CWSF 2019 - Fredericton, New Brunswick

Keanu Chan

HEALIT 3.0 (Hemostasis by Expanding Automatic Life-Saving Innovative Technique)

Challenge: Innovation
Category: Junior
Region: East Kootenay
City: Cranbrook, BC
School: Parkland Middle

Abstract: Uncontrolled bleeding from trauma is the leading cause of potentially preventable death among injured patients. I developed a novel device under the acronym HEALIT (Hemostasis by Expanding Automatic Life-saving Technique). HEALIT was shown to significantly reduce the amount and rate of bleeding from traumatic wounds. Two further iterations were designed to enhance clotting and reduce infection.

Biography

I am excited to participate at CWSF for the first time. I will be joining my older brother for his second time. I am a member of the U13 Whitecaps Soccer Academy and the local Rep Soccer Team. In the winters, I play hockey and snowboard. In the summer, I surf, kiteboard and have my open water PADI certification for SCUBA diving. In between sports and school, I compete in Speech and Dramatic Arts. My research project was inspired by the Lamborghini Terzo Millennio. When this vehicle is dented or scratched the carbon fibre body detects the damage and fills the cracks with nanotubes. I used to this concept to develop a self-inflating model to control traumatic bleeding in the human body. My project is now in its second year of development. I have created a third iteration of my innovation to further improve the capacity to treat traumatic wounds. In the future, I plan to test my innovation in the clinical setting. My best advice for future science fair students is to keep an open mind and realize that research ideas can come from almost anything in your life. The trick is to always "think outside the box".

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