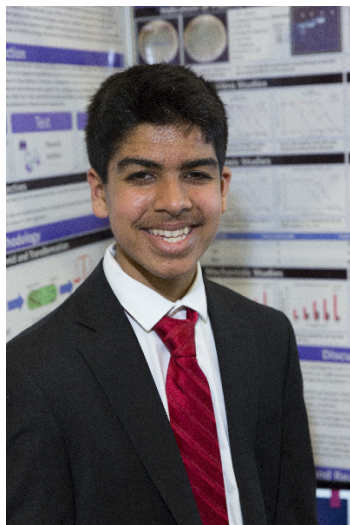


# CWSF 2018 - Ottawa, Ontario



## Harry Parmar

### SYN-VIOLA: The Power of Novel, Designer Bacteria in Real World

**Challenge:** Innovation

**Category:** Intermediate

**Region:** York

**City:** Thornhill, ON

**School:** Maple H.S.

**Abstract:** Violacein is a natural purple compound shown to have anticancer, antibacterial, antiviral, antifungal, and antioxidant properties. Unfortunately, commercially available violacein costs up to \$395,000 per gram due to slow production. By transforming genetic material containing enzymes to produce violacein into model organisms, violacein can be produced faster and inexpensively. Additionally, the bacterial strains may suggest targeted violacein drug delivery to local tumour microenvironment.

#### Biography

My name is Harry Parmar, and I am a grade 9 student at Maple High School. At school, I enjoy literacy and math. I also play on a basketball team in Thornhill, and I like playing the piano. Outside of school, I like discovering answers to questions that aren't usually asked. One topic that interested me the most was synthetic biology. By inserting new genetic code into a new organism to create desirable features, synthetic biology can help change the world. I was first introduced to the topic by a Ph.D. student at Ryerson University. In the future, I plan on conducting long-term studies of my project for new useful research. Some great advice I learned from my mentor, is never to give up. Even when you can't find the answer, continue to fail until you succeed.

#### Awards

#### Value

Youth Can Innovate Awards - Intermediate Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	\$750
Excellence Award - Intermediate - Gold Medal Sponsor: Youth Science Canada	
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$4 750</b>