Background

Dr. Ruud Veldhuizen is a scientist at Lawson Research Institute in conjunction with St. Joseph’s Hospital in London, Ontario, as well as an associate professor at Western University. He currently teaches 3rd year Physiology and supervises the 3rd year Physiology lab as well. At Lawson, his research focuses on the pulmonary surfactant system and its significance to patients who suffer damage from mechanical lung ventilation. WURJ member, Eva Huang, had the chance to interview him to learn more about his research, his path to Western and his career.

Questions for Dr. Veldhuizen

Tell us about yourself. What are some of your hobbies, your background etc.?

Dr. Veldhuizen grew up in Holland where he completed his undergraduate degree before looking to go abroad, which was how he ended up here at Western. Though he spent a year away, London was ultimately where he ended up staying.

As for hobbies, he used to play soccer often, and run between seasons to stay in condition. He is still an avid runner, and has run a few marathons in his time!

How did you end up in the field of respirology physiology?

Getting involved in this field wasn’t so much ‘chosen’ by Dr. Veldhuizen as he was placed into it. As a grad student, he worked with a biochemist who focused his work on pulmonary surfactant. From here, the interest in the field deepened with more time spent in the work, and became Dr. Veldhuizen’s own main focus.

How did you hone in on surfactant research?

In research, new questions are continually being generated, with input from respirologists (i.e. experts in the field) and previous literature. With his work, he collaborates with these respirologists by providing the biochemistry behind certain processes. As background, Dr. Veldhuizen’s interest lies in patients who are on mechanical ventilators which may themselves cause more damage to the lungs. More specifically, these patients usually suffer from Acute Respiratory
Distress Syndrome, or ARDS. As the name suggests, it is not a disease but a syndrome; the end result of a variety of different insults.

Despite the fact that a variety of things can lead to ARDS, an affected surfactant is a common sign amongst the majority of patients. Thus, he was drawn to the study of surfactant.

Why Western as opposed to other institutions?

Besides the fact that he was accepted here for grad school, Dr. Veldhuizen decided to continue to work here because of Western’s reputation for science, as well as the current work and research being done here.

What’s one of the hardest parts about being a lecturer/researcher? One of the best?

“One of the hardest things, just like it is for students, is balancing everything.” When it comes to teaching, there is a lot of preparation that goes into lectures, as well as the supervision in the 3rd year physiology lab. On top of all this, Dr. Veldhuizen’s lab is off campus, meaning his office and lab are not readily accessible if needed. Research in the lab doesn’t stop while he’s teaching, so during the times when he’s teaching, he has to be able to somehow balance both worlds.

“One of the best things is that it’s fun, it’s a challenge and it’s rewarding.” Though he does come in contact with many students at the lab (ex: 4th years and grad students), he does have a larger audience in a lecture hall and in the physiology labs, which makes for a diversified and different workplace than his lab.

From our classes, we can tell you’re clearly very passionate about research. What advice would you give undergrads interested in getting involved or who are still unsure about future paths?

“I remember biking to the lab at 8 am and smiling because I was happy – and that’s when I realized that was the first time I was really happy at 8 am in the morning. It was then that I realized research was something I wanted to do.”

Dr. Veldhuizen stresses the importance of getting involved early on, even in first or second year. He also mentions that students can gain research experience through the 4th year honours program offered by the Biological and Medical Sciences, as well as Work Study which is offered by Western.

Furthermore, he noted that the field of research seems to be misconstrued to many undergrads – as an example, almost everyone in the Physiology module is geared towards medicine and for many, they don’t even consider research – “research is just a big question mark”. This is in part, a cultural thing – “we see medicine in TV shows” – if there could be a shift in that, or more publicity for research, perhaps there’d be more interest in this career path.

Where do you see your research ultimately going, how would you like to leave the field?

Everything we hear about in the news is the sum of lots of small steps working towards a large goal. Research in the field continues to make progress in our understanding of the development of the disease and Dr. Veldhuizen would hope to leave the field after having made significant contributions to this. The ultimate goal would be to be able to effectively treat those with ARDS, or propagate the research towards that end.

To read more on Dr. Veldhuizen’s lab and research, please visit his website at http://www.uwo.ca/physpharm/faculty/veldhuizen_ruud.html