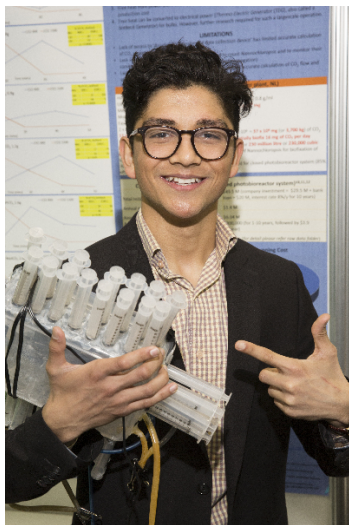


## CWSF 2019 - Fredericton, New Brunswick



### Aaron Sarkar

#### Algae-Based Carbon Capture System: Modelling Photosynthesis for CO<sub>2</sub> Reduction

**Challenge:** Environment

**Category:** Senior

**Region:** Eastern Newfoundland

**City:** St. John's, NL

**School:** Holy Heart High School

**Abstract:** Following the research presented at CWSF 2018, assessing limitations and having clear cut objectives, an improved Algae-Based Carbon Capture System (ABaCCaS) was made. The algae's photosynthetic rates were measured as well as the corresponding % of CO<sub>2</sub> captured. The ABaCCaS consistently captured almost 100% of the CO<sub>2</sub>. After this an industrial scale model was built, resulting in high commercial potential of CO<sub>2</sub> capture using algae.

#### Biography

Hello my name is Aaron Sarkar and I am a grade 11 student at Holy Heart of Mary High School, St. John's, NL. The inspiration for my project seeded from reading multiple articles on Climate change and global warming. I had always been fascinated by this topic since it is such a huge problem to our planet and everyone talks about it so much. Everyone says that not burning fossil fuels is the solution, but is it even practical? We burn thousands of tonnes of fossil-fuels a day because we are heavily dependant on it so why not find a way to make burning fossil fuels completely Eco-friendly. My plans for further research are to make a computational approach and then make a real life miniature algae-based system in a lab. My dream is to see this tech incorporated in real life one day because I strongly believe systems like these are our future. If I was to give advice to a student wanting to do a science fair project, I would say remember to always be inspired by something that you love and incorporate it into science and remember to always be original and innovative in anything you do.

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