

# 2021

Annual Report

vetmeduni  
vienna





Approximately 260 million years ago, the first vertebrates were able to hear. Hearing is one of the oldest senses. Mammals, fish, reptiles, avians and some insects are able to perceive sound, and do not always rely on externally visible ears to do so. In some animals we only see the external ear opening.

Representing all the animals that our clinical practitioners, teachers and students at Vetmeduni Vienna work with every day, eight ears guide us through the annual report 2013.

Get ready and lend us your ears!



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# Content

## **04 Opening words**

## **06 Editorial**

## **08 Facts and Figures**

## **12 Education**

- 13 Choosing the right academic programme
- 14 Talents for Vetmeduni Vienna
- 14 Highly mobile
- 15 A new curriculum for Veterinary Medicine
- 16 Quality of teaching
- 18 Student services
- 20 Students who have received awards
- 21 Key figures

## **24 Research**

- 25 Research activities
- 26 New research projects
- 31 Evaluating and promoting research
- 32 Young academics
- 32 Service for researchers
- 33 Research received honours
- 37 International researchers met at the campus
- 38 Projects approved in 2013
- 40 Key figures

## **42 University Clinics**

- 43 Veterinary resident training
- 44 Continuing education and information for practicing veterinarians
- 46 Key figures

## **48 Cooperation**

- 49 Cooperation in research
- 52 Working together to achieve more

## **56 Staff & Appointments**

- 57 Heeding the call to Vetmeduni Vienna
- 58 The university as an employer

## **60 Society & PR**

- 61 Science and research communication
- 65 Animal Welfare
- 67 Public events and student fairs
- 68 The university plays host
- 70 Provenance research at the university library

## **72 Resources**

- 73 Positive result

## **76 Organisation**

# Opening words

# 2013

## University Council

### Committed to uniqueness

Competitive, dynamic and complex – so may be described the domestic and international research activities and the context in which they occur. This poses major challenges for (research and science) policy. The higher the expectations of science and the associated „grand challenges“ of the 21<sup>st</sup> century are, such as an aging population, climate change and dealing with dwindling resources, the more decisions with political foresight become increasingly necessary. Research policies are responsible for the groundwork and those conditions that enable innovation and progress through academic research and teaching.

With its expertise, Vetmeduni Vienna makes an important contribution towards the domestic research output because as the only academic educational and research institu-

tion for veterinary medicine in Austria, it researches subject areas which best provide for the health of both humans and animals. We should not lose focus, bearing in mind that each and every one of us benefits from these endeavours. Also in overall economic terms an important foundation for steady progress and the innovative performance of a scientific and business location is laid.

The previous year yielded a multitude of successes. Looking still further back in the past reveals even more of the picture:

The current research evaluation that Vetmeduni Vienna carried out every five years and also in 2013 to assess the development of the site confirms that the sum of external funding doubled in the period from 2008 to 2012. The number and quality of the publications in the top segment could be increased substantially. The number of newly established research projects – whether a new Christian Doppler laboratory or ERC grants etc. – underpins the growing scientific output of Vetmeduni Vienna. Young scientists have been further supported through new initiatives such as the PhD programme of Poultry and Swine Medicine. Speaking of young academics: The newly established Veterinary Medicine curriculum not only ensures that the training is conducted according to modern educational standards, but also that the students get involved early in scientific projects.

In this sense, the University of Veterinary Medicine, Vienna is well equipped to take on the next challenges in teaching, research, and medical care in the future.

### Edeltraud Stiftinger

Head of University Council, Vetmeduni Vienna

University Council of Vetmeduni Vienna (f.l.) Johannes Khinast, Walter Obritzhauser, Edeltraud Stiftinger, Claudia Reusch, Peter Swetly



Photo: © Michael Bernkopf / Vetmeduni Vienna

## Senate

2013 saw the creation of a new curriculum for Vetmeduni Vienna's degree programme in Veterinary Medicine. This process was initiated in 2011 under the auspices of "AG Curr," a work group appointed by the Senate, and will remain in place until the new curriculum has been fully implemented. The group is headed by Vice-Rector Petra Winter. Teachers, students and admissions department staff have been working on the new curriculum for almost three years. They have been fine-tuning the subject weighting, the number of course hours, the feasibility and integration of learning content as well as the new teaching and examination formats and the implementation of the learning outcome approach to teaching.

The new curriculum – set to be implemented for the first time in the 2014/2015 winter semester – represents thousands of hours of work by Vetmeduni Vienna staff. At a time when all decisions are made based on performance indicators and the university's budget is limited, the creation of this new curriculum may appear to some to be a staggering consumption of resources. The majority of work done on this project, however, is the product of increased effort with no additional compensation. Despite the increased workload, regular operations at the university continued without any substantial additional personnel resources. Participants in the project were motivated by the idea of laying the foundation for a modern curriculum for a degree programme in veterinary medicine unique to the German-speaking world. Unfortunately, neither the motivation of those who collaborated on the new curriculum, nor



Photo: © Michael Bernkopf / Vetmeduni Vienna

the experience and expertise they gained in the process, can be easily expressed in figures.

The annual report describes the overall performance of the university. In fact, this performance is the product of the communal efforts of individual members of the university. Please bear their contributions in mind as you read this annual report. We hope you enjoy!

### **Anja Joachim**

Chairwoman of the Senate, Vetmeduni Vienna

## Aimed at students and researchers

Today's highly-sophisticated and highly-competitive global economies present a unique challenge to universities: they are responsible for educating young people whose qualifications are the key to social and technological progress, as well as for generating top research and providing medical care. Vetmeduni Vienna has the added responsibility of animal health, food safety and animal welfare, all of which impact consumers.

Vetmeduni Vienna can boast a long list of achievements in 2013 that further ensure its place as a leading education provider going into the future. This report is only able to detail a selection of all that Vetmeduni Vienna has accomplished last year.

**Responsibility for competence:** students of Veterinary Medicine can look forward to a fundamentally revised curriculum starting in the 2014/2015 winter semester. Over the course of three years of preparation, teachers and students have developed a curriculum based on student-oriented and skills-

Rectorate of the Vetmeduni Vienna (f.l.):  
Vice-Rector Josef Ebenbichler, Vice-Rector Petra Winter, Rector Sonja Hammerschmid, Vice-Rector Otto Doblhoff-Dier



Photo: © Ernst Hammerschmid / Vetmeduni Vienna

based learning. More emphasis will be placed on practical application, competence, systems thinking, early clinical integration and self-guided study rather than the straightforward transmission of knowledge. In June 2013, the Senate approved the new curriculum, which will serve as a basis for the education of future generations of veterinarians. The new curriculum will include new quality assurance processes. A periodic review of student competencies (Competency-Check) will help to identify weak points and target them productively.

**On the road to quality:** the principle of quality-oriented improvement and development plays an important role in research. In 2013, Vetmeduni Vienna subjected its research to an in-depth evaluation. International experts probed research activities in great detail. This outside perspective – in addition to international accreditation by the European Association of Establishments for Veterinary Education (EAEVE) – helps to strengthen Vetmeduni Vienna and increase its potential.

**Innovative pig farm:** In 2013, Vetmeduni Vienna opened a new pigsty at Medau on the Teaching and Research Farm. The pigsty has an integrated research pen and relies on innovative methods of animal husbandry, which go far beyond legally required standards. These forward-looking standards ensure high-quality education and research in the field of farm animal husbandry. In the clinical field, processes and structures have been revised and streamlined with the aim of constantly improving quality.

**Fit for the future:** all of this contributes to the fact that Vetmeduni Vienna remains an internationally attractive university for students and researchers with a focus on animal health, food safety and animal welfare. We are grateful to all those associated with the university – both staff and students – for their willingness to set a course for the future and take the necessary initial steps with us; and to our cooperation partners in the fields of science, business and politics, both at a national and international level.

We hope you have an informative and entertaining read. Thank you for your interest and your commitment to the University of Veterinary Medicine, Vienna.



**Sonja Hammerschmid**  
Rector



**Otto Doblhoff-Dier**  
Vice-Rector for Research and  
International Relations



**Josef Ebenbichler**  
Vice-Rector for Resources



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

# Facts and Figures 2013

## Mission

**Responsible** teaching

**Visionary** research

**Ambitious** healing

## Core values

dedicated

competent

responsible





## 1.274 Staff

- 38 Professors
- 645 Scientific staff (without professors)
- 591 Administrative staff
- 795 Women / 479 Men

## 2.282 Students

- 1.839 Women
- 443 Men

## Areas of research

The University of Veterinary Medicine, Vienna conducts research mainly in the following areas:

- Animal health
- Preventative veterinary medicine
- Comparative medicine
- Animal models
- Public health
- Food safety
- Animal husbandry, animal welfare and animal ethics
- Organismic biology and biodiversity

## Degree programmes

- 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 in Comparative Morphology
- Interdisciplinary Master in Human-Animal Interactions
- Master's programme Wildlife Ecology and Wildlife Management\*
- PhD programme

\* in cooperation with the University of Natural Resources and Life Sciences, Vienna

## 43.085 animal patients

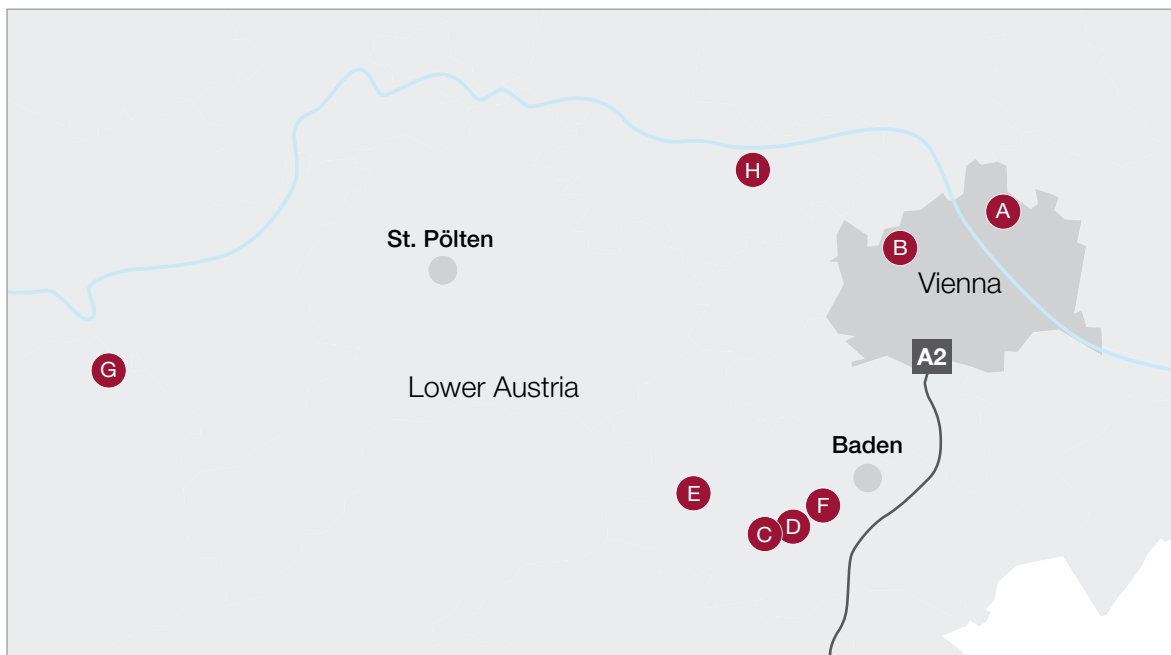
were treated in five specialized University Clinics in 2013:

Medical services are offered by five clinics bundled according to animal species:

- University Clinic for Small Animals
- University Equine Clinic
- University Clinic for Swine
- University Clinic for Ruminants
- University Clinic for Avian and Fish

## Sites of the University of Veterinary Medicine, Vienna

The University operates several sites to fulfil its roles in education, research and animal patient care in the best way possible. In addition to the campus at Floridsdorf, Vienna, Vetmeduni Vienna has another site at Wilhelminenberg, Vienna, where the Research Institute of Wildlife Ecology and the Konrad Lorenz Institute of Ethology are located. Furthermore, the university operates a research and teaching farm with four estates south of Vienna and a research institution in Wieselburg. At the inter-university Department for Agro-Biotechnology, IFA Tulln, the Vetmeduni Vienna is also active.



### Legend:

A: Campus, Floridsdorf, Vienna

B: Department of Integrative Biology and Evolution, Ottakring, Vienna (Wilhelminenberg)

### Teaching and Research Farm

C: Kremesberg estate, Pottenstein

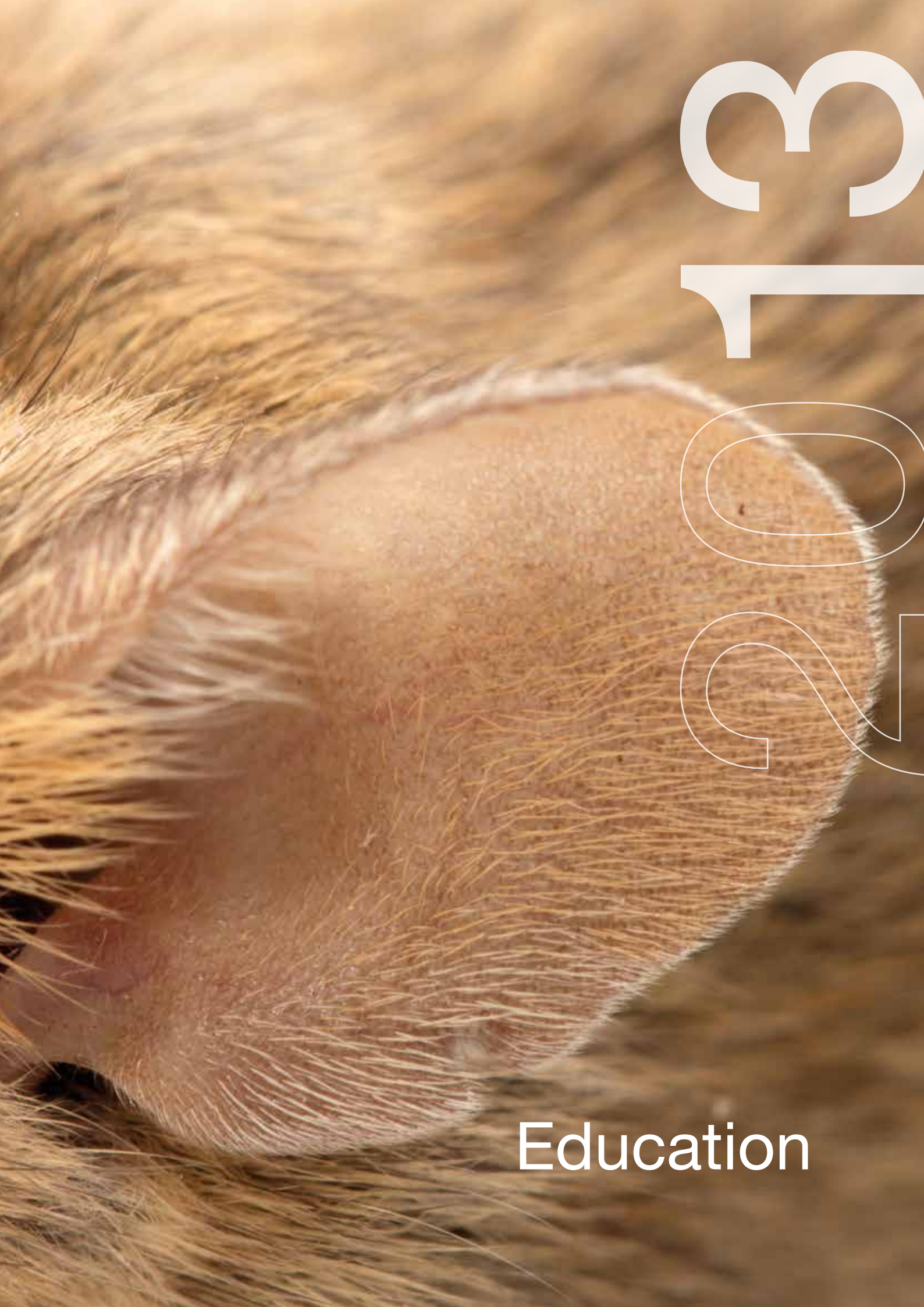
D: Medau estate, Berndorf

E: Rehgras estate, Furth/Triesting

F: Haidlhof estate, Bad Vöslau

G: Reproduction Center Wieselburg

H: IFA-Tulln



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Education

## Hands-on and interdisciplinary approach

More than 2,000 students take advantage of the comprehensive range of academic programmes offered by the University of Veterinary Medicine, Vienna. In addition to the Diploma degree programme in Veterinary Medicine and the Bachelor's degree programmes in Biomedicine and Biotechnology as well as Equine Science, Vetmeduni Vienna also offers the following Master's programmes, Doctorate programmes and PhD programmes: Master in Biomedicine and Biotechnology, Interdisciplinary Master in Human-Animal Interactions, Master in Wildlife Ecology and Wildlife Management, European Master in Comparative Morphology, Doctorate in Veterinary Medicine, PhD programme in Pig and Poultry Medicine and PhD programme in Population Genetics. All Master's programmes and PhD programmes (with the exception of the Master in Wildlife Ecology and Wildlife Management) are offered in English.

