Grand Tradition — Bold Future

125 Years of physiology at Michigan

In the early 1900s, U-M students studied physiology in the department's laboratory in the C.C. Little Building on the main campus. Warren P. Lombard, M.D., is the bearded man to the left of the wall clock. After receiving their training at Michigan, prominent U-M alumni like Carl Wiggers (M.D. 1906) and Detlev Bronk, Ph.D., made important contributions to physiology research and became department chairs, deans and presidents at other major universities.

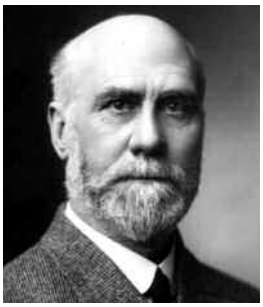
A century-and-a-quarter ago, doctors didn't know much about how the human body works. The world's best scientists didn't understand how the body converts food into energy, how blood pressure is regulated or how the brain and body interact. Basic information taught to high school biology students today was still a mystery when Henry Sewall, Ph.D., the U-M's first professor of physiology, came to the U-M Medical School in 1882.

Since then, many generations of gifted teachers and scientists have made the study of physiology an integral part of every U-M medical student's education. Over the course of its history, U-M physiologists have made important contributions to understanding how different organs in the body work together, how the body adjusts to changes in its environment, and how genes function in the context of the entire cell, organ and organ system in a living animal or person.

Virtually everything about physiology at Michigan has changed over the years — even the name of the department. It's now called the Department of Molecular and Integrative Physiology. Instead of just one faculty member, the department has 50. Today's researchers are using genetically engineered mice and other animal models to learn about human diseases like muscular dystrophy, cardiomyopathy, pancreatitis, obesity and diabetes.

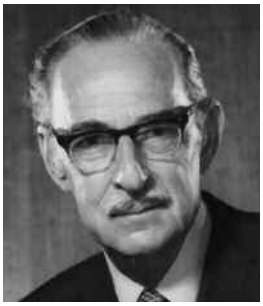
This September, many of the department's current and former graduate students, fellows and faculty will gather in Ann Arbor to celebrate the department's 125th anniversary and attend a scientific symposium that will emphasize physiology's contribution to contemporary biomedical research.

