**Embryonic Stem Cell Injection**

**Prior to injection**

- Client must complete both the ‘Request for Genetic modification’ and ‘Biological Risk Assessment’ forms and both must be approved before work can commence.
- A short description of the ES cells to be injected and the experimental rational must be given to the Transgenic Mouse Facility (TMF) including a test genotyping PCR performed on ‘spiked’ genomic DNA.
- Client must at least one frozen vial of each ES cell clone to be injected at least two weeks prior to the commencement of blastocyst injections. This is to allow for expansion of the ES cell clone and pluripotency testing.
- Payment must be received before work can commence on the project.

**During blastocyst injection**

- The TMF will generate, inject and transfer at least 40 blastocysts in the first wave of injections. If no germline positive chimeras have been generated in the initial stages further day sessions can be instigated by the client on a pay-as-you-go basis.
- The TMF will set up breeding pairs to assess the germline transmission competency of the ES cell chimeric mice.
- Tissue samples from germline positive mice will be provided to the client from mice aged between 2-4 weeks.
- The new genetically modified mouse strain will then be transferred to BMSU

**After microinjection**

- The TMF will be available for advice on animal husbandry etc.
- The TMF is not responsible for unsuccessful ES cell injection experiments. Unfortunately some ES cells disrupt normal embryonic development when incorporated into mouse embryos at high levels so only low level chimeras are produced. Also some ES cells lack the ability to contribute to the germline of the mouse and will therefore only produce WT progeny.