

3rd international DIGITAL VIVARIUM FORUM

HOW TECHNOLOGY
CAN SUPPORT BETTER SCIENCE

April 9 - 11, 2024

Tecniplast Congress Centre
Buguggiate (VA) - Italy



Welcome & Opening - Pietro Bernardini	8:30 AM
Moderator: Jan-Bas Prins - Director of the Biological Research Facility, The Francis Crick Institute, UK	
Improving Animal Welfare and Operational Efficiency using Digital Ventilated Cages (DVC®) Jeeendra Eswaraka - Vice-President University-wide core services, Rutgers University, USA	9:00 AM
ROI analysis from a Pharma - TBD	9:30 AM
Workflow of a Digital Facility - TBD	10:00 AM
Coffee Break	10:30 AM
Introducing DVC® Housing in a fully operational animal facility Ronald van Os - Scientific breeding coordinator/Member Animal Welfare Body/Member Management Team UMCG, Groningen, The Netherlands	11:00 AM
Revolutionizing Laboratory Pup Birth Detection: an innovative acoustic monitoring approach Marcello Raspa - Technological Director CNR-IBBC; EMMA/INFRAFRONTIER, Monterotondo Scalo, Italy	11:30 AM
What construction activities might stress mice? Markus Brielmaier - Head of Core Facility Laboratory Animal Science (CF-LAS) at Helmholtz Zentrum Munich, Germany	12:00 PM
Lunch	12:30 PM
Operative sessions with AMS	2:00 PM
Coffee Break	3:30 PM
Transitioning to digital housing technology within a high containment (ABSL3) biosafety facility – lessons learned, benefits gained Betty Theriault - Director, Gnotobiotic Research Animal Facility/Biocontainment Facilities; Professor, Department of Surgery, University of Chicago; The University of Chicago, USA	4:00 PM
Evaluation of the DVC® - Digital Ventilated Cage system for facility management, assessment of animal welfare, and potential research use in preclinical drug development Thomas Reich - Study Director, Abbvie, Ludwigshafen, Germany	4:30 PM
Architect session - TBD	5:00 PM
Pick up and transfer to the Hotel	5:30 PM

Pick up at the hotel	8:30 AM
<p>Moderators:</p> <p>Marcello Raspa - Technological Director CNR-IBBC; EMMA/INFRAFRONTIER, Italy</p> <p>Brun Ulfhake - Professor-Guest Researcher, Stockholm University, Sweden</p>	
<p>Automated Animal Welfare Assessment: Tecniplast's Digital Ventilated Cage System and its predictive monitoring capabilities</p> <p>Raphael Doenlen - Scientist, Head of the Phenotyping Unit, EPFL, Switzerland</p>	9:00 AM
<p>Revealing aggression in male mice through DVC®</p> <p>Fabrizio Scorrano - Head Emerging Technologies, Novartis AG, Basel, Switzerland</p>	9:30 AM
<p>Automated detection of behavioral stereotypies using the DVC® system to enhance animal welfare and improve research outputs</p> <p>Daniela Pollak - Professor for Behavioural Biology Department of Neurophysiology and Neuropharmacology, Medical University of Vienna, Austria</p>	10:00 AM
<p>Predicting an inevitable end looking at disturbed data</p> <p>Sebastian Brachs - Head of Research Lab Department of Endocrinology and Metabolism Charité – Universitätsmedizin Berlin, Germany</p>	10:30 AM
Coffee Break	11:00 AM
<p>Voluntary aerobic running activity improves pathologic outcomes in a mouse model of acquired epilepsy</p> <p>Valentina Kebede - Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milan, Italy; eCampus University, Novedrate, Italy</p>	11:30 AM
<p>Use and validation of DVC® in research on mouse models for vascular risk factors like obesity and stroke</p> <p>Maximilian Wiesmann/Amanda Kiliaan - Dept. Medical Imaging, Anatomy Donders Institute for Brain, Cognition and Behavior; Chair Preclinical Imaging, Center PRIME Radboud University Medical Center, The Netherlands</p>	12:00 PM
Lunch	12:30 PM

