

The 156th RIKEN BRC SEMINAR



2019年 4月 11日 (木) 16:00～

バイオリソースセンター1階 森脇和郎ホール

Dr. Lydia Teboul

The Mary Lyon Centre, MRC Harwell Institute

Generation and validation of increasingly complex alleles by genome editing



Mouse models are valuable tools to understand genes functions, genetic diseases and to develop and test new therapeutic treatments *in vivo*. The ability to introduce tailored modifications within the mouse genome is essential to generate them. The CRISPR/Cas9 system has brought new perspectives for the generation of mouse models in a more efficient and precise fashion, at reduced price, all within a shorter time scale. We are developing protocols for the production of increasingly complex alleles. Alongside the generation of mutants, their validation represents a new challenge that is essential to meet to ensure research reproducibility. We will present our recent developments of processes for genome engineering. We will also show the first results of a new pilot for the use of the long-read sequencing for founder screening and model validation. With new processes for allele validation, we uncover further variability in the outcome of applying CRISPR/Cas9 to the modification of mouse early embryos. This includes discrete sequence changes, the generation of larger than expected deletions and chromosomal rearrangements. We will show how extensive validation recognises unwanted variants at early stages of the mutagenesis process and reduces the number of animals used for genome engineering.

当セミナーは、学生、研究者、技術者を対象としたものです。
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研究機関が発行する身分証をご持参になり、守衛所にて
入構証をお受け取りください。

連絡先: 実験動物開発室

綾部 信哉 (029-836-9529)

shinya.ayabe@riken.jp