IC-3Rs 2022
Symposium booklet

21 SEPTEMBER 2022

MORE SCIENCE,
MORE CARE,
LESS ANIMALS

IC-3Rs
INNOVATION CENTRE
3R ALTERNATIVES

IC-3Rs can expand its activities thanks to:

the **Chair Mireille Aerens** and
the generous support of the **Brussels Region**, Animal Welfare under Minister Bernard Clerfayt

General Data Protection Regulation (GDPR) note:

All participants of the symposium may be contacted for future events. If you do not wish to be contacted, please inform us at info@IC-3Rs.org

Leerstoel **Mireille Aerens**
voor de ontwikkeling van proefdiervrije methoden

The IC-3Rs platform could be created thanks to **Mireille Aerens** and the **Chair Mireille Aerens for the Development of Alternative methods.**

Mireille Aerens was a very friendly person with a warm heart, not only for humans, but also for animals. In 2015, she created the **'Chair Mireille Aerens for the Development of Alternative Methods'** with **Vera Rogiers** as chairholder. As the dedicated founder of the chair, Mireille Aerens closely followed up the 3R-research of young scientists. In 2017, she helped to launch the IC-3Rs platform at the VUB.

Mireille sadly left us on 30 March 2020 at the age of 86. We lost a very dear and loyal friend, and will definitely continue her life's work at the VUB. She made this possible in her last will, wherein she maintained her support for animal-free studies within the research group IVTD. Thanks to her personal engagement, the Mireille Aerens Chair and the IC-3Rs platform will continue and grow for many years to come. This beautiful gesture reflects her attitude to life.

We will all remember her exceptional kindness and generosity.

IC-3Rs 2022 Symposium

MORE SCIENCE, MORE CARE, LESS ANIMALS

VUB Health Campus | 21 September 2022 | 09.00 -16.30

09.00 Welcome coffee

09.30 Introduction by Vera Rogiers (Chair IC-3Rs) and Bernard Clerfayt (Minister of Brussels Region)

REPLACEMENT

09.40 Animal free recombinant antibodies: from therapeutics to multiclonals
Stefan Dübel (Technische Universität Braunschweig, DE)

10.10 Pros and Cons about the production and use of antibodies without involving experimental animals: A perspective of the National Committee for the Protection of Animals Used for Scientific Purposes of the Federal Republic of Germany
Gilbert Schönfelder (BfR, DE)

10.45 - 11.20 Coffee break

11.20 Current status of the RE-Place database
Mieke Van Mulders (VUB-Sciensano, BE)

11.35 *In vitro* serum protein binding assay to predict *in vivo* biodistribution
Sophie Hernot (Vrije Universiteit Brussel, BE)

11.50 *In vitro* air-liquid interface (ALI) exposure method to simulate *in vivo* inhalation exposure
Sandra Verstraelen (VITO, BE)

REFINEMENT/REDUCTION

12.25 How to save (mice) lives using interim analysis
Susanne Blotwijk (Vrije Universiteit Brussel, BE)

12.55 - 14.15 Lunch

14.25 Round table discussion:
Short introduction by moderator Stef Aerts (Chair 'Vlaamse Proefdieren Commissie', BE)
How can Ethical Committees contribute to the 3Rs with focus on Refinement and Reduction? Panel discussion on practical case studies with representatives of Belgian Universities

16.00 Awards Ceremony

16.30 Networking reception

VUB IC-3Rs INNOVATION CENTRE 3R ALTERNATIVES

www.IC-3Rs.org

VUB VRIJE UNIVERSITEIT BRUSSEL

Leerstoel **Mireille Aerens**
voor de ontwikkeling van proefdiervrije methoden

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SYMPOSIUM MODERATORS

ROGIERS, VERA

Prof. Dr. Emeritus
In Vitro Toxicology and Dermato-Cosmetology (IVTD)
Vrije Universiteit Brussel (VUB)
Laarbeeklaan 103, 1090 Brussels, Belgium

vera.rogiers@vub.be

EDUCATION

Pharmacist (University of Ghent, 1974)
Doctor in Pharmaceutical Sciences (Vrije Universiteit Brussel, 1980)
Master in Applied Toxicology (University of Guilford, UK, 2000)
European Registered Toxicologist (since 2010)

