LIFESCIENCES

2017

INDUSTRY INFLUENCERS

Fifteen life science visionaries translating insights into action

GROWING BRITISH COLUMBIA'S BIO-ECONOMY

OFFICIAL PUBLICATION

LifeSciences British Columbia

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MICHAEL SMITH FOUNDATION
FOR HEALTH RESEARCH

Discover. Connect. Engage.

Driving talent development and innovation in BC

Introducing the I2C Program

Many talented health researchers in BC are discovering cures and treatments that have the potential to improve health outcomes and enrich BC's health research and life sciences ecosystem.

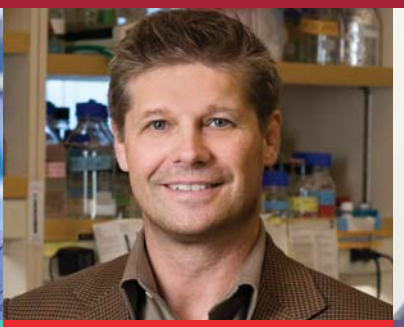
To help these researchers take their discovery and turn it into a viable product, MSFHR has launched the new Innovation to Commercialization (I2C) Program. Awards from this program will help BC researchers undertake feasibility research and commercialization activities.

With this program, MSFHR hopes to support a new generation of researchers to follow in the footsteps of past MSFHR award recipients like Dr. Torsten Nielsen, Dr. Martin Gleave and Dr. Mark Ansermino, all of whom have gone on to commercialize their discoveries.

Targeted breast cancer treatment

Dr. Torsten Nielsen and his team developed PAM50 — a test that measures key genes expressed by breast cancer. The test identifies roughly one-third of early breast cancer patients whose tumours are of a low-risk subtype and whose likelihood of survival without chemotherapy is greater than 95%. The PAM50 test, FDA-cleared and marketed around the world under the brand name Prosigna, helps patients avoid unnecessary chemotherapy, and helps ensure medical resources are deployed more efficiently.

Dr. Torsten Nielsen
2003 Scholar & 2008 Senior Scholar



Better prostate cancer outcomes

A 2004 Research Unit Award helped Dr. Martin Gleave establish PC-TRiADD, a research program focused on developing new services and products to improve prostate cancer outcomes. Since inception, PC-TRiADD has spun off four biotechnology companies and developed eight new intellectual property-protected cancer drugs. In 2015, a potential treatment for advanced prostate cancer was licensed to pharmaceutical company Roche, to date the largest licensing agreement to come out of a Canadian university.

Dr. Martin Gleave
2004 Research Unit Award

Tools for safer maternal care

Dr. Mark Ansermino, Dr. Peter von Dadelszen (2006 Scholar) and colleagues developed the phone oximeter, a mobile diagnostic tool that uses smart phone technology to measure blood oxygen levels. The technology has proven valuable in predicting the onset of serious complications caused by pre-eclampsia, a condition of pregnancy that is responsible for 76,000 maternal deaths annually that occur primarily in low- and middle-income countries. The researchers founded LionsGate Technologies to bring the product to market.

Dr. Mark Ansermino, 2007 Scholar

Since 2001, the Michael Smith Foundation for Health Research has empowered world-class health innovation with global impact, supporting nearly 1,600 individual researchers and 80 research teams. Our funding programs support a vibrant health research community in BC that:

- Develops, attracts and retains leading health researchers.
- Leverages funding to develop innovative ideas into new products, new treatments and new companies.
- Addresses our province's health priorities.
- Finds solutions to our most pressing health challenges, including cancer, genomics and HIV/AIDS.

In 2016, MSFHR launched a refreshed suite of eight targeted funding programs, including the new Innovation to Commercialization Program. These programs are designed to address health system priorities and to support a strong health and life sciences ecosystem in BC, today and in the future. For more information, connect with us.

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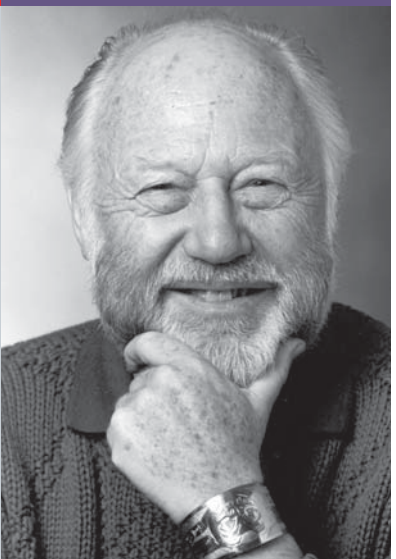
MSFHR is dedicated to the memory of Nobel Laureate Dr. Michael Smith (pictured right).



Congratulations to the Annual LifeSciences BC Award Winners!

Our 2017 Winners are:

- Genome British Columbia Award for Scientific Excellence – Dr. Leonard Foster
- Michael Smith Foundation for Health Research – Aubrey J. Tingle Prize – Dr. James Russell
- Deal of the Year – Celator Pharmaceuticals Inc.
- Growth Stage Life Sciences Company of the Year – Innovative Targeting Solutions Inc.
- Growth Stage Medtech Company of the Year – Clarius Mobile Health Corp.
- Strategic Life Sciences Partner of the Year – Industrial Research Assistance Program (IRAP) – Pacific Region
- Milton Wong Award for Leadership – Dr. William Hunter
- Dr. Don Rix Award for Lifetime Achievement – Dr. Alan Winter
- Life Sciences Company of the Year – McKesson Imaging and Workflow Solutions

Celator Pharmaceuticals and Dr. Alan Winter

In congratulating all of this year's winners, we are most delighted and proud to have been the legal advisor to Celator Pharmaceuticals from BC Cancer Agency spin out through its seed and Series A rounds before migration to the US, and in supporting Dr. Alan Winter's leadership in launching GenomeBC.

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Life Sciences is a global business for our clients. Farris has been in involved in Life Sciences from the earliest days of the industry, guiding our clients through some of the largest and most ground-breaking financing, commercialization, and merger transactions in Canadian history.

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Life Sciences 2017 is published by BIV Magazines, a division of BIV Media Group, 303 Fifth Avenue West, Vancouver, B.C. V5Y 1J6, 604-688-2398, fax 604-688-1963, *www.biv.com*.

ISSN 1205-5662

Publications Mail Agreement No: 40069240. Registration No: 8876. Return undeliverable Canadian addresses to Circulation Department: 303 Fifth Avenue West, Vancouver, B.C. V5Y 1J6 Email: subscribe@biv.com

Cover: B.C. life sciences movers and shakers, clockwise from centre: Karimah Es Sabar, Quark Venture Inc.; Sally Greenwood, Genome BC; Norma Blin, Augurex Life Sciences Corp.; Kathryn Hayashi, Advanced Applied Physics Solutions; Nancy Harrison, formerly of MSI Methylation Sciences Inc.; Natalie Dakers, Accel-Rx Health Sciences Accelerator; Lesley Esford, LifeSciences BC; Kathleen Martin Ginis, UBC Okanagan; Anne Stevens, Aequus Pharmaceuticals; Catalina Lopez-Correa, Genome BC

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Message from the Minister of Science

Hon. Kirsty Duncan, PC, MP, Minister of Science

Many of Canada's remarkable scientists are inspired by one truth: science has the power to change lives. And perhaps no branch of science does this more directly than the life sciences. The study of cell biology and genomics, among others, is the study of the wonder that is life. Life science is a critical research area in which Canada has world-leading expertise. It is also a scientific discipline for which I have great respect and admiration.

