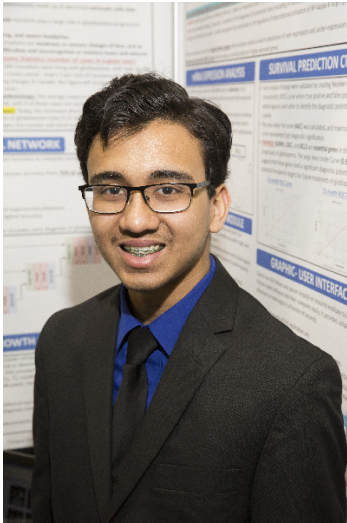# CWSF 2019 - Fredericton, New Brunswick

Dhruv Patel

A Novel Approach to Diagnose Glioblastoma

Challenge: Health
Category: Senior
Region: Frontenac, Lennox & Addington
City: Kingston, ON
School: Loyalist Collegiate Vocational Institute - LCVI

Abstract: Glioblastoma is an aggressive, stage IV brain cancer, with low survival rates of 15 months. Traditional methods of tumor diagnosis are invasive and expensive. Early tumor detection is crucial for successful treatment and patient survival. My project utilizes artificial intelligence to develop a novel MRI diagnostic tool with integrated systems for tumor growth prediction, detecting responsible genes in glioblastoma, and possible new drug development.

Biography

Hello! My name is Dhruv Patel, a grade eleven student at Loyalist Collegiate Vocational Institute, Kingston, Ontario. I am an avid science and math fan, participating in science fair since Grade 7 and math competitions since grade 3. I have placed top 6 in Canada for mathematics through Waterloo competitions, solidifying my love for that field. However, my main passion lies in the field of neuroscience, stemming from my previous investigations on therapies for Alzheimer's disease, as well as my participation and success in multiple brain bees. Currently, I am also working on creating an international high school neuroscience course. Through the exploration of this topic, I have come upon my main interest in the intersection of health science and machine learning and have applied this knowledge in this science fair project ? a novel approach to improve the accuracy and efficiency of glioblastoma diagnoses, while further improving prognostic and treatment outlooks for patients. With a variety of interests, I believe CWSF will be an amazing forum for discussion and discovery as I meet like-minded individuals who have the potential to change the future.

Awards	Value
Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - $2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - $2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	$2 000
University of New Brunswick Canada-Wide Science Fair Scholarship Silver Medallist - $2500 Entrance Scholarship Sponsor: University of New Brunswick	$2 500
University of Ottawa Entrance Scholarship Senior Silver Medallist - $2000 Entrance Scholarship Sponsor: University of Ottawa	$2 000
Western University Scholarship Silver Medallist - $2000 Entrance Scholarship Sponsor: Western University	$2 000
Total	$11 000