BIOGRAPHY

After many years of leading the department of *In Vitro* Toxicology and Dermato-Cosmetology at the VUB in a successful way, Emeritus professor in Toxicology Vera Rogiers is actually still teaching dermato-cosmetics at the VUB and the University of Ghent. She also gives a limited number of lessons to the University of Namur and the Université Libre de Bruxelles. She yearly organizes international courses on Cosmetics and Risk Assessment. She is the Director of the Innovation Centre-3Rs (IC-3Rs) at the VUB and of the scientific Chair Mireille Aerens, both with focus on replacing experimental animals by novel technologies. At the EU level, she is co-chair of the Scientific Committee on Consumer Safety (SCCS) and member of the Mirror group of the European Partnership on Alternative Approaches to Animal Testing (EPAA). Her main research activity was many years situated in the development of *in vitro* models as an alternative to the use of experimental animals. Actual focus is on the differentiation of human skin-derived stem cells to functional hepatic cells and their application for drug discovery and the detection of drug-induced liver injury. She has been promoter of 33 doctoral theses, is author or co-author of >380 publications in international peer reviewed scientific journals and is editor of several scientific books. She is an often-invited speaker (>350) and participated in the organization of more than 60 international congresses. She has coordinated 2 EU research projects and was partner in several FP6, FP7 EU and Horizon 2020 research projects concerned with *in vitro* methodology development. Of the obtained scientific results, several patents have been filed. Throughout her carrier she received several international scientific awards for her pioneering role in *in vitro* Experimental Toxicology.

DE KOCK, JOERY

Professor
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Joery.De.Kock@vub.be

EDUCATION

Pharmacist (Vrije Universiteit Brussel, 2006)

Doctor in Pharmaceutical Sciences (Vrije Universiteit Brussel, 2012)

BIOGRAPHY

Joery De Kock graduated in 2006 as Pharmacist from the Vrije Universiteit Brussel (VUB) and obtained his PhD in Pharmaceutical Sciences in May 2012 under the mentorship of Prof. Vera Rogiers. During his PhD, he managed for the first time to differentiate so-called human skin-derived precursor cells (hSKP) into hepatic cells. These hSKP-derived hepatic cells (hSKP-HPC) have provided a solid basis for multiple successful follow-up PhD projects over the last years. He is since 2017 a full-time Tenure Track professor affiliated to the Faculty of Medicine and Pharmacy at the research group of In Vitro Toxicology and Dermato-Cosmetology (IVTD) and was previously a postdoctoral research fellow of the Research Foundation Flanders (FWO) from 2012 until 2017. From 2016 to 2018, he was a visiting researcher at the Institute of Biotechnology of the RWTH Aachen University in Germany. During this period he acquired expertise in state-of-the-art directed protein evolution technology. His ongoing research uniquely combines gene and stem cell therapy with directed protein evolution technology in order to develop next generation medicines to cure inborn errors of liver metabolism.

SYMPOSIUM SPEAKERS

Zilkens, Kilian

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BIOGRAPHY

Born 1990 in Cologne, Germany

After basic studies of Biochemistry/Molecular Biology in Jena, Germany, Kilian moved on to Stockholm for a more in-depth study of Molecular Life Sciences. There he finished his Master's degree with a final work on a DNA-based spatial biology application for tumor diagnostics. He then joined Yumab GmbH in Brunswick, Germany under the guidance of Prof. Dr. Stefan Dübel to develop novel phage-display methods to uncover unknown tumor antigens. Two years later, he is now the lead scientist for antibody discovery in the young start-up Abcalis GmbH in Brunswick, Germany, providing recombinant antibody services for customers and pushing the development of animal-free replacements in in vitro diagnostics products.