Training for veterinarians at Vetmeduni Vienna is firmly grounded in hands-on experience. In the teaching hospital, with its five university clinics, in the VetSIM skills lab and at the Teaching and Research Farms, students are given the opportunity to apply the theoretical knowledge they have acquired. The new curriculum for the degree programme in Veterinary Medicine places an even greater emphasis on clinical training. As early as in the third semester, students have already begun to gather clinical experience.

The academic experience at Vetmeduni Vienna is also distinguished by a good student to teacher ratio, which is the result of a multi-stage selection process in all academic programmes. Particularly in the Bachelor's programme Biomedicine and Biotechnology, as well as the Master's programmes, students and teachers work primarily in small groups. Students value Vetmeduni Vienna for its spacious campus in Vienna Floridsdorf, as well as for its idyllic satellite locations.



Photos: © citromerct / Vetmeduni Vienna

## Choosing the right academic programme

The University of Veterinary Medicine, Vienna regularly provides information regarding its course offerings at education fairs and during school visits. In addition, special information events allow prospective students to get a taste for university life.

### Science camp

For one week each year the science camp at Vetmeduni Vienna offers interested youths between 17 and 19 the opportunity to gain deep insight into the life at the university, the campus and the veterinary profession. In keeping with the camp's motto "From the lab to the stable," science campers experienced first hand the work of scientists and veterinarians. Through classes, excursions and practical exercises, they studied the entire food chain and learned about career opportunities in farm animal medicine and food production. The science camp is offered once a year in the summer by a dedicated team of instructors. Due to great interest by prospective students in Austria and neighbouring countries, spaces are quickly filled.

Photo: © Vetmeduni Vienna



The science camp offers a glimpse of the study of Veterinary Medicine.

### Getting a taste for campus life

Students interested in studying at Vetmeduni Vienna can get a concrete idea of the university by taking a "Campus Feeling" guided tour. In addition to information regarding admission and courses of study, a visit to one of the University Clinics is also included in the tour. Current students provide prospective students with information regarding campus life.



Photo: © Lisa Zimmermann / Vetmeduni Vienna

### Road show through Austria

At the beginning of the year, Vetmeduni Vienna paid a visit to agricultural secondary schools throughout Austria. With the aim of promoting interest in the field of farm animal medicine, Rector Sonja Hammerschmid, along with veterinarians Walter Obritzhauser and Berthold Grassauer and Vice-Rector Petra Winter, discussed diverse careers available in veterinary medicine with the students.



Photo: © citronenrot / Vetmeduni Vienna

## Talents for Vetmeduni Vienna

The University of Veterinary Medicine, Vienna admits students according to a multi-stage selection process. Three quarters of the places are given to the top-ranked applicants. Selection is based on the evaluation of online applications, written aptitude tests, school grades and additional achievements relevant to the desired field of study. When assigning the remaining quarter of places, a personal interview is also incorporated into the selection process. An additional 50 applicants thus have the opportunity of being admitted to Vetmeduni Vienna. In addition to students and teachers, the selection committee is also comprised of representatives of diverse fields within veterinary medicine. In 2013, the following practicing veterinarians participated in the selection process: Isabella Copar, Berthold Grassauer, Raphael Höller, Sonja Huber-Wutschitz, Johannes Keplinger, Wigbert Rossmann, Manuela Schludermann, Peter Wagner, Sandra Weinzinger and Constanze Zach.

Out of approximately 1,600 online applicants, a total of 317 students were admitted for the 2013/2014 academic year, 220 of whom were admitted to the Degree programme in Veterinary Medicine.

## Highly mobile

Students at Vetmeduni Vienna are particularly mobile when compared to the average Austrian student. This was confirmed by a graduate survey by the Universities Austria, published in September 2013. More than half of veterinary medicine graduates have spent time abroad. By comparison, the average rate of mobility for university students in Austria is 29 percent. Vetmeduni Vienna students are particularly eager to complete clinical internships outside of Austria.

In order to even better promote mobility for its students in the best way possible, Vetmeduni Vienna's International Relations Office revised its financial aid guidelines in 2013 to create greater transparency, successfully applied to the new generation of exchange programs, ERASMUS PLUS, and made the administration's resources more efficient by means of new software.



Photo: © Syda Productions / fotolia.com

## A new curriculum for Veterinary Medicine

In 2013, Vetmeduni Vienna successfully concluded an almost three-year reform process: In June, Vetmeduni Vienna's Senate passed the new curriculum for Veterinary Medicine, which will be taught beginning in the 2014/2015 winter semester. The new curriculum follows the principles of modern educational sciences centred on problem-oriented and student-centred learning.

Following preparatory work, (analysis of strengths and weaknesses of the curriculum, the creation of reform committees and the development of general concepts for the new curriculum), the focus in 2013 was on the development of individual course models and the detailed curriculum. Teachers from all disciplines contributed their expertise to the development process.

A high-priority goal for the new curriculum is the strengthening of clinical training. From their first year of study, students learn to treat animals. Clinical subjects are an integral part of the entire academic programme. The interdisciplinary structure of the individual teaching modules is designed to promote lateral thinking. Increased attention is also placed on self-guided study.

The curriculum reform in the Veterinary Medicine programme also resulted in numerous changes to the Bachelor's programme in Biomedicine and Biotechnology.



Photo: © Michael Bernkopf / Vetmeduni Vienna



Photo: © Vetmeduni Vienna

## Quality of teaching

Continuous development of teaching activities is one of the areas the University of Veterinary Medicine, Vienna is focusing special attention on. Tried and tested methods along with newly developed tools are used to help pursue this goal.

## Promoting student skills

In the scope of the Competency-Check starting in the winter semester of 2013/2014 skills of students studying veterinary medicine are evaluated annually. Using online questionnaires students, teachers and instructors involved in practical training assess students' subject-specific expertise. Both theoretical foundations and practical skills are evaluated. The results of the Competency-Check are used to continuously improve the curriculum.

## Continuous assessment of learning progress

As a member of the „Centre of Excellence for E-Learning, Didactics and Educational Research in Veterinary Medicine“ – funded by the VW/Mercator Foundation – the University of Veterinary Medicine, Vienna has developed a Veterinary Medicine Progress Test together with seven other German-speaking universities of veterinary medicine. The test comprises 136 multiple choice questions from all areas of veterinary medicine. On a sample basis, the knowledge of the students will be continuously evaluated starting in the winter semester of 2013/2014, their skills level being compared every year to the level of expertise expected from graduates of Veterinary Medicine on their first day on the job. Students can participate in the test once per year on a voluntary basis starting in their first semester

until they graduate from the programme. This type of progress test has already been successfully implemented in human medicine.

## “Breakfast learning“

The new Veterinary Medicine curriculum also brings new challenges for teachers. In basic subjects, areas such as chemistry and physics were previously taught as separate subjects. Based on the new curriculum placing more emphasis on the integration of subject areas, the (biological) system is first taught using healthy animals and then diseased ones. Interdisciplinary teaching modules make it necessary for teachers to better coordinate their teaching contents. Furthermore, new assessment methods result in additional changes. To prepare teachers for these new challenges in the best way possible, the Office of the Vice-Rector for Study Affairs and Clinical Veterinary Medicine has developed a new event series on academic teaching. Once a month, an invited expert holds a presentation on educational matters during a breakfast meeting, which is followed by discussions.

The “Breakfast learning” initiative offers ideas relating to university instruction



Photo: © Felicitas Steindl / Vetmeduni Vienna



## Teaching awards

For special merits in teaching and education the University of Veterinary Medicine, Vienna is presenting the annual awards Teacher of the Year and Instructor of the Year. The awards are endowed with 12,000 Euros by the Department of Culture of the City of Vienna.

Britta Vidoni, Clinical Department of Small Animal Surgery, received the Junior Teacher of the Year award endowed with 2,800 Euros; Till Rügenapf, Institute of Virology, the Senior Teacher of the Year award endowed with 3,800 Euros. The category Instructor of the Year honours practicing veterinarians who provide practical training to students. In 2013, the award was given to Karl Grohmann. All teachers and instructors of the University of Veterinary Medicine, Vienna were invited to apply for the award. Additionally, students were encouraged to nominate their favourites for the award. A panel comprising last year's award recipients, students and the Vice-Rector selected three proposals from all entries. The winner was nominated by students via online voting.

Photos: © Doris Sallaberger / Vetmeduni Vienna, Ernst Hammerschmid / Vetmeduni Vienna



Prize laureates with the Rectorate of the Vetmeduni Vienna:  
 Picture 1: Junior Teachers of the Year James Rushton, Britta Vidoni und Agnes Dadak  
 Picture 2: Instructor of the Year Karl Grohmann  
 Picture 3: Senior Teacher of the Year Till Rügenapf (middle)



Photo: © Michael Bernkopf / Vetmeduni Vienna

## Student services

### Live-streaming of case studies

Videos have become an indispensable tool in modern academic teaching. Using a new mobile video set, the VetmedVideoStream, comprising a streaming set and a camcorder, lectures and case studies can be easily streamed live inside a lecture hall at the highest quality, or recorded and made available afterwards for teaching. Thanks to these instructional videos students can access important contents anytime and anywhere. Video broadcasts using VetmedVideoStream have become an integral part of clinical exercises and other courses.

At the Skills Lab VetSIM students practice clinical skills



Photo: © Michael Bernkopf / Vetmeduni Vienna

### Final thesis marketplace

The final thesis marketplace has been very positively received since its launch in 2013: It is an online marketplace for students and scientists. Thesis topics available for students can be announced on the Vetmeduni Vienna website. This way, many Bachelor's, Diploma, Master's and PhD projects have already been successfully placed.

### Gaining hands-on experience at the Skills Lab VetSIM

The "VetSIM" skills lab of the University of Veterinary Medicine, Vienna provides specially equipped surgeries where veterinarians in training can learn and independently practice clinical skills prior to applying them to animal patients. The 180 square meters skills lab features an operating room, a test laboratory and a treatment room. The student training centre was extended by various practice facilities where students can independently hone their skills. The new areas that have been added include activities in the area of ruminant medicine, surgery, internal medicine and a laboratory.

### Alternative career opportunities

The University of Veterinary Medicine, Vienna places special emphasis on preparing students for their future career paths in the best way possible. At special informational events graduates of Veterinary Medicine can also learn about lesser known career opportunities. During a panel discussion in October 2013 representatives of international pharmaceutical companies and established research institutions discussed career advancement opportunities in the pharmaceutical sector and in research with interested students.

Panel discussion on the topic of career opportunities in the pharmaceutical industry and in research with Rector Sonja Hammerschmid, Claudia Keibl (Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna), Romina Nagel (Zoetis Österreich GmbH), Eva-Maria Muchitsch (Baxter Innovations GmbH), Anke Baum (Boehringer Ingelheim GmbH) and Leonie Ziegłowski Vetmeduni Vienna student union



Photo: © Vetmeduni Vienna



Photo: © Ernst Hammerschmid/Vetmeduni Vienna

## Students who have received awards

### Scholarships and outstanding achievements

Each year, Vetmeduni Vienna supports students who write their doctoral thesis with Vetmeduni Success grants endowed with 12,000 Euros. The selection is based on academic qualifications of the applicants and the significance of the research project. In 2013, the Vetmeduni Success grants were presented to Amira Shousha and Eva Haas.

The Friends of the University of Veterinary Medicine, Vienna award every year three merit-based scholarships for outstanding study achievements to students in their third stage of studies. In 2013 the grants endowed with 1,000 Euros each were given to Claudia Lecher, Moriz Klonner and Johannes Raith.

### The best graduates

The Students of the Year award is bestowed upon the top graduates in three academic programmes each year. The selection criteria are grade average and length of study. In 2013 the award was presented to Martin Höcher (Veterinary Medicine), Nina Kunz (Equine Science) and Simone Bauer (Biomedicine and Biotechnology).

### 50<sup>th</sup> anniversary of doctor title

The University of Veterinary Medicine, Vienna awards each year golden doctorates to alumni who graduated 50 years ago. Participants of the 2013 award ceremony included Dieter Adamiker, Pius Hirner, Gerald Lamprecht and Johann Leber.

Students of the Year

Golden doctorate recipients



Photos: © Ernst Hammerschmid/Vetmeduni Vienna

## Key figures

### Applicants for courses of study

2013	University applicants			Admissions		
	Females	Males	Total	Females	Males	Total
Biomedicine and Biotechnology (Bachelor's programme)	86	40	126	16	16	32
Biomedicine and Biotechnology (Master's programme)	16	29	45	5	7	12
Comparative Morphology (Master's programme)*						
Human-Animal Interactions (Master's programme)	39	5	44	17	1	18
Equine Science (Bachelor's programme)	89	1	90	33	0	33
Veterinary Medicine (Diploma programme)	1,063	255	1,318	170	38	208
Wildlife Ecology and Wildlife Management (Master's programme)*						
<b>Total</b>	<b>1,293</b>	<b>330</b>	<b>1,623</b>	<b>241</b>	<b>62</b>	<b>303</b>

\*The admission procedure for the Master's programmes Wildlife Ecology and Wildlife Management and Comparative Morphology are not managed by Vetmeduni Vienna. Therefore no data is available.

### Number of students

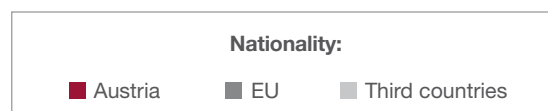
(degree students, non-degree students and students from mobility programmes)

	Nationality	Fall semester 2013/2014			Fall semester 2012/2013			Fall semester 2011/2012		
		Females	Males	Total	Females	Males	Total	Females	Males	Total
<b>Freshmen students</b>	Austria	218	49	267	199	52	251	187	44	231
	EU	124	24	148	113	34	147	122	30	152
	Third countries	16	12	28	11	9	20	8	7	15
	<b>Total</b>	<b>358</b>	<b>85</b>	<b>443</b>	<b>323</b>	<b>95</b>	<b>418</b>	<b>317</b>	<b>81</b>	<b>398</b>
<b>Second or higher semester students</b>	Austria	1,013	221	1,234	1,047	215	1,262	1,050	214	1,264
	EU	445	113	558	459	95	554	446	88	534
	Third countries	23	24	47	21	31	52	25	32	57
	<b>Total</b>	<b>1,481</b>	<b>358</b>	<b>1,839</b>	<b>1,527</b>	<b>341</b>	<b>1,868</b>	<b>1,521</b>	<b>334</b>	<b>1,855</b>
<b>Students total</b>		<b>1,839</b>	<b>443</b>	<b>2,282</b>	<b>1,850</b>	<b>436</b>	<b>2,286</b>	<b>1,838</b>	<b>415</b>	<b>2,253</b>

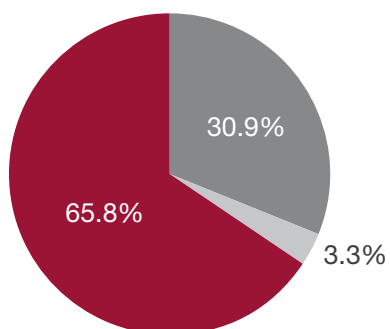
### Number of graduations

Type of programme	Academic year 2012/2013		
	Females	Males	Total
Diploma degree programme Veterinary Medicine	143	20	163
Doctorate degree programmes	38	14	52
Bachelor's degree programme Equine Science	20	0	20
Bachelor's degree programme Biomedicine and Biotechnology	6	3	9
Master's degree programme Biomedicine and Biotechnology	7	4	11
<b>Total</b>	<b>214</b>	<b>41</b>	<b>255</b>

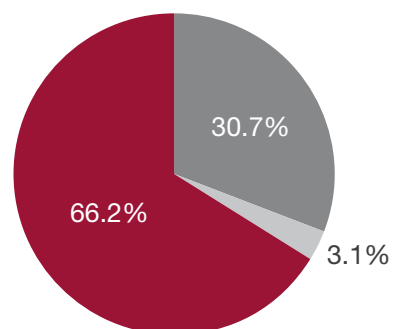
### Students based on origin (degree students and non-degree students)



Fall semester 2013/2014



Fall semester 2012/2013





3

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Research

# Research

## Research in human and animal health

In basic research, applied research and clinical research, the University of Veterinary Medicine, Vienna focuses on a broad range of subjects relevant to society. The research questions range from veterinary diagnostics and therapy for individual animals and herd health, through food safety, to questions of animal welfare and animal ethics.

