

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Best Project Award

Sponsor: Youth Science Canada
Award

Bhavya Mohan [16] – Ottawa ON

Taking ABiTE out of Cancer: A Novel Aptamer based BiTE for Cancer

Platinum Award - Best Senior Project

Sponsor: Youth Science Canada
Award

Manning Whitby [18] – Toronto ON

An Interpretation of Life Through Vibration Motors

Platinum Award - Best Intermediate Project

Sponsor: Youth Science Canada
Award

Bhavya Mohan [16] – Ottawa ON

Taking ABiTE out of Cancer: A Novel Aptamer based BiTE for Cancer

Platinum Award - Best Junior Project

Sponsor: Youth Science Canada
Award

Islay Graham [13] – Bluewater ON

Rake Wrack Risk: Do Piping Plovers Prefer a Clean Beach?

International Swiss Talent Forum (ISTF)

Sponsor: Youth Science Canada

All-expenses-paid trip to the 9th International Swiss Talent Forum (ISTF) from February 5-8, 2020 in Nottwil, Switzerland. Forum participants will focus on "World Food" (including topics such as consumer behaviour, land use, climate change, genetically modified food, food waste, bio-agriculture, food distribution, etc.)

Kai Leong [18] – Greater Vancouver BC

Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

China Adolescents Science and Technology Innovation Contest (CASTIC)

Sponsor: Youth Science Canada

All expenses paid trip to the China Adolescents Science and Technology Innovation Contest (CASTIC) in Macao, China from July 20-26, 2019.

Kai Leong [18] – Greater Vancouver BC

Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

Peter Zhu [16] – South-East New Brunswick NB

Development of an AI-Based Acute Promyelocytic Leukemia Classification System

Youth Can Innovate Awards

Senior

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation

Eight projects each receive \$1,000 cash, a presentation award and a certificate. Four of these winners also receive an additional \$7,000 cash award and certificate.

Om Agarwal [16] – Halifax NS

DetectTimely

Kai Leong [18] – Greater Vancouver BC

Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

Stephen Lu [17] – Montréal RM QC

Emergence, une approche statistique pour optimiser la salle d'urgence

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Jacqueline Mansiere [17] – Central Okanagan BC
'Sensing' Health Improvement: How Auditory Input Can Impact Our Health

Pakeeza Mushtaq [17] – Southeast Alberta AB
A Novel DSSC Using Bio-Photosensitizer Pigments and Diatom Frustules

Shounak Ray [16] – Calgary Youth AB
A Predictive Diagnosis for Parkinson's Disease Through Machine Learning

Manning Whitby [18] – Toronto ON
An Interpretation of Life Through Vibration Motors

Peter Zhu [16] – South-East New Brunswick NB
Development of an AI-Based Acute Promyelocytic Leukemia Classification System

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Eight projects each receive \$1,000 cash, a presentation award and a certificate. Four of these winners also receive an additional \$7,000 cash award and certificate.

Stephen Lu [17] – Montréal RM QC
Emergence, une approche statistique pour optimiser la salle d'urgence

Shounak Ray [16] – Calgary Youth AB
A Predictive Diagnosis for Parkinson's Disease Through Machine Learning

Manning Whitby [18] – Toronto ON
An Interpretation of Life Through Vibration Motors

Peter Zhu [16] – South-East New Brunswick NB
Development of an AI-Based Acute Promyelocytic Leukemia Classification System

Youth Can Innovate Awards

Intermediate

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
Four projects each receive \$750 cash, a presentation award and a certificate

Bhavya Mohan [16] – Ottawa ON
Taking ABiTE out of Cancer: A Novel Aptamer based BiTE for Cancer

Juliette Quirion [15] – Estrie QC
Dessine-moi un mouton

Monis Sayyid [14], **Jack Sloan** [15] – Rideau-St. Lawrence ON
The Windfall Solution: An Alternative Winter Road Treatment

Nethra Wickramasinghe [15] – Sudbury ON
A Novel Neuropsychiatric Wearable System Using Cognitive Behavioural Therapy

Youth Can Innovate Awards

Junior

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
Four projects each receive \$500 cash, a presentation award and a certificate

Islay Graham [13] – Bluewater ON
Rake Wrack Risk: Do Piping Plovers Prefer a Clean Beach?

Christopher Lamont [13] – Bay Area ON
Creation of an Intravenous Fluid Administration System for Low Income Countries

Bruce Porter [14] – Yukon/Stikine YT
Pristine Waters: A Pioneering Project in Yukon River Microplastic Research

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Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Callum Yoker [13] – Windsor ON

Manipulating Microbial Membrane Permeability to Dyes

Western University Scholarship

Gold Medallist - \$4000 Entrance Scholarship

Sponsor: Western University

An Entrance Scholarship of \$4,000 is offered to each winner of a Gold Medal; \$2,000 to each winner of a Silver Medal; and \$1,000 to each winner of a Bronze Medal.

Om Agarwal [16] – Halifax NS

DetectTimely

Amal Aziz [17] – Thames Valley ON

Smart Photo-Active Trojan Horse Nanoparticle for Alzheimer's Vascular Therapy

Antoine Blais [14] – Estrie QC

OMG, des insectes !

Tori Chen [17] – Thames Valley ON

Gene Therapy: A Treatment for Diabetic Cardiomyopathy

Jordan Fergani [14], **Edward Xiong** [14] – Sudbury ON

A.T.L.A.S.T: Auto Temperature Live Alert System Thermometer

Islay Graham [13] – Bluewater ON

Rake Wrack Risk: Do Piping Plovers Prefer a Clean Beach?

Rohan Gupta [16] – Vancouver Island BC

Cytogenotoxic Effects of Local Stormwater on Allium cepa L.

Lucas Hilden [13] – Annapolis Valley NS

The New Solution for Facial Blindness

Sophie Hoyer Pacholek [15] – Calgary Youth AB

From Sea and Sky: Biomimetic Wings for Enhanced Aircraft Performance

Daniel Kornyllo [15] – Northern Vancouver Island BC

The Development of a Research Tool to Improve Snake Husbandry

Christopher Lamont [13] – Bay Area ON

Creation of an Intravenous Fluid Administration System for Low Income Countries

Kai Leong [18] – Greater Vancouver BC

Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

Krish Modi [14] – Lambton County ON

'No to Photo' – My Photo Consent

Bhavya Mohan [16] – Ottawa ON

Taking ABiTE out of Cancer: A Novel Aptamer based BiTE for Cancer

Pakeeza Mushtaq [17] – Southeast Alberta AB

A Novel DSSC Using Bio-Photosensitizer Pigments and Diatom Frustules

Harry Parmar [15] – York ON

Synthetic Viocaine: The Power of Designer Pharmaceuticals in the Real World

Bruce Porter [14] – Yukon/Stikine YT

Pristine Waters: A Pioneering Project in Yukon River Microplastic Research

Juliette Quirion [15] – Estrie QC

Dessine-moi un mouton

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Ali Rizvi [15] – Regina SK

Detecting Exoplanets Using Supervised Machine Learning

Emily Robb [16] – Western Manitoba MB

Grow Big or Grow Home: The Roots to Hydroponic Success

Anthony Saturnino [13] – Bay Area ON

Eave 7.0: An Autonomous Robotic Eavestrough Cleaner

Monis Sayyid [14], **Jack Sloan** [15] – Rideau-St. Lawrence ON

The Windfall Solution: An Alternative Winter Road Treatment

Leah Schwartz [16] – Manitoba Schools Science Symposium MB

Regulation of Periostin Gene Expression by Scleraxis

Claire Scrimini [16], **Vanessa Scrimini** [16] – Greater Vancouver BC

Algae Meets Fungi: Microalgae-Fungi Co-Pelletization for Biofuel Production

Neila Selouani [13] – Districts francophones du Nouveau-Brunswick NB

ARim : un nouvel outil d'aide pour le diagnostic de la rétinopathie diabétique

Muhammad Shahzad [16] – Edmonton AB

Pomelo and Chinese Bayberry Extracts Protect Mouse β Cells from Oxidative Stress

Manning Whitby [18] – Toronto ON

An Interpretation of Life Through Vibration Motors

Nethra Wickramasinghe [15] – Sudbury ON

A Novel Neuropsychiatric Wearable System Using Cognitive Behavioural Therapy

Callum Yoker [13] – Windsor ON

Manipulating Microbial Membrane Permeability to Dyes

Peter Zhu [16] – South-East New Brunswick NB

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Silver Medallist - \$2000 Entrance Scholarship

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Yaseen Abbas [16] – York ON

Anthocyanins: A Natural Deterrent to Carcinogenesis

Rya Adronov [14] – Bay Area ON

Ti-Dye Energy: Natural Dye Combinations in Dye-Sensitized Solar Cells

Hadi Almalki [16] – Waterloo-Wellington ON

Random Forest Classification of Histopathological Images

Teryl Bates [16] – Central Okanagan BC

A Fibonacci Solution – Mitigating Landslides and Avalanches (v2)

Mira Bhattacharya [15] – York ON

An Eco-Friendly Method to Remove Oil and Other Contaminants Using Fruit Peels

Kyle Brent [14] – Greater Vancouver BC

Metallurgy Mayhem

Charley Cai [18] – Greater Vancouver BC

Chagas Disease: Decoding Vector-Based Pathogen Recognition

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-
- Ethan Chan** [14] – Vancouver Island BC
Protein Problem: A Digitized At-Home Urinalysis Device for Kidney Disease
-
- Anna Chandler Merlo** [12] – Ottawa ON
Which is the Best Alternative to Paraffin Wax: Beeswax, Soy, Palm or Coconut Wax
-
- Sarah Choi** [16], **Neelah Hassanzadeh** [16] – Fraser Valley BC
BSFL Frass: Improving Plant Health While Minimizing Environmental Impact
-
- Sarah Chun** [17] – Thames Valley ON
Effect of COX-1 Inhibition on Tumour Organoids Using SC-560
-
- Maisie Cottrill** [14] – Bluewater ON
Pi in the Sky: A Sustainable, Web-Based, Automated Greenhouse
-
- Fuyang Deng** [16] – Northwestern Ontario ON
Nipigon River Landslides: A Study of Soil Moisture on the Risk of Slope Failure
-
- Gaia Fameli** [14] – Greater Vancouver BC
Nailing (the Issue with) Nail Polish
-
- Wendy Fang** [16] – Greater Vancouver BC
The Pollen GPS
-
- Adelka Felcarek-Hope** [16], **Sofia McVetty** [16] – Montreal QC
The Poly-Phaeophyceae Method
-
- Erica Forsythe** [15] – Sunset Country ON
Medicine in My Backyard
-
- Zoe Gagnon** [18] – Niagara ON
Activating Insulin Receptors in Fruit Fly Larvae Decreases Movement
-
- Sébastien Girard** [17] – Outaouais QC
Correction assistée
-
- Amy Gudmundson** [15] – Western Manitoba MB
Le système flash de surveillance du glucose et la dermatite – l'enquête débute !
-
- Aaryan Harshith** [13] – Renfrew County ON
Using Artificial Intelligence to Diagnose Diabetes Early
-
- Graeme Hopkins** [14] – Ottawa ON
A Taphonomic Comparison of Two Ordovician Fossil Assemblages
-
- Julien-Pierre Houle** [16] – Estrie QC
Transition près du zéro absolu
-
- Kiera Hui** [13] – Toronto ON
Can Cotton Textiles be used to Clean Up Oil Spills
-
- Etienne Joulin** [16] – Thames Valley ON
Identification of Genetic Similarities between Parasites and Hosts Using CGR
-
- Guntaas Kaur** [15] – Peel ON
Insights into Cytokinin Functions: Characterizing Arabidopsis thaliana Mutants
-
- Raphael Kelly** [14] – Calgary Youth AB
Utilizing GIS and Data Analysis to Assess Human Impact on Migratory Bird Species
-
- Jeffrey Klinck** [14] – Bay Area ON
Using BCI and AI to Detect Emotions for Mental Health Applications