PRESENTATION:

PRESENTED BY: KILIAN ZILKENS

ANIMAL FREE RECOMBINANT ANTIBODIES: FROM THERAPEUTICS TO MULTICLONALS

While phage display, the premier animal-free method for antibody production, is well established for the production of therapeutics, most antibodies for research and diagnostics are still produced in animals. This presentation will review the achievements and prospects of recombinant *in vitro* antibody generation and provide examples of how animal-derived antibodies could be supplemented or replaced in typical current research applications. Further differences and opportunities of *in vitro* antibody generation compared to animal-based generation will be presented, e.g. the possibility to predetermine specificity features, the exchange of constant regions to adapt to different detection antibodies (species switch), or easy post-selection modifications to add functions not available from plain IgG. In addition, polyclonal animal antibodies can now be replaced by recombinant multiclonal antibodies in various applications ranging from typical secondary antibodies used in research and diagnostics to the replacement of equine sera for therapy as passive vaccine.

Schönfelder, Gilbert

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BIOGRAPHY

Professor Dr. Gilbert Schönfelder is the head of the German Centre for the Protection of Laboratory Animals (Bf3R) and of the Department “Experimental Toxicology and ZEBET” at the German Federal Institute for Risk Assessment (BfR). He is also appointed full professor of Experimental Toxicology and Alternatives to Animal testing at the Charité-Universitätsmedizin Berlin.

He is licensed to practice medicine and has qualifications as a medical specialist in pharmacology and toxicology, as well as in clinical pharmacology.

Professor Schönfelder main research interests are alternatives to animal testing, experimental toxicology, endocrine disruptors, openscience, and metascience.

Professor Schönfelder has a long teaching career in pharmacology, clinical pharmacology, toxicology, and public health.

PRESENTATION:

PRESENTED BY: GILBERT SCHÖNFELDER

PROS AND CONS ABOUT THE PRODUCTION AND USE OF NON-ANIMAL-DERIVED ANTIBODIES: A PERSPECTIVE OF THE NATIONAL COMMITTEE FOR THE PROTECTION OF ANIMALS USED FOR SCIENTIFIC PURPOSES OF THE FEDERAL REPUBLIC OF GERMANY

EURL ECVAM has published a recommendation on non-animal-derived antibodies. This recommendation has created controversy among parts of the research community in the EU member states, including Germany. On the level of competent authorities, the recommendation resulted in uncertainty about the ethical justification of animal-derived antibody production in general. The National Committee for the Protection of Animals used for Scientific Purposes of the Federal Republic of Germany addressed this situation due to the emerging conflicts the recommendation of EURL ECVAM created. According to the German Animal Welfare Act, one of the mandates of the National Committee is to advise the competent German authorities and animal welfare bodies on matters dealing with the use of laboratory animals. It further ensures that an exchange of best practices takes place within Germany and among National Committees of other EU member states.

The German National Committee has been following ongoing discussions and scientific controversies of different stakeholders. It has recently been participating in the debate by bringing additional scientific expertise to the table. To this end, Germany is actively participating in a European working group under the leadership of the Dutch National Committee, with the goal to arrive at a joint opinion that is advocated by National Committees across Europe.

There is no doubt that it should be the designated goal to replace animal-derived antibodies as much and as wide-spread as possible. On the way to achieving this, the current scientific discussion involving individual EU member states needs to be analyzed and re-evaluated. Strengths and weaknesses of the EURL ECVAM recommendation need to be delineated transparently and comprehensibly. The results of the individual evaluations should make it possible to describe further and new scientific, technological and social fields of action that are necessary to advance the discussion in a newly targeted and structured manner. In the end, a joint recommendation of the National Committees will allow competent authorities and animal welfare bodies to resume effective fulfillment of their respective statutory mandates.

Van Mulders, Mieke

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EDUCATION

MSc in Biomedical Sciences (University of Ghent, 2014)

BIOGRAPHY

Mieke Van Mulders obtained her Master's degree in Biomedical Sciences from the University of Ghent in 2014. For her major in 'Nutrition and Metabolism' she conducted research on liver fibrosis and cirrhosis.

