Gerald Abrams, course director, told students that Mini-Medical School was designed to help them "think a bit more critically about the welter of medical information" coming at them.

Photo: Gregory Fox

Leukocytes, phenotypes, raspberries and more

Last March when James Woolliscroft, M.D., related to a roomful of eager new "medical students" the legendary lines "Look to your left. Look to your right. One of you won't be here to graduate," it wasn't quite the same as when professors used the warning on students of decades ago. This particular "class" would field no homework, endure no exams, and would graduate in just six weeks. Woolliscroft, executive associate dean of the Medical School, was convening the first University of Michigan Mini-Medical School, an overview of Medical School topics intended for the general public.

Lawyers, insurance agents, families, people with a particular interest in certain illnesses, students considering a "real" medical education, and a local newspaper medical science reporter — ranging in age from 12 to 87 — were among those who signed up for the first Mini-Med. From over 20 communities in Michigan, Ohio and Indiana, the 185 attendees had come for a better understanding of human health, disease and treatment from faculty at one of the most prestigious medical schools in the nation.

Gerald D. Abrams (M.D. 1955), professor of pathology and U-M Mini-Med course director (also known as the "pathological emcee" and "mini-dean"), explained the rationale for Mini-Med: in addition to training physicians and researchers, the Medical School has the responsibility to provide medical and health information to the citizens of Michigan and beyond. Response to U-M's first Mini-Medical School was strong, with a waiting list of 250 beyond those enrolled.

"It's part of the general educational mission of the School," says Abrams, "to bring information from the ivory tower to the community and to provide insight into the School itself as an important public institution and a community resource. We also wanted to convey how we translate research into clinical practice." Indeed, students cited a general desire for information on medical and health issues as their motivation for attending, with one specifically seeking "to obtain information without media spin, commercial interest or bias."

"It was a sophisticated audience," says Abrams, noting the specificity and number of questions — which served the students well, for though no exams were administered, the curriculum was far from lightweight.

Mini-Med students began their studies in the same fashion four-year students do — with anatomy. "Anatomy is a crucial first-year experience for medical students," Roy Glover, Ph.D., associate professor of cell and developmental biology, told the Mini-Med attendees, "so we, too, must have an anatomy experience."

Dissection, the traditional first-year anatomy intensive, was not a requirement of Mini-Med students, however, thanks to the U-M Medical School being one of the few schools in the country to have a plastination lab, one of the largest of its kind in North America. Plastination is a process, developed in Germany in the 1970s, that removes tissue fluids from anatomical specimens and infuses in their place curable silicone polymers that preserve the specimens virtually forever and allow them to be handled and studied closely — and repeatedly. Mini-Med stu-

dents, most with great interest, availed themselves of the opportunity to handle plastinated specimens. Contemporary clinical imaging methods, presented by Barry Gross (M.D. 1977), professor of radiology, completed the anatomy section.

Subsequent lectures covered host defense, the immune system and allergy, presented by Steven Kunkel, Ph.D., professor of pathology; atherosclerosis and cardiovascular disease, covered by Kim Eagle, M.D., Albion Walter Hewlett Professor of Internal Medicine; infectious disease, emerging infections, food-borne disease and antibiotic resistance, presented by Carol Kauffman (M.D. 1969, Residency 1971), professor of internal medicine; genetics and genetic disease, the Human Genome Project, and attendant ethical considerations, delivered by Thomas Gelehrter M.D., professor and chair of Human Genetics; and colorectal cancer and digestive tract health, presented by Timothy Nostrant, M.D. (Residency 1979), professor of internal medicine.

While Mini-Med students learned about basic biological processes fundamental to human life and disease, as well as research into disease prevention and treatments, they came away, too, with plenty of practical knowledge, such as the need to avoid raspberries grown in tropical climates. Since a raspberry, with its many lobes and minute hairs, can't truly be washed, exotic microbes on tropical raspberries confront temperate U.S. immune systems not prepared to battle them, and acute food-borne illness can result. Students of Mini-Med also learned that colorectal is the one preventable form of cancer that could be eradicated within 50 years through screening and education, and they went away with Timothy Nostrant's impassioned observation that "A good set of bowels is worth all the brains in the world!"

The concept of mini-medical school was first developed in 1990 at the University of Colorado. Since then, hugely popular programs have sprung up at universities across the country and at NIH in Bethesda, Maryland. What about the future of Mini-Med at Michigan? Plans are underway for a second Mini-Med course to be held in spring 2002 with a new curriculum being designed by Abrams.

Kim Eagle presented the Mini-Med course on coronary artery disease, "Michigan's silent epidemic." Forty-five percent of Michiganians die of the disease due to high incidence in the state's population of risk factors such as obesity and smoking.

Photo: Gregory Fox

Thomas Gelehrter covered genetics, the "science of variation": "In the beginning, there was Mendel."

Photo: D.C. Goings

Roy Glover handled anatomy, a crucial first-year experience for medical students: "We, too, must have an anatomy experience."

Photo: D.C. Goings

Barry Gross reviewed the history of imaging techniques, from Roentgen's discovery of the x-ray in 1895 to today's PET scans and emerging digital technology replacing traditional imaging film.

Carol Kauffman instructed Mini-Med attendees in emerging and re-emerging infections such as *E. coli* and West Nile virus; food-borne infections like *Salmonella enteritidis;* and the growing problem of antibiotic resistance.

Steven Kunkel covered the historical study of the immune system in Alexandria, Padua, Berlin, and Paris and current understandings of innate and acquired immunity, basic mechanisms of immune events, and the challenges of HIV, pox and influenza viruses.

Photo: Martin Vloet

Timothy Nostrant presented the Mini-Med section on colorectal cancer, the second-leading cancer in incidence and death rate and currently the only preventable form.