—Sally Pobojewski

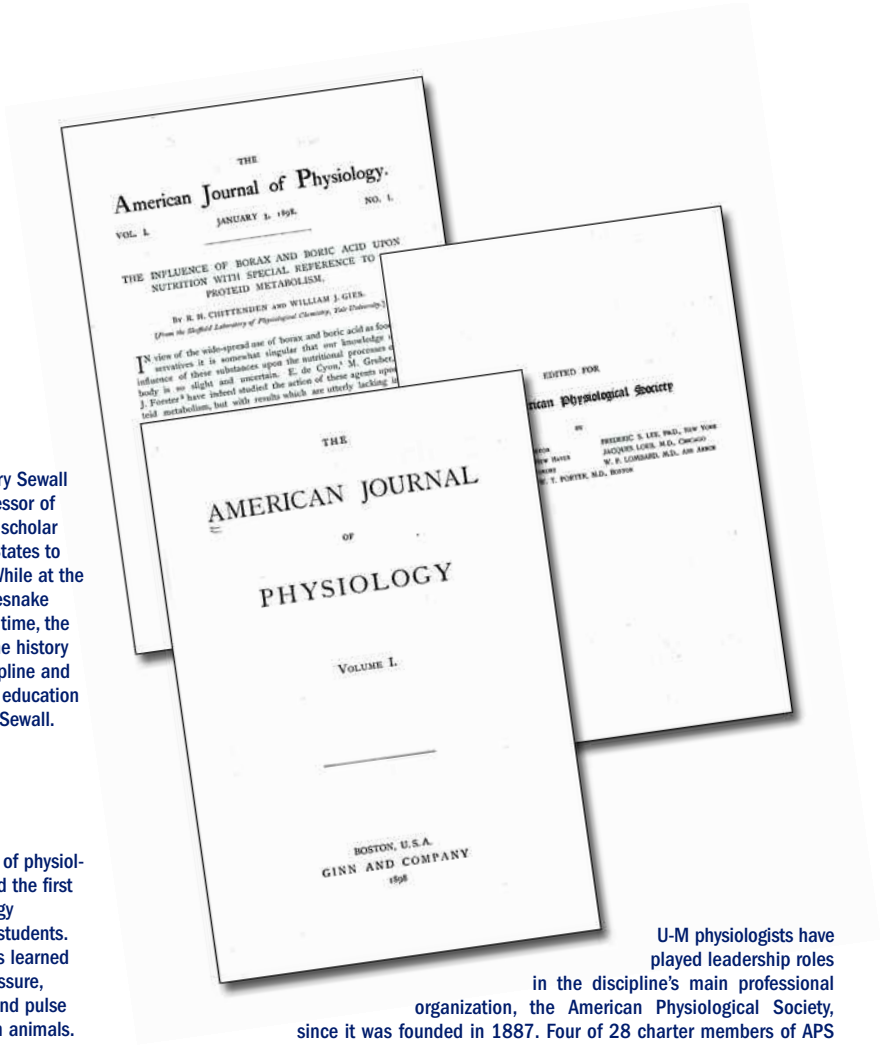


Recruited to the U-M in 1882, Henry Sewall was the Medical School's first professor of physiology. He was a distinguished scholar and the first person in the United States to receive a doctorate in physiology. While at the U-M, he injected pigeons with rattlesnake venom to demonstrate, for the first time, the principle of antitoxin production. The history of physiology as an academic discipline and as an integral part of research and education in the Medical School started with Sewall.

Warren P. Lombard was a professor of physiology from 1892-1923. He developed the first U-M laboratory courses in physiology designed for the needs of medical students. Under Lombard's direction, students learned physiology by monitoring blood pressure, knee jerk reflexes, muscle fatigue and pulse rates on each other and in research animals.



From 1956-78, Horace Davenport, Ph.D., was professor and chair of the U-M Department of Physiology. He focused his considerable talent and energy on teaching, recruiting outstanding scientists and graduate students, writing textbooks and starting a new career as a medical historian. During his many years at Michigan, Davenport taught physiology to about 3,000 medical students.



U-M physiologists have played leadership roles in the discipline's main professional organization, the American Physiological Society, since it was founded in 1887. Four of 28 charter members of APS came from the University of Michigan. During the organization's 120-year history, more than 10 percent of its presidents have been from the U-M. William Henry Howell, M.D., the U-M's second professor of physiology, was one of several prestigious scientists with papers published in the first (1898) issue of the *American Journal of Physiology.*

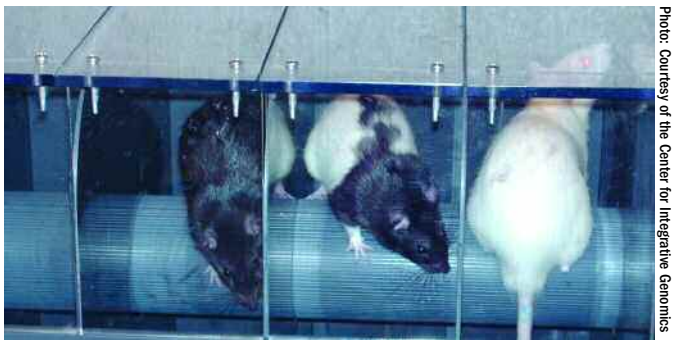


Photo: Courtesy of the Center for Integrative Genomics

Today's scientists use research animals, like these rats in the department's Center for Integrative Genomics, to study complex interactions between genes, an organism and its environment. Using a rotating device called a rota-rod, these rats are being tested for balance and coordination.