Urination in the Home Cage: detection of polyuria in mouse models of metabolic dysregulation

Thomas Svava Nielsen - Senior Scientist, Novo Nordisk Foundation Center for Basic Metabolic Research, University of Copenhagen

2:00 PM

Deciphering the Multifaceted Aging Code: gender-based insights from natural and accelerated aging in outbred mice

Angelo Parini - Professor of Physiology (PRE) - Faculty of Pharmacy – Hospital Practitioner (PH) – CHU Toulouse. Director of the U1048 Inserm – Institute of Metabolic and Cardiovascular Diseases, Toulouse, France

2:30 PM

Impact of Sleep Disturbances in Adolescence on Depression Risk: insights from mouse studies

Birgitte Rahbek Kornum - Associate Professor, Visiting researcher. Neuronal Signalling, Copenhagen University, Denmark

3:00 PM

Coffee Break

3:30 PM

A non-invasive automated home cage digital system detects the variable phenotype of two SOD1G93A mouse models of amyotrophic lateral sclerosis

Caterina Bendotti - Laboratory of Neurobiology and Preclinical Therapeutics, Research Center for ALS, Department of Neuroscience, Mario Negri Institute for Pharmacological Research IRCCS, Milano, Italy

4:00 PM

Assessing mice activity in breeding cages using digital technology

Jason Villano - Associate Professor of Molecular and Comparative Pathobiology, John Hopkins University, USA

4:30 PM

Coordinating research and building capacity for advanced home-cage monitoring – international networks and institutional core-facilities

Vootele Vaikar - Helsinki Institute of Life Science, University of Helsinki, Finland

5:00 PM

Sleep and circadian rhythm disruption: from mechanisms to behaviour

Stuart Peirson - Sleep and Circadian Neuroscience Institute, Nuffield Department of Clinical Neurosciences, University of Oxford, UK

5:30 PM

Pick up and transfer to the Hotel

6:00 PM

Pick up at the hotel	8:00 AM
Moderator: James Bussel - Director of Biomedical Services at University of Oxford, UK	
Measuring behavior with machine learning Alexander Mathis - Assistant Professor, EPFL, Switzerland	8:30 AM
Video-monitoring and AI solutions push animal monitoring to the next level with a version 2.0 of the DVC® rack Pierre Laine - Head of In Vivo Research Center, Sanofi, France	9:00 AM
Scientific Advancements with DVC® Cages at Novartis Fabrizio Scorrano - Head Emerging Technologies, Novartis AG, Basel, Switzerland	9:30 AM
TBD Joel Eliades - Metabolic Phenotyping Platform Manager, Metabolic Disease and Obesity Program, Biomedicine Discovery Institute, Monash University, Australia	10:00 AM
Coffee Break	10:30 AM
From Data Collection to Insight Generation in Core facilities: the role of metadata in home cage monitoring technologies Leonardo Restivo - Department of Fundamental Neurosciences, Faculty of Biology & Medicine, University of Lausanne, Switzerland	11:00 AM
Sensitive detection of early neurological phenotypes in Mecp2 mice using digital cage monitoring Monica Justice - Prof. of Genetics and Genome Biology Program, The Hospital for Sick Children, Toronto, Ontario, Canada	11:30 AM
TBD Brun Ulfhake - Professor/Guest Researcher, Stockholm University, Sweden	12:00 PM
Lunch	12:30 PM
Using the DVC®- LEDDY system to better understand how circadian rhythms affect behavioural outcomes in neuroinflammatory disease Nader Ghasemlou - Associate Professor, Queen's University; Director, Pain Chronobiology & Neuroimmunology Laboratory; Dept. of Anesthesiology & Perioperative Medicine; Dept. of Biomedical & Molecular Sciences, Kingston, Ontario, Canada	1:30 PM
DVC® activity as a digital biomarker in an inhalation study Annemarie Zimprich - Scientist, Institute of Experimental Genetics, Helmholtz Centre, Munich, Germany	2:00 PM
Final Wrap Up	2:30 PM

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OPPORTUNITY, GET
YOUR SEAT!**

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