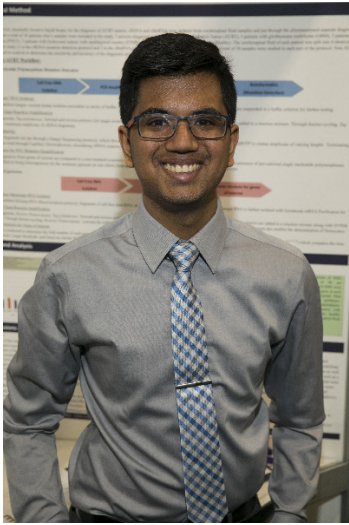


# CWSF 2017 - Regina, Saskatchewan



## Mehul Gupta

### Liquid Biopsy: A Novel Diagnostic Technique for Atypical Teratoid/Rhabdoid Tumor

**Challenge:** Health

**Category:** Senior

**Region:** Calgary Youth

**City:** Calgary, AB

**School:** Sir Winston Churchill High School

**Abstract:** Atypical Teratoid/Rhabdoid Tumor is an aggressive form of cancer affecting the central nervous system of patients typically 0-36 months of age. Typical diagnosis of this disease and other malignancies requires invasive and often insensitive surgical tissue biopsies. This investigation focused on gene mutation and expression analysis, thereby developing a novel liquid biopsy procedure with a diagnostic sensitivity of 96%.

#### Biography

I have been very passionate about science from a very young age, and have looked to implement it in various avenues from competing in Science Olympiad to publishing research in international peer-reviewed journals. In addition to my work in the sciences, I am passionate about addressing various social issues that I see in the world around me. As chair on Calgary's Mayor's Youth Council (MYC) and as a member of the Youth Employment Centre's Youth Advisory Committee (YAC), I have worked to tackle pressing municipal issues. From curating a database of ways for young people to get involved, to working with youth to ensure they have access to employment and mental health resources, creating stronger communities is a goal I have consistently worked towards. I have also looked to tackle the important issues of physical and mental well-being by creating multiple organizations and registered Canadian non-profits. To date, organizations I have helped create have raised tens of thousands of dollars for local organizations like the Alberta Children's Hospital Brain Health Department. Through these organization I wanted to give youth a way to positively impact their community while building the skills and passion necessary to be successful in the world today.

#### Awards

#### Value

|   |                |
|---|----------------|
| Excellence Award - Senior - Bronze Medal<br>Sponsor: Youth Science Canada   |                |
| University of Ottawa Entrance Scholarship<br>Senior Bronze Medallist - \$1000 Entrance Scholarship<br>Sponsor: University of Ottawa | \$1 000        |
| Western University Scholarship<br>Bronze Medallist - \$1000 Entrance Scholarship<br>Sponsor: Western University                     | \$1 000        |
| <b>Total</b>  | <b>\$2 000</b> |