



GVRSF 2023 Annual Report



**Greater Vancouver
Regional Science Fair**

**c/o HR MacMillan Space Centre
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gvrsf.ca

BN: 832888564RR0001

**In association with
Youth Science Canada**

Our Mission

To encourage youth to conduct research and experimentation in the areas of science, technology, engineering, arts, and mathematics.



About The Fair

The Greater Vancouver Regional Science Fair (GVRSF) is a regional science fair servicing 10 school districts across the Lower Mainland area. GVRSF is available to over 100,000 students between Grades 7-12 from public, private, independent, and home schools.

Our fair encourages 100,000+ youth in our region to conduct creative inquiry-based projects, and hosts hundreds of students who are keen and invested in today's scientific and technological developments. GVRSF provides \$45,000+ in cash, prizes, trips and scholarship awards, the top projects receiving the Grand Award of progressing to the Canada-Wide Science Fair. Participants of our fair attend various student and educator workshops, research lab tours, and engage in fun student activities.



The GVRSF Society

The GVRSF Society is a registered charity and non-profit organization (BN: 832888564RR0001) run by a diverse group of dedicated volunteers passionate about education in Science, Technology, Engineering, Arts and Mathematics (STEAM).

Most committee members are teachers, university professors, former science fair students, science professionals, and educators.

The list of committee members and amazing volunteer team can be found on our [website](#).



Why Science Fair?

COMMUNITY. Science fairs provide a platform for the students to showcase their work and interact with like-minded students, academics, and industry professionals; building and strengthening tomorrow's scientific community.

EDUCATION. Science fair projects provide a hands-on approach to science that applies theory to practice, teaching students the values of hypothesis-based tests, independent thinking, and creative problem-solving to prepare them for an increasingly complex world.

FUN. Students leave the fair with new knowledge, new friends, and increased interest in science, technology, engineering, and mathematics!



Message from the Chair

Dear interested parties and stakeholders,

The completion of our 2023 fair marks the 40th iteration of the Greater Vancouver Regional Science Fair. We had yet another successful year, overcoming many challenges and barriers as we return to our first fully in-person fair since 2019. We were delighted to be able to return to UBC and the AMS Nest to host all judging, project showcasing, and student activities, giving our brilliant students the full GVRSF and UBC experience.

The challenges we faced, many unforeseen, were overcome by the amazing and dedicated group of people who make up the GVRSF Committee, who contribute hundreds of hours of volunteer time planning and hosting the fair. I cannot thank every person enough who contributed to the effort, as we emerged with another successful event.

The Greater Vancouver Regional Science Fair is only possible due to the continued support of our partners and sponsors, and from the bottom of our hearts, thank you. Your contributions allow us to continue providing our unique inquiry based learning experience for students across Greater Vancouver, inspiring the next generation of globally active citizens.

Moving forward, our goals will be to provide a stronger presence on social media. While GVRSF is only three days of the year, we would like to be active year-round, providing students, educators, and other interested parties with GVRSF specific or general science content, promoting curiosity, inquiry, and innovation.

Having been a member of this committee since 2013, I have been honoured to watch it grow into what it is today, and look forward to the next year of growth and learning alongside my dedicated peers.

Kenzo Vlasman
2022-2023 Chair



GVRSF 2023 Recap

This year we welcomed 191 projects represented by over 200 students to the AMS Nest at UBC. Once again, our continued partner UBC Faculty of Science's financial contribution was able to cover the hosting costs of our 3-day fair. The hard work of participants were evaluated by a group of over 200 volunteer judges, experts from industry, research, and academia.

Our students had the opportunity to explore the UBC campus and visit one of 12 lab tours, organized by the Faculty of Science in coordination with our committee.

Once again, HR Macmillan Space Centre generously provided students with the opportunity to view their amazing star lab experience. A science magic show was also a hit with students, performed by Lon Mandrake of Mandrake the Magician.

This year, we were also thrilled to be able to once again welcome back school tours. Over 100 students from across Greater Vancouver ventured to UBC to experience public viewing, many coming to draw inspiration for future projects.

This year, GVRSF awarded 28 Bronze, 19 Silver, 25 Gold medals to exceptional projects. 62 Special Awards were also given out. 15 projects were awarded the Grand Award, which was a promotion to Canada-Wide Science Fair in Edmonton.



Team GVRSF at CWSF 2023

Team GVRSF, consisting of 17 students, representing 15 projects, travelled with 4 chaperones to Canada-Wide Science Fair (CWSF) in Edmonton from May 14th-19th 2023. The delegation was hosted at hotels in downtown Edmonton, with the fair occurring at the Edmonton Convention Centre.

