

# 3rd international DIGITAL VIVARIUM

HOW TECHNOLOGY  
CAN SUPPORT BETTER SCIENCE

April 9 - 11, 2024

Tecniplast Congress Centre  
Buguggiate (VA) - Italy



## AGENDA



# TUESDAY, APRIL 9<sup>TH</sup>

## MORNING

Pick up from the Hotel and transfer to the Tecniplast Congress Centre	7:45AM
Welcome & Opening - Pietro Bernardini, Tecniplast Managing Director	8:30 AM
<b>KEYNOTE SPEECH</b>	
<b>Vivarium of the future - the role of technologies in animal welfare, facility management and better (reproducible) science</b> Alon Harmelin - President's consultant, Weizmann Institute of Science, Israel	8:45 AM
<b>MODERATOR</b> <b>Jan-Bas Prins</b> - Professor of Laboratory Animal Science, Leiden University Medical Centre, The Netherlands	
<b>Improving Animal Welfare and Operational Efficiency using Digital Ventilated Cages (DVC®)</b> Jeetendra Eswaraka - Vice-President University-wide core services, Rutgers University, USA	9:00 AM
<b>Transforming Animal Care and Efficiency: The Adoption of Digital Ventilated Cages in Research Settings</b> Isabelle Petit Paris - Responsable PREBIOS - Université de Poitiers, Prebios, France Anne-Lise Huot - Zootechnician - Université de Poitiers, Prebios, France	9:30 AM
<b>Introducing DVC® in a fully operational animal facility</b> Ronald van Os - Scientific breeding coordinator / Member Management Team UMCG, Groningen, The Netherlands	10:00 AM
Coffee Break	10:30 AM
<b>Assessing mice activity in breeding cages using digital technology</b> Jason Villano - Associate Professor of Molecular and Comparative Pathobiology, John Hopkins University, USA	11:00 PM
<b>Automated Animal Welfare Assessment: Tecniplast's Digital Ventilated Cage System and its predictive monitoring capabilities</b> Raphael Doenlen - Scientist, Head of the Phenotyping Unit, EPFL, Switzerland	11:30 PM
<b>Transitioning to digital housing technology within a high containment (ABSL3) biosafety facility - lessons learned, benefits gained</b> Betty Theriault - Director, Gnotobiotic Research Animal Facility, Professor, Department of Surgery, The University of Chicago, USA	12:00 PM

TUESDAY, APRIL 9<sup>TH</sup>

AFTERNOON

Lunch	12:30 PM
<b>Hands-on sessions with selected Animal Management Software (ATUNE, DOXX, NorayBio)</b>	<b>2:00 PM</b>
Coffee Break	3:30 PM
<b>Evaluation of the DVC<sup>®</sup> - Digital Ventilated Cage system for facility management, assessment of animal welfare, and potential research use in preclinical drug development</b> Thomas Reich - Study Director, Abbvie, Ludwigshafen, Germany	<b>4:00 PM</b>
<b>Automated detection of behavioral stereotypies using the DVC<sup>®</sup> system to enhance animal welfare and improve research outputs</b> Katharina Tillmann - PostDoc at the Behavioural Biology Department of Neurophysiology and Neuropharmacology, Medical University of Vienna, Austria	<b>4:30 PM</b>
<b>Influence of transfer method into new cages on mouse locomotion measured in the DVC<sup>®</sup> system</b> Markus Brielmaier - Head of Core Facility Laboratory Animal Science (CF-LAS) at Helmholtz Zentrum Munich, Germany	<b>5:00 PM</b>
Day 1 - Wrap up	5:30 PM
Pick up and transfer to the Hotel	6:00 PM
Pick up for Dinner at Golf Club Luvinata	7:45 PM
Transfer to the Hotel	11:00 PM

Pick up from the Hotel and transfer to the Tecniplast Congress Centre	7:45 AM
<b>MODERATORS</b> <b>Marcello Raspa</b> - Technological Director CNR-IBBC; EMMA/INFRAFRONTIER, Italy (Morning) <b>Brun Ulfhake</b> - Professor-Guest Researcher, Stockholm University, Sweden (Afternoon)	
<b>A multicenter study of slow oscillations in spontaneous activity in two commonly used mouse strains</b> <b>Brun Ulfhake</b> - Professor/Guest Researcher, Stockholm University, Sweden	8:30 AM
<b>Revolutionizing Laboratory Pup Birth Detection: an innovative acoustic monitoring approach</b> <b>Jan-Bas Prins</b> - Professor of Laboratory Animal Science, Leiden University Medical Centre, The Netherlands <b>Marcello Raspa</b> - Technological Director CNR-IBBC; EMMA.INFRAFRONTIER, Monterotondo Scalo, Italy	9:00 AM
<b>Revealing aggression in male mice through DVC<sup>®</sup></b> <b>Fabrizio Scorrano</b> - Head Emerging Technologies, Novartis AG, Basel, Switzerland	9:30 AM
<b>Interlinked cages: can we better drive our studies?</b> <b>Celine Gomet</b> - HDigital Innovation, In Vivo Research Center Paris, Sanofi, France	10:00 AM
<b>Video-monitoring and AI solutions push animal monitoring to the next level with a version 2.0 of the DVC<sup>®</sup> rack</b> <b>Pierre Laine</b> - Head of In Vivo Research Center, Sanofi, France	10:10 AM
Coffee Break	10:40 AM
<b>Voluntary aerobic running activity improves pathologic outcomes in a mouse model of acquired epilepsy</b> <b>Valentina Kebede</b> - Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milan, Italy; eCampus University, Novedrate, Italy	11:00 AM
<b>Urination in the Home Cage: detection of polyuria in mouse models of metabolic dysregulation</b> <b>Thomas Svava Nielsen</b> - Senior Scientist, Novo Nordisk Foundation Center for Basic Metabolic Research, University of Copenhagen, Denmark	11:30 AM
<b>Use and validation of DVC<sup>®</sup> in research on mouse models for vascular risk factors like obesity and stroke</b> <b>Amanda Kiliaan</b> - Prof. at Donders Institute for Brain, Cognition and Behavior; Radboud University Medical Center, The Netherlands	12:00 PM
Lunch	12:30 PM