Researchers investigate the entire chain of production of animal-based food products – from stable to table –, which contributes to safe and high-quality food and consumer protection. Research activities in the field of comparative medicine contribute to the improvement of treatment options for humans and animals, including for cancer; and studies into the humane treatment of farm animals are aimed at furthering the advancement of animal welfare.

The scope and orientation of Vetmeduni Vienna's research activities ensure its place as a viable research institution going into the future.



Photo: © Georges Schmelder / Vetmeduni Vienna



## Research activities

### A pigsty for science

Approximately 1,500 pigs will be in hog heaven in the newly built pilot pigsty Medau at Vetmeduni Vienna's Teaching and Research Farm. Animal-friendly housing systems (no holding crates), more space than conventional pig farms and a good stall environment contribute to the animals' wellbeing. The system for rearing and fattening piglets is primarily used for the purpose of student education but can also be used for scientific research. The Austrian Ministry of Science and Research contributed 4.2 million Euros to the plant's construction. Remaining funding was provided by the Province of Lower Austria and by Vetmeduni Vienna itself.

The structure of the Medau pig farm – particularly the flexible and customisable research stalls – is ideally suited for scientific research regarding the health and well being of sows and piglets. The stages at which piglets feed are of particular importance to the health of the entire pig population. A research team headed by Isabel Hennig-Pauka, head

of the University Clinic for Swine, is currently researching measures to reduce piglet mortality on pig farms. Another research project headed by Johannes Baumgartner from the Institute of Animal Husbandry and Animal Welfare is working with the fixation of mother sows around the time of giving birth. The research team is examining diverse systems of farrowing in order to improve the timing and duration of fixation and thus the wellbeing of the animals.

The Province of Lower Austria supports new research projects at the Medau pig farm with a total of 150,000 Euros.

### PhD in Pig and Poultry Medicine

Since October 2013, Vetmeduni Vienna has been training PhD students according to international standards as part of its new Doctoral programme Pig and Poultry Medicine. Two University Clinics and four Institutes have joined forces with the goal of providing comprehensive training to students through scientific projects in the field of infection medicine within poultry and swine populations. The interdisciplinary research team accompanying the students deals with the interaction between hosts and pathogens. This scientific work will help to better prevent diseases in livestock populations. Approximately 20 PhD students from three continents complete three years of training, which includes a programme for technical, soft and social skills in addition to scientific training.

The new farrowing system Pro Dromi at Medau pig farm.



Photo: © citronenrot / Vetmeduni Vienna

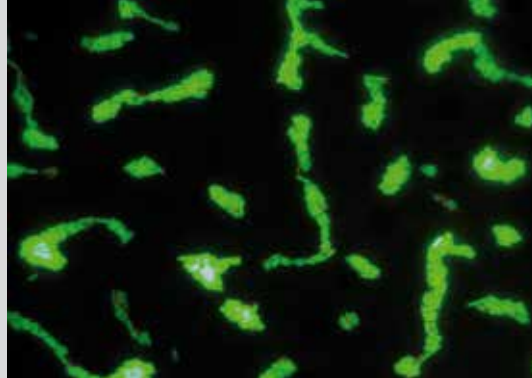


Photo: © Monika Džebel / Vetmeduni Vienna

### **Christian Doppler laboratory for the detection of bacteria and co.**

Bacterial, viral and fungal contaminations can significantly disrupt industrial production: germs in food endanger the health of consumers; and germs in pharmaceutical and chemical products can lead to significant financial loss. A new Christian Doppler laboratory at Vetmeduni Vienna is developing methods of detecting so-called contaminants as early, quickly, and safely as possible in order to confront this challenge. The Christian Doppler laboratory for Monitoring of Microbial Contaminants was officially opened in June 2013 in the presence of Austria's Minister of Science and Research, Karlheinz Töchterle. The laboratory is headed by Peter Rossmanith of the Institute of Milk Hygiene, Milk Technology and Food Science.

### **New research projects**

Research activities at Vetmeduni Vienna include a wide variety of diverse disciplines in addition to its core area of veterinary medicine. A selection of new research projects illustrates the wide scope of research.

#### **Invasive mosquitoes in Europe**

Climate and international transport of goods and people has led to mosquitoes from other parts of the world establishing themselves in Europe. They not only threaten the survival of native mosquitoes, but they also act as potential carriers of viruses and parasites that endanger human and animal health. Hans-Peter Führer and his team from the Institute of Parasitology, together with colleagues in France and Germany in the context of an EU project, are investigating the risk of implanting infectious diseases spread by mosquitoes. For this purpose, the team of researchers is collecting native and invasive mosquitoes in Austria, France and Germany to test them for pathogens using molecular-biological methods. The researchers are investigating all the factors that are necessary for invasive species to become established in new habitats. Based on the findings, specific measures are defined.



Photo: © Carina Zitra / Vetmeduni Vienna

### Researching molecular mechanisms of sepsis

Sepsis, commonly known as blood poisoning, is initiated by the presence of live bacteria or their products (e.g. endotoxins). Sepsis is still associated with high mortality rates and its development is not yet fully known. Absence of the enzyme tyrosine kinase 2 (Tyk2) in mice with severe forms of sepsis results in an increased survival rate. Tyk2 is an integral component of signalling between cells. Birgit Strobl and her team from the Unit of Molecular Genetics are now investigating how Tyk2 contributes to the development of septic shock and whether deactivation of Tyk2 protects from sepsis. The project is funded by the Austrian Science Fund (FWF) and will help us understand the complex molecular processes involved in sepsis, ultimately contributing to the development of new therapeutic strategies.

### New treatments for aggressive mast cell disorders in humans and dogs researched

Aggressive mast cell disorders are incurable cancers with a poor prognosis in both humans and dogs. Mast cell disorders are rare in humans, but very frequent in dogs. It was recently shown that mast cells in aggressive mastocytosis express the CD30 surface molecule. Michael Willmann from the Clinical Unit of Internal Medicine Small Animals at Vetmeduni Vienna and his colleague Peter Valent from the Medical University Vienna are investigating in a joint effort a new therapy for mastocytosis with a focus on CD30 as a new targeted structure in the treatment of this disease. The aim of this research project funded by the FWF is to improve the treatment and prognosis of aggressive mast cell disorder in human and canine patients.

Using special human and animal (see image) cell lines, new mastocytosis treatments are researched.

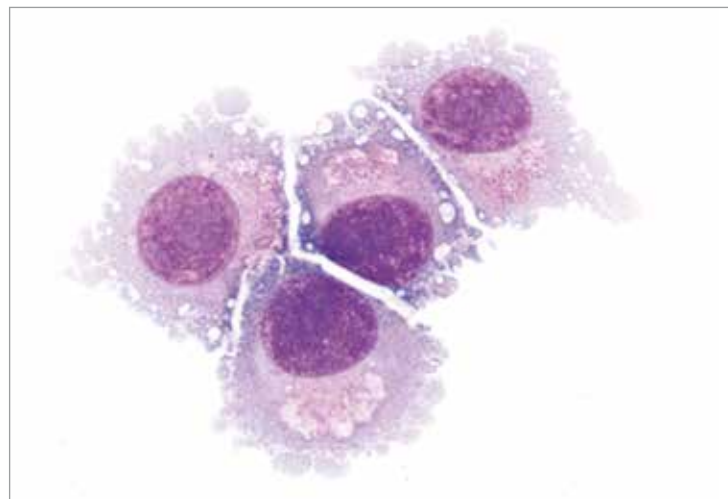


Photo: © Michael Willmann, Peter Valent



Photo: © iuxart / fotolia.com

### **Histomonosis: Understanding dangerous poultry disease**

Histomonosis, a parasitic infection also known as “blackhead disease” affects mainly turkeys and chickens. In recent years almost all preventative and curative drugs for food-producing animals against histomonosis have been withdrawn from the markets in the EU and USA, leading to increased occurrence of the disease and the loss of entire poultry stocks. This demonstrates the necessity of identifying the molecular-biological basis of this dangerous poultry disease. Ivana Bilic and her colleagues from the Clinical Unit of Poultry Medicine are collaborating in a research project funded by the FWF to investigate the *Histomonas meleagridis* parasite. The researchers seek to identify in particular those proteins that are responsible for the virulence factors. Furthermore, the value of selected proteins as markers in diagnostic tests will be evaluated.

### **Joining forces against back pain**

About 85 percent of Central Europe’s population suffer from back pain at least once during their lifetime. The long back muscle is frequently involved, impacting spinal stability through its branched anatomical structure. Its physiological mechanisms have not yet been fully identified. Christian Peham and his team from the Clinical Unit of Equine Surgery study the function of this muscle in horses and humans in a project funded by the FWF. The back muscles of horses are much longer than those of humans, which allows for the placing of more electromyography (EMG) electrodes on their long back muscle. Based on the results of the muscle activity readings and a video-based motion analysis, mechanical models of each muscle network (human and horse) will be created. The data exchange between both species is to the benefit of both human and veterinary medicine.



Photo: © Anita Zander / fotolia.com

### Bacterial treatment against EHEC pathogens

An infection with enterohaemorrhagic *Escherichia coli*, also known as EHEC bacteria, can cause serious diseases in humans for which often only the symptoms can be treated, as demonstrated during an outbreak in 2011. Alternative therapies against infection with such an aggressive form of *Escherichia coli* are urgently needed. Isabel Hennig-Pauka of the University Clinic for Swine together with her team are studying new treatment methods in a project funded by the Austrian Research Promotion Agency (FFG). Piglets reared in a gnotobiotic environment serve as models to reproduce the disease and study its progression using the EHEC strain that caused the outbreak of 2011. Furthermore, the researchers are investigating how a known probiotic strain – *E. coli* G3/10 – impacts the intestinal health of the study animals. The research findings will be used to develop and assess new forms of treatment against EHEC.

### Do hamster mothers overheat during lactation?

In response to high metabolic requirements animals raise their metabolic rate up to six-fold through increased food intake and energy assimilation. This adaptability to excessive cold, high long-term physical activity or an increased energy need throughout lactation however has limits which were previously unknown. Even with unlimited food access, the increase in heat generation, muscle activity and milk production has limits too. This results in the animal not being able to produce what it needs to. Teresa Valencak of the Research Institute of Wildlife Ecology together with her team investigates these physiological limits with the Syrian golden hamster (*Mesocricetus auratus*). The researchers of the project funded by FWF are especially interested in the extent of heat production in lactating golden hamster females. When are they no longer able to release the excess heat produced as a by-product of both metabolism and milk production? The golden hamster findings are especially valuable for breeding laboratory, domestic and wild animals in captivity.

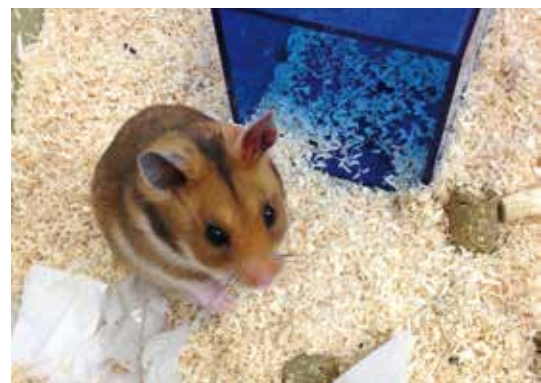


Photo: © Teresa Valencak / Vetmeduni Vienna



Photo: © sorensen / fotolia.com

## A way out of antibiotic resistance

Antibiotic resistant pathogens pose major challenges to both humans and veterinary medicine, especially because new and effective drugs are scarce. Martin Wagner and Kathrin Rychli from the Institute of Milk Hygiene, Milk Technology and Food Science and Joseph Strauss from the University of Natural Resources and Life Sciences, Vienna/Austrian Institute of Technology (AIT) and their team aim to change that in a research project supported by the Research and Education Society of Lower Austria (NFB). Genome analysis and epigenetic research suggests that fungi are talented producers of more bioactive compounds than previously assumed. However, the production of these compounds is often blocked through epigenetic mechanisms. The researchers study a number of different epigenetically altered fungi to develop new compounds and their molecular effects. The team will also characterise the underlying epigenetic principles. The research findings will provide valuable information for the development of new drugs and antibiotics.

## Unhealthy diet for high-output dairy cows

High-output dairy cows need a great deal of energy and sufficient nutrients. To meet their needs they are given ever larger amounts of concentrated feed. While this helps to ensure a higher milk production, it can lead to long-term problems for the cows. An unbalanced nutrient-rich diet can cause severe inflammation. Professor Qendrim Zebeli and his team from the Institute of Animal Nutrition and Functional Plant Compounds are now for the first time studying the impact of unbalanced nutrient-dense feed on the digestion of high-yield dairy cows and how digestive problems correlate with inflammation parameters. The “Diet-induced inflammation in cows” project funded by the Vienna Science and Technology Fund (WWTF) will provide important insights about the adaptability of the metabolism and immune system to increased nutrient uptake in cows. Based on the findings the researchers will develop innovative preventative measures.

Search for new antibiotics:  
How do different fungal extracts help to control bacteria?

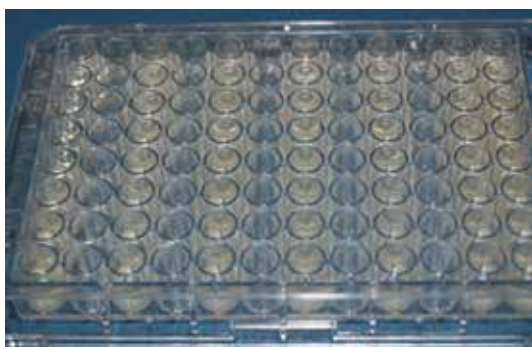


Photo: © Kathrin Rychli / Veimeduni Vienna

## Evaluating and promoting research

### Evaluating research

Much emphasis is placed on the quality of research conducted at Vetmeduni Vienna. In addition to the successful certification of all processes awarded by the European Association of Establishments for Veterinary Education (EAEVE) in 2012, the university evaluated all of its research output in the fall of 2013 for the second time. First, all appointed professors completed a self evaluation based on pre-defined indicators of their areas of responsibility for the period of 2008 to 2012. The self-evaluation reports were presented to an external, international group of experts who also inspected ongoing research at the clinics and departments during a site visit. Based on interviews and discussions the international review team provided recommendations. The results and recommendations will be summarised in a final report which will be published in early 2014 as a continuous quality assurance measure for research conducted at the university.

### A view from outside

The Scientific Advisory Board is another pillar that ensures the high quality of research at the University of Veterinary Medicine, Vienna. The Advisory Board is formed of internationally renowned scientists in veterinary medicine. Its members change regularly based on a rotation principle. The Scientific Advisory Board consults the university regarding evaluation procedures and oversees the implementation of recommendations based on the evaluation of research activities.

