

MOLECULAR AND ENVIRONMENTAL TOXICOLOGY, PH.D.

Molecular and environmental toxicology is a multidisciplinary subject that involves the study of mechanisms of action of environmental toxicants on humans and other organisms and the behavior of these toxicants in the environment. The UW–Madison Molecular and Environmental Toxicology Center's graduate program provides students with expert knowledge in at least one specialty plus a broad understanding of other specialties that contribute to the resolution of environmental toxicology problems. The center is sponsored by the School of Medicine and Public Health as well as the College of Agricultural and Life Sciences, the School of Veterinary Medicine, and the School of Pharmacy. The center links researchers in numerous academic departments who are working on problems in this area.

An interdisciplinary graduate program leading to the doctor of philosophy or a master of science in molecular and environmental toxicology is offered by the center under the direction of an executive committee composed of faculty affiliated with the center. The program offers two general approaches: mechanisms of pathobiology of chemically induced disease and environmental activities of chemicals. Each approach is subdivided into focal areas including metabolic and genetic toxicology, neurotoxicology, and immunotoxicology; and ecotoxicology, bioremediation, and distribution and assessment of environmental chemicals. All students participate in a core curriculum that addresses these various areas and that is supplemented by other advanced, specialized courses. Students perform research under the guidance of one of the center's graduate faculty members.

Recipients of graduate degrees in molecular and environmental toxicology pursue careers in governmental agencies (policymaking, regulations, standard setting, or research), private industry (e.g., hazardous waste management, occupational safety, consumer affairs, research and development, or regulatory compliance), and the academic community (teaching and research). The center office maintains specific information concerning career placements.