



Bringing Anatomy to Life

by Wendy Haaf

Thanks to a long-ago lesson involving a blanket, two footballs, and a gifted teacher, the orientation of the female reproductive organs and the subdivisions of the broad ligament will forever remain burned into Timothy Wilson's brain.

A teaching assistant in gross anatomy at the time, Wilson, PhD, remembers hearing giggles ripple through the audience of several hundred undergraduates as Marjorie Johnson, PhD, threw the heavy blanket over her head, announcing it represented the fundus of the uterus. Titters deepened to chuckles as, grasping a football 'ovary' in each hand, Johnson stretched out her 'Fallopian tube' arms.

"It was a Eureka moment," recalls Wilson, who is now an assistant professor in the Faculty of Health Sciences and the Department of Anatomy & Cell Biology at Schulich Medicine & Dentistry.

That kind of simple, imaginative demonstration is just one of the tools that Johnson has used to bring anatomy to life during her 13-year career at Western, starting in the Faculty of Health Sciences, and more recently at the Schulich School of Medicine & Dentistry. It's also just one illustration of why Johnson has been honoured with the Award of Excellence in Undergraduate Teaching (2002) from the University Students' Council, the Western Alumni Association and the Bank of Nova Scotia, as well as Western's highest teaching honour, the Edward G. Pleva Award for Excellence in Teaching (2003).

"Teaching is not about imparting knowledge," Johnson. "It's about making information relevant to students by connecting it to something that's meaningful to them." So what's her secret? "You can't be afraid to make a fool of yourself," she says. On the other hand, "You have to be true to yourself – not everyone is a comedian or a clown."

And indeed, clowning around in costume is only one of the methods Johnson has used to engage her students. For instance, she often uses her

experience as a sometime snowboarder to illustrate the location and roles of the various muscles used in that sport.

During her days of teaching Health Sciences students, Johnson even managed to inject excitement into potentially boring pre-exam review, notes Alexandra Chappelle, who just completed her BSc in Health Sciences and Biology. For example, on one occasion, Johnson devised a Jeopardy game around the exam material. "It was a big, big class, and the front half of the room was one team, and the back half the other," she explains. "Everyone really got into it!" Chappelle also remembers Johnson lugging cadaver parts into that particular class to show the students some anatomical feature or other – a rare opportunity for undergraduates.

Johnson has also played an instrumental role in developing higher-tech tools to help visual learners grasp anatomical concepts more easily, and give students opportunities to learn outside of the lecture hall or cadaver lab. One of her ideas – on-line, virtual gross anatomy labs and quizzes for medicine and dentistry students – was developed thanks to studentships funded by Instructional Innovation and Development Awards in 2004 and 2005. This year, she received funding for another summer studentship, this time to develop 3-D reconstructions of the body from a series of MRI scans, which medical students will one day view in a 3-D 'Anatatorium'.

But innovative teaching tools aren't the only things that distinguish Johnson.

"I think part of what makes Marjorie such a highly respected teacher is what she does outside of the classroom as well as in it, and the extra effort she makes beyond what is expected of her," says Peter Haase, PhD, professor in the Department of Anatomy & Cell Biology. For example, she is voluntarily offering lab tutorials to fourth-year nursing students who previously had no

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exposure to cadaveric anatomy during their program. "There is no doubt she is an excellent lecturer, but in addition, students recognize that she cares very much about their well-being," he adds.

Small wonder all of the former students contacted for this article made comments echoing the following, from Sarah Trotter (Dents'10). "I was extremely lucky to have Dr. Johnson as my professor for Human Anatomy. She is by far one of the best teachers I've had over my five years at Western."

Another theme that rises repeatedly during interviews with Johnson's former students is her contagious enthusiasm for her subject. "Her passion for teaching is evident to anyone in her classroom," observes Ryan Dobbs, who studied under Johnson as a Health Sciences undergraduate and later in Schulich Medicine's anatomy lab.

Passion also animates Johnson's face when she's asked to name the best part of her job.

"The colleagues and students I work with," she responds. "And, as morbid as it sounds, opening up a body," she adds, particularly the look on the students' faces when, for the first time, they get to see the human body's miraculous inner workings in the flesh.

"And when I get a card from a student saying, 'you changed my life', that makes my day – my month – my year!"