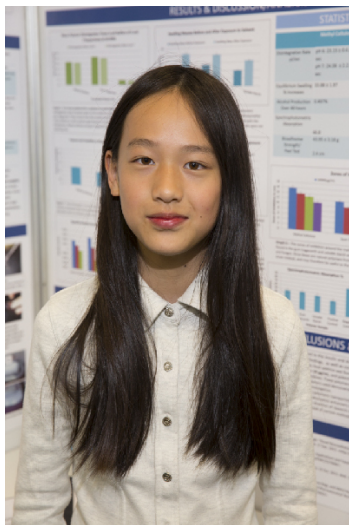


## CWSF 2016 - Montreal, Quebec



### Yimeng Li

#### Analyzing the Bioadhesive and Toxicity Properties of Three Natural Biopolymers

**Challenge:** Discovery

**Category:** Junior

**Region:** Greater Vancouver

**City:** Vancouver, BC

**School:** Sir Winston Churchill Secondary

**Abstract:** The potential application of gum tragacanth, soluble starch, and methylcellulose in the bioadhesive nanoparticle insulin delivery field were examined through a series of in vitro experimental and theoretic assays in which properties impacting both drug absorption and biosafety were quantified. It was discovered that certain biopolymers demonstrated promising results compared to those currently under investigation, and can impact both research and treatment in this field.

#### Biography

I am a passionate 13 year old student, volunteer, and scientist who is involved with a variety of subjects. For example, I maintain an "A+" academic average at the Sir Winston Churchill Synergy Program, and a First Class Honours with Distinction at the Royal Conservatory of Music for piano. I am currently working towards my level 10 RCM piano examination in August. I also enjoy volunteering regularly. I am involved with the Me to We organization, the school Reach For the Top team, as well as the Variety Club. Last year, I had the wonderful opportunity of representing my school at the Regional Richmond Heritage Fair, in which our school was the only one that presented in French! Additionally, I enjoy writing short stories and poems in my spare time. This year, my poems and short stories were shortlisted as part of the national Polar Expression competition which represents the top 30% of the grade. Finally, I played on school Volleyball and Track and Field Teams, as well as a variety of other sports including swimming, skating, basketball, and ultimate. This year is my first time participating in a competitive regional and national science fair and I am very excited!

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