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Jesse Lee [16] – Calgary Youth AB <i>Protein Based Biosensor: Roadside Detection of THC</i>
Monica Aida Lopez [16] – Calgary Youth AB <i>Lessening Allergic Activities of Lipid Transfer Proteins in Plant Tissue</i>
Stephen Lu [17] – Montréal RM QC <i>Emergence, une approche statistique pour optimiser la salle d'urgence</i>
Shayan Mahmood [12] – Thames Valley ON <i>DeepWave: Cardiac Arrhythmia Diagnosis Using a Deep Learning ECG System</i>
Jacqueline Mansiere [17] – Central Okanagan BC <i>'Sensing' Health Improvement: How Auditory Input Can Impact Our Health</i>
Mikko Lorico [14], Deven Marrero [13] – South Fraser BC <i>AutoParkade: Could this solve long parking wait times?</i>
Davin Martin [13] – Calgary Youth AB <i>Mealworms – A Way to Reduce Styrofoam!</i>
Abby Mattina [15] – Toronto ON <i>Time to Switch to Switchgrass Bedding?</i>
Hollis Mattson [12] – Northern British Columbia BC <i>Underwater Soundscape</i>
Jannah McCallum [12] – Prince Edward Island PE <i>Weeding Out the Alternatives: Is Cinnamon an Herbicide?</i>
Ahmed Nadeem [16] – York ON <i>A Novel Approach to Alleviate Oxidative Stress in Daphnia magna by D-limonene</i>
Joe Moak [13], Davis Nicholson [13] – Prince Edward Island PE <i>Ready Set Grow: A guide to Better Microgreens</i>
Annika Paliwal [13] – Manitoba Schools Science Symposium MB <i>Determining Cognitive Abilities of Individuals through Associative Memory Games</i>
Emma Palmer [13] – Simcoe County ON <i>Northern NEW-trition</i>
Dhruv Patel [15] – Frontenac, Lennox & Addington ON <i>A Novel Approach to Diagnose Glioblastoma</i>
Adam Patton [15] – Cariboo/Mainline BC <i>The Power of Hydrogen</i>
Hayden Persad [15] – West Kootenay & Boundary BC <i>Using Potato Peel Waste as a Polymer Source in the Creation of a Bioplastic</i>
Reid Pidsadowski [13] – Edmonton AB <i>Diesel From the Field</i>
Shaun Plassery [14] – Peterborough ON <i>Slick Sorbents for Cleaning Up Ocean Oil Spills Using Hair, Wool and Jute</i>
Shounak Ray [16] – Calgary Youth AB <i>A Predictive Diagnosis for Parkinson's Disease Through Machine Learning</i>
Patricia Rea [13] – York ON <i>BioGrade Yeast: Biomanufacturing with Antifreeze-Yeast on Mars</i>

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David Richard [17] – Saguenay-Lac Saint-Jean QC
Pi, ça donne quoi ?

Hajeong Seo [15] – Montreal QC
Fog On, Fog Off

Sasha Seufert [17] – Waterloo-Wellington ON
Delivery of DNA to Stem Cells via Nematocysts

Hardit Singh [13] – Waterloo-Wellington ON
FoodSpec – A Multispectral Detector for Non-Destructive Testing of Food

Syni Solanki [15] – Peel ON
Modification of Nuclear Architecture in Hodgkin's Lymphoma due to Lamin A/C

Graydon Strachan [14] – Winnipeg Schools MB
MAC-2: Estimation of Weight Using a Modified Blood Pressure Cuff

Anna Voia [16] – Montréal RM QC
Ensemble contre la résistance

Mohammed Torkmani [14], **Raphael Xu** [14] – Bay Area ON
Plastic Delicacies: The Consumption and Biodegradation of Polystyrene by

Kerry Yang [14] – Sudbury ON
Weeding Out the Secret to Antibiotic Resistance

Jessica Yemen [15] – Renfrew County ON
Taking Flight: Monarch Butterfly Conservation

Matthew Zhou [17] – Thames Valley ON
Effects of BMI and SSRI Use on Inflammation in Adolescents with Mood Disorders

Western University Scholarship

Bronze Medallist - \$1000 Entrance Scholarship

Sponsor: Western University

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Sparsh Agrawal [16] – Manitoba Schools Science Symposium MB
Improving Current Stock-Trading Infrastructure Using a Blockchain Network

Ahmad Ali [17] – Windsor ON
SignSMART V.2

Hamdi Ali [17] – Edmonton AB
Diamonds in the Rough: Maximizing Diamond Recovery

Nicolas Allard [17] – Saguenay-Lac Saint-Jean QC
Robot au service du ping-pong

Momin Anwar [15] – Eastern Newfoundland NL
Improving Bioplastics Properties by Incorporating Hydrophobic Materials

Tavian Augustus [12] – Bay Area ON
Solar Step: Combining Solar Panels and Piezo Cells to Create Clean Electricity

Jaden Balasuriya [13] – Simcoe County ON
Pucksense

Mokhtar Beldjilali [16] – Districts francophones du Nouveau-Brunswick NB
Friperie Marie-Esther : ressortez votre style

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Bridgit Bennett-Delorme [15] – Renfrew County ON
CPR Model #2

Jemma Blattner [13] – Central Interior British Columbia BC
Food Fit for Fairies

Ethan Breit [16] – Toronto ON
Performant GPU Pathtracing

Johnathan Campbell [13] – Kivalliq NU
Window Parka

Keanu Chan [12] – East Kootenay BC
HEALIT 3.0 (Hemostasis by Expanding Automatic Life-Saving Innovative Technique)

Abby Chapman [16] – Prince Edward Island PE
Temperature Dependent Approach to Enhance Drug Discovery from Bacteria

Brent Charron [16] – Windsor ON
Slip Prevention System Using Tribometric, Light, Moisture, and Temperature Sensors

Ethan Chiang [13] – Bay Area ON
Proteolytic Effect of Fruit Enzyme Homogenate on Different Doneness of Beef

Ryan Churchill [16] – Tri-County NS
Phone 2 Phone

Ally Churko [16] – Prairie Valley SK
Can Transgenerational Epigenetics be Shown in Eisenia fetida?

Mitchell Clapperton [13] – Bay Area ON
AeroTronics – A High Pressure Aeroponics System for Sustainable Indoor Agriculture

Mary Clifford [14] – Waterloo-Wellington ON
When Life Gives You Potatoes, Make Plastic

Julia Cross [16] – Northwestern Ontario ON
Analysis of Canine Musculoskeletal Injuries from Sled Dog Harness Designs

Lucas Crupi [15] – Northwestern Ontario ON
Spectrophotometry for Concentration Testing on E. coli Using Relative Absorbance

Fletcher Dares [14] – Beaufort-Delta NT
The Effects of Low Earth Orbit on Digital Displays

Tristan Davies [12], **Ryan Wilson** [13] – Halifax NS
Whale of a Problem – An Innovation on North Atlantic Right Whales

Catherine Diyakonov [14] – Greater Vancouver BC
Developing Bioplastic Walls: Reducing Waste and Restoration Costs After Floods

Megan Downe [16], **Avery Nicholson** [15] – 4-H Canada PE
Ulva lactuca: Subcritical Water and Supercritical CO2 Extractions

Emilia Dyksterhuis [12] – Northern British Columbia BC
Spare Our Air: The Use of Algae Scrubbers in the Oil and Gas Industry

Aeryn Eastwood [14] – Halifax NS
Garbage to Gucci: A Novel Approach to Producing an Eco-Friendly Leather

Milo Eirew [15] – Greater Vancouver BC
The Hydrocyclic Cell – A Novel Improved-Efficiency Fuel Cell

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Ava Fischer [13] – Simcoe County ON
Stand Open

Marin Foulds [13], **Claire Pasenau** [12] – Central Okanagan BC
Spin Stove

Shreya Gandhi [15] – Vancouver Island BC
Smarticle Particles: Laser-absorbing gold nanoparticle solution for airplanes

Anika Garg [16] – Thames Valley ON
Developing a Self-Sensing Actuator for Use in Wearable Rehabilitation Devices

Brianna Garvey [12] – Bluewater ON
Don Don Don

Emily Goodson [15], **Nikki van Schaik** [14] – Simcoe County ON
Comparing the Effects of Aerobically Decomposed Waste on Plant Development

Jonathan Goudreault [14] – Peace Country AB
Microwave Manipulation

Tara Gover [16] – North-West New Brunswick NB
Thermoelectricity: Powering the Ships of Tomorrow

Samara Green [14], **Anaya Permanand** [13] – Northern Manitoba MB
Is It Possible to Repurpose Slag from the Nickel Mining Industry?

Sarah Grieves [16] – Manitoba First Nations MB
Soil Contamination in Oxford House

Lénárd Grossmann [15] – Edmonton AB
Intelligent Architecture – Can AI predict architecture that makes us happy?

Christina Hanna [16] – Bay Area ON
Eco-Friendly Solutions Preventing Redox Reactions for Economic Sustainability

Hillary Huynh [16] – Yellowknife NT
Physiognomy Retention

James Iansavitchous [17] – Thames Valley ON
B-ALL Leukemia Treatment: Exploiting Dependency on ROS to Prevent Proliferation

Pasha Jones [15], **Adrianna Vutrano** [15] – Montreal QC
Portable House

Sophia Khoury [14] – Toronto ON
Hand Sanitizer and the Elimination of Home and School-Acquired Bacteria

Juliana Koen Alonso [17] – Eastern Newfoundland NL
The Effect of the Engrailed Gene & TGF Beta on the Migration of Ovarian Cancer

Jessica Lee [15] – Halifax NS
Are 'Eco-Friendly' Detergents Really More Eco-Friendly?

