**CRISPR targeted mouse production**

The Transgenic Mouse Facility (TMF) provides service of mutant mouse model production using CRISPR/Cas9 gene editing technique for investigators on campus. The following FAQs are general information for CRISPR-targeted mouse production. If you have specific questions related to your project, please contact TMF Director, Fuming Pan, fpan@illinois.edu, 217-244 0649.

**Q. How to start making a CRISPR targeted mouse?**

**A.** You first need to obtain CRISPR/Cas9 reagents. TMF can inject CRISPR reagents (RNAs, ODNs, Cas9 protein) into mouse zygotes to produce mutant mice. There are some options obtaining CRISPR reagents: (a). You can design and produce or purchase reagents yourself. (b). You can find a collaborator who has experience in the process of making these reagents. (c). You can use commercial vendors for assistance in design and production at a reasonable cost.

**Q. How long to get potential CRISPR targeted mice?**

**A.** Once CRISPR reagents are ready to use, it takes approximately 6-8 weeks for TMF to produce pups and transfer them to your protocol for genotyping. Founders usually have germline transmissions with exception of some mosaics.

**Q. How to screen potential CRISPR targeted pups?**

**A.** There are different ways for screening founder pups. (a). Endonuclease mismatch assays can determine if a mouse is heterozygous or mosaic for any variations in your PCR product. Surveyor Kit (IDT) and Clontech Guide-it Kit are commonly used. (b). A restriction digestion may be used to determine the loss or gain (indels) at the cutting site. (c). Direct sequencing of a PCR product may be used but it could be difficult to interpret.

**Q. How much for making CRISPR targeted mice?**

**A.** The Transgenic Mouse Facility offers the same rate for this service as for “Transgenic Mouse Production”.