



Diaa Osman, Daniel Gehlbach and Peggy Smith-Barbaro, PhD

## Students research complementary and alternative therapies

Students at the Texas College of Osteopathic Medicine have an unusual opportunity to research complementary and alternative therapies as part of their training. These treatments may include such practices as acupuncture, herbal therapy, prayer and meditation, and body manipulation.

The Complementary and Alternative Medicine Short-Term Research Rotation (CAMSTRR) is a competitive, optional eight-week rotation at the end of the third year and start of the fourth year. It begins with 64 hours of course work in research fundamentals, including hypothesis formulation, research protocol development, data analysis techniques and research ethics.

Each student is assigned a mentor whose research correlates with the student's career goals. In the mentor's lab, the student gets seven weeks of hands-on experience with the nitty-gritty of bench research, learning one or more state-of-the-art research techniques.

"The overall goal is that some of the students will go on to a career in medical research," says Peggy Smith-Barbaro, PhD, who directs the CAMSTRR program.

CAMSTRR requires two of a medical student's eight elective rotations, but that has not proved to be a deterrent. The program has existed for three years, and applications have increased each year. Ten students were chosen from 23 applicants for the 2011 rotation.

Smith-Barbaro says some students apply because they're curious about certain CAM practices, while others want to learn how the evidence that advances medical science is accumulated. For Diaa Osman, a TCOM student who already holds a degree from the Canadian College of Naturopathic Medicine and hopes to do clinical research in endocrinology and nutrition, CAMSTRR neatly melded his interests. "I thought this would be an excellent opportunity to get a basic foundation in how to go about working within the milieu of research."

Osman worked in the lab of Meharvan Singh, PhD, chair of Pharmacology and Neuroscience, who is studying phytoestrogens and their effect on neurobiology.

Daniel Gehlbach, who hopes to become a pathologist, did his CAMSTRR rotation with Lisa Hodge, PhD, associate professor of Molecular Biology and Immunology, who is studying the effect of osteopathic manipulative treatment on the immune system. The treatments are believed to boost circulation of cells that were in lymph nodes, thus increasing the body's ability to fight infection or cancer. "Eight weeks of research isn't a lot of time, but it's enough to give you the flavor of research," Gehlbach says.

The CAMSTRR program is funded by the National Center for Complementary and Alternative Medicine branch of the National Institutes of Health (NIH). Students who participate in CAMSTRR receive NIH fellowship funding for the two months of the program, as well as a reimbursement of two months' TCOM tuition — a nice perk of the rotation. But maybe it's the experience doing bench research, not the money, that motivates applicants.

"I love to watch the students' faces as they get involved in research," Smith-Barbaro says. "Some say they will never do research again, but for lots of them, their faces light up when they talk about what they've learned."