When I first arrived in Ottawa, I worked to promote life sciences. I was able to get all-party support to create a subcommittee of health on neurological disease, disorder and injury, and promote health research. I later worked with researchers from across the country on areas such as autism spectrum disorder, cerebral palsy and dementia.

The Canadian life sciences sector is an important contributor to our economy, creating the innovations that will improve health-care delivery in Canada and abroad. Our government's investments are targeted to areas where Canada has demonstrated its strengths. We have also made major investments in the fundamental science to ensure Canada's international leadership position remains strong.

Our most significant commitment to research is the boost in support for discovery at Canadian post-secondary institutions. We have provided a $95 million top-up to the granting councils, the highest amount of new annual funding for this purpose in over a decade.

We provided $237 million to support the pan-Canadian activities of Genome Canada, and are supporting brain research by providing $20 million to the Brain Canada Foundation. To further Canada's long-standing leadership in the field of stem cell research, we also invested $12 million to support the Stem Cell Network's research, training and outreach activities.

As Minister of Science, I also believe it is my duty to encourage young women to choose a career in science, technology, engineering or math (STEM). Only 22 per cent of people working in STEM fields in Canada are women, and only about one in four engineering degrees go to women.

That's why I have been taking specific steps to advance equity such as introducing diversity requirements into the Canada Excellence Research Chairs program, and bringing back the University and College Academic Staff System survey. I also recently had the pleasure of launching a women and girls in STEM campaign. This campaign aims to start the conversation on how we can encourage more young women to choose a scientific career, and how to foster a culture of curiosity in all Canadians.

In the life sciences alone, there are major opportunities for Canada to excel in areas such as regenerative medicine, oncology and neurology. The possibilities to advance innovations in these areas are enormous and we cannot be left behind. Increasing the diversity of talented people fuelling our country's future will enhance the richness of these discoveries and innovations to the benefit of all Canadians.

“We’ll do our best”

just got better.

IMAGINE IF RARE DISEASES COULD BE DIAGNOSED AT BIRTH

Genomics has changed our perspective on what is possible in medical science. Today there is hope where once there was none. Genomics has the potential to dramatically change the way we diagnose and treat people with chronic, infectious and rare diseases. Imagine if autism could be detected years earlier or cancer could be predicted in the ones we love before the disease takes hold. Imagine the number of lives that could be saved. It isn’t hard to do.

Visit genomebc.ca and follow us on:

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Genome BritishColumbia

Leading > Investing > Connecting

Message from the president

Lesley Esford, PhD, president of LifeSciences BC

I'm proud and humbled to have been recently chosen to lead LifeSciences BC. Throughout my career in academia, industry and government, I have been fortunate to work in an area that I love, life sciences, focused on supporting the growth of this ever-evolving and dynamic sector.

As an industrial technology adviser for the National Research Council's Industrial Research Assistance Program, I have had the pleasure of working with numerous thought-provoking and motivated entrepreneurs who have successfully grown their companies from startup to commercialization. Interestingly, Statistics Canada reports that 1.2 million small and medium-sized enterprises (SMEs) drive more than half of Canada's GDP and account for 63 per cent of private-sector employment. B.C. has a strong SME and startup ecosystem in the life sciences. Now I have the opportunity to lead our association in a manner that promotes the vibrancy and global interest of this ever-changing and influential industry.

In this 2017 edition of *LifeSciences*, we feature 15 profiles of exceptionally talented and dynamic "industry influencers" in the life sciences ecosystem – and they also happen to be women. Women in the life sciences sector are often lifelong contributors to research and innovation, but, like myself until recently, many work in isolation away from the spotlight. The LifeSciences BC board of directors and I thought it was time the many women who have contributed, studied, worked and dedicated their lives to the betterment of health outcomes for all, had their moment in the spotlight. What is also exciting is that there were many more women who could have been added to this list.

As we move into 2017 we don't want to leave anyone out of the bigger, broader picture, as it will take our collective efforts to move us forward. This year our theme of "Translating Insights into Action" is about strengthening our life sciences ecosystem and ensuring that we continue to support the fundamentals of company creation and growth. We require research to drive new knowledge, and in order for this to realize its full economic and health outcome potential, we require innovation, as a critical next step. A rising tide lifts all boats.

We have many strengths in B.C., including generating great science. Optimizing and aligning the life sciences sector to support translation of our world-class science into new innovations and commercial products will be key. Our challenge is to ensure that we have the resources, capital and talent to achieve our goals.

The various players – academic institutions, government, industry associations, accelerators, incubators and industry – need to recognize (and support) the role each plays in our ecosystem in order to fortify the connections between them. Each performs an essential role in the efforts to facilitate lasting growth, but none will be as effective in isolation.

We have many of the ingredients for fostering innovation in B.C., and we are moving in the right direction. We need to continue to generate great science, and the related discovery and development will continue to advance new startups. Recognizing the need to do a better job of scaling up those small companies and supporting their progress and growth, as a community we should commit to:

- Strengthening the network and connection of key players in the ecosystem within B.C., Canada and the world.
- Assisting our SMEs in accessing smart capital – introducing and promoting B.C. companies to investors from around the world.
- Finding ways to support adoption and procurement of innovation at all levels of the public and private sectors.

If we can do this, we will have secured our place in Canada and around the world, while being a beacon of inclusion, resourcefulness, talent and opportunity for all.

LifeSciences British Columbia

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LifeSciences British Columbia relies greatly on the support of our sponsors – without which we would not be able to undertake many of our important industry-building initiatives. We are proud to list the companies below as organizational sponsors.

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STRENGTHENING THE ECOSYSTEM

Genome BC chief scientific officer champions genomics research

CATALINA LOPEZ-CORREA

CHIEF SCIENTIFIC OFFICER AND VICE-PRESIDENT, SECTOR DEVELOPMENT, GENOME BC

Where there is a living organism, the genome and genomics have a role to play

PETER MITHAM

Genetics research has come a long way since Czech monk Gregor Mendel's studies of pea plants. Yet those humble beginnings laid the foundation for the more than 120 projects and $800 million in investment Genome BC oversees. Allowing scientists to understand the hereditary characteristics that enhance life and contribute to disease, and how diseases respond to various therapies, the research is revolutionizing how we tackle problems in areas from medicine to the environment.

"Where there is a living organism, the genome and genomics have a role to play," says Dr. Catalina Lopez-Correa, chief scientific officer and vice-president, sector development, with Genome BC. "My responsibility is to be leading all the scientific strategy at Genome BC, and I work on what we call sector development – meaning ensuring the use and adoption of genomics in different sectors."

While health care is the single biggest sector applying genomics research at present, the forestry, agri-food and aquaculture sectors are close behind.

"The most recent areas that we're covering are all the areas that are related to mining and the environment," Lopez-Correa adds, explaining how bacteria can remediate soil and purify waste water.

The application of genomics research is key for Lopez-Correa, who trained as a medical doctor before specializing in genomics. Raising awareness of how genomics research can create a new way of doing things is key for her.

Catalina Lopez-Correa, chief scientific officer and vice-president, sector development, Genome BC, says "it's about creating environments and ecosystems here in the province, where genomics is really helping economic development" | CHUNG CHOW

"We see Genome BC [as] much more than a funding agency. It's not about giving money to projects," she says. "It's about creating environments and ecosystems here in the province, where genomics is really helping economic development. ... It's about working together with industry, with the province, with the federal entities to build those ecosystems."

