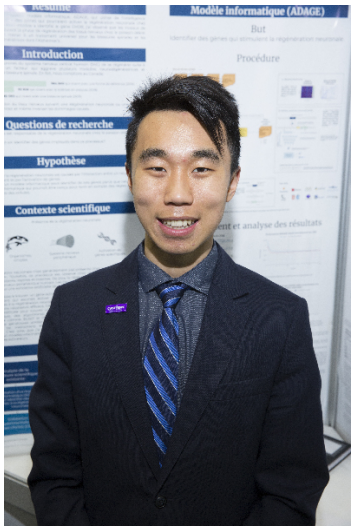
CWSF 2019 - Fredericton, New Brunswick



Laurence Liang

La régénération neuronale assistée par un modèle informatique

Challenge: Health
Category: Senior
Region: Montréal RM
City: Roxboro, QC
School: Collège Jean-de-Brébeuf
Abstract: La difficulté des neurones à se régénérer est à l'origine de plusieurs conditions médicales comme les blessures spinales et les maladies neurodégénératives. Ainsi, j'ai procédé à programmer un modèle informatique qui utilise de l'intelligence artificielle pour identifier des gènes pouvant activer la régénération neuronale. J'ai validé expérimentalement chez le poisson-zèbre l'effet d'un gène identifié, CHD8, qui pourrait jouer un rôle crucial dans la régénération neuronale.

Biography

I aspire to actively help my community through building technical applications or by organizing social projects. Driven by using tech for social good, I co-organized BrebeufHx, a hackathon that attracted over 100 high school and cegep students in 2 editions to program solutions for local social organizations. I also co-lead Brébeuf Code, my school's coding club, which gives students the opportunity to help local nonprofits through coding. I am a volunteer at Kids Code Jeunesse and my school's FIRST robotics team, and I have written code for Expedia as an intern as well as for McGill research labs. I am also deeply curious about using computer models to simplify biochemical interactions in the human body. For my science fair project, I used AI to discover genes for neuron regeneration, and hope to make a treatment available for this cause. In the end, I wish to make both coding, information and medical treatments open and accessible. I am a two-time recipient of the highest cumulative average for my year (boys') and received various prizes highlighting social and academic work. I am also a fencer, having been ranked top 8 provincially for 2 seasons, and enjoy biking and running.

Awards	Value
Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
University of Ottawa Entrance Scholarship Senior Bronze Medallist - $1000 Entrance Scholarship Sponsor: University of Ottawa	$1 000
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$2 000

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