

Program and Abstracts of the 10th Transgenic Technology Meeting (TT2011)
TradeWinds Island Grand Resort, St Pete Beach, Florida, USA, October 24-26, 2011

The TT2011 Meeting is organized by the International Society for Transgenic Technologies (ISTT) (www.transtechsociety.org)

TT2011 Organizing Committee

Lluís Montoliu (National Center of Biotechnology - CNB, CSIC, Madrid, Spain), President

Thom Saunders (University of Michigan, Ann Arbor, MI, USA), Vice-President

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Johannes Wilbertz (KCTT, Karolinska Institute, Stockholm, Sweden)

Elizabeth Williams (TASQ, University of Queensland, Brisbane, QLD, Australia)

Tom Fielder (University of California-Irvine, CA, USA)

Jan Parker-Thornburg (M. D. Anderson Cancer Center, Houston, TX, USA).

TT2011 Registration and Administration (Technical Secretariat)

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Comparative Pathology Laboratory (www.vet.uga.edu/vpp/services/labs/comppath.php)

TT2011 Scientific and Social Program FINAL(October 15, 2011)

Sunday, October 23, 2011

10:00 - 14:00 ISTT Council meeting

15:00 - 18:00 Registration and Poster Set Up

18:00 - 22:00 Social event: Cruise and Pre-meeting dinner
Bus departs from TradeWinds Island Grand Resort at 18:00

Monday, October 24, 2011

Opening

8:45 - 9:00 Welcome Address: ISTT President, Organizing Committee

Session 1. Mouse Genetics

Chair: Carlisle Landel, Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA, USA

9:00 - 9:30 Genetic Background and Superovulation

Carlisle Landel

Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA, USA

9:30 - 10:00 Coat Colour in generation of chimeras

Marina Gertsenstein

Toronto Centre for Phenogenomics, Toronto, ON, Canada

10:00 - 10:30 How to Name a Mouse - Mouse Strain, Gene, and Allele Nomenclature

Howard Dene

The Jackson Laboratory, Bar Harbor, Maine, USA

10:30 - 11:00 Coffee Break

Session 2. Mouse Models of Disease

Chair: Jan Parker-Thornburg, M. D. Anderson Cancer Center, Houston, TX, USA

11:00 - 11:30 As quiet as a mouse: Use of genetically modified mice to study hearing and deafness

Andy K. Groves

Baylor College of Medicine, Houston, TX, USA

11:30 - 12:00 Development and preclinical evaluation of therapies for spinal muscular atrophy in mice

Arthur Burghes

The Ohio State University, Columbus, OH, USA

12:00 - 13:30 Lunch and **Posters**

Session 3: Animal Ethics, welfare and updated regulations on animal experimentation

Chair: Johannes Wilbertz, Karolinska Institute, Stockholm, Sweden

- 13:30 - 14:00 Animal Ethics
Karin Blumer
Novartis International AG, Basel, Switzerland
- 14:00-14:30 New European Directive on the protection of animals used for scientific purposes: Impact on the generation and management of genetically modified models
Belen Pintado
National Center of Biotechnology (CNB), CSIC, Madrid, Spain
- 14:30 - 15:00 Shifting Research Animal Regulations and Accreditation Standards: Hobbling or Facilitating Sound Science?
Chris Newcomer
AAALAC, Frederick, MD, USA
- 15:00-15:30 Coffee Break
- 15:30 - 17:30 Round Table: How to Run a Transgenic Unit
Chair: Tom Fielder, University of California-Irvine, CA, USA
Aimee B. Stablewski, Roswell Park Cancer Institute, Buffalo, NY, USA
Cheryl Bock, Duke Medical Center, Durham, NC, USA
Rebecca Haffner, Weizmann Institute of Science, Rehovot, Israel

Session 4: ISTT Prize

- 17:30-17:40 Introduction to the ISTT Prize winner
Lluís Montoliu
National Center of Biotechnology (CNB), CSIC, Madrid, Spain
- 17:40 - 18:45 8th ISTT Prize for outstanding contributions to transgenic technologies
Sponsored by genOway
Mammalian germline modification
Ralph L. Brinster
University of Pennsylvania, School of Veterinary Medicine, Philadelphia, PA, USA
- 19:00 Wine, Beer, Cheese and Posters

Tuesday, October 25, 2011

Session 5. Fundamental Methods for Transgenic Core Facilities

Chair: Elizabeth Williams, TASQ, University of Queensland, Brisbane, QLD, Australia

- 9:00-9:30 Essentials of Microinjection
Charles Hawkins
Johns Hopkins University, Baltimore, MD, USA
- 9:30-10:00 Factors Affecting In Vitro Fertilization
Jan Parker-Thornburg
M. D. Anderson Cancer Center, Houston, TX, USA
- 10:00-10:30 International Germplasm Transfer
Kent Lloyd
University of California-Davis, CA, USA
- 10:30-11:00 Coffee Break

