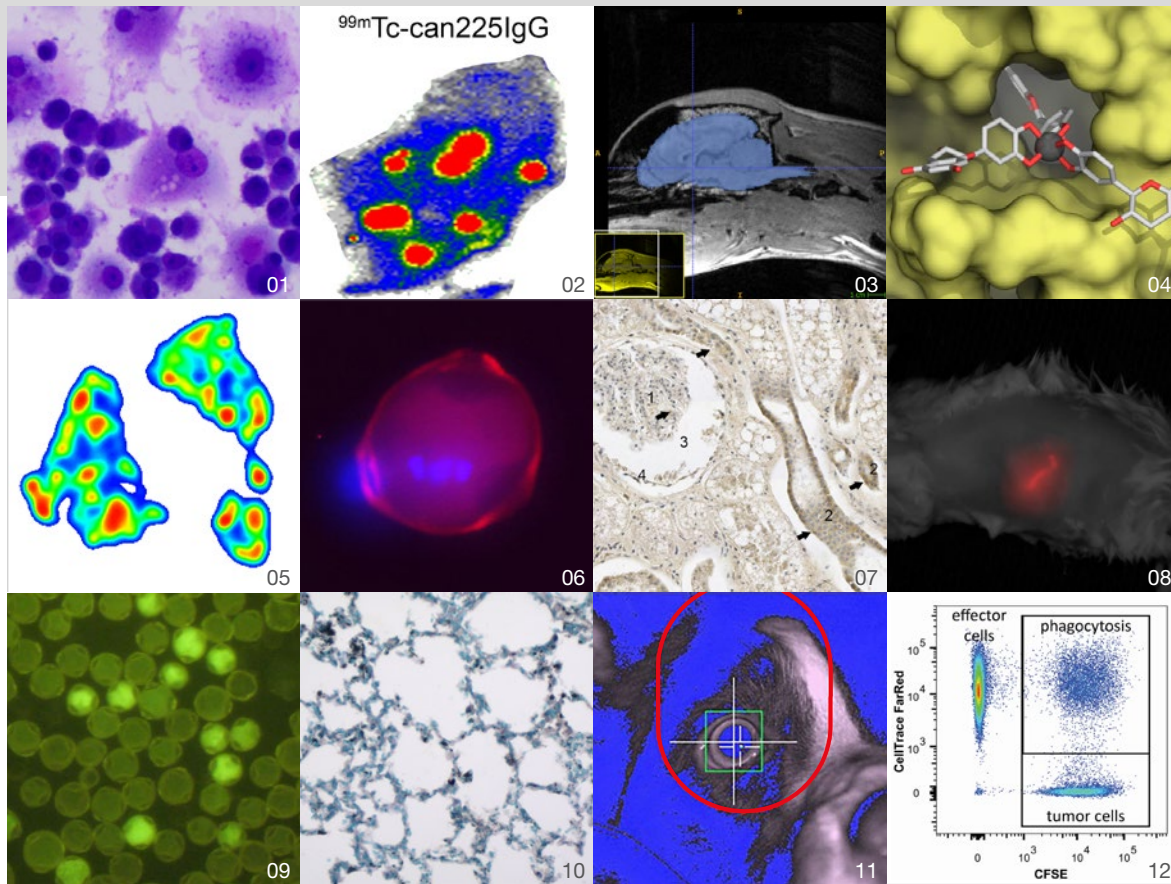


messerli
Research Institute

Annual Report 2019



All pictures are derived from original research at the Messerli Research Institute:

- 01 Cultured and differentiated canine macrophages (HE stain).
- 02 Canine tumour targeted with the engineered ^{99m}Tc-labeled canine antibody 225IgG.
- 03 A so-called structural picture shows the brain of attentive but quiet dog Maeva.
The picture was taken with a magnetic resonance imaging system.
- 04 *In silico* modelling of bovine beta-Lactoglobulin (yellow) with trivalent iron-complex.
- 05 Multi-stain analysis of macrophage surface markers in flow cytometry.
- 06 Red autofluorescent birch pollen with Hoechst-stained DNA (blue).
- 07 Histological localisation of beta-lactoglobulin in bovine kidney.
- 08 *In vivo* imaging of mouse tumour using canine antibody ^{99m}Tc can225IgG.
- 09 Coincubation of green autofluorescent pollen grains and macrophages.
- 10 Mouse lung tissue expressing the immunomodulatory arylhydrocarbon receptor.
- 11 The computer screen of an eye tracking test in dogs during eye calibration (pupil measurement).
- 12 Antibody-dependent phagocytosis of tumour cells by macrophages in flow cytometry.

Imprint

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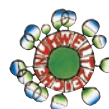
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© BMBWF / Lüsser

Heinz Faßmann

Federal Minister for Education, Science and Research

The Messerli Research Institute has been dedicated to research into human-animal interaction and its various aspects since its foundation in 2010. The status of animals in our society has considerably changed within the last decades. The Messerli Research Institute accompanies this development through transfer of knowledge into society and makes sure that the human-animal relationship and animal welfare benefit in a sustainable way from the wide range of research results. From the very beginning, the cornerstones of this success have been a high level of expertise, interdisciplinarity and a strong international focus, which make the Messerli Research Institute visible far beyond the Austrian borders. I would like to wish the team continued success.



© Doris Kucera / Vetmeduni Vienna

Petra Winter

Rector of the University of Veterinary Medicine, Vienna

Together with the partner universities and the Messerli Foundation, the University of Veterinary Medicine, Vienna looks back on a successful reporting period of the Messerli Research Institute. Once again, important signals for a respectful treatment of animals were sent out and cornerstones relevant to society developed. Examples are projects and studies on allergy sufferers' susceptibility to stress, on hate speech in the environment of livestock-keeping farmers and on the digitalisation in stables.



© Mirna Rossi

Heinz W. Engl

Rector of the University of Vienna

The cooperation between the three universities – University of Veterinary Medicine, Vienna, Medical University of Vienna and University of Vienna – has proved successful. A new chair for research into the neuroscientific foundation of the human-animal interactions, which is currently being filled, complements the expansion of cognitive neurosciences at the University of Vienna, which is also supposed to result in joint courses by the universities involved. With its focus on cognition and behaviour and research into their foundations, the Messerli Research Institutes promotes a responsible treatment of animals.



© MedUni Wien / feelimage

Markus Müller

Rector of the Medical University of Vienna

The inter-university Messerli Research Institute is now a fixed part of the Austrian research landscape and a competence centre with an international standing. It shows successful cooperation between humanities and natural sciences and, in particular, between human medicine and veterinary medicine. Building this bridge is perfectly in accordance with the “One Health” concept, which is becoming more relevant every day in view of the environmental changes we witness.



© privat

Peter Sandøe

Chair of the Scientific Advisory Board

It is good to see a well consolidated Messerli Research Institute with an impressive research output and growing international visibility. The Institute is now embedded in the University of Veterinary Medicine, Vienna as part of Department 5, which opens further avenues of collaboration, for example regarding conservation. At the same time, I am sorry to see that the efforts to establish a fourth chair at the Institute have not been successful so far. Therefore, the Institute still does not really cover research into human-animal relations by use of sociological, anthropological or psychological methods, which is, in my view, a pity.



© Messerli Stiftung

Heinz Schweizer

Honorary President of the Messerli Foundation

In 2009, ten years ago, the Swiss Messerli Foundation held a competition between 12 universities in the German-speaking area to establish an interdisciplinary institute for research into the human-animal relationship. The Foundation was convinced that this would improve the well-being of animals. In the selection process, a panel of international experts counselled the Foundation. This panel unanimously recommended the joint project of the University of Veterinary Medicine, Vienna, the Medical University of Vienna and the University of Vienna. Therefore, the Messerli Research Institute was established in Vienna and opened at the University of Veterinary Medicine, Vienna in 2010. Thanks to the interest of the three universities in Vienna, the prudent management by the Vetmeduni Vienna Rectorate and the motivated commitment of researchers and teachers, the Messerli Research Institute has become an internationally renowned competence centre. The Messerli Foundation is proud of what has been achieved and would like to thank all people who contributed.

Erika Jensen-Jarolim

Head of the Messerli Research Institute

The year 2019 was full of rapid developments, work and changes, and looking back, it was a very joyful and varied year at the Messerli Research Institute. Our schedule was set from the beginning because there was plenty to do: Our internal Messerli meetings are valuable for us, guarantee regular personal exchange among the entire team and facilitate connections at the Campus of Vetmeduni Vienna. In 2019, we organised four Messerli meetings with guests such as our colleagues from Wilhelminenberg, Prof. Walter Arnold and Prof. Leo Fusani, Prof. Jean-Loup Rault from the Institute of Animal Welfare Science, as well as Prof. Iwan Burgener, head of the University Hospital for Small Animals.

On 22 May, we had the opportunity to present our performance to the new Scientific Advisory Board: The newly composed Board was invited, with Prof. Sabine Werner and Prof. Thomas Kündig, Prof. Josep Call and Prof. Nikola Biller-Andorno, chaired by Prof. Peter Sandøe from Copenhagen. Our programme included talks, reviews, a poster session and – as a special effect – a “running slide show” with dynamic short presentations. We tried to finally convince our guests at the following dinner with an all-round view over Vienna and think that our efforts were not in vain. We are looking forward to the next visitation in 2020.