Born in Colombia in 1967, Lopez-Correa was strongly influenced by her father, an engineer who was passionate about computers and new technology. This was immensely stimulating for her, as was the small farm he maintained where he took an active interest in improving the quality of his livestock – her first introduction to genetics.

"Genetics, always either with my dad in the farm or at medical school or in my PhD, genomics or genetics has always been not an end but a means to improve a process, improve economic development."

She initially studied to be a physician at Universidad Pontificia Bolivariana in Medellín, Colombia, graduating in 1991, but the science, rather than the clinical practice of medicine, attracted her.

"When I had my genetic classes in medical school, I was like, 'Oh my God, this is what I would like to do.' It was really clear for me," she says.

She practised for two years in Colombia and then moved to France, part of a desire to spread her wings and see the world. It ultimately led to a master's degree in human genetics at the Pasteur Institute in Paris. A doctoral program in Belgium followed, balanced by medical practice on Saturdays.

"It was a good transition for a medical doctor, not just jumping into the [lab] bench but always having patients in mind, and the application of the science," she says.

Work at a bioinformatics company in London opened doors in Reykjavik as head of cytogenomics with deCode Genetics Inc., which established the world's first biobank with DNA samples from the Icelandic population.

"For me, it was really like the mecca – the place to be in terms of genomics and genetics," she says.

An appointment as principal research scientist with Eli Lilly and Co. followed in 2005. She moved to Indianapolis with her partner, María Adelaida Escobar, but when Escobar's student visa expired in 2008, hard decisions followed.

"We couldn't stay in Indianapolis," Lopez-Correa

Strengthening the ecosystem

CATALINA LOPEZ-CORREA

CHIEF SCIENTIFIC OFFICER AND VICE-PRESIDENT, SECTOR DEVELOPMENT, GENOME BC

We have the possibility to interact with all these companies in Singapore, in Australia, in China, that are starting to also lead the way

explains. "We consciously chose Canada, not just because of the professional opportunities for us, but because ... we wanted a culture and a country that respected the environment, respected human rights, where diversity was valued."

Lopez-Correa became scientific director at Genome Quebec, the province's counterpart to Genome BC, and was soon vice-president and chief scientific officer. While there, she saw what Genome BC was doing well, and sought to enhance what Genome Quebec was doing.

"I asked Genome BC if they could host me for one week to learn what they did and how they did it," she says, establishing connections that laid the foundation for her arrival in B.C. in 2016.

"Genome BC was my example to follow, so what [better] than to go work for your example?"

Even more exciting for Lopez-Correa is B.C.'s strategic location on the Pacific Rim.

"It's a very powerful position we have; we are the door to Asia, we have the possibility to interact with all these companies in Singapore, in Australia, in China, that are starting to also lead the way," she says.

An entrepreneurial spirit and cluster of skilled scientists anchored by a single research university strengthens B.C.'s position.

"We have the expertise, we have the ecosystem or environment, and also we have the possibility to reach out to key potential partners," she says. "There is more freedom to be creative."

Her current priorities include securing the funding that supports that freedom, as well as maintaining and enhancing the local and international reputation of Genome BC. She also works to make industry aware of genomics' potential, as well as to make researchers aware of the opportunities.

She's particularly keen to encourage women to enter the field. While gender equity is not a significant issue at Genome BC, she believes more can be done in the life sciences sector as a whole. "Almost 80 per cent of the team of PhDs and scientists that we have here are women, because this is an environment where they can have some flexibility to take care of the families and their kids. It's intellectually stimulating, and they can grow," she says. "[But women] are not represented in our funding; they're not represented on our expert panels."

With the growth of the sector in a part of the country with a high quality of life, Lopez-Correa would like to see a more diverse genomics community.

"We love hiking, we love camping, we love skiing," she says of her own recreational pursuits. "So what can be [better] in Canada than moving to B.C., and Vancouver, having all the outdoors that we love and having a way to grow and – for me – having much possibility to grow internationally?"

COLLABORATION IS KEY

Augurex CEO: 'Surround yourself with good people'

MARKE ANDREWS

Norma Biln learned to collaborate at an early age. She was just a baby when her family emigrated from Syria and the seven of them – four children, two parents and one grandparent – spent six years in a one-bedroom apartment in Montreal. Curtains divided the living space; everyone waited their turn for the bathroom. Young Norma, the youngest of the clan, slept in a crib for the first six years of her life.

"They did remove the bars of the crib," she says now with a laugh.

Learning to share and collaborate served her well. Today, Biln is co-founder and CEO of Augurex Life Sciences Corp., a Vancouver biotechnology company that develops biomarker blood tests, making major inroads in the management of rheumatoid arthritis (RA) and other autoimmune diseases affecting joints.

Augurex comprises just seven people, including co-founders Biln and Dr. Anthony Marotta. It is important that the company collaborates with government and private funding bodies to further its work. It collaborates with researchers and other health professionals, paying contractors and sharing data with them.

That is what Augurex did in its work developing a 14-3-3 eta blood test, called JOINTstat. The 14-3-3 eta protein usually exists within a body's cells; if it moves to outside cells, it can cause inflammation and joint damage. The blood test developed by Augurex looks for the extracellular protein; a positive test indicates the person has a five to 50 times greater chance of developing RA than someone without it. Early RA diagnosis and treatment improve clinical outcomes.

JOINTstat has been adopted by clinical labs throughout the world: LifeLabs in Canada; Quest Diagnostics, Laboratory Corp. of America and RDL Reference Laboratory in the U.S.; and Medical & Biological Laboratories in Japan. The Therapeutic Goods Administration has approved it for use in Australia, and it is CE-marked for Europe.

Genome BC is one of the organizations investing in Augurex.

"Augurex is helping to speed up diagnosis for patients, which is enabling better health outcomes," says Dr. Tony Brooks, chief financial officer and vice-president of research programs at Genome BC. "Augurex is well positioned to make JOINTstat, and other tests in their therapeutic pipeline, accessible across global markets.

"

NORMA BILN

CO-FOUNDER AND CEO, AUGUREX LIFE SCIENCES CORP.

People kept talking about [work-life] balance, and I thought that balance was for seniors

Collaboration is key

Norma Biln is co-founder and CEO of Vancouver-based biotechnology company Augurex, which develops biomarker blood tests that aid in early diagnosis of rheumatoid arthritis | CHUNG CHOW

"The success of Augurex speaks to Norma's leadership as well as the strength of the life sciences community in British Columbia."

So how did Biln get on this track? With an X-ray technician father and a mother who worked as a nurse, health care was always in her family. As a student, she loved biology, but it was really volunteering as a candystriper in her teens that made the biggest impression.

"My role was to keep seniors company on the chronic wards and to assist nurses and ward aides with work overflow," Biln says. "My exposure to aging, humanity, health crises and death, along with the many stories shared by patients, made me realize how important every one of our stories is."

She earned a bachelor of science in physiology and psychology from McGill University and then a master of business administration from the University of Phoenix, with a career goal of "being a COO of a pharmaceutical company."

While working for pharmaceutical giant Pfizer, she took what was supposed to be a nine-month sales job in Vancouver. Here, she met her husband and fell for the West Coast lifestyle, though that took some acclimatizing.

"The culture here was laid back and more relaxed than it is in other cities," she recalls. "I was young and ambitious, and knew I could only go so far here in a pharmaceutical company. People kept talking about [work-life] balance, and I thought that balance was for seniors."

Biln moved around to different companies (including

Amgen and Abbott Laboratories) before landing at Stressgen Bioreagents, where she met her future business partner, Marotta. They talked about ideas they shared, and in 2006 they created Augurex.

