



2010 Top 20 Under 20 Bios

Paige Lawson
London, ON
Age: 19

Motivated by experience, Paige Lawson has clear objectives: "I want to help reduce the stigma of mental illness so students are not afraid to acknowledge that they may struggle from anxiety and so teachers and staff can better understand and support students going through this." Paige lead the DREAM project -- Direct Resources for Education Alternatives and Mental Health and, through her efforts, it has become a recognized support system within the Thames Valley District School Board and London District Catholic School Board. DREAM provides mental health workshops, personal resources, and education alternatives that equip London's high school students with the tools to recognize, prevent and support mental health disorders and to ease their transition to post-secondary. Paige affirms, "Had this type of information been available to me, my school and life experience would have been drastically different".

Raphael Leclaire
Pierrefonds, QC
Age: 19

Raphael's Top 20 sponsor poignantly describes his impact: "Some people come into your life and leave as quietly as they appeared. Others show up when you least expect but mark your life like you could never imagine. Raphael Leclaire is such a person." At 15, this star athlete quit all his extracurricular activities and postponed his education when diagnosed with relapsed non-Hodgkin's lymphoma. Yet Raphael found an outlet: inspired by former Montréal Canadiens Saku Koivu, he dedicated himself to fundraising for cancer research. Raphael was the official spokesperson for "Pedal for Kids" in 2008, a \$750,000 fundraiser. He started a letter campaign which, within a month, raised \$50,000 for the Saku Koivu Foundation, and, not stopping there, Raphael raised another \$33,000 and rode 100km with Lance Armstrong in the \$2million dollar "Tour de Lance".

Ivet Bell
Vancouver, BC
Age 17

No wonder Kitsilano Secondary awarded Ivet their "Excellence in Service" Award! Her over 600 hours of outstanding service has impacted her own community and many others around the world. Elected President of the Vancouver District Student Council after one year as a student representative, Ivet initiated many projects, including "Beyond Borders", which aids orphanages in Peru and Vietnam and drew the full support of Vancouver's entire, 18-school student body. Ivet also founded "The Walk". Now

successfully replicated by other schools, this series of walkathons raises funds for a Namibian orphanage and enables students to volunteer abroad. At 16, Ivet's accomplishments and academic excellence garnered her early acceptance to Harvard, Cornell and UBC, and her extensive capacity for leadership resulted in her election as the first Canadian representative on the National Youth Council of America.

Abid Virani
Guelph, ON
Age: 19

At the age of 17, Abid Virani co-founded Student Reach International (SRI) to provide opportunities for students to make contributions to the global community. Since then, SRI has raised over \$50,000 for various causes including HIV/AIDS, women's empowerment and education. Abid's focus today is Reach Lesotho, an academic and leadership program that is producing a documentary with a creed that youth can make an impact. Abid enjoys writing and is working on a book that he hopes will be titled, "Finding Hope." After a profoundly moving visit with Abid to the Tsepong HIV/AIDS clinic in Lesotho, where they witnessed the impact of SRI, Mayor Brenda Halloran of Waterloo expresses her firm belief that Abid is "not only an agent for change, but... a catalyst for a movement of global citizenship".

Perri Tutelman
Richmond, BC
Age: 16

Perri is guided by her passion to help children with special needs. Since the age of 14, she has been a contributing researcher at the B.C. Cancer Research Centre where she developed a novel combination cancer treatment, whose distinctions include first place at the 2009 Canada-Wide Science Fair. Perri's current research examines hormones and auto-immune disorders. Beyond the lab, Perri founded the Cures for Kids Foundation, a non-profit organization that raises funds and awareness for pediatric life-threatening illnesses. In their first year, the Cures for Kids Foundation raised \$15,000 to help fund a procedure room at B.C. Children's Hospital and recently received a national innovation award from the Art of Living Foundation. Perri's future goals focus on treating pediatric illnesses by significantly advancing research and the funding that supports both research and care.