Our work in the Senate Commission for the fourth Messerli chair, focusing on the “Neurobiological Foundation of the Human-Animal Interactions”, led to a timely hearing from 1 to 2 July 2019. It resulted in a shortlist of four candidates, which was submitted to the two Rectorates.



© Felicitas Matern / Medizinische Universität Wien

Also on 1 July, the Messerli Research Institute and the Institutes on Wilhelminenberg were formally merged into one Department for Interdisciplinary Lifesciences, pursuant to a structural requirement by the University of Veterinary Medicine, Vienna.

The new composition of the Messerli Foundation Board was a good opportunity to invite the entire “new board” to personally get to know the Messerli Research Institute. We were pleased to welcome the entire Foundation Board on 8 November, despite manifold obligations: Dr. Heinz Schweizer, Dr. Adrian von Segesser, Dr. Dominique Amman, Prof. Dr. Hans Hengartner, Dr. Felix Howald and – being the only woman – Ariana Schweizer Henniges. This day was full of science and team spirit.

The highlight was a special tribute to our two longest serving board members, Dr. Heinz Schweizer und Prof. Hans Hengartner. This has also inspired our creativity because it was associated with the production of individual Messerli articles.

There were also some personnel changes in 2019: staff members left, came and returned, and – on a private level – a baby was born, all in accordance with evolution. However, the core team stayed, permanent and welded together, and that is why our work at the Institute makes us happy every day. I will do my part to ensure that this situation is maintained.



© Jennifer Bentlage / Vetmeduni Vienna

Best,
Erika Jensen-Jarolim

messerli

Research Institute



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The Messerli Research Institute at a glance

2019

The Messerli Research Institute was founded in 2010, with support from the Messerli Foundation (Sorenberg, Switzerland), under the management of the University of Veterinary Medicine, Vienna, in cooperation with the Medical University of Vienna and the University of Vienna. The professors for the first three units (Comparative Cognition, Comparative Medicine, Ethics and Human-Animal Studies) were appointed in autumn 2011. In March 2012, the institute was officially opened. The work at the Messerli Research Institute has four cornerstones:

- **Research:** The research is devoted to the interaction between humans and animals, as well as its theoretical principles in animal cognition and behaviour, comparative medicine and ethics.
- **Teaching:** Research findings are an integral part of the academic curriculum in the Master's programme and are also designed to provide guidelines for the responsible and acceptable treatment of animals.
- **Interdisciplinarity:** The institute's work is characterised by its broad interdisciplinary approach (biology, human medicine, veterinary medicine, philosophy, psychology, law) and strong international focus.
- **Practice:** Thus, the Messerli Research Institute considers providing scientific information to aid people responsible in the field of human-animal interactions one of its main responsibilities.

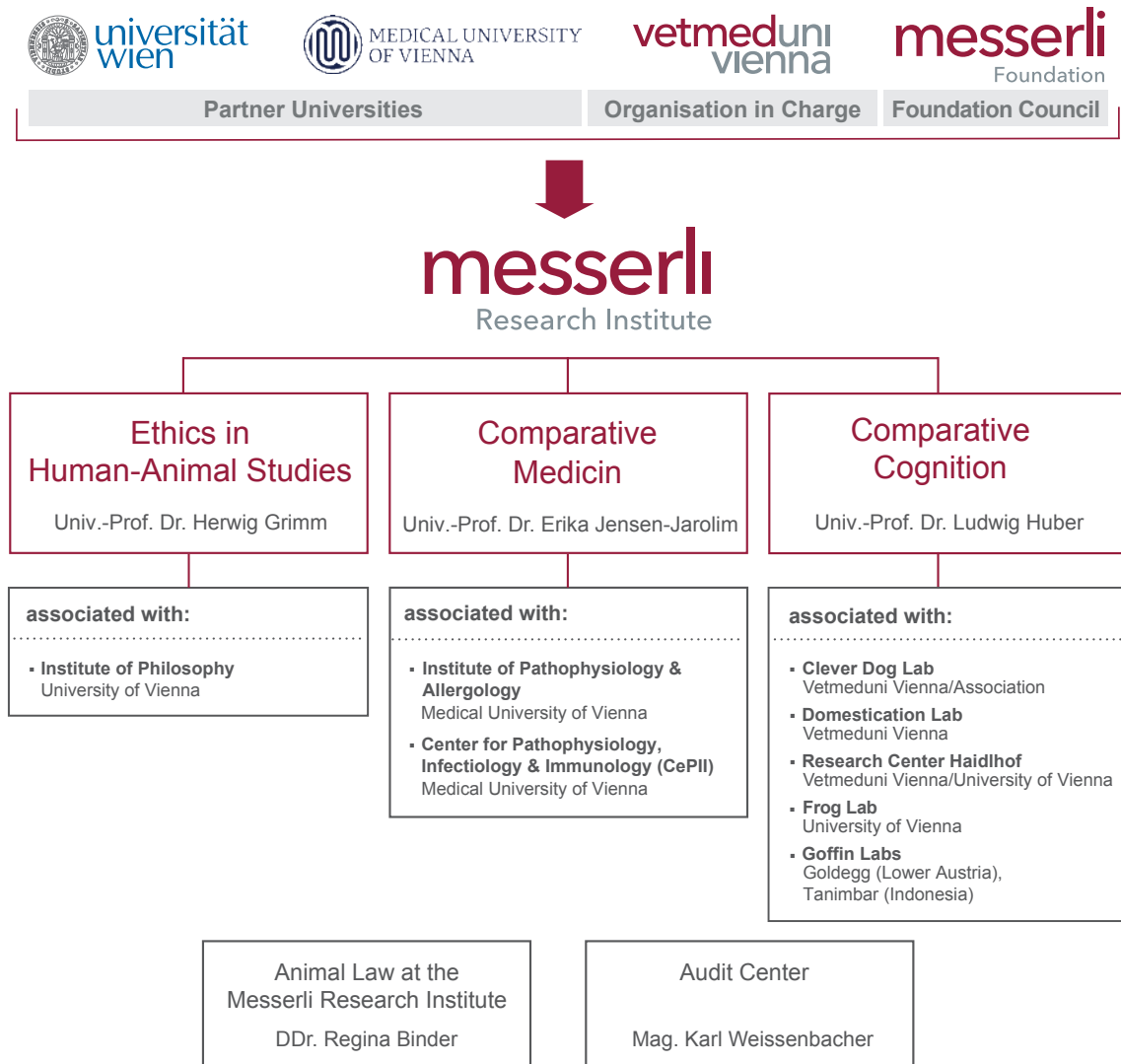
Messerli staff, Messerli Foundation and Rectorate in Vienna, 8 November 2019.



© Thomas Suchanek / www.thomassuchanek.com

Organisation chart

The Messerli Research Institute has its headquarters at the University of Veterinary Medicine, Vienna. It is associated with the rectorate and represented by its spokesperson. It comprises three units, each headed by a fully employed professor. The professors have double appointments or affiliations at the University of Veterinary Medicine, Vienna and at the Medical University of Vienna or the University of Vienna. Furthermore, the accessory service units Coordinating Office “Dog trainer in accordance with animal welfare” and “Animal Law” are associated with the Messerli Research Institute. Five associated centres work in cooperation with the partner universities.





© Erika Jensen-Jarolim

The Team

Each of the three units of the Messerli Research Institute has one chair, scientific assistant positions, one administrative assistant position and – at the two natural science units – technical posts. Furthermore, there are an IT office and one administrative assistant supporting all three units. The Unit of Comparative Medicine has one administrative position to administrate the part of the unit at the Medical

University of Vienna. In 2019, the institute's staff comprises 36,9 positions on a full-time equivalent basis, 21,7 of which were permanently employed, and 15,2 were financed by third-party sources. Further scientists, who are not counted at this point, work at the institute's associated centres.





The Foundation Board



Photos: © Messerli Foundation

From left to right:

- Adrian von Segesser, President of the Messerli Foundation
- Heinz Schweizer, Honorary President of the Messerli Foundation
- Hans Hengartner
- Dominique Ammann
- Felix Howald
- Ariane Schweizer Henniges

The members of the Messerli Foundation Board have been accompanying the Messerli Research Institute since its foundation with great commitment and sympathy. The institute's thriving has thankfully become their personal concern.

The Scientific Advisory Board



© Sandøe

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From left to right:

- Peter Sandøe (University of Copenhagen, Denmark), Chair of the Scientific Advisory Board
- Nikola Biller-Andorno (University of Zurich, Switzerland)
- Sabine Werner (ETH Zurich, Switzerland)*
- Josep Call (University of St. Andrews, United Kingdom) kindly joined the Board in 2019 and will particularly counsel on Comparative Cognition
- Thomas Kündig (University of Zurich, Switzerland) also joined the Board in 2019 and will particularly represent the field of Comparative Medicine

The Scientific Advisory Board of the MRI is the external advisory body to assure scientific quality, up-to-date research and focusing of the research at the MRI. The main issues are the strategic orientation of the research, the institute's international position and networking. The Scientific Advisory Board held its first meeting in its new composition in Vienna on 22 May 2019.