Paul Lee [14] – Bay Area ON
Conserving Momentum with MMDs

Samuel Lefrançois [17], **Cloé Robichaud** [17] – Districts francophones du Nouveau-Brunswick NB
L'impact des routes sur les forêts

Laurence Liang [17] – Montréal RM QC
La régénération neuronale assistée par un modèle informatique

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-
- Oana Binder [17], Josh Lien [16]** – Waterloo-Wellington ON
ViraDose: A Novel Application for Facilitating Gene Therapy Dosing
-
- Hana Haytaoglu [16], Hannah MacAusland [16]** – Peterborough ON
Preparation, Property Testing, and Applications of Bioplastic
-
- Monica Mahut [16]** – Bay Area ON
Elevator to Everywhere
-
- Cyril Mani [18]** – Montréal RM QC
Democratizing Aerospace Technologies: A Novel Approach to Space R&D
-
- Grace Marion [14]** – Windsor ON
Do Walleye Fish in Lake Erie Show Presence of Mercury?
-
- Dana Mavrow [16]** – Vancouver Island BC
Reused Christmas Trees: Creating a Biodiesel from Pine Needles
-
- Lucas McDonnell-Hoffert [13]** – West Kootenay & Boundary BC
To Be There or Not to Be There... The Case for Vibrant Lines!
-
- Trevor Meek [13]** – Sudbury ON
Development of a Timed On-Demand Wireless Heated Washer Fluid System
-
- Rohan Mehta [14]** – Simcoe County ON
Automating the Detection and Probability of Wildfires – Tapio
-
- Luca Ménard [13]** – Frontenac, Lennox & Addington ON
Harnessing Nature's Power
-
- Henley Mullins [14]** – Eastern Newfoundland NL
Experimental Optimization of a Hybrid Rocket Engine
-
- Jodh Singh Nahal [15]** – Cariboo/Mainline BC
Optimizing MFCs With a Novel Approach and Controlling Eutrophication
-
- Francois Marais [15], Caprinder Nanrey [16]** – Wood Buffalo AB
Security Upgrade
-
- Adrian Nitu [13]** – Ottawa ON
A Novel Artificial Intelligence-Based Approach to Dynamic Traffic Management for
-
- Emilia Oliver [14]** – Timmins ON
Using Food Waste to Remove Arsenic from Water 2.0 – It's All About Oranges
-
- Layla Owens [13]** – Conseil scolaire acadien provincial NS
Submergence !
-
- Áine Pucchio [16]** – Thames Valley ON
A Pineapple a Day Keeps the Doctor Away – It's Not So Difficile
-
- Crystal Radinski [18]** – Calgary Youth AB
EEG Coherence as BioMarker for Alzheimer's Dementia
-
- Rosemund Ragetli [17]** – St. James-Assiniboia MB
An Economically Plausible Reduction of Food Wastage in Kenya
-
- Rebecca Rathlef [15]** – Greater Vancouver BC
Natural Products as Potential Sunscreens
-
- Annabelle Rayson [13]** – Lambton County ON
De-Icer Distillery: An Innovative and Environmental Approach to Road Safety

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Christianne Riveroll [14] – Prince Edward Island PE <i>The Psychology of Colour</i>
Alexander Rozic [13] – Quinte ON <i>Do You See What I See?</i>
Devarsh Shah [16] – Lambton County ON <i>A Novel Dielectrophoretic-Based Separation System for Cell Identification</i>
Mankeerat Singh Sidhu [15] – South Fraser BC <i>A Hand for Hope</i>
Aiden Simard [18] – Western Manitoba MB <i>Adolescent Anxiety and Social Media</i>
Leila Smaili [14] – Frontenac, Lennox & Addington ON <i>Are Pesticide Formulations Genotoxic?</i>
Lily Smales [14] – Bay Area ON <i>Convolutional Neural Network to Detect Eyes with Visual Impairment</i>
Abby Snodgrass [17] – South-East New Brunswick NB <i>Interceptive Awareness and the Novel Use of VR with Arduino Based Sensors</i>
Andy Liang [16], Alexander Sun [16] – Greater Vancouver BC <i>Novel Treatment of Algal Blooms with Viral Transfection and Barley Straw Extract</i>
Abdallahman Tawhid [18] – Cariboo/Mainline BC <i>Extensive Development of Statistical Models to Predict Future Health Care Trends</i>
Kyra Taylor [18] – Northern British Columbia BC <i>Keeping the Balance: The Correlation Between Diet and pH in the Equine Hindgut</i>
Nattan Telmer [16] – Vancouver Island BC <i>A Flexible TEG Prototype (FlexiTEG) for Wearable Electronics</i>
Anna Tymofyeyeva [16] – York ON <i>An Integrated Glucose Meter Using Sweat Diagnostic Technology for Diabetics</i>
Rachael Urquhart [12] – Bluewater ON <i>Calm Your Beating Heart: An Experiment on Ways to Lower Heart Rate</i>
Laura Wang [16] – Greater Vancouver BC <i>Endotoxin's Association with Wheeze and Atopy</i>
Brooklynn Watson [14] – Northern Vancouver Island BC <i>CRISPR Cas9 and the Human Genome</i>
Wei Xie [15] – Greater Vancouver BC <i>FireBot: Augmenting Firefighting with AI</i>
Zoe Yee [13] – Edmonton AB <i>Water My Seeds Doing in Water Beads?</i>
Kevin Liu [14], Saabir Yousuf [14] – Saskatoon SK <i>Economically Feasible Desalination</i>

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University of Ottawa Entrance Scholarship

Senior Gold Medallist - \$4,000 Entrance Scholarship

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DetectTimely

Amal Aziz [17] – Thames Valley ON

Smart Photo-Active Trojan Horse Nanoparticle for Alzheimer's Vascular Therapy

Tori Chen [17] – Thames Valley ON

Gene Therapy: A Treatment for Diabetic Cardiomyopathy

Rohan Gupta [16] – Vancouver Island BC

Cytogenotoxic Effects of Local Stormwater on Allium cepa L.

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Leah Schwartz [16] – Manitoba Schools Science Symposium MB

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Manning Whitby [18] – Toronto ON

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Teryl Bates [16] – Central Okanagan BC

A Fibonacci Solution – Mitigating Landslides and Avalanches (v2)

Charley Cai [18] – Greater Vancouver BC

Chagas Disease: Decoding Vector-Based Pathogen Recognition

Sarah Choi [16], **Neelah Hassanzadeh** [16] – Fraser Valley BC

BSFL Frass: Improving Plant Health While Minimizing Environmental Impact

Sarah Chun [17] – Thames Valley ON

Effect of COX-1 Inhibition on Tumour Organoids Using SC-560

Fuyang Deng [16] – Northwestern Ontario ON

Nipigon River Landslides: A Study of Soil Moisture on the Risk of Slope Failure

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Zoe Gagnon [18] – Niagara ON <i>Activating Insulin Receptors in Fruit Fly Larvae Decreases Movement</i>
Sébastien Girard [17] – Outaouais QC <i>Correction assistée</i>
Julien-Pierre Houle [16] – Estrie QC <i>Transition près du zéro absolu</i>
Jesse Lee [16] – Calgary Youth AB <i>Protein Based Biosensor: Roadside Detection of THC</i>
Monica Aida Lopez [16] – Calgary Youth AB <i>Lessening Allergic Activities of Lipid Transfer Proteins in Plant Tissue</i>
Stephen Lu [17] – Montréal RM QC <i>Emergence, une approche statistique pour optimiser la salle d'urgence</i>
Jacqueline Mansiere [17] – Central Okanagan BC <i>'Sensing' Health Improvement: How Auditory Input Can Impact Our Health</i>
Ahmed Nadeem [16] – York ON <i>A Novel Approach to Alleviate Oxidative Stress in Daphnia magna by D-limonene</i>
Dhruv Patel [15] – Frontenac, Lennox & Addington ON <i>A Novel Approach to Diagnose Glioblastoma</i>
Shounak Ray [16] – Calgary Youth AB <i>A Predictive Diagnosis for Parkinson's Disease Through Machine Learning</i>
David Richard [17] – Saguenay-Lac Saint-Jean QC <i>Pi, ça donne quoi ?</i>
Sasha Seufert [17] – Waterloo-Wellington ON <i>Delivery of DNA to Stem Cells via Nematocysts</i>
Matthew Zhou [17] – Thames Valley ON <i>Effects of BMI and SSRI Use on Inflammation in Adolescents with Mood Disorders</i>

University of Ottawa Entrance Scholarship

Senior Bronze Medallist - \$1000 Entrance Scholarship

Sponsor: University of Ottawa

The University of Ottawa offers entrance scholarships of \$4,000 to each gold medal winning senior finalist; \$2,000 to each silver medal winning senior finalist; and \$1,000 to each bronze medal winning senior finalist.

Ahmad Ali [17] – Windsor ON <i>SignSMART V.2</i>
Hamdi Ali [17] – Edmonton AB <i>Diamonds in the Rough: Maximizing Diamond Recovery</i>
Nicolas Allard [17] – Saguenay-Lac Saint-Jean QC <i>Robot au service du ping-pong</i>
Mokhtar Beldjilali [16] – Districts francophones du Nouveau-Brunswick NB <i>Friperie Marie-Esther : ressortez votre style</i>
Brent Charron [16] – Windsor ON <i>Slip Prevention System Using Tribometric, Light, Moisture, and Temperature Sensors</i>
Ally Churko [16] – Prairie Valley SK <i>Can Transgenerational Epigenetics be Shown in Eisenia fetida?</i>

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Julia Cross [16] – Northwestern Ontario ON

Analysis of Canine Musculoskeletal Injuries from Sled Dog Harness Designs

Milo Eirew [15] – Greater Vancouver BC

The Hydrocyclic Cell – A Novel Improved-Efficiency Fuel Cell

Anika Garg [16] – Thames Valley ON

Developing a Self-Sensing Actuator for Use in Wearable Rehabilitation Devices

Tara Gover [16] – North-West New Brunswick NB

Thermoelectricity: Powering the Ships of Tomorrow

Lénárd Grossmann [15] – Edmonton AB

Intelligent Architecture – Can AI predict architecture that makes us happy?

Christina Hanna [16] – Bay Area ON

Eco-Friendly Solutions Preventing Redox Reactions for Economic Sustainability

James Iansavitchous [17] – Thames Valley ON

B-ALL Leukemia Treatment: Exploiting Dependency on ROS to Prevent Proliferation

Juliana Koen Alonso [17] – Eastern Newfoundland NL

The Effect of the Engrailed Gene & TGF Beta on the Migration of Ovarian Cancer

Samuel Lefrançois [17], **Cloé Robichaud** [17] – Districts francophones du Nouveau-Brunswick NB

L'impact des routes sur les forêts

Laurence Liang [17] – Montréal RM QC

La régénération neuronale assistée par un modèle informatique

Oana Binder [17], **Josh Lien** [16] – Waterloo-Wellington ON

ViraDose: A Novel Application for Facilitating Gene Therapy Dosing

Monica Mahut [16] – Bay Area ON

Elevator to Everywhere

Cyril Mani [18] – Montréal RM QC

Democratizing Aerospace Technologies: A Novel Approach to Space R&D

Áine Pucchio [16] – Thames Valley ON

A Pineapple a Day Keeps the Doctor Away – It's Not So Difficile

Crystal Radinski [18] – Calgary Youth AB

EEG Coherence as BioMarker for Alzheimer's Dementia

Rosemund Ragetli [17] – St. James-Assiniboia MB

An Economically Plausible Reduction of Food Waste in Kenya

Devarsh Shah [16] – Lambton County ON

A Novel Dielectrophoretic-Based Separation System for Cell Identification

Aiden Simard [18] – Western Manitoba MB

Adolescent Anxiety and Social Media

Abby Snodgrass [17] – South-East New Brunswick NB

Interoceptive Awareness and the Novel Use of VR with Arduino Based Sensors

Abdallah Tawhid [18] – Cariboo/Mainline BC

Extensive Development of Statistical Models to Predict Future Health Care Trends

Kyra Taylor [18] – Northern British Columbia BC

Keeping the Balance: The Correlation Between Diet and pH in the Equine Hindgut

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Nattan Telmer [16] – Vancouver Island BC
A Flexible TEG Prototype (FlexiTEG) for Wearable Electronics

Anna Tymofyeyeva [16] – York ON
An Integrated Glucose Meter Using Sweat Diagnostic Technology for Diabetics

Laura Wang [16] – Greater Vancouver BC
Endotoxin's Association with Wheeze and Atopy

University of New Brunswick Canada-Wide Science Fair Scholarship

Gold Medallist - \$5000 Entrance Scholarship

Sponsor: University of New Brunswick

A University of New Brunswick Canada-Wide Science Fair scholarship is offered to senior medalists of the 2019 Canada-Wide Science Fair. \$5,000 is offered to each gold medal winning senior finalists; \$2,500 to each silver medal winning senior finalist. Recipients must be enrolled in a UNB undergraduate degree program as a full-time student in Fall 2019.

