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U of L student honoured with national award for inorganic chemistry research

Chemistry research is play for Jackson Knott, and he talks about his work in the lab with as much excitement as someone who's found buried treasure. His fire for chemistry research hasn't gone unnoticed as he recently received a national honour from the Canadian Society for Chemistry (Division of Inorganic Chemistry) for his research work done at the University of Lethbridge.

Knott has been named the outstanding recipient of the 2015 Award for Undergraduate Research in Inorganic Chemistry (AURIC), signifying that his research work has been judged to be of exceptional quality.

"They only give out one of these a year so it's an honour to get and be able to put that on your CV," says Knott. "The first thing I did was call my mom. What that award actually fully entails was a lot to take in."

Dr. Paul Hayes, a chemistry professor, and Dr. Matthew Zamora, a former post-doctoral fellow, nominated Knott because they considered his work of a sufficiently high calibre to compete for the award.

"As Jackson's research supervisor since 2012, I am very proud of his growth as a scientist and the well-deserved recognition he has earned. The AURIC is a highly competitive national award and is a testament to both Jackson's past research accomplishments, as well as his future potential," says Hayes. "I am extremely excited he has elected to pursue graduate studies in my laboratory; I look forward to continuing to work with Jackson and the science we will do together."

As part of the award, Knott will give an invited presentation on his research in June at the society's annual conference, held this year in Halifax. A fifth-year student, Knott is in his final semester of a bachelor of science, after having taken a year off to work at a coop placement at NOVA Chemicals in Calgary.

"I've gotten quite a bit of research experience in my five years of university and oneyear of a co-op," he says. "Now I've got an academic perspective and a little bit of the industrial perspective on the research."

Inorganic chemistry is the study of metals and main group elements as found in the periodic table. Knott is also interested in organometallic chemistry, which is the study of compounds or complexes that have metal-carbon bonds.

"A lot of organometallic and inorganic complexes are used as catalysts for reactions," says Knott. "Such catalysts can play a role in the formation of biodegradable plastics, for example. My far, hopeful dream is CO₂ capture and conversion into commercially important small molecules, which has industrial and environmental applications. I really want to take a stab at that and see what I can do."

Knott, from Coleman, graduated from high school in 2010 and started at the U of L that fall. He'd enjoyed all the sciences in high school and came to University prepared to take courses in physics, biology, chemistry and math to see what he liked best.

"I took organic chemistry with Dr. Greg Patenaude and that class just hooked me. It was the first time I saw an instructor get really passionate about what he or she was teaching and the line of thinking kind of clicked and made sense," says Knott. "Of all the sciences, I would do homework for the other classes because I had to, but for chemistry, even once my homework was done, I would go back and do more just for fun."

Knott got his first taste of research in Hayes' lab in the fall of 2012 and he's been doing it ever since.

"Research takes you down a lot of unexpected paths," he says. "The science kind of unfolds, you have to be there and follow along with it and do some creative problem solving."

Knott will start graduate school at the U of L in May. He has a few research projects in the works that he'd like to pursue as he completes a master's degree. He will continue working in the lab under the supervision of Hayes.

"I'm not fully sure what I'll do beyond school but I really would like to keep doing research, be it in an industrial or academic job," he says. "Research is really a lot of fun. I like to say I'm good at it and I've developed a passion for it."

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Contact:

Caroline Zentner, public affairs advisor 403-394-3975 or 403-795-5403 caroline.zentner@uleth.ca