VRI

2023 YearBook

www.vri.cz

Veterinary Research Institute

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Contents

Dear readers,

The 2023 Yearbook of the Veterinary Research Institute presents a summary of the activities and outcomes that contributed to achieving its mission. The structure of this Yearbook remains consistent with previous editions, allowing for the effective tracking of the progress and trends in the data presented.

The Institute continued its efforts to generate new data that can be applied in the form of knowledge or technology in veterinary medicine, animal production, and other biomedical areas.

This is made possible by financial support, primarily provided by the Long-term Conceptual Development of the Research Organisation project. This is funded by the founder - in the case of VRI the Ministry of Agriculture - as a form of institutional support. In 2023, a new five-year programme was launched, covering the entire spectrum of issues addressed by the Institute's staff. Other sources of funding for scientific and research activities include grant subsidies obtained in calls for proposals from various national and international funders. These include the National Agency for Agricultural Research, the Czech Science Foundation, the Medical Research Agency, and projects of the Ministry of Industry and Trade, and the Ministry of Education, Youth and Sports, as well as operational programmes projects.

In 2023, the Institute pursued a total of 49 projects, 4 of which were international. Furthermore, cooperation was established with 26 countries, including Mongolia. Contract research conducted in collaboration with commercial companies amounted to approximately CZK 17 million.

We consider the National Centre for Biotechnology in Veterinary Medicine (NaCeBiVet), funded by the Technology Agency of the Czech Republic, a key project in the Institute's field of activities. Within this framework, partial projects involving 19 participants from the application sector were launched. The aim of this centre is also to generate new ideas and proposals intended to shape the future direction of applied research within the project scope, including related legislation at both national and international levels.

In 2023, the researchers successfully produced and put into effect over 100 publication outcomes, with nearly their three--quarters published in journals with an impact factor above the specialty median. The practical aspects of their work have been patented or protected in other forms, and were also presented at various conferences and seminars. Additionally, these findings were traditionally shared through a series of seminars for the professional community known as the VRI ACADEMY.

In summary, 2023 was another successful year for the Institute, both from a professional standpoint and in terms of social responsibility. Employees actively participated in initiatives like blood donation and tree planting. In the realm of popularisation, an educational and popularisation outreach programme was developed, featuring an educational video aimed at children and young people that explains the Institute's scientific work and its impact on animal health. Nevertheless, it is important to remain vigilant as new challenges and new opportunities continually arise. And perhaps we can say that the Veterinary Research Institute stands ready to face them, viewing these challenges as motivation for further improvement and growth. We would like to express our gratitude to everyone, who has contributed through their daily efforts.

MVDr. Martin Faldyna, Ph.D.
and Authorship Team

Medium-term goals until 2030

SWOT ANALYSIS

Strengths

- NCC Project - National Centre for Biotechnology in Veterinary Medicine
- Scientific area - high proportion of publications in journals with impact factor (IF)
- The capability to produce results with high potential for practical application
- High-quality scientific infrastructure with possibilities for further expansion
- Strong partnership with industry
- Economic stability and commercial capabilities

Opportunities

- Introduction of a new product to the market
- Biotechnology Prototype Laboratory
- Cleanroom laboratory for establishing good manufacturing practices to scale-up production
- Expanded workplace of experimental animal facilities in BSL 3 mode
- Political and environmental challenges
- Overlap with public health and the application of One Health principles

Weaknesses

- International relevance in securing projects
- PR strategy and public communication
- Information Technology and the digitalisation of processes
- Financial incentives for young researchers

Threats

- Alterations in R&D funding at the institutional level
- Uncertain funding sources for development and strategic goals
- Legislative changes and industry disinterest in research results
- Demotivation of young researchers

Justification of the operation and future of the VRI

VISION

Conducting high-quality research for transfer to practical users in veterinary medicine and agriculture for the benefit of the society and in alignment with One Health principles.

2030

MISSION

THE FOLLOWING VALUES ARE CONSIDERED AS CRUCIAL BY THE INSTITUTE'S MANAGEMENT:

Support for excellence and innovation- developing science and innovation in veterinary medicine with the aim to improve animal and human health

Social responsibility- accepting suggestions from the professional community to address societal needs

Partnership and collaboration- research in collaboration with domestic and foreign partners, including the dissemination of results and their transfer to end users

Respect and diversity- an environment where everybody feels respected and motivated

GOALS

Veterinary research in the field of prevention, control, diagnosis and treatment of animal diseases, welfare and animal care. Furthermore, study and research at the human-animal interface, including food safety, wildlife and ecosystem health, zoonoses and public policy in line with the OneHealth philosophy.
From the point of view of the medium-term mission, it is necessary to consider the following strategic priorities, which set the goals in areas that are crucial for us:

- "Farm-to-fork strategy" for fair, healthy and environmentally-friendly food systems
- EU biodiversity strategy in the field of biodiversity by 2030
- National Research, Development and Innovation Policy of the Czech Republic 2021+
- Concept of research, development and innovation of the Ministry of Agriculture for 2023+

The Institute has the following medium-term goals:

- **Scientific area**
  - Maintain and increase the number of publications in high-quality journals with impact factor above the median of the field
  - Maintain and increase the number of publications in journals for the veterinary and agricultural professionals

- **Application area**
  - Maintain the number of outcomes with legal protection and increase their dissemination through licencing
  - Maintain and enhance collaboration with commercial partners to better align the defined research topics
  - Maintain and increase the volume of finances through invoiced activities

- **Project area**
  - Maintain the volume of financial resources from special-purpose support projects
  - Increase the number of special-purpose support projects acquired in collaboration with industry partners
  - Increase the volume of financial resources obtained from international collaboration

- **Development area**
  - Reduce the energy demand of buildings and diversification of energy sources through the use of the EPC method (*Energy Performance Contracting*)
  - Construction of new infrastructure and technical facilities
  - In the field of human resources, the focus is primarily on new trends and the use of the potential of modern and emerging technologies

TOOLS

To achieve the objectives, the Institute employs a broad group of tools, with the following considered crucial:

- Establishing an internal evaluation system
- Bonus Rules and Licence Rules
- Strategy of a follow-up project of the long-term conceptual development of the research institution
- Creation and efficient use of the institutional asset reproduction fund
- The ability to utilize special-purpose support

The Institute runs laboratories for performing experiments under infectious and non-infectious conditions equipped with cutting-edge instruments, and also an experimental animal facility for keeping experimental animals, including performance of experiments under BSL 3 regime.

The Institute‘s premises offer considerable opportunities for further development and renovation of its infrastructure:

• In 2023, a semi-operating unit in the Grade “D“ cleanroom for the area of semi-solid and liquid pharmaceutical and cosmetic forms for non-injectable use, non-injectable products, veterinary products and pharmaceuticals was put into operation.
• In 2023, the photovoltaic power plant was put into operation, for which the VRI received a subsidy from the Operational Programme Environment. The power plant consists of a total of 249 photovoltaic panels with an output of360 Wp. The total installed capacity of the photovoltaic system is 89.64 kWp.

The strategic plans for the development of scientific infrastructure within the medium--term concept include in particular:

- Construction of a veterinary biotechnology prototype unit (PROBIOVET) for faster and easier practical implementation by increasing the level of technological preparedness.
- The expansion of animal facilities for performing large animal experiments under infectious conditions in BSL2/BSL3 regimes.

Significant Events

Veterinary Congress with VRI Presentation at AnimalTech Unites Experts and Public

The Veterinary Research Institute presented its latest research findings to the agricultural community at its booth at the international trade fair for agricultural production, AnimalTech, held from 22-26 April 2023. Among the materials presented was a publication on African swine fever, offering the current state of knowledge about this disease, the causative virus, and the available methods for diagnosis and prevention. The aim of the active participation was to effectively present and inform the community about the services offered, as well as scientific and consulting activities conducted at the VRI through a series of professional seminars and workshops known as the VRI ACADEMY. (https://www.vri.cz/spoluprace-s-praxi/vuvel-academy-a-ctpz/). The VRI presented its ongoing projects within the H2020 programme focused on the use of alternative food sources. These are the projects ALEHOOP (https://www.vri.cz/vyzkum/projekty/?id=56) and NEOGIANT (https://www.vri.cz/vyzkum/projekty/?id=65)

Thanks to the cooperation with BVV, a.s., the traditional Central European Veterinary Congress could take place again this year as an accompanying programme organized by the VRI and VÚŽV (Institute of Animal Science). The topic covered included drug policy with a focus on combating antimicrobial resistance, the agenda related to mandatory reporting of antimicrobial use, new and upcoming regulations in animal welfare, and the reduction of harmful gas emissions in agriculture. This information was provided and presented by experts from the Ministry of Agriculture of the Czech Republic, the Institute for State Control of Veterinary Biologicals and Medicines, and the State Veterinary Administration. The expert programme of the congress was introduced by MVDr. E. Kaděrková, with expert lectures delivered by MVDr. Jan Bernardy. The morning programme was devoted to veterinary legislation in animal husbandry. The afternoon programme focused on welfare and biosecurity in animal herds. Each session ended with a panel discussion. Participants of the congress had the opportunity to learn about the activities of the Czech Academy of Agricultural Sciences, which, as a scientific advisory body of the Ministry of Agriculture, is co-responsible for shaping applied research in the agricultural sector. The congress was held under the auspices of the Minister of Agriculture, Ing. Zdeněk Nekula.

Mendel Quiz Contest Winner Selected our Institute for a Visit

The year 2023 marked the 200th anniversary of Gregor Johann Mendel's birth, and the #brnoregion team seized this opportunity through the Mendel Quiz initiative to draw attention to Brno and raise awareness of our region, particularly among young people in the field of life sciences, not only domestically, but also internationally. https://www.mendelquiz.com/

The aim was to bring one of the young scientists to Brno and provide them with direct exposure to the local environment. The Veterinary Research Institute participated in this event and became the designated destination for the winner, Dr. Emanuele Gustani Buss, who holds a Ph.D. in Evolutionary Genetics and Molecular Biology. Dr. Buss, currently working as a Postdoctoral Research Associate at the University of Leuven in Belgium, expressed her interest in visiting our Institute.

In spring 2023, upon arrival at the VRI, Dr. Gustani Buss received a warm welcome from colleagues working at the Department of Genetics and Reproductive Biotechnology. Prof. MVDr. Jiří Rubeš, CSc. provided her with the information about the Institute's history, its current activities and some projects aligned with her research focus. RNDr. Petra Musilová Ph.D., Mgr. Miluše Vozdová, Ph.D., RNDr. Svatava Kubíčková, and Mgr. Halina Černohorská warmly greeted Dr. Gustani Buss at the department. Among other things, they shared information about their research collaboration with Brazilian partners, specifically focusing on chromosomal identification of the Brazilian red deer (Mazama americana), by which she was pleasantly surprised. Considering the focus of her postdoctoral studies, the staff of the department further introduced her to the procedures of cytogenetic testing in mammals and, for example, the use of chromosome studies to identify disorders of chromosomal evolution.

Research Institutions under the Authority of the Ministry of Agriculture of the Czech Republic Help Mongolian Veterinarians

Press release

The Veterinary Research Institute is currently implementing a project focused on international collaboration to assist Mongolian veterinarians. This project is financially supported by the Ministry of Industry and Trade of the Czech Republic in collaboration with the Embassy of the Czech Republic in Mongolia.

Mongolian livestock frequently suffer from poor health, and the transmission of diseases is common. The underlying causes for this situation include limited access to veterinary services, inadequate treatment of sick animals and poor hygienic conditions. The combination of rapid urbanization and climate change are exacerbating the pressure put on animal health in Central Asia, says Doc. Radko Rajmon from the State Veterinary Administration.