Justin Vanderheide
Oakville, ON
Age: 17

Community recreation programs provide vital opportunities for all participants, and service delivery is a critical piece of the puzzle. It wasn't enough for Justin that every lifeguard he worked with just accepted an ineffective report card system for their swimmers. He took it upon himself to write "Swimgen", a computer program to make

report cards easy to create and coordinate. After two months of development, the program launched in early 2010 and is now online at www.swimgen.net. The Town of Oakville has rolled out its usage across all their swimming programs, and Justin is pressing to have “Swimgen” adopted across the country by September. Justin has also developed “Sport Made Simple”, a web-based application to handle sports league registrations.

Elyse Simpson
Oakville, ON
Age: 17

Elyse is building her career as a solo musician and her performances to-date include an engagement at one of Toronto’s premier music venues, the Sound Academy. Elyse’s business smarts have powerfully connected her love of music and respect for hard-working, yet largely unknown musicians. Proposing a collective voice for off-the-radar artists, Elyse’s business plan won the support of Halton Region and received \$5000 in funding via the Ontario Government’s Summer Company program and the Business Plan Competition. Within one month of launching her business, Elyse signed two artists! Her **Jangle Records** is now established as an independent label geared towards folk, rock, alternative artists. Through **Jangle Records**, Elyse markets, packages and sells music; books shows; directs photo shoots; and produces artists’ materials. Elyse is a certified Music Business specialist from the Berklee College of Music.

Neil Kalra
Saskatoon, SK
Age: 19

Rotary’s Youth Leadership Program has honed Neil’s leadership abilities and taught him important life skills. His activities include the Saskatchewan Math Challenge, science fairs, the Model UN, athletics, and choral and jazz band. Recognized with numerous youth awards, Neil exemplifies positive lifestyle, dedication to school and community, and the ability to overcome life’s challenges while inspiring others. Neil is now focusing on two projects concerning cell death in atherosclerosis and lymphomas. It is his biggest hope to contribute significantly in the future to the evolving worlds of science and technology. Neil’s research mentor says, “He is a role model for others intending to pursue research which is both clinically relevant and practical”. With a 2nd Place in the Sanofi-Aventis Biotalent Challenge “Open Category”, he’s well on his way.

Sapna Shah
Markham, ON
Age 17

At 16, Sapna became a summer research student at McGill University, and her passion for science and creative thinking were galvanized. She designed a microencapsulated live yeast column bioreactor and tested its feasibility in removing urea during kidney failure. Sapna’s research focus was inspired by her friend’s ailing parent who was dying of kidney

failure. Sapna educated herself and learned that kidney failure leads to uremia; accumulation of toxic levels of urea and other uremic toxins, affecting over 1.9 million people in Canada alone. Sapna's review article was published in May, 2009 in Journal of Biologics: Targets and Therapy. Her unique and practical solution to kidney failure, an orally administered capsule of microencapsulated live yeast cells holds promise for the millions of people who suffer from kidney failure.

Sofia Oke
Guelph, ON
Age 17

In 2009, the City of Guelph recognized Sofia with their Top 40 Under 40 Award for her outstanding volunteerism with Habitat for Humanity, St. Joseph's Health Care Centre, Red Cross, and her local blood donor clinic. An athlete with strong business skills, Sofia's competitive soccer team named her MVP and at DECA's 2009 international business competition she placed in the Top 10. Witnessing a family friend endure cancer treatments, her passion for science inspired her to improve the application and effectiveness of chemotherapies. Sofia and her partner worked for two years to discover how to make cancerous cells more sensitive to chemotherapy drugs, resulting in lower drug dosages being needed and reduced side effects. Their innovation earned Gold at the Waterloo-Wellington Science Fair and Petro Canada's Innovation Award at the Canada Wide Science Fair.