Augurex's blood test and its adoption internationally is a major coup for the company. Biln says her biggest challenge does not come from competition with other companies in the medical field, but from getting physicians to make the switch.

"They'll say, 'I've never used this in the past,' so the challenge is to convince them that this will make life better for their patients," Biln says.

Augurex is currently examining treatment possibilities; preclinical animal studies demonstrate that anti-14-3-3 eta monoclonal antibodies delay the onset of and mitigate the severity of arthritis development.

Asked what advice the Augurex CEO has for any person wanting to lead a company in the biotechnology field, Biln has two important points.

"You must realize that it is not about you; it is about your team," she says. "It is important to surround yourself with good people.

"And if you're a founder, you must have an unrelenting 'we will make this a success come hell or high water' attitude. Because there are so many opportunities to fail."

WAR ON CANCER

For Phoenix Molecular Designs founder Sandra Dunn, the mission is personal

MARKE ANDREWS

For the past quarter century, Dr. Sandra Dunn, founder and CEO of Phoenix Molecular Designs, has devoted her time to researching cancer and trying to put the deadly disease on the run. That mission is very personal for Dunn. Her paternal grandparents, with whom she was very close, both died from cancer.

"They were like parents to me," recalls Dunn, her voice choked with emotion, at the Phoenix office in Richmond. "Cancer touching my family like that made me realize there is so much more that needs to be done."

Born in Berea, Ohio (population: 19,093), Dunn and her four siblings grew up in a working-class family at a large farmhouse in Brunswick, Ohio. Her dad worked at the steel mill, her mother toiled as a nurse, and Dunn had regular summer jobs throughout her teens. She loved school, particularly science, and decided in high school she wanted a career in research.

Dunn studied biology at Hiram College, choosing that school because it had research opportunities and research jobs for undergraduate students. From there she moved south to North Carolina State University to get a master's and PhD in toxicology, specializing in cancer research. Her post-doc fellowship was at the National Institutes of Health, where she was mentored by Carl Barrett.

Many students take a gap year. Dunn took five years between undergraduate and graduate school, working as an analytical chemist. Students in the sciences face two career paths: they can go into academia, teaching what they know, or they can work in industry. There was no question what Dunn wanted.

"I loved [working in labs] and told people, 'I want to work in industry and develop drugs for patients with cancer.'"

However, those industry plans took a 15-year detour into academia, all because a supervisor asked her to write a grant application to start a lab in a university environment. She wrote the proposal, got the grant and spent the next decade and a half teaching, though she was still able to carry on with cancer research, first at North Carolina State University and then – moving to Vancouver in 2001 – at the University of British Columbia's (UBC) faculty of medicine.

Sandra Dunn, founder and CEO of Phoenix Molecular Designs | CHUNG CHOW

In January 2012, she founded Phoenix Molecular Designs, bringing UBC post-doctoral student Aarthi Jayanthan on board to get things going. She was able to open a lab and focus full time on the company three years later.

British Columbia, she says, has unlimited opportunities for health-care companies.

"There's this wonderful culture here of people who want to work together," she says. "You could say Canada's West Coast is the Wild West, but people aren't afraid of that. They embrace the opportunity to think outside the box.

"Now is a better time than ever to start a company in British Columbia. There are incredible tax incentives. There's a wealthy investor community here. And, moreover, there's an opportunity to set ourselves apart from others.

"I found I kind of fell out of the nest and learned to fly here."

SANDRA DUNN

FOUNDER AND CEO, PHOENIX MOLECULAR DESIGNS

You could say Canada's West Coast is the Wild West, but people aren't afraid of that

The Phoenix team aims not only to combat cancer the first time it hits, but also to stop it from hitting again.

"We're going after what causes cancer to recur," she says. "We're developing durable therapies for patients, completely different from what's out there. It's not only effective against the cancer, it's safer. No nausea, no hair loss, and it reduces the cancer."

Phoenix has targeted triple-negative breast cancer, a particularly lethal cancer that affects 15 to 20 per cent of women, most of them young women. For triple-negative breast cancer, Phoenix has developed the compounds, patented them and tested them on mice, and will go into clinical trials next year.

Through collaborations with other researchers in Japan, Italy and the United States, the company also keeps data on prostate, melanoma, ovarian and blood cancers.

"Sandi has always been high-energy and highly driven," says Emma Guns, associate professor in UBC's faculty of

War on cancer

From left, Sandra Dunn and Phoenix Molecular Designs team members Mymy Huynh, Aarthi Jayanthan and Chris Williamson | CHUNG CHOW

medicine and senior research scientist at the Vancouver Prostate Centre. "Whenever I might feel like throwing in the towel, I call Sandi and she turns me around."

Phoenix has five full-time employees and 30 contracted employees both in B.C. and in San Diego, Montreal and Boston. Dunn's fundraising experience back in her university days has served her well: last year, she was able to raise $1 million for Phoenix; this year her target is $10 million.

En route to becoming a CEO, she learned from her grandmother that she must lead by example. Even more important, she says, she must work with others as a team.

"None of this success we've had at Phoenix is about me; it's about us and the countless hours and dedication that went into the research to get us to where we are today," she says.

There's no question where Dunn wants to go in the coming years.

"If I have another 15 years of my career, I really want to make a difference in the cancer area," she says. "I want to focus on fixing the problem."

STEMCELL Technologies Inc.

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VENTURING ON

Nancy Harrison nurtures a lifelong love for life sciences

NANCY HARRISON
VICE-CHAIR, LIFESCIENCES BC

It is unbelievable the lengths that people go to to build these companies

BRIGITTE PETERSEN

After spending more than two decades helping shape the B.C. life sciences industry, Nancy Harrison stepped down from her position as president and chief business officer of MSI Methylation Sciences Inc. in March, but she has no plans to leave the sector.

Harrison, who co-founded MSI in 2008, says she will continue to aid the Burnaby-based clinical-stage pharmaceutical company, but is going to take time off to consider her next move.

"The company is in that stage where it makes sense for me to transition out. It's just time to evolve and do the next step," says Harrison, vice-chair of LifeSciences BC. "I owe life sciences my career and I love it. I couldn't imagine doing something that is more intellectually stimulating or more meaningful."

After graduating with her MBA from McGill University, Ottawa-born Harrison moved to Vancouver at the age of 29. Shortly afterward, she joined venture capital firm Ventures West Management Inc., where she spent about 14 years building and managing life sciences investment funds.

"I was lucky enough to meet the people at Ventures West when it was a relatively small venture capital company in 1993, and they were interested in life sciences," says the geophysical engineer who worked for Shell after earning a bachelor of applied science in engineering from Queen's University.

The 52-year-old North Vancouver resident is proud of her work as a partner and senior vice-president of Ventures West. During her time there, the life sciences portfolio grew from zero to about 30 per cent of the overall investment portfolio. Her strategic investments while with Ventures West included Angiotech Pharmaceuticals Inc., AnorMed Inc., Caprion Pharmaceuticals Inc., Celator Technologies Inc., Alder BioPharmaceuticals Inc., Xenon Pharmaceuticals Inc., Salmedix Inc., SemBioSys Genetics Inc. and many other firms.

"The transition [into life sciences] was really a fascination with biology," Harrison says. "With building the companies, I find that all the issues of strategy, science and the regulatory environment make a very complex web. I was just really interested in looking for medicines that worked better, and working with companies and entrepreneurs who did that."

