



**IPAD-MD Industry & Innovation Workshop  
28 & 29 June 2016 Munich Germany**

**Objectives:**

- Promote INFRAFRONTIER resources and services, technology developments and translational research to industry
- Present technological innovations relevant to INFRAFRONTIER and IMPC
- Engage with industry to discuss requirements and use of mouse models by Biopharma
- Initiate new collaborations and new alliances with industry partners

**Content:**

- Targeting Innovation with sessions on Technology Development
- Targeting Translation with sessions on Translational Research and Translational Bioinformatics
- Reaching out to other initiatives/programs: Ageing, Gnotobiology, ESFRI BMS projects, IMI, as well as Regulatory Agencies – European Medicines Agency
- Panel discussions on: '*Impact of genome editing technologies on repositories, IT & animal welfare*' as well as on '*Impact of rodents as model of human diseases*'
- Networking session



# INFRAFRONTIER

mouse disease models

28 JUNE 2016

**12:00-13:00**

**LUNCH**

13:00-13:15

Welcome & INFRAFRONTIER Introduction  
Michael Hagn, Helmholtz Zentrum München, Germany

**13:15-15:45**

**Session 1: Technology Development I (13:00-15:00)**

**Chair: Radislav Sedlacek, Czech Center for Phenogenomics**

13:15-13:45

International Mouse Phenotype Consortium: Future Challenges & Knockout Mouse Program  
Mark Moore & Colin Fletcher, IMPC & National Institutes of Health, USA

13:45-14:15

Mouse genetics and the CRISPR/Cas9 revolution  
Ralf Kühn, Max Delbrück Center for Molecular Medicine, Germany

14:15-14:45

CARD's Kaizen Strategy for Mouse Reproductive Technology  
Toru Takeo, Kumamoto University, Japan

14:45-15:15

Replacing Immunoassays with MS-based Technology: Quantitative Proteomics Kits Enabling Deep Molecular Phenotyping of the Mouse  
Christoph Borchers, Genome BC Proteomics Centre, Canada

**15:15-15:45**



**15:45-16:45**

**Session 2: Panel Discussion: *Impact of CRISPR technology on repositories, IT & animal welfare***

**Introductory presentation & Chair: Lluís Montoliu, CNB-CSIC, Spain**

Panel members: Terry Meehan, Ramiro Ramirez-Solis, Lauryl Nutter

**16:45-18:15**

**Session 3: Technology Development II (16:45-18:15)**

**Chair: Raija Soininen, University of Oulu, Finland**

16:45 - 17:05

Automated Multi-Dimensional Metabolic & Behavioral Phenotyping of Mouse and Rat Models of Human Disease  
Harm J. Knot, TSE Systems, Germany

17:05 - 17:25

Informatics for the Capture, Analysis, and Dissemination of 3D Image Data  
Henrik Westerberg, Biocomputing, MRC Harwell, UK

17:25 - 17:55

Gnotobiotic mouse models to study the role of the commensal microbiota on host physiology  
Stephanie Ganal-Vonarburg, University of Bern, Switzerland

17:55 - 18:15

Ageing: MouseAge  
Ilaria Bellantuono & Paul Potter, University of Sheffield & MRC Harwell, UK

**18:15-19:00**

**Session 4: Network Session**

**20:00**

**DINNER**

**Hofbräukeller am Wiener Platz**



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29 JUNE 2016

## 08:30-10:30 Session 5: Translational Research

Chair: Yann Herault, PHENOMIN-iCS, France

- 08:30 – 09:00 Metabolic research  
Hans Häring, University of Tübingen, Germany
- 09:00 – 09:30 Multiparametric profiling of the immune system using flow and mass cytometry  
Bernard Malissen, Centre d'Immunophénomique, PHENOMIN-CIPHE, France
- 09:30 – 10:00 Genetic dissection of breast cancer development, therapy response and resistance in mouse models  
Jos Jonkers, Netherlands Cancer Institute, The Netherlands
- 10:00 – 10:30 Bridging the innovation gap – EATRIS ERIC and the ESFRI BMS infrastructure efforts to improve patient outcomes  
Giovanni Migliaccio, EATRIS, The Netherlands

10:30-11:00



## 11:00-12:45 Session 6: Industry & Innovative Medicines Initiative (IMI)

Chair: Dimitris Kontoyiannis, BSRC Alexander Fleming, Greece

- 11:00 – 11:25 Investigation of real-time PCR-based pathogen screening for monitoring mice in flexible film isolators  
Stephanie Durrand, Charles River, France
- 11:25 – 11:50 The Evolution of Preclinical Testing through Novel Humanized Precision Disease Models  
Maria Denis, Biomedcode, Greece
- 11:50 – 12:15 Finding Treatments for Metabolic Disease and its Complications  
Andrew Peterson, Genentech, USA
- 12:15 – 12:45 Preclinical Data Reproducibility and Model Validation in Neuroscience – the IMI Approach  
Thomas Steckler, Janssen Research & Development, Belgium

