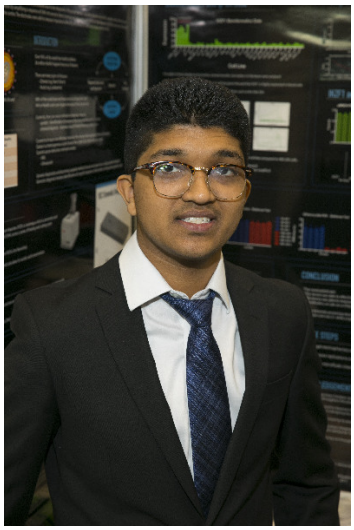
CWSF 2017 - Regina, Saskatchewan



Bhavya Mohan

A Novel Lab on a Chip based PCR Sensor for Disease Diagnostics for Under $1

Challenge: Health
Category: Junior
Region: Ottawa
City: Ottawa, ON
School: Earl of March S.S.

Abstract: In this project, a novel PCR based Lab-On-A-Chip microfluidic device was designed to measure DNA concentration for application in disease diagnostics. Current means of measuring DNA are robust and expensive. This simple $1 chip, fabricated using photolithography, allows users to DNA concentrations as low as 12ng/uL. This technology allows a cost-effective and widespread adoption of genetic based diagnosis for diseases like leukemia.

Biography

I am Bhavya Mohan and a Grade 8 student at Earl of March, Ottawa. Whether it is designing a treatment for cancer or building "stuff" with lego, as a kid I have always been creative. This trait has allowed me to explore many different topics which introduced me to Science. The fact that Cancer remains a problem and that Science can solve the toughest problems motivated me and 2 years ago I began to do cancer research at Dr. Willmore's lab. I am very fortunate to have been able to do research at a young age. Apart from science, I enjoy playing music. I also like computers which I was able to incorporate into my project and learned bioinformatics and learnt the program "R studio" by myself. I enjoy leadership roles as I am part of my school's Student Council and I had also successfully secured sponsorship from sponsors on my own. I plan to continue research by exploring new targeting mechanisms. For me, my motivation is creativity though my recommendation for future scientists would be to look at your interests, find a problem and then just research.

Awards	Value
Youth Can Innovate Awards - Junior Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	$500
Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada	$250
Western University Scholarship Gold Medallist - $4000 Entrance Scholarship Sponsor: Western University	$4 000
Total	$4 750