In March 2013, Claudia Reusch from the University of Zurich joined the expert panel replacing Bernd Hoffmann (University of Gießen). Other members include Gerhard Breves (University of Veterinary Medicine Hannover), Reinhold Carle (University of Hohenheim), Jürgen Dämmgen (Boehringer Ingelheim GmbH), Hans Lutz (University of Zurich), Frauke Ohl (Utrecht University). Hans Lutz' period in his capacity as a board member concluded at the end of 2013.

The Scientific Advisory Board  
(f.l.: Frauke Ohl, Hans Lutz, Reinhold Carle,  
Jürgen Dämmgen, Gerhard Breves, Claudia Reusch)



Photo: © Frauke Lejeune / Vetmeduni Vienna



Photo: © Georges Schneider / Vetmeduni Vienna

## Young academics

### Climbing the career ladder

The Vetmundi Vienna Postdoc programme prepares outstanding young academics for a national or international scientific career. Mentoring, networking and the exchange of experience are necessary for ascending the rungs of the career ladder. The annual postdoc retreat gives postdoc students the opportunity to discuss current projects, careers, and ask questions regarding financing and cooperation.

### Active in the Academy of Sciences

In May 2013, behavioural biologist and ERC Starting Grant recipient Friederike Range of the Messerli Research Institute at Vetmeduni Vienna was officially accepted into the “Junge Kurie” (circle of young academics) of the Austrian Academy of Sciences in May 2013. Range was appointed to the biology, cognition and behaviour section.

The “Junge Kurie” of the Academy is made up of young scientists from various disciplines, the majority of whom have been awarded ERC (European Research Council) grants. Their mission is to advance interdisciplinary research and identify innovative research areas as well as to promote young academics.

## Service for researchers

### Support with research design and analysis

How can research data best be evaluated, analysed and prepared for publication? Researchers in the life sciences are regularly confronted with these questions in the course of their work. Employees and students at Vetmeduni Vienna receive support for experimental design and data analysis through the Bioinformatics and Biostatistics Platform, which has been fully staffed since 2013.

### Successful project applications

In addition to research activities, academics are also responsible for raising external funding and exploiting research findings, the latter of which is supported by the Research Support and Innovation Office of the University of Veterinary Medicine, Vienna. The Office informs researchers about current project announcements, advises them on the submission of applications and connects them with cooperation partners for national and international research programmes. The Research Support and Innovation Office staff also gives support for grant management and research contracts.

In order to streamline the transfer of technology from science to industry, Vetmeduni Vienna helps its researchers to market scientific findings for practical application in the business world. The Research Support and Innovation Office advises researchers on how to assess the patentability and marketability of scientific findings, and helps them search for business partners.



In order to successfully turn scientific results into commercial practice, the Office presented information on topics regarding technology transfer as part of the event series Nuts for Research in 2013.

## Research received honours

### Outstanding achievements by Vetmeduni Vienna staff

The Rectorate honours every year especially successful Vetmeduni Vienna scientists. The prizes for the highest number of citations and the highest amount of external funding raised are awarded in two age categories in the areas of clinical and non-clinical research. Awards are also bestowed upon the best inventors each year.

### For raising external funding in 2012/2013 most effectively, awards were conferred to:

- In the category clinical research (born after 1978): Barbara Metzler-Zebeli, University Clinic for Swine
- In the category clinical research (born before 1977): Ivana Bilic, Clinical Unit of Poultry Medicine
- In the category non-clinical research (born before 1977): Mathias Müller, Institute of Animal Breeding and Genetics

### Awards for the highest number of citations in 2012/2013 were presented to:

- In the category clinical research (born after 1978): Regina Erber, Insemination and Embryotransfer Platform
- In the category clinical research (born before 1977): Christine Aurich, Insemination and Embryotransfer Platform
- In the category non-clinical research (born after 1978): Mareike von Lewinski, Graf Lehndorff Institute for Equine Science
- In the category non-clinical research (born before 1977): Rupert Palme, Institute of Medical Biochemistry

### Inventor of the Year 2013

Therersia Licka, University Equine Clinic, received the award for developing orthopaedic hoof protection. The segmented horseshoe can be individually adjusted to the hooves.

The Rectorate honours every year outstanding achievements of Vetmeduni Vienna staff



Photo: © Heike Hochhauser / Vetmeduni Vienna



Photo: © Lilly Lapackova / 123 RF

## Poster prize

Scientific subjects can be well presented with posters. The more appealing the visual presentation of research findings is, the more attention they draw. This year more than 50 young academics of Vetmeduni Vienna presented their research at the annual poster competition. In addition to staff (75 percent) also students (25 percent) contributed posters. Overall, women (85 percent) outperformed men in the competition. Comparisons across participating institutes and university clinics show that the Institute of Milk Hygiene, Milk Technology and Food Science and the Clinical Unit of Internal Medicine Small Animals submitted the highest number of entries with five submissions each.

Two juries, one consisting of members of the Scientific Advisory Board and one of journalists, nominated three winners.

## Top posters selected by the scientific jury (members of the Scientific Advisory Board):

### 1<sup>st</sup> prize:

*Does social isolation impair DNA repair? Social deprivation associated with reduced telomere length in *Psittacus erithacus erithacus**, Denise Aydinonat, Institute of Medical Biochemistry

### 2<sup>nd</sup> prize:

*Defining the core microbiome of physiologically and pathologically altered ileocaecal lymph nodes of slaughter pigs*, Monika Dzieciol, Institute of Milk Hygiene, Milk Technology and Food Science

### 3<sup>rd</sup> prize:

*Estradiol Dependent Accrual of Bone Mass in Young Growing Rats is not Amplitude-Modulated*, Ingrid Kantner, Institute of Physiology, Pathophysiology and Biophysics

The journalist jury (left) and the scientific jury (right) during the selection of the submitted posters.



Photos: links © Susanna Kautschitsch / Vetmeduni Vienna, rechts © Frauke Lejune / Vetmeduni Vienna

### Top posters nominated by the journalist jury

(Martin Kugler/Die Presse, Peter Iwaniewicz/  
Der Falter, Lukas Wieselberg/orf.at/Ö1,  
Thomas Zimmer/VET-MAGAZIN.com)

#### 1<sup>st</sup> prize:

*VGKC-complex/Ig1 antibody-associated Limbic Encephalitis in a cat*, Ursula Glantschnigg, Clinical Unit of Internal Medicine Small Animals

#### 2<sup>nd</sup> prize:

*Does social isolation impair DNA repair? Social deprivation associated with reduced telomere length in *Psittacus erithacus erithacus**, Denise Aydinonat, Institute of Medical Biochemistry

#### 3<sup>rd</sup> prize:

*Characterisation of the spread of BTV8 and the *Culicoides* fauna using climate classification*, Katharina Brugger, Institute of Veterinary Public Health



Photo: © Sashkin / fotolia.com

### External scientific awards and grants

- Alfred Kleibel Prize for research in the area of animal-based foodstuff: Johannes Khol, Clinical Unit of Ruminant Medicine
- Armin Tschermak von Seysenegg Award 2013 presented by the Friends of the University of Veterinary Medicine, Vienna: Barbara Wallner, Institute of Animal Breeding and Genetics
- Annual Research Award of open access publishing-house BioMed Central, second place in the category Animal Science, Veterinary Research and Zoology for the publication “Female attractiveness affects paternal investment: experimental evidence for male differential allocation in blue tits”: Katharina Mahr, Matteo Griggio, Michaela Granatiero and Herbert Hoi – all from the Konrad Lorenz Institute of Ethology
- Award of Excellence presented by the Federal Ministry of Science and Research: Katharina Reutner, Institute of Immunology
- Best presentation award in the context of the K-Project Preventive Veterinary Medicine: Evelyne Mann, Institute of Milk Hygiene, Milk Technology and Food Science
- Best publication of the Federation of European Companion Animal Veterinary Associations (FECAVA) for the paper “Anästhesie bei Hunden und Katzen mit Herzerkrankung – ein unmögliches Unterfangen oder eine Herausforderung mit überschaubarem Risiko (Anaesthesia in dogs and cats with cardiac disease – an impossible endeavour or a challenge with a calculable risk)?“: Roswitha Steinbacher, University Clinic for Small Animals



Photo: © Michael Bernkopf / Vetmeduni Vienna

- Congress Grant for Young Scientists of the Federation of European Microbiological Societies (FEMS): Elrike Frenzel, Unit of Functional Microbiology
- First place for scientific poster of the Austrian Small Animal Veterinarian Association Conference in Salzburg: Nikola Katic, Clinical Unit of Small Animal Surgery
- German Study Award, second place in the category Humanities and Cultural Studies: Judith Benz-Schwarzburg, Messerli Research Institute
- H. Wilhelm Schaumann Foundation Award for Wageha Awad, Clinical Unit of Poultry Medicine and Award for the best dissertation: Agha Waqar Yunus, Institute of Animal Nutrition and Functional Plant Compounds
- Heimtierpreis 2013 (companion animal prize) presented by the Friends of the University of Veterinary Medicine, Vienna: Hanna Franziska Schöpfer, Institute of Anatomy, Histology and Embryology
- Honorary ambassador of the Jane Goodall Institute – Austria: Ludwig Huber, Messerli Research Institute
- INITS Award by the academic business incubator Innovation into Business, second place in the category Life Sciences: Agnes Dadak, Unit of Clinical Pharmacology
- Junior Award of the Austrian Society of Tropical Medicine and Parasitology and Migration Medicine: Martina Ondrovics, Institute of Parasitology
- Junior researcher prize for the best presentation at the DACH Conference on Epidemiology, second place: Karin Lebl, Institute of Veterinary Public Health
- Max Eyth silver coin awarded by the German Agricultural Society (DGL): Friedrich Bauer, Institute of Meat Hygiene, Meat Technology and Food Science
- Poster award of the Austrian Pharmacological Society (APHAR): Angelika Berger, Institute of Pharmacology and Toxicology
- Poster prize of the International Conference on Diseases of Zoo and Wild Animals: Gerald Weissengruber, Institute of Anatomy, Histology and Embryology
- Prize of the Austrian Small Animal Veterinarian Association Claudia Ouschan, Institute of Medical Biochemistry
- Scientific Award of the Austrian Association for Buiatrics: Heidemaria Berger, Clinical Unit of Herd Health Management for Ruminants
- Scientific Paper of the Year nominated by Wiener Tierärztliche Monatsschrift for “Klauenschäden bei Ferkeln in sieben Typen von Abferkelbuchten” (Damaged claws in piglets in seven types of farrowing pens): Johannes Baumgartner, Institute for Animal Husbandry and Animal Welfare
- Travel award for the 2nd Meeting of Middle European Societies for Immunology and Allergology in Opatija: Eva Maria Putz, Institute of Pharmacology and Toxicology
- Young Scientist Award of the University Teachers’ Association of Vetmeduni Vienna: James Rushton, Clinical Unit of Small Animal Surgery, and Hanna Plickert, Clinical Unit of Internal Medicine Small Animals
- Wiley-Blackwell Prize for the Paper “In vitro validation of a new respiratory ultrasonic plethysmograph“: Johannes Schramel, Yves Moens, both from the Clinical Unit of Anaesthesiology and perioperative Intensive-Care and René van den Hoven, Clinical Unit of Equine Internal Medicine

## International researchers met at the campus

### Veterinary immunology research group

In April 2013, the University of Veterinary Medicine, Vienna hosted the annual veterinary immunology research group meeting of the German Society for Immunology. Researchers representing every field of veterinary immunology gathered for two days in Vienna to exchange ideas and experience on Vetmeduni Vienna campus. Presentations covered numerous animal species, from farm animals and pets to birds and fish.

### Research into diseases of zoo animals and wild animals

The International Conference on Diseases of Zoo and Wild Animals provides an annual forum for scientific exchange amongst researchers and veterinarians. In May 2013, international experts met to discuss disease patterns and methods of treatment for animals living in the wild and in captivity. Presentations and workshops dealt with a wide range of topics, including infectious diseases, surgery and the newest methods of treatment.

### Comparative cognitive research

In July 2013, the Department of Comparative Cognitive Research at the Messerli Research Institute of Vetmeduni Vienna hosted the final conference of “CompCog”. The name stands for the network program “Evolution of Social Cognition: Comparisons and integration across a wide range of human and non-human animal species”. The network’s aim was to conduct research into comparative cognition in diverse vertebrate and invertebrate species, as well as in human beings. More than 160 participants from 22 countries took part in this interdisciplinary exchange.

### Parasites on a world tour

In November 2013, the Austrian Society for Tropical Medicine, Parasitology, and Migration Medicine (Österreichische Gesellschaft für Tropenmedizin, Parasitologie und Migrationsmedizin) held its annual conference at Vetmeduni Vienna. More than 100 specialists from Austria and neighbouring countries met to exchange information regarding the risks of international spread of pathogens by mosquitoes and other biological carriers. The annual conference provides a unique platform in Central Europe for scientists in veterinary and human medicine, as well as for government representatives, diagnosticians and clinicians.



160 participants from 22 nations joined the final CompCog conference at the Vetmeduni Vienna campus

Photo: © Messerli Forschungsinstitut / Vetmeduni Vienna



## Projects approved in 2013

The following table presents a summary of research projects which were awarded funding in 2013. Due to confidentiality clauses, not all projects can be published.

Funding provided by	Full title	Person responsible
7 <sup>th</sup> Framework Programme KBBE	FECUND. Optimisation of early reproductive success in dairy cattle through the definition of new traits and improved reproductive biotechnology	Urban Besenfelder
Administration of "Wilderness Dürrenstein"	Ural owl re-introduction	Richard Zink
BIOS Science Austria	Pathogens of the honey bee	Till Rümenapf
BMG, Ministry of Life, Province of Lower Austria	Evaluation of farrowing pens with temporary crating of the sow	Johannes Baumgartner
BMG/Ministry of Life	Study on the role of llamas and alpacas as potential reservoirs of viral, bacterial and parasitic diseases for farm animals	Thomas Wittek
BMLVS	Early detection of hip dysplasia in young dogs	Britta Vidoni
BMWF	Developing a method to carry out the harm-benefit analysis in animal research	Herwig Grimm
CDG	Christian Doppler Labor for Monitoring of Microbial Contaminants	Peter Rossmanith
ERDF	Reconciling Renewable Energy Production and Nature in the Alps	Chris Walzer
Eva Mayr-Stihl Foundation	Understanding onagers-human conflicts to develop evidence based conservation strategies for the critically endangered onager population in Bahram-e Goor Protected Area, Iran	Petra Kaczensky
FFG	Automated phenotyping	Gottfried Brem
FFG	Bacterial therapy of infection with enterohaemorrhagic E. coli in a gnotobiotic piglet model	Isabel Hennig-Pauka
FFG	Improvement of colostrum supply and effects of colostrum based products in calves	Marc Drillich/Thomas Wittek
FWF	Tyk2 in the innate immune response during sepsis	Birgit Strobl
FWF	Global Change and invasive mosquitoes as infectious disease risks in Europe (GC-INVAMOFECT)	Hans-Peter Führer
FWF	Genetic and cytogenetic bases of Cardinium-caused cytoplasmic incompatibility	Stephan Schmitz-Esser
FWF	Elucidating virulence factors of Histomonas meleagridis	Ivana Bilic
FWF	The longissimus dorsi network – the backup of posture and motion	Christian Peham
FWF	Evaluation of Ki-1 Antigen (CD30) as a Novel Therapeutic Target in Advanced Mastocytosis	Michael Willmann
FWF	HDL: Heat Dissipation Limitation or Hot Hamsters during lactation?	Teresa Valencak
FWF	Genetics and epigenetics of wolf and dog social behaviour	Zsófia Virányi
FWF	Multifunctional OCT for ophthalmic imaging in mice and rats	Martin Glösmann
FWF/DFG	Phenotypic and genetic Variation in Biscutelle didyma and Adaptation to environmental Change – a combined ecological-genomic approach	Christian Schlötterer

