

MGC-OOA course for PhD students
“Transgenesis, gene targeting and *in vivo* imaging”

Leiden University Medical Center – Building 1

Organizers: Els Robanus-Maandag (LUMC), Hein te Riele (NKI), Sjef Verbeek (LUMC)

Monday, June 8, 2015 – LUMC hospital (building 1), H1-14

08.30 – 09.00	Registration	
09.00 – 09.15	Introduction/course setup	Sjef Verbeek/ Els Robanus Maandag
09.15 – 10.00	Origin/genetics of laboratory mice	Margriet Snoek
10.00 – 10.45	Conventional transgenesis/ Gene targeting in ES cells	Sjef Verbeek
10.45 – 11.00	Coffee break move to building 1, P0-112/115	
11.00 – 12.00	CRISPR/Cas9-assisted gene modification/gRNA design	Sjef Verbeek/ Cor Breukel
12.00 – 12.45	Gene editing by CRISPR/Cas9	Henri v/d Vrugt
12.45 – 13.45	Lunch, P0-112/115	
13.45 – 17.00	Demonstrations/literature assignment <i>a. Microinjection</i> <i>b. ES cell culture</i>	Margot Linssen Jill Claassens/ C. Brouwers
16.00 – 16.45	Histology/obduction	Daniela Salvatori

Tuesday, June 9, 2015 – LUMC hospital (building 1), H1-14

09.00 – 09.45	Oligo targeting <i>versus</i> CRISPR/Cas9 in ES cells	Hein te Riele
09.45 – 10.45	Conditional gene targeting	Els Robanus Maandag
10.45 – 11.00	Coffee break move to building 1, P0-112/115	
11.00 – 11.45	How to make a construct/ recombineering	Cor Breukel
11.45 – 12.30	ES cell derivation via 2i culture	Ivo Huijbers
12.30 – 13.30	Lunch, P0-112/115	
13.30 – 14.00	Imaging technologies	Eric Kaijzel
14.00 – 15.30	Demonstrations <i>a. Bioluminescence</i> <i>b. Multiphoton imaging</i> <i>c. MRI</i>	Ivo Que Annelies van der Laan Ernst Suidgeest
15.30 – 15.45	Tea break (P0-112/115)	
15.45 – 17.00	Preparation of literature presentations	

Wednesday, June 10, 2015 – building 1, P0-112/115

09.00 – 10.30	Literature presentations/discussion	
10.30 – 10.45	<i>Coffee break</i> (P0-112/115)	
10.45 – 11.15	Fragile X syndrome	<i>Renate Hukema</i>
11.15 – 11.45	Cell fate in hematopoiesis	<i>Catherine Robin</i>
11.45 – 12.30	Mouse clinic	<i>Jos Jonkers</i>
12.30 – 13.30	<i>Lunch</i> (P0-112/115)	
13.30 – 14.15	<i>C. elegans</i>	<i>Rik Korswagen</i>
14.15 – 15.00	Zebrafish	<i>Anna-Pavlina Haramis</i>
15.00 – 15.15	<i>Tea break</i> (P0-112/115)	
15.15 – 16.00	Transgenesis and live imaging in <i>Tribolium castaneum</i>	<i>Maurijn van der Zee</i>
16.00 – 17.00	Forum discussion <i>Which animal model is the best? Pros and cons.</i> <i>Which technology from other model systems can we apply to our model system?</i> <i>The future of animal modeling (in relation to deep sequencing in humans)</i>	

Thursday, June 11

Friday, June 12

All day

8th Workshop on Innovative Mouse Models
Leiden University Medical Center
Building 1, Lecture Hall 5
<http://research.nki.nl/immworkshop/>

Ten invited speakers from leading laboratories present the latest developments on genome alteration protocols (with a focus on CRISPR/Cas9) and novel imaging technologies. Keynote lectures, combined with oral presentations of selected abstracts encourage in-depth discussion of novel technologies.

(free attendance for course participants)

12.30 – 13.30 Meet-the-expert lunch meetings with keynote speakers
(total time for lunch 1.5 h)