Mieke started her career as a consultant in the life sciences at various pharmaceutical companies. She was in charge of several projects in the Departments of Regulatory Affairs and Quality Assurance.

Since 2017 she is fully dedicated to the RE-Place project, a joint research collaboration between the Vrije Universiteit Brussel and Sciensano. Mieke has been responsible for the development of the RE-Place platform and currently works on its further optimization. RE-Place provides an open access database collecting all expertise available in Belgium on the use of alternative methods to animal testing, also known as 'New Approach Methodologies' (NAMs). The project focuses on increasing knowledge sharing on NAMs and fosters collaborations across life sciences sectors/stakeholders.

Mieke is also involved in the activities of the Belgian 'Network for Preliminary Assessment of Regulatory Relevance (PARERE)', which provides EURL ECVAM with upstream input and preliminary views on potential regulatory relevance of methods or approaches submitted for validation and/or peer review.

Furthermore, Mieke is a steering committee member of BelTox, the Belgian Society of Toxicology and Ecotoxicology, where she improves the communications strategy with fellow steering committee members. She is also an active member of the Flemish animal testing committee.

PRESENTATION:

PRESENTED BY: MIEKE VAN MULDERS

CURRENT STATUS OF THE RE-PLACE DATABASE

Although the 3Rs Principle was already introduced more than 6 decades ago, the replacement of animal testing remains a challenge in the 21st century. New and innovative technologies can help to reduce or sometimes even avoid the use of experimental animals in the life sciences. They are referred to as 'New Approach Methodologies (NAMs)' and include, amongst others, sophisticated cell- and tissue cultures, computer modeling techniques, high throughput testing strategies, and '-omics' technology.

Due to the fast development pace of NAMs, (young) scientists may encounter difficulties in finding relevant, reliable and up-to-date information. The RE-Place database aims to facilitate the search for this type of information by collecting the available expertise on NAMs in one central, open access database. All submitted NAMs are linked with the names of experts and research centers where these technologies have been developed and/or are currently applied.

By consulting the database, available via www.RE-Place.be, scientists can easily identify the different types of NAMs and the experts using them in Belgium. In August 2022, the RE-Place database contained 199 methods submitted by 138 experts from 24 different (research) institutes. The majority of the submitted methods is situated in basic and applied research and is categorized as an in vitro or ex vivo method.

The RE-Place project promotes the use of NAMs by sharing (inter-)nationally available knowledge via the website and social media channels. Face-to-Face meetings are organized with experts from various research areas to present the project, highlight the importance of NAMs and set-up new collaborations. This approach ensures a close and reliable interaction with all involved stakeholders. As such, the RE-Place project not only helps to raise awareness, but also builds bridges and increases trust in the use of these new technologies, thereby stimulating the regulatory uptake of NAMs and their daily use.

Hernot, Sophie

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BIOGRAPHY

Tenure Track Professor at the Vrije Universiteit Brussel has a background a biomedical engineer. Her research relates to the use of fluorescence and nuclear imaging techniques for surgical and interventional applications. She focusses mainly on the design and preclinical validation of labeled Nanobodies and their translation to the clinic. In addition, she is developing an additional research line to study the behavior and kinetics of Nanobodies at microscopic scale in living animals via intravital imaging.

PRESENTATION:

PRESENTED BY: SOPHIE HERNOT

ASSESSMENT OF SERUM PROTEIN BINDING TO PREDICT NON-SPECIFIC UPTAKE IN VIVO

For therapeutic or reporter molecules to be effective for therapy or imaging applications, proper accumulation of the compounds in the tissue of interest is required, with minimal accumulation in undesired organs to avoid toxic side-effects and increase bioavailability. After initial in vitro screening on functionality and potency, a panel of preselected analogues are often evaluated in vivo for their pharmacokinetic profile to select a lead compound. This is most often assessed in vivo following administration of the compound using chromatography techniques or ELISA on collected tissues/organs, or non-invasive imaging. We propose to screen the compounds beforehand for non-specific protein binding in order to predict undesired background accumulation, in particular in the liver. As such, the number of compounds that need to be tested in vivo can be limited to the most promising ones.

