



Stem Cell and Nuclear Transfer Cloning technologies

WORKSHOP

Gödöllő, Hungary

25.01.2010.–30.01.2010.

■ AGENDA ■

MONDAY, 25th January 2009

Morning (9:00 a.m. – 12:00 p.m.)

Welcome by Dr Andras Dinnyes

- Introduction to the training program
- Information about BIO: FP7 projects, overview of research activities
- How to communicate genetic research and ethical issues connected to the wider public
- **Coffee Break 15 min.**
- Somatic Cell Nuclear Transfer (Cloning)
- Guided tour through the building

Lunch (12:00 p.m. – 1:30 p.m.)

Afternoon (1:30 p.m. – 5:00 p.m.)

Production of transgenic cell and animal models (Dr. Melinda Pirity, Dr. Olga Ujhelly)

- Gene construct preparation, targeting strategy
- Introducing genetic alterations to mammalian cells
- The mouse – as a genetically tractable model system of human disease
- Induced Pluripotent Stem (iPS) cells – as new tools for future regenerative medicine and drug testing

Coffee Break 15 min.

Visualising gene expression (Dr. Ana Claudia Carstea)

- Introduction to fluorescence microscopy
- Staining for cardiac gene expression – visualising genes
- Staining for neuronal gene expression
- Staining for pluripotency (stem cell markers)
- Summarise impressions

TUESDAY, 26th January 2009

Morning (9:00 a.m. – 12:00 p.m.)

Microinjection and chimera technologies (Dr. Szilard Bodo, Dr. Ana Claudia Carstea)

- Collecting pre-implantation mouse embryos for microinjection
- Microinjection techniques
- **Coffee Break 15 min.**
- Chimera formation
- Summarise impressions

Lunch (12:00 p.m. – 1:30 p.m.)

Afternoon (1:30 p.m. – 5:00 p.m. Incl. 15 min. Coffee Break at 15:30 p.m.)

Editorial Seminar by Ms Daniela Mezzena (Scientific Communication, EURAC)

WEDNESDAY, 27th January 2009

Morning (9:00 a.m. – 12:30 p.m. Incl. 15 min. Coffee Break at 11:00 a.m.)

Practical Courses (see detailed programme below)

- Three groups of journalists (Group 1–3), each having five members
- Each group will have introductory practical training in Molecular Biology (MB), Tissue Culture (TC) and Flurescent Microscopy (FM).
- Group 1: MB, Group 2: TC, Group 3: FM.

Lunch (12:30 p.m. – 2:00 p.m.)

Afternoon (2:00 p.m. – 5:00 p.m. Incl. 15 min. Coffee Break at 15:30 p.m.)

- Summarise impressions – informal chat with practical course teachers, laboratory members
- Interviews

THURSDAY, 28th January, 2009

Practical Courses (see detailed programme below)

Morning (9:00 a.m. – 12:30 p.m. Incl. 15 min. Coffee Break at 11:00 a.m.)

- Three groups of journalists (Group 1–3), each having five members
- Each group will have introductory practical training in Molecular Biology (MB), Tissue Culture (TC) and Flurescent Microscopy (FM).
- Group 1: TC, Group 2: FM, Group 3: MB.

Lunch (12:30 p.m. – 2:00 p.m.)

Afternoon (2:00 p.m. – 5:00 p.m. Incl. 15 min. Coffee Break at 15:30 p.m.)

- Summarise impressions – informal chat with practical course teachers, laboratory members
- Interviews

FRIDAY, 29th January, 2009

Practical Courses (see detailed programme below)

Morning (9:00 a.m. – 12:30 p.m. Incl. 15 min. Coffee Break at 11:00 a.m.)

- Three groups of journalists (Group 1–3), each having five members
- Each group will have introductory practical training in Molecular Biology (MB), Tissue Culture (TC) and Flurescent Microscopy (FM).
- Group 1: FM, Group 2: MB, Group 3: TC.

Lunch (12:30 p.m. – 2:00 p.m.)

Afternoon (2:00 p.m. – 5:00 p.m. Incl. 15 min. Coffee Break at 15:30 p.m.)

- Ethics and Animal Welfare Issues
- Issues related to cloning and transgenic technologies
- Summarise impressions – informal chat with practical course teachers, laboratory members
- Guided tour to the main building of “Szent Istvan University”.

Detailed Programme of the Practical Courses

Tissue Culture Laboratory (TCL):

- Introduction of the TCL and Stem Cell laboratory by Dr. Csilla Nemes
- Guided tour: Visiting the TCL
- Observing ES (Embryonic Stem) Cell lines in TCL
- Mouse ES cell line establishment, maintenance and differentiation

Molecular Biology Laboratory (MBL):

- Introduction of the MBL by Dr. Anita Feher
- Guided tour: Visiting the MBL
- How to make a target vector
- Visualisation (gel electrophoresis) of DNA fragments
- Cutting (restriction digestion) of DNA fragments
- Re-joining (ligation) of DNA fragments

Flurescent Microscopy (FM):

- Introduction to Microscopy by Dr. Ana Claudia Carstea, Dr. Szilard Bodo
- How microscope works?
- How immunohystochemistry works?
- Flurescent visualization of cardiac, neural and pluripotency markers

One evening – social event – dinner, visiting a “Palinka House (a small shot of a strong alcoholic beverage; like “grappa or Snaps”), or a contemporary restaurant in Budapest with assorted international and Hungarian wine selection– in order to promote non-formal discussion and information flow between journalists and scientists. (Participants own expense)