# VAN ANDEL INSTITUTE

Business Development / Technology Transfer

## Application

- Provides a means for testing a wide spectrum of MET-expressing human tumor cell lines and tumor xenografts

## Benefit

- Powerful tool to study MET-activation in different tumor types

## VARI IP-00009

**Patent Status:** Issued
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## Human Hepatocyte Growth Factor (hHGF) Mouse Model

Immunocompromised animals that express human hepatocyte growth factor/scatter factor (HGF/SF) provide optimal growth conditions for human tumor xenografts.

## Background

In 2014, there will be an estimated 1.6 million new cancer cases and more than 580,000 cancer-related deaths in the U.S.; breast, prostate, lung, and colon cancers are expected to comprise more than 40 percent of these new cases and close to 50 percent of the predicted cancer deaths. Increased amounts of the protein, MET, can be found in these types of tumors and others, such as liver cancer. However, most tools for studying MET-expressing tumors are not adequate and provide suboptimal conditions for improving the understanding of the consequences of MET activation in human cancer.

## Technology

To provide a more effective tool for studying MET-expressing tumors, scientists developed a transgenic mouse model that expresses human HGF/SF. Generated on a severe combined immunodeficiency (SCID) background, these mice support the growth of human tumor cell lines and tumor xenografts, permitting research, testing, and optimization of potential therapeutics that target pathways influenced by MET activity.

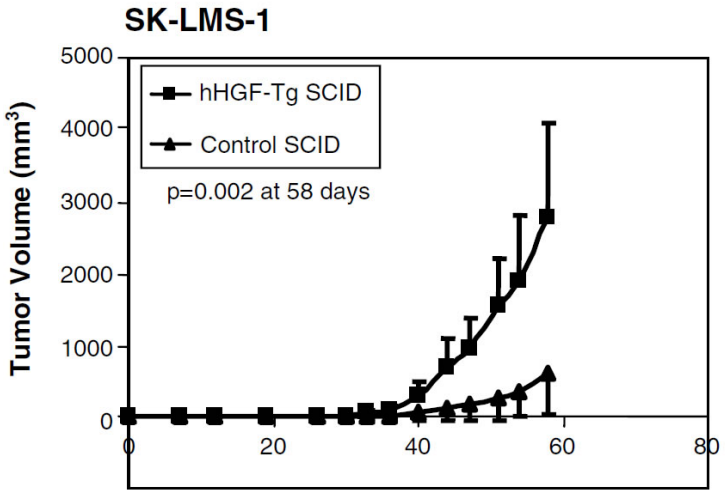


**Figure 1:** *Selectively enhanced growth of the MET-expressing human tumor line SK LMS 1—a human leiomyosarcoma cell line—in hHGF-Tg SCID mice.* Mean estimated tumor volumes and standard deviations are shown: P=0.002 for differential xenograft growth at 58 days post-injection.

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