"The project focuses on creating the conditions for the situation improvement by providing education and training to Mongolian veterinary professionals. Based on the acquired knowledge, recommendations, know-how, and insights gained in a selected veterinary station in the Czech Republic, the Mongolian party will construct the first model veterinary station in Mongolia and put it into operation," says Dr. Jan Bernardy, the expert guarantor of the project.

An important aspect will be, for example, the evidence of individual farm animals, including their marking, which has been disregarded until recently...- adds Doc. Soňa Šlosárková, an expert in cattle farming. Dr. Csölle Putzová from the Centre for Technology Transfer and Project Support informs: "During a week of intensive collaboration, participants will have the opportunity to attend lectures delivered by leading Czech experts in the field of livestock health and farming. They will also have a tour of farms, herds, state organisations, as well as pharmaceutical companies and technology manufacturers specialized in provision of equipment for veterinary stations and breeding facilities.

Furthermore, the visits include tours of certain Czech companies in the field, e.g. Bioveta, a.s., LabMediaServis, s.r.o. in Jaroměř, and V. RACEK, zemědělské technologie s.r.o., specialized in agricultural technologies."

Agricultural production accounts for 16.5% of Mongolia's GDP and employs 27.7% of the working-age population. The sector is responsible for managing 60 million head of livestock, which, in addition to cattle and horses, includes significant numbers of sheep, goats, and camels cared for by approximately 120,000 herding families. Livestock keeping and the associated dairy and meat industry generate 70% of the sector's output. Currently, the Mongolian government faces big challenges in ensuring the country's food security. The main problem regarding food security Mongolia faces is food affordability due to disruptions in the global supply chain and the war in Ukraine. Given Mongolia's geographical facts and climatic conditions, the task of increasing the domestic food production is difficult to fulfil, but essential. Poor animal health and the transmission of diseases are common among the livestock in Mongolia because of the lack of access to veterinary services, inappropriate treatment of sick animals and poor hygienic conditions. Animals affected by non-infectious diseases require extensive care and long-term treatment, diverting herders from their regular tasks and resulting in economic losses to them. The low qualifications of veterinarians and limited awareness of herders regarding proper procedures for treatment of injured or sick animals lead to the frequent and unnecessary use of various inappropriate drugs and therapeutic products. The lack of awareness, knowledge, and skills of local veterinarians, particularly the younger ones who have limited opportunities to acquire necessary expertise from their older counterparts, are the reasons for these unprofessional practices. At the same time, there is an absence of a veterinary centre dedicated to the treatment of animals with non-infectious diseases, limited training opportunities for veterinarians and facilities for further research, etc. The Mongolian party expressed their keenness to address the situation and they look forward to receiving assistance from Czech experts, knowledge, experience and know-how transfer in order to establish the first veterinary care centre (the first model veterinary station) in Mongolia.

The primary goal of the project is to enhance the expertise of Mongolian veterinarians and facilitate the adoption of new technologies by training courses, consultations, workshops, etc. The project is also

anticipated to generate additional employment opportunities, enhance herders' knowledge and skills in livestock care and health, mitigate livestock mortality associated with non-infectious diseases, and increase farm productivity, says Dr. Arnost Marks, an expert on Mongolian herding and economics.

Mr. Bolor-Erdene Bataar, one of the trainees, told us: "We are happy to have the opportunity to participate in this project and we thank the project implementers and financial support providers. We aspire to contribute to accelerating the transition from the traditional nomadic approach to animal farming, which will facilitate animal breeding and veterinary care practices. We are making efforts to comprehend your approach to herd health control in order to enhance our ability to prevent the transmission of diseases in Mongolia, such as brucellosis and, since 2008, also the local transmission of foot-and-mouth disease. Furthermore, we are seeking political support for this initiative as it should be connected with the objective of improving the quality of food produced for the people in our country."

As part of the continuation of the programme's ongoing activities, the participants will have the opportunity to visit the Institute of Animal Science, Research Institute of Agricultural Engineering, and the State Veterinary Administration in Prague.

Representatives of the Ministry of Agriculture Visited our Exhibition at the Agricultural Fair “Bread Basket”

The Minister of Agriculture Marek Výborný and his Deputy Radek Lanč briefly visited the shared booth of public research institutions in the agricultural sector. During the tour of the exhibition, the discussion revolved around the importance of applied research and the dissemination of its outcomes to end-users as an important aspect of the justification for its funding. The Minister anticipates visiting individual institutes in order to gain a more in-depth understanding of their agendas and expertise. “Communication with the founder, including the search for topics guiding the future course of scientific efforts to best meet the needs of Czech agriculture, is essential for the fulfilment of the long-term concepts of individual institutes,“ added Martin Faldyna, a participant of the meeting.

země živitelka
24–29/8/2023
České Budějovice

VRI ACADEMY

The Veterinary Research Institute in Brno continued in 2023 to host seminars and workshops under the title VRI Academy, and arranged other educational meetings. The events were primarily funded from the Rural Development Programme and from the Czech Technology Platform for Agriculture, of which the VRI is a member, and received financial support from the Ministry of Agriculture. Seminars and workshops were designed for professionals and non-professional public in the field of agricultural production on farms, veterinary medicine, fishery, beekeeping and food industry. They provide new research findings transferred to practice. In the seminars, researchers from the VRI in Brno as well as from allied research and other professional institutions delivered their lectures. A total of 11 seminars/workshops and 1 with a lecturer, who was the leading European expert Prof. Dr. Volker Krömker, Dip. ECBHM, were held during the past year. The outcome of most events was the publication of proceedings, available on the Institute's website: www.vri.cz, tab Spolupráce s praxí/VÚVeL ACADEMY a ČTPZ. The VRI ACADEMY is organized by Doc. MVDr. Soňa Šlosárková, Ph.D., who also presented the results of her scientific work in several seminars. Besides her, the following VRI staff actively participated in the above-mentioned seminars: MVDr. Libor Borkovec, Doc. MVDr. Svatopluk Čech, Ph.D., MVDr. Martin Faldyna, Ph.D., MVDr. Petr Fleischer, Ph.D., Mgr. Martina Floriánová, Ph.D., Mgr. Helena Juřicová, Ph.D., Mgr. Kristýna Kořená, Mgr. Natálie Králová, Ing. Miroslava Krzyžánková, Dr.rer. nat., Mgr. Radek Machát, Ph.D., MVDr. Jiřina Marková, Ph.D., MVDr. Ján Matiašovic, Ph.D., MVDr. Hana Minářová, Ph.D., MVDr. Kateřina Nedbalcová, Ph.D., doc. MVDr. Adam Novobilský, Ph.D., MVDr. Ľubomír Pojezdal, Ph.D., RNDr. Jana Prodělalová, Ph.D., doc. RNDr. Ivan Rychlík, Ph.D., Mgr. Nikol Straková, Ph.D., Mgr. Lenka Vlasatíková, Ph.D. a MVDr. Monika Zouharová, Ph.D.

VÚVeL ACADEMY

FESTIVAL OF SCIENCE 2023

The Festival of Science 2023 was launched on 8 September 2023 in Building A1 of the Brno Exhibition Centre and lasted until Sunday, 10 September. The event took place daily from 9 am to 6 pm. The large number of visitors and the interest in exhibitions from the realm of science, technology and history clearly indicate that the event was far from boring. Over forty scientific and technical institutions, popular education organisations, academic institutes, universities and private companies prepared interactive demonstrations of their current work or achievements for visitors of all ages, including experts and enthusiasts.

The Veterinary Research Institute has been a regular participant in this grand festival, which primarily aims to promote science. Three of the Institute's four scientific departments presented themselves at the VRI exhibition. The prepared programme was full of fun and new experiences. Visitors had the opportunity to discover the mysteries of microorganisms that contribute to our health as well as those that cause illnesses. We demonstrated the shared characteristics between animals and humans, explored our relationship with parasites and their vectors, and delved into the secrets hidden within our veins and bloodstream.

By incorporating playful elements such as quizzes and concentration card games, attendees had the chance to gain not only fascinating scientific knowledge but also intriguing facts from the realm of science. The programme at the booth was suitable for children and adults alike.

The VRI's participation in this event was supported by the Ministry of Agriculture of the Czech Republic under the programme Support and Consultancy in Education.

We were once again delighted and pleasantly surprised by the displayed enthusiasm for science.

The Night of Scientists was Filled with Mysteries

As has almost become tradition, VRI participated in the nationwide science popularisation programme, the Night of Scientists, for the third consecutive year. The event took place on 6 October 2023. Popularisation of science and the presentation of its scientific results are key activities of the Institute to inform the public about the importance of scientific progress. Original exhibitions highlight the Institute's research activities and present them to the general public in an appealing way. The theme for 2023 was "Mysteries", which, through various scientific disciplines, gave children and young people the opportunity to explore the mysteries of life with microorganisms, understanding both their contributions and the harm they can cause. In addition, they had the opportunity to learn about the microorganisms inhabiting our intestines and those living in our households, or to step into the role of a veterinary parasitologist for a while and uncover the secrets of parasite eggs.

Minister of Agriculture Visited the VRI

On 27 November 2023, Minister of Agriculture Marek Výborný visited the Veterinary Research Institute as part of his tour of all departmental research organisations under the Ministry of Agriculture. Minister Výborný was accompanied by his Advisor Doc. Kučera; the Director of the Section of Organic Agriculture, Commodities, Research, and Education, Ing. Jílek; Secretary Mgr. Wolf; and Press Secretary Mgr. Bílý.

The guests were welcomed by the Director Dr. Faldyna, along with representatives of the research departments and the VRI Board. Dr. Faldyna briefly presented the current research programmes, the results achieved, and plans for the future. The leaders of each department were also given the opportunity to briefly describe their department's professional focus and the results achieved. Minister Výborný was also interested in the overlap of scientific activities with other research organizations. Attention was also given to the practical impact of the results of the Institute's research activities and their contribution to the agriculture sector. Minister Výborný appreciated the extent of the Institute's involvement in international projects.

Space was also allocated for the presentation of the current project proposal to establish a shared European scientific centre CENAGRIVET, prepared for the TEAMING call of the Operational Programme Johannes Amos Comenius. The project proposal was presented by Prof. Adam from Mendel University in Brno. The discussion also included contributions from the Rector of the University, Prof. Mareš, and the Dean of the Faculty of Agronomy, Prof. Pavlata.

During the rest of the visit, Minister Výborný and his team inspected a part of the accredited experimental facility and the pilot prototype workplace. Finished in 2023, this workplace is designed to support the scaling up of research results and the pilot production of biotechnology products.

"Although the planned programme encompassed a tour of various facilities and offered opportunities to explore many aspects of applied research in the agriculture sector, the Minister's limited time prevented the full programme from being completed. Nevertheless, we believe that this brief visit allowed the Minister and his team to gain a clear understanding of the Institute's activities as a scientific institution that transfers research results to end users," said Dr. Faldyna.

Presentation of VRI aAtivities at the General Assembly of the Animalhealth Association

On 29 November 2023, a meeting of the General Assembly, followed by a working meeting of the interest association of legal entities Animalhealth CZ/SK, took place. The association represents the Czech and Slovak veterinary pharmaceutical industries and aims to promote the use of safe, effective and high quality veterinary medicines for the health and well-being of animals.
At this meeting, the director of the Institute, Dr. Faldyna, had the opportunity to introduce the VRI as a research institution that, through its scientific work, produces various types of applied outcomes- from functional samples to registered and manufactured diagnostics and vaccines. Dr. Faldyna said: “I thank Animalhealth for the invitation, as pharmaceutical companies are expected users of some of the outcomes. They could also be potential partners in contract or collaborative research“.