Verstraelen, Sandra

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HEALTH department
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EDUCATION

Master in Biomedical Sciences (University of Antwerp, 2003)

Certificate of Pedagogical Competence (Thomas More, 2007)

Doctor in Biomedical Sciences (University of Ghent-VITO, 2010)

BIOGRAPHY

Dr. Sandra Verstraelen studied Biomedical Sciences at the University of Antwerp and obtained her PhD entitled 'Research into the respiratory-immuno-disturbing mechanisms of chemical allergens by means of in vitro test systems' in 2010 from the University of Ghent, in collaboration with the Flemish Institute for Technological Research (VITO). In 2008, she started her career at VITO as Study Director in vitro toxicology for contract research projects (GLP/non-GLP) for industry in the domain of chemical safety assessment, as part of services delivered by the Centre for Advanced R&D on Alternative Methods (CARDAM, 2008-2011) and the VITO-HEALTH department (2011-2018). Besides this, she was also involved in strategic research projects and gained expertise in in vitro assay development and validation using human cell models/ex vivo models, and zebrafish embryos. Since 2018, her main research activity focused on in vitro inhalation testing (non-GLP) of chemicals (safety) and pharmaceuticals (safety & efficacy). The platform for in vitro inhalation testing is fully equipped for testing at the highest technical difficulty (i.e. vapors, gases, aerosols; dry powders (low and high amounts), liquids, and mixtures). Several air-liquid interface exposure systems (ALI i.e. lung cells grown on a membrane, nourished by medium from below and exposed to airborne substances) are combined with a generation and characterization platform and a set of biological assays (e.g. cell viability/ cytotoxicity, oxidative stress, inflammatory response, membrane integrity, …) for safety and efficacy testing of nano/ultrafine particles, plastics, consumer products, environmental/occupational compounds, chemical compounds, and pharmaceuticals. As a biomedical expert, she is working in a multidisciplinary team of aerosol experts, data scientists, chemists, and engineers. She is co-inventor of a patent (162000571.4 1408 Flatbed air liquid interface exposure module and methods), and (co-)author of >30 publications in international peer-reviewed scientific journals. She is member of the Belgian and European Respiratory Society (BeRS/ERS), the International Society for Aerosols in Medicine (ISAM), and the Controlled Release Society BeNeLux & France local chapter (BNLF CRS). She was/is partner in FP7, H2020, and Horizon Europe research projects related to e.g. in vitro (eye, skin, inhalation) testing, nanosafe-

PRESENTATION:

PRESENTED BY: SANDRA VERSTRAELEN

IN VITRO AIR-LIQUID INTERFACE (ALI) EXPOSURE METHOD TO SIMULATE IN VIVO INHALATION EXPOSURE

After many years of animals being the main model for inhalation testing, the field has now developed a range of new approach methodologies (NAMs). The in vitro air-liquid interface (ALI) (i.e. lung cells grown on a membrane, nourished by medium from below and exposed to airborne substances) exposure method is promising as a NAM, as this method: (i) does not require animals, (ii) is in total less costly and time consuming than an in vivo experiment; (iii) reliably mimics human exposure; and (iv) facilitates the evaluation of mechanistic effects and contributes to the development of adverse outcome pathways (AOPs). VITO has a platform for in vitro ALI inhalation testing of chemicals (safety) and pharmaceuticals (safety & efficacy) as an alternative to the use of experimental animals. The platform is fully equipped for testing at the highest technical difficulty (i.e. vapors, gases, aerosols; dry powders (low and high amounts), liquids, and mixtures). Several ALI exposure systems are combined with a generation and characterization platform and a set of biological assays (e.g. cell viability/cytotoxicity, oxidative stress, inflammatory response, membrane integrity, …) for safety and/or efficacy testing of nano/ultrafine particles, plastics, consumer products, environmental/occupational compounds, chemical compounds, and pharmaceuticals. During this session, the INSPiRE initiative (IN vitro System to Predict REspiratory toxicity) will be presented. In this project, two- and three-dimensional (2D and 3D) systems are being used to predict the ability of chemicals to cause portal-of-entry effects on the human respiratory tract. The study design includes positive and negative controls, four test chemicals (two silanes and two surfactants), exposure at the ALI, and the assessment of endpoints known to be triggered by respiratory irritants.

