

Individual Researcher: Barbara Vanderhyden

As a third year undergraduate student at the University of Western Ontario, Barbara Vanderhyden faced a complex science puzzle. In the space of six weeks, she had to figure out which one of two vials of water had a hormone in it without the help of chemical analysis. By studying the daily activities of four female and four male lab rats, she determined that a luteinizing hormone existed in one of the vials because it affected the size of their reproductive organs.

“I loved the challenge of trying to discover something that was unknown – at least to me,” Dr. Vanderhyden, now a senior scientist at the Ottawa Hospital Research Institute, says. “That’s what convinced me to be a researcher, more than anything else.”

Dr. Vanderhyden works as researcher who concentrates on cancer’s impact on reproductive organs. For the past two decades, she has devoted a great deal of time to mentoring youth through hands-on scientific activities.

“The underlying basis through all of my outreach activities is to provide students of any age the chance to learn by experience,” she says. “It has to be in a way where the student is involved and can solve those little science problems or answer science questions through investigation.”

Dr. Vanderhyden mentors in various ways. As Director of the University of Ottawa *Let’s Talk Science (LTS) Partnership Program* which works jointly with Carleton University, she annually helps over 230 graduate student volunteers bring more than 300 hands-on science workshops to almost 10,000 youth at the middle school and high school level. *LTS* is dedicated to educational outreach to youth, and was originally restricted to London, Ontario. After Dr. Vanderhyden completed a postdoctoral fellowship in the United States, and settled in Ottawa, she expanded the outreach possibilities for youth and mentorship opportunities to the graduate students within that region. Since then, *LTS* has expanded to 25 Canadian sites and is the only national graduate student-driven science outreach program in the world.

In 2006, Dr. Vanderhyden also launched *Science Travels – La Science Voyage*, with the help of Jeff Keshen, as a bilingual outreach program with the mandate to deliver science workshops to remote and Aboriginal communities in northern Ontario. Within its first year, the program delivered 93 workshops, regarding topics as wide-ranged as DNA, earthquakes and climate change, to 19 high schools in areas as remote as Moosonee and Moose Factory. Each May, the top Grade 11 science students, who are selected by high schools, have the opportunity to take part in *Science Travels Week*, where they visit science and engineering labs at the University of Ottawa and do hands-on science experiments with *LTS* volunteers.

Dr. Vanderhyden also provides mentorship to high school students in her university lab and visits high schools to talk about cancer research. In recognition of achievements among bright high school students who have won at science fairs as well as mentorship and outreach efforts made by graduate students, she coordinates their participation at the annual *Partners in Research* gala event, *The Ottawa Evening*. At this event, these students get to interact with scientists in academia, government and industry.

All scientific outreach activities have proven to be rewarding for students, teachers – and the mentors themselves.

“The reason why it’s been so successful and why it’s been such a joy to do is because we all get so much fun out of it,” says Dr. Vanderhyden. “There is benefit for everyone.”