Outstanding Outcome Awards in 2023

Medica Veterinaria 2022

The Medica Veterinaria award ceremony and a meeting of veterinary medicine notables took place in the Chamber of Deputies in the Hall of State Acts in Lesser Town of Prague. At the meeting, customarily moderated by Jolana Voldánová, the award, known as the ‚veterinary Oscar', is presented annually for exceptional or lifetime contributions to veterinary medicine and for authored publications.

Scientists from the Veterinary Research Institute in Brno-Medlánky are traditionally among those honoured with the award. For example, in 2022, Dr. K. Kovařčík was recognized for his exceptional contribution, Dr. J. Krejčí for his lifetime contribution to veterinary medicine, and Dr. K. Nedbalcová for her paper entitled "Phenotypic resistance of Enterococcus genus isolates".

In 2023, the Award for Contribution to Veterinary Medicine was bestowed upon two scientists from the Veterinary Research Institute: MVDr. Martin Šanda was honoured (in memoriam) for his lifetime contribution. The award was presented in response to his sudden passing and reflects his work in the field and his activities at the VRI.

He embodied the qualities of a knight both in life and in memory forever, and as a veterinarian representing pharmaceutical companies, he consistently displayed the characteristics of a distinguished and knowledgeable expert rather than a mere businessman. He arranged professional events for the Chamber of Veterinary Surgeons, his alma mater, and most recently, primarily for the VRI in Brno.

Another award winning scientist was MVDr. Monika Zouharová, Ph.D. recognized for her publications, specifically for the paper: Zouharová M., Matiašková K., Nedbalcová K.: Antimicrobial resistance in Streptococcus uberis isolated from mastitis cases in dairy cows in the Czech Republic in 2021-2022. Veterinářství 2022;72(10):574-579.

Third Place in the 2023 Award of the Minister of Agriculture (MZe) for Young Scientists Goes to MVDr. Nikola Hodkovicová, Ph.D.

The Minister of Agriculture Awards are given annually for the best research results funded by the Ministry of Agriculture. This year's awards were presented by the Minister of Agriculture Marek Výborný and the Chairman of the Board of the Czech Academy of Agricultural Sciences, Jan Nedělník.

MVDr. Nikola Hodkovicová, Ph.D., won third place in the 2023 Award of the Minister of Agriculture (MZe) competition for Young Scientists for her article in an peer-reviewed journal entitled "Non-steroidal anti-inflammatory drugs caused an outbreak of inflammation and oxidative stress with changes in the gut microbiota in rainbow trout (Oncorhynchus mykiss)", https://www.sciencedirect.com/science/article/pii/S0048969722050203?via%3Dihub)

"Environmental pollution by residues of pharmacologically active substances is not only a problem in the aquaculture environment. Non-steroidal anti-inflammatory drugs, such as ibuprofen and diclofenac, are used almost daily in human medicine and contribute significantly to the pollution of surface waters. However, their toxicity to freshwater organisms is still not fully understood. Our experiment monitored the toxicity of these drugs in a model organism, the rainbow trout, and found that non-steroidal antiphlogistic drugs can affect the functioning of the organ systems of fish at the molecular and microscopic levels and disrupt the composition of the gut microbiota, even at concentrations commonly found in surface waters," explains the author of the article.

The Minister of Health Award Presented to Prof. Růžek and Dr. Fořtová

Prof. RNDr. Daniel Růžek, Ph.D. and Mgr. Fořtová, Ph.D. were presented with the award of the Minister of Health for a project that had received an excellent evaluation outcome. It is a project of the Grant Agency for Health Research of the Czech Republic, entitled: "Genetic Basis of the Clinical Course and Severity of Tick-Borne Encephalitis", implemented by the Veterinary Research Institute as the principal investigator, with the University Hospital Brno and the Institute of Molecular Genetics of the Czech Academy of Sciences as co-investigators. "In my view, this award recognizes the work of the entire team, including scientists, technicians, and students. Without their contributions, this award would not have been possible," remarks Prof. Růžek. Mgr. Fořtová commented on the award: "I am delighted with this recognition, as it signifies that we are conducting high-quality research."

Besides Prof. RNDr. Daniel Růžek, Ph.D., and Mgr. Andrea Fořtová, Ph.D., the following other staff members from the Department of Infectious Diseases and Preventive Medicine at the VRI have also contributed: Mgr. Václav Hönig, Ph.D., RNDr. Jiří Salát, Ph.D., and RNDr. Martin Palus, Ph.D.

Awarded employee	Subject of award	Date of award
Mgr. Antonín Pavelka	Best Poster Award- Lednice 2023 Conference (Wound Healing)	24 November 2023
Mgr. Zuzana Úlehlová	Rector's Award, Veterinary University Brno	27 November 2023
prof. MVDr. Jiří Rubeš, CSc.	Award from the Cytogenomics Section of the Czechoslovak Biological Society for merit and outstanding contribution to Czech cytogenetics	6 September 2023

Projects in 2023

In 2023, the Institute's researchers submitted a total of 80 project applications under national and international calls for special support. Of these, 20 were selected for funding, representing nearly a threefold increase compared to 2022. Within the National Centre of Competence project, specifically the National Centre of Competence in Veterinary Medicine, 18 partial projects were launched in cooperation with the application sphere, and the first results of applied research were produced.
In the monitored year, two major research projects under the Operational Programme Research, Development and Education were successfully completed. One of them is the project entitled "Sustainable production of healthy fish in various aquaculture systems - PROFISH", which led to significant renewal of technology, including upgrades to the laboratory and breeding equipment of the working group Diseases of Fish.
In cooperation with Mendel University in Brno and the Faculty of Fisheries and Protection of Waters at the University of South Bohemia in České Budějovice, the project contributed to the understanding of some of the links between fish, their pathogens and the environment in which they live. Another project entitled "Healthy Aging in Industrial Environment - HAIE" aimed at assessing the effects of selected environmental and lifestyle risk factors on the health and aging of the population in the industrial region and beyond.

Sustainable production of piglets before and after weaning combined with increased welfare
Investigator at the VRI: Doc. RNDr. Ivan Rychlík, Ph.D.

MINISTERSTVO ZEMĚDĚLSTVÍ

The objectives of the project are to review the literature to identify current trends in increasing productivity on pig farms while reducing the consumption of antibiotics and ZnO, as well as to develop diagnostic kits for the multiplex detection of key pathogens in pigs using real-time PCR. Other objectives include preparing new types of probiotic preparations for newborn piglets, preparing new types of probiotic preparations for weaned piglets, analysing the immunization method for sows with a milk cocktail fermented with bacteria from the faeces of diarrhoeic piglets, and increasing productivity while reducing mortality and maintaining or increasing welfare in pig production.

Optimization of celiac disease monitoring and new options for its prevention
Investigator at the VRI: RNDr. Lubomír JANDA, Ph.D.

MINISTERSTVO ZDRAVOTNICTVÍ
ČESKÉ REPUBLIKY

The project proposal consists of four main objectives. The first is to improve the accuracy of the diagnosis of celiac disease using patient sera. To achieve this, epitope mapping of gliadin and avenin antigens will be conducted in each patient. Knowledge of detailed epitope mapping should be applied to achieve two additional objectives of the project: personalizing the gluten-free diet and improving the quality of non-invasive monitoring of adherence to a gluten-free diet. The last objective will be to study the impact of the diet and other factors (e.g. high gluten diet, various additives, preservatives) on the intestinal barrier (measurement of villi height and crypt depth.

National Centre for Biotechnology in Veterinary Medicine
Investigator at the VRI: MVDr. Martin FALDYNA, Ph.D.

The aim of the project is to create a stable and long-term base for applied research by concentrating the research capacities of 7 research organizations in the field of biotechnology in veterinary medicine, animal production and related fields. The project is designed to impact the sustainable production of high-quality, safe food of animal origin under the conditions of the implementation of the policy of reducing the consumption of antibiotics, improving the welfare of farmed animals, maintaining biodiversity in the landscape and promoting the principles of circular economy. The results generated in the project in the form of new or innovative products or services are intended to increase the competitiveness of the participating enterprises. Over the course of the 6-year project, a minimum of 30 partial projects will be implemented, resulting in at least 35 outcomes.

Development of personalised microbiome nutrition
Investigator at the VRI: MVDr. Ján MATIAŠOVIC, Ph.D.

The aim and scope of the project is to develop a range of dietary supplements based on targeted microbiome nutrition for humans. This nutrition will specifically influence the growth of selected bacteria in the gut microbiome. The new products will enable effective modulation of the gut microbiome in combination with tailor-made probiotics, which are already produced by the applicant. The project will thus facilitate the creation of a comprehensive personalised service for gut microbiome care.

Development of functional bedding with sequential effect
Investigator at the VRI: MVDr. Edita JEKLOVÁ, Ph.D.

The aim of the project is to develop a completely new type of active antibacterial bedding with sequential effect for pets and farm animals. The bedding will be dust-free, absorbent, ecological, comfortable and user-friendly. It will have an active effect on the health of the animals, extend the product's lifespan by reducing the need for frequent replacements, and enhance the user comfort for breeders.

Functional foods with controlled fermentation
Investigator at the VRI: Ing. Kamil ŠŤASTNÝ, Ph.D.

The aim of the project is to develop a completely new type of functional fermented drinks and smoothies with health and wellness benefits. The freshness of the fermented beverages will not only be ensured, but its functionality will also be guaranteed by the presence of live probiotic cultures and functional fermentation metabolites.

Development of an effective drug carrier for intranasal administration in the treatment of organophosphate poisoning
Investigator at the VRI: PharmDr. Josef MAŠEK, Ph.D.

The project aims to develop, test, and initiate prototype production of a unique medicinal product for the non-invasive administration of active substances in the treatment of organophosphate poisoning. The partial objectives of the project include: designing and developing a prototype intranasal formulation as an alternative to current therapy for organophosphate poisoning; developing a prototype for formulation and simultaneous application of three active substances (a cholinesterase reactivator, a parasympatholytic, and an anticonvulsant); determining biodistribution and pharmacokinetics of the active ingredients and verification of efficacy after intranasal and injectable application in an animal model; ensuring the product production under semi-operational conditions and scale-up; and mapping global markets to assess sales opportunities for the developed product, as well as deepening the market valuation.

Other project providers

PROGRAM 9 F.i. Professional Consultations
Investigator at the VRI: Doc. MVDr. Soňa ŠLOSÁRKOVÁ, Ph.D.

In 2023, the VRI continued to provide consultancy services for agricultural production under the 9.F.i. Support for Agriculture Consulting, Expert Consultations, financially supported by the Ministry of Agriculture.

The VRI staff reported 176.25 consultation hours for the whole year 2023 under this project and, therefore, the VRI was paid the total sum of CZK 264,375 in two phases (July and December 2023). After deducting the funds allocated to the Institute's overhead from the received subsidy, the respective staff members were paid bonuses in their salary in two instalments according to their reported consulting hours.

NATIONAL CENTRE FOR BIOTECHNOLOGY IN VETERINARY MEDICINE

ABOUT THE PROJECT

The aim of the project is to establish a stable and long-term basis for applied research by concentrating the research capacities of seven research institutions in the field of biotechnology in veterinary medicine, animal production and related areas. In terms of its impact, the project aims to support the sustainable production of high-quality and safe food of animal origin in the context of the implementation of the policy of reducing the consumption of antibiotics, improving farmed animal welfare, preserving landscape biodiversity and adhering to circular economy principles. The results generated in the project in the form of new or innovative products and services are expected to enhance the competitiveness of the involved enterprises.