Blotwijk, Susanne

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BIOGRAPHY

Susanne Blotwijk is a PhD candidate at the BISI research group at the VUB, a consultant at the SQUARE core facility, and one of the statisticians of the VUB ethical committee for animal trials.

She holds a master's degree in Mathematics, specialization applied and financial mathematics. As a teaching assistant, she currently teaches exercise classes for biostatistics, and quantitative data analysis and processing.

PRESENTATION:

PRESENTED BY: SUSANNE BLOTWIJK

HOW TO SAVE LIVES (MICE) USING INTERIM ANALYSIS?

Due to its ability to reduce required participants, costs, and duration of the experiment, interim analysis has been used in clinical trials for decades. Thanks to technological improvements, those same techniques can now be applied to animal experiments as well.

So that you too can reap the benefits of interim analyses, we have developed a tool to make it easy to add them to your design. In this talk, we will illustrate how to use this tool with a case study. No advanced knowledge of statistics required.

In addition to the ethical and financial benefits interim analyses bring, they can also be used to help navigate and mitigate other problems. This includes uncertainty of the effect size prior to the experiment, or not having enough resources to process all animals in a single batch.

POSTER PRESENTATIONS

PARTICIPANT POSTERS

The posters are available at the expo area on the day of symposium , Wednesday 21 September.

The winner(s) will be announced during the award ceremony and they will present their poster.

Following the QR code, you can vote for your favorite poster and give more exposure to your preferred IC-3Rs research topic.

Presenter	Poster subject
Katerina Georgousaki	*Bioguided isolation, in silico approaches and in vitro methodologies as a tool for the discovery, biological and toxicological evaluation of novel cosmetic agents from the global microbial biodiversity based on the principles of the 3Rs; the case of Cercospora sp. and Comoclathris sp.*
Beate Rinner	*Three-pillar approach to avoid animal testing in the Core Facility Alternative Biomodels and Preclinical Imaging*
Laura Cools	*Development of an iPSC-derived spheroid model for liver fibrosis*
Liliana Pineros	*Bioactivation capacity of the zebrafish embryo model*
Robin M. Awad	*Development of an in vitro hot tumor model for immunotherapeutic drug screening*
Lorna Marchandise	*Murine Testicular Organoid Culture*

PARTICIPANT POSTERS

Presenter	Poster subject
Sien Lequeue	*Development of a robust high-throughput screening system for the evaluation of human homogentisate 1,2-dioxygenase missense variants in the context of rare disease alkaptonuria*
Alexandra Gatzios	*Resmetirom reduces lipid load, restores THRB expression and prevents cell damage in a human stem cell based in vitro MAFLD model*
Julia Kapr	*Disease modeling of the neuropathology of nucleotide excision repair (NER) syndromes in vitro*
Quinten Marcelis	*Applicability of the DPRA on mixtures: Challenges and opportunities*
Julie Sanders	*Impact of experimental design factors on in vitro genotoxicity test results*

PANEL MODERATOR

AERTS, STEF

BIOGRAPHY

Stef Aerts holds a PhD in Applied Biological Sciences with a thesis on the societal and ethical aspects of animal production. He has served as the program director of the Bachelor of Agro & Biotechnology at the Odisee University College, where he also teaches ethics, current topics, and experimental animal sciences. He is a Visiting Professor of Veterinary Ethics at Ghent University. His research is centered on the ethics of the use of animals, and agriculture on general, and he has been a board member of the European Society for Agricultural and Food Ethics for 10 years. He has co-authored several books, papers, conference papers and proceedings on these topics.