* Prof. Sabine Werner is also member of the scientific advisory board of the Messerli Foundation.

Target

The Messerli Research Institute develops and broadens scientific findings for the cohabitation of humans and animals. Current questions about the complex relationship between humans and animals and its principles are investigated from a biological, medical and ethical perspective.

Research in Context

The Messerli Research Institute works at the interface between three universities in Vienna: the University of Veterinary Medicine, the Medical University and the University of Vienna. It integrates the universities' existing knowledge and expertise into its own work. Alternatively, research and teaching at the three universities benefit from the institute's research findings and results.

Interdisciplinary Research

Interdisciplinarity and high specialisation shape the Messerli Research Institute's unique profile. The institute's three units have their own specific research agendas with a considerable number of projects funded by competitive grants. Interdisciplinary research cooperation within the units and with national and international partners is important. In the following, selected examples will detail the research topics at each unit.



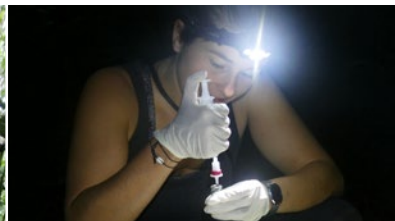
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© Eva Ringler / Vetmeduni Vienna



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© Erika Jensen-Jarolim

Comparative Cognition

Being on the track of cognition and emotions in animals

The acceptance of animals as thinking and feeling beings has greatly increased in recent years. With their research in the lab and outdoors, which is exclusively non-invasive, the researchers of the Comparative Cognition unit try to extend the empirical knowledge about cognitive, emotional and social abilities of domestic and wild animals. Thus, they also contribute significantly to the understanding of the different relationships between humans and animals. The main fields of research in 2019 were:

- Emotion and cognition in dogs and wolves
- Technical and social abilities of keas and cockatoos
- Flexible behaviour and memory in poison dart frogs
- Socio-cognitive abilities of domestic pigs

Staff



© Roobert Bayer



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Research projects – highlights

Cockatoos pass the right tools to a partner in need

Flexible targeted helping is the ability to flexibly serve a partner's specific need, depending on the latter's respective situation, without having an obvious self-benefit. The skill can be closely linked to empathy and has so far only been found in chimpanzees and humans. Nevertheless, in 2019 the Goldegg Goffin Lab conducted a study in which Goffin's cockatoos were provided with a selection of objects while another bird in an adjacent compartment received one of two tasks requiring a specific object in order to be solved (a ball-shaped or

stick-shaped object respectively). The cockatoos flexibly passed the correct tool to their partner through a window, depending on the task (stick or ball operated task) that the latter was faced with. In a control in which the partner bird was missing, the actor birds did not show a preference for passing the correct object through the window, although a task was placed in the partner's compartment. The new findings suggest that advanced forms of prosocial behaviour may have evolved independently in distantly related species such as birds and hominoids. The Goffin studies are funded by the Austrian Science Funds FWF and WWTF.

Two Goffin's cockatoos at a test on prosocial tool use.



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Personality tests in frogs

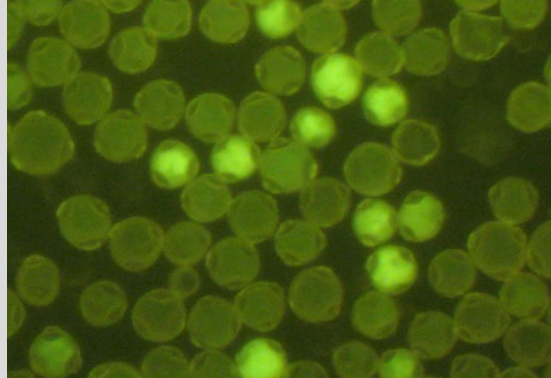
Nature observers and pet owners have always been convinced that animals have different “personalities”. This view was frowned upon and considered unscientific in research for a long time. Only in the last decade, the topic “animal personality” has received broader attention after consistent individual differences regarding the behaviour of many animal groups had been documented. In the current FWF individual project “Individual behaviour and sexual selection”, Eva Ringler and her team want to investigate the extent to which different personality characteristics have an impact on competitive behaviour, use of space, as well as mate choice and parental care. In particular, they want to investigate whether these differ-

ences in behaviour are reflected in the “success” of individuals, especially regarding successful mating and mortality risk. The study is carried out in an experimental population of the South American poison dart frog species *Allobates femoralis* on a river island in French Guiana. The opportunity to register, test and track all individuals of a population in their natural habitat and determine their exact genetic relationship is very special and provides an ideal basis for the planned analyses. The results are supposed to contribute to a better understanding of the significance of individual behavioural differences for reproduction and survival.

A male of *Allobates femoralis* transports tadpoles on its back to a water place.



© Eva Ringler / Vetmeduni Vienna



Comparative Medicine

One environment, one water, one health for humans and animals

We share environment, food and climate with our animals, decisive for human and animal health according to the “One Health” principle. Changed cohabitation of humans and animals, food processing and pollution are disruptive factors and may especially cause immune deviation, such as in allergies. Harmless antigens become potent allergens, eliciting immediate and chronic inflammations like rhinitis, bronchial obstruction/asthma, atopic dermatitis or anaphylaxis in humans and animals. The unit

investigates why molecular antigens in some cases elicit inflammation or induce immune tolerance. Especially Franziska Roth-Walter promotes the research on the family of lipocalins which harbour an intramolecular pocket for ligands. Lipocalins, innate defence molecules, are highly conserved in the animal kingdom, but the researchers observed similar innate defence principles also in plants. Needless to say, their original function is not to be an allergen but to defend the host. The unit’s research mostly focused on a paradigmatic lipocalin, beta-lactoglobulin from cows, which acts as an allergen when empty, while ligands

One Health key lecture by Erika Jensen-Jarolim at the 20th Symposium of the International Water Association (IWA) in Vienna 2019 under the motto “One Water”.



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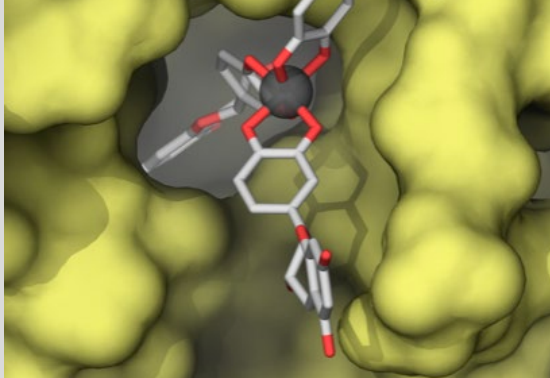
turn it into a tolerogen. Through aerosols and native milk, cow farms are pivotal to providing the “farm protection factor” against allergies and asthma for humans and animals. In 2019, the unit’s ongoing research was beautifully portrayed in several TV reports, like on BR, ARD and ORF III.



© Erika Jensen-Jarolim

Staff





Research projects – highlights

A real highlight of the 2019 publications by the Comparative Medicine team was a study on humans investigating the intake of antiacid medications in the entire Austrian population, using a data set of 8.2 million people provided by all Austrian social insurance entities. The data show that intake of such medications is significantly related to subsequent intake of anti-allergy medication, but not of other medications like lipid-modifying drugs and anti-hypertensive medications. These data are relevant for pet animals, as proton-pump inhibitors and antiacids are broadly prescribed in veterinary medicine, too. Correlations with canine

atopic dermatitis in dogs, for instance, will be investigated in future studies. Press releases by Springer Nature and via OTS triggered broad interest, to name reports on CNN, in Science, Reuters Health, and many more (*Jordakieva et al., Country-wide medical records infer increased allergy risk of gastric acid inhibition. Nat Commun. Nature Communications, 2019 Jul 30;10(1):3298. doi: 10.1038/s41467-019-10914-6*).

For the work by Jordakieva et al. it was decisive that all health insurance funds in Austria cooperated and provided data rows of the assured people. The members of the argumentation group of the Federation of Austrian Social Insurance Entities have been in close contact with Jensen-Jarolim and her team for many years (f. l. t. r.): Berthold Reichardt/ÖGK, Erika Jensen-Jarolim, Ursula Ries/ÖGK, Margot Reiter/ÖGK, Almud Körbler/Dachverband, Jana Fischer/ÖGK.