PROJECT PARTNERS
26 partners

Contact: MVDr. Martin Faldyna, Ph.D.
Phone: +420 777 786 695 E-mail: faldyna@vri.cz

HEALTHY AGEING IN INDUSTRIAL ENVIRONMENT

ABOUT THE PROJECT

- The project addresses the effects of selected environmental and lifestyle risk factors on health and ageing of the population in an industrial area.
- Numerous studies are being conducted under four research programmes in different population samples (mortality, morbidity, molecular-epidemiological and genetic studies, cytogenetic studies, exposure studies, fertility studies, increased physical activity studies, socio-economic and psycho-social studies).

PROJECT PARTNERS
University of Ostrava
Institute of Experimental Medicine CAS
Faculty of Education, University of Ostrava

Contact: Prof. MVDr. Jiří Rubeš, CSc.
Phone: +420 72144 1493, E-mail: rubes@vri.cz

PRO

SUSTAINABLE PRODUCTION OF HEALTHY FISH IN VARIOUS AQUACULTURE SYSTEMS

ABOUT THE PROJECT

- Study of relationships between fish, pathogens and environmental conditions affecting fish health and economic output from aquaculture production.
- Study of technological, animal husbandry and nutritional factors, the effects of environmental pollution and the use of antibiotics. Other activities will be aimed at the investigation of causative agents of infectious diseases and immune mechanisms.

PROJECT PARTNERS

Mendel University in Brno
University of South Bohemia in České Budějovice

Contact: MVDr. Martin Faldyna, Ph.D.
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EUROPEAN UNION
European Structural and Investment Funds
Operational Programme Research, Development and Education

MINISTRY OF EDUCATION, YOUTH AND SPORTS

CZECH REPUBLIC
DEVELOPMENT COOPERATION

DEEPENING THE EXPERTISE OF MONGOLIAN VETERINARIANS AND HELPING TO ESTABLISH THE FIRST MODEL VETERINARY RESCUE STATION

ABOUT THE PROJECT

The project is focused on international collaboration to assist Mongolian veterinarians, with financial support from the Ministry of Industry and Trade of the Czech Republic, in collaboration with the Czech Embassy in Mongolia. Through an intensive training programme, including visits and workshops, conditions were created to improve the situation of Mongolian herders and veterinary professionals. Contacts have also been established with competent organisations in both countries to further deepen cooperation, especially in the field of cattle care and the production of healthy food of animal origin under nomadic conditions. following the development of diagnostic methods/screening tests, and disease monitoring. As part of the follow-up collaboration, the long-term goal is to create a platform for training Mongolian colleagues in cattle care (good husbandry practices) and in diagnostics - e.g. antimicrobial resistance - with the involvement of other institutions in the Czech Republic.

Contact: MVDr. Jan Bernardy, Ph.D.
Phone: +420 5 3333 1611, E-mail: jan.bernardy@vri.cz

MINISTERSTVO PRŮMYSLU A OBCHODU

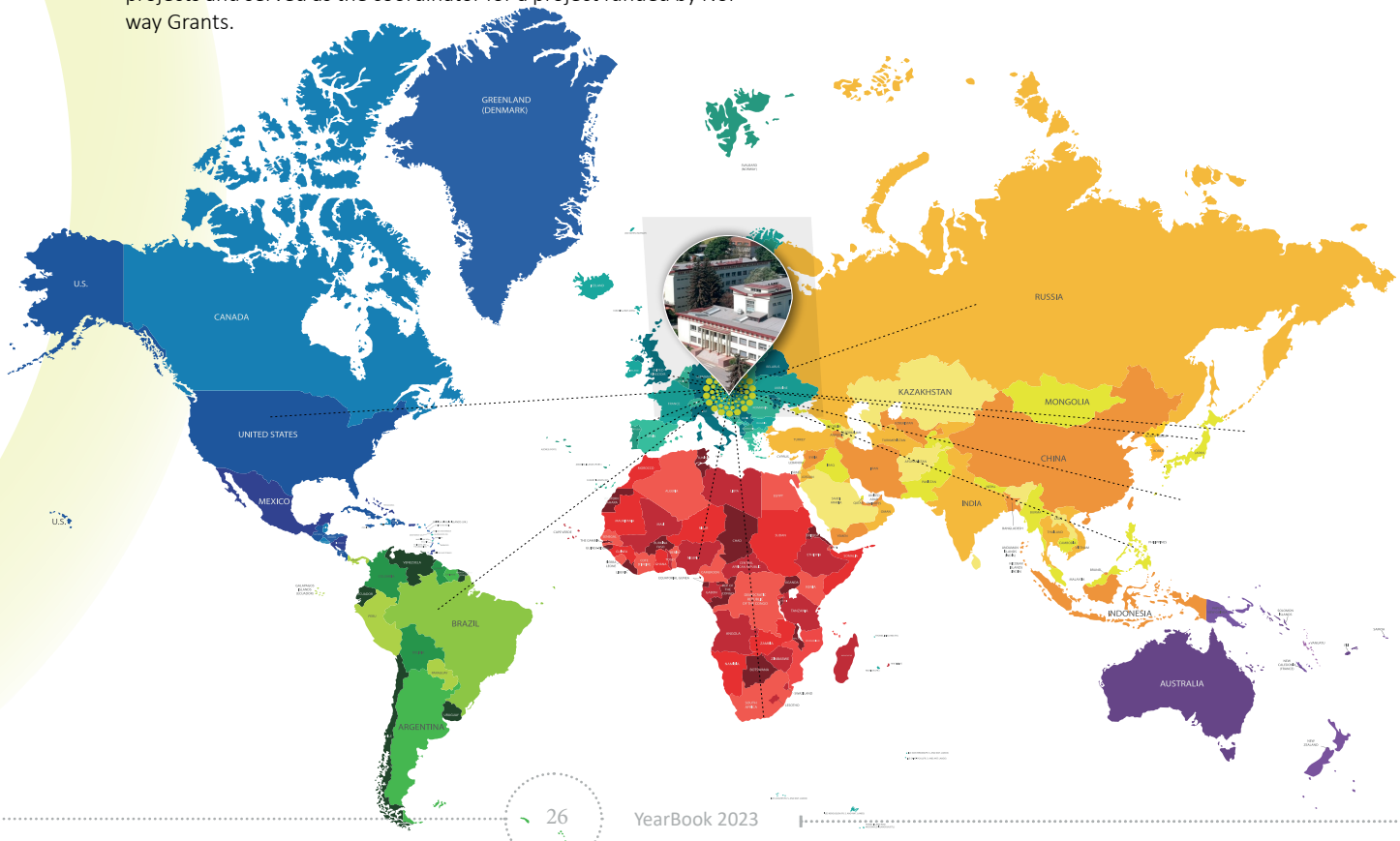
International Cooperation

The VRI has established a broad network of foreign contacts and collaborating research organisations through its researchers. Over the past 5 years, the Institute has implemented several dozens of international cooperation projects annually. This cooperation includes contract research with foreign commercial companies and collaborative research with foreign research organisations and universities. Shared projects, publications, joint patents, and formal agreements document the collaboration. Notably, the Institute concluded over 10 new formal agreements with new partners in 2023.

Research teams have been successful in obtaining and implementing projects at all grant levels, including international ones. In 2023, the VRI was a consortium member in four ongoing HORIZON projects and served as the coordinator for a project funded by Norway Grants.

International cooperation is facilitated not only by the study stays of the Institute's staff abroad and the membership of the Institute's scientists in international committees of professional societies but also by the business or study stays of colleagues from abroad at the Institute.

In 2023, the Institute became an associate member of the Bio-based Industries Platform (BBI) with the aim of contributing to the definition of research topics and assisting in advancing the bioeconomy with EU legislators.



Federation of Veterinarians of Europe Meeting in Zaječí, Czech Republic

The Federation of Veterinarians of Europe (FVE), European Veterinarians in Education, Research and Industry (EVERI), Union of European Veterinary Practitioners (UEVP) and other associations held a regular general meeting of their members at the Moravian Winery U Kapličky in Zaječí, upon the invitation of the Czech Board of the Chamber of Veterinary Surgeons. Dr. Martin Faldyna, the VRI Director, participated in the meeting of the Researchers' Section as an invited speaker and provided an overview of the Institute's history, mission, and activities, highlighting its position within the veterinary sector of the Czech Republic. He also presented important projects that are currently implemented at the VRI, among others, in the field of alternative food sources. These are the H2020 funded projects ALEHOOP (https://www.vri.cz/vyzkum/ projekty/?id=56) and NEOGIANT (https://www.vri.cz/vyzkum/projekty/?id=65). His performance was highly appreciated. Elections to the Board of Directors were conducted during the sessions of several sections. Our employee, Dr. Jan Bernardy, was elected as Vice President to the section of Veterinary Practitioners.

NEOGIANT: THE POWER OF GRAPE EXTRACTS: ANTIMICROBIAL AND ANTIOXIDANT PROPERTIES TO PREVENT THE USE OF ANTIBIOTICS IN FARMED ANIMALS

ABOUT THE PROJECT

The main objective of the NeoGiANT project is to develop and validate an innovative natural formulation from grape extracts with antimicrobial and antioxidant properties, which will be used as a nutritional supplement for farm animals and farmed fish. The aim is to reduce the dependence on the use of antibiotics in animal/aquaculture production. This strategy should make a significant contribution to the fight against antimicrobial resistance (AMR) originating in animal production on farms by providing an economically viable alternative to the routine use of antibiotics.

PARTNERS: CONSORTIUM OF 20 PARTNERS

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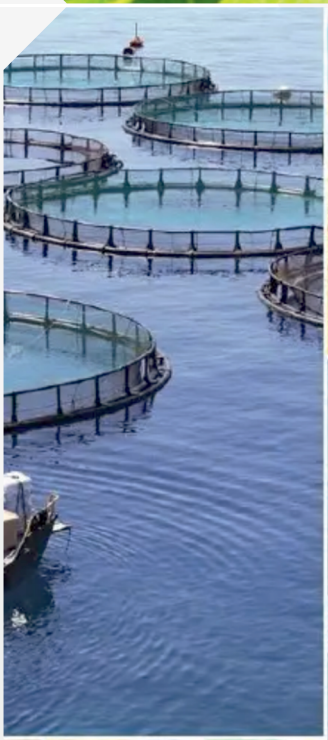
Horizon 2020
European Union Funding
for Research & Innovation



BIOREFINERIES FOR THE VALORISATION OF MACROALGAL RESIDUAL BIOMASS AND LEGUME PROCESSING BY-PRODUCTS TO OBTAIN NEW PROTEIN VALUE CHAINS FOR HIGH-VALUE FOOD AND FEED APPLICATIONS (ALEHOOP)

ABOUT THE PROJECT

Obtaining cheap dietary proteins from biomass, algae and by-products in the production of legumes using biorefineries. This transforms biomass into alternative forms of proteins for a variety of uses, from animal feeds and food supplements to cutting-edge applications in nutritional awareness and health control.

