

## **IMM Workshop Webinar series 2021**

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Like other meetings, the 11th edition of the Innovative Mouse Models workshop had to be moved to an online platform due to the ongoing Covid-19 restrictions. We chose a format of four weekly 1½ hour long webinars at a fixed time and day throughout June 2021, each consisting of 2 or 3 talks on a common theme. Because of the increasing technical possibilities of editing of the genomes of different species the IMM webinars for the first time discussed other species than mice

The IMM webinars kicked off on **June 3** with the topic of **New CRISPR/Cas technologies**. Scott Lowe (Sloan Kettering Institute, USA) discussed their work on somatic (in contrast to germline) genome editing to study cancer mechanisms. His talk was followed by Tomomi Aida (Massachusetts Institute of Technology, USA) he spoke about genome editing of non-human primates as well as their shortly before published work on the use of Rad51 to increase homozygous gene conversion and thus improve the efficiency of genome editing. Finally, the first session was closed by a talk from Hein te Riele (Netherlands Cancer Institute, Netherlands) on their unpublished work on 'hideRNAs' for generating single-base-pair substitutions with higher efficiency.

**Relevance of Disease Models** was the topic of the second webinar session on **June 10**. Barbara Rehermann (National Institutes of Health, USA) spoke about the importance of wild mouse microbiota for preclinical models of inflammation and metabolism. Next, IMM's first foray beyond mouse models was done by Angelika Schnieke (Technical University Munich, Germany) who discussed the advantages and disadvantages of pigs as preclinical models.

On **June 17** the topic was **Models for Viral Infection**. Ralph Baric (UNC Gillings School, USA) talked about their many different mouse models to study corona infection, and how they have been essential in the global fight against Covid-19. This was followed by a comparison of different animal models to study SARS-CoV-2 infection by Barry Rockx (Erasmus MC, Netherlands).

The final session of the IMM webinar series on **24 June** was on **Ethics and Alternatives**. Daniela Salvatori (Utrecht University, Netherlands) discussed her institute's efforts on TPI, the Dutch government's initiative to stimulate animal-free alternatives in research. Kirk Leech (European Animal Research Association) explained how researchers themselves need to improve their open communication regarding their use of and motivations for animals in science to regain control of this discussion. Lluís Montoliu (National Centre of Biotechnology, Spain) was the final speaker in this session giving an overview of the use of animals in research in Europe, including good examples but unfortunately also still bad examples. As always, the ethics and alternatives session, and with that the 11<sup>th</sup> IMM webinar series was concluded with a general discussion with the audience, led by Jos Jonkers (Netherlands Cancer Institute, Netherlands) and Peter Hohenstein (Leiden University Medical Center, Netherlands).

The online format of IMM 2021 resulted in workshop that was very different from the normal in-person meetings in Leiden. The social interactions in a relaxed atmosphere the IMM workshops are famous for were this time not possible. There were however also advantages. Many more people registered for the free webinars, which resulted in a maximum number of people being logged into the system at a given time of 278 delegates. The lower costs of the online format not only enabled us to make registration to the series free, but also resulted in low-costs options for sponsors to reach their customer base. In all it was a very successful way to keep in touch with the IMM audience and sponsors until the next IMM in 2023. We hope to be able to organize the 12th IMM in-person again, but IMM-2021 has given us a good format if this would still not be possible.

Even a low-cost online webinar series cannot do without sponsors, and we would specifically like to thank the ISTT for their continuing support towards the IMM workshops. Although the target audience for the IMM workshops and the TT meetings (and therefore the ISTT) is overlapping, it is clear that each has its own use in supporting the transgenic animal model community.