Funding provided by	Full title	Person responsible
INFRAFRONTIER	Development of mouse mutant resources for functional analyses of human diseases – Enhancing the translation of research into innovation	Thomas Rülcke
Jutta und Georg Bruns Foundation	Comparative study of the microbiom of the abomasum in cattle with or without abomasal ulcers	Thomas Wittek
KBBE	A whole-system approach to optimising feed efficiency and reducing the ecological footprints of monogastrics	Barbara Metzler-Zebeli
Mehl-Mühlens Foundation	Influence of the LH analogue human chorionic gonadotrophin (hCG) on early pregnancy in the mare	Christine Aurich
NFB	Microbial Epigenetics for Medicine – Novel drugs and antibiotics and their mode of action	Kathrin Rychli
OeAD	Variability of Major Histocompatibility Complex in camels	Pamela Burger
OeAD	Epidemiological investigations on the prevalence of enteric and respiratory coronaviruses in dogs of Hungary and Austria	Karin Möstl
Province of Lower Austria	Development, testing and validation of an automated observation technology for pigs under practical conditions	Johannes Baumgartner
Province of Lower Austria	MICROCATTLE: Identification of bovine intestinal microbes in respect to food quality and animal health	Martin Wagner
Province of Lower Austria	PIG BALANCE: Effects of health measures in swine during the peripartal stage on antibiotics use and animal welfare.	Isabel Hennig-Pauka
SANCO	Coordinated European Animal Welfare Network	Knut Niebuhr
University Jubilee Foundation of the City of Vienna	Variation of the TcR chain repertoire in porcine T cells depending on age, subset and infection	Sabina Eßler
Volkswagen Foundation	Simulator based training in equine gynecological examination- Analysis of acquirments of veterinary students and effects of stress during exams	Christina Nagel
Wildlife Conservation Society	Mongolia Ungulate Survey	Petra Kaczensky
WKW	A masterkey to the hidden fungal potential	Christoph Zutz
WWTF	d-i.INFLACOW: Characterization and prevention of diet-induced inflammation and related immune and metabolic disorders in dairy cows	Qendrim Zebeli
ZSI	Ticks and their pathogens	Anja Joachim
ZSI	Strengthening the Regional Scientific-Research Potential by Studying Medicinal and Aromatic Plants from the Sharr/Sar and Korab Mountains (Kosovo)	Johannes Novak

BMG	Austrian Federal Ministry of Health
BMLVS	Austrian Federal Ministry of Defence and Sports
BMWF	Austrian Federal Ministry for Science and Research
CDG	Christian Doppler Research Association
DFG	German Research Foundation
ERDF	European Regional Development Fund
FFG	Austrian Research Promotion Agency
FWF	Austrian Science Fund
INFRAFRONTIER	European Research Infrastructure for phenotyping and archiving of model mammalian genomes

KBBE	Knowledge Based Bio-Economy
NFB	Research and education society of Lower Austria
OeAD	Austrian Agency for International Mobility and Cooperation
SANCO	Directorate General for Health and Consumers, EU-Commission
WKW	Economic Chamber Vienna
WWTF	Vienna Science and Technology Fund
ZSI	Centre for Social Innovation

## Key figures

### Staff (Headcount, as of 12/31)

	2013			2012			2011		
	Females	Males	Total	Females	Males	Total	Females	Males	Total
Professors	8	30	38	8	31	39	7	32	39
Academic staff	398	247	645	376	233	609	339	226	565
<b>Academic staff total</b>	<b>406</b>	<b>277</b>	<b>683</b>	<b>384</b>	<b>264</b>	<b>648</b>	<b>346</b>	<b>258</b>	<b>604</b>

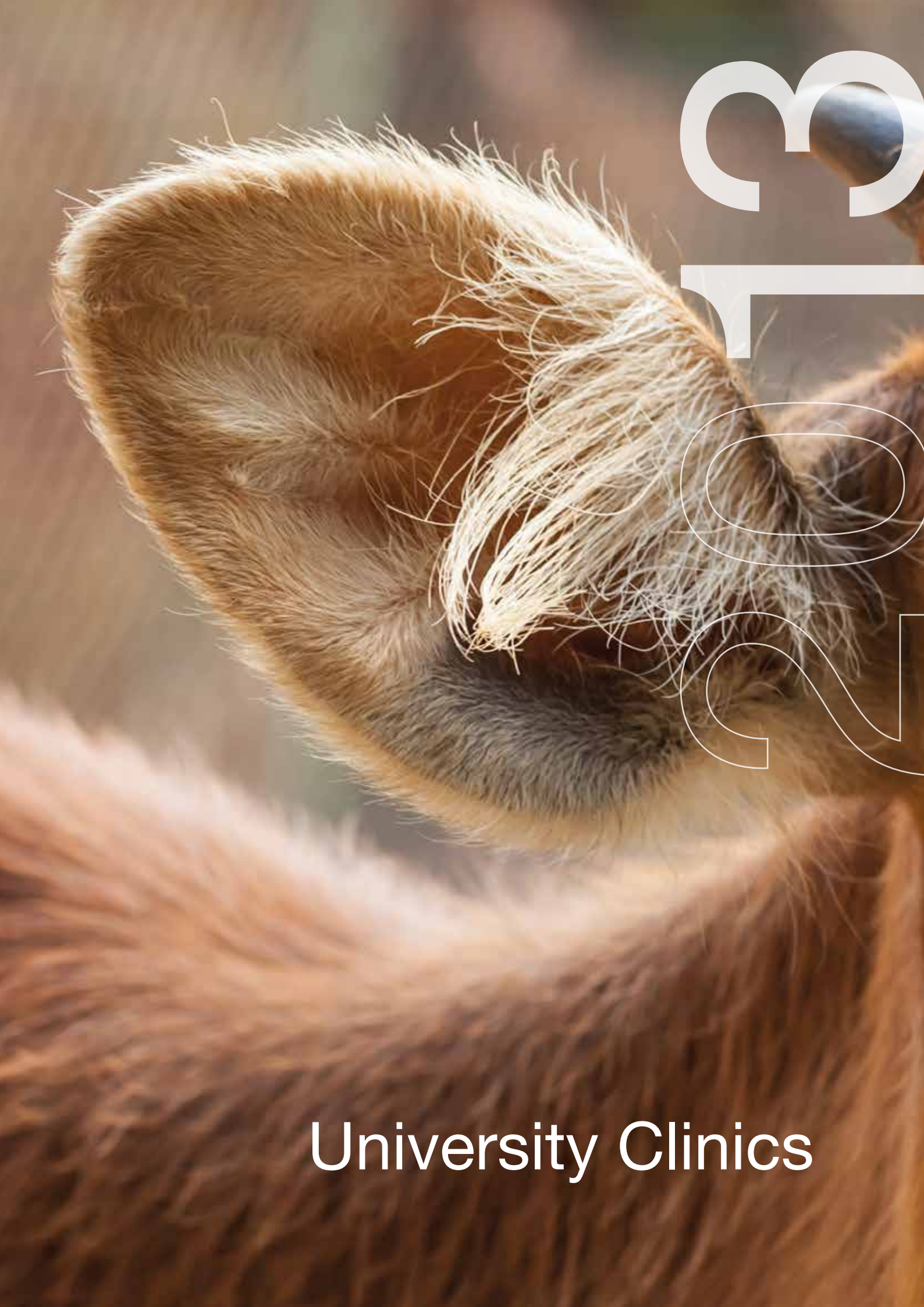
### Income from R&D projects in Euro

	2013	2012	2011
Domestic	11,206,071	12,204,892	7,039,181
EU	2,163,071	2,259,636	1,958,317
Third countries	146,035	0	0
<b>Total</b>	<b>13,515,177</b>	<b>14,464,528</b>	<b>8,997,499</b>

### Number of scientific publications by staff

Types of publications	2013	2012	2011
First edition of scientific specialised literature and textbooks	7	23	14
First publications in SSCI, SCI or A&HCI journals	506	425	397
First publications in other scientific journals	40	39	25
First publications in collected editions	364	426	392
Other scientific publications	159	191	141
<b>Total</b>	<b>1,076</b>	<b>1,104</b>	<b>969</b>





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University Clinics

## Excellent medical care around the clock

Medical services for animal patients are offered at the University of Veterinary Medicine, Vienna by five Clinics bundled according to animal species. The University Clinics for Avian and Fish\*, Small Animals, Swine and Ruminants as well as the Equine Clinic provide 24-hour medical care for animal patients year round. After restructuring the University Clinics and improving internal processes in 2013, the needs of animal patients and their owners as well as referring veterinarians can be met even more efficiently. Florian Jenner, an expert in large animals with extensive international experience, became the new head of the Equine Clinic in 2013.

Outpatient, inpatient and intensive care is provided at the University Clinics in accordance with the latest scientific findings. Research findings gained at Vetmeduni Vienna are directly applied to medical care of animal patients.

\* former Clinic for Avian, Reptile and Fish Medicine



Photo: © Michael Bernkopf / Vetmeduni Vienna

## Veterinary resident training

At Vetmeduni Vienna graduated veterinarians can complete a postgraduate residency programme in a specialized area of veterinary medicine. The university is currently offering 14 residency programmes in accordance with the European Board of Veterinary Specialisation (EBVS) curricula. The three-to-four year residency training at the University Clinics concludes with an examination which is held centrally for all residents in Europe. Graduates are entitled to carry the internationally recognised title “Diplomate” in their area of specialisation.

Vetmeduni Vienna offers residency programmes in the following areas (Diplomate title of the respective European Colleges in parentheses):

Animal Reproduction (ECAR), Bovine Health Management (ECBHM), Equine Internal Medicine (ECEIM), Porcine Health Management (ECPHM), Poultry Veterinary Science (ECPVS), Veterinary Anaesthesia und Analgesia (ECVAA), Veterinary Clinical Pathology (ECVCP), Veterinary Internal Medicine Companion Animals (ECVIM-CA), Veterinary Internal Medicine Companion Animals, Oncology (ECVIM-CA, Oncology), Veterinary Ophthalmology (ECVO), Veterinary Pathologists (ECVP), Veterinary Surgery, Small Animal Surgery (ECVS), Veterinary Surgery, Large Animal Surgery (ECVS), Parasitology College (EVPC).

The following staff members have passed their residency examination at the European or American Colleges attesting to their clinical and scientific expertise, and have graduated as diplomates in their areas of specialisation:

- **Anja Becher** – Diplomate of the European College of Animal Reproduction (ECAR)
- **Alice Bennett** – Diplomate of the American College of Veterinary Emergency and Critical Care
- **Barbara Braus** – Diplomate of the European College of Veterinary Ophthalmologists (ECVO)
- **Hubert Simhofer** – Diplomate of the American Veterinary Dental College – Equine Dentistry (AVDC – ED)
- **Christoph Peterbauer** – Diplomate of the European College of Veterinary Anaesthesia and Analgesia (ECVAA)

In preparation for the residency, Vetmeduni Vienna offers one-year internships in the areas of small animal medicine, equine medicine and ruminant medicine. Young veterinarians can deepen their knowledge and skills in all areas pertaining to the specific species while being integrated into the daily practice at the Clinics. Based on a rotation schedule interns gain experience in all areas – from anaesthesiology through diagnostics imaging to pathology. This programme is one of the few of its kind in the German-speaking world.



Photo: © Heiko Hochhauser / Vetmeduni Vienna

## Continuing education and information for practicing veterinarians

### New cases for small animal surgery

The international small animal surgery scene gathered in September 2013 at Vetmeduni Vienna for ESVOT's (European Society of Veterinary Orthopaedics and Traumatology) annual continuing education programme. Around 150 international participants took advantage of this comprehensive, hands-on training programme offered by renowned experts from all fields of small animal surgery.

Established surgeons were able to keep up to date with current practices in the event series Short Night of Small Animal Surgery Experts from the Clinical Unit of Small Animal Surgery presented numerous cases and provided a platform for professional exchange.

### Fire & Emergency Vets

Fire and Emergency Vets are trained to manage animal accidents and to increase safety for animals and humans in emergencies. The four-day training programme dealt with themes ranging from accident management, emergency and catastrophe veterinary medicine and anaesthesia to the legal framework for dealing with accidents involving animals. Participants were instructed in rescue techniques through practical exercises using horse dummies. The course was organised by Christoph Peterbauer of the Clinical Unit of Anaesthesiology and perioperative Intensive-Care Medicine under the auspices of the Council for Security in Equestrian Sports.



Photos: © Michael Bernkopf / Vetmeduni Vienna

### **Dermatology for young veterinarians**

The European Society of Veterinary Dermatology (ESVD) organised a special training programme for young veterinarians at Vetmeduni Vienna's campus. Over the course of the two-day congress, 120 young veterinarians from 19 countries, including numerous doctoral candidates and students, learned lots of new information from internationally recognised experts in the field of dermatology using clinical cases as examples. Thanks to the support of sponsors, the ESVD offers this high-quality continuing education course for young veterinarians for low registration fees.

### **Continuing education for farm animal practitioners**

The University Clinic for Ruminants offers cattle veterinarians an in-depth programme as part of the Vienna Ruminant Modules. Over the course of 12 modules, special topics relating to cattle livestock management are covered theoretically and practically, including calf health, feeding and surgery. Two fully booked modules were held in 2013.

The University Clinic for Ruminants also invited referring veterinarians to an informational afternoon at the Clinic. Head Thomas Wittek and his team presented the latest cases from routine medical practice, gave information regarding innovations and answered technical questions.

### **Postgraduate education in equine medicine**

Equine veterinarians have the opportunity to expand their knowledge and skill sets in a series of modules as part of the Vienna Postgraduate Training for Equine Veterinarians at the University Equine Clinic. The five-year training program covers the entire spectrum of equine medicine. The programme content is comprised of the latest scientific findings in addition to clinical cases. In 2013, a pain management module was offered.

### **Newsletter small animal veterinarians**

Since the beginning of 2013, the University Clinic for Small Animals has been publishing a newsletter for small animal practitioners. It contains information on new research findings, practice-relevant services, references to publications and current educational events.



Photo: © citronenrot / Vetmeduni Vienna

## New horseshoes

The best inventions aren't much good if they can't be put to use. This won't be a problem for the innovative hoof protection developed by the University Equine Clinic in collaboration with farriers. Vetmeduni Vienna invited more than 100 farriers from all over Austria to its campus for the presentation of the new segmented horseshoes, which can be individually fitted to a horse's hoof. Participants at the daylong symposium were able to try out the fitting of the new horseshoes. The programme was rounded off by experts from the University Equine Clinic giving lectures.