Om Agarwal [16] – Halifax NS
DetectTimely

Amal Aziz [17] – Thames Valley ON
Smart Photo-Active Trojan Horse Nanoparticle for Alzheimer's Vascular Therapy

Tori Chen [17] – Thames Valley ON
Gene Therapy: A Treatment for Diabetic Cardiomyopathy

Rohan Gupta [16] – Vancouver Island BC
*Cytogenotoxic Effects of Local Stormwater on *Allium cepa* L.*

Kai Leong [18] – Greater Vancouver BC
Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

Pakeeza Mushtaq [17] – Southeast Alberta AB
A Novel DSSC Using Bio-Photosensitizer Pigments and Diatom Frustules

Leah Schwartz [16] – Manitoba Schools Science Symposium MB
Regulation of Periostin Gene Expression by Scleraxis

Muhammad Shahzad [16] – Edmonton AB
Pomelo and Chinese Bayberry Extracts Protect Mouse β Cells from Oxidative Stress

Manning Whitby [18] – Toronto ON
An Interpretation of Life Through Vibration Motors

Peter Zhu [16] – South-East New Brunswick NB
Development of an AI-Based Acute Promyelocytic Leukemia Classification System

University of New Brunswick Canada-Wide Science Fair Scholarship

Silver Medallist - \$2500 Entrance Scholarship

Sponsor: University of New Brunswick

A University of New Brunswick Canada-Wide Science Fair scholarship is offered to senior medalists of the 2019 Canada-Wide Science Fair. \$5,000 is offered to each gold medal winning senior finalists; \$2,500 to each silver medal winning senior finalist. Recipients must be enrolled in a UNB undergraduate degree program as a full-time student in Fall 2019.

Yaseen Abbas [16] – York ON
Anthocyanins: A Natural Deterrent to Carcinogenesis

Hadi Almalki [16] – Waterloo-Wellington ON
Random Forest Classification of Histopathological Images

Teryl Bates [16] – Central Okanagan BC
A Fibonacci Solution – Mitigating Landslides and Avalanches (v2)

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



-
- Charley Cai** [18] – Greater Vancouver BC
Chagas Disease: Decoding Vector-Based Pathogen Recognition
-
- Sarah Choi** [16], **Neelah Hassanzadeh** [16] – Fraser Valley BC
BSFL Frass: Improving Plant Health While Minimizing Environmental Impact
-
- Sarah Chun** [17] – Thames Valley ON
Effect of COX-1 Inhibition on Tumour Organoids Using SC-560
-
- Fuyang Deng** [16] – Northwestern Ontario ON
Nipigon River Landslides: A Study of Soil Moisture on the Risk of Slope Failure
-
- Zoe Gagnon** [18] – Niagara ON
Activating Insulin Receptors in Fruit Fly Larvae Decreases Movement
-
- Sébastien Girard** [17] – Outaouais QC
Correction assistée
-
- Julien-Pierre Houle** [16] – Estrie QC
Transition près du zéro absolu
-
- Jesse Lee** [16] – Calgary Youth AB
Protein Based Biosensor: Roadside Detection of THC
-
- Monica Aida Lopez** [16] – Calgary Youth AB
Lessening Allergic Activities of Lipid Transfer Proteins in Plant Tissue
-
- Stephen Lu** [17] – Montréal RM QC
Emergence, une approche statistique pour optimiser la salle d'urgence
-
- Jacqueline Mansiere** [17] – Central Okanagan BC
'Sensing' Health Improvement: How Auditory Input Can Impact Our Health
-
- Ahmed Nadeem** [16] – York ON
A Novel Approach to Alleviate Oxidative Stress in Daphnia magna by D-limonene
-
- Dhruv Patel** [15] – Frontenac, Lennox & Addington ON
A Novel Approach to Diagnose Glioblastoma
-
- Shounak Ray** [16] – Calgary Youth AB
A Predictive Diagnosis for Parkinson's Disease Through Machine Learning
-
- David Richard** [17] – Saguenay-Lac Saint-Jean QC
Pi, ça donne quoi ?
-
- Sasha Seufert** [17] – Waterloo-Wellington ON
Delivery of DNA to Stem Cells via Nematocysts
-
- Matthew Zhou** [17] – Thames Valley ON
Effects of BMI and SSRI Use on Inflammation in Adolescents with Mood Disorders

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



University of Manitoba Entrance Scholarship

Senior Gold Medallist - \$5000 Entrance Scholarship

Sponsor: University of Manitoba

The Office of the Vice-President (Research and International) at the University of Manitoba offers a renewable entrance scholarship for students who have been awarded a Gold Medal for a senior project at the Youth Science Canada's - Canada-Wide Science Fair.

The award is renewable, at the same value, in the second year of study provided that the recipient:

1. continues to be enrolled full-time (minimum 24 credit hours) in any faculty or school, excepting the Faculty of Graduate Studies;

Om Agarwal [16] – Halifax NS

DetectTimely

Amal Aziz [17] – Thames Valley ON

Smart Photo-Active Trojan Horse Nanoparticle for Alzheimer's Vascular Therapy

Tori Chen [17] – Thames Valley ON

Gene Therapy: A Treatment for Diabetic Cardiomyopathy

Rohan Gupta [16] – Vancouver Island BC

Cytogenotoxic Effects of Local Stormwater on Allium cepa L.

Kai Leong [18] – Greater Vancouver BC

Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

Pakeeza Mushtaq [17] – Southeast Alberta AB

A Novel DSSC Using Bio-Photosensitizer Pigments and Diatom Frustules

Leah Schwartz [16] – Manitoba Schools Science Symposium MB

Regulation of Periostin Gene Expression by Scleraxis

Muhammad Shahzad [16] – Edmonton AB

Pomelo and Chinese Bayberry Extracts Protect Mouse β Cells from Oxidative Stress

Manning Whitby [18] – Toronto ON

An Interpretation of Life Through Vibration Motors

Peter Zhu [16] – South-East New Brunswick NB

Development of an AI-Based Acute Promyelocytic Leukemia Classification System

UBC Science (Vancouver) Entrance Award

Senior Gold Medallist - \$4000 Entrance Scholarship

Sponsor: The University of British Columbia (Vancouver)

A UBC Vancouver Science entrance scholarship is offered, \$4,000 to each senior gold medalist and \$2,000 to each senior silver medalist. To be eligible for the scholarships, finalists must be admitted to the UBC Faculty of Science (Vancouver campus) and register directly from secondary school. Winners who are in grade eleven may defer the award for one year.

Om Agarwal [16] – Halifax NS

DetectTimely

Amal Aziz [17] – Thames Valley ON

Smart Photo-Active Trojan Horse Nanoparticle for Alzheimer's Vascular Therapy

Tori Chen [17] – Thames Valley ON

Gene Therapy: A Treatment for Diabetic Cardiomyopathy

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



-
- Rohan Gupta** [16] – Vancouver Island BC
Cytogenotoxic Effects of Local Stormwater on Allium cepa L.
-
- Kai Leong** [18] – Greater Vancouver BC
Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis
-
- Pakeeza Mushtaq** [17] – Southeast Alberta AB
A Novel DSSC Using Bio-Photosensitizer Pigments and Diatom Frustules
-
- Leah Schwartz** [16] – Manitoba Schools Science Symposium MB
Regulation of Periostin Gene Expression by Scleraxis
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- Muhammad Shahzad** [16] – Edmonton AB
Pomelo and Chinese Bayberry Extracts Protect Mouse β Cells from Oxidative Stress
-
- Manning Whitby** [18] – Toronto ON
An Interpretation of Life Through Vibration Motors
-
- Peter Zhu** [16] – South-East New Brunswick NB
Development of an AI-Based Acute Promyelocytic Leukemia Classification System
-

UBC Science (Vancouver) Entrance Award

Senior Silver Medallist - \$2000 Entrance Scholarship

Sponsor: The University of British Columbia (Vancouver)

A UBC Vancouver Science entrance scholarship is offered, \$4,000 to each senior gold medalist and \$2,000 to each senior silver medalist. To be eligible for the scholarships, finalists must be admitted to the UBC Faculty of Science (Vancouver campus) and register directly from secondary school. Winners who are in grade eleven may defer the award for one year.

-
- Yaseen Abbas** [16] – York ON
Anthocyanins: A Natural Deterrent to Carcinogenesis
-
- Hadi Almalki** [16] – Waterloo-Wellington ON
Random Forest Classification of Histopathological Images
-
- Teryl Bates** [16] – Central Okanagan BC
A Fibonacci Solution – Mitigating Landslides and Avalanches (v2)
-
- Charley Cai** [18] – Greater Vancouver BC
Chagas Disease: Decoding Vector-Based Pathogen Recognition
-
- Sarah Choi** [16], **Neelah Hassanzadeh** [16] – Fraser Valley BC
BSFL Frass: Improving Plant Health While Minimizing Environmental Impact
-
- Sarah Chun** [17] – Thames Valley ON
Effect of COX-1 Inhibition on Tumour Organoids Using SC-560
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- Fuyang Deng** [16] – Northwestern Ontario ON
Nipigon River Landslides: A Study of Soil Moisture on the Risk of Slope Failure
-
- Zoe Gagnon** [18] – Niagara ON
Activating Insulin Receptors in Fruit Fly Larvae Decreases Movement
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- Sébastien Girard** [17] – Outaouais QC
Correction assistée
-
- Julien-Pierre Houle** [16] – Estrie QC
Transition près du zéro absolu
-
- Jesse Lee** [16] – Calgary Youth AB
Protein Based Biosensor: Roadside Detection of THC
-

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



-
- Monica Aida Lopez** [16] – Calgary Youth AB
Lessening Allergic Activities of Lipid Transfer Proteins in Plant Tissue
-
- Stephen Lu** [17] – Montréal RM QC
Emergence, une approche statistique pour optimiser la salle d'urgence
-
- Jacqueline Mansiere** [17] – Central Okanagan BC
'Sensing' Health Improvement: How Auditory Input Can Impact Our Health
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- Ahmed Nadeem** [16] – York ON
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A Novel Approach to Diagnose Glioblastoma
-
- Shounak Ray** [16] – Calgary Youth AB
A Predictive Diagnosis for Parkinson's Disease Through Machine Learning
-
- David Richard** [17] – Saguenay-Lac Saint-Jean QC
Pi, ça donne quoi ?
-
- Sasha Seufert** [17] – Waterloo-Wellington ON
Delivery of DNA to Stem Cells via Nematocysts
-
- Matthew Zhou** [17] – Thames Valley ON
Effects of BMI and SSRI Use on Inflammation in Adolescents with Mood Disorders
-

Dalhousie University Faculty of Science Entrance Scholarship

Senior Gold Medallist - \$5000 Entrance Scholarship

Sponsor: Dalhousie University, Faculty of Science

A Dalhousie University Faculty of Science entrance scholarship of \$5,000 is offered to each gold medal winning senior finalist. A Dalhousie University Faculty of Science entrance scholarship of \$2,500 is offered to each silver medal winning senior finalist.