The CWSF organizing committee packed the schedule for the week, including visits to the West Edmonton Mall, University of Alberta, and the Telus World of Science. Throughout the week, Team GVRSF bonded, networked, and showcased their amazing work. Through two challenging days of judging they emerged with smiles on their faces, knowing they all were champions just for being selected for CWSF.

In terms of results, Team GVRSF walked away from awards night with 9 Bronze, 2 Silver, and 3 Gold medals. Team GVRSF also received a Challenge Award, a Sanofi Biogenius Award, and a Youth Can Innovate Grand Award. In total \$57,000 in cash and scholarships was won by the team.

A full table of Team GVRSF award winners can be viewed on the next page.

Team GVRSF Awards at CWSF 2023

<p>Khafri Mau</p>	<p><i>The First Step to Growing Plants on Mars</i></p>	<p>Bronze Medal \$1500 University of Alberta Scholarship \$1000 Western University Scholarship</p>
<p>Angelina Hang Noah Oliver Pang</p>	<p><i>Turning Algae Into Fibers: The Solution to Textile Waste</i></p>	<p>Bronze Medal \$1500 University of Alberta Scholarship \$1000 Western University Scholarship</p>
<p>Reine Huang</p>	<p><i>Detecting and Preventing Human Falling with Lateral Stability</i></p>	<p>Bronze Medal The Actuarial Foundation of Canada Award – \$750 cash and certificate \$1500 University of Alberta Scholarship \$1000 Western University Scholarship</p>
<p>Veronica Guo</p>	<p><i>Biological Photovoltaics: Testing Algae for the Optimal Battery</i></p>	<p>Gold Medal Challenge Award – Energy Youth Can Innovate Award – \$750 cash, presentation award and a certificate \$1500 University of Alberta Scholarship \$4000 Western University Scholarship</p>

Team GVRSF Awards at CWSF 2023

Rodin Shokravi Kevin Yuan	<i>A NoTurning Algae Into Fibers: The Solution to Textile Waste</i>	Bronze Medal \$1500 University of Alberta Scholarship \$1000 University of Ottawa Scholarship \$1000 Western University Scholarship
Aaron Zhao	<i>ExoTremor: A Low-Cost, 3D-Printed Exoskeleton that Suppresses Hand Tremors in Movement Disorder Patients</i>	Bronze Medal \$1500 University of Alberta Scholarship \$1000 University of Ottawa Scholarship \$1000 Western University Scholarship
Nara Harvey	<i>A Biological Solution to Phosphate and Nitrate Pollution</i>	Silver Medal \$1500 University of Alberta Scholarship \$2000 Western University Scholarship
Justin Peng	<i>Atmos: A Neural Edge-Cloud Visual to Auditory Spatial Augmentation Device for the Visually Impaired</i>	Silver Medal \$1500 University of Alberta Scholarship \$2000 Western University Scholarship
Ann Wang	<i>Battling Bacterial Biofilms</i>	Silver Medal Sanofi Biogenius Canada Award – \$750 cash and certificate \$1500 University of Alberta Scholarship \$2000 Western University Scholarship

