

Meeting EUROCLAST Kiel, Germany December 7th- December 10th 2014

Defining the Models

Arrival and checkin at Maritim Hotel Bellevue, Kiel

Sunday December 7th by 2PM

Sunday, December 7th

14.00-14.30 Welcome (Vincent) and overview of the meeting (Paul/Markus)

Learning outcomes (Miep)

14.30-17.00 **Transgenic technologies**

14.30-15.15 **Workshop** “How to make a transgenic mouse, the basics”

Focus on the different types of transgenics; students will have prepared using teaching materials circulated previously. Can include some group work.

Paul Saftig and Markus Damme.

15.15-16.00 **Lecture** “New techniques for genetic manipulation such as TALEN and CRISPR”

Explaining methodology and how to use this to generate model systems; pros and cons of different approaches.

Radek Sedlacek (Prague).

16.00-16.15 Short Break

16.15-17.00 **Interactive lecture** “How to analyse bone phenotypes in transgenic mice”

Focus on interpretation of analysis, best age for analysis, in vivo, ex vivo and in vitro analyses and “induced” phenotypes e.g., after surgery or other interventions. Will include questions to the group.

Eric Hesse (Hamburg).

17.00-18.00 **Discussion session** after collecting some refreshments.

Topics follow on from the earlier lectures: animal experimentation, including ethics and scientific governance; also discussing the opportunities and model systems available to the consortium and their translational potential. Use of some case-studies in relation to scientific integrity/governance.

Facilitated by **Miep Helfrich, Paul Saftig, Eric Hesse** and attended by all ESRs and all partners and invited speakers. Pertinent questions about animal ethics to be collated for animal ethics session on Monday morning.

19.00 Dinner

20.00 PIs hold Management meeting: General Assembly (incl. supervisory board), (restaurant or meeting room); ESRs hold student board meeting (bar)

21.00 Social time

Monday December 8th

Two supervisory board members and Mirjam Leloux join us.

- 9.00-11.00 **Workshop** “The science environment”
Providing knowledge about IP and how to protect this. Delivered in an interactive format. Attended by all ESRs and supervisors welcome.
Mirjam Leloux : Intellectual Property & Technology Transfer.
- 11.00-11.30 **Break**
- 11.30 **Lecture** “Animal ethics” Explanation of the key regulations as they pertain in Germany and most of Europe. Discussion of questions collated on Sunday.
Gerhard Schultheiß, leader of the transgenic facility in Kiel.
- 12.15-13.15 LUNCH**
- 13.15-13.30 Introduction** from advisory board member Tim Arnett who joins us for the rest of the day.

Chair: Vincent Everts
- 13.30-17.30 Progress reports from ESRs**

Presentations by ESRs chaired by their respective work package leads (15 min per ESR, incl. short discussion, NOTE there will be a plenary discussion at the end of each work package). Presentation to include goals for the next 6 months both in terms of project as well as personal development.
- 13.30-14.10 Work package 1:** Different progenitor populations for osteoclasts

Chair Teun de Vries
- 13.30 I Osteoclast precursors in inflamed tissues (Sara Sprangers)
- 13.45 II Identification of molecular markers for a specific subset of osteoclasts in inflammation related bone pathologies (Yixuan Cao)
- 14.00-14.10 Discussion
- 14.10-16.25 Work package 2:** Resorption machinery of different osteoclast populations

Chair Tiina Laitalen Leinonen
- 14.10 III Importance of Different Proteolytic Enzymes for Osteoclast Differentiation and Activity (Vikte Lionikaite)
- 14.25 IV Mechanism/ molecules essential in sealing zone and ruffled border formation (Sandra Segeletz)
- 14.40 V Analysis of mouse models and osteoclast function with lysosomal deficiencies (David Massa)
- 14.55-15.10 Discussion of projects III-V in work package 2
- 15.10-15.40 BREAK**

Continuing with work package 2

Chair Tiina Laitalen Leinonen

- 15.40 VI Mechanisms and molecules involved in ruffled border formation and transcytosis (Ahn Nhi Tran)
- 15.55 VII Vesicular content and trafficking in osteoclast using advanced imaging and proteomic techniques (Arjen Gebraad)
- 16.10 VIII Studying vesicular content and trafficking in osteoclasts using advanced imaging, including TEM tomography (Emma Mc Dermott)
- 16.25-16.40 Discussion of projects III-V in work package 2

16.40-17.20 Work package 3: Extrinsic regulation of different osteoclast subsets

Chair Pernilla Lang

- 16.40 IX "Regulation of osteoclast subsets by systemic and local factors (Laia Mira Pascual)
- 16.55 X Modulation of formation and activity of osteoclasts by anti-resorptive compounds, focus on assay development (Guiliana Ascone)
- 17.10-17.20 Discussion of work package 3
- 17.20-17.40 Work package 4:** Communication between osteoclasts and other bone cells

Chair: Kim Henriksen

- 17.20 XI Role of osteoclast-derived anabolic factors (Henrik Löfvall)
- 17.35-17.40 Discussion of work package 4
- 17.40 END OF SESSION, SHORT BREAK**
- 18.00-18.45 Plenary discussion led by advisory board member. Feedback about the projects and training provided by the consortium. All ESRs and partners present to answer questions
- 18.45-19.30 Meeting between ESRs and their Euroclast mentors, everyone finds their own space; drinks available at the bar
- 19.30 Dinner
- 21.00 Feedback from advisory board to Euroclast management board

Tuesday December 9th

- 09.00-11.00 **Visit** to the imaging Centre Claus Glüer (Molecular Imaging North Competence Center (MOIN CC) and to labs of Paul Saftig.
- 11.00-12.00 **Lecture** “Lysosomes in osteoclasts and lysosomal diseases”
Illustrating the various diseases that arise from defects in lysosomal enzymes, where possible link to bone disease
Paul Saftig and Markus Damme
- 12.00-13.00 Lunch**
- 13.00-14.00 Time for meetings of the various teams: webteam, editorial team, Management Board etc.
- 14.00-15.00 Question and answer session, also in relation to the teams that have just met, ESRs can ask what they like, partners answer
- 16.00-16.30 Management board gives feedback to individual ESRs about their personal development plans, 3 groups of students, 10 min per student max
Vincent, Paul and Miep give the feedback
- 16.30 Social event: visit to Xmas market in Kiel
- 19.30 Dinner
- 20.30 Social time

Wednesday December 10th

- 08.00 Breakfast
- 09.00 Depart (transport to Hamburg airport to be organised)

General: Prior to the meeting some teaching materials will be distributed in relation to generation of transgenic animals.

Students are required to send their personal development plans and what they have achieved so far (using the template Bas has sent) prior to the meeting so that the management board can discuss this in preparation for the individual feedback session (where each student will meet with one member of the board only, parallel sessions).

During the meeting some time will need to be created to allow students to ask general questions that should be addressed. These can be related to gaps in knowledge or to issues specific to Euroclast. We can hold ad hoc “catch-up” sessions around specific topics early in the morning, before the start of the official programme, or during dinner or after dinner.