© Erika Jensen-Jarolim

In 2019, the unit continued publishing position papers of the European Academy of Allergy and Clinical Immunology (EAACI), which is the world's largest academy dedicated to allergy. In this highlights section, the most relevant one in the Messerli context by Isabella Pali-Schöll is presented. She presently chairs the Interest Group of Comparative and Veterinary Allergology in the EAACI and is also first author in the position paper on insect hypersensitivity induced by bite, sting, inhalation or ingestion. In this paper, human and animal clinics and therapeutic measures are consequently compared, revealing many homolo-

gies in line with the One Health principle. Notably, the topic insect allergy raises increasing awareness as climate change supports the expansion of insect habitats from the tropics to temperate climate, affecting humans and animals. This paper was also promoted by a press release, "Insect allergies: a bug's life", followed, for instance, by an interview with Maggie Entenfellner on ORF III (Pali-Schöll I. et al., EAACI position paper: Comparing insect hypersensitivity induced by bite, sting, inhalation or ingestion in human beings and animals. *Allergy*. 2019 May;74(5):874-887. doi: 10.1111/all.13722. Epub 2019 Feb 6).

Insect stings plague humans and animals. The reactions are consequently compared in the recent EAACI position paper (Pali-Schöll et al., *Allergy* 2019).



© Sabine Brandt / Vetmeduni Vienna



© Wolfgang Hasselmann



© Isabella Pali-Schöll



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Ethics and Human-Animal Studies

Moral responsibility in interdisciplinary projects

The Unit of Ethics and Human-Animal Studies focuses on questions around the responsible treatment of animals in research and teaching. What are, for example, the consequences of the close cognitive relationship of humans and animals for our dealing with animals? Which forms of instrumentalisation of animals are morally unacceptable? Which moral questions arise particularly in veterinary medicine? In which way do concepts of animal vulnerability, illness and health change? What does the digitalisation of agriculture mean for farmers and livestock? In 2019, we could particularly become internationally visible with our project “Morality in animals”, which is funded by the Austrian Research Funds and was started in 2018, and contribute with fundamental research to the debate about ethics in different human-animal relationships.

Staff



Research projects – highlights

Animals and the concept of death

Animals have historically been portrayed as creatures who cannot understand what happens to another being when they die, and who have absolutely no clue about their own mortality. In recent years, however, scientists have begun to gather evidence that suggests that this view of animals may be mistaken. Chimpanzees have been seen apparently testing for signs of life and offering nurturance to dead conspecifics. Crows have been found to gather around their deceased to learn about the circumstances of their death and potential sources of danger. Mothers from a wide range of species have been witnessed carrying the corpses of their infants for long periods of time. Does all this mean that these animals can understand death? Or are these behaviours the result of instincts, hormones gone awry, or simple confusion?

In September 2019, Dr. Susana Monsó began her Lise Meitner project “Animals and the Concept of Death”. This project is the first in-depth philosophical exploration of animals’ understanding of death and will be carried out in collaboration with some members of the Unit of Comparative Cognition. The project is expected to deliver important insights that can help improve the human-animal relationship by providing a first approximation of the animals’ perspective on the practice of killing animals.



© Theresa Robbler, Vetmeduni Vienna



© Herwig Grimm / Vetmeduni Vienna

Instrumentalisation. On the transformation of a fundamental category of moral in the ethics of the human-animal relationship

How should we morally act towards animals? Samuel Camenzind’s monography investigates for the first time the extent to which instrumentalisation as a fundamental category of moral can contribute to answering this question. Firstly, the work makes a contribution to the metaethical question why instrumentalisation overall is a moral category. Secondly, by critically honouring contemporary Kantian positions it is shown that Immanuel Kant’s animal-ethical position is more complex than widely thought, and which adaptations are necessary to apply Kant’s prohibition of instrumentalisation to animals. To this end, the categories instrumentalisation, objectification and exploitation are finally interrelated.

Philosophy of veterinary medicine

In Kerstin Weich’s research project “Towards a Philosophy of Veterinary Medicine” (PhD), the philosophical interest is directed towards routines in the field of curative veterinary medicine. How are concepts such as health, normality and naturalness entangled with ideas and treatments of certain animals in veterinary medicine? The diversity and historicity of animal patients enable a redefinition of the relationship between veterinary medicine and its ethical reflection, which can help overcome thinking in opposites – nature and culture, man and animal. Moreover, the investigation of the embodiment of metaphysical ideas of mortality and humanity in animals through the highly medicalised culture of dying contributes to a better understanding of euthanasia – both in veterinary medicine and in contemporary culture, in whose analyses animals are still rare guest.

Doctor’s hat from Svenja Springer.



© Eva Schwarzwinger / Vetmeduni Vienna

Examination and Coordination Centre



Assistance and therapy dogs

The Examination Centre at the Messerli Research Institute to implement § 39a of the Austrian Disability Act, assistance and therapy dogs, is internationally unique and recognised. Besides talks by the head of the Centre, Karl Weissenbacher, at international conferences such as the EGDF Congress of the European Guide Dog Federation in Tallinn, Estonia, and the ESAAT Conference of the European Society for Animal Assisted Therapy in Sasbachwalden, Germany, governmental organisations and universities such as the Social Affairs Ministries of Germany and Slovakia, the German Ministry of Defence, the National Reference Centre for Animal-assisted Intervention in Italy and the University of Adelaide, School of Animal and Veterinary Sciences, contact the Centre for information.

The innovative work in the European Committee for Standardization (CEN) to develop a single European norm in the field of assistance dogs was successfully continued. The working group “Lifelong well-being of assistance dogs”, headed by Karl Weissenbacher, has completed a first draft in the past year.

In the scientific field, a Master’s thesis was finalised and published, a diploma thesis was finalised and a Master’s and a diploma thesis have been started.

The integrative symposium Kyntegra took place for the fourth time in November with 190 participants. It makes a valuable contribution to the mutual understanding of people with disabilities and people without.

In the centre’s core field of examinations, 849 therapy dog teams and 40 assistance dog teams have been successfully examined in 2019.

Staff



The Examination and Coordination Centre presents itself (f. l. t. r.):
Viola Färber-Morak, Simone Bruckner, Karl Weissenbacher, Claudia Kammerer, Kerstin Stejskal.



© Ernst H. / www.fineprint.at / Vetmeduni Vienna

13 AssistenzhundehalterInnen erhielten am 16. Juli 2019 ihre Zertifizierung.



Dog trainer in accordance with animal welfare

The Examination and Coordination Centre has become an indispensable public information office for media such as print, online, radio and TV. Likewise, Ombudsperson's offices for animal protection, regional governments and ministries contact the Centre for information regarding dog-related issues. Therefore, Karl Weissenbacher was co-opted into the permanent work group of the Animal Protection Council.

In 2019, 104 new trainers were examined, 23 of which did not pass. This means that the number of examinations has increased by 247 per cent, which is due to changed dog keeping legislation in the Austrian federal states. The number of active dog trainers in accordance with animal welfare is currently 264. More than 13,000 hours of vocational training were approved. This improves the quality and deepens the knowledge of Austria's trainers.



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In the core of the Messerli idea, a cooperative project of the Examination and Coordination Centre “Dog Trainer in accordance with animal welfare” and Lisa-Maria Glenk from Comparative Medicine unit is presented. In this study, the view on guide dog ownership was turned around and it was investigated how high the strain on the animal actually is. The data were collected in the course of the Master’s thesis project by Lucie Příbylová, student in the institute’s programme Interdisciplinary Master of Human-Animal Interactions. The publication was accompanied by a press release by Vetmeduni Vienna (Glenk LM, et al., *Perceptions on Health Benefits of Guide Dog Ownership in an Austrian Population of Blind People with and without a Guide Dog. Animals. 2019 Jul 7;9(7). pii: E428. doi: 10.3390/ani9070428.*)

University course Applied Cynology

The university course has started in its sixth edition in October 2018 and will be completed at the end of spring term 2020.

Animal Law at the Messerli Research Institute

Animal Law is an issue in teaching and research at the Messerli Research Institute, particularly focusing on general animal welfare legislation and animal testing legislation. This field is headed by Regina Binder, who also heads the Information and Documentation Office for Animal Welfare and Veterinary Law at the University of Veterinary Medicine, Vienna. The Unit of Ethics and Human-Animal Studies and the Unit of Comparative Medicine have

several areas of interdisciplinary collaboration with this field. This collaboration comprises mainly teaching in the Master's programme IMHA1 and the scientific discussion of questions arising from current publications and projects. The normative foundations of the various forms of human-animal interaction and their relationship to empirical findings in natural science are central in this cooperation.



© Herwig Grimm / Vetmeduni Vienna

Interdisciplinary Master in Human-Animal Interactions (IMHAI)

Academic training of students in topics closely related to the Messerli Research Institute an important issue for us. The next generation should learn to assess the quality of the human-animal relationship on a scientific basis and in an ethically correct way and be able to contribute to improvements through innovative ideas and concepts. To implement these objectives, the three units of the Messerli Research Institute, together with the Institute of Animal Husbandry and Animal Welfare, designed an international Master's programme in spring 2012 that is taught in English and unique in its broad interdisciplinary approach. Considering the experiences of the first years, a reform process was initiated in 2017, which was intensively continued in seven workshops in 2018 with the involvement of teachers and students. In the course of their studies, students focus on one of the following fields: Animal Behaviour and Cognition, Comparative Medicine – from Pathophysiology to Clinical Trials, Animal Husbandry and Welfare, Legal Framework of Human-Animal Interactions or Ethics and Human-Animal Studies. This Master's degree qualifies graduates for both academic careers and careers in all socially relevant fields of human-animal interaction. To make successful graduates and their careers visible, an alumni section was implemented on the Institute's website in 2018.



