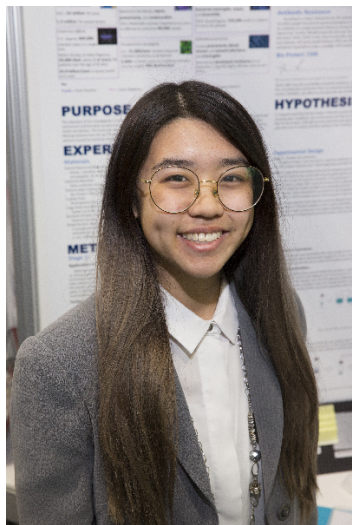


## CWSF 2019 - Fredericton, New Brunswick



### Katelyn Wang

#### Efficacy of Quaternary Ammonium Antimicrobial Application on Textile Substrates

**Challenge:** Health

**Category:** Senior

**Region:** York

**City:** Richmond Hill, ON

**School:** Richmond Hill H.S.

**Abstract:** My project entails applying an antimicrobial coating, Bio Protect 7200, to textile substrates, and subsequently, evaluating the samples for antimicrobial effectiveness. Large drop inoculation protocol was utilized to quantify direct contact elimination of bacteria species *P. aeruginosa*, *E. coli* and *Arthrobacter* sp. This solution aims to alleviate the prevalent contamination of hospital fabrics (e.g. curtains, bed linens), which cause hospital-acquired and antibiotic-resistant bacterial infections.

#### Biography

Katelyn Wang is a 12th grade student attending Richmond Hill High School. She is happy to be returning to CWSF to share her work again. Given the problem of bacterial infections and the rise of antibiotic resistance, she sought a preventative measure to address such infections. She hopes that quaternary ammonium compounds may be applied within hospital settings to decrease bacteria proliferation. Apart from science, she enjoys creative writing and contributes as a journalist to her school's magazine, providing political commentaries. In her spare time, she is an avid debater, creates ceramic art pieces, and drinks too much bubble tea. She is excited for post-secondary school, where she plans to study life science and continue innovating unique solutions to challenging issues.