

LATEST ADVANCES IN GENOME EDITING AND ART TECHNOLOGIES
IN LABORATORY MICE

May 15-19th, 2023

Organized by Laboratory Animals Biotechnology Unit

Institut Pasteur de Montevideo, Uruguay

PROGRAM

Monday 15th

08:45 – 09:00 Registration

09:00 – 09:20 Teacher´s and student´s presentation

09:20 – 09:30 Unidad de Biotecnología en Animales de Laboratorio - presentation
(M. Crispo)

09:30 – 11:00 Lecture: Genome modification in animals: past, present and
future (L. Montoliu)

11:00 – 11:15 Coffee break

11:15 – 12:30 Lecture: Main applications of CRISPR system in rodents (A. Muro)

12:30 – 14:00 Lunch

14:00 – 15:00 Lecture: Basic CRISPR design (A. Muro)

15:00 – 17:00 Practical/Informatics session: step by step tutorial for the design of
CRISPR reactives (part I) (L. Teboul, J. Pórfido, A. Muro)

17:00 Toast; Informal get-together

Tuesday 16th

09:00 – 11:00 Practical/Informatics session: step by step tutorial for the design of CRISPR reagents (part II) (L. Teboul, J. Pórfido, A. Muro)

11:00 – 11:15 Coffee break

11:15 – 12:15 Lecture: Validation of CRISPR reagents (L. Montoliu)

12:15 – 13:00 Lunch

13:00 – 14:00 Lecture: CIGM presentation. Embryo microinjection and electroporation approaches (F. Langa)

14:00 – 17:00 Practical session: Microinjection and electroporation of mouse embryos (M.N. Meikle, G. Schlapp, M. Crispo, F. Langa)

Wednesday 17th

09:00 – 10:30 Lecture: Genotyping strategies and validation of GE alleles (L. Teboul)

10:30 – 10:45 Coffee break

10:45 - 12:30 Practical/Informatics session: step by step tutorial for the design of CRISPR reagents (part III) (L. Teboul, J. Pórfido, A. Muro)

12:30 – 13:30 Lunch

13:30 – 14:30 Lecture: Functional validation of GE mouse models (J. Pórfido)

14:30 – 15:30 Lecture: Controlling food intake and body weight using CRISPR/Cas9 in mice (M. Rubinstein)

15:30 – 15:45 Coffee break

15:45 - 17:00 Round table: CRISPR troubleshooting (all together)

Thursday 18th

09:00 – 10:00 Lecture: *In vitro* fertilization (J. Jaubert)

10:00 – 12:00 Practical session: *In vitro* fertilization (Part I) (M. Raspa, J. Jaubert)

12:00 - 13:30 Lunch

13:30 – 15:15 Practical session: *In vitro* fertilization (Washing) (M. Raspa, J. Jaubert)

15:15-15:30 Coffee break

15:30-17:00 Students paper's discussion

20:00 - Social event

Friday 19th

09:00 - 10:30 Practical session: *In vitro* fertilization (Part II). Count embryos from IVF (M. Raspa, J. Jaubert)

10:30-10:45 Coffee break

10:45-12:00 Lecture: Embryo and sperm cryopreservation (M. Raspa)

12:00 - 13:00 Lunch

13:00 – 16:00 Practical session: Embryo and sperm cryopreservation (M. Raspa, J. Jaubert)

16:00 - 17:00 Wrap up - End of the course