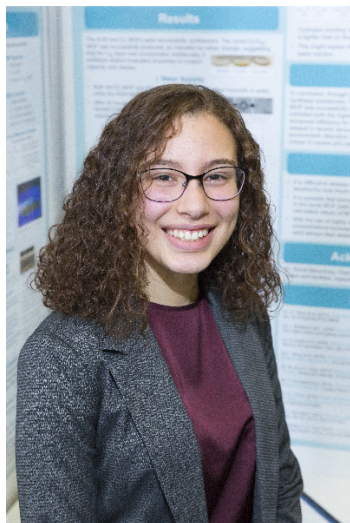


## CWSF 2018 - Ottawa, Ontario



### Lydia Elbatarny

#### A Sweet Drop Off: Evaluating Metal Organic Frameworks for Drug Delivery

**Challenge:** Discovery

**Category:** Senior

**Region:** Frontenac, Lennox & Addington

**City:** Kingston, ON

**School:** Kingston Collegiate Vocational Institute - KCVI

**Abstract:** This experiment evaluated Metal-Organic-Frameworks (MOFs) for application in oral drug delivery, and explored combining two previously established syntheses to produce a novel MOF. This novel synthesis was predicted to have enhanced drug delivery properties. Following successful synthesis of the novel MOF, it was found to have a greater content capacity and release, with potential for better drug release in the intestine versus the stomach.

#### Biography

My name is Lydia Elbatarny, and I am a grade 11 high school student enrolled in the International Baccalaureate Programme at Kingston CVI, Ontario. I always aim to excel in my academics and extracurricular activities, and I constantly seek out new opportunities to learn and develop my skills. One of these invaluable opportunities is Science Fair. I have been participating in my regional science fair since grade 5 and I am excited to be returning to CWSF for a third time! This year I looked into evaluating the use of Metal Organic Frameworks (MOFs) for the application of oral Drug delivery. Having explored different MOF structures and syntheses, I experimented to see if combining 2 previously established procedures could yield a novel MOF that would be more efficient in this application. Along with Science Fair, I am also involved in DECA, a business competition, and have achieved great success in this as well. I am highly interested in science and research and I intent on pursuing a career in the field of chemistry or medicine. In my spare time, I enjoy traveling, Art and Graphic design.

#### Awards

#### Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
Carleton University Entrance Award Senior Bronze Medallist - \$1,000 Entrance Award Sponsor: Carleton University	\$1 000
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$3 000</b>