



TIGM houses unique, world-class scientific facilities on the Texas A&M University main campus in College Station, TX. The central feature of TIGM's 34,000 square foot facility is a Specific Pathogen Free (SPF) maximum barrier (shower-in) mouse vivarium. This breeding vivarium can house more than 40,000 mice in 8,000 high-density micro isolator cages. An adjoining research vivarium can house an additional 30,000 mice. In addition, TIGM houses onsite molecular biology core facilities, tissue culture facilities, a microinjection suite, a laboratory for cryo-preservation of stem cells, embryos and sperm and a bioinformatics platform including an ES cell library database and software for tracking mouse production.

TIGM currently maintains the world's largest library of mouse stable knockout embryonic stem (ES) cells, with a total of over 350,000 clones representing more than 10,000 unique inactivated genes and serves the international scientific community as a major source of genetically modified murine ES cells and knockout mice. Combined, these core resources are used by scientists in 26 countries around the world to create and study novel mouse models for human and veterinary diseases.

Since beginning its operation in 2006, TIGM has delivered more than 5,250 ES cell clones and 380 mouse lines to investigators in more than 340 different academic and research institutions, as well as commercial entities from 26 countries. More than 8,600 individual investigators from more than 900 different academic, research institutions as well as commercial entities representing 40 countries worldwide, have inquired about TIGM resources or services. The TIGM International Mouse Repository currently has 204 C57/BL6N and 61 129/SvEv x C57BL6/N cryopreserved lines most of which are available to the public under the same Terms and Conditions as any of our other lines and can be resuscitated more quickly and at a significantly reduced cost compared to starting from ES cells. Also, TIGM has been actively involved in developing CRISPR/Cas9 technology since 2015 and has already produced 19 mouse lines, 4 of which carry NHEJ-mediated deletions, and 15 - HDR-mediated insertions.

TIGM provides transgenic core services to researchers within the Texas A&M system and offers these same services to researchers outside the system as well. These services include blastocyst or pronuclear injections (including CRISPR/Cas9), rederivation of transgenic lines, embryo transfer, design and production of vectors for custom knockout projects (stable and Cre-ready conditional), various aspects of ES cell manipulations (such as ES cell isolation from embryos, electroporation/colony screening, and ES cell differentiation), embryo and sperm cryopreservation, and long-term storage of any cryopreserved materials split between two autonomous locations on campus for extra security. TIGM can provide a variety of breeding services including routine colony maintenance, genotyping and expansion. We can also perform animal studies to obtain information about genetics, viability and fertility of mouse lines, compound administration, as well as tissue collections and arrange for their analysis or imaging using two x-ray based imaging units (DXA and microCT) we currently house.

TIGM's mutant ES repository is also powerful tool for high throughput target discovery and validation. The advantage of using ES cells in gene target screening is that they can model specific tissues/cell types using a totally in vitro system. TIGM now offers high throughput ES screening as a fee-for service or collaboration.

By facilitating translational research using functional genomics, scientists at TIGM are pioneering the development of life-changing medical breakthroughs and advancing personalized medicine on a global scale. To date, more than 212 peer reviewed journal articles have been published using TIGM resources in highly ranked magazines including Science, Nature, and Cell. For a full list of publications which used TIGM resources please visit our website.

For more information about TIGM and how TIGM can help you achieve your research goals please visit [www.tigm.org](http://www.tigm.org), email [info@tigm.org](mailto:info@tigm.org) or call 888-377-TIGM.