

3rd international DIGITAL VIVARIUM

HOW TECHNOLOGY
CAN SUPPORT BETTER SCIENCE

April 9 - 11, 2024

Tecniplast Congress Centre
Buguggiate (VA) - Italy



AGENDA



TUESDAY, APRIL 9TH

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

Lunch	12:30 PM
Hands-on sessions with selected Animal Management Software (ATUNE, DOXX, NorayBio)	2:00 PM
Coffee Break	3:30 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	4:00 PM
Automated detection of behavioral stereotypies using the DVC® system to enhance animal welfare and improve research outputs Katharina Tillmann - PostDoc at the Behavioural Biology Department of Neurophysiology and Neuropharmacology, Medical University of Vienna, Austria	4:30 PM
Influence of transfer method into new cages on mouse locomotion measured in the DVC® system Markus Brielmaier - Head of Core Facility Laboratory Animal Science (CF-LAS) at Helmholtz Zentrum Munich, Germany	5:00 PM
Day 1 - Wrap up	5:30 PM
Pick up and transfer to the Hotel	6:00 PM
Pick up for Dinner at Golf Club Luvinat	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

MODERATORS

Marcello Raspa - Technological Director CNR-IBBC; EMMA/INFRAFRONTIER, Italy (Morning)

Brun Ulfhake - Professor-Guest Researcher, Stockholm University, Sweden (Afternoon)

A multicenter study of slow oscillations in spontaneous activity in two commonly used mouse strains

Brun Ulfhake - Professor/Guest Researcher, Stockholm University, Sweden

8:30 AM

Revolutionizing Laboratory Pup Birth Detection: an innovative acoustic monitoring approach

Jan-Bas Prins - Professor of Laboratory Animal Science, Leiden University Medical Centre, The Netherlands

Marcello Raspa - Technological Director CNR-IBBC; EMMA/INFRAFRONTIER, Monterotondo Scalo, Italy

9:00 AM

Revealing aggression in male mice through DVC[®]

Fabrizio Scorrano - Head Emerging Technologies, Novartis AG, Basel, Switzerland

9:30 AM

Interlinked cages: can we better drive our studies?

Celine Gomet - HDigital Innovation, In Vivo Research Center Paris, Sanofi, France

10:00 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

10:10 AM

Coffee Break

10:40 AM

Voluntary aerobic running activity improves pathologic outcomes in a mouse model of acquired epilepsy

Valentina Kebede - Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milan, Italy; eCampus University, Novedrate, Italy

11:00 AM

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, Denmark

11:30 AM

Use and validation of DVC[®] in research on mouse models for vascular risk factors like obesity and stroke

Amanda Kiliaan - Prof. at Donders Institute for Brain, Cognition and Behavior; Radboud University Medical Center, The Netherlands

12:00 PM

Lunch

12:30 PM

WEDNESDAY, APRIL 10TH

AFTERNOON

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	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 - 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, Department of Neuroscience, Mario Negri Institute for Pharmacological Research IRCCS, Milano, Italy	4:00 PM
Coordinating research and building capacity for advanced home-cage monitoring – international networks and institutional core-facilities Vootele Voikar - Helsinki Institute of Life Science, University of Helsinki, Finland	4:30 PM
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 11TH

MORNING

Pick up from the Hotel and transfer to the Tecniplast Congress Centre

8:15 AM

MODERATOR

James Bussel - Director of Biomedical Services at University of Oxford, UK

Measuring behavior with machine learning (Remote Presentation)

9:00 AM

Alexander Mathis - Assistant Professor, EPFL, Switzerland

Scientific Advancements with DVC[®] cages at Novartis

9:30 AM

Fabrizio Scorrano - Head Emerging Technologies, Novartis AG, Basel, Switzerland

Home cage measurement of food intake, operant behaviour and spontaneous activity

10:00 AM

Joel Eliades - Metabolic Phenotyping Platform Manager, Metabolic Disease and Obesity Program, Biomedicine Discovery Institute, Monash University, Australia

Coffee Break

10:30 AM

From Data Collection to Insight Generation in Core facilities: the role of metadata in home cage monitoring technologies

11:00 AM

Leonardo Restivo - Department of Fundamental Neurosciences, Faculty of Biology & Medicine, University of Lausanne, Switzerland

Sensitive detection of early neurological phenotypes in Mecp2 mice using digital cage monitoring

11:30 AM

Monica Justice - Prof. of Genetics and Genome Biology Program, The Hospital for Sick Children, Toronto, Canada

Novel Murine Model To Study Potassium Channel-Related Autism Spectrum Disorder (Remote Presentation)

12:00 PM

Alessandro Bortolami - PHD, Rutgers - Robert Wood Johnson Medical School, Department of Neuroscience, Federico Sesti Lab, NJ, USA

Lunch

12:30 PM

THURSDAY, APRIL 11TH
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>



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