© Sabrina Karl

IMHAI student Kaja Salobir with her Master's certificate.

Ten graduates completed their studies in 2019:

- **Monika Laschober**, “Midsession reversal learning in Kea (*Nestor notabilis*)” (supervisors: Raoul Schwing, Ludwig Huber)
- **Lucie Přibyllová**, “Quality of life assessment of blind people with and without a guide dog” (supervisor: Lisa-Maria Glenk)
- **Julia Mihatsch**, “The effect of injection of clove oil or isoeugenol on the behavior of goat kids” (supervisor: Susanne Waiblinger)
- **Christina Maria Raudies**, “Characteristics and welfare of longterm shelter dogs” (supervisors: Susanne Waiblinger, Christine Arhant)
- **Astrid Lengauer**, “Reduding potentially human-edible food in dairy cattle feeding by using agro-industrial by-products” (supervisor: Qendrim Zebeli)
- **Mariia Shevchenko**, “An ethical examination of the inconsistencies of the human-pet relationship” (supervisor: Herwig Grimm)
- **Kaja Salobir**, “Overimitation in dogs – dogs do copy irrelevant actions, but only of their owner” (supervisors: Ludwig Huber, Giulia Cimorelli)
- **David Beraha**, “Quantity discrimination in Kea (*Nestor notabilis*)” (supervisors: Ludwig Huber, Raoul Schwing)
- **Lena Kreuzer**, “Examining the stress response of horses during equine assisted therapy and subsequent regeneration” (supervisors: Erika Jensen-Jarolim, Lisa-Maria Glenk)
- **Sabine Riener**, “Investigations regarding the persecution of raptors in Austria” (supervisor: Knut Niebuhr)

” For me, the IMHAI meant discussions in an international and friendly atmosphere on highly topical, applied issues of human-animal interactions.

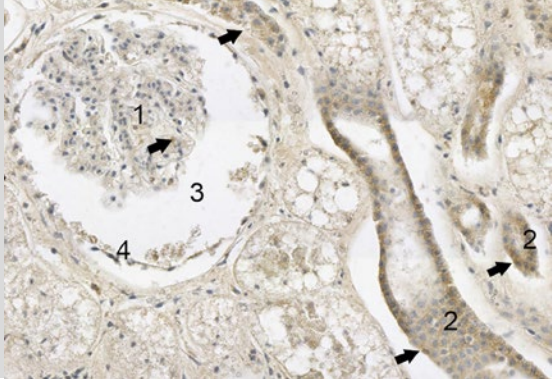
Lena Kreuzer, IMHAI graduate

” The acquired philosophical skills are a good foundation for future project in very different fields.

Monika Laschober, IMHAI graduate

” The IMHAI is a unique study programme that equips students with theoretical and empirical tools, allowing them to study the complex interactions between humans and other animals from a scientific as well as a humanistic point of view.

David Beraha, IMHAI graduate



Further courses

Staff of the Comparative Cognition unit taught courses at the University of Veterinary Medicine, Vienna and at the University of Vienna. There was a new two-week intense course on statistics, “Linear models and their application in R” by Roger Mundry, which was open to students from both universities. 21 Master’s and 13 PhD students from different national and international universities were supervised in the Comparative Cognition unit in 2019.

All members of the Comparative Medicine unit engage in IMHAI teaching, supervise Master’s theses and find the unit’s own text books (Comparative Medicine I and II, 2014 and 2015 by Springer Nature) very useful. They also supervise students from technical colleges, the University of Vienna, the University of Natural

Resources and Life Sciences, Vienna and Vetmeduni Vienna. They contribute to the mentoring programme for veterinary medicine students to develop their scientific thinking, which they will need during their work on their diploma theses at the latest.

The members of the Ethics and Human-Animal Studies unit taught topics of practical and theoretical philosophy and particularly of veterinary ethics at the University of Veterinary Medicine, Vienna and the University of Vienna. Further, they taught, among others, at the University of Zurich, the University of Zagreb, the University of Ljubljana, FU Berlin and Vetmeduni Vienna’s animal keeper school. In 2019, 30 Master’s and diploma theses were supervised, 8 of which were finalised.

Team building: Teachers in the module Comparative Medicine at the annual Heurigen visit.



© Erika Jensen-Jarolim

PhD and doctoral students

DK programme Cognition and Communication 2

In 2019, the doctoral programme “Cognition and Communication” (deputy spokesperson: Ludwig Huber), which is funded by the Austrian Science Funds (FWF), went in its third year. Members of the Messerli Research Institute supervised projects on comparative brain research into humans and animals (Sabrina Karl), on vocal learning in keas (Mélissa Sebilléau), on the personality of frogs (Mélissa Peignier) and on sequential use of tools in Goffin’s cockatoos (Theresa Rößler).

Besides PhD projects in the doctoral programme, PhD projects on social learning (Ariane Veit) and social intelligence in Kune Kune pigs (Marianne Wondrak), on sound production in keas (Amelia Wein), on the neurobiology of social cognition in dogs (Lucrezia Lonardo), on jealousy in dogs (Velia Nicotra)

PhD student Velia Nicotra after her successful defence at the University of Parma with her supervisors Prof. Paola Valsecchi and Prof. Ludwig Huber.



© Messerli Forschungsinstitut / Vetmeduni Vienna

and on the comparison between the tool innovations of Goffin’s cockatoos and children (Antonip Osuna-Mascaro, Poppy Lambert, Jennifer Colbourne) were carried out in the Comparative Cognition unit in 2019. The doctoral students were supervised by Ludwig Huber, Alice Auersperg, Eva Ringler and Raoul Schwing.

DK programmes MCCA and CCHD

The Comparative Medicine unit engages in PhD programmes of the Medical University of Vienna: 1.) in the immunology PhD programme and in the doctoral colleges, 2.) in the programme MCCA – Molecular, Cellular and Clinical Allergology and 3.) in the programme Cell Communications in Health and Disease (CCHD). Members of the unit supervise doctoral theses and teach basic seminars, journal clubs, thesis seminars and progress reports.

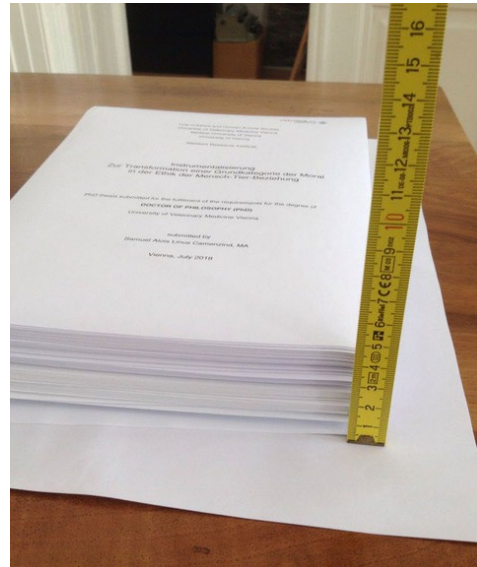
A typical journal club of the Comparative Medicine unit, taking place on Wednesdays. Anna Korath from the IMHAI programme presents her work, supervised by Karin Hufnagl et al.



© Erika Jensen-Jarolim

PhD students in the Unit of Ethics and Human-Animal Studies

In the Unit of Ethics and Human-Animal Studies, six scientists were supervised in different doctoral programmes in 2019: Samuel Camenzind (instrumentalisation as a fundamental category in animal ethics), Kerstin Weich (philosophy of veterinary medicine) and Birte Wrage (moral ability in animals) in the PhD programme of Vetmeduni Vienna, Andreas Aigner (psychoanalysis and animal ethics) and Sarah Espinosa (ethics of scarce resources) in the doctoral programme of the University of Vienna and Svenja Springer (morals inherent in the veterinary profession) in the doctoral programme of the University of Copenhagen in collaboration with Vetmeduni Vienna.



© Samuel Camenzind / Vetmeduni Vienna

It's a monograph (by Samuel Camenzind!) 2499 g and 4.2 cm.

Kerstin Weich after her defence (f. l. t. r.): mascot Sustitia, supervisor Herwig Grimm, newly graduated PhD Kerstin Weich, PD Martin Fritz Brumme.



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Academic ceremony at Vetmeduni Vienna with Samuel Camenzind and Svenja Springer.



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Engagement in committees

2019

Engagement in committees – highlights 2019

Members of the Unit of Comparative Cognition have been engaged in national and international committees. At the University of Veterinary Medicine, Vienna, Ludwig Huber was a member of the Curriculum Commission for several study programmes (including IMHA), the Scientific Advisory Boards of the Animals for Therapy curriculum and the university course Cynology, and the Coordination Board of the Teaching and Research Farm Kremesberg (Vetfarm). Together with Zsófia Virányi he is a member of the Scientific Commission of the Examination and Coordination Centre for assistance and therapy dogs and dog trainers in accordance with animal welfare, as well as head of the association Clever Dog Lab. Ludwig Huber is a member of the Scientific Advisory Boards of the Institute for Advanced Sciences Berlin (WIKO) and of the Schönbrunn Zoo in Vienna as well as a member of the Supervisory Council of the Jane Goodall Institute Austria. Eva Ringler is a member of the Council of the European Society of Herpetology.

