 1 Senate Institute of Microbiology Functional Microbiology Clinical Pathology Platform Institute of Immunology Institute of Parasitology Pathobiology Department of Institute of Pathology and Forensic Veterinary Medicine Institute of Virology Institute of Anatomy, Histology and Embryology - Pathology of Laboratory Department 2 Governing Bodies of the University Research and Teaching Department/University Clinic for Farm Animals and University Clinic* for Swine University Clinic* for Poultry and Veterinary Public Health University Clinic* for Ruminants Institute of Animal Husbandry and Animal Welfare Institute of Animal Nutrition and Institute of Veterinary Public Institute of Milk Hygiene, Milk Institute of Meat Hygiene, Mea Poultry Medicine Fish Medicine Fish Medicine **Functional Plant Compounds** Health Technology and Food Science Technology and Food Science Ruminant Medicine Ruminants Herd Health Management for Department 3 Rectorate and Horses Department/University Clinic for Companion Animals Radiooncology University Clinic* for Small University Equine Clinic* Insemination and Embryo - Internal Medicine Small Animals Animals Transfer Platform Equine Surgery Equine Internal Medicine Anaesthesiology and Small Animal Surgery Diagnostic Imaging Andrology Obstetrics, Gynaecology and Medicine perioperative Intensive-Care Department 4 University Council Konrad Lorenz Institute of Biology and Evolution Department of Integrative Research Institute of Wildlife - Conservation Medicine Ethology Ecology Department 5

 $^{^*}$ In accordance with \S 36 and \S 20(5) of the 2002 Universities Act, the University Clinics do not represent organizational units



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Corporate Communications University of Veterinary Medicine, Vienna Veterinaerplatz 1, 1210 Vienna, Austria

T + 43 1 25077-0, communication@vetmeduni.ac.at

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Come celebrate 250 years of responsibility for animals and people!



Saturday, 30 May 2015

Open House on the campus of the Vetmeduni Vienna

Saturday, 20 June 2015

Jubilee Ball
at the Vienna City Hall (Rathaus)

Saturday, 20 June 2015

Symposium "Teaching Vets #1":

Be informed. Be inspired. Challenges of Student-Centered Teaching
on the campus of the Vetmeduni Vienna

Friday and Saturday, 18 and 19 September 2015

Harvest Festival and Open House / Open Barn at the Teaching and Research Farm Kremesberg

Thursday, 15 October 2015

Science Slam – Scientists compete for audience favour with short presentations on the campus of the Vetmeduni Vienna