12:45-13:30 LUNCH

## 13:30-14:30 Panel Discussion: *Impact of rodents as models of human diseases*

Introductory presentation & Chair: Yann Herault, PHENOMIN-iCS

Panel Members: Hans Häring, Bernard Malissen, Andrew Peterson, Thomas Steckler,

## 14:30-15:45 Session 8: Translational Bioinformatics

Chair: Sabine Fessele, INFRAFRONTIER GmbH

- 14:30 – 14:50 A New Drug Target Identification and Prioritisation Web Platform  
Gautier Koscielny, GSK - Open Targets, UK
- 14:50 – 15:10 PhenoDigm and IMPC: New insights into the genetics of rare disease  
Terry Meehan, EMBL-EBI, UK
- 15:10 – 15:30 Network Biology for Big Data Integration  
Fabian Theis, Helmholtz Zentrum Munich, Germany

## Meeting Conclusions

- 15:40 – 15:45 Meeting wrap-up & Outlook  
Michael Hagn, Helmholtz Zentrum Munich, Germany

**IPAD-MD Industry & Innovation Workshop**  
**Participants List**

**Academia & Consortia**

Dobbie	Michael	Australian Phenomics Network	Australia	IMPC
Kontonyiannis	Dimitris	BSRC Alexander Fleming	Greece	INFRAFRONTIER
Montoliu	Lluis	CNB-CSIC	Spain	INFRAFRONTIER
Matteoni	Raffaele	CNR-IBCN	Italy	INFRAFRONTIER/IMPC
Raspa	Marcello	CNR-IBCN	Italy	INFRAFRONTIER/IMPC
Scavizzi	Ferdinando	CNR-IBCN	Italy	INFRAFRONTIER/IMPC
Sedlacek	Radislav	Czech Center for Phenogenomics	Czech Republic	INFRAFRONTIER/IMPC
Migliaccio	Giovanni	EATRIS-ERIC	The Netherlands	
Meehan	Terry	European Bioinformatics Institute	UK	INFRAFRONTIER/IMPC
Borchers	Christoph	Genome BC Proteomics Centre	Canada	
Aguilar	Antonio	Helmholtz Zentrum München	Germany	INFRAFRONTIER/IMPC
Becker	Lore	Helmholtz Zentrum München	Germany	INFRAFRONTIER/IMPC
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Raess	Michael	INFRAFRONTIER GmbH	Germany	INFRAFRONTIER/IMPC
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Moore	Mark	International Mouse Phenotyping Consortium	USA	IMPC
Seong	JeKyung	Korea Mouse Phenotyping Consortium	Korea	IMPC
Huylebroeck	Danny	KU Leuven	Belgium	INFRAFRONTIER
Kühn	Ralph	Max Delbrück Center for Molecular Medicine	Germany	
Potter	Paul	MRC Harwell	UK	INFRAFRONTIER/IMPC
Fray	Martin	MRC Harwell	UK	INFRAFRONTIER/IMPC
Westerberg	Henrik	MRC Harwell	UK	INFRAFRONTIER/IMPC
Hough	Tertious	MRC Harwell	UK	INFRAFRONTIER/IMPC
Fletcher	Colin	National Institutes of Health	USA	IMPC
Jonkers	Jos	Netherlands Cancer Institute	The Netherlands	INFRAFRONTIER/IMPC
Malissen	Bernard	Phenomin-CIPHE	France	INFRAFRONTIER/IMPC
Zarubica	Ana	Phenomin-CIPHE	France	INFRAFRONTIER/IMPC

Herault	Yann	Phenomin-iCS	France	INFRAFRONTIER/IMPC
Sorg	Tania	Phenomin-iCS	France	INFRAFRONTIER/IMPC
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Yuan	Julie	The Centre for Phenogenomics	Canada	INFRAFRONTIER/IMPC
Svenson	Karen	The Jackson Laboratory	USA	IMPC
Elias	Ivet	Universitat Autònoma de Barcelona	Spain	INFRAFRONTIER/IMPC
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Häring	Hans	University of Tübingen	Germany	
Ganal	Stephanie	University of Bern	Switzerland	
Brakebusch	Cord	University of Copenhagen	Denmark	INFRAFRONTIER
Takeo	Toru	University of Kumamoto	Japan	
Soininen	Raija	University of Oulu	Finland	INFRAFRONTIER
Bellantuono	Illaria	University of Sheffield	UK	
Rülicke	Thomas	University of Veterinary Medicine Vienna	Austria	INFRAFRONTIER
Ramirez-Solis	Ramiro	Wellcome Foundation Sanger Institute	UK	INFRAFRONTIER

### Industry Representatives

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Craig	David	Actual Analytics	UK
Bühren	Sebastian	Ayoxxa Biosystems	Germany
Villa	Valentina	Ayoxxa Biosystems	Germany
Zumbansen	Markus	Ayoxxa Biosystems	Germany
Denis	Maria	Biomedcode	Greece
Cozzi	Jean	Charles River	France
Durrand	Stefanie	Charles River	France
Volz	Thomas	Charles River	Europe
	Soren		
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Koscielny	Gautier	GSK- Open Targets	UK
Bartels	Jan	InnoSer Laboratories BV	The Netherlands
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Ebel	Rainer	Merck (Sigma-Aldrich)	Germany
Shmerling	Doron	Polygene	Switzerland
Selbert	Stefan	Polygene	Switzerland
	David-		
Eskenazis	Edgar	Polygene	Switzerland
Bernardini	Pietro	Tecniplast	Italy

Rosati	Giorgio	Tecniplast	Italy
Brux	Stefan	Tecniplast Deutschland GmbH	Germany
Kellner-Fendt	Florian	Tecniplast Deutschland GmbH	Germany
Knot	Harm J	TSE Systems	Germany