Erika Jensen-Jarolim, spokesperson of the Messerli Research Institute since 2018, was appointed head of the Messerli Research Institute in mid-2019. In this function she was engaged in the Senate Committee for the 4th Messerli professorship. Since January 2019, she has been president elect of the Austrian Society of Allergy and Clinical Immunology (ÖGAI). Isabella Pali-Schöll chairs the Interest Group of Comparative Allergology in the European Academy of Allergy and Clinical Immunology (EAACI), Franziska Roth-Walter is secretary of the Task Force for Immunopharmacology of the EAACI. Erika Jensen-Jarolim chairs the Task Force of Allergo-Oncology in the EAACI

and is a board member of the Allergen-Immunotherapy Interest Group.

The staff of the Ethics and Human-Animal Studies unit were engaged in panels at local, national and international levels in 2019: in the Ethics and Animal Welfare Committee, the Vet Innovation Circle, the Curriculum Commission of Vetmeduni Vienna, the Committee for Ethics in Science of the Austrian Academy of Sciences, the Scientific Advisory Board of the Association Tierschutz macht Schule (Animal Protection goes School), the Scientific Commission of the Examination and Coordination Centre for assistance dogs, the Austrian Commission for Animal Testing, the Animal Protection Council of Berlin, the Scientific Advisory Board of the Institute TTN in Munich, and others. Samuel Camenzind was appointed to the Swiss Federal Ethics Committee on Non-Human Biotechnology (ECNH).

Grants and Awards 2019

- **Eva Ringler** was the first Austrian to be awarded the Christopher Barnard Award of the Association for the Study of Animal Behaviour (ASAB). This prestigious award is given to excellent and important scientists in the field of ethology in animals every year to honour their work.
- **Alice Auersperg** got the award for the most successful raising of third-party funds by Vetmeduni Vienna, already for the second time after 2017.
- **Sabrina Karl** won the Best Poster Award by Vetmeduni Vienna in the category “Science Journalism” and reached second place in the category “University Environment” with the title “Whom do you like?” (co-authors Magdalena Boch, Claus Lamm and Ludwig Huber).
- **Katharina Fink** was honoured by the Austrian Research Promotion Agency (FFG) for her report about her talent internship on the play behaviour of keas.



© Max Ringler / Vetmeduni Vienna

Eva Ringler at fieldwork in French Guiana.

Alice Auersperg (2nd from left) and the prize winners of the internal science awards 2019.



Sabrina Karl (rightmost) and the prize winners of the Poster Awards in the categories “University Environment” and “Science Journalism”.



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- **Josef Singer**, MD.PhD, previous member of the Comparative Medicine team, was awarded the Science Award of the Medical Association of Lower Austria for the publication “Allergo-Oncology: High innate IgE levels are decisive for the survival of cancer-bearing mice” (World Allergy Organization Journal 12,100044, 2019).
- **Judit Fazekas-Singer** got the 1st Thesis Award of the Austria Society of Allergology and Immunology (ÖGAI), which was awarded on November 22, 2019.
- Several members of the Comparative Medicine unit got poster presentation awards: **Verena Köhler** (Annual EAACI Conference in Lisbon and MCCA PhD Symposium, Vienna) as well as **Rodolfo Bianchini** and **Livia Kromp** (CePII Symposium, Vienna). **Christina Pranger** and **Verena Köhler** received EFIS-IL short-term fellowships for PhD studies abroad in Barakaldo, Spain, and London, UK, and **Franziska Roth-Walter** got an EAACI travel award.



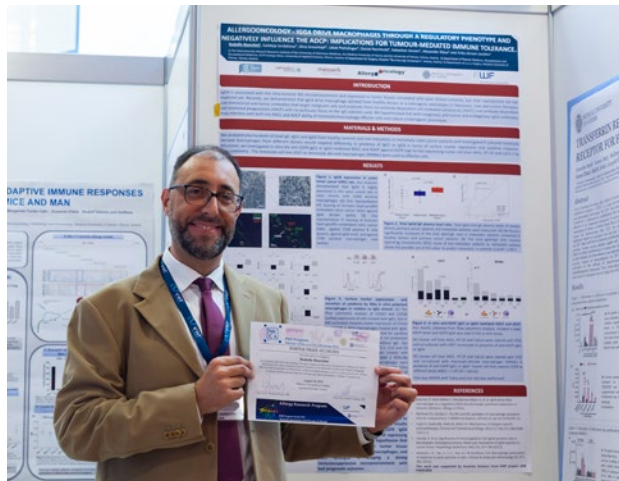
Josef Singer, MD.PhD



Master's student Livia Kromp and her supervisor Karin Hufnagl are happy about a poster award.

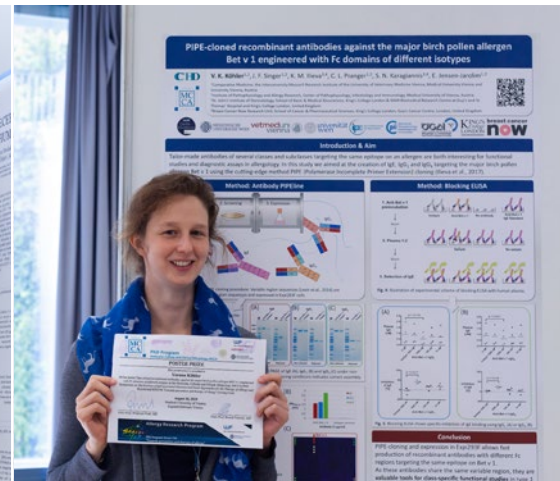
© Erika Jensen-Jarolim

Rodolfo Bianchini is happy about a poster award.



© Erika Jensen-Jarolim

MCCA PhD student Verena Köhler is happy about a poster award.



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2019

Cooperation & International Engagement

The most important partners in 2019

Associated centres

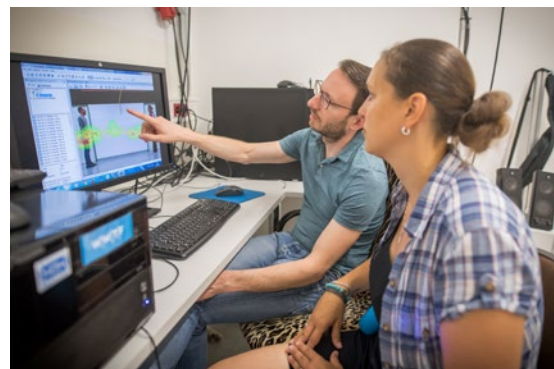
Institute for Pathophysiology and Allergy Research (ipa) at the Centre for Pathophysiology, Infectiology and Immunology (CePii) of the Medical University of Vienna

The team of the Comparative Medicine unit worked, as usual, to a great extent also in their lab at the Institute of Pathophysiology and Allergy Research, which provides technology for immunology-oriented research, including state-of-the-art lab equipment and animal facilities. In the field of allergy research, this institute is among the top research institutions of the world (number 7 in the international university rankings, <https://cwur.org/2017/subjects.php#Allergy>).

This environment is stimulating and also the heart of the special research programme on allergy (spokesperson Rudolf Valenta) and the doctoral college MCCA (headed by Winfried Pickl). The team of the Comparative Medicine unit has been involved in both for many years.

Clever Log Lab

Research into the intelligence and the behaviour of dogs has been intensely continued in 2019. A highlight was the successful training of dogs to voluntarily enter a magnetic resonance imaging system and watch videos without moving for several minutes, while their brain activity was measured. First tests on seeing the human partner compared to unknown people were promising. The eye tracker was used to measure eye movements and thus analyse anticipatory looking in dogs. Regarding the human-dog relationship, a study on the quality of the relationship of domestic dogs to their human partner and to conspecifics in the same household was published. There was also a report about the influence of oxytocin in a supplement of the journal *Frontiers in Psychology*, which the lab co-edited.



Christoph Völter and Sabrina Karl are discussing the eye tracker data in the Clever Dog Lab.

© Rocobert Bayer

Research station Haidlhof

In the ninth year of research station Haidlhof's existence, the two labs of the unit expanded in terms of science. In the pig lab, Ariane Veit got an OeAW-DOC grant by the Austrian Academy of Sciences to investigate the influences of different individual and social factors on social learning in pigs. In the kea lab, Megan Lambert, postdoc researcher from the USA, joined the team. She independently leads a Lise Meitner project funded by the Austria Science Funds FWF on the tool choice of keas. PhD student Amelia Wein published the first publication on the vocalisations of a parrot mother in the nest. She could show that this mother changes the structure of her calls in the course of rearing – similar to human mothers.



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Group picture with Kune Kune pigs (f. l. t. r.): Florian Uhl, Ariane Veit, Marianne Wondrak, Florian Vogel, Sabrina Karl.