-
- Om Agarwal** [16] – Halifax NS
DetectTimely
-
- Amal Aziz** [17] – Thames Valley ON
Smart Photo-Active Trojan Horse Nanoparticle for Alzheimer's Vascular Therapy
-
- Tori Chen** [17] – Thames Valley ON
Gene Therapy: A Treatment for Diabetic Cardiomyopathy
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- Muhammad Shahzad** [16] – Edmonton AB
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-
- Manning Whitby** [18] – Toronto ON
An Interpretation of Life Through Vibration Motors
-
- Peter Zhu** [16] – South-East New Brunswick NB
Development of an AI-Based Acute Promyelocytic Leukemia Classification System
-

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Dalhousie University Faculty of Science Entrance Scholarship

Senior Silver Medallist - \$2500 Entrance Scholarship

Sponsor: Dalhousie University, Faculty of Science

A Dalhousie University Faculty of Science entrance scholarship of \$5,000 is offered to each gold medal winning senior finalist. A Dalhousie University Faculty of Science entrance scholarship of \$2,500 is offered to each silver medal winning senior finalist.

Yaseen Abbas [16] – York ON

Anthocyanins: A Natural Deterrent to Carcinogenesis

Hadi Almalki [16] – Waterloo-Wellington ON

Random Forest Classification of Histopathological Images

Teryl Bates [16] – Central Okanagan BC

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Zoe Gagnon [18] – Niagara ON

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Dhruv Patel [15] – Frontenac, Lennox & Addington ON

A Novel Approach to Diagnose Glioblastoma

Shounak Ray [16] – Calgary Youth AB

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David Richard [17] – Saguenay-Lac Saint-Jean QC

Pi, ça donne quoi ?

Sasha Seufert [17] – Waterloo-Wellington ON

Delivery of DNA to Stem Cells via Nematocysts

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Matthew Zhou [17] – Thames Valley ON

Effects of BMI and SSRI Use on Inflammation in Adolescents with Mood Disorders

Excellence Award - Senior

Gold Medal

Sponsor: Youth Science Canada

Medal and certificate

Om Agarwal [16] – Halifax NS

DetectTimely

Amal Aziz [17] – Thames Valley ON

Smart Photo-Active Trojan Horse Nanoparticle for Alzheimer's Vascular Therapy

Tori Chen [17] – Thames Valley ON

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Pomelo and Chinese Bayberry Extracts Protect Mouse β Cells from Oxidative Stress

Manning Whitby [18] – Toronto ON

An Interpretation of Life Through Vibration Motors

Peter Zhu [16] – South-East New Brunswick NB

Development of an AI-Based Acute Promyelocytic Leukemia Classification System

Excellence Award - Intermediate

Gold Medal

Sponsor: Youth Science Canada

Medal and certificate

Sophie Hoyer Pacholek [15] – Calgary Youth AB

From Sea and Sky: Biomimetic Wings for Enhanced Aircraft Performance

Daniel Kornyllo [15] – Northern Vancouver Island BC

The Development of a Research Tool to Improve Snake Husbandry

Bhavya Mohan [16] – Ottawa ON

Taking ABiTE out of Cancer: A Novel Aptamer based BiTE for Cancer

Harry Parmar [15] – York ON

Synthetic Violenin: The Power of Designer Pharmaceuticals in the Real World

Juliette Quirion [15] – Estrie QC

Dessine-moi un mouton

Ali Rizvi [15] – Regina SK

Detecting Exoplanets Using Supervised Machine Learning

Emily Robb [16] – Western Manitoba MB

Grow Big or Grow Home: The Roots to Hydroponic Success

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Monis Sayyid [14], Jack Sloan [15] – Rideau-St. Lawrence ON
The Windfall Solution: An Alternative Winter Road Treatment

Claire Scrimini [16], Vanessa Scrimini [16] – Greater Vancouver BC
Algae Meets Fungi: Microalgae-Fungi Co-Pelletization for Biofuel Production

Nethra Wickramasinghe [15] – Sudbury ON
A Novel Neuropsychiatric Wearable System Using Cognitive Behavioural Therapy

Excellence Award - Junior

Gold Medal

Sponsor: Youth Science Canada
Medal and certificate

Antoine Blais [14] – Estrie QC
OMG, des insectes!

Jordan Fergani [14], Edward Xiong [14] – Sudbury ON
A.T.L.A.S.T: Auto Temperature Live Alert System Thermometer

Islay Graham [13] – Bluewater ON
Rake Wrack Risk: Do Piping Plovers Prefer a Clean Beach?

Lucas Hilden [13] – Annapolis Valley NS
The New Solution for Facial Blindness

Christopher Lamont [13] – Bay Area ON
Creation of an Intravenous Fluid Administration System for Low Income Countries

Krish Modi [14] – Lambton County ON
'No to Photo' – My Photo Consent

Bruce Porter [14] – Yukon/Stikine YT
Pristine Waters: A Pioneering Project in Yukon River Microplastic Research

Anthony Saturnino [13] – Bay Area ON
Eave 7.0: An Autonomous Robotic Eavestrough Cleaner

Neila Selouani [13] – Districts francophones du Nouveau-Brunswick NB
ARim : un nouvel outil d'aide pour le diagnostic de la rétinopathie diabétique

Callum Yoker [13] – Windsor ON
Manipulating Microbial Membrane Permeability to Dyes

Excellence Award - Senior

Silver Medal

Sponsor: Youth Science Canada
Medal and certificate

Yaseen Abbas [16] – York ON
Anthocyanins: A Natural Deterrent to Carcinogenesis

Hadi Almalki [16] – Waterloo-Wellington ON
Random Forest Classification of Histopathological Images

Teryl Bates [16] – Central Okanagan BC
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Charley Cai [18] – Greater Vancouver BC
Chagas Disease: Decoding Vector-Based Pathogen Recognition

Sarah Choi [16], Neelah Hassanzadeh [16] – Fraser Valley BC
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Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Sarah Chun [17] – Thames Valley ON <i>Effect of COX-1 Inhibition on Tumour Organoids Using SC-560</i>
Fuyang Deng [16] – Northwestern Ontario ON <i>Nipigon River Landslides: A Study of Soil Moisture on the Risk of Slope Failure</i>
Zoe Gagnon [18] – Niagara ON <i>Activating Insulin Receptors in Fruit Fly Larvae Decreases Movement</i>
Sébastien Girard [17] – Outaouais QC <i>Correction assistée</i>
Julien-Pierre Houle [16] – Estrie QC <i>Transition près du zéro absolu</i>
Jesse Lee [16] – Calgary Youth AB <i>Protein Based Biosensor: Roadside Detection of THC</i>
Monica Aida Lopez [16] – Calgary Youth AB <i>Lessening Allergic Activities of Lipid Transfer Proteins in Plant Tissue</i>
Stephen Lu [17] – Montréal RM QC <i>Emergence, une approche statistique pour optimiser la salle d'urgence</i>
Jacqueline Mansiere [17] – Central Okanagan BC <i>'Sensing' Health Improvement: How Auditory Input Can Impact Our Health</i>
Ahmed Nadeem [16] – York ON <i>A Novel Approach to Alleviate Oxidative Stress in Daphnia magna by D-limonene</i>
Dhruv Patel [15] – Frontenac, Lennox & Addington ON <i>A Novel Approach to Diagnose Glioblastoma</i>
Shounak Ray [16] – Calgary Youth AB <i>A Predictive Diagnosis for Parkinson's Disease Through Machine Learning</i>
David Richard [17] – Saguenay-Lac Saint-Jean QC <i>Pi, ça donne quoi ?</i>
Sasha Seufert [17] – Waterloo-Wellington ON <i>Delivery of DNA to Stem Cells via Nematocysts</i>
Matthew Zhou [17] – Thames Valley ON <i>Effects of BMI and SSRI Use on Inflammation in Adolescents with Mood Disorders</i>

Excellence Award - Intermediate

Silver Medal

Sponsor: Youth Science Canada

Medal and certificate

Mira Bhattacharya [15] – York ON <i>An Eco-Friendly Method to Remove Oil and Other Contaminants Using Fruit Peels</i>
Kyle Brent [14] – Greater Vancouver BC <i>Metallurgy Mayhem</i>
Ethan Chan [14] – Vancouver Island BC <i>Protein Problem: A Digitized At-Home Urinalysis Device for Kidney Disease</i>
Wendy Fang [16] – Greater Vancouver BC <i>The Pollen GPS</i>

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Adelka Felcarek-Hope [16], Sofia McVetty [16] – Montreal QC
The Poly-Phaeophyceae Method

Erica Forsythe [15] – Sunset Country ON
Medicine in My Backyard

Amy Gudmundson [15] – Western Manitoba MB
Le système flash de surveillance du glucose et la dermatite – l'enquête débute !

Graeme Hopkins [14] – Ottawa ON
A Taphonomic Comparison of Two Ordovician Fossil Assemblages

Etienne Joulin [16] – Thames Valley ON
Identification of Genetic Similarities between Parasites and Hosts Using CGR

Guntaas Kaur [15] – Peel ON
Insights into Cytokinin Functions: Characterizing Arabidopsis thaliana Mutants

Raphael Kelly [14] – Calgary Youth AB
Utilizing GIS and Data Analysis to Assess Human Impact on Migratory Bird Species

Abby Mattina [15] – Toronto ON
Time to Switch to Switchgrass Bedding?

