The Histology and Genetic Modification (HGeM) Core Facility at the University of Oregon (UO) provides a technology resource to the local and regional research community to support the generation, analysis and maintenance of genetically modified organisms. The facility offers expertise in a wide variety of technical procedures:

* pronuclear injections
* blastocyst injections
* tissue culture for the manipulation of mouse Embryonic Stem (ES) cells
* cryopreservation of embryos
* *in vitro* fertilization
* rederivation of mouse strains
* customized project and colony management
* construct design/bioengineering
* RNA *in situ* hybridization
* genotyping services
* cryo sections

HGeM also operates a transgenic barrier holding facility. The facility is fully equipped for microinjections, microsurgery, cryopreservation, gene targeting and tissue culture as well as standard molecular techniques.

Since 2003, the Transgenic Mouse Facility has produced over one hundred unique transgenic mouse lines. The facility also offers additional services in gene targeting and blastocyst injections. In 2013 the core mergede with histology to form the Histology and Genetic Modification Core Facility (HGeM).

Staff are continually improving techniques and services through formal training and partnership with other facilities. Examples include training at the [**Jackson Laboratories**](http://www.jax.org/) in cryopreservation and recovery of cryopreserved material and a hands-on course in the Tetraploid Embryo Complementation Assay at the TCP at Mount Sinai Hospital, organized by Andras Nagy and Kristina Vintersten and training at the Allen Institute for Brain Science.

TMF staff also maintain connections with active research through meetings and conferences, including regular attendance at [**International Society for Transgenic Technologies**](http://www.transtechsociety.org/) (ISTT) events, where we have been a member since 2007, the [**TT2008 meeting**](http://www.mshri.on.ca/nagy/tt2008/) in Toronto, Ontario, Canada, as well as the 2008 "Advances in Transgenic Animal Research" conference in Houston (TX, USA), at the MD Anderson Cencer Center, organized by Jan Parker-Thornburg in collaboration with ISTT as well as the TT2016 meeting in Prague, Czech Republic.