Team GVRSF Awards at CWSF 2023

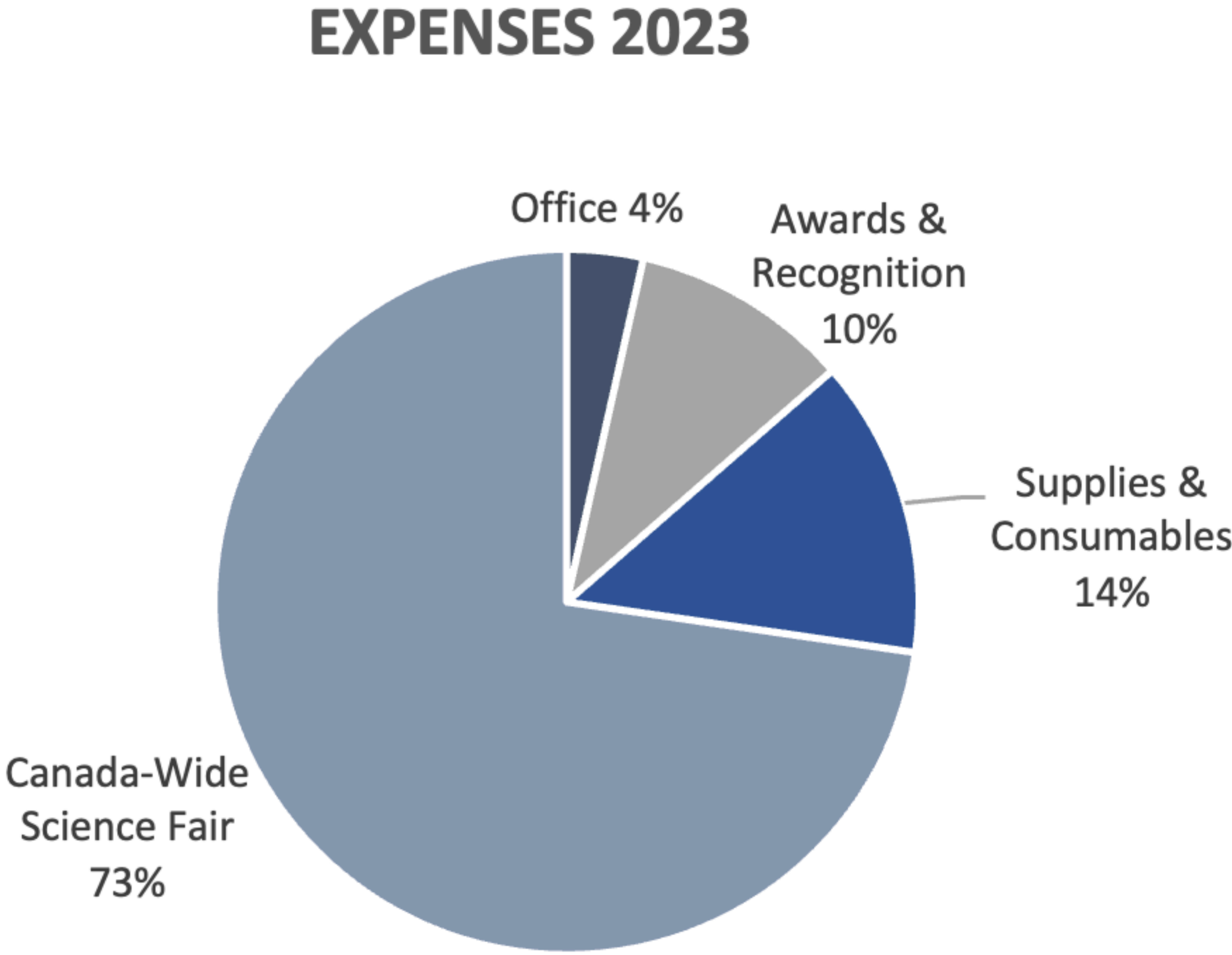
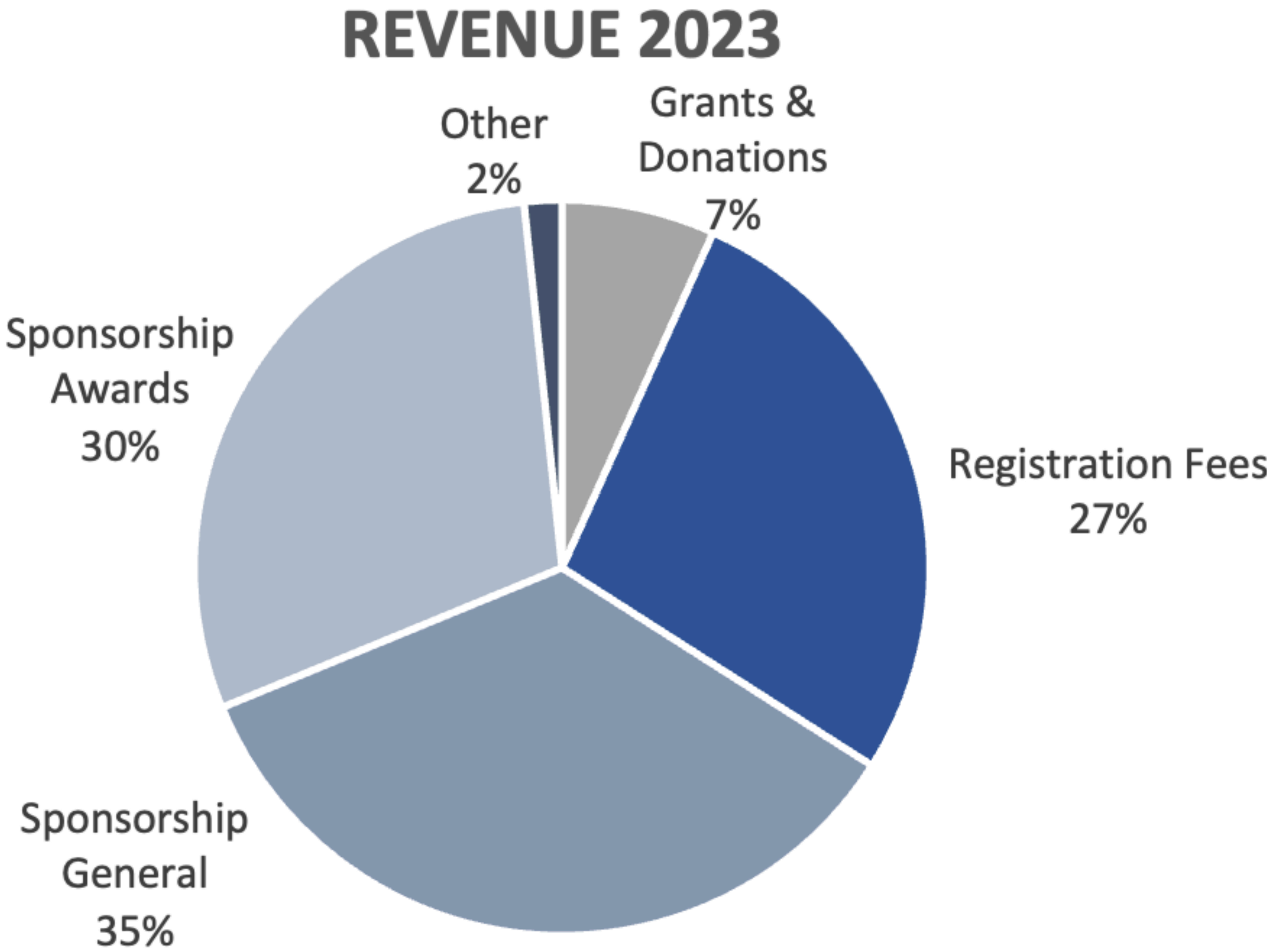
Nimish Jain	<i>Highly Evolved Lip Learning mOdel (HELLO): A Novel Machine Learning Model for Accurate Lipreading.</i>	Bronze Medal \$1500 University of Alberta Scholarship \$1000 Western University Scholarship
Justin Du	<i>Interrsect: Aggregated Note Summarization by Machine Learning</i>	Bronze Medal \$1500 University of Alberta Scholarship \$1000 University of Ottawa Scholarship \$1000 Western University Scholarship
Adara Shilling	<i>Plastic Roots</i>	Bronze Medal \$1500 University of Alberta Scholarship \$1000 University of Ottawa Scholarship \$1000 Western University Scholarship
Justin Guo	<i>What Method of Meat Thawing Results in Least Bacterial Contamination?</i>	Gold Medal \$1500 University of Alberta Scholarship \$4000 Western University Scholarship
Jonathan Leung	<i>A Survey of Spider Diversity at the University of British Columbia Farm</i>	Gold Medal Statistical Society of Canada Award (Sponsor: Statistical Society of Canada) – \$750 cash and certificate \$1500 University of Alberta Scholarship \$4000 Western University Scholarship