Adam Patton [15] – Cariboo/Mainline BC
The Power of Hydrogen

Hayden Persad [15] – West Kootenay & Boundary BC
Using Potato Peel Waste as a Polymer Source in the Creation of a Bioplastic

Hajeong Seo [15] – Montreal QC
Fog On, Fog Off

Syni Solanki [15] – Peel ON
Modification of Nuclear Architecture in Hodgkin's Lymphoma due to Lamin A/C

Graydon Strachan [14] – Winnipeg Schools MB
MAC-2: Estimation of Weight Using a Modified Blood Pressure Cuff

Anna Voia [16] – Montréal RM QC
Ensemble contre la résistance

Kerry Yang [14] – Sudbury ON
Weeding Out the Secret to Antibiotic Resistance

Jessica Yemen [15] – Renfrew County ON
Taking Flight: Monarch Butterfly Conservation

Excellence Award - Junior

Silver Medal

Sponsor: Youth Science Canada

Medal and certificate

Rya Adronov [14] – Bay Area ON
Ti-Dye Energy: Natural Dye Combinations in Dye-Sensitized Solar Cells

Anna Chandler Merlo [12] – Ottawa ON
Which is the Best Alternative to Paraffin Wax: Beeswax, Soy, Palm or Coconut Wax

Maisie Cottrill [14] – Bluewater ON
Pi in the Sky: A Sustainable, Web-Based, Automated Greenhouse

Award Recipients

Canada-Wide Science Fair 2019 Fredericton, New Brunswick



Gaia Fameli [14] – Greater Vancouver BC <i>Nailing (the Issue with) Nail Polish</i>
Aaryan Harshith [13] – Renfrew County ON <i>Using Artificial Intelligence to Diagnose Diabetes Early</i>
Kiera Hui [13] – Toronto ON <i>Can Cotton Textiles be used to Clean Up Oil Spills</i>
Jeffrey Klinck [14] – Bay Area ON <i>Using BCI and AI to Detect Emotions for Mental Health Applications</i>
Shayan Mahmood [12] – Thames Valley ON <i>DeepWave: Cardiac Arrhythmia Diagnosis Using a Deep Learning ECG System</i>
Mikko Lorico [14], Deven Marrero [13] – South Fraser BC <i>AutoParkade: Could this solve long parking wait times?</i>
Davin Martin [13] – Calgary Youth AB <i>Mealworms – A Way to Reduce Styrofoam!</i>
Hollis Mattson [12] – Northern British Columbia BC <i>Underwater Soundscape</i>
Jannah McCallum [12] – Prince Edward Island PE <i>Weeding Out the Alternatives: Is Cinnamon an Herbicide?</i>
Joe Moak [13], Davis Nicholson [13] – Prince Edward Island PE <i>Ready Set Grow: A guide to Better Microgreens</i>
Annika Paliwal [13] – Manitoba Schools Science Symposium MB <i>Determining Cognitive Abilities of Individuals through Associative Memory Games</i>
Emma Palmer [13] – Simcoe County ON <i>Northern NEW-trition</i>
Reid Pidsadowski [13] – Edmonton AB <i>Diesel From the Field</i>
Shaun Plassery [14] – Peterborough ON <i>Slick Sorbents for Cleaning Up Ocean Oil Spills Using Hair, Wool and Jute</i>
Patricia Rea [13] – York ON <i>BioGrade Yeast: Biomanufacturing with Antifreeze-Yeast on Mars</i>
Hardit Singh [13] – Waterloo-Wellington ON <i>FoodSpec – A Multispectral Detector for Non-Destructive Testing of Food</i>
Mohammed Torkmani [14], Raphael Xu [14] – Bay Area ON <i>Plastic Delicacies: The Consumption and Biodegradation of Polystyrene by</i>

Excellence Award - Senior

Bronze Medal

Sponsor: Youth Science Canada
Medal and certificate

Ahmad Ali [17] – Windsor ON <i>SignSMART V.2</i>
Hamdi Ali [17] – Edmonton AB <i>Diamonds in the Rough: Maximizing Diamond Recovery</i>

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Nicolas Allard [17] – Saguenay-Lac Saint-Jean QC
Robot au service du ping-pong

Mokhtar Beldjilali [16] – Districts francophones du Nouveau-Brunswick NB
Friperie Marie-Esther : ressortez votre style

Brent Charron [16] – Windsor ON
Slip Prevention System Using Tribometric, Light, Moisture, and Temperature Sensors

Ally Churko [16] – Prairie Valley SK
Can Transgenerational Epigenetics be Shown in Eisenia fetida?

Julia Cross [16] – Northwestern Ontario ON
Analysis of Canine Musculoskeletal Injuries from Sled Dog Harness Designs

Milo Eirew [15] – Greater Vancouver BC
The Hydrocyclic Cell – A Novel Improved-Efficiency Fuel Cell

Anika Garg [16] – Thames Valley ON
Developing a Self-Sensing Actuator for Use in Wearable Rehabilitation Devices

Tara Gover [16] – North-West New Brunswick NB
Thermoelectricity: Powering the Ships of Tomorrow

Lénárd Grossmann [15] – Edmonton AB
Intelligent Architecture – Can AI predict architecture that makes us happy?

Christina Hanna [16] – Bay Area ON
Eco-Friendly Solutions Preventing Redox Reactions for Economic Sustainability

James Iansavitchous [17] – Thames Valley ON
B-ALL Leukemia Treatment: Exploiting Dependency on ROS to Prevent Proliferation

Juliana Koen Alonso [17] – Eastern Newfoundland NL
The Effect of the Engrailed Gene & TGF Beta on the Migration of Ovarian Cancer

Samuel Lefrançois [17], **Cloé Robichaud** [17] – Districts francophones du Nouveau-Brunswick NB
L'impact des routes sur les forêts

Laurence Liang [17] – Montréal RM QC
La régénération neuronale assistée par un modèle informatique

Oana Binder [17], **Josh Lien** [16] – Waterloo-Wellington ON
ViraDose: A Novel Application for Facilitating Gene Therapy Dosing

Monica Mahut [16] – Bay Area ON
Elevator to Everywhere

Cyril Mani [18] – Montréal RM QC
Democratizing Aerospace Technologies: A Novel Approach to Space R&D

Áine Pucchio [16] – Thames Valley ON
A Pineapple a Day Keeps the Doctor Away – It's Not So Difficile

Crystal Radinski [18] – Calgary Youth AB
EEG Coherence as BioMarker for Alzheimer's Dementia

Rosemund Ragetli [17] – St. James-Assiniboia MB
An Economically Plausible Reduction of Food Wastage in Kenya

Devarsh Shah [16] – Lambton County ON
A Novel Dielectrophoretic-Based Separation System for Cell Identification

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Aiden Simard [18] – Western Manitoba MB
Adolescent Anxiety and Social Media

Abby Snodgrass [17] – South-East New Brunswick NB
Interceptive Awareness and the Novel Use of VR with Arduino Based Sensors

Abdallahman Tawhid [18] – Cariboo/Mainline BC
Extensive Development of Statistical Models to Predict Future Health Care Trends

Kyra Taylor [18] – Northern British Columbia BC
Keeping the Balance: The Correlation Between Diet and pH in the Equine Hindgut

Nattan Telmer [16] – Vancouver Island BC
A Flexible TEG Prototype (FlexiTEG) for Wearable Electronics

Anna Tymofyeyeva [16] – York ON
An Integrated Glucose Meter Using Sweat Diagnostic Technology for Diabetics

Laura Wang [16] – Greater Vancouver BC
Endotoxin's Association with Wheeze and Atopy

Excellence Award - Intermediate

Bronze Medal

Sponsor: Youth Science Canada
Medal and certificate

Spash Agrawal [16] – Manitoba Schools Science Symposium MB
Improving Current Stock-Trading Infrastructure Using a Blockchain Network

Momin Anwar [15] – Eastern Newfoundland NL
Improving Bioplastics Properties by Incorporating Hydrophobic Materials

Bridgit Bennett-Delorme [15] – Renfrew County ON
CPR Model #2

Ethan Breit [16] – Toronto ON
Performant GPU Pathtracing

Abby Chapman [16] – Prince Edward Island PE
Temperature Dependent Approach to Enhance Drug Discovery from Bacteria

Ryan Churchill [16] – Tri-County NS
Phone 2 Phone

Lucas Crupi [15] – Northwestern Ontario ON
Spectrophotometry for Concentration Testing on E. coli Using Relative Absorbance

Fletcher Dares [14] – Beaufort-Delta NT
The Effects of Low Earth Orbit on Digital Displays

Catherine Diyakonov [14] – Greater Vancouver BC
Developing Bioplastic Walls: Reducing Waste and Restoration Costs After Floods

Megan Downe [16], **Avery Nicholson** [15] – 4-H Canada PE
Ulva lactuca: Subcritical Water and Supercritical CO₂ Extractions

Aeryn Eastwood [14] – Halifax NS
Garbage to Gucci: A Novel Approach to Producing an Eco-Friendly Leather

Shreya Gandhi [15] – Vancouver Island BC
Smarticle Particles: Laser-absorbing gold nanoparticle solution for airplanes

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Emily Goodson [15], Nikki van Schaik [14] – Simcoe County ON
Comparing the Effects of Aerobically Decomposed Waste on Plant Development

Sarah Grieves [16] – Manitoba First Nations MB
Soil Contamination in Oxford House

Hillary Huynh [16] – Yellowknife NT
Physiognomy Retention

Pasha Jones [15], Adrianna Vutrano [15] – Montreal QC
Portable House

Jessica Lee [15] – Halifax NS
Are 'Eco-Friendly' Detergents Really More Eco-Friendly?

Hana Haytaoglu [16], Hannah MacAusland [16] – Peterborough ON
Preparation, Property Testing, and Applications of Bioplastic

Grace Marion [14] – Windsor ON
Do Walleye Fish in Lake Erie Show Presence of Mercury?

Dana Mavrow [16] – Vancouver Island BC
Reused Christmas Trees: Creating a Biodiesel from Pine Needles

Rohan Mehta [14] – Simcoe County ON
Automating the Detection and Probability of Wildfires – Tapio

Jodh Singh Nahal [15] – Cariboo/Mainline BC
Optimizing MFCs With a Novel Approach and Controlling Eutrophication

Francois Marais [15], Caprinder Nanrey [16] – Wood Buffalo AB
Security Upgrade

Emilia Oliver [14] – Timmins ON
Using Food Waste to Remove Arsenic from Water 2.0 – It's All About Oranges

Rebecca Rathlef [15] – Greater Vancouver BC
Natural Products as Potential Sunscreens

Christianne Riveroll [14] – Prince Edward Island PE
The Psychology of Colour

Mankeerat Singh Sidhu [15] – South Fraser BC
A Hand for Hope

Leila Smaili [14] – Frontenac, Lennox & Addington ON
Are Pesticide Formulations Genotoxic?