PARTNERS: CONSORTIUM OF 16 PARTNERS

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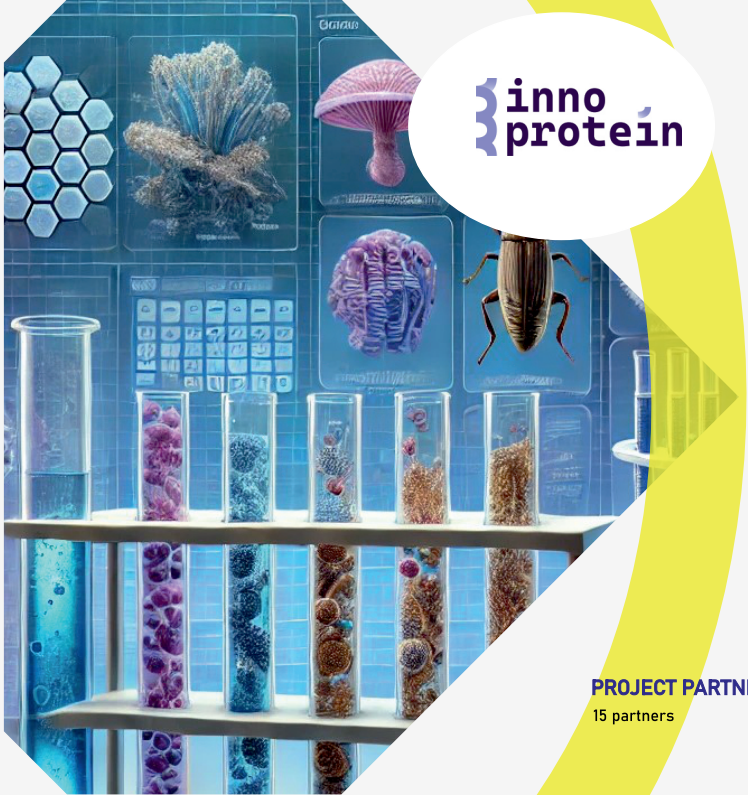
Horizon 2020
European Union Funding
for Research & Innovation

Bio-based Industries
Consortium



INNOPROTEIN: NEW SUSTAINABLE PROTEINS FOR FOOD, FEED AND NON-FOOD BIO-BASED APPLICATIONS

ABOUT THE PROJECT

With the global population expected to reach 10 billion in 2050, the urgency of sustainably producing high-quality protein is evident. The protein deficit in the EU, with 70% of protein crops and 90% of soybeans being imported, highlights the growing need for fresh organic protein sources across various markets.

The InnoProtein project addresses this challenge by developing new products for food, feed, and other applications. By utilizing overlooked protein sources such as microalgae, fungi, bacteria, and insects, and combining them with advanced extraction techniques, we are working toward solutions that reduce protein scarcity in the EU while minimizing environmental impact.

PROJECT PARTNERS
15 partners

Contact: MVDr. Martin Faldyna, Ph.D.
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Co-funded by the European Union

TBFVnet - A NETWORK OF LABORATORIES THAT STUDY AND SURVEY TICK-BORNE FLAVIVIRUSES

ABOUT THE PROJECT

TBFVnet is a joint research platform consisting of a network of associated laboratories to investigate the biology and pathogenesis of tick-borne encephalitis virus (TBFV) disease and to study novel antivirals. TBFVnet also aims to integrate research in this area by sharing common tools, expertise and best practices, and passing them on to neighboring countries.

PARTNERS: CONSORTIUM OF 6 PARTNERS

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Transfer of Results to End--users

The commercialisation and knowledge transfer system at the VRI is coordinated by the Centre for Technology Transfer and Project Support (CTTPS), with the primary aim to ensure that items created by employees are utilised in a way that maximizes benefits for the VRI. It may not always be profitable, but it always aims at positive impacts on animal health, the environment and society.

The Institute is aware of the need for these activities and finds new solutions and approaches to meet and innovate this need. In particular, oriented research, the quantity and quality of partner networks, and the active strengthening of collaboration with both the academic and the application sphere play an important role.

The main activities in this area include: monitoring research activities and new knowledge; evaluating the commercial potential of new knowledge; ensuring the protection of intellectual property for created items; managing the intellectual property portfolio; providing consultancy and contractual documents; preparing internal regulations; developing licensing policy; promoting results; offering consultations and analyses; and providing external legal services.

As of 31 December 2023, the Institute's intellectual property database contained a total of 13 valid national and international patents and 37 utility models.

In 2023, in cooperation with the Comenius University in Bratislava, an international patent application (PCT) was prepared and filed under the title: "Nanoformulations of gold and silver for the therapy of inflammatory and degenerative diseases" claiming priority from Slovak national patent applications No. 57-2022 and 120-2022. The application was assigned the number PCT/SK2023/050011.

One of the main objectives of knowledge transfer in 2023 was to strengthen collaboration with the professional community and the application sphere in agriculture and veterinary medicine, as well as with other potential customers of research results and knowledge. New collaborations have been established with the commercial and public sector through applied research projects, development and expert activities, and contractual research, aiming for a long-term, mutually beneficial impact.

The most important is considered to be the project of the National Centres of Competence entitled the National Centre for Biotechnology in Veterinary Medicine (NaCeBiVet), which is expected to contribute significantly to strengthening cooperation with industry and to accelerating technology transfer. By aligning research capacities with practical applications, and connecting research excellence with technological trends and new or highly innovative outcomes, NaCeBiVet will offer partner companies valuable opportunities for growth.

In the area of international cooperation in the transfer of knowledge and experience, a project with Mongolian veterinarians was implemented in 2023 to build a long-term base of cooperation in the field of infectious diseases of farm animals. The project was funded by the Ministry of Industry and Trade of the Czech Republic in cooperation with the Czech Embassy in Mongolia.

A major role in the transfer of new knowledge to end users is played by the educational project VRI Academy, which is implemented in collaboration with the Ministry of Agriculture of the Czech Republic, departmental professional organisations and other partners (for more information see section 5.5. Organization of professional events and https://www.vri.cz/spoluprace-s-praxi/vuvel-academy-a--ctpz/).

In 2023, an educational video was developed to present the Institute's research activities to children and young people, using language that makes it easier for them to understand their connection to farm animal health. Researchers were involved in preparing the content. The video was produced with financial support from the Ministry of Agriculture as part of the Annual Educational Plan for 2023, which includes public training within the Ministry of Agriculture.

In 2023, in the area of commercialisation of research and development results, contracts for collaboration with domestic and foreign partners, especially from the industry, were concluded in the amount of approx. 17 mil. CZK. These collaborations were accomplished in the form of licencing agreements, contractual research and custom research agreements.

Certified methodologies

Title of the result	Authors
Double teat hygiene before milking (predipping) as an option to reduce the risk of transmission of S. uberis and other bovine mastitis agents.	BIDLOVÁ, Pavlína; ZOUHAROVÁ, Monika; TITTL, Karel MAYER, Radek.
Proposal for the recommended treatment of broilers with amoxicillin in combination with clavulanic acid.	NEDBALCOVÁ, Kateřina; ŠŤASTNÝ, Kamil; ZOUHAROVÁ, Monika; MATIAŠKOVÁ, Katarína; BARTEJSOVÁ, Iva; CHARVÁTOVÁ, Michaela; HODKOVICOVÁ, Nikola; TOŠNEROVÁ, Kristína; VÍŠKOVÁ, Michaela; PETREŇ, Michal; ONDROUCH, Jakub and JEŘÁBEK, Martin.
Proposal for the recommended treatment of broilers with sulfamethoxazole in combination with trimethoprim.	NEDBALCOVÁ, Kateřina; ŠŤASTNÝ, Kamil; ZOUHAROVÁ, Monika; MATIAŠKOVÁ, Katarína; BARTEJSOVÁ, Iva; CHARVÁTOVÁ, Michaela; HODKOVICOVÁ, Nikola; TOŠNEROVÁ, Kristína; VÍŠKOVÁ, Michaela; PETREŇ, Michal; ONDROUCH, Jakub and JEŘÁBEK, Martin.
Benchmarking health in dairy cattle farms.	PECHOVÁ, Alena; FLEISCHER, Petr andŠLOSÁRKOVÁ, Soňa.
Methodological recommendations for measures to reduce the incidence of selected non-bacterial mastitis agents in primary milk production	SEYDLOVÁ, Růžena; ROUBAL, Petr; HANUŠ, Oto; KLIMEŠOVÁ, Marcela; MORÁVKOVÁ, Monika; BEINHAUEROVÁ, Monika; KUCHAROVIČOVÁ, Ivana; FRIEDRICH, Šimon; NOVOSAD, Milan and STŘELEČKOVÁ, Veronika.

Utility model

Title of the result	Authors
Veterinary medicinal product for the treatment of mastitis in dairy cattle.	Hana ŠTĚPÁNOVÁ; Karolína HLAVOVÁ; Šárka KOBZOVÁ; Katarína MATIAŠKOVÁ; Jan GEBAUER; Adam NOREK; Martin FALDYNA and Tomáš KREJČÍ

Verified technology

Title of the result	Authors
Production of a kit for the determination of antibiotic susceptibility/resistance in bacteria isolated from fish.	NEDBALCOVÁ, Kateřina; ZOUHAROVÁ, Monika; MATIAŠKOVÁ, Katarína
Preparation of mutant enzybiotic LYSSTAPH T2 from plasmid DNA.	JANDA, Lubomír; KOBZOVÁ, Šárka; NOREK, Adam and VACEK, Lukáš
Preparation of lyophilized biopolymer foams enriched with enzybiotic LYSSTAPH T2	JANDA, Lubomír; KOBZOVÁ, Šárka; VOJTOVÁ, Lucy; KACVINSKÁ, Katarína; SEDLÁŘ, Marian and PAVLIŇÁKOVÁ, Veronika.

Prototypes, functional patterns

Title of the result	Authors
Preparation of recombinant SUAM (Streptococcus uberis adhesion molecule) protein and its potential use for obtaining specific IgY antibodies by immunization of hens	KOBZOVÁ, Šárka; ŠTĚPÁNOVÁ, Hana; HLAVOVÁ, Karolína; MATIAŠKOVÁ, Katarína; NOREK, Adam and GEBAUER, Jan.
ELISA test pro detekci protilátek proti L725 proteinu Acanthamoeba polyphaga mimiviru v séru ryb.	ÚLEHLOVÁ, Zuzana; CELER, Vladimír; POJEZDAL, Ľubomír; MATĚJÍČKOVÁ, Kateřina a FALDYNA, Martin.
Indirect ELISA test for the determination of specific IgY antibodies against Streptococcus uberis in hen serum samples and purified IgY from egg yolks	HLAVOVÁ, Karolína; MATIAŠKOVÁ, Katarína; KOBZOVÁ, Šárka and ŠTĚPÁNOVÁ, Hana.
Veterinary medicinal product based on IgY antibodies for the treatment of mastitis in dairy cattle.	ŠTĚPÁNOVÁ, Hana; HLAVOVÁ, Karolína; KOBZOVÁ, Šárka; MATIAŠKOVÁ, Katarína and NOREK, Adam
A mobile diagnostic system for reducing the consumption and proper use of antibiotics in primary cow‘s milk production	KREJČÍ, Michal; ZITOVÁ, Barbara; ŠLOSÁRKOVÁ, Soňa; FLEISCHER, Petr; ZOUHAROVÁ, Monika and KAZDA, Michal.
Protective face mask VIRATEX-RO-A.	PROCHÁZKA, Jiří; KŘEMENÁKOVÁ, Dana; PRODĚLALOVÁ, Jana and MARTINKOVÁ, Lenka
Sporty set of two-layer sweatshirt and sporty fitting elastic trousers VIRATEX	PROCHÁZKA, Jiří; KŘEMENÁKOVÁ, Dana; PRODĚLALOVÁ, Jana and MARTINKOVÁ, Lenka.
Protective face mask VIRATEX-RP-B.	PROCHÁZKA, Jiří; KŘEMENÁKOVÁ, Dana; PRODĚLALOVÁ, Jana and MARTINKOVÁ, Lenka.
Working polo shirt VIRATEX- long sleeve	PROCHÁZKA, Jiří; KŘEMENÁKOVÁ, Dana; PRODĚLALOVÁ, Jana and MARTINKOVÁ, Lenka.
Synbiotic feed mixture for weaned piglets.	CRHÁNOVÁ, Magdaléna; MORÁVKOVÁ, Monika; KOSTOVOVÁ, Iveta; KAVANOVÁ, Kateřina and BRYCHTA, Aleš.
Cultivation of bovine dendritic cells using polycaprolactone nanofibers.	SLÁMA, Petr; PAVLÍK, Aleš and ZOUHAROVÁ, Monika.
Method for the detection of hantavirus Brno loanvirus (BRNV).	FOŘTOVÁ, Andrea; HAVIERNIK, Jan; RŮŽEK, Daniel and SALÁT, Jiří.