Previously named a winner in the *Business in*

Nancy Harrison, co-founder and former president and chief business officer of MSI Methylation Sciences, has thrived for more than two decades within a challenging life sciences ecosystem | CHUNG CHOW

Vancouver Forty under 40 and Caldwell Partners Canada's Top 40 Under 40 awards, Harrison cites the major highlight of her career as being able to help pharmaceutical companies navigate the challenging, heavily regulated industry waters where companies often invest hundreds of millions of dollars to get a drug through clinical trials before they are able to earn a penny.

"I've just been really fortunate to be able to interact with entrepreneurs and the companies to see the breadth of ideas, strategies and drugs that people can dream up and scientifically discover," says the avid skier.

As one of the most experienced biotech financial people in the Canadian life sciences industry, Harrison has earned a reputation for her passionate drive as a biotechnology venture capitalist, company co-founder and active board member. Watching the B.C. biotechnology industry transform since 1993 and supporting and witnessing the successes of companies in this province have been some of the highlights of her career, she says.

"It is unbelievable the lengths that people go to to build these companies. The passion they show, the fortitude, the spirit of hope, and they all do it to develop better medicines, devices, diagnostics and better outcomes for people."

Harrison had a number of mentors along the way, including the late Ronald Cape, who co-founded one of the first biotechnology companies, Cetus Corp., in Berkeley, California, in 1971.

"Other mentors I've had include each of my partners at Ventures West. Each one of them taught me a ton about different things, even when I didn't want to learn," she recalls. "At MSI, I learned a ton from co-founder Barry Guld about being entrepreneurial and thinking things through."

Harrison, a mother, believes the life sciences industry holds as many promising opportunities for women as it does for men.

"I don't have a sense of gender inequality in life sciences. I think life sciences is a good place for women to be. I think you have to do it in the way that you would do it as an individual, not in a male way or in a female way, but how you would do it with all the components of your own personality," advises Harrison. "Try to stay true to your path, your values, and do what you think is the right thing, and ask for help."

Harrison has served on numerous boards over the years and is currently on the National Research Council of Canada's industrial research assistance program advisory board and on entrepreneurship@UBC's board. And is also an adviser for Genome BC's I2 Fund and the BC Tech Association's HyperGrowth:Life program.

Terry Thomas, chief scientific officer of Stemcell Technologies: "making a positive impact on cancer, immunology and stem cell research" has made for a rewarding career in life sciences | CHUNG CHOW

SWITCHING GEARS

Terry Thomas started out as a marine biologist and is now Stemcell Technologies' chief scientific officer

PETER CAULFIELD

Dr. Terry Thomas is chief scientific officer of Stemcell Technologies Inc., located up the hill from False Creek and just a few blocks from Vancouver General Hospital. "I lead research and development, product development, strategic marketing and licensing," Thomas says. "I also play a key role in corporate strategy."

Starting when she was young, Thomas has followed her dreams. But she also hasn't been afraid to strike off on a different path when her dreams changed.

As a young schoolgirl in Montreal and Toronto, Thomas excelled in biochemistry and biology.

"My focus on creativity and innovation I attribute to my father, Bill Thomas, who was an automotive engineer and a boat builder," she says. "As a child, novel ideas and inventions were part of our daily routine."

On her mother's side of the family, education was an important value.

"My mother, Mary Morrison, studied and became a nurse," Thomas says. "And my grandfather, George Morrison, was a research chemist at Shawinigan Chemicals in Shawinigan, Quebec. I knew I wanted to do research, too."

Thomas earned a PhD in marine biology from the University of British Columbia in 1983. She was awarded a two-year Natural Sciences and Engineering Research Council of Canada post-doctoral fellowship to study the chemical and physiological effects of heavy metals on marine organisms.

But then her research interests changed.

"I had dreamed of becoming a marine biologist ever since I was 10 years old," Thomas says. "I held on to that dream much longer than most people, thoroughly enjoying my career as a marine biologist."

She came to the realization, however, that what she really wanted to do was to make a contribution to human health.

"I declined job offers for post-doctoral positions in marine biology and applied instead for life sciences positions, relying heavily on my laboratory experience and my knowledge of biochemistry and general cell biology," Thomas says.

In 1986, she changed her field of scientific research to hematopoietic stem cell research and landed a job at the Terry Fox Laboratory (TFL) at the BC Cancer Research Centre.

"Switching scientific fields was not easy," Thomas says. "Essentially, I did a second PhD, learning on the job and in my spare time."

Thomas says she was very fortunate to get a job at TFL.

"To this day, I am grateful to Dr. Peter Lansdorp, who is principal investigator at the lab, and to Dr. Allen Eaves, who is director of the lab and head of hematology at Vancouver General Hospital, for giving me the opportunity to make such a bold switch."

Thomas says a highlight of her career took place while she was working with Lansdorp at TFL, when she invented tools and reagents to improve the purification of cells from blood and bone marrow.

"In 1994, when this technology was licensed to Stemcell, I joined the 12-person company as head of R&D to commercialize these cell separation reagents," she says. "The resulting products are now responsible for over one-third of the company's sales of $150 million per year."

Thomas says Eaves, who is founder and CEO of Stemcell, has been her mentor for more than 20 years.

"Allen's clear vision of what was important – advancement of science and being truthful and ethical in all our dealings – has never wavered. He coached me in decision-making, managing people, strategic thinking and leadership."

Thomas says she has also had the opportunity to mentor many gifted young scientists.

"I have guided over 25 PhD graduates to become senior managers in technology development. Most recently, four of that number – two men and two women – are now vice-presidents and senior directors at Stemcell."

In addition, many members of her team have come to her looking for not only career advice but also insight on creating work-life balance.

Thomas says women thrive in the life sciences.

"My goal has been to create a work environment that promotes not only innovation, but also trust, respect and teamwork," she says. "Women tend to thrive in such an environment, as is shown by the high proportion – 70 per cent – of women in R&D at Stemcell. Working in groups gives women the confidence to say what they really think."

Looking back, is there anything Thomas would have done differently?

"Well, I ended up switching my field of research three years after my PhD," she says. "Did I make the wrong choice to start? Yes, probably, but for me, it was an enriching and empowering phase of my life."

Thomas says she started off pursuing the romantic idea of youth, to be a marine biologist like Jacques Cousteau.

"But later I also got the opportunity to pursue a most rewarding career in life sciences, making a positive impact on cancer, immunology and stem cell research."

"

TERRY THOMAS

CHIEF SCIENTIFIC OFFICER, STEMCELL TECHNOLOGIES

Switching scientific fields was not easy. Essentially, I did a second PhD, learning on the job and in my spare time

IN THE BLOOD

ThromboLUX inventor encourages young women to pursue the field of science

ELISABETH MAURER

PRESIDENT AND CTO, LIGHTINTEGRA TECHNOLOGY

One of my early advisers said to me, 'Remember, you can't do it alone,' and that is so, so true

IAN JACQUES

Taking risks can be hard, even scary at times, but for Dr. Elisabeth Maurer, building a company from the ground up would never have been achieved without taking a few risks.

The founder of LightIntegra Technology and principal inventor of ThromboLUX has more than 20 years of research experience, devoting her career to understanding blood platelet function and the application of dynamic light scattering.

LightIntegra was incorporated in November 2008 to commercialize ThromboLUX, a non-invasive, easy-to-use optical test to determine the size and distribution of all particles in a platelet sample and evaluate their response to temperature stress. ThromboLUX is ideal for determining microparticle content in samples derived from patient or donor blood and platelet concentrates.

Originally from Austria, Maurer received her PhD in physical chemistry from the Karl-Franzens University of Graz, Austria. She came to Vancouver in 1994.

