THE IIT @MSU

INSTITUTE FOR INTEGRATIVE TOXICOLOGY

Michigan State University's Institute for Integrative Toxicology (IIT) is a multidisciplinary academic unit that supports and coordinates research and graduate education activities for faculty and trainees interested in various aspects of toxicology. Founded in 1978, the name of the IIT has changed over the years to reflect changes in the leadership and academic mission. For 40 years, the IIT at Michigan State has provided outstanding graduate training, facilitated research, and offered service to the State of Michigan and the country when needed. The successes generated in these endeavors have resulted in recognition of Michigan State as a leader in academic toxicology. This leadership in toxicology has extended to the Society of Toxicology in which nine MSU faculty and past trainees have been elected to the office of society president.

The IIT is a leader in conducting diverse, interdisciplinary research, with over seventy affiliated faculty members who conduct toxicology-related research spanning investigations of environmental (air, water, soil), occupational, food-borne and pharmaceutical agents. These faculty are from twenty-two different academic departments across campus. Faculty research is primarily supported by federal agencies such as NIH, EPA, NSF and USDA as well as through partnerships with private industry. The research partnerships that MSU toxicologists have forged over the decades in conducting interdisciplinary research have been highly beneficial in the context of research productivity, education and service.

As of 2018, the IIT now houses two centers: the National Institute for Environmental Health Sciences-funded Superfund Research Program and the Center for Research on Ingredient Safety (CRIS), both are collaborative research and training efforts. The Superfund Research Program, with continuous funding since 1988, presently brings more than twenty-two investigators from numerous disciplines in the biomedical, microbiological and engineering fields together to address complex environmental contamination problems associated with dioxin and dioxin-like compounds. CRIS is an independent, academic, science-based center that serves as a reliable and unbiased source for information on the safe use of chemical ingredients in consumer packaged goods including foods, beverages, cosmetics and household consumer products.

The IIT at MSU also offers a multidisciplinary training program in Environmental and Integrative Toxicological Sciences (EITS) that provides doctoral students and postdoctoral fellows with extensive research training in a specific basic science discipline as well as toxicology. In this "dual major" program, each student engages in graduate education in a partnering basic science doctoral program and in the discipline of toxicology through the EITS program. This ensures excellent training in scientific fundamentals in the context of the student's interest in toxicology. Students are able to enroll in one of three tracks: the Biomedical Toxicology track for students with a mammalian biology discipline, the Food Toxicology and Ingredient Safety track for students interested in the safety of food-borne and consumer product ingredints, or the Environmental Toxicology track for students who enter with limited mammalian biology background and bachelor's degrees in fields such as chemistry, engineering, environmental law, etc. With this dual major, triple track approach, the EITS program provides customized and coordinated training that enables a student to launch a successful career in toxicological research. The quality of this cross programmatic effort was recognized by the NIH in 1989 with the award of a Training Grant from the National Institute for Environmental Health Sciences that has been competitively renewed ever since, providing decades of uninterrupted funding. Graduates of MSU's toxicology program number more than 200 and can be found as leaders in academia, industry and government.

For more than four decades, the IIT has embodied MSU's commitment to train leaders in toxicology and to conduct mechanistic research aimed at minimizing chemical threats to human and animal health.