Group picture with kea (f. l. t. r.): Megan Lambert, Mélissa Sébilleau, Morgaine Virapin, Amelia Wein, Raoul Schwing.



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Goffin's Labs in Goldegg (A) and Tanimbar (Indonesia)

The Goffin's Lab in Goldegg, in which the cognitive abilities of cockatoos are investigated, started a new project funded by the Vienna Science and Technology Fund WWTF in 2019, in which the tool innovations of animals are directly compared with the ones of children. For this purpose, the "Innovation Team" was established, comprising Dr. Auersperg, Dr. Tebbich (behavioural ecologist from the University of Vienna), Dr. Beck (developmental psychologist from the University of Birmingham) and three PhD students (picture). Further, the lab is involved in a new cooperation project with roboticist Oliver Brock from TU Berlin.

The Goffin's Lab in Tanimbar, a field station on the Moluccas (in collaboration with the Indonesian Institute of Biology, LIPI) did not only expand its personnel with further international students but also its infrastructure with extensions of the station itself, new food platforms and a big watch tower in the midst of the rain forest.

The PhD students of the WWTF project by Alice Auersperg (f. l. t. r.): Antonio Jose Osuna Mascaro, Jennifer Colbourne, Poppy Lambert.



© Alice Auersperg / Vetmeduni Vienna

Frog Lab

The frog lab at Biocentre Althanstraße is associated with the Messerli Research Institute through Eva Ringler, scientist in the Unit of Comparative Cognition. In this lab, frogs of the species *Allobates femoralis* are kept under species-appropriate conditions, and their brood care behaviour is investigated in special terraria. Besides an FWF project to analyse the connections between personal characteristics in the behaviour of frogs and sexual selection, also experiments regarding partner selection strategies in females were carried out. Based on the results of the work done by Eva Ringler during her Hertha Firnberg Grant at the UCLA, a follow-up experiment was carried out in which functional MRT was used to show differences in the activity of different brain areas in males when transporting tadpoles. This project was carried out in collaboration with the Preclinical Imaging Facility of the Vienna Biocenter.



© Eva Ringler / Vetmeduni Vienna

Companion Animal Behaviour Working Group

To develop a good practice in companion animal keeping, training and management, members of the working group from the Comparative Cognition unit and the Ethics and Human-Animal Studies unit, the Small Animal Clinic and the Institute of Animal Welfare Science submitted a number of research proposals this year, conducted a large survey on muzzle effects in dogs, and provided scientific support to various governmental organisations on how to deal with aggressive dogs. The highlight of its second year was the newly initiated Companion Animal Behaviour Journal Club. In this integrative seminar on welfare, veterinary ethics, behavioural biology and medicine, mostly veterinary medicine students and IMHAI students engaged in interdisciplinary discussions on highly relevant and controversial topics, such as neutering, animal welfare vs. human safety, quality of life and the role of subjectivity in assessing it.

Institute of Philosophy of the University of Vienna

The Institute of Philosophy of the University of Vienna is highly visible on the international level and relies on the many areas of competence of its members. It considers itself obliged to offer courses which cover the breadth of the discipline and, at the same time, meet the high standards of specialisation in some fields. Due to Herwig Grimm being a honorary professor, his teaching and supervising and cooperation in the FWF project “Forms of Normativity” (doc.funds) as well as Martin Huth’s and Samuel Camenzind’s teaching activities, there is intense exchange and regular cooperation with the Institute of Philosophy of the University of Vienna.



Cooperation with our partner universities

University of Veterinary Medicine, Vienna

- Clinical Unit of Anaesthesiology and Perioperative Intensive-Care Medicine
- Clinical Unit of Diagnostic Imaging
- Institute of Animal Welfare Science
- Institute of Laboratory Animal Science
- Institute of Medical Biochemistry
- Institute of Population Genetics
- Konrad Lorenz Institute of Ethology
- University Clinic for Horses
- University Clinic for Ruminants
- University Clinic for Small Animals, Dermatology and Oncology
- University Clinic for Swine
- VetCore

University of Vienna

- Cognitive Science Platform
- Department of Behavioural Biology and Human-Animals Relationships Research Group
- Department of Cognitive Biology
- Department of Integrative Zoology
- Faculty of Psychology
- Institute of Philosophy

Medical University of Vienna

- Center for Biomedical Engineering and Physics
- Center for Pathophysiology, Infectiology and Immunology
- Department of Child and Adolescent Psychiatry
- Department of Dermatology
- Department of Ear, Nose and Throat Diseases
- Department of Psychiatry und Psychotherapy
- Department of Radiology and Nuclear Medicine
- Department of Surgery
- Immunology Research Cluster
- Medical Imaging Cluster, Preclinical Imaging Cluster

Further national research partners

- Animals for Therapy/Center of Science and Training
- Austrian Academy of Sciences
- Catholic-Theological Private University Linz
- Network Berufliche Assistenz, Vienna
- Technical University of Vienna
- University of Natural Resources and Life Sciences, Vienna
- Zoo Schönbrunn
- Zoo Wels

Further international research partners

The Unit of Comparative Cognition has many research partners in Europe: Belgium (Ghent), Germany (Berlin, Frankfurt and Leipzig), France (Rennes, Strasbourg), Hungary (Eötvös Loránd and Semmelweis in Budapest), Italy (Milan, Padua, Parma, Rome and Rovereto), Norway (Trondheim), Sweden (Lund) and the United Kingdom (Birmingham, Bristol, Edinburgh, Exeter, Lincoln and Oxford). Furthermore, the unit collaborates with partners from French Guiana (Saut Pararé), Indonesia (Cibinong, West Java), Japan (Tokyo), New Zealand (Christchurch, Auckland) and the USA (Duke, Los Angeles, Minnesota, Nebraska, Atlanta and Stanford). Particularly important is the cooperation agreement with the Indonesian Academy of Sciences (Institute of Biology) because it enables research into Goffin's cockatoos on the island Tanimbar.

Most research collaboration in the Comparative Medicine unit resulted again from networks in international societies: World Allergy Organization (WAO), European Academy of Allergy and Clinical Immunology (EAACI), as well as American Academy of Allergy, Asthma and Immunology (AAAAI). The unit was pleased to continue the successful collaboration with the Comparative Oncology Trial Consortium (COTC) of the National Cancer Institute.

The Unit of Ethics and Human-Animal Studies is in cooperation with scientists at university organisations: in Denmark with the University of Copenhagen, in Germany with the 3R Centre Gießen (ICAR3R), the Institute of Philosophy at TU Darmstadt and with the Faculty of Theology at HU Berlin, as well as in Switzerland with the University of Basel and the University of Zurich. In 2019, particularly cooperation with VetSuisse Zurich, FU Berlin, TiHo Hannover, Charité Berlin and the University of Bonn were intensified in the Network for Veterinary Ethics, with the University of Skopje the University of

Ludwig Huber, Alice Auersperg and Mark O'Hara visited the Institute of Biology of the Indonesian Academy of Sciences in Bogor (Indonesia). In the middle Prof. Dewi Prawiradilaga.



© Mark O'Hara / Vetmeduni Vienna



© Ludwig Huber / Vetmeduni Vienna

Ljubljana and the University of Zagreb through the VetNEST Summer School, and with Prof. Kristin Andrews (York University Toronto) and Dr. Maria Botero (Sam Houston State University, Huntsville) in the project “Morality in animals”.

Cooperation with networks and societies

Members of the Comparative Cognition unit are represented in international societies (Europe: Ethological Society, The Association for the Study of Animal Behaviour, Canine Science Forum; USA: American Psychological Association, Comparative Cognition Society, Psychonomic Society; New Zealand: Kea Conservation Trust) and cross-border networks (Animal Welfare Research Network, Many Primates).

In the Comparative Medicine work in interest groups and task forces of WAO, EAACI as well as AAAAI led to, besides joint international work on position papers, individual cooperation with researchers from all over the world. Particular emphasis deserves the long and successful cooperation with Prof. Sophia N. Karagiannis from the King’s College in London and her team, with Dr. Aurelie Poli from the Luxembourg Health Institute, with Dr. Denisa Ferastraoaru from the Albert Einstein College, New York, with Edda Fiebiger from the Boston Children’s University Hospital, with Prof. Uta Jappe from Research Centre Borstel, with Prof. Michelle Turner from the Barcelona Insti-

Students at the seminar of the VetNEST Summer School in Vienna.



© Svenja Springer / Vetmeduni Vienna

Participants of the VetNEST Summer School and a brave sheep in a course of Vetmeduni Vienna.



© Svenja Springer / Vetmeduni Vienna

Opening ceremony at the Goffin Lab, Tanimbar, with Marc O’Hara, Ludwig Huber and Alice Auersperg.



© Berenika Mioduszewska / Vetmeduni Vienna

tute for Global Health and the McLaughlin Centre for Population Health Risk Assessment, with Prof. Marek Jutel from the Department of Clinical Immunology, Wrocław Medical University, Wrocław, Poland, with Prof. Robyn O’Hehir from the Central Clinical School, Monash University and Alfred Hospital, Melbourne, and with Prof. Claudio Rhyner from the SIAF – Swiss Institute of Allergy and Asthma Research, Davos. Unfortunately, we cannot mention all our distinguished partners at this point.