"I think I have always been interested in learning and observing things, and that's why I went into science," she says. "I was really lucky having good teachers in high school who fostered that interest in looking deeper into why things work a certain way and not another."

Early in her career Maurer was a scientist with Canadian Blood Services (CBS), and she has held the position of adjunct scientist with CBS since 2010.

LightIntegra Technology got its start in the CBS research and development labs through Maurer's efforts. Her years of research on platelet function led to a breakthrough discovery about the temperature response of platelets. She recognized the opportunity to use this discovery – coupled with advances in laser and optics technology – to address a market need to provide a safe,

quick and simple diagnostic test for microparticles, platelet quality and function. Knowing the microparticle content of platelet transfusions is particularly important for optimal patient care, she explains.

"It was around 2004 that I started to think about using this technology," she says. "CBS and the University of British Columbia [UBC] gave me a lot of support along the way, and we did a successful pilot study at Vancouver General Hospital."

Maurer, who is LightIntegra's president and chief technology officer, also holds a position as clinical associate professor at UBC and is an active member of a number of organizations with a focus on blood transfusions.

She says starting the company was a huge risk, but she was confident in the products and the technology. But she also admits she could never have achieved anything without a lot of support along the way.

"I think one really, really important thing was to bring Paul Geyer into the company as CEO, because as a scientist, one is just not prepared to run a company – at least, I felt like that. In my view they are very different job descriptions," she says. "I started it off, but it was a real milestone in 2009 when Paul came on as CEO and started to build a team.

"One of my early advisers said to me, 'Remember, you can't do it alone,' and that is so, so true. I'm very fortunate to have a wonderful team who shares my passion and strives to do good work for people."

Over the years, Maurer has had many influencers who have helped her, but she credits her father for really

Elisabeth Maurer, founder, president and CTO of LightIntegra Technology | CHUNG CHOW

In the blood

Elisabeth Maurer with her invention, ThromboLUX | CHUNG CHOW

starting her on the right path.

"While [I was] growing up, my dad, being an engineer himself and always trying to improve the product that he was working on, was for sure an influence," she says.

She also credits Dana Devine, vice-president of medical, scientific and research affairs at Canadian Blood Services, who was Maurer's longtime supervisor, for significantly shaping her career.

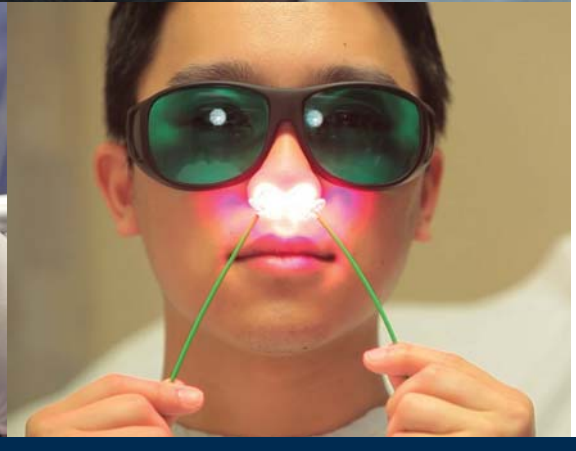
Being a woman and a leader in her field comes with many challenges, but Maurer would like to encourage more young women to pursue the field of science, despite those challenges.

"I would encourage any woman who has an idea or a willingness to try to get into this industry. I work a lot with men and it is always a really good experience," she says.

"I would encourage women to take chances. Sometimes I think that being a woman in this industry would be a disadvantage, but when I took the steps necessary, reality proved to be OK. You can do anything you set your mind to. It doesn't matter if you are a woman or a man."

"When I look back at my life, the challenge is really balancing your career and a family life," she adds. "I am very grateful having had a family. While I was doing it I often felt stretched thin and not being able to give 100 per cent to my family and 100 per cent to my work, so I think it is a very fine balance to make it work.

"It can be done, though, and that is the message young women probably need to hear. You are not a bad mother if you try to pursue a career, because you will actually generate interesting things for your children. If you have some fulfilment in your job, it will actually be good for your family."



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RESEARCH IN ACTION

UBC Okanagan professor taps community to create change for people with spinal cord injuries

Kathleen Martin Ginis, a professor in the faculty of health and social development at the University of British Columbia Okanagan, established SCI Action Canada to advance physical activity participation in people living with spinal cord injury

IAN JACQUES

Dr. Kathleen Martin Ginis has based her career on asking questions and using the answers to those questions to create change. It is a philosophy that has served her well.

Martin Ginis is a professor in the faculty of health and social development at the University of British Columbia Okanagan in Kelowna. She established SCI Action Canada, a national alliance to advance physical activity participation in people living with spinal cord injury. It was founded after she was awarded a Social Sciences and Humanities Research Council grant in 2007.

"It was a special type of grant where we were tasked with addressing a problem of social significance and doing it in a way that brought together community-based organizations and university-based researchers to solve that problem," she says. "The trick was you just couldn't take the money and just do research – you had to put the research into action. So the research I was interested in was advancing physical activity in those with spinal cord injuries. With the grant we brought together more than 20 researchers and community organizations."

And even though the grant has run out, they still continue that work today.

"Our hallmark is everything we do is evidence-based, so we work with scientists to generate the best possible evidence that we can then put into practice with our community partners," she adds.

Martin Ginis' story, she admits, was a bit of a long and winding road.

She has a bachelor of science from the University of Toronto and a PhD in kinesiology from the University of Waterloo, with post-doctoral training at Wake Forest University.

"I did a bachelor of science in psychology and had a real passion for human behaviour and a passion for sport as well. I thought I would be a sports psychologist when I was an undergrad," she recalls.

"I went to grad school in kinesiology, and over time I was more interested in trying to understand the physical benefits of sport and participation and trying to maximize the number of people in sports and the benefits of exercise rather than trying to focus on a handful of people trying to perform at the highest levels. That all transitioned into an interest in physical activity and disability, which was my post-doc."

She spent time working in a lab in the U.S. that looked at issues around older adults, physical disability and exercise, and then, when she took her first position at McMaster University, she had the opportunity to work with people with spinal cord injuries. That's when she truly found her passion.

She says the establishment of SCI Action Canada is a crowning career achievement.

"I would say it didn't change the trajectory of my career because I knew where I was going, but it absolutely galvanized it. From that point forward all my research has been community engaged," she says. "The best research questions come from communities, so if you want to know how to make a change, the best way is to go out into the community and ask people with spinal cord injuries.

"Once you ask, 'How can I help?' and 'What do you need?' these amazing research questions come out, and as you go down the road of trying to answer these questions, because you are working with the people who need these answers, they help you to ensure you are going in the right direction. Your research is put into action, and there is nothing more rewarding than that."

KATHLEEN MARTIN GINIS

PROFESSOR, FACULTY OF HEALTH AND SOCIAL DEVELOPMENT, UNIVERSITY OF BRITISH COLUMBIA OKANAGAN

Once you ask, 'How can I help?' and 'What do you need?' these amazing research questions come out

Martin Ginis credits Dr. Keith Hayes with the Ontario Neurotrauma Foundation as a massive influence on her career.

"This direction would never have happened for me [if he hadn't] encouraged me to write the grant that got SCI Canada on the map," she says. "But most importantly he took me out into the community and he introduced me to people who have subsequently become the key partners that I would not want to do my research without.

"He gave me the confidence and showed me how to make these connections. He almost literally took me by the hand and taught me how to ask questions and not feel silly or embarrassed to ask questions on what people need, so I will always be grateful to him for that."