Cody O'Neil
Kelowna, BC
Age 17

National Champion in Wendy's "Classic Achiever", Cody performs to his utmost. Demonstrating his talents in the sciences, languages, drama, and athletics. With firsts at national and international science fairs, his ability to make effective presentations has revealed a skillful public speaker as he sheds new light on climate change. Cody's research into this pressing issue takes an entirely new and to some, controversial, point of view: he examines the relationship between astronomy and climate change, a combination typically overlooked, if not ignored, by the scientific community. His theory of "Orbital Forcing" poses a relation between variations in the Earth's orbit and long-term climatic change. It also attempts to correlate sunspot cycles to short-term climate change. Placing 1st overall at the 2009 Taiwan International Science Fair and the Australian National Youth Science Forum, Cody's work is gaining acceptance and recognition.

Tony Kwon
London, ON
Age: 17

As a grade nine student, Tony wanted to lessen the effects of microorganisms on human health. The University of Western Ontario let him use their Microbiology and Immunology lab to research a globally ubiquitous and life-threatening bacteria—

streptococcus pyogenes. His works shows that fresh garlic inhibits streptococcal colonization, decreases aspects of the bacteria's virulence, and could ultimately prevent or treat group A streptococcal infections. Untreated strep throat can cause acute rheumatic heart disease and is linked to about 500,000 deaths in developing countries annually. Imagine the major advancement if simply chewing garlic would prevent even 1% of these cases. A National Science Fair Gold Medallist, Tony represented Canada in Tunisia at the 2009 International Science Fair and helped his team win the "Enrique Padilla Award" for project quality, spirit, organization and overall contribution to the fair.

Gary Kurek
Fort Kent, AB
Age: 18

With cancer debilitating several members of his family, Gary wanted to make their lives a little easier. He came up with the Rollator Wheelchair Hybrid (RWH), a motorizing kit that can be retrofitted to any four-wheeled rolling walker to create a combination walker and electric wheelchair. RWH is the first powered mobility product that lets users transform their single-ability walking aids into multifunctional devices. Costing $\frac{1}{4}$ of a conventional electric wheelchair, RWH navigates well in standard homes. Gary's invention garnered 17 Canada Wide Science Fair awards, including the Best in Fair National Champion. Over \$70,000 and thousands of hours have gone into developing RWH, which is now in the final prototype stage. Gary's company, GET Mobility Solutions Inc., holds the patent on the product and plans to launch it in 2010.

David Castelino
Mississauga, ON
Age: 19

A 2008 Manning Innovation Achievement Award winner, David has shown a passion for science, innovation and community involvement since childhood. Leadership roles with the SMART Network and the Mississauga Mayor's Youth Advisory Council are mature extensions of his early interests, which included creating holographic images and improving food labeling systems. In 2006, David designed an efficient, affordable alternative to silicon solar cells—a dye-sensitized organic solar cell that uses photosynthesis to create electrical energy at a higher rate of return. Sol-Tile is David's latest invention, a thin-film solar tile using solar paint made from organic dyes, which can easily fit existing roofing. This tile offers an inexpensive, sustainable source of renewable energy for use around the world. The Patent and Trademark Office Society has awarded David with a patent citation for his breakthrough invention.

Yan Yu
Calgary, AB
Age: 19

Yan Yu has put environmental innovation on the map at Queen's University. As an intern with the Main Campus Resident's Council (MCRC) Sustainability Office, Yan brought vision and energy to an indifferent Council. Successfully advocating the creation of a "Sustainability Coordinator" position, Yan promptly assumed the role and transformed MCRC into one of the greenest student governing bodies in Canada. He formed one of the largest environmental groups on campus, the MCRC Green Team, to tackle environmental issues like running a successful weekly campus clean-up crew, reducing cafeteria food wastage, installing indoor vegetable gardens, and establishing a worm-composting system in residence—the first of its kind in Canada. Here's one measure of their success: in the first four months of the cleanup crew's existence, recyclable waste collection increased by 57% over the whole of the previous year.