## Key figures

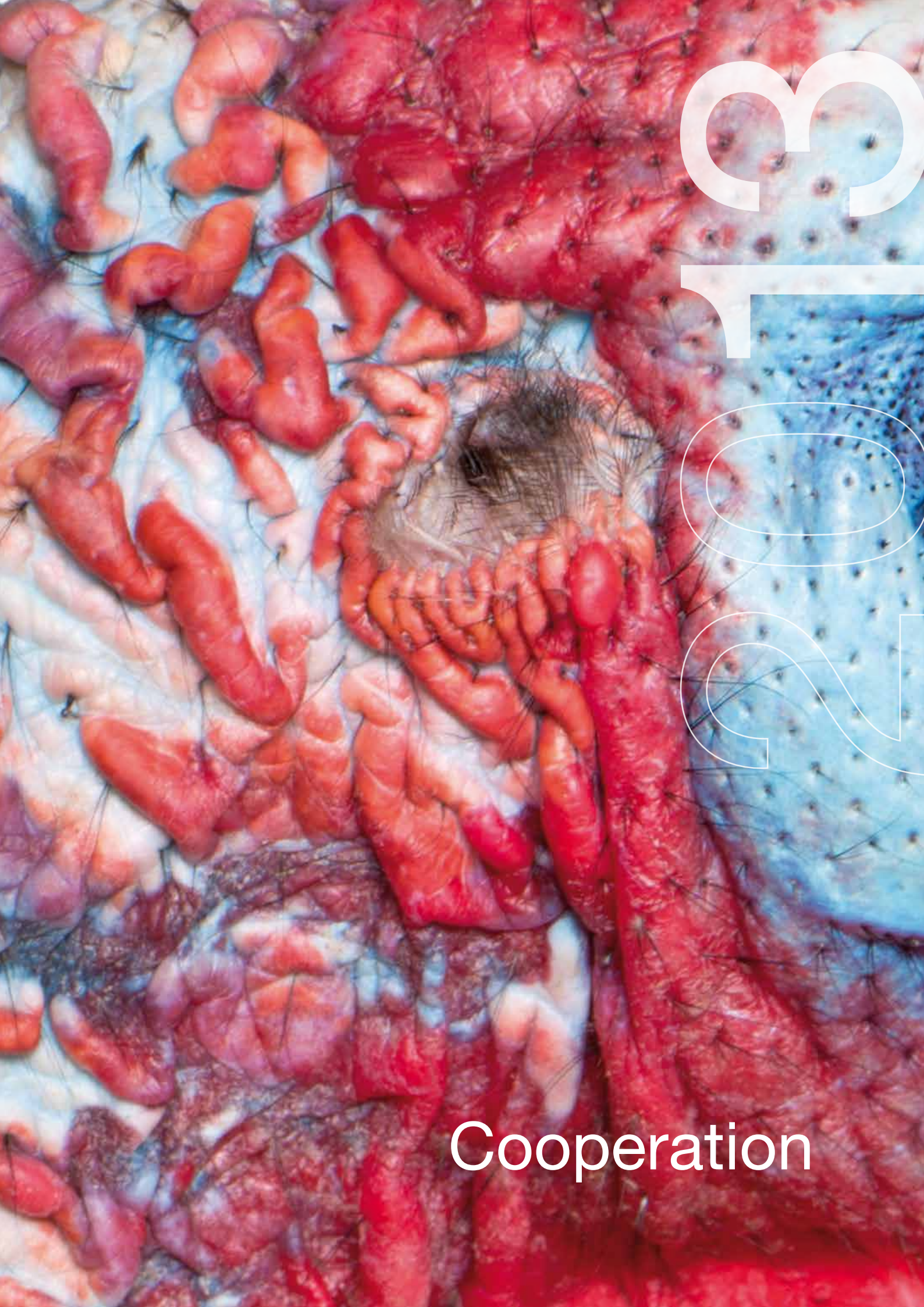
Animals treated at the University Clinics in 2013	
<b>Small animals</b> (dogs, cats, rodents and lagomorphs)	35,098
<b>Horses and donkeys</b>	3,886
<b>Farm animals</b> (ruminants, pigs, productive poultry)	1,196
<b>Other animal species</b>	2,905
<b>Total</b>	<b>43,085</b>

Animal patients treated in 2013	
<b>Outpatient cases</b>	26,388
<b>Inpatient cases</b>	16,697

Farriers get informed about the innovative segmented horseshoes



Photos: Inks © Christine Ruckertbauer / Vetmeduni Vienna  
rechts © Frauke Lejune/Vetmeduni Vienna



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Cooperation

# Cooperation

## Working together to achieve more

Vetmeduni Vienna is the only university of veterinary medicine in Austria. Cooperations are therefore one of its cornerstones; the university's cooperation network is today more extensive than ever. Intensive cooperation across disciplines and national borders provides the foundation for important advances in education and research. The Higher Education Structural Fund tender announced by the Austrian Ministry of Science and Research, for which Vetmeduni Vienna also applied, provides initial funding for many cooperation projects. International exchange via (established) networks and (research) partnerships was further strengthened in 2013.



Photo: © peshkova / fotolia.com



## Cooperation in research

### Ministry of Science rewards cooperation projects

Academic cooperation projects in education, research and administration received a total of 63 million in funding from the Austrian Ministry of Science and Research in 2013. Vetmeduni Vienna successfully acquired so-called Higher Education Structural Funds for eleven of its projects. It has leadership for two of these projects and is a project partner

for the remaining ones. Approved cooperations of Vetmeduni Vienna total 51 million Euros in expenses, while the funds received amount to 13.3 million Euros.

In the area of research, Vetmeduni Vienna is cooperating as lead partner with the University of Vienna in an animal physiology project, with special emphasis on ornithology. The funds received for the second lead project will be used to improve the infrastructure of the Research Station in Haidlhof, which is also operated in cooperation with the University of Vienna.

Cooperation projects in research and education	Total costs in million EUR	Funds received from Higher Education Structural Fund in million EUR
Animal physiology – emphasis on ornithology (Lead: Vetmeduni Vienna)	6,77	1,50
Improving of infrastructure of Research Station in Haidlhof (Lead: Vetmeduni Vienna)	3,78	1,26
Bioactive substances made of microorganisms	4,79	1,20
Expanding of synergies for medical biotechnology, molecular cell biology and cell therapy	6,72	1,50
Interdisciplinary translational brain research cluster (ITHC) Highfield Magnetic Resonance Imaging	15,97	3,50
<b>Total</b>	<b>38,03</b>	<b>8,96</b>
Cooperation in administration	Total costs in million EUR	Funds received from Higher Education Structural Fund in million EUR
Development and implementation of procurement processes for Austrian university libraries	0,45	0,15
E-infrastructures Austria: Development and further development of a storage infrastructure	4,13	1,38
Development of an inter-university core facility and service provider network	0,52	0,15
Campus management at Austrian universities	4,80	1,60
3plus research information system – development platform by BOKU, MUG and Vetmeduni Vienna	2,66	0,89
Entrepreneurship Center Network (ECN)	0,50	0,16
<b>Total</b>	<b>13,06</b>	<b>4,33</b>
<b>Gesamtsumme</b>	<b>51,09</b>	<b>13,29</b>



Photo: © Tjimek / fotolia.com

### **Biodiversity and energy transition**

The Alps have enormous renewable energy potential, but the pursuit of this energy increases the strain on the alpine environment. When should an area be used for power generation? When is the preservation of biodiversity more important? These questions brought together 15 partner institutions representing six alpine nations for recharge. green, a project headed by Chris Walzer of the Research Institute for Wildlife Ecology. By 2015, project planners will have assessed the potential for use of renewable energy sources and will have created a priority ranking of areas in need of protection. This infor-

mation will ultimately be used to create models that will serve as a point of reference for policymakers and energy producers in making land use decisions. The research project is co-financed by the European Regional Development Fund as part of the Alpine Space Program.



Photo: © Karin Stadlerak / Veitmedum Vienna

### **Avian medicine without borders**

The in-depth study of the dangers of transmission of infectious agents between humans and wild birds is the objective of the Training Center for Avian Medicine (TAV), a project being realised by Vetmeduni Vienna in cooperation with the University of Veterinary and Pharmaceutical Sciences Brno and the State Veterinary Institute Jihlava. In the project's second year, the Center focused on sampling and analysing zoonotic pathogens in wild birds in Austria and the Czech Republic. The results were presented at a meeting of experts in Jihlava (Czech Republic), who also discussed recommended behaviour when dealing with wild birds.

### **Bioeconomy strategy for Austria**

The BIOS Science Austria Association is committed to pooling research activities in the Life Sciences. Vetmeduni Vienna is one of the association's founding members, along with the University of Natural Resources and Life Sciences, Vienna (BOKU), the Ministry of Life (the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management) and its organisations, and the Austrian Agency for Health and Food Safety (AGES). The latest addition is the Austrian Institute of Technology. In November 2013, the Life Sciences association presented its bioeconomy position paper, thus taking the first concrete step in the development of an independent, national bioeconomy strategy for Austria. The word "bioeconomy" refers to the science based production and use of biological resources in order to provide products, processes and services in all sectors of the economy with the aim to create sustainable economic growth. The government programme for 2013-2018 singles out the bioeconomy research initiative as worthy of support.

### **Cross-boarder research for healthy poultry**

A joint project between Vetmeduni Vienna's University Clinic for Poultry and Fish Medicine and the Hungarian Georgikon Faculty at the University of Pannonia is dedicated to the cross-border study of healthy flocks of chicken. As part of the Center of Excellence for Poultry (CEPO), experts regularly meet to exchange scientific findings and practical experience arising from work in the field of veterinary medicine and in the poultry industry. One of CEPO's main concerns is student exchange between the two universities. The project is financed by the European Regional Development Fund.



Photo: © Günther Hochhauser

## Working together to achieve more

In addition to participating in numerous temporary research collaborations, Vetmeduni Vienna also permanently collaborates with other universities and research institutions, in inter-university and inter-institutional organisations.

### Messerli Research Institute: Humans and animals

The Messerli Research Institute, a joint organisation run by Vetmeduni Vienna, the Medical University of Vienna and the University of Vienna, is concerned with the many issues surrounding the relationship between humans and animals. The Institute's findings are intended to provide guidance to humans regarding the ethical and responsible treatment of animals.

Jane Goodall

With this in mind, Messerli Research Institute, in cooperation with the Jane Goodall Institute – Austria organised a presentation by chimpanzee expert Jane Goodall in December 2013 in Vienna. The world-renowned primatologist is an advocate for respectful treatment of animals and protection of their natural habitats. After the presentation, Ludwig Huber, speaker of the Messerli Research Institute was appointed Honorary ambassador of the Jane Goodall Institute – Austria.

In 2013, the Scientific Advisory Board of the Messerli Research Institute held its first meeting. It consults the Messerli Research Institute to maintain its scientific quality and its research. Its members are Nicola Biller-Adorno (Centre for Ethics at the University of Zurich, professor of Biomedical Ethics), Frauke Ohl (Department of Animals in Science and Society at Utrecht University), Christine Nicol (Division of Animal Health and Husbandry at the Bristol Veterinary School), Peter Sandoe (Department of Large Animal Sciences at the University of Copenhagen), Georg Wick (former head of the Institute for Pathophysiology at the Medical University of Innsbruck).

In a new research laboratory, that was opened in 2013, the team headed by Erika Jensen-Jarolim is conducting research on the differences and similarities between diseases in humans and animals. The thematic focus of the Laboratory for Comparative Medicine is on allergy and cancer research. Linking veterinary and human medicine is intended to accelerate the development of pharmaceutical products for human and animal patients.

Additional information on the Messerli Research Institute can be found in its annual report.



Photo: © Michael Mach

### International summer school

In 2013, numerous German and French-language veterinary schools joined forces to offer the first transnational summer school for students of veterinary medicine. The aim of the summer school is to promote scientific exchange and cooperation between young scientists from participating veterinary research institutes. In August, students from all the participating institutions spent two weeks working with the theme “Membrane Proteins. From Cloning to Function”. Vetmeduni Vienna students Klara Klein and Karoline Hilse participated in the summer school.



### Graf Lehndorff Institute: Horse husbandry and animal welfare

Over the past year, the Graf Lehndorff Institute for Equine Science, a joint institution of Vetmeduni Vienna and the German Foundation of the Brandenburg State Stud at Neustadt, has conducted research primarily in the areas of reproduction, breeding, horse husbandry and animal welfare. In 2013, the institute saw a particularly high output of scientific publications. Two researchers at the institute were honoured by the Rectorate of Vetmeduni Vienna for the high number of citations. The Graf Lehndorff Institute also assumes key teaching responsibilities and conducts seminars on horse insemination and gynaecology for students of Veterinary Medicine and Equine Science. The Institute participated in festivities for the 225-year anniversary of the Stud at Neustadt with a carriage in the stallion parade.



Photo: © stephcoffman / fotolia.com

### **Acoustics and cognition research at Haidlhof**

This unique research facility located on the Haidlhof property on the grounds of Vetmeduni Vienna's Teaching and Research Farms is operated in cooperation with the University of Vienna. It offers a superb infrastructure for research into the cognition of birds and into bioacoustics in vertebrates. The Research Station consists of four large aviaries – for keas, woodpeckers and ravens – and a multifunctional test building for behavioural and acoustics research.

Since its founding in 2010, the Haidlhof research facility has been able to undertake numerous international projects thanks to the joint efforts of both universities in creating the infrastructure. More than 20 scientists – including professors, Master's students and interns – work at the Research Station, which is set to be modernised and expanded starting in 2014 with funds from the Higher Education Structural Fund.



Photo: © Manfred Kising / Vetmeduni Vienna

Haidlhof is internationally renowned for conducting behavioural research with keas from New Zealand.

### **IFA Tulln: Healthy and productive animals**

The inter-university Department for Agro-Biotechnology (IFA Tulln) is a joint research institution of the University of Natural Resources and Life Sciences Vienna, the University of Veterinary Medicine, Vienna and the Vienna University of Technology . Staff from all three universities conducts joint research.

The central mission of the Unit of Biotechnology in Animal Production is the breeding of healthy and fertile animals with reasonable productive capacity. The results of basic research into molecular and cell biology are directly applied to modern reproduction techniques used in breeding practices.

### **RC Wieselburg: Cattle reproduction**

In cooperation with the Federal Experimental Laboratories Wieselburg, Vetmeduni Vienna operates a research centre in Wieselburg dedicated to cattle reproduction. 2013 saw the launch of an EU-funded research project which uses system biological methods for dealing with fertility problems in cattle. The project is a collaboration with 12 partner institutions and will run through 2017.

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Staff & Appointments

# Staff & Appointments

## Staff & Appointments

### Strengthen personal responsibility

Scientists and experts of different ages from all over the world and from various disciplines collaborate together at Vetmeduni Vienna. So much intellectual capital provides a fertile soil for creativity and fruitful interdisciplinary cooperation, be it in research, education or animal patient care. Vetmeduni Vienna especially seeks to strengthen personal responsibility among its staff. Regardless of their position and responsibility, all employees have access to a wide range of training opportunities for personal development and qualification. Individual support measures, such as coaching, assist supervisors with their role as examples and help teams to overcome challenging situations and changes.



Photo: © Felicitas Steindl / Vetmeduni Vienna



## Heading the call to Vetmeduni Vienna

### New head of Equine Clinic

Florien Jenner, large animal expert with extensive international experience under her belt, became the new Chair in Equine Surgery in early 2013, and is now also the head of the Equine Clinic. Jenner is specialised in horse joints, especially therapies against arthrosis. The equine expert is researching embryonic cartilage formation and how this knowledge can be applied to the repair of damaged joint cartilages. Her research activities always focus on clinical work, especially the healing and relief of animal patients.

Florien Jenner,  
Professor for Equine Surgery



Photo: © private

### Staff members who received awards

The Rectorate each year awards the Employee of the Year prize for outstanding achievements. In 2013, the choice was easy – the tireless team that organised the first Vetmeduni Vienna ball was honoured.

- **Detlef Bibl**, Clinical Unit of Poultry Medicine
- **Beatrice Grafl**, Clinical Unit of Poultry Medicine
- **Alexander Moravec**, Facility Services
- **Monika Schebesta**, Clinical Unit of Poultry Medicine

### Employees of the Year 2013

First row, f.l.: Detlef Bibl, Alexander Moravec, Monika Schebesta, Beatrice Grafl.  
Last row f.l.: Rector Sonja Hammerschmid, Vice-Rector Petra Winter, Vice-Rector Otto Doblhoff-Dier and Vice-Rector Josef Ebenbichler.



Photo: © Heike Hochhauser / Vetmeduni Vienna

## The university as an employer

### Balancing family life and career

Balancing family and career is one of the priorities of Vetmeduni Vienna. The university has introduced a variety of specific measures to support its staff and students, including flexible and need-based child care, career advancement measures for mothers and cooperation with individual departments to employ maternity leave replacements. As a family-friendly employer Vetmeduni Vienna has earned the “University and Family” certificate.

Due to high demand, in summer 2013 Vetmeduni Vienna organised professional child care for children of employees for the second time. Future educators from the University College of Teacher Education Vienna supervised approximately 60 children aged three to twelve during the summer months of July and August.