She says as a professor she tries to instil the importance of listening, and that working in the life sciences sector affords a great opportunity to make change – to make a difference.

"Listen to the people who are potentially going to use this research and follow a direction based on what you are hearing rather [than] on what might look like the next hot thing coming in an area, or where you might think the money might be – stop and listen to what you are hearing in the community and what needs to be done there," she says.

"I love what I do and want to show students that they have to use their voice. One of the ways we can ensure that we are rising to the highest levels is to speak out and ensure people hear our voices and know we are there; otherwise it gets easy to not recognize the number of women who are rising to the top."

ON TARGET

CDRD division head didn't let starting a family at a young age stop her from pursuing a rewarding career in life sciences

BRIGITTE PETERSEN

Dr. Edie Dullaghan dreamed of pursuing a medical doctor career as a child, but fate had other plans for her. At the age of 17, she became a mother and had to put her education on hold.

"Having a young child as a single mom, the idea of going into med school would have been overwhelming," recalls Dullaghan, head of the Centre for Drug Research and Development's (CDRD) target validation division at the University of British Columbia (UBC). "I loved biology, so I decided to go into medical research."

Dullaghan, second eldest in a family of seven children, was born in Dublin, Ireland. Her family relocated to England when she was four years old. She later went on to earn a bachelor of science at the University of Hertfordshire and a PhD in molecular microbiology at the U.K.'s National Institute for Medical Research, University College London, where she studied the molecular genetics of the SOS response in *Mycobacterium tuberculosis*, the causative agent of tuberculosis. While completing her doctorate work, she was approached by UBC to do a post-doctorate in tuberculosis research in Canada. She relocated to Vancouver in 2000 and has since become a Canadian citizen.

In her role at the CDRD, Dullaghan leads a team in developing cutting-edge assays to identify biomarkers of interest to develop as companion diagnostics for clinical trial drug candidates. These assays enable Canadian biotechnology companies to develop new drugs. She also plans and advances research initiatives, develops budgets and leverages resources.

Prior to joining the CDRD in 2007, Dullaghan was a project co-ordinator and scientist at Burnaby-based Inimex Pharmaceuticals Inc. for about five years; before that, she held the position of microbiology scientist for a Genome Canada project at UBC for three years.

One of Dullaghan's goals for the future includes being part of the development of new antibiotics.

"We are in such a crisis situation. There hasn't been a new antibiotic for 30 years," she explains. "We are now seeing resistance, particularly in hospitals where people are getting infected with bacteria that's resistant to every known antibiotic."

Named on three patents, Dullaghan says she believes in the power of mentorship and has mentored many students throughout her life sciences career.

"It's very hard to establish yourself individually. You've got to network; you've got to become known," she explains. "A lot of the jobs in life sciences, you get them because people know who you are."

She cites her own mentor as Dr. Bob Hancock, a world-renowned UBC microbiology and immunology professor and director of the Centre for Microbial Diseases and Immunity Research.

"One of the things that he liked about me was that I understood how to manage budgets and how to manage a lab. I've worked with him now for 15 years."

Dullaghan, who lives in Vancouver's Point Grey neighbourhood with her husband, Charles Livingston, helps Hancock manage Sepset Biosciences Inc., a CDRD spin-off company. Sepset is currently preparing a multi-centre study across Canada for a diagnostic for sepsis, a life-threatening condition resulting from infection.

"Sepsis kills more people than most diseases," Dullaghan says.

Edie Dullaghan: goals for the future include being part of the development of new antibiotics | CHUNG CHOW

The life sciences sector offers a wide variety of opportunities for both women and men to find rewarding careers. Dullaghan advises women entering life sciences to network extensively and develop a strong work ethic in order to get ahead in the field, but to not focus entirely on their careers. As a young mother, Dullaghan sometimes felt she was behind where she could have been while bringing up her daughter at a time when she would have liked to attend university, but her feelings have since changed.

"Life throws you these curveballs, and you just have to work with it," says the avid runner and mountain biker. "It doesn't mean you're no longer a success; it just means it takes you longer to get to where you want to go. It's never a straight line, and I would not change a moment of it."

Learning to manage conflict without taking it personally is another piece of advice Dullaghan offers to help women advance in their professions.

"Men are naturally good at that. It's one of their key strengths."

While gender bias still exists, Dullaghan believes workplaces are becoming more gender balanced; however, she says women need to build their own self-belief and confidence, something that could be achieved through an increase in positive role models within the sector.

"Much is changing, society is changing, but women themselves have to embrace the fact that they have to step out and understand that they can do it."

EDIE DULLAGHAN

HEAD OF TARGET VALIDATION, CENTRE FOR DRUG RESEARCH AND DEVELOPMENT

A lot of the jobs in life sciences, you get them because people know who you are

CONNECTING SCIENCE WITH SOCIETY

New head of TRIUMF's Advanced Applied Physics Solutions aims to make a difference in people's lives

Kathryn Hayashi, president and CEO of Advanced Applied Physics Solutions, says it's "inspiring to work with researchers and scientists who are inventing things that will change people's lives" | ROB KRUYT

MARKE ANDREWS

There's a common fallacy that people in the arts have no inclination toward business or the sciences, and those in business or science eschew the arts.

That certainly isn't the case with Kathryn Hayashi, the new president and CEO of Advanced Applied Physics Solutions (AAPS). As a business student at the University of British Columbia (UBC), she had a radio show on campus station CiTR, playing music she loved. After graduation and before working at a number of companies in the life sciences field, she spent more than five years as controller, then general manager, at Vancouver's Nettwerk Music Group.

"In school, I was the brainy kid," says Hayashi, born and raised in Vancouver. "I was always a good student, and I always liked sciences, but I also loved music."

With her bachelor of commerce degree, Hayashi worked as an accountant at Ernst & Young and as assistant controller at the Loewen Group before her job at Nettwerk. Following that, she helped to found Chromos Molecular Systems, a biotech company that pointed the way to her future.

"Life sciences is a great world," she says. "It's very inspiring to work with researchers and scientists who are inventing things that will change people's lives."

In 2006, Natalie Dakers convinced Hayashi and others that they needed to start up an organization that could expedite funding for researchers with viable technologies. The provincial government, UBC, Simon Fraser University and pharmaceutical companies Angiotech and QLT all kicked in seed money, and the Centre for Drug Research and Development (CDRD) hit the ground running in 2007.

CDRD, for which Hayashi was chief financial officer, reflects a growing movement in the life sciences field.

"Patient groups try to find ways to improve patients' lives, and a part of that is enabling research for new cures and treatments," she says. "It takes so much time and money and resources that you have to build partnerships … to advance that technology."

CDRD partnered with the Multiple Sclerosis Society of Canada in drug development programs. Sitka Biopharma, a CDRD spinoff for which Hayashi was director, got seed money from Quark Venture (led by CEO Karimah Es Sabar; see story on page 42) for work on a new drug for bladder cancer. Zucara Therapeutics, another CDRD offshoot that had Hayashi as director, received funds from the Juvenile Diabetes Research Foundation for a drug in development for hypoglycemia (low blood sugar) in diabetics.

KATHRYN HAYASHI

PRESIDENT AND CEO, ADVANCED APPLIED PHYSICS SOLUTIONS

If you can't commercialize a drug, that drug doesn't get to anyone

"The core of our mission is to connect science and innovation with society," Hayashi explains. "The path to do that is to commercialize those technologies. If you can't commercialize a drug, that drug doesn't get to anyone. Being able to make scientific discoveries impactful to people in their everyday lives is what really attracts me to this [industry]."