Claudia Covalciuc
Halifax, NS
Age: 19

Now a role model for Cape Breton youth, Claudia has lived a life of unimaginable hardship. Growing up in Ontario, Claudia had to leave Canada at the age of eleven when her mother was forced to return to her native Romania. For the next five years, Claudia worked, unable to attend school. Yet she never lost her love of learning nor her belief that education would free her from poverty and exploitation. At 16, she made the difficult decision to leave her mother and return to Canada. With one bag of clothing, Claudia arrived alone at the Halifax, NS airport. Despite immense challenges, she graduated high school with honors *and* the Harrison McCain Scholarship. Today, Claudia offers youth motivational talks, and interpretative hikes and expeditions while actively reinforcing healthy lifestyle choices and personal well-being.

Brian Wong
Vancouver, BC
Age: 18

In 2008, Brian thought a little job creation would help offset the university fees coming his way, so he started a basic web development company called Aer Marketing. He really didn't see a fully-fledged business or a star product emerging! He and his team created "Followformation", a simple user-discovery tool for Twitter novices. After 4 weeks of development, Aer Marketing launched Followformation and recorded 30,000+ follows the first month. Mashable, the world's third most popular blog, Fast Company and the Examiner, all praised the new product. Followformation's success has attracted many new clients, including Best Buy. Brian's sponsor for the Top 20 Award says, "Brian has got something on Bill Gates—think Bill's passion for technology meets Steve Jobs' need

for innovation and throw in a bit of “Millennial-determination-to-change-the-world” and you’ve got Mr. Wong”.

Emma Graham
Ottawa, ON
Age: 15

Living as a child in a heavily polluted environment in China, Emma found breathing difficult and provoked her wish to create safe, effective chemical products. By grade 9, now living in Canada and volunteering in a pharmaceutical company lab, she discovered her love of organic chemistry and soon won a Youth Science Team Canada Award. Since 2009, Emma been developing a natural pesticide enhancer to minimize pesticide-resistance rates in insects, and thereby decrease the overall environmental impact of pesticides. With several firsts in science competitions, Emma attended the 2010 Intel ISEF in California, winning a fourth place in the Environmental Management category. Also artistic and athletic, Emma is an accomplished violist and rower, performing with the Ottawa Youth Orchestra and rowing for the Ottawa Rowing Club.

Stéphanie Brisson
Québec, QC
Age: 19

Stéphanie’s sponsor says she is a creative leader with exceptional dedication and contagious positivity. Stéphanie is on a mission to expose as many young Quebeckers to the rewards of participating in scientific competitions. At 16, Stéphanie entered the Canada Wide Science Fair and captured awards and distinctions. Following success at Shad Valley as the leader of a team of 25, she knew that her school could better promote these valuable opportunities to its students. Now, after Stéphanie’s efforts, all notebook packages handed out at Collège François-Xavier Garneau include information and successful teams have been winning acclaim. Knowing that girls need special encouragement to get into science, Stéphanie became a committee member of Les filles et les sciences and is making special efforts to engage girls and share her passion for the sciences.

Aly Kassim-Lakha
Toronto, ON
Age: 16

Aly has won many accolades for his entrepreneurial efforts and community service. As Junior Achievement’s Company President, Top Salesperson, Outstanding Leader and Entrepreneur in Ontario, he represented Canada at JA’s International Conference for Young Leaders. An International Baccalaureate honours student, he has acted as a VP in the Model UN, a Tutor Leader in “Horizons Tutoring”; and is a Big Brother. Aly was chosen to be Project Leader of his team’s company in Shad Valley’s business creation competition. Based on triple-bottom line principles, their “CocoNet” company researched the development of an anti-malarial net made of 100% bio-degradable coconut fibre and

much less expensive than currently available mosquito nets. Recognized with many awards, they captured the top prize, the prestigious “RBC/Shad Entrepreneurship Cup” plus a proposal from an international company wanting to take the product to market.