Team GVRSF at Regeneron International Science and Engineering Fair

GVRSF participant and Team GVRSF alum Tara Zhan represented Canada at Intel Regeneron International Science and Engineering Fair with her project *HemiStride: Design of a Low-Cost and Backdrivable Lower-Limb Exoskeleton for Hemiplegic Patients*. Her project was awarded the Fourth Award and \$500 in her category of Biomedical Engineering. We congratulate Tara on her accomplishments, and for representing GVRSF!

Financial Summary



The UBC Faculty of Science generously provides the site of the 3-day fair at the AMS Student Nest Building, along with 6 university scholarships and the organization of 12 research lab tours.



A Thank You to Sponsors

Thank you to all of our sponsors, partners, and friends! The Greater Vancouver Regional Science Fair Society is a not-for-profit charitable organization that relies upon donations from individuals and corporations to finance activities.

Without the on-going support of our generous community, we would not be able to bring together hundreds of the region's brightest science students to share their learning, progress, and adventures in science. With this support, the Greater Vancouver Regional Science Fair propels students to the national level Canada-Wide Science Fair, in addition to other international competitive and non-competitive science fairs. Most importantly, GVRSF encourages all participants to continue to think critically about science and the world around them in accordance with our motto; It's not what you win, it's who you become.

We are fortunate to have outstanding sponsors and supporters that contribute to the fair each year and we are always looking for additional contributors to help support youth in science within our community. Monetary donations and award sponsorships are accepted throughout the year.

If you would like to donate to the GVRSF in any way or know of an organization that would like to contribute, please contact chair@gvrsf.ca. Tax receipts for donations are available upon request. By supporting the GVRSF with a donation, you will make a positive impact within the community by empowering youth to continue to be innovative and ask questions through project-based science in their journey to become the next generation of positive change makers.

Partner Level Sponsors



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Dr. Meigan Aronson, Dean

*Honourary Chair of the Greater Vancouver Regional Science
Fair*



Science Fair
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