Board of Governors Report
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Joy Johnson, Vice-President, Research

Research News

- SFU will equip a first-of-its-kind research imaging facility in Western Canada, with $3.6 million in funding announced May 19th by Minister of State for Western Economic Diversification Michelle Rempel. Together with $1 million in earlier funding from the Canada Foundation for Innovation (CFI) and support from partner Philips Healthcare, the funding will establish an ImageTech lab at Surrey Memorial Hospital. Led by SFU neuroscientist Ryan D’Arcy, the lab will combine state-of-the-art MRI and MEG devices to provide unparalleled insight into brain/body conditions across the lifespan and facilitate breakthroughs in diagnostics and treatment.

- SFU engineering science associate professor Lesley Shannon is one of five NSERC Chairs for Women in Science and Engineering across Canada who will work to champion diversity in STEM fields. NSERC President Mario Pinto made the announcement at the national Creating Connections conference this May, hosted by SFU. Shannon will receive $475,000 in NSERC funding over five years with matching funds from SFU and industry partner, Vancouver’s Simba Technologies.

- The IRMACS Centre hosted a meeting at SFU’s Vancouver campus to develop best practices for the generation, use, and sharing of immune sequencing datasets. The keynote address was presented by Paul Terry, CEO of PHEMI Inc., a big data warehouse enterprise in Vancouver (and VentureLabs client). Nature Medicine recently reported on the importance of this type of data and quoted IRMACS Director/population geneticist Felix Breden and molecular immunity researcher Jamie Scott, who are developing their own such database, called iReceptor.

- Economist Marjorie Griffin Cohen presented her research on economic prosperity and austerity at the Big Thinking on the Hill lecture series in Ottawa this April. She shared insights from her research on the impacts of government policies on women, men, and the wider economy.

- SFU health scientist Tim Takaro has co-authored the first report of the Canadian Healthy Infant Longitudinal Development (CHILD) Study. CHILD is a large national study, led by McMaster and funded by the AllerGen Network and CIHR, to explore how genetics and environment interact to impact the development of chronic childhood diseases. Takaro notes, “The size of the study and the rigour with which we assess environmental exposure will increase our capacity to detect associations between environmental factors and health outcomes.”

- Nature magazine has published an article on the impact of SFU research on a novel optical dating technique introduced 30 years ago by physics professors David Huntley and Michel Thewalt, and archaeologist Dorothy Godfrey-Smith. “[Optical dating] has since become an essential arrow in the quiver of scientists worldwide…if the past 30 years of progress are any guide, we can expect optical dating to illuminate much more on
the history of this planet—and perhaps that of others—before we celebrate its fiftieth anniversary,” reports the article.

- The SFU Postdoctoral Association held its first **Postdoctoral Research Day** on May 20th at the IRMACS Centre. Panels and poster sessions featured postdoctoral research across SFU’s faculties.
- High-school student **Nicole Ticea**, who created a novel method of HIV detection for newborns and early-stage infected adults in the lab of associate professor **Mark Brockman**, beat more than 1700 competitors to take one of three top prizes at the 2015 Intel International Science and Engineering Fair.

**Research Grant Successes**

- SFU was recently nominated to host one of **Compute Canada’s** four new national CFI-funded Advanced Research Computing (ARC) systems. Of the four available systems, SFU was nominated for the largest data centre, planned to be fully operational in 2016. This nomination reflects SFU’s outstanding leadership and built capacity in advanced ARC nationally (through Compute Canada) and regionally (through WestGrid).
- SFU is collaborating on five new CFI projects announced May 29th, including **GlycoScreen**, a unique centre for fundamental carbohydrate research and the development of new drug and diagnostic targets leading to transformative health solutions. GlycoScreen will augment the research capability of the Canadian Glycomics Network (GlycoNet) in which SFU is a key partner. The other four projects are in the field of subatomic physics research and include new infrastructure for TRIUMF’s rare isotope program and for the ATLAS experiment.
- The **joint SFU-UBC bioinformatics training program**, previously supported by a CIHR training grant, will be expanded under $1.65 million in new funding from the NSERC Collaborative Research and Training Experience (CREATE) program announced May 20th. SFU MBB professor Fiona Brinkman says, “The new funding will ensure further growth and continued success of our joint university program. This funding supports training of experts who can organize and analyze large data sets in bioinformatics—a skill in high demand across academia and industry.”
- Mechatronics professor **Majid Bahrami** is leading a $700,000 NSERC-funded project that brings together expertise from SFU’s Laboratory for Alternative Energy Conversion and Ontario’s Sheridan College to help three Canadian companies (Terrella Energy Systems, Alpha Technologies and Westport Innovations) advance their graphite thermal management products.
- **Peter Hall** of Urban Studies leads a SSHRC partnership development grant entitled (Re)Claiming the New Westminster Waterfront. This collaborative effort involves academic, municipal, labour, school and community partners who are co-producing and mobilizing knowledge to tell the untold story of work and life along the New Westminster working waterfront. The project will culminate with an exhibit, hosted by the New
Westminster Museum from July to October 2015, that draws heavily on the almost 100 oral histories that the project has collected.