WEDNESDAY, APRIL 10<sup>TH</sup>

AFTERNOON

<b>Sleep and circadian rhythm disruption: from mechanisms to behaviour</b> <b>Stuart Peirson</b> - Sleep and Circadian Neuroscience Institute, Nuffield Department of Clinical Neurosciences, University of Oxford, UK	<b>2:00 PM</b>
<b>Deciphering the Multifaceted Aging Code: gender-based insights from natural and accelerated aging in outbred mice</b> <b>Angelo Parini</b> - Professor of Physiology (PRE) - Faculty of Pharmacy - Director of the U1048 Inserm - Institute of Metabolic and Cardiovascular Diseases, Toulouse, France	<b>2:30 PM</b>
<b>Impact of Sleep Disturbances in Adolescence on Depression Risk: insights from mouse studies</b> <b>Birgitte Rahbek Kornum</b> - Associate Professor, Visiting researcher. Neuronal Signalling, Copenhagen University, Denmark	<b>3:00 PM</b>
Coffee Break	3:30 PM
<b>A non-invasive automated home cage digital system detects the variable phenotype of two SOD1G93A mouse models of amyotrophic lateral sclerosis</b> <b>Caterina Bendotti</b> - Laboratory of Neurobiology and Preclinical Therapeutics, Department of Neuroscience, Mario Negri Institute for Pharmacological Research IRCCS, Milano, Italy	<b>4:00 PM</b>
<b>Coordinating research and building capacity for advanced home-cage monitoring – international networks and institutional core-facilities</b> <b>Vootele Voikar</b> - Helsinki Institute of Life Science, University of Helsinki, Finland	<b>4:30 PM</b>
Day 2 - Wrap up	5:00 PM
Pick up and transfer to Museo Fisogni and Gala Dinner	5:30 PM
Transfer to the Hotel	11:00 PM

# THURSDAY, APRIL 11<sup>TH</sup>

## MORNING

Pick up from the Hotel and transfer to the Tecniplast Congress Centre	8:15 AM
<p style="text-align: center;"><b>MODERATOR</b></p> <p style="text-align: center;"><b>James Bussel</b> - Director of Biomedical Services at University of Oxford, UK</p>	
<p><b>Measuring behavior with machine learning</b> (Remote Presentation)</p> <p>Alexander Mathis - Assistant Professor, EPFL, Switzerland</p>	9:00 AM
<p><b>Scientific Advancements with DVC<sup>®</sup> cages at Novartis</b></p> <p>Fabrizio Scorrano - Head Emerging Technologies, Novartis AG, Basel, Switzerland</p>	9:30 AM
<p><b>Home cage measurement of food intake, operant behaviour and spontaneous activity</b></p> <p>Joel Eliades - Metabolic Phenotyping Platform Manager, Metabolic Disease and Obesity Program, Biomedicine Discovery Institute, Monash University, Australia</p>	10:00 AM
Coffee Break	10:30 AM
<p><b>From Data Collection to Insight Generation in Core facilities: the role of metadata in home cage monitoring technologies</b></p> <p>Leonardo Restivo - Department of Fundamental Neurosciences, Faculty of Biology &amp; Medicine, University of Lausanne, Switzerland</p>	11:00 AM
<p><b>Sensitive detection of early neurological phenotypes in Mecp2 mice using digital cage monitoring</b></p> <p>Monica Justice - Prof. of Genetics and Genome Biology Program, The Hospital for Sick Children, Toronto, Canada</p>	11:30 AM
<p><b>Novel Murine Model To Study Potassium Channel-Related Autism Spectrum Disorder</b> (Remote Presentation)</p> <p>Alessandro Bortolami - PHD, Rutgers - Robert Wood Johnson Medical School, Department of Neuroscience, Federico Sesti Lab, NJ, USA</p>	12:00 PM
Lunch	12:30 PM

THURSDAY, APRIL 11<sup>TH</sup>

AFTERNOON

**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; 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

Pick ups for Malpensa Airport and to the Hotel

3:00 PM

## TO KNOW MORE:

<https://digitalcage-tecniplast.com/en/dvf.html>



## CONTACTS

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