Session 6: International initiatives, web resources for transgenic/KO mice

Chair: Peter Sobieszczuk, Auckland, New Zealand

- 11:00-11:30 Finding your transgenic mouse/ES cell line/gene with on-line resources
Peter Sobieszczuk
Auckland, New Zealand
- 11:30-12:00 Germline Performance of Gene-Targeted ES Cell Clones Imported from the International Knockout Mouse Consortium by a Transgenic Core Facility
Thom Saunders
University of Michigan, Ann Arbor, MI, USA
- 12:00-12:30 The IKMC Web Portal: a single access point to mouse knockouts from the International Knockout Mouse Consortium
William Skarnes
Wellcome Trust Sanger Institute, Hinxton, UK
- 12:30-14:00 **Posters & light Lunch, Posters, EVEN numbers**

Session 7: New technologies

Chair: Boris Jerchow, Max-Delbrück-Center for Molecular Medicine, Berlin-Buch, Germany

- 14:00-14:30 Authentic Rat Embryonic Stem Cells and Germline Transmission of Targeted Mutations
Qi-Long Ying
Center for Stem Cell and Regenerative Medicine, University of Southern California, LA, CA, USA
- 14:30 - 15:00 Pronuclear injection-based mouse targeted transgenesis by site-specific recombination
Masato Ohtsuka
Tokai University, School of Medicine, Isehara, Kanagawa, Japan

- 15:00 – 15:30 Development of vibratory microinjection systems
Fujio Miyawaki
Tokyo Denki University, Saitama, Japan
- 15:30 – 16:00 The JAX Colony Management System (JCMS): An extensible colony and phenotype data management system for transgenic mouse colonies
Chuck Donnelly
The Jackson Laboratory, Bar Harbor, Maine, USA
- 16:00-16:15 *selected short oral presentation*
Recombinase mediated promoter switching enables two different transgene expression levels to be achieved in a single line of targeted transgenic mice
Ben Davies
Wellcome Trust Centre for Human Genetics, University of Oxford, UK
- 16:15-16:30 *selected short oral presentation*
A "Lymphoreporter" mouse for in vivo imaging of lymphangiogenesis in development, inflammation and tumour metastasis
Sagrario Ortega
Spanish National Cancer Research Center (CNIO), Madrid, Spain
- 16:30 - 17:30 **Posters, ODD numbers**
- 17:30-19:30 **ISTT General Assembly**
- 20:00 **Conference Banquet**
Breck Decks, TradeWinds Island Grand Resort, St Pete Beach, Florida

Wednesday, October 26, 2011

Session 8: Beyond Mouse Transgenesis

Chair: Lluís Montoliu, National Center of Biotechnology (CNB), CSIC, Madrid, Spain

- 9:00-9:30 An introduction to non-mouse models
Bruce Whitelaw
Roslin Institute, University of Edinburgh, Midlothian, Scotland, UK
- 9:30-10:00 Transgenic pigs as models for translational biomedical research
Eckhard Wolf
University of Munich, Munich, Germany
- 10:00-10:30 The use of transgenic zebrafish to investigate biological processes in vivo
Robert Kelsh
Centre for Regenerative Medicine, University of Bath, Bath, UK
- 10:30-11:00 Coffee Break

Session 9: Animal Biotechnology

Chair: Wojtek Auerbach, Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA

- 11:00 - 11:30 The Regulation and Politics of Food from Genetically Engineered Animals
Alison L. Van Eenennaam
University of California-Davis, CA, USA
- 11:30 - 12:00 Suppression of bird flu transmission in transgenic chickens
Helen Sang
The Roslin Institute, University of Edinburgh, Midlothian, Scotland, UK
- 12:00-12:30 Beyond the Mouse - Novel Genetically Engineered Animals
Edward Weinstein
Sigma Advanced Genetic Engineering Labs, St. Louis, MO, USA
- 12:30-12:45 *selected short oral presentation*
Production of transgenic sheep by inhibin α shRNA
Xiangyang Miao
Institute of Animal Sciences, Chinese Academy of Agricultural Sciences,
Beijing, China
- 12:45-13:00 *selected short oral presentation*
Targeted transgene integration in mouse embryos using "open source" zinc
finger nucleases
Mario Hermann
Institute of Laboratory Animal Sciences, University of Zürich, Zürich,
Switzerland
- 13:00 - 14:30 Lunch and **Posters**

Session 10: Manipulating the Rat Genome

Chair: Thom Saunders, University of Michigan, Ann Arbor, MI, USA

- 14:30 - 15:00 Mutating the rat genome with transposons
Joseph Ruiz
Transposagen Inc., Lexington, KY, USA
- 15:00 - 15:30 The Power of Rat Models – Targeted Nucleases
Aron M. Geurts
Medical College of Wisconsin, Milwaukee, WI, USA
- 15:30 – 15:40 Introduction to the ISTT Young Investigator Award
Thom Saunders, Vice-President of the ISTT
Paul Sheiffle & Lisa Aronov, inGenious Targeting Laboratory
- 15:40 – 15:55 1st ISTT Young Investigator Award, sponsored by inGenious Targeting Laboratory
Short talk: *Generate Animal Models by Stem Cells Technology*
Xiao-Yang Zhao
State Key Lab of Reproductive Biology, Institute of Zoology, Chinese Academy of Sciences, Beijing, PR China
- 15:55 – 16:15 Diplomas for the ISTT Registration Awards
TT2011 Best Poster awards
Presentation of the TT2013 meeting
Concluding Remarks
- 16:15 **End of TT2011 meeting**