The Unit of Ethics and Human-Animal Studies collaborates with networks and associations in the field of ethics and human-animal interaction, including the European Society for Food and Agricultural Ethics, ECAWBM, the International Society of Livestock Husbandry, the Animals and Society Institute, Cultural and Literal Animal Studies, the Interspecies Rights Initiative, Minding Animals Germany, Minding Animals International, the Network Veterinary Ethics and the VETART – arts forum.

Cooperation meeting with the Technical University of Vienna, Prof. Anne Kasper-Giebl and colleagues: The analysis of environmental samples is gaining importance in the One Health concept.



© Erika Jensen-Jarolim

Guest researchers at the Messerli Research Institute

At Alice Auersperg’s invitation, scientist Paula Ibanez from Spain worked at the Goffin’s Lab in Goldegg on the question whether previous experience has an influence on the innovative ability of animals.

At the invitation of the Ethics and Human-Animal Studies unit, the following guest researchers visited the Messerli Research Institute: Prof. Kristin Andrews (York University Toronto), Dr. Maria Botero (Sam Houston State University, Huntsville), Mara-Daria Cojocaru (Munich School of Philosophy), Elena Noe (Freie Universität Berlin) and Carlo Salzani (University of Vienna).

During their one-week research stay, Maria Botero (USA) and Kristin Andrews (Canada) visited the labs of the Comparative Cognition unit with the MiA team.



© privat

The institute contributes to the promotion of a scientifically sound and ethically acceptable treatment of animals in our society. Therefore, the Messerli Research Institute is committed to bringing knowledge gained from research to the public debate, in line with the principles defined in its mission statement.

Media highlights

In 2019, again numerous newspaper articles, social media news and TV documentaries about the research by the Unit of Comparative Cognition were published. There was, for example, the documentary “Stay-at-home Animal Dads” which reported in detail about the brood care behaviour of poison dart frogs. Further, there were several media reports

about over-imitation in dogs, a special behaviour that has not even been proved in primates so far. Alice Auersperg was “the crown of science” (Krone der Wissenschaft) in the Austrian daily newspaper Kronenzeitung, guest in the lunchtime news by the Austrian broadcasting company ORF and in the Japanese documentary series “Amazing Dinoworld” by NHK.

A poison dart frog as the protagonist of the film “Stay-at-home animal dads”.



© Rotating Planet Wild Productions / Vetmeduni Vienna

In the Comparative Medicine unit, current work on the farm effect as a protection against allergies and asthma triggered beautiful TV productions on Bayerischer Rundfunk and ORF III (“Die Hygienefalle” – the hygiene trap). The film team chose subjects in the cowshed of the University of Veterinary Medicine, Vienna in a very sensitive way and connected them to scientific pictures from the lab. As both films are still repeated on different channels, they have a strong advertising effect for the work done at the Messerli Research Institute.

In 2019, members of the Unit of Ethics and Human-Animal Studies gave many interviews in media in the German-, English- and Spanish-speaking areas. A highlight was a contribution on veterinary ethics in the science magazine nano (3Sat) by Dr. Kerstin Weich on the humanisation of animals. In the light of jaw surgeries in rabbits and MRT in turtles, the reasons for this development in human-animal interactions were analysed. Another topic was border cases in veterinary medicine such as euthanasia.

The film team of Bayerischer Rundfunk at the shooting in Vienna on ImmunoBON, the “cowshed pill”.



© Erka Jensen-Jarolim

Institute-wide events

There were two major events in 2019 which concerned the whole Messerli Research Institute.

Site visit of the Messerli Scientific Advisory Board

The site visit of the Messerli Scientific Advisory Board took place on 22 May. The newly constituted Board convened to give their advice on current Messerli projects. The SAB members under the guidance of Prof. Peter Sandøe were impressed by the Messerli spirit.



© Jennifer Bentlage / Vetmeduni Vienna



© Stephanie Scholz / Vetmeduni Vienna

Site visit of the newly constituted Messerli Foundation Board

For the site visit of the newly constituted Messerli Foundation Board, all Board members convened in Vienna on 8 November. The Messerli team took the opportunity to especially thank Dr. Heinz Schweizer, chair of this Board, and Prof. Hans Hengartner, who have accompanied the Messerli Research Institute since its foundation and personally cared for its prosperous development. Both were surprised by especially branded Messerli caps, branded cakes, typical Viennese wafers and others.



© Jennifer Bentlage / Vetmeduni Vienna



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Events organised within the units

Like in the past years, members of the Comparative Cognition unit held numerous presentations and guided tours through the unit's labs. Particularly on Haidlhof and in the Clever Dog Lab there were presentations nearly every week, which illustrated the research activities very well. Further, there was a large exhibition with live presentations at the Campus Open Day of Vetmeduni Vienna, where interested visitors could learn something about comparative cognition research.



© Karin Bayer / Vetmeduni Vienna

IMHA students are presenting the experimental set-up of their Into-Science project during a guided tour.



© Alexandra Eder / Vetmeduni Vienna

VetNEST Summer School 2019.

Svenja Springer, Eva Schwarzinger and Herwig Grimm from the Unit of Ethics and Human-Animal Studies organised the international VetNEST Summer School “Animal Welfare Veterinary Ethics, Law and Communication” in cooperation with the Universities of Skopje, Zagreb and Ljubljana. Further, first results of the project “Morality in Animals” were presented at the interdisciplinary conference “Animal Minds & Animal Ethics” (keynotes: Prof. Kristin Andrews and Dr. Maria Botero), which was also organised by the Unit.

Speakers at the conference Animal Minds & Animal Ethics, which was held on 23 September 2019 at Vetmeduni Vienna at the mid-term of the FWF project “Morality in Animals – What it means and why it matters”; f. i. t. r.: Zsófia Virányi, Birte Wrage, Kristin Andrews, Judith Benz-Schwarzburg, Susana Monsó, Maria Botero, Jean-Loup Rault, Susanne Waiblinger.

Sidney Carls-Diamante at the Working Group Human-Animal Relationship, speaking about cognition in octopus.

Workshop by the Unit of Ethics and Human-Animal Studies with Prof. Markus Wild (University of Basel) and the team at the MRI.



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Improvement of the research infrastructure of the outdoor pig laboratory

In the sixth year of operation of the Messerli Pig Lab, an important measure to improve the research infrastructure was implemented. After the central part of the so-called Sägeacker, an eight-hectare open space at the Research Station Haidlhof, had been reclassified as “special building land”, a new test building for behavioural and cognitive testing of Kune Kune pigs was constructed. The building has a 34 square metre test room, which can be

divided into three test compartments with flexible walls, and a ten square metre technical and preparation room. The wooden frame construction of the building is environmentally sound. The exterior of the building is covered with planed larch wood boards, the gabled roof with stone roof tiles. The pigs can reach the test compartments directly through openings with slide doors. In the compartments, their behaviour can be recorded with a video surveillance system. Thanks to this innovation, cognition tests in the Clever Pig Lab using sensitive video and computer technology can be carried out in winter and in bad weather conditions.

The new test building at the Messerli pig lab from outside.



The new test building at the Messerli pig lab from inside.



© Ludwig Huber / Vetmeduni Vienna

Social Events

2019



"Therapists on four paws – how can animals assist in healing?"
This was the name of Lisa-Maria Glenke's class at the 2019 Children's University.



F. l. t. r.: Isabella Pali, Erika Jensen-Jarolim, Ria Mang, Franziska Roth-Walter and Karin Hufnagl; The team of the Comparative Medicine unit visits the health resort Bad Gleichenberg and its historian Ria Mang. Since the resort's foundation, cowshed air has been used to treat lung diseases, a topic the unit is intensively working on.



The high quality standards in the lab of the Comparative Medicine unit require safety training every year, followed by pizza for the team.



What would the Messerli Research Institute do without the good forces behind the scenes: the admin team. Katharina Petschinger, Karin Bayer, Eva Schwarzingner, Regina Meixner, Gerlinde Hofstetter, Jenny Bentlage (ohne Titel, (f. l. t. r.))



BBQ Haidlhof; in the picture: Karin Bayer, Theresa Rößler, Poppy Lambert



BBQ Haidlhof; in the picture: Roger Mundry, Mélissa Pegnier, Mélissa Sébilleau, Theresa Rößler



The Unit of Ethics and Human-Animal Studies is getting ready for a table tennis match.



Alice Auersperg and Ludwig Huber at the welcome ceremony at the Goffin Lab in Tanimbar/Indonesia.



Pizza at the Goffin Lab at Goldegg, Lower Austria; in the picture: Ludwig Huber, Ariane Veit, Zsófia Virányi.



Pizza at the Goffin lab at Goldegg, Lower Austria; in the picture: Rooobert Bayer, Poppy Lambert.



The Messerli team at the open day at vetmeduni Vienna.

messerli

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