Andy Liang [16], Alexander Sun [16] – Greater Vancouver BC
Novel Treatment of Algal Blooms with Viral Transfection and Barley Straw Extract

Wei Xie [15] – Greater Vancouver BC
FireBot: Augmenting Firefighting with AI

Excellence Award - Junior

Bronze Medal

Sponsor: Youth Science Canada
Medal and certificate

Tavian Augustus [12] – Bay Area ON
Solar Step: Combining Solar Panels and Piezo Cells to Create Clean Electricity

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



-
- Jaden Balasuriya** [13] – Simcoe County ON
Pucksense
-
- Jemma Blattner** [13] – Central Interior British Columbia BC
Food Fit for Fairies
-
- Johnathan Campbell** [13] – Kivalliq NU
Window Parka
-
- Keanu Chan** [12] – East Kootenay BC
HEALIT 3.0 (Hemostasis by Expanding Automatic Life-Saving Innovative Technique)
-
- Ethan Chiang** [13] – Bay Area ON
Proteolytic Effect of Fruit Enzyme Homogenate on Different Doneness of Beef
-
- Mitchell Clapperton** [13] – Bay Area ON
AeroTronics – A High Pressure Aeroponics System for Sustainable Indoor Agriculture
-
- Mary Clifford** [14] – Waterloo-Wellington ON
When Life Gives You Potatoes, Make Plastic
-
- Tristan Davies** [12], **Ryan Wilson** [13] – Halifax NS
Whale of a Problem – An Innovation on North Atlantic Right Whales
-
- Emilia Dyksterhuis** [12] – Northern British Columbia BC
Spare Our Air: The Use of Algae Scrubbers in the Oil and Gas Industry
-
- Ava Fischer** [13] – Simcoe County ON
Stand Open
-
- Marin Foulds** [13], **Claire Pasenau** [12] – Central Okanagan BC
Spin Stove
-
- Brianna Garvey** [12] – Bluewater ON
Don Don Don
-
- Jonathan Goudreault** [14] – Peace Country AB
Microwave Manipulation
-
- Samara Green** [14], **Anaya Permanand** [13] – Northern Manitoba MB
Is It Possible to Repurpose Slag from the Nickel Mining Industry?
-
- Sophia Khoury** [14] – Toronto ON
Hand Sanitizer and the Elimination of Home and School-Acquired Bacteria
-
- Paul Lee** [14] – Bay Area ON
Conserving Momentum with MMDs
-
- Lucas McDonnell-Hoffert** [13] – West Kootenay & Boundary BC
To Be There or Not to Be There... The Case for Vibrant Lines!
-
- Trevor Meek** [13] – Sudbury ON
Development of a Timed On-Demand Wireless Heated Washer Fluid System
-
- Luca Ménard** [13] – Frontenac, Lennox & Addington ON
Harnessing Nature's Power
-
- Henley Mullins** [14] – Eastern Newfoundland NL
Experimental Optimization of a Hybrid Rocket Engine
-
- Adrian Nitu** [13] – Ottawa ON
A Novel Artificial Intelligence-Based Approach to Dynamic Traffic Management for

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Layla Owens [13] – Conseil scolaire acadien provincial NS
Submergence !

Annabelle Rayson [13] – Lambton County ON
De-Icer Distillery: An Innovative and Environmental Approach to Road Safety

Alexander Rozic [13] – Quinte ON
Do You See What I See?

Lily Smales [14] – Bay Area ON
Convolutional Neural Network to Detect Eyes with Visual Impairment

Rachael Urquhart [12] – Bluewater ON
Calm Your Beating Heart: An Experiment on Ways to Lower Heart Rate

Brooklynn Watson [14] – Northern Vancouver Island BC
CRISPR Cas9 and the Human Genome

Zoe Yee [13] – Edmonton AB
Water My Seeds Doing in Water Beads?

Kevin Liu [14], **Saabir Yousuf** [14] – Saskatoon SK
Economically Feasible Desalination

Gold Medal - International

Sponsor: Youth Science Canada
Medal and certificate

Manaskawin Phupinyokul [18], **Naranya Rujanawech** [17] – Thailand
The Biodegradable Nursery Bags From Agricultural Waste

Bronze Medal - International

Sponsor: Youth Science Canada
Medal and certificate

Emiliano Aguilar González [15], **Camila Cortez Lizarraga** [15] – Mexico
Star-Track: Dark Side of the Stars

Challenge Award - Resources

Senior

Sponsor: Youth Science Canada
Certificate

Hamdi Ali [17] – Edmonton AB
Diamonds in the Rough: Maximizing Diamond Recovery

Challenge Award - Resources

Intermediate

Sponsor: Youth Science Canada
Certificate

Monis Sayyid [14], **Jack Sloan** [15] – Rideau-St. Lawrence ON
The Windfall Solution: An Alternative Winter Road Treatment

Challenge Award - Resources

Junior

Sponsor: Youth Science Canada
Certificate

Antoine Blais [14] – Estrie QC
OMG, des insectes !

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Challenge Award - Innovation

Senior

Sponsor: Youth Science Canada
Certificate

Manning Whitby [18] – Toronto ON
An Interpretation of Life Through Vibration Motors

Challenge Award - Innovation

Intermediate

Sponsor: Youth Science Canada
Certificate

Harry Parmar [15] – York ON
Synthetic Violacein: The Power of Designer Pharmaceuticals in the Real World

Challenge Award - Innovation

Junior

Sponsor: Youth Science Canada
Certificate

Lucas Hilden [13] – Annapolis Valley NS
The New Solution for Facial Blindness

Challenge Award - Information

Senior

Sponsor: Youth Science Canada
Certificate

Om Agarwal [16] – Halifax NS
DetectTimely

Challenge Award - Information

Intermediate

Sponsor: Youth Science Canada
Certificate

Francois Marais [15], Caprinder Nanrey [16] – Wood Buffalo AB
Security Upgrade

Challenge Award - Information

Junior

Sponsor: Youth Science Canada
Certificate

Lucas McDonnell-Hoffert [13] – West Kootenay & Boundary BC
To Be There or Not to Be There... The Case for Vibrant Lines!

Challenge Award - Health

Senior

Sponsor: Youth Science Canada
Certificate

Tori Chen [17] – Thames Valley ON
Gene Therapy: A Treatment for Diabetic Cardiomyopathy

Challenge Award - Health

Intermediate

Sponsor: Youth Science Canada
Certificate

Bhavya Mohan [16] – Ottawa ON
Taking ABiTE out of Cancer: A Novel Aptamer based BiTE for Cancer

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



Challenge Award - Health

Junior

Sponsor: Youth Science Canada
Certificate

Callum Yoker [13] – Windsor ON

Manipulating Microbial Membrane Permeability to Dyes

Challenge Award - Environment

Senior

Sponsor: Youth Science Canada
Certificate

Rohan Gupta [16] – Vancouver Island BC

Cytogenotoxic Effects of Local Stormwater on Allium cepa L.

Challenge Award - Environment

Intermediate

Sponsor: Youth Science Canada
Certificate

Emily Robb [16] – Western Manitoba MB

Grow Big or Grow Home: The Roots to Hydroponic Success

Challenge Award - Environment

Junior

Sponsor: Youth Science Canada
Certificate

Islay Graham [13] – Bluewater ON

Rake Wrack Risk: Do Piping Plovers Prefer a Clean Beach?

Challenge Award - Energy

Senior

Sponsor: Youth Science Canada
Certificate

Pakeeza Mushtaq [17] – Southeast Alberta AB

A Novel DSSC Using Bio-Photosensitizer Pigments and Diatom Frustules

Challenge Award - Energy

Intermediate

Sponsor: Youth Science Canada
Certificate

Claire Scrimini [16], **Vanessa Scrimini** [16] – Greater Vancouver BC

Algae Meets Fungi: Microalgae-Fungi Co-Pelletization for Biofuel Production

Challenge Award - Energy

Junior

Sponsor: Youth Science Canada
Certificate

Reid Pidsadowski [13] – Edmonton AB

Diesel From the Field

Challenge Award - Discovery

Senior

Sponsor: Youth Science Canada
Certificate

David Richard [17] – Saguenay-Lac Saint-Jean QC

Pi, ça donne quoi ?

Award Recipients

Canada-Wide Science Fair 2019 Fredericton, New Brunswick



Challenge Award - Discovery

Intermediate

Sponsor: Youth Science Canada
Certificate

Etienne Joulin [16] – Thames Valley ON
Identification of Genetic Similarities between Parasites and Hosts Using CGR

Challenge Award - Discovery

Junior

Sponsor: Youth Science Canada
Certificate

Patricia Rea [13] – York ON
BioGrade Yeast: Biomanufacturing with Antifreeze-Yeast on Mars

York University STEM Entrepreneur Bootcamp Scholarship Awards

All categories

Sponsor: York University, Lassonde School of Engineering

Full scholarship to participate in the Youth Science Canada/York University STEM Entrepreneur Bootcamp in Toronto in August, including travel expenses up to \$1,000. The weeklong program is based on the award-winning Bergeron Entrepreneurs in Science and Technology (BEST) experiential learning approach, which combines the technical skills of building a new venture with creative problem-solving skills and personal reflection. Participants interact with successful entrepreneurs and leading academics from the Lassonde School of Engineering, Osgoode Hall Law School and the Schulich School of Business, as well as staff and ventures from the BEST lab. Total value \$2,500.

Mira Bhattacharya [15] – York ON
An Eco-Friendly Method to Remove Oil and Other Contaminants Using Fruit Peels

Monis Sayyid [14], Jack Sloan [15] – Rideau-St. Lawrence ON
The Windfall Solution: An Alternative Winter Road Treatment

University of Toronto Engineering Award

Senior

Sponsor: University of Toronto,

Two outstanding senior projects by Grade 11 students that are related to engineering - demonstrating an innovative, creative and well-tested solution to a real world problem.

Om Agarwal [16] – Halifax NS
DetectTimely

Zachary Fraser [17] – Cape Breton NS
Laser Tuner: A Novel Approach to Pitch Detection on a Drumhead

University of Ottawa Undergraduate Research Scholarship Award

Senior

Sponsor: University of Ottawa, Faculty of Science

The recipient will work with scientists and take part in important scientific discoveries during two consecutive summers. In the summer preceding the first year of studies in an undergraduate program at the Faculty of Science, University of Ottawa, the recipient will earn \$3,750 as a research assistant to one of the world class professors. By succeeding in the first year of studies, the research experience will be extended to a second summer, during which he/she will earn \$6,250.

James Iansavitchous [17] – Thames Valley ON
B-ALL Leukemia Treatment: Exploiting Dependency on ROS to Prevent Proliferation

Award Recipients

Canada-Wide Science Fair 2019 Fredericton, New Brunswick



Ted Rogers Innovation Awards

All categories

Sponsor: Rogers Communications Inc.

Full scholarship, including travel, to support participation in the weeklong Youth Science Canada/York University STEM Entrepreneur Bootcamp in August 2019. Total value \$2,000.

Ethan Chan [14] – Vancouver Island BC

Protein Problem: A Digitized At-Home Urinalysis Device for Kidney Disease

Aeryn Eastwood [14] – Halifax NS

Garbage to Gucci: A Novel Approach to Producing an Eco-Friendly Leather

Kai Leong [18] – Greater Vancouver BC

Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

Bhavya Mohan [16] – Ottawa ON

Taking ABiTE out of Cancer: A Novel Aptamer based BiTE for Cancer

Layla Owens [13] – Conseil scolaire acadien provincial NS

Submergence !