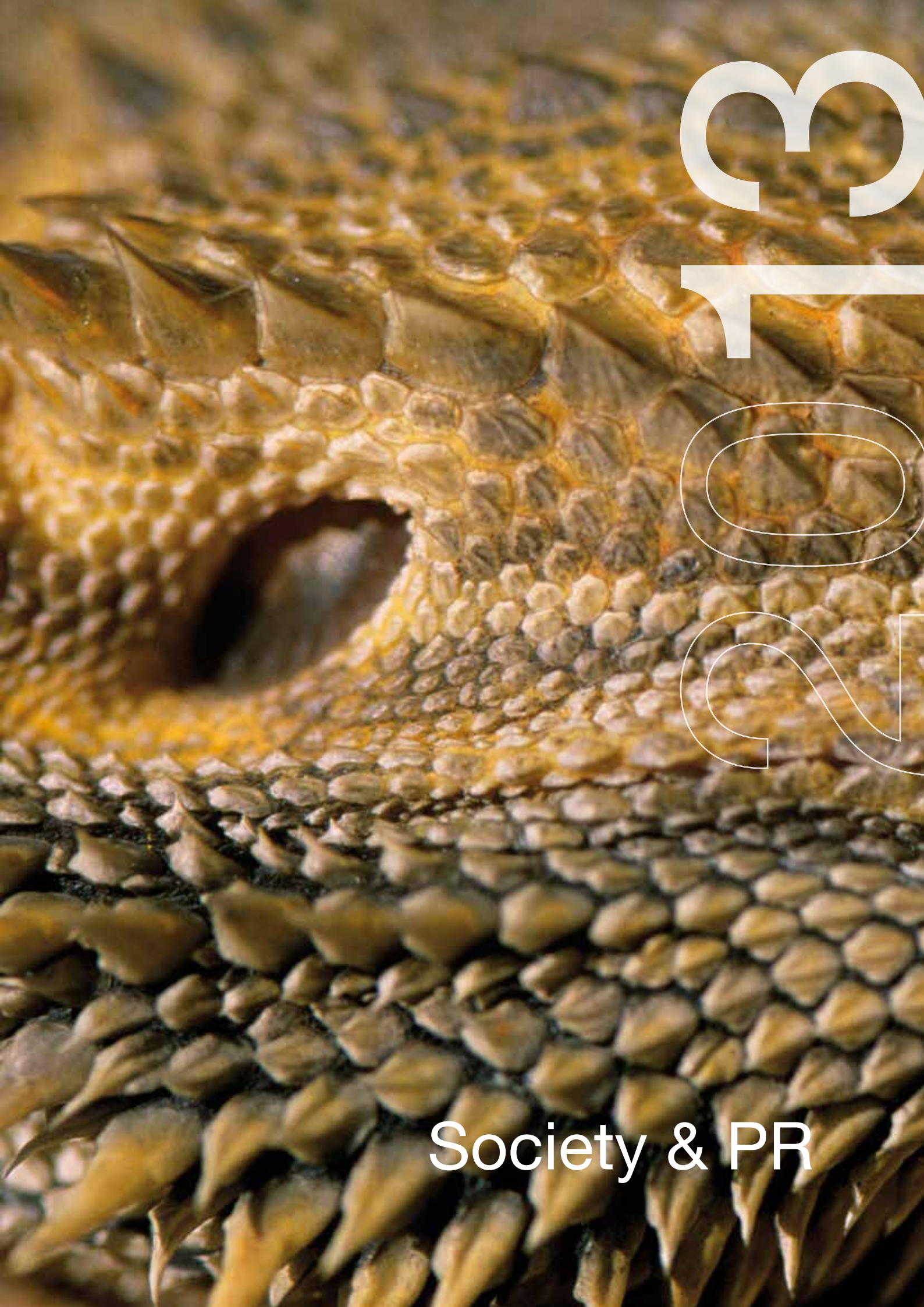
The university is now also offering on-campus child care on holidays (November 15 and Pentecost Tuesday).

### Lifelong learning

Vetmeduni Vienna provides a wide range of advanced training programmes to support its staff. In the context of the LeadingVet leadership training, special focus was placed in 2013 on gender and diversity. In order to advance women, training programmes were offered specifically for female leaders, including media and communication training sessions. In a new workshop members of appointment committees learned to evaluate leadership and the soft skills of potential candidates.



Photos: left © Michael Bernkopf / Vetmeduni Vienna, right © Maria Fritsche



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Society & PR

## Dialogue with the public

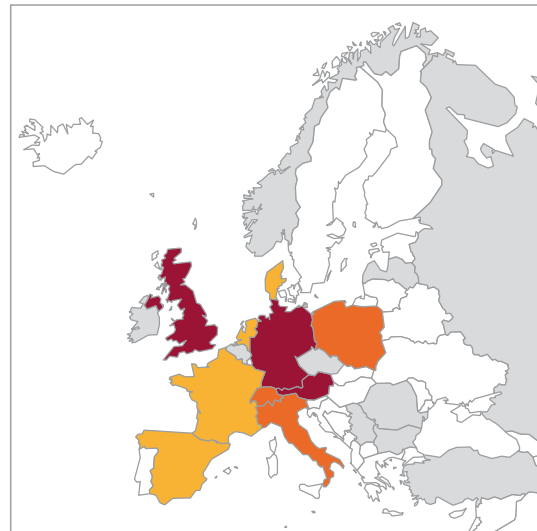
Vetmeduni Vienna is aware of its responsibility as a communication hub between science and the public. Therefore, the university uses all its communication channels to make a wide spectrum of activities known: be it via media activities, social media and web presence, or through events held at the campus and participation in fairs. This way, the public is benefitting directly from knowledge generated at the university. As the only university of veterinary medicine in Austria, Vetmeduni Vienna also has a special role in animal protection.



Photo: © Georges Schmeider / Vetmeduni Vienna

## Science and research communication

Science and research communication aims to make research findings accessible to the general public. In 2013, Vetmeduni Vienna published nearly 60 press releases on current research activities. Various events on campus, social media platforms and videos relating to scientific publications, as well as press conferences and exclusive interviews for media representatives, facilitate exchanges between researchers and the general public.

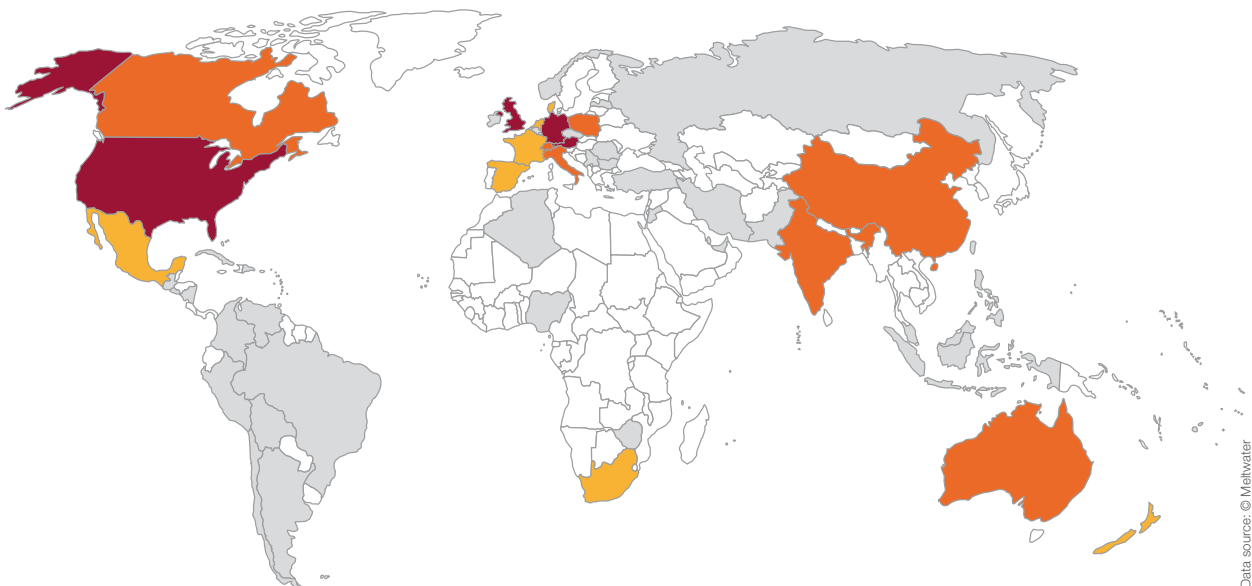


### International media response

In 2013, press releases about Vetmeduni Vienna were published in approximately 60 countries worldwide. Most reports were published in Germany, the USA, Austria and Great Britain.

**Legend:**

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



Data source: © Meltwater



Photo: © Elena Pohl / Vetmeduni Vienna

The following list shows all those topics that generated especially high media response in Austria and internationally in 2013.

### Why wolves howl

Wolves have their own way of communicating: they howl. If a wolf becomes separated from its pack, the remaining wolves howl. Scientists at the Messerli Research Institute conducted research into wolves' motivation for howling and discovered that the relationship between individual wolves determined the intensity of their howls. Wolves howl louder when high-ranking members of the pack or partner wolves become separated from the pack. The intensity of the howling is less an indication of emotional stress as it is of the nature of the relationship to the lost wolf. After one such "howling concert", saliva samples were taken from the wolves and examined for stress hormones. The recorded levels of cortisol did not correspond with the intensity of the howling. According to behavioural researcher Friederike Range, wolves are able to flexibly control at least part of their howling.



Photo: © Peter Kaut

### Sampling hair

Cushing's Syndrome (hyperadrenocorticism) is a common hormone imbalance found in dogs. It occurs when the pituitary gland produces too much cortisol and can result in a variety of health problems for the dogs in which it occurs. Scientists from the Institute of Medical Biochemistry are developing a method for easily detecting increased levels of cortisol in dogs by using samples of their hair. Traditionally, blood samples have been used to measure cortisol levels. According to Claudia Ouschan, lead author of the study, "It's much easier for the veterinarian to detect cortisol in hair, and less stressful for the dog. The amounts measured refer to a longer period of time and are thus more reliable. This rapid and non-invasive technique makes diagnosis significantly easier."



Photo: © Claudia Ouschan / Vetmeduni Vienna

### A bellows that saves horse lives

Respiratory and cardiac arrest in horses often present an insurmountable challenge to veterinarians. The necessary respiration can't be easily performed outdoors because traditional respirators are too big and require electricity in addition to compressed air. Since horses have a correspondingly large lung volume, artificial respiration in an emergency is far from easy. While the needed respirators would be available in a clinic, they are not available during emergencies in the places where horses are most likely to be found: barns, pastures, forests and on highways while being transported. Veterinary anaesthesiologist Yves Moens and his colleagues have developed a simple and inexpensive device for the emergency respiration of large animals. The bellows is easy to transport and can save animal lives in emergencies.

### An uncoupling protein for fat burning

In addition to muscle movement, there is a second way to generate heat: A special protein in the brown adipose tissue allows for heat generation without muscle activity. It's called UCP1 (uncoupling protein 1), and it lets human infants and hibernating animals keep warm without shivering. A research team headed by Elena Pohl from the Unit of Physiology and Biophysics has recently discovered that a special chemical compound – an aldehyde – activates the UCP1 under special conditions and can thus stimulate the burning of fat. The results could be used for the treatment of obesity.



Photo: © Michael Bernkopf / Vetmeduni Vienna



Photo: © Agnes Dadak / Vetmeduni Vienna

### **The edible dormouse: Using fat to stay fit**

Edible dormice put on a store of insulating fat during the summer months. They need it, because when they burrow underground for the winter, there will be nothing for them to eat. Scientists from the Research Institute of Wildlife Ecology discovered that fatter dormice use their energy waking up frequently, and thus boost their metabolism more often than thinner dormice. This helps to protect their bodies from cold damage. A long period of hibernation also allows the dormice to better stay hidden from predators.

### **Lamas: Swallowing instead of spitting**

Cows, sheep, goats and horses are not the only ones grazing on local pastures: llamas and alpacas are becoming an increasingly common sight. The pharmaceutical market still offers no approved medications for these animals. Agnes Dadak of the Institute of Pharmacology and Sonja Franz of the Clinical Unit of Ruminant Medicine have conducted research into possible treatments for these New World camelids. They have developed a paste for oral application, in which conventional medicines can be properly dosed and administered to llamas and alpacas. The two researchers have successfully treated the animals for lancet liver fluke.



Photo: © Claudia Bleber / Vetmeduni Vienna



## Animal Welfare

Vetmeduni Vienna takes its role as a model for the treatment of animals seriously, and contributes in many areas to the improvement of animal well being.

### A new certification mark for dog trainers

It can be hard for pet owners to keep track of the large variety of dog training methods and schools that are available. The new certification mark “animal-welfare-qualified dog trainer” (Tierschutzqualifizierte Hundetrainerin/ Tierschutzqualifizierter Hundetrainer) provides guidance and assures safety. The Messerli Research Institute was commissioned by the Austrian Ministry of Health to assign this new label according to a regulation for animal-welfare-compliant dog training. Since March 2013, dog trainers who offer animal-welfare-appropriate training based exclusively on the principle of positive reinforcement, and in accordance with the latest scientific methods, are able to obtain the quality seal by passing a committee examination. In the first year, nearly 50 dog trainers successfully passed the test. The certification mark is already enshrined in the dog-owner law of the province of Styria, while additional provinces are holding talks on implementation into their provincial laws.



### Training for laboratory animal physicians

Working with laboratory animals requires special expertise and with it special training. The Institute for Laboratory Animal Science at Vetmeduni Vienna plays an important role by offering the course “Introduction to Laboratory Animal Science” (equivalent to FELASA category B course according to the standards of the international Federation for Laboratory Animal Science Association). Since March 2013, Veterinary Medicine students are also able to specialise in the field of laboratory animal science.

In addition, the Institute is the only accredited laboratory animal medicine institution in Austria that trains non-veterinarians to become professional scientists in the study of laboratory animals. The official title and the accreditation of the institute are awarded by the German Society for Laboratory Animal Science (GV-SOLAS). Scientists who have been active in the field of laboratory animal science for at least four years, have published at least three relevant scientific publications, and have demonstrated their knowledge before a GV-SOLAS expert committee, are able to receive this internationally recognised title. In October 2013, Thomas Kolbe of the Institute for Laboratory Animal Science received the title of specialty scientist (Fachwissenschaftler) in laboratory animal science.



Photo: © Roswitha Krebs / Vetmeduni Vienna

## Weighing the benefits and harm of animal experiments

When it comes to experimental animal research, scientists are faced with the dilemma of the harm caused to animals on the one side, and the resulting benefits on the other. The new Animal Protection Act, which took effect in Austria on the 1st of January, 2013, requires participants in animal experiments to face this ethical consideration. The responsible licensing authority must conduct a harm-benefit analysis when evaluating a project. The Messerli Research Institute at Vetmeduni Vienna was tasked by the Austrian Ministry of Science and Research with drawing up a list of criteria to standardise and objectivise the harm/benefit analysis. At a symposium at Vetmeduni Vienna in March 2013, international experts in the field of ethical evaluation of animal experiment applications contributed numerous ideas for the development of these criteria. Commentary by stakeholders and experts regarding the first draft of the list of criteria, as well as workshops,

provide all interested parties with a voice in the process. Additional contributions are welcome into 2014. Beginning in 2016, these scientifically-based criteria will provide guidance to both government authorities examining applications for animal experiments and to the applicants themselves.

## Animal-Human-Society symposium

An animal's fate is often determined by the role that humans assign to it. A mouse can be a child's beloved pet, a hated pantry-invading pest, something else's meal in a terrarium or a laboratory animal used in experiments. More than 130 experts representing science, agriculture, animal welfare, government agencies, consumer protection and business met to discuss current challenges related to animal welfare at the two-day symposium "Animal-Human-Society," held in June 2013 at Vetmeduni Vienna. The event was organised by Vetmeduni Vienna, the Austrian Ministry of Health, the Association of Animal Welfare Education and the Austrian Agency of Health and Food Safety (AGES).



Photo: © Understanding Animal Research

### The responsible treatment of animals

In its numerous advanced and specialised training courses, such as its course “Applied Cynology,” Vetmeduni Vienna teaches scientifically based information regarding proper housing for and respectful treatment of animals. Over the course of four semesters, academically certified professionals are trained to apply their knowledge regarding the responsible and humane treatment of dogs in the dog economy and in dog sports.

The university course “Animal-assisted Therapy and Animal-assisted Supportive Measures” is offered in cooperation with the association “Animals in Therapy”. Participants receive comprehensive training in the professional use of animals for caring for people with special needs.