Stef is the president of the Flemish National Animal Research Council, and a member of several ethical committees within the agricultural industry and academia.

SCIENTIFIC PANEL MEMBERS

Zwijsen, An

an.zwijsen@kuleuven.be

BIOGRAPHY

An Zwijsen is a developmental biologist. She received her PhD at the University of Antwerp in 1995. She was EMBO and ESF post-doctoral fellow with Christine Mummery at the Hubrecht Laboratory (NIOB, Utrecht, The Netherlands). Here, she became interested in the context dependent role of TGFβ signaling in early developmental processes. After her return to Belgium, she joined Danny Huylebroeck in the Laboratory of Molecular Biology (Celgen) (VIB, University of Leuven, Belgium) in 1997, where she started studying BMP signaling. She became a KU Leuven faculty member in 2004 in the department of Human Genetics. She established her own lab - the Laboratory of Developmental Signaling – and was VIB groupleader (VIB Center for the Biology of Disease) in 2008-2015. In 2017, she joined with her team the Department of Cardiovascular Sciences, where she continues her research on the role of BMP signaling in vascular and lymphatic development and remodeling. She is a full Professor and engages in several courses and workshops for primarily Biomedical Sciences students at KU Leuven and KULAK. She is also the president of the Ethics Committee for Animal Experimentation of KU Leuven.

Mouterde, Solveig

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BIOGRAPHY

I graduated as a veterinarian in 2010, after studying at the Ecole Nationale Vétérinaire d'Alfort in France. During my last year, and as part of my veterinary thesis, I completed a research project on the agonistic behaviour of little blue penguins at Waikato University in Hamilton, New Zealand. After working in a few clinics in France as a veterinarian aid, I then came back to research as a PhD student at the Université Jean Monnet in Saint-Etienne, France. My project was about vocal communication in songbirds, and through a co-directorship with the University of Berkeley, California, I spent a year in the USA on a Fulbright and a Monahan fellowships before completing my PhD.

At the end of 2014 I started working at the Institute of Experimental and Clinical Research (IREC) at UCLouvain as a veterinary and scientific manager, getting involved in the construction and set-up of a new rodent animal facility (divided in 3 containment zones), which I now manage. I am also the secretary of the local Ethical Committee on animal experimentation, and a member of the Brussels Commission on animal experimentation since its creation in 2017.

Van Ginneken, Chris

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https://www.uantwerpen.be/nl/personeel/chris-vanginneken/

EDUCATION

Veterinary Medicine (University of Ghent – 1994)

Doctor in Veterinary Medicine (PhD) (University of Ghent – 2001)

Master in Laboratory Animal Sciences (University of Ghent – 2002)

Certified Pig Practioner (University of Ghent – 2013)

BIOGRAPHY

From the start of her career as a researcher, the focus lies on pre-and postnatal development in the pig, to unravel the complexity of the consequence of pre-and dysmaturity and, within a one health approach, provide insight into both human medicinal and veterinary disorders related to intrauterine growth retardation. Until now, research activities on this topic were facilitated via 14 research projects. Via these projects, Chris Van Ginneken has gained nationally and internationally (as invited speaker) recognition as an expert in low birth weight piglets. Next to field studies and standardized e periments in vitro assays were established to study enterocyte physiology. She is the (co-) author of 144 scientific papers. Besides her research activities, she is vice-dean of the Faculty of Pharmaceutical, Biomedical, and Veterinary Sciences, a member of the board of directors of the University of Antwerp, and the chair-elect of the Education & Training Board FELASA, and a member of the board of management of FELASA. She also presides on the ethical committee on Animal Experimentation of the University of Antwerp. The remainder of her time is devoted to teaching: veterinary (neuro)anatomy, veterinary skills, and general surgery in the bachelor of veterinary medicine and laboratory animal sciences courses (FELASA accredited).