Crystal Radinski [18] – Calgary Youth AB

EEG Coherence as BioMarker for Alzheimer's Dementia

Shounak Ray [16] – Calgary Youth AB

A Predictive Diagnosis for Parkinson's Disease Through Machine Learning

Andy Liang [16], **Alexander Sun** [16] – Greater Vancouver BC

Novel Treatment of Algal Blooms with Viral Transfection and Barley Straw Extract

Manning Whitby [18] – Toronto ON

An Interpretation of Life Through Vibration Motors

Statistical Society of Canada and Biostatistics Section Award

Intermediate

Sponsor: Statistical Society of Canada and Biostatistics Section

\$750 cash and certificate

Etienne Joulin [16] – Thames Valley ON

Identification of Genetic Similarities between Parasites and Hosts Using CGR

Statistical Society of Canada Award

Senior

Sponsor: Statistical Society of Canada

\$1,000 cash and certificate

Abdallah Tawhid [18] – Cariboo/Mainline BC

Extensive Development of Statistical Models to Predict Future Health Care Trends

SHAD Scholarship Awards

Intermediate

Sponsor: SHAD

Each year, SHAD provides the opportunity for 750+ students from across Canada and internationally to attend a month-long summer program, in residence at a Canadian host university, focused on STEAM (science, technology, engineering, arts, and mathematics).

Penelope Armstrong [14] – Qikiqtaaluk NU

What's in Your Water?

Tamara Chisholm [15] – Sahtu NT

Seed BioEssays

Award Recipients

Canada-Wide Science Fair 2019 Fredericton, New Brunswick



Amy Gudmundson [15] – Western Manitoba MB

Le système flash de surveillance du glucose et la dermatite – l'enquête débute !

S.M. Blair Family Foundation Award

Senior

Sponsor: S.M. Blair Family Foundation

\$1,000 cash and certificate

Kai Leong [18] – Greater Vancouver BC

Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

S.M. Blair Family Foundation Award

Intermediate

Sponsor: S.M. Blair Family Foundation

\$750 cash and certificate

Catherine Diyakonov [14] – Greater Vancouver BC

Developing Bioplastic Walls: Reducing Waste and Restoration Costs After Floods

S.M. Blair Family Foundation Award

Junior

Sponsor: S.M. Blair Family Foundation

\$500 cash and certificate

Christopher Lamont [13] – Bay Area ON

Creation of an Intravenous Fluid Administration System for Low Income Countries

Renewable Energy Award

Senior

Sponsor: Ontario Power Generation

\$1,000 cash and certificate

Pakeeza Mushtaq [17] – Southeast Alberta AB

A Novel DSSC Using Bio-Photosensitizer Pigments and Diatom Frustules

Renewable Energy Award

Intermediate

Sponsor: Ontario Power Generation

\$750 cash and certificate

Jodh Singh Nahal [15] – Cariboo/Mainline BC

Optimizing MFCs With a Novel Approach and Controlling Eutrophication

Renewable Energy Award

Junior

Sponsor: Ontario Power Generation

\$500 cash and certificate

Reid Pidsadowski [13] – Edmonton AB

Diesel From the Field

Nutrients for Life Foundation Award

Intermediate

Sponsor: Nutrients for Life Foundation Canada

\$750 cash and certificate

Emily Robb [16] – Western Manitoba MB

Grow Big or Grow Home: The Roots to Hydroponic Success

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



International Summer School for Young Physicists Award

Senior

Sponsor: Perimeter Institute for Theoretical Physics

The award consists of a full scholarship to participate in the International Summer School for Young Physicists 2019 (ISSYP 2019) from July 14-27, an intensive two week enrichment program that will introduce the student to the fascinating picture of our universe as seen through the eyes of contemporary physicists: from the bizarre quantum world of atoms and subatomic particles to black holes, warped spacetime and the expanding universe. The student will also interact with professional physicists at Perimeter Institute in small group mentoring sessions, participate in field trips to leading experimental science laboratories, and forge new friendships with like minded young people from around the world. The scholarship includes room and board and travel expenses to and from the Institute. Total value \$3,500.

Kai Leong [18] – Greater Vancouver BC

Smartphone-Based Gait Analysis: A Boon for Disease Diagnosis

Intact Climate Change Resilience Award

Senior

Sponsor: Intact Financial Corporation

\$1,000 cash and certificate plus an all-expenses paid trip to Waterloo, Ontario during summer 2019 to visit the Intact Centre on Climate Adaptation at the University of Waterloo, Canada's leading research centre on climate change resilience. Total value \$2,500.

Cynthia Cui [15], **Leonardo Cui** [17] – North-West New Brunswick NB

An Innovative Flood Prediction System Using Improved Machine Learning Approach

Intact Climate Change Resilience Award

Intermediate

Sponsor: Intact Financial Corporation

\$750 cash and certificate

Rohan Mehta [14] – Simcoe County ON

Automating the Detection and Probability of Wildfires – Tapio

Intact Climate Change Resilience Award

Junior

Sponsor: Intact Financial Corporation

\$500 cash and certificate

Maggie Hollett [13] – Quinte ON

Sunny Side Up

4-H Canada Sustainable Agriculture Award

Junior

Sponsor: 4-H Canada

\$500 cash and certificate

Emma Palmer [13] – Simcoe County ON

Northern NEW-trition

4-H Canada Food Security Award

Junior

Sponsor: 4-H Canada

\$500 cash and certificate

Antoine Blais [14] – Estrie QC

OMG, des insectes!

Award Recipients

Canada-Wide Science Fair 2019

Fredericton, New Brunswick



First Nations University of Canada Award

Junior

Sponsor: First Nations University of Canada
\$500 cash and certificate

Maria Alex [13] – Mi'kmaq Schools NS
Respond to My Language

Excellence in Astronomy Award

Intermediate

Sponsor: Royal Astronomical Society of Canada
Telescope and certificate plus a one year membership to RASC

Ali Rizvi [15] – Regina SK
Detecting Exoplanets Using Supervised Machine Learning

Excellence in Astronomy Award

Junior

Sponsor: Royal Astronomical Society of Canada
Telescope and certificate plus a one year membership to RASC

Patricia Rea [13] – York ON
BioGrade Yeast: Biomanufacturing with Antifreeze-Yeast on Mars

Engineering Innovation Award

Intermediate

Sponsor: The Engineering Institute of Canada
\$750 cash and certificate

Ethan Chan [14] – Vancouver Island BC
Protein Problem: A Digitized At-Home Urinalysis Device for Kidney Disease

Carlson Wagonlit Award

Junior

Sponsor: Carlson Wagonlit Travel
\$500 cash and certificate

Lucas McDonnell-Hoffert [13] – West Kootenay & Boundary BC
To Be There or Not to Be There... The Case for Vibrant Lines!

CAP Physics Prize

Senior

Sponsor: Canadian Association of Physicists
\$1,000 cash and certificate.

Cyril Mani [18] – Montréal RM QC
Democratizing Aerospace Technologies: A Novel Approach to Space R&D

CAP Physics Prize

Intermediate

Sponsor: Canadian Association of Physicists
\$750 cash and certificate

Jarek Osika [15] – Northern Manitoba MB
Radio Eyes – Blackhole Hunter

CAP Physics Prize

Junior

Sponsor: Canadian Association of Physicists
\$500 cash and certificate

Krish Modi [14] – Lambton County ON
'No to Photo' – My Photo Consent

Award Recipients

Canada-Wide Science Fair 2019 Fredericton, New Brunswick



Canadian Young Researcher Award

Senior

Sponsor: Canadian Science Publishing and STEM Fellowship

Peer review and guidance from the STEM Fellowship editorial board leading to open access publication of the project in the STEM Fellowship Journal by Canadian Science Publishing, Canada's largest scientific publisher.

Charley Cai [18] – Greater Vancouver BC

Chagas Disease: Decoding Vector-Based Pathogen Recognition

Muhammad Shahzad [16] – Edmonton AB

Pomelo and Chinese Bayberry Extracts Protect Mouse β Cells from Oxidative Stress

Laura Wang [16] – Greater Vancouver BC

Endotoxin's Association with Wheeze and Atopy

Canadian Stockholm Junior Water Prize

Senior

Sponsor: Canadian WEF Member Associations, the Canadian Water and Wastewater Association, and Jacobs
All-expenses paid trip to Stockholm, Sweden, August 24-30, 2019, for up to two student(s) of the winning project to represent Canada at the International Stockholm Junior Water Prize Competition (www.sjwp.ca).

Annie Bloomfield [18], **Malcolm Cameron** [17] – Strait NS

Grey is the Way: Developing a Residential Greywater Treatment

Rohan Gupta [16] – Vancouver Island BC

*Cytogenotoxic Effects of Local Stormwater on *Allium cepa* L.*

Emily Mah [16], **Jazlyn McGuinty** [16] – North Bay ON

Bannin' with Tannins: A Heavy Metal Extraction Process for Contaminated Water

Canadian Society for Clinical Chemists Award

Senior

Sponsor: Canadian Society for Clinical Chemists

\$1,000 cash and certificate

Muhammad Shahzad [16] – Edmonton AB

Pomelo and Chinese Bayberry Extracts Protect Mouse β Cells from Oxidative Stress

Canadian Acoustical Association Award

Senior

Sponsor: Canadian Acoustical Association

\$1,000 cash and certificate plus subscription to the Canadian Acoustical Association's quarterly journal

Zachary Fraser [17] – Cape Breton NS

Laser Tuner: A Novel Approach to Pitch Detection on a Drumhead

The Beaty Centre for Species Discovery Award

Senior

Sponsor: Canadian Museum of Nature

\$1,000 cash, certificate and one-year Canadian Museum of Nature family membership

Jacob Bowman [17] – Peterborough ON

Can freshwater stream invertebrates adapt to road salt?

The Actuarial Foundation of Canada Award

Senior

Sponsor: The Actuarial Foundation of Canada

\$1,000 cash and certificate

Stephen Lu [17] – Montréal RM QC

Emergency, une approche statistique pour optimiser la salle d'urgence

Award Recipients

Canada-Wide Science Fair 2019 Fredericton, New Brunswick



The Actuarial Foundation of Canada Award

Intermediate

Sponsor: The Actuarial Foundation of Canada
\$750 cash and certificate

Graydon Strachan [14] – Winnipeg Schools MB
MAC-2: Estimation of Weight Using a Modified Blood Pressure Cuff

The Actuarial Foundation of Canada Award

Junior

Sponsor: The Actuarial Foundation of Canada
\$500 cash and certificate

Aaryan Harshith [13] – Renfrew County ON
Using Artificial Intelligence to Diagnose Diabetes Early

European Union Contest for Young Scientists

Trip to EUCYS

Sponsor: The Gwyn Morgan and Patricia Trottier Foundation
An all-expenses paid trip to the European Union Contest for Young Scientists as a member of Team Canada-EUCYS in September.

Bhavya Mohan [16] – Ottawa ON
Taking ABiTE out of Cancer: A Novel Aptamer based BiTE for Cancer

Manning Whitby [18] – Toronto ON
An Interpretation of Life Through Vibration Motors

Broadcom MASTERS International

Sponsor: Broadcom Foundation

An all-expenses-paid trip to participate in the Broadcom MASTERS (Math, Applied Science, Technology & Engineering Rising Stars) competition. The event brings together 25 middle school students from around the world and runs concurrently with the International Science & Engineering Fair.

Islay Graham [13] – Bluewater ON
Rake Wrack Risk: Do Piping Plovers Prefer a Clean Beach?