Incidental Institutional Activities

In 2023, there was an effort to build on previous experiences and actively engage in social co-responsibility. This is evidenced by the charity collections organised for breathing machine monitors for hospitals, clothing collections for those in need, and other contributions made by the Institute‘s employees. Noteworthy efforts also include clean-up work at the SOS Children‘s Village in Medlanky, a blood donation initiative, tree planting and a summer urban camp.

VRI Supports the Acquisition of Baby Breathing Monitors

At the end of last year, a fair was organised at the VRI, where donations totalled CZK 15,635. This sum was used to purchase six breathing monitors for newborns, thanks to the Křižovatka Foundation.
The monitors were handed over on 30 March 2023 at the Children‘s Hospital Brno in the presence of the VRI management and the event organizer, Mrs. Jana Křížová. The monitors will be used in two wards of the hospital. Given that the monitors have a usage period of only two years in a medical facility, this encourages us to repeat this collection and continue supporting the Křižovatka Foundation‘s activities. Thank you to all our employees who supported this fundraiser.

Open House Festival 2023 at the VRI

The 6th edition of the OPEN HOUSE 2023 festival of urban architecture, which allows registered visitors to explore fascinating infrastructure, was held this year on Saturday 13 May at the Veterinary Research Institute. The VRI director, Dr. Martin Faldyna, first introduced visitors to the history and present of the Institute. This was followed by a tour of selected notable architectural features – including the entrance foyer of the main building. The Institute‘s buildings were constructed between 1958 and 1963 based on the architectural design by architect Vladimír Beneš. The Institute also features the VRI Small Gallery, which, despite its modest size, boasts a rich tradition and hosts numerous exhibitions by notable artists. Mrs. Zdenka Gregorová from the VRI Informatics Unit provided an expert overview of the building‘s history and architecture, including the library with its unique spiral staircase. The tour also included a visit to the nuclear bunker located in the underground in the main building. Finally, visitors enjoyed a distinctive view from the fourth floor of Building 3, overlooking the Institute‘s surroundings and the Medlánky district.

Annual Employees‘ Day

On June 15, 2023, current and former employees of the Institute and their relatives had an opportunity to reunite after a year. They gathered in an informal atmosphere, where they could engage in conversation while listening to reproduced music. As the main motto of the meeting was “World of sports – May the sports thrive and flourish!“ the premises of the Institute transformed into a sports ground, not only for children but for others as well. The main attraction of the event was the performance of the world champion in bike trials Vasek Kolar, whose adrenaline-filled bike show captivated children and adult attendees of the event alike. The weather conditions positively impacted the mood of the event, even though there may have been some initial uncertainty, it eventually became quite comfortable. We extend our sincere appreciation to the event organizers, and we eagerly anticipate the prospect of another gathering of this nature.

Blood Donation

On 27 and 28 June 2023, a blood donation drive by voluntary donors took place in collaboration with Brno University Hospital. This initiative was organized by our employees.

The aim of our jointly planned event was to raise awareness about the ongoing need for voluntary blood donation. Blood remains an irreplaceable resource, and the number of donors is steadily decreasing, not only in the Czech Republic, but also globally. This decline is a significant factor in the challenge of saving lives.

We believe that our initiative has positively impacted not only the company‘s social responsibility but also mutual cohesion, commitment, and shared pursuit of a common goal. Each of us had their own experiences and felt grateful for the opportunity to help. Thanks go to everyone who selflessly sacrificed a part of themselves to save the lives of others.

The VRI Urban Summer Educational Camp

From 10 July to 14 July 2023, we organized a successful week of activities, adventures, and excursions for the children of our employees. As part of the urban summer camp organized by the Veterinary Research Institute, with support from the Ministry of Agriculture, we welcomed 15 children and provided them with an engaging and exciting holiday programme. The camp's main mission was to explore nature and encounter animals amidst the vibrant colours of summer. We introduced the children to the possibilities of healthy summer eating, focusing on fruits and vegetables. Together, we tried making healthy drinks and explained the beneficial substances and vitamins hidden behind the flavours of fruits and vegetables. We also provided engaging information about the potential dangers of natural elements in the summer and taught them how to protect themselves in both natural settings and urban environments.

Improving Our Breathing: The VRI's Initiative at the Forest Nursery

On 16 October 2023, a group of 27 volunteers from our Institute joined forces to assist with the local forest restoration efforts. In collaboration with the Mendel University Forest Enterprise Masaryk Forest in Křtiny, we successfully coordinated one of our upcoming activities aligned with our environmental goals. Our collaborative event aimed to highlight the significance of daily efforts dedicated to forest restoration. Through our collective endeavours and this modest contribution, we aspire to nurture the future and preserve the beauty of our natural environment. We trust that the 15,200 small fir seedlings we have diligently nurtured will find their rightful places.

VRI FAIR 2023

On this year's St. Nicholas' Day, the traditional VRI fair was held for VRI employees. Although it might seem early to call it a tradition in only its second year, all traditions have to start somewhere. The large meeting room was filled with gifts—either handmade or lovingly purchased by our employees—and a festive Christmas atmosphere that lasted throughout the event. The selection of gifts was abundant, allowing everyone to take home a small keepsake or a present for their loved ones. Through this event, the organizers raised over 16,000 CZK, which the Institute decided to donate to the Křižovatka and Nedoklubko foundations.

Library

In 2023, the Library continuously updated its book fund and magazine fund, purchased books and periodicals, and provided bibliographic and library services, including book lending and providing papers published in journals from its own fund, as well as from other Czech libraries and from abroad. Besides that, it fulfilled the requirements of the Interlibrary loan services for other libraries in the Czech Republic. As well as in previous years, the online access to full-texts of requested papers in databases offered by Elsevier (ScienceDirect and Scopus), Springer and Wiley and to the abstract and citation database Web of Science was made possible for the VRI researchers.
In addition to professional literature, the VRI Library also provides lending of fiction books within the Employees' Library. https://knihovna.vri.cz/

MG Malá galerie

In 2023, our Small Art Gallery hosted 8 exhibitions of photographs, graphic arts, woodcuts, paintings, etc. Some artists organized private viewing to their exhibitions.

- **Michal Bartoš -** The year in the village, photographs
- **Mila Vašíčková -** In my view, photographs from the dance performances of ProART Company and ORBITA z.s."
- **The Pátečníci art group and the team of biochemists from University Hospital Brno** Cells: Art at the heart of humanity artistically completed photographs
- **Paul Gauguin, Jánuš Kubíček –** Wood engravings
- **Lenka Tichá -** BEYOND GRAPHICS: Man, Space, Universe
- **Michaela Josefa and Jana Margaret Šaňáková -** Synthesis, graphics, and mixed media techniques.
- **Silvie Kummerová and Ladislava Ondráčková -** An enchanting journey through photography and encaustic art.
- **The Pátečníci art group -** Happy poems for boys and girls about animals, with illustrations

Sisters MgA. Sylva Tománková and Andrea Ďurišová are responsible for the Small Art Gallery operation. For the history of exhibitions and current exhibitions please visit **https://www.vri.cz/spoluprace-s-praxi/mala-galerie/**

Additional Activities

Veterinary Committee for Food Safety in 2023

In 2023, the Veterinary Committee for Food Safety, supported organizationally by the VRI, operated with the following members:

Chairperson of the Committee:
RNDr. Miroslav Machala, CSc. (VRI)
Secretary of the Committee:
Mgr. Pavlína Šimečková, Ph.D. (VRI)
Members:
MVDr. Pavel Alexa, CSc. (VRI, former employee)
Doc. MVDr. Jan Bardoň, Ph.D. (SVI Olomouc)
Prof. Ing. Petr Doležal, CSc. (MENDELU)
Prof. MVDr. Alfréd Hera, CSc. (ISCVBM Brno),
MVDr. Václav Jordán (Agris Medlov, former employee)
Doc. MVDr. Renáta Karpíšková, Ph.D. (LF MU)
MVDr. Ivana Koláčková, Ph.D. (LF MU)
MVDr. Eva Renčová, Ph.D. (ISCVBM Brno)
Prof. RNDr. Daniel Růžek, Ph.D. (MUNI SCI)
Mgr. Petra Vašíčková, Ph.D. (LF MU)
Prof. MVDr. Vladimír Večerek, CSc. (VETUNI Brno)
Prof. MVDr. Lenka Vorlová, Ph.D. (VETUNI Brno)

Professional activity of the Committee in 2023 focused mainly on processing and discussion of four studies closely related to current issues in veterinary medicine and food and feed safety:

1. Verification of the antimicrobial effect of selected silver moss extracts as a possible substitute for antibiotics in compliance with EU and Czech antibiotic policy (Prof. Hera et al.)
2. Genetic diversity and antibiotic resistance in animal-derived Listeria monocytogenes isolates (Doc. Karpíšková et al.)
3. Prevalence and characteristics of Klebsiella pneumoniae in clinical material of animals and in food of animal origin from the retail market (Dr. Koláčková et al.)
4. Emerging chemical contaminants from a feed and food safety perspective (Dr. Machala et al.)

The Chairperson and members of the Committee monitored the current risks and scientific opinions related to veterinary medicine and food safety (EFSA studies, EU pharmacological legislation, etc.). The Chairperson participated in the preparation of the IARC monograph on the carcinogenicity of perfluorinated compounds.

Collection of Animal Pathogenic Microorganisms (CAPM)

- **Deposition of:**
  - New bacterial and viral isolates into the CAPM
  - Cultures of microorganisms for the purposes of patent procedures in the Czech Republic
  - Storage in safe deposit (cultures remain the property of the depositor)
- **Areas of advisory services**
  - Taxonomy of bacteria and viruses
  - Growing bacterial cultures
  - Isolation and growth of viruses in cell cultures and chicken embryos
  - Detection of mycoplasma contamination in viral and cell cultures and its elimination
  - Cryopreservation of bacteria, viruses and cell cultures
  - Biosafety and biosecurity
- **Distribution of cultures of animal pathogenic bacteria and viruses**
  - Database of available strains is accessible through the Internet at http:/ /www.vurv.cz/ collections/vurv.exe/ search?lang=cz
- **Lyophilisation services**

Head: MVDr. Markéta Reichelová, Contact: Phone: +420 5 33332131, E-mail: marketa.reichelova@vri.cz

Centre of Laboratories- Testing laboratory No. 1354

Accredited entity according to ČSN EN ISO/IEC 17025:2005

01- Laboratory for Animal Health and Food Safety

Testing for mycobacterial infections in animals; detection of the etiological agents of paratuberculosis, avian tuberculosis and the other mycobacterial infectiols; detection of the presence of specific DNA sequences by PCR; detection of human noroviruses, hepatitis A and E viruses.

03- Laboratory for *E. coli* infections

Detection of Shiga-toxigenic *Escherichia coli* (ISO/TS 13136); typing of *E. coli* somatic antigen; detection of-Shiga toxins, adherence factor intimin, enterohemoLysin, enterotoxins and differentiation of stx2e.

05 - Laboratory for Electron Microscopy

Detection of viruses using negative staining.

