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For immediate release

Texas A&M Institute for Genomic Medicine receives EPA funding to study human health risk from chemicals

(HOUSTON, TX) — The Texas A&M Institute for Genomic Medicine (TIGM) – a joint research institute of the Texas A&M Health Science Center and Texas A&M University – is a co-recipient of a \$3.2 million grant from the Environmental Protection Agency and its Science to Achieve Results (STAR) program. The primary objective of the grant is to study current human health risk from chemical exposures. TIGM will receive \$750,000 over three years in collaboration with the University of Houston and Indiana University through a new entity called the Texas-Indiana Virtual STAR (TIVS) Center.

The increase in worldwide chemical production is believed to be responsible for increasing hazardous exposure levels to people. This increase in exposure indicates current chemical regulation as well as existing methods to determine human health risks is insufficient. Restructuring regulation and assessing risk will require emerging technologies to handle the volume and complexity of chemicals.

The Texas-Indiana Virtual STAR Center is designed to provide a more reliable chemical risk assessment by creating in vitro (controlled environment) screening models of mouse embryonic stem cells (TIGM) and zebrafish (at the University of Houston) for toxicity. Data from these models then will be used by Indiana University to produce predictive computer models for toxicity on processes that are also relevant in human embryonic development.

The overall results will be incorporated with other chemical safety initiatives to develop a large screening effort that will prioritize chemicals for further risk study related to exposure to environmental chemicals. Richard Finnell, Ph.D., Robert Cabrera, Ph.D., and their colleagues at TIGM will work to determine the impact of selected environmental chemicals on specific processes such as cardiac, neural, hematopoietic and vascular development in the mouse.

TIGM uses advanced technologies to discover breakthroughs in science and medicine and accelerate the pace of medical discoveries. The institute also maintains the world's largest repository of genetic mouse material known as "knockout mouse embryonic stem cells."

Offering a genetic blueprint for biological responses to chemical exposure in mice, these cells could offer clues to how humans may react to chemical exposure. TIGM provides these cells and mice to academic and commercial institutions worldwide to help find solutions for threats to human health. Its technology has been used by more than 200 businesses and universities in 35 countries

"This is our first opportunity to really demonstrate the vast potential of our TIGM mouse embryonic stem cell library in approaching difficult problems that impact human health," said Dr. Finnell, TIGM executive director. "As with any good collaboration, this program lays out a friendship as well as a working relationship, and together we will assess the impact of industrial chemicals on reproductive health and set priorities to protect and create healthy work and living environments."

"We are very pleased that the extraordinary resources represented by TIGM have been recognized through this grant award," said Nancy W. Dickey, M.D., president of the Texas A&M Health Science Center and vice chancellor for health affairs for The Texas A&M University System. "Each step towards better understanding of the ways that we can utilize animal genetic material to predict, prevent or treat disease is a substantial step towards a healthier America."



TEXAS A&M INSTITUTE FOR GENOMIC MEDICINE

About the Texas A&M Institute for Genomic Medicine (TIGM)

The Texas A&M Institute for Genomic Medicine (TIGM) is a research institution within the Texas A&M University System. TIGM's mission is to accelerate the pace of medical discoveries and pioneer scientific breakthroughs through internal research and effective collaborations. TIGM maintains the world's largest gene trap library. This resource is used for internal research and research conducted through strategic alliances. TIGM also provides its resource to academic and commercial institutions around the world. The Institute headquarters and laboratory facilities are based in the Texas Medical Center in Houston, Texas, with additional facilities opening in the fall in College Station, Texas. For more information, visit www.tigm.org or call 888-377-TIGM (toll free in North America).

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