Menu, Eline

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BIOGRAPHY

Eline Menu is a VUB alumnus, who graduated in 2001 as a Biomedical Scientist. She obtained her PhD in 2006 in the Hematology and Immunology (HEIM) lab of Prof. K. Vanderkerken where she studied the role of the bone marrow environment in the development of Multiple Myeloma (MM), a plasma cell tumor. After her post-doctoral training at the Weill Medical College of Cornell University (NY, USA), she returned to the HEIM lab. In 2015 she became a Research Professor at the VUB and set-up her own research group. She is (co-) author of more than 80 papers and has obtained several grants from FWO and Kom op Tegen Kanker to identify novel therapeutic targets for MM patients. Her group continues to study the interactions between MM cells and their microenvironment using both in vitro and in vivo models (5TMM mouse model). Her research interests include exosomal communication, tumor metabolism and immune suppression. She is board member of the Belgian Society for Extracellular Vesicles and is Chair of the Ethical Committee for Animal Experimentation of the VUB since 2020.

Hermans, Katleen

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BIOGRAPHY

Katleen Hermans is a full professor in laboratory animal science and small mammal medicine at the Faculty of Veterinary Medicine of Ghent University. She graduated as a veterinarian at the same university in 1997. She has 25 years of experience in small mammal veterinary medicine, laboratory animal science education and research. She is part of several committees and organizations, amongst others as a board member of BCLAS, the Belgian Council for Laboratory Animal Science and a member of the Flemish laboratory animal committee. She is the chair of the ethical committee on animal experiments of the faculties of Veterinary Medicine and Bioscience Engineering of Ghent University, and has been member of various other external ethical committees.

Bito, Virginie

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BIOGRAPHY

Prof Virginie Bito completed her PhD in Biomedical Sciences in 2004 at the KUL (Belgium). Her thesis entitled 'Mechanisms of excitation-contraction coupling in myocytes from normal and chronically ischemic pig myocardium' unraveled the underlying mechanisms responsible for cardiac remodeling in the setting of chronic ischemia. After 8 years' post-doctoral research, she was, in 2012, appointed as Associate Professor at Hasselt University. As equipment and expertise were not present within the institute, she had to start her research group and research line from scratch, in order to bring fundamental cardiology as a new research domain within the institute. First embedded in the research group 'physiology', she is now part of the research group COS (cardiac and organ systems) of the institute. Together with her collaborators, she focusses on the development and characterization of new approaches (exercise intervention, anti-AGEs therapies, stem cell therapy) to improve cardiac function in pathological settings such as myocardial infarction, diabetes and anthracyclines-induced cardiotoxicity. She mainly focusses on basic fundamental research, in animal models of heart failure and examines molecular changes at tissue and cellular level. She is currently leading a group of 4 researchers with currently 3 PhD students and 1 post-doctoral researcher. Next to her fundamental research, she is actively involved in several teaching activities within the faculty (for medical and biomedical students, at bachelor and master level). She is involved in VLIR-UOS projects (international collaborative projects with South partners) where she is the leader of a VLIR-IUC sub-project with UMI (Morocco) and is the coordinator of several projects with DRCongo (VLIR-South Initiative and TEAM with UNIKI and a large VLIR-IUC project with UNILU). She is since 2013 Chair of the Ethical Committee for Animal Experimentation at UHasselt. Since 2019, she is also chairing the Animal Facility of UHasselt. Finally, since 2020, she is the vice-director of BIOMED.

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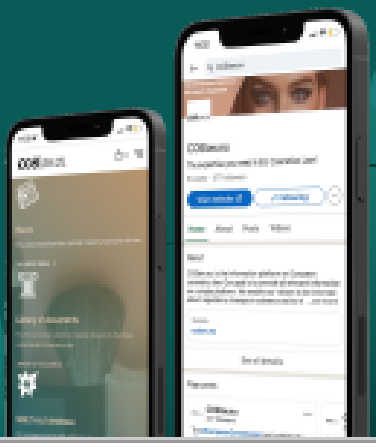

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