- **SFU Science** undergraduate students have launched a new peer-reviewed undergraduate research journal that will published annually, accompanied by a website (http://sfusurj.com/) that will serve as a hub for showcasing undergraduate research.

### Research Awards & Honours

- Earth Sciences professor and Canada Research Chair in Natural Hazard Research, John Clague, has made the list of 100 of Canada’s Modern-Day Trailblazers published by Canadian Geographic Magazine. He is cited as a leading authority in quaternary studies, specializing in geological hazard such as earthquakes, tsunamis, landslides and floods.

- Isabelle Coté’s research on marine ecology and conservation has made the spotlight in SSHRC’s June 2015 eNewsletter. The biological sciences professor’s new study on the economic impact of closing the high seas to fishing aims to increase understanding of the need for protection and stewardship of this resource.

- Computing science professor Jiangchuan (JC) Liu has received the 2015 IEEE INFOCOM Test of Time Paper Award for his 2005 co-authored paper on the key technology underpinning CoolStreaming, the first large-scale Peer-to-Peer video streaming system in the world.

- Education professor and CRC in Tangible Mathematics, Nathalie Sinclair, received an Outstanding Book Award Honourable Mention for Innovations in Curriculum Studies for Mathematics and the body: Material entanglement in the classroom. Presented by the 2015 American Education Research Association, the award recognizes extraordinary contributions to the field of curriculum studies.

- Four SFU computing science graduate students have created a free app that crunches the numbers from government data to show you how much a degree will really cost you in Canada, in tuition and average rent. They created the app for the Canadian Open Data Experience (CODE) 2015 competition, and won a $5,000 prize for Best Student Team.

- Beedie School of Business PhD student Bryan Gallagher is one of five students from across Canada to win the Research for a Better Life: The SSHRC Storytellers competition. His short video, “Urban Entrepreneurship and Indigenous Identity,” tells the story of his research on Indigenous entrepreneurship.
Innovation Updates

• Amrik Virk, Minister of Technology, Innovation and Citizens’ Services, visited SFU’s Surrey campus on May 25\textsuperscript{th} to announce $6 million in provincial funding for BCIC Tech Works, a program that will provide training opportunities for co-op students at BC technology companies. It will be delivered through the BCIC Innovator Skills Initiative—delivered by BC Acceleration Network partners, including VentureLabs—and the BC Tech Co-Op Grants Program. Venture Connection Manager Michelle Sinclair spoke at the announcement, and Venture Connection clients Avian Robotics and OraScents demonstrated their products.

• A gift of $1 million from Scotiabank will help prepare SFU students to transform the world through social innovation. The gift will benefit students participating in the trailblazing social innovation programs facilitated by RADIUS (RADical Ideas Useful to Society), the Beedie School of Business’ social innovation lab and venture incubator. It will fund three new initiatives designed to further social innovation education: the Student Awards in Social Innovation; the Social Innovation Student Competition Team Fund; and the Student Social Innovation Conference and Event Fund.

• RADIUS Ventures has partnered with the Business Development Bank of Canada (BDC) in a pilot project to fund social entrepreneurship. BDC has committed to provide RADIUS Ventures with $50,000 in financing for the next fiscal year, which the program will use to support its Slingshot venture acceleration program. The partnership will also see BDC and RADIUS host a series of workshops for growth-ready ventures.

• Following a record year for applications to the BCIC New Ventures Competition, three Venture Connection clients have advanced to round 2.5 of the competition. Avian Robotics, ORA Scents and TerraTap Technologies will all make their pitch on June 17\textsuperscript{th} toward progressing to the top 25 teams selected for round 3.

• SFU Surrey business student Ethan O’Brien has been featured in Business in Vancouver for his vertical aquaponics system for growing herbs. His company, Garden Fresh Foods (a Venture Connection client) was recently awarded the Vancity Grand Prize at SFU’s annual Opportunity Fest, which celebrates SFU innovators and entrepreneurs.