06 - Laboratory for Viral Diseases of Fish

Isolation of fish viral pathogens on cell lines; detection of viral fish pathogens by ELISA; determination of the presence of selected DNA and RNA sequences in fish viruses.

07- Laboratory for Spermatology and Andrology

Semen analysis; determination of the functions of male reproductive organs; biological safety testing of various materials for sperm.

08 - Laboratory for Viral Diseases of Cattle

Bovine viral diarrhoea (BVD) and infectious bovine rhinotracheitis (IBR) – detection of the viruses and antibodies by ELISA.

09 - Laboratory for Typing of Bacteria

Detection of *Listeria monocytogenes* (EN ISO 11290), *Salmonella* spp. (ČSN EN ISO 6579) and *Campylobacter* spp.; detection of Staphylococcus aureus by PCR; serotyping of *Listeria monocytogenes* and *Salmonella* spp.; phage typing of Salmonella; macro-restriction analysis of bacteria by PFGE.

Human Resource Management in Research – HR Award

Since 2022, the Institute has been one of the research institutions holding the HR Excellence in Research Award. Following the Award, we are committed to promoting and supporting effective human resource management processes and practices. Research results and outcomes are continuously evaluated. In line with the generally binding documents of the Code and the Charter for Researchers, as well as our internal policies, we affirm that discrimination, sexual harassment and any other inappropriate behaviour that disrupts interpersonal relations in workplaces or in contexts related to the activities of the research institution will not be tolerated under any circumstances. The Institute fully supports a positive environment and respects each individual. Equal opportunities are considered a key area of promotion.

In 2023, the HR Award Action Plan continued to implement planned activities to strengthen specific areas of HR work. Among the most important areas of support in 2023 were the following:

- "Ethics and ethical principles"- reflecting the ethical procedures outlined in the VRI Code of Ethics, which address the need to respond to and redefine common principles and attitudes regarding the use of AI technology outcomes and their impact on research;.
- "Internal and external communication of the Institute"- in relation to the rules established for receiving and handling proposals, suggestions, and requests addressed to us. The document contains a clear description of the various procedures, conditions and methods for giving feedback to the Institute's employees, customers, partners or other enquirers. The developed procedure is available in the Downloads section of the website;
- "Equal Opportunities" and the ongoing implementation of the Gender Equality Plan (GEP). An overview of the completed activities is publicly available on the Institute's website in the About Us- HR Award- Documents section;
- "Recruitment, Selection and Hiring of New Employees, a newly formulated policy of the Institute, presented in the form of the publicly available document "Recruitment and Selection Policy as per OTM-R rules", which regulates the general principles of selecting researchers and other employees in accordance with the requirements of the Institute. The established employment procedures are publicly available to all prospective candidates or those interested in applying for the job in the Selection Procedures- Vacancies section;
- "Adaptation and Orientation of New Employees"; a manual for new employee orientation (onboarding) titled "Guide for New Employees" was created in both Czech and English. The guide provides essential information to help new colleagues adapt more quickly, offering better support during their integration. The document is available on the VRI website under the section ABOUT US – HR AWARD- DOCUMENTS- Guide for new employees.

The implementation of the strategy, through the activities outlined in the Action Plan, is also reflected in the preparation and execution of national and international projects that provide special support for the financing of research and other related activities. The selection procedures are conducted in a predefined and transparent manner, with appropriate promotion and advertising in the web-based careers section on selected external job portals and via social media. A total of 12 recruitment activities were carried out to fill administrative and scientific positions.

Identifying Data

Identification No.: 00027162
Tax Identification No.:
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Fax: +420 541 211 229
E-mail: vri@vri.cz
http://www.vri.cz
ID Data Mailbox: 3gsnh8r

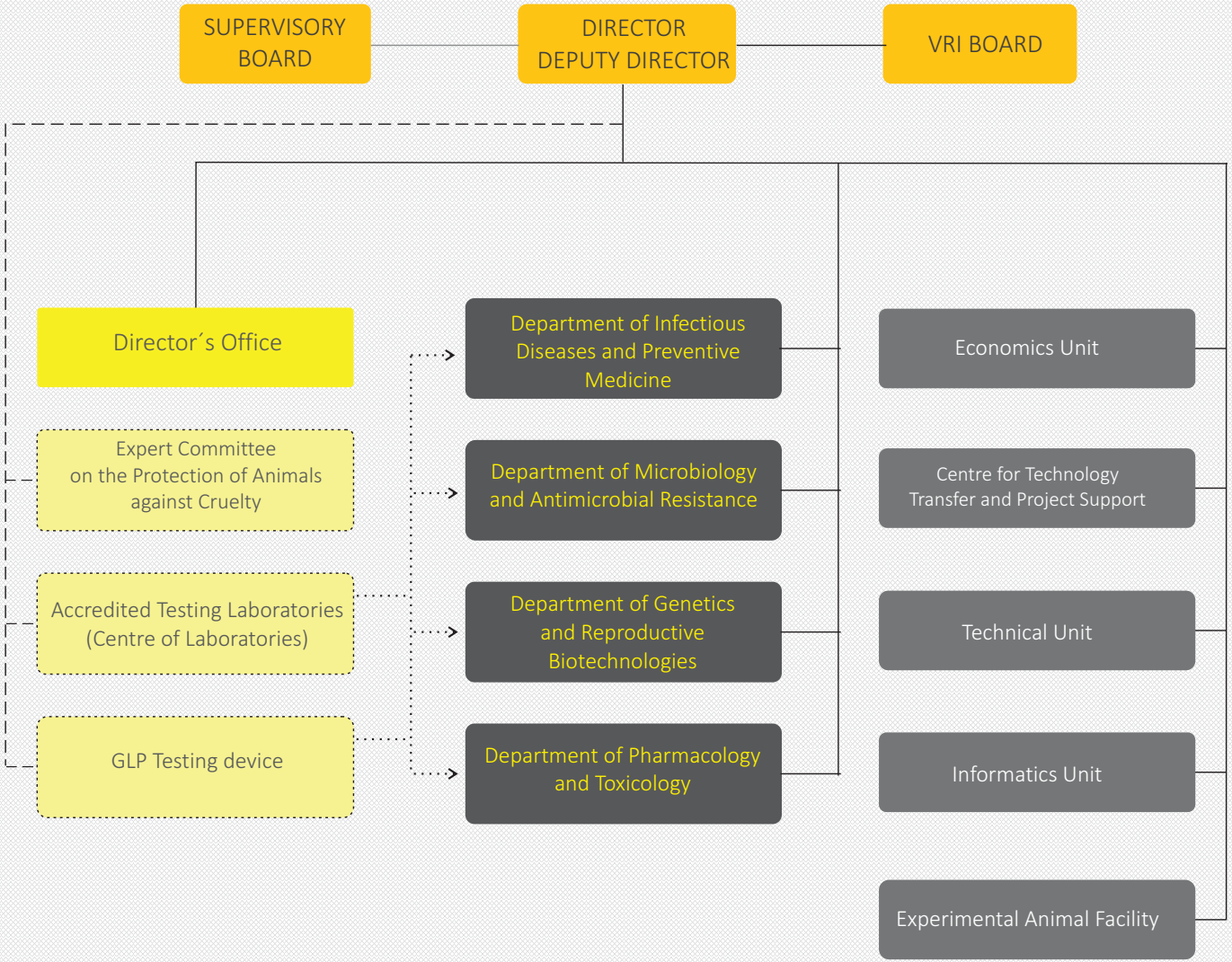
Founder:
Ministry of Agriculture of the Czech Republic
Based in: Těšnov 17
117 05 Praha 1
Identification No.: 00020478

The Veterinary Research Institute location on the map
GPS Loc: 49°23728"N, 16°57948"E

The Institute was founded on the basis of the Deed of Establishment Ref. No.: 22970/2006 - 11000, in accordance with § 3 of Act No. 341/2005 Coll., on public research institutions. The Veterinary Research Institute has become a public research institution with effect from 1 January, 2007

From the Deed of Establishment of the Veterinary Research Institute, as of 8 February 2018. The register of public research institutions: http://rvvi.msmt.cz/detail.php?ic=00027162

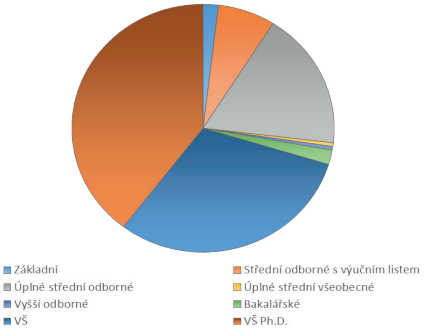
VETERINARY RESEARCH INSTITUTE



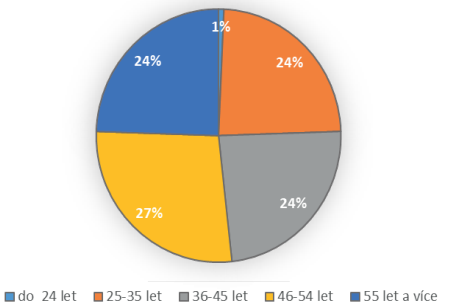
Basic personnel data

The average gross monthly salary of VRI employees in 2023 was CZK 46,753. When compared with the previous year, this represents an increase of CZK 3,974 per month, which means that its year-over-year growth rate was 9.29%. The national average for 4.Q 2023, published on the Czech Republic's Statistical Office website on 5th March, 2024, was CZK 46,013. The average gross salary indicator is calculated as the arithmetic mean (this is not the salary of one employee) and includes bonuses, salary compensation and overtime paid to FTE employees. Gross salaries are paid net of income tax, statutory health and social security contributions, and any other deductions agreed with individual employees. After deducting all these contributions, the employee is paid net salary. Neither compensation nor other personal costs were included in the calculation of the average gross salary, i.e. the costs paid on the basis of non-employment agreements (work agreements) and bonuses paid to statutory bodies.

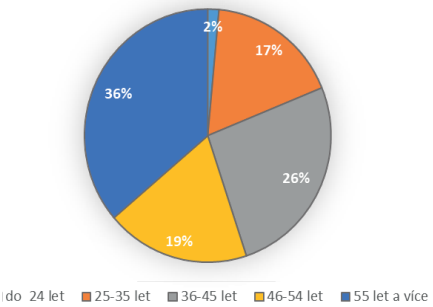
Sataff structure by education



Age distibution of women



Age distibution of men



Long-term Conceptual Research Organization Development for 2023 – 2027

Decision number MZE-RO 0523 Investigator: MVDr. Martin Faldyna, Ph.D.

The year 2023 marked the first year of the VRI institutional support project entitled "Long-term Conceptual Research Organization Development for 2023 – 2027" (LTCROD). The concept was shaped by ongoing projects under the Operational Programme Research, Development and Education, while also taking into account strategic documents from the Ministry of Agriculture, including the Concept of Research, Development and Innovation for 2023-2027, and the Strategy of the Ministry of Agriculture of the Czech Republic with a view to 2030.
The internal structure of the LTCROD project reflects the professional focus of the Institute as a research organization of the Ministry of Agriculture. The internal structure also reflects the organizational structure of the scientific part of the Institute. Thus, specific activities within the DKRVO were carried out through the implementation of 7 project plans that covered the whole range of topics in which the VRI is professionally involved: (1) Infectious diseases, (2) Immunology and preventive medicine, (3) Diagnostics, antimicrobials, and probiotics, (4) Genetics and reproduction of farm animals, (5) Experimental and pharmacological toxicology, and (6) Modern dosage forms and pharmacology. The seventh research project focused on completing the activities related to the National Sustainability Programme.
After the first year of the new LTCROD project, all the set indicators have been met and mostly exceeded. For example, the Institute's staff were authors or co-authors of 73 publications in journals with impact factors above the median of the branches. In fact, this exceeds the planned number by 20. Other publication outcomes were 35, which is nearly double the planned 18. The count of applied results reached 24, surpassing the planned quantity by 11. These figures demonstrate that the funds allocated for the institutional support of the Veterinary Research Institute were used effectively in alignment with their intended purpose, playing a pivotal role in fulfilling the Institute´s mission: contributing to the sustainable development of livestock production through scientific research and subsequent transfer of technology and knowledge.