### A certification mark for stables and cages

In addition to pet owners and animal keepers, companies that produce and sell animal housing systems are also responsible for animal welfare. With this in mind, the Austrian Ministry of Health has established a new unit responsible for the inspection of new animal housing before it is sold on the Austrian market. This unit for species-appropriated animal housing and welfare has been active since July 2013, and is headed by veterinarian and animal rights expert Elke Deininger at the Vetmeduni Vienna campus. Animal housing systems which conform to principles of animal welfare receive an animal welfare label. The inspection will be mandatory for farm animal systems in the future but will remain optional for pet housing.

### Public events and student fairs

2013 was a convention-filled year for Vetmeduni Vienna. Experts from the veterinary medicine University Clinics were available to the general public for question and answer sessions at events such as the Children-Animal Week in Schönbrunn, the PetExpo convention in Vienna, the horse fair “Apropos Pferd” in Vienna Neustadt, and the Festival of Animals on Vienna’s Donauinsel. The university presented current research projects at the Science Fair at Vienna’s Naschmarkt. Vetmeduni Vienna also presented its academic offering at numerous student information fairs throughout Austria.

Vetmeduni Vienna presents two research projects at the Science Fair at Vienna’s Naschmarkt.



Photo: © Vetmeduni Vienna



## The university plays host

### The first university ball

On the 8<sup>th</sup> of June, 2013, the Vetmeduni Vienna ball was held on campus in Vienna Floridsdorf for the first time. More than 1,100 guests enjoyed a night of dancing, which boasted a broad programme and multiple dance floors. In addition to those affiliated with the university, numerous representatives of the veterinary profession and cooperation partners in the fields of science, research, business, and politics attended the ball.

### Open campus

Taking a tour at the campus of Vetmeduni Vienna will give visitors an idea of the diverse activities taking place at the university. Depending on their interests, guests can choose to visit a University Clinic, the skills lab Vet-SIM for students, or the Veterinary Pathological Museum. The university organises special tours for prospective students. In 2013, more than 1,500 visitors took advantage of more than 100 tours.



### 1,000 mini-students on campus

In the summer of 2013, almost 1,000 children studied at the second KinderuniVetmed at the Vetmeduni Vienna campus, more than twice as many as the year before. At this two-day event, young students between the ages of seven and twelve learned everything worth knowing about domestic and exotic animals, bacteria, and even werewolves and vampires. The children dissected pig lungs and learned about the respiratory system, tested their sense of smell and rescued a horse in distress.

### Art and Science

As part of the Vienna Art Week in November 2013, the University of Applied Arts Vienna organised the project Crucial Experiments in cooperation with four research institutes, including Vetmeduni Vienna's Research Institute for Wildlife Ecology. The project consisted of the re-enactment of key science experiments, some of which were considered to be successful and others which had completely failed.

### Symposium backs the right horse

The symposium on horses held in October 2013 at the University Equine Clinic drew many visitors. More than 600 horse aficionados in two full lecture halls came to learn about proper first aid measures for horses.



Photo: © Felicitas Steindl / Vetmeduni Vienna



Photo: © Frauke Lejeune / Vetmeduni Vienna



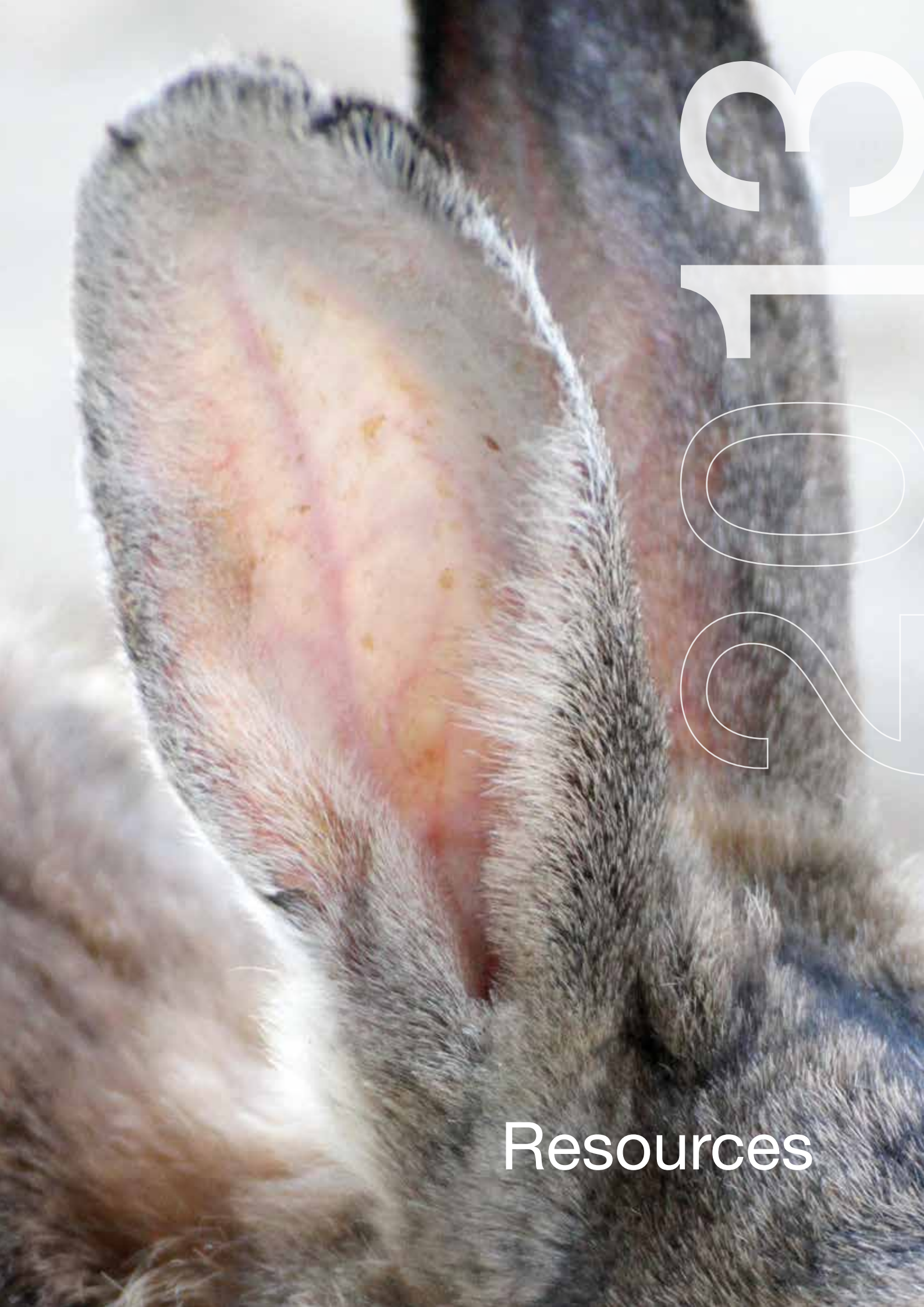
Photo: © Lisa Zimmermann / Vetmeduni Vienna

## Provenance research at the university library

In recent years, Vetmeduni Vienna has been performing an autopsy on the old inventory of its university library. Historian Ilona Mages was inspecting the inventory for entries, stamps, bookplates and other clues that might lead to the books' former owners. She identified 134 works purchased from bookshops during the Nazi period. Some of these bookshops were either "arianised" or liquidated by the Nazis, which means Jewish booksellers were forced to sell their shops to "Aryans" or abandon them. Mages was investigating cases in which the library acquired books from Jewish bookshops. In 2013, she published an interim report on the university library's website, detailing the current status of her research. The research will require more time before obtaining the results necessary for initiating the process of restitution.



Photo: © Michael Bernkopf / Vetmeduni Vienna



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Resources

## Investing into the future

2013 was a stable and successful year for Vetmeduni Vienna. With a profit of approximately 2.9 million Euros the annual balance is better than expected. In addition to special project funding, the positive operative cash flow helped to cover all investments into technical and scientific equipment and facilities. With the new modern pigsty at the Medau farm Vetmeduni Vienna completed a major construction project in 2013. The university was able to increase efficiency by improving internal processes.

Official inauguration of pigsty in Medau with Rector Sonja Hammerschmid, Provincial Governor Erwin Pröll, Minister of Science and Research Karlheinz Töchterle, Director Werner Pohl and member of staff Elisabeth Weichselbaum



Photo: © Ernst Hammerschmid / Vetmeduni Vienna



## Positive result

A total of 9.6 million Euros were invested into tangible assets in 2013. The largest investments were made in the new pigsty in Medau at the research and teaching farm, as well as the phone system called VetPhone and the Vetmed3i computer system (3i stands for intelligent information integration).

Revenue income in 2013 totalled 119.0 million Euros; 81 percent of which originated from the national global budget and 19 percent from research funding and contracted research, in addition to income generated from tuition fees, the animal hospital and diagnostic services as well as other sources. The largest expense was allocated for staff at approximately 60.9 million Euros. The remaining expenses were write-offs and other operating expenses totalling approximately 59.7 million

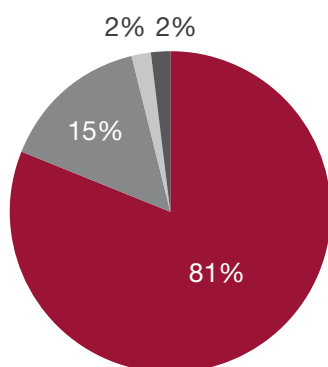
Euros. Staff expenses in 2013 and the previous years amounted to approximately 51 percent of all revenue.

Investments made into tangible assets	in EURO
Building value	3,429,000
Technical equipment and machines	2,329,000
Scientific literature	842,000
Other expenses, operating and business assets	2,379,000
Low-value assets	535,000
Construction investments	61,000
<b>Total</b>	<b>9,575,000</b>

Assets 2013	in EURO
Fixed assets	39,184,000
Circulating assets	40,271,000
<b>Total</b>	<b>79,455,000</b>

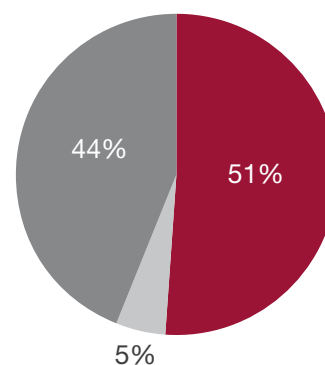
Equity ratio: 60.1 %, Equity-to-fixed-assets ratio: 126.7 %

Total revenues 2013



- Revenue from federal global budget
- Reimbursed expenses according to §26 and revenue according to §27 Universities Act 2002
- Revenue from tuition fees and compensation paid by the government for lost tuition fees as well as university training course fees
- Other revenue and reimbursements

Expenses 2013



- Staff expenses
- Write-offs
- Other operating expenses



Photo: © Ernst-Hammerschmid / Vetmeduni Vienna

### New pigsty completed

The new pigsty at the Research and Teaching Farm of Vetmeduni Vienna (Medau) was completed in September 2013, 12 months after construction had started. The model plant for modern pig farming has 140 places for sows, 720 for piglets and 600 for fattening pigs. The arrangement is complemented by an adjustable research stable. 4.2 million Euros of the total investment of 4.9 million Euros were funded by the Austrian Ministry of Science and Research and the remainder was allocated from the Province of Lower Austria and Vetmeduni Vienna's own funds. The official inauguration of the new swine facility by the Minister of Science and Research, Karlheinz Töchterle, and Provincial Governor Erwin Pröll took place in September 2013.

Tour of the premises on the occasion of the recently completed and still empty pigsty in Medau



Photo: © Ernst-Hammerschmid / Vetmeduni Vienna

### New VetPhone system

Vetmeduni Vienna started operation of its new phone system in late 2013. VetPhone offers new functions such as the Unified Communication concept. All members of staff can be reached at one phone number and are able to decide whether they will receive the call on their landline or mobile phones. This makes separate extensions for mobile phones no longer necessary.

### Improving internal processes

The Initiative Vetmed3i aims to integrate work and individual processes into the IT landscape and to improve internal information systems. In 2013, a comprehensive reporting and planning solution was launched for financing (Cognos software) which has already been successfully used to plan the annual budget of 2014. The project team also evaluated information and document management measures, client and contact management systems as well as process control and automation. Preparations have also been carried out to upgrade the intranet system.



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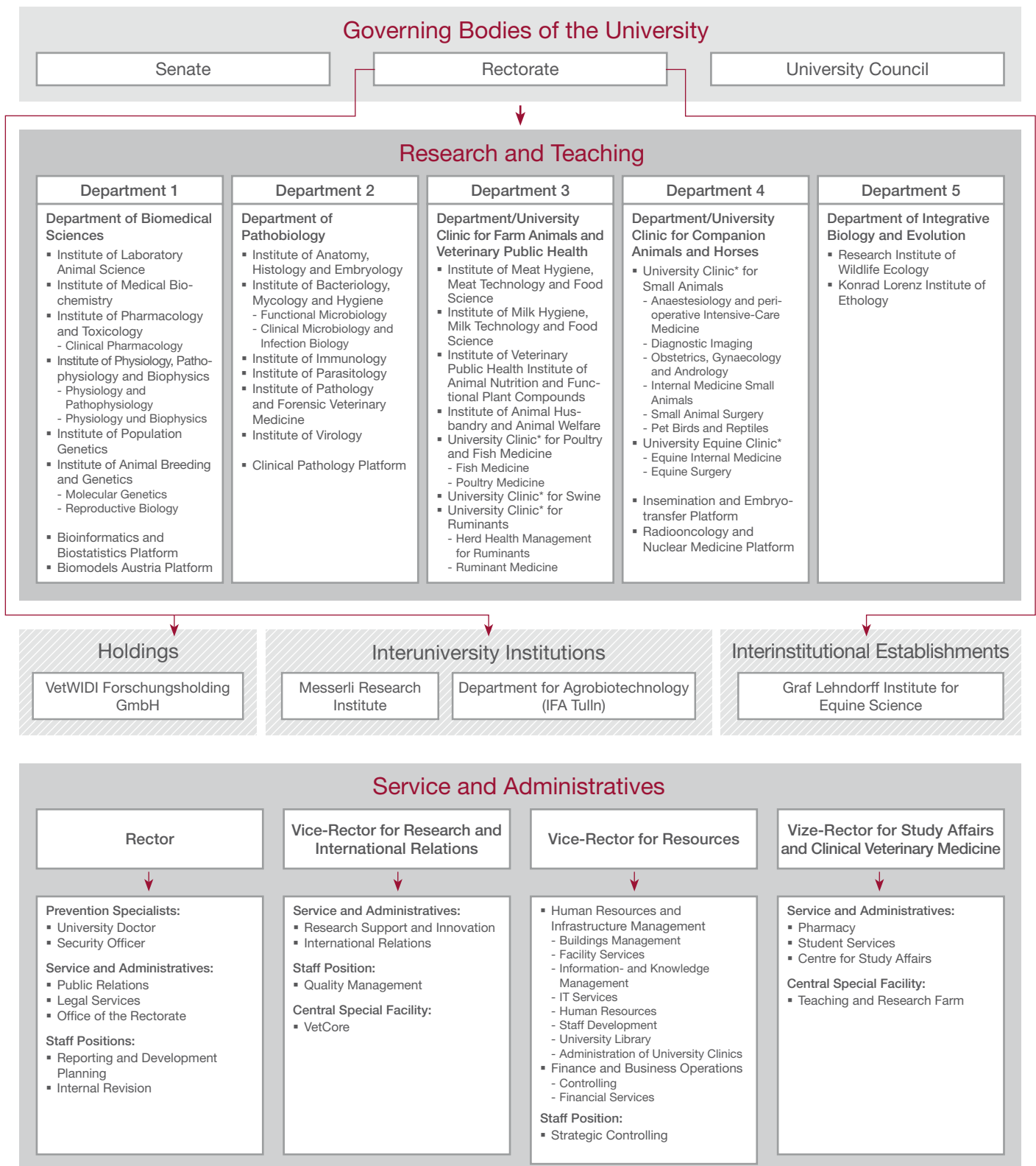
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Organisation

# Organisation

## Organisational chart of the University of Veterinary Medicine, Vienna



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



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