

# CWSF 2014 - Windsor, Ontario



## Ankita Saxena

### Investigating Protein Aggregation States in AD and TBI using CSM

**Challenge:** Innovation

**Category:** Senior

**Region:** Calgary Youth

**City:** Calgary, AB

**School:** Westmount Charter School

**Abstract:** Alzheimer's Disease is characterized by the accumulation of misfolded Abeta protein into aggregates called amyloids. This study develops novel methods to image such protein structures via conformation specific fluorescent probes and confocal spectral microscopy. Here, emission spectra from the treated sample are correlated with particular aggregation states. This technique can be used to quantitatively and qualitatively analyze, classify, and detect said structures for various uses.

#### Biography

Hi, I'm Ankita Saxena. I hail from Calgary, Alberta, Canada and am incredibly excited to be at this years' Canada Wide Science Fair. I've been fortunate enough to work in research labs since I was 14. This experience has been incredibly enriching, and helped me to find what I think is my passion - neuroscience. In the future, I aspire to become a clinician-scientist and run my own biotechnology company. Aside from science, I have an interest in politics and volunteerism - I'm a member of the Minister's Student Advisory Council and chair the Calgary Youth Advisory Council for the Canadian Breast Cancer Foundation. I also edit for the Canadian Young Scientist Journal. I strongly believe that engaged youth can change the world and encourage all students to try their hat at science fair.

#### Awards

#### Value

Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$700
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$5 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba	\$5 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa	\$4 000
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$22 700</b>