SUBJECT OF THE MAIN ACTIVITIES

Basic and applied research and development in veterinary medicine, veterinary hygiene and ecology and related biomedical, agricultural and food sciences:

- Involvement in international and national centres of research and development,
- Activities of reference laboratories,
- Operation of the Collection of Animal Pathogenic Microorganisms,
- Scientific, professional and educational cooperation,
- Transfer of research and development results, including new technologies, to end users,
- Verification and dissemination of research results within the Institute's authority,
- Hosting and holding of professional courses, seminars, and conferences, workshops and other professional events,
- Function of an information centre and support of publishing in the field of veterinary medicine and food safety,
- Experimentation,
- Agricultural activities.

OTHER ACTIVITIES

Other activities relate to the major activities in the fields of veterinary medicine, veterinary hygiene and ecology and related biomedical, agricultural and food sciences:

1. Activities under the National Programme of Conservation and use of genetic resources of plants, animals and microorganisms important for nutrition and agriculture in conformity with Act No. 148/2003 Coll., on conservation and use of genetic resources of plants and microorganisms important for nutrition and agriculture and on amending Act No. 368/1992 Coll., on administrative fees, as amended (Act on Genetic Resources of plants and microorganisms).
2. Activity of the Veterinary Committee for Food Safety on the basis of the Resolution of the Government of the CR No. 1320 of 10 December 2001 concerning food safety strategy in the Czech Republic.
3. Expert witness activities in the fields of healthcare and agriculture; zoonotic diseases and infections of farm animals.
4. Commercial, financial, organizational and economic consulting.
5. Holding of professional courses, training and other educational activities, including lecturing activities.
6. Providing software and consultancy in hardware and software.
7. Graphics and drawing services.
8. Publishing services.

COMPLEMENTARY ACTIVITIES

FREE TRADES:

1. Activities of business, finance, organization and economic consultants
2. Research and development in sciences, technology and social sciences
3. Providing software, and consultancy in hardware and software
4. Copying services
5. Graphic art services
6. Specialized retail-sale and mixed goods
7. Hosting professional courses, trainings and other education, including lecturing
8. Publishing
9. Production of food products
10. Accommodation services

NON-TRADE ACTIVITIES

1. Letting real estate, apartments and non-residential rooms. (Besides letting out, no other services are provided by the lessor than basic services ensuring proper operation of the real estate, apartments and non-residential rooms.)
2. Agricultural production, provision of works and services in agriculture, production and sale of animals and animal and vegetable products.
3. Expert witness activities in the fields of healthcare and agriculture – zoonotic diseases and infections of farm animals.

EXPERIMENTAL ACTIVITIES

Experiments with the use of live animal models are carried out on the basis of accreditation (5050/2020-MZE-18134, valid until 23 March 2025). The goal is to create best conditions for experiments of the highest quality, corresponding to international standards with applying high ethical standards. Consideration is given to reducing the number of experimental animals used in approved experiments. All animal experiments are carried out according to the approved methodological procedure of the ordering party.

The following animals are used in the experiments: cattle, sheep, goats, pigs, rabbits, chickens, guinea pigs, rats, hamsters, mice and fish. In 2023, 43 experimental project proposals were submitted for approval in the following areas: basic research (765 animals), translational and applied research (1,218 animals), development, production or quality testing of the efficacy or safety of medicines, food, feed and other substances or products, as well as in the field of higher education or doctoral study in order to obtain, maintain or improve professional knowledge (273 animals). The following numbers of experimental animals were used in these experiments:

795 mice, 48 rats, 52 guinea pigs, 54 rabbits, 902 chickens, 219 pigs, 16 sheep, and 170 salmonid fish. The experiments were conducted under projects funded by the Technology Agency of the Czech Republic (TACR), Czech Science Foundation (GACR), ICVZ, National Agency for Agricultural Research (NAZV), Czech Research Council (AZV), NeoGIANT, basic research, contractual research of the Joint research workplace of the VRI and FNUSA-ICRC, as well as through commercial cooperation.

AGRICULTURAL ACTIVITIES

Part of the VRI agricultural area is designed for farm animal evacuation in case of fire or other emergency events. This area is inevitable and conforms to the current legislation.

Statutory representative of the VRI: **MVDr. Martin Faldyna, Ph.D.**

THE VRI BOARD

Member's name	Function	Organisation
RNDr. Jana Prodělalová, Ph.D.	Chairperson	VRI
MVDr. Ján Matiašovic, Ph.D.	Deputy-Chairperson	VRI
MVDr. Martin Faldyna, Ph.D.	Member	VRI
MVDr. Kamil Kovarčík, Ph.D.	Member	VRI
PharmDr. Josef Mašek, Ph.D.	Member	VRI
MVDr. Ján Matiašovic, Ph.D.	Member	VRI
MVDr. Kateřina Nedbalcová, Ph.D.	Member	VRI
doc. MVDr. Adam Novobilský, Ph.D.	Member	VRI
MVDr. Ľubomír Pojezdal, Ph.D.	Member	VRI
MVDr. Markéta Reichelová	Member	VRI
doc. RNDr. Ivan Rychlík, Ph.D.	Member until 31 May 2023	VRI
Mgr. Magdaléna Crhánová, Ph.D.	Member from 1 June 2023	VRI
MVDr. Jiří Bureš	External member	State Control of Veterinary Biologicals and Medicines
doc. Dr. Ing. Josef Kučera	External member	Czech-Moravian Breeders Association, a.s. PGRLF
prof. MVDr. Vladimír Celer, Ph.D.	External member	University of Veterinary Sciences Brno
MVDr. Kamil Sedlák, Ph.D.	External member	State Veterinary Institute, Prague
doc Ing. Pavel Ryant, Ph.D.	External member	Mendel University in Brno

MEMBERS OF THE SUPERVISORY BOARD

Member's name	Function	Organisation
doc. MVDr. Milan Malena, Ph.D.	Chairperson	
Mgr. Tomáš Jírů	Deputy-Chairperson	Veterinary Administration for Pardubice Region (28 May 2019 – 28 May 2024)
Mgr. Jaroslav Hejátko	Member	Ministry of Agriculture (1 May 2019 – 1 May 2024)
Ing. Ondřej Sirko	Member	Ministry of Agriculture (27 May 2021 – 27 May 2026)
MVDr. Martin Beňka	Member	State Veterinary Administration (7 December 2017 – 7 December 2022)
Ing. Jan Vodička	Member	SMinistry of Agriculture (5 Septemberer 2019 – 5 September 2024)
prof. MVDr. Alfred Hera, CSc.	Member	State Control of Veterinary Biologicals and Medicines (13 November 2020 – 13 November 2025)

DIRECTOR'S BOARD

Member's name	Department
MVDr. Ján Matiašovic, Ph.D.	Department of Infectious Diseases and Preventive Medicine
doc. RNDr. Ivan Rychlík, Ph.D.	Department of Microbiology and Antimicrobial Resistance
doc. MVDr. Martin Anger, CSc.	Department of Genetics and Reproductive Biotechnologies
PharmDr. Josef Mašek, Ph.D.	Department of Pharmacology and Toxicology

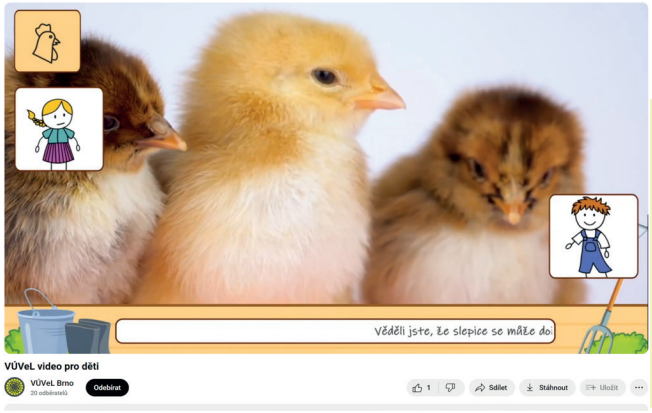
Member's name	Unit
Ing. Ildikó Csölle Putzová, Ph.D., MBA	Centre for Technology Transfer and Project Support
Roman Dvořáček	Informatics Unit
Ing. Jana Satrapová –until 31 May 2023 Mgr. František Pernica – from 1 June 2023	Economics Unit
Marie Sobotková	Experimental Animal Facility
Ing. Jiří Svoboda	Technical Unit
Ing. Iva Stránská	Safety Officer
Ing. Jan Rázek Lenka Janečková until 30 June 2023 Pavla Dobrovská from 1 July 2023	Director´s Office
Jana Křížová	HR Officer
Ing. Jiří Kolísek	HR Coordinator
Irena Smrčková, MSc.	Internal Auditor
MVDr. Kateřina Nedbalcová, Ph.D.	Veterinary Trade Union

THE ACTIVITIES OF THE VRI BOARD IN 2023

In 2023, three regular meetings were held by the VRI Board. The meetings included formal acts related to the running of the institution: The VRI Board members approved the Institute's budget for 2023 and the Annual Report of the Institute for 2022. Furthermore, the Board members discussed and approved changes to the Internal Wage Regulation, Organisation System, the Rating System for the evaluation of working groups and Bonus Rules. During the year, project proposals submitted in response to open calls from various providers were discussed. As of 31 May 2023, Doc. RNDr. Ivan Rychlík, Ph.D., resigned from his position as a member of the VRI Board. In the subsequent by-elections, Mgr. Magdaléna Crhánová, Ph.D., was elected to the vacated position and became a member of VRI Board as of 1 June 2023.

VRI and the Media

In addition to mass media platforms such as Facebook, Twitter, and others, the VRI also promotes its results on television. The primary collaborators are TV Zemědělec and Czech Television (ČT). In cooperation with ČT, two reports were broadcast as part of the programme "About Science and Scientists", which features a series of portraits of Czech scientists presenting the most interesting results of their research. An 18-minute documentary about the gut microbiome entitled "The Second Brain Within Us" was broadcast as part of an educational series entitled "In Broader Context" directed by Jan Tuna.



POPULARISATION OF SCIENCE AND RESEARCH

The saying "Children are our future" is especially true for science and research. For long-term development, it is essential to educate the youngest generation in sciences. That´s why the VRI researchers created an educational video about scientific activities. When implementing popularization activities aimed at children and youth, care is taken to choose enjoyable, understandable, and unconventional formats. The aim is to foster a love of science in children and young people to inspire them to pursue future careers in the field.

The video was produced with financial support from the Ministry of Agriculture of the Czech Republic.

KEY PERFORMANCE INDICATORS

212 EMPLOYEES

Contract research 2023
17 mil. CZK

cooperation in **26** countries worldwide

valid patents **14**

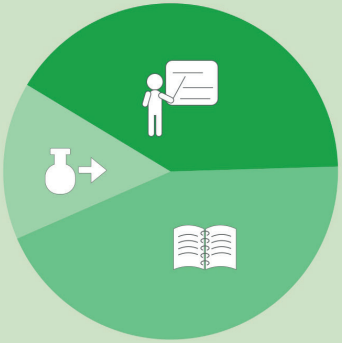
37 valid utility models

14 Research groups

49 PROJECTS

R&D Results 2023

- Publications
- Applied results
- Other results



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