Lyndon Jones’ research in optometry takes him to other disciplines, universities and countries

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It’s not hard to develop misconceptions about what the school of optometry does on campus. Situated in an unassuming, brown-brick building along a quiet side street, one might think of the faculty as isolated from the rest of campus, cut off and into their own world of clinical studies and handling out contact lens samples to ginea pig students. I certainly shared this view before my interview with Dr. Lyndon Jones, professor of optometry at UW. “Even the corridors look clinical,” I thought to myself as I banked around a corner and into his office. “Everything I thought about this place must be true.”

But as we engaged in conversation with Prof. Jones, my opinions were permanently changed. An eclectic, outspoken individual with a cheerful Welsh accent to match, it took little for Jones to show me just how connected to campus the optometry department really is. Then again, Jones has been looking at ways to collaborate with other departments since he first came to Waterloo in 1998.

“We can adapt their skills to try and understand some of the things that we’re involved in,” Jones explains. For example, in physics, James Forrest has an interest in studying how proteins interact with surfaces. That’s exactly the kind of thing I’m interested in. Then you’ve got people in mechanical engineering who do drug delivery stuff and we could use contact lens materials to deliver drugs to your eye. Or if you’re going to implant a chip in your eye. There are people who do friction studies ... in hip and knee transplants. Well, again, we’re very interested in the frictional forces that occur when an eye goes over a contact lens. In chemistry there are people who have a great interest in looking at proteins and lipids — that’s perfect for understanding the things that we’re interested in. In biology there’s a large immunology group, contact lenses and immunology are perfect, ways to study things together. Rather than trying to reinvent the wheel, [we] see if there are other people here who would like to collaborate.

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That kind of attitude keeps Jones a busy man; in addition to his duties at the school of optometry, he is cross-appointed to the departments of physics, biology, chemistry, and chemical engineering, and supervises twelve graduate students in those fields. And that’s just at UW; he also holds an adjunct appointment at MacMaster University, with graduate students there. “My average day is really hectic,” he admits, due to a combination of his teaching load and an incoming e-mail sounds from his computer, perfectly on cue.

Of course, Jones is used to handling several subjects at once; it’s that unique quality that helped bring him to UW along with his wife, who directs programs in the clinical faculty. “I have a Ph.D. in chemical engineering,” he said, “looking at how contact lens materials interact with tears. And because I have that unusual background, of being a chemist with a high degree in that untested field, both myself and Debbie got invited to present papers.”

Prof. Jones’ current research looks at the effect contact lens materials and solutions have on user comfort. “Over the last five to six years,” he explained, “we’ve seen the introduction of a brand new contact lens material [called] silicone hydrogels. Hydrogels have very little water in them, and the oxygen is transported through the lens by the silicone. The only downside of that is that silicone is very hydrophobic, it hates water. And as soon as you make a contact lens that’s of very high oxygen permeability, you’ve got a big trouble: although the lens is transporting most amounts of oxygen, you get a comfort complications. When the lid moves over the lens, it doesn’t move very well. The oil in your tear cells adds to that lens, and you get a group of lenses. So my principal interest these days is trying to characterize how these new lenses interact with tears, and ... perfection for the things that we’re interested in. In biology there’s a large immunology group, contact lenses and immunology are perfect, ways to study things together. Rather than trying to reinvent the wheel, [we] see if there are other people here who would like to collaborate.

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“absolutely" claimed to receive. The always-engage,
Jones’ research to find his lectures in a more reac-
tive way, using questions and techniques to engage his
audience. “People hate to sit in there being talked at,” he said. “The way that you teach students is quite different from the way that you teach your peers. When you’re presenting to clinicians, it’s more a case of making an exchange of [information].”

So what does the Welsh native aspire to pursue such
an excellent career? The answer is more surprising than one might expect. “I left school and became a [welder],” he recalls, “and after a couple of years working as [that], I decided it would be more sensible to go and get a job. I chose the university of [Wales] because it meant that I could still work as the club... and I could put myself through university. And, I choose optometry purely because the [faculty] has the best rugby team in the university.”

Now, Jones is invited to present studies and speak at conferences around the world. In fact, the immense amount of travel done by him and Debbie has turned their family into bona fide jetset-
ters. Fortunately, for their two children — 11 year old Rebecca and 8 year old Ben — don’t mind one bit. “Oh, they love it,” says Jones. “They come with us as much as we can take them. To them, getting on a plane is a bit like getting on a bus. I didn’t go on a plane until I was 22, they have their own frequent flyer cards.”

He admits, though: “I’ll like to maybe travel a bit less. That would be very nice, I need way too much. But that’s probably not going to happen realistically.”

In conclusion, Jones is very excited about the future of the school of optometry. In addition to accepting more students, and establishing a satellite campus connected to the school of pharmacy, Jones noted that a new wing on the optometry building is set to begin next summer. “We have simple solutions to the ability to reach the number of students that we have,” he said. “Every batch of students you take in has a huge impact on teaching students, you just take them out and students show their in lecture hall.”

Hopefully the expansion will help alleviate the perceptions students have about the school. “The biggest impediment to people on campus knowing what goes on in optometry is Columbus,” said Jones. “That physical separation of our building really impacts heavily on people’s perceptions.

Fortunately, there are people like Prof. Jones who change those perceptions, whose work illustrates how there is much, much more to the school of optometry than meets the eye.