Hayashi's ex-boss Dakers speaks highly of her friend and colleague.

"She was one of the first people I hired [at CDRD] and I did so with the belief that she would be a great value-add CFO," says Dakers, now CEO of Accel-Rx Health Sciences Accelerator (see story on page 44). "I was not wrong. Kathryn turned out to be a wonderful team member who added to all aspects of building CDRD and was a great friend along the way. I am delighted to see her move on to lead her own shop and will look forward to seeing what she builds."

Hayashi started her post at AAPS, the commercialization arm of TRIUMF, Canada's national laboratory for particle and nuclear physics, in February. She confesses she's not really a physics person, but the work AAPS does relates to her past endeavours.

"I came here to take some of the lessons I learned at CDRD and apply them to the applied physical sciences space. Building out the commercialization side of it, interacting more with companies and investors – that will be the piece that completes the picture," she says. "Again, it's about connecting science with society. It has to turn into something that people need and use to make a difference in their lives, to solve their disease or make them safer or make their car work better."

Current projects for AAPS and its spinoff companies involve: using subatomic particles called muons to provide a kind of 3D X-ray of the Earth, which would have applications for mining and border security; a technology that enables the most-used medical imaging isotope, technetium-99m, to be produced locally at hospital sites with no long-lived radioactive waste; and a concept involving photon technology for use in night-vision goggles or self-driving cars.

At the annual LifeSciences BC Awards ceremony each spring, part of the program celebrates innovations from students, and most of those students are female. Will we see more women become CEOs?

"Women are very well represented at the lower levels in science, but as you get more and more senior, the percentages [of women] are very low," says Hayashi. "I know that when women have children, it kind of derails their careers. I don't have any children. If I did have children, I don't think I would have this position."

In her spare time, Hayashi enjoys music and attending music festivals, such as Desert Trip and the New Orleans Jazz & Heritage Festival. She also loves film and has volunteered for Vancouver's DOXA Documentary Film Festival.

PROVIDING A PLATFORM

Curatio CEO channelled personal experience to build a health-care app that connects patients

LYNDA BROWN-GANZERT
CEO, CURATIO

It takes a village to raise a startup

MARKE ANDREWS

A career path takes many twists and turns, occasionally dictated by a personal experience. Lynda Brown-Ganzert, CEO of Curatio – which created a multiple-app platform that puts those with a health condition in touch with others like them – experienced a major fork in the road when she underwent a complicated pregnancy with her second child. Not only did she feel discomfort and anxiety, but she also felt alone, not knowing anyone else going through the same experience.

"I found it incredibly isolating and difficult to find other women that were like me," says Brown-Ganzert, from her home in North Vancouver. "I thought to myself, 'This is kind of crazy. I've spent a lot of my life [in technology] building communities. I know how to fix this problem.'"

Her research clearly showed that peer support in the health field leads to positive results, and so she set to work. A close friend in the tech industry, Ryan Lejbak, thought her idea for connecting people through an app was terrific. Ten days later, he suffered a heart attack, which magnified the need for developing such a health science technology.

Born in Powell River, Brown-Ganzert moved around a lot as a child (Winnipeg, Port Alberni, Haida Gwaii, North Vancouver, Victoria). A social animal, she loved connecting with others, and, after winning a calculator in the fourth grade, she became fascinated by technology, as primitive as it was in the late 1970s.

"It had a profound effect," she recalls. "I was not very motivated to learn my times table when I had a calculator; I thought, if you had technology, why would you need to learn?"

Brown-Ganzert got her bachelor of arts in communications at Simon Fraser University (SFU), then a master of education there, not because she wanted to be a teacher like her mother, but because SFU had graduate studies in educational technology. Social media was in its early days, and Brown-Ganzert was drawn to that area.

In 2002 she and Dr. Alissa Antle co-founded GoBe Media, a games company that turned TV properties into interactive games for children. Unfortunately, the

Lynda Brown-Ganzert with her team at Curatio | ROB KRUYT

tech industry crash limited GoBe's activity. From 2003 to 2007, Brown-Ganzert was president of New Media BC, helping to develop a business plan to secure $40.5 million of provincial money to fund the country's first digital media graduate degree program at Vancouver's Great Northern Way Campus. She continued in the digital media field at Edelman and Nordicity, before starting Curatio in June 2013.

What was it like being a woman in management in the digital technology industry, so dominated by males?

"I would be lying to say it was not challenging," she says. "I, along with many others, have worked hard to involve girls and women in technology, but we're still not there."

Health technology, she says, has more diversity – in gender and other areas – than regular technology, but she feels "there's still work to be done."

To get the health-app ball rolling, she and Alireza Davoodi, co-founder of Curatio, spent 40 days building a prototype, which won $100,000 from Novartis at the 2013 Health 2.0 Global Challenge in Santa Clara, California. With significant funding in place, huge interest and their first customer, she and Davoodi incorporated Curatio. Today, they have investors, partners and 14 to 16 employees, either full time, part time or contracted.

On a recent episode of CBC's *Dragons' Den*, Brown-Ganzert secured an investment of $360,000 from the dragons for Curatio, whose current valuation is $7.2 million.

"We're building a platform for everyone in the world that can handle any health condition," says Brown-Ganzert. "It is applicable to patients, their families, caregivers, parents, on a platform that is private and personalized."

To get on this platform, users can download it as they do with other apps. Because it is a platform, people undergoing several health conditions can download existing apps for each condition that affects them. If that particular app is not there yet, they may not have to wait long to find it.

"We can start a new community in less than 48 hours," says Brown-Ganzert.

She says doctors have been very accepting of the platform, with its curated, evidence-based content and its ways of connecting patients to groups and organizations that can help them.

These apps could also save physicians time.

"A doctor can see how patients using the platform can lessen repetition; for example, being able to answer one question for 20 patients versus having to answer it 20 times over is a better use for her time," she says.

Brown-Ganzert says she learns "an important lesson every hour" in running a health sciences business, and she is grateful for all her co-workers, colleagues at other companies, teachers and organizations that have helped her along the way.

"It takes a village to raise a startup," she says.

PHARMACY ALL THE WAY

For 'UBC lifer,' school career day helped ignite a passion for science

HELEN BURT

INTERIM VICE-PRESIDENT OF RESEARCH AND INTERNATIONAL, UNIVERSITY OF BRITISH COLUMBIA

For me it just seemed like this perfect blend of biology and chemistry

IAN JACQUES

A high school career-day visit to a local pharmacy helped pave the way for a science career that has spanned more than 40 years for Dr. Helen Burt.

Born and raised in Manchester, England, Burt had a strong interest in the basic sciences in high school, including chemistry, physics and biology. She knew she was not particularly interested in medicine and was thinking she would become a chemist.

"Then my high school organized a career day and I signed up to visit a pharmacy in Manchester, and that was the light bulb for me because back in the early '70s hospital pharmacies made a lot of their own medicines," Burt recalls. "I saw the chemistry in action but also being applied to the health-care system, so for me it just seemed like this perfect blend of biology and chemistry, and from that day on, it was pharmacy all the way."

Burt is now interim vice-president of research and international at the University of British Columbia (UBC). Her major research efforts involve the development of polymer-based drug delivery systems, in particular micro- and nanoparticulates, for controlled and localized drug delivery. She has published more than 150 peer-reviewed papers and holds eight patents. She is also a founding scientist at the Centre for Drug Research and Development, is a member of the Canadian Academy of Health Sciences and has served on the board of directors of the Provincial Health Services Authority.

Following that "light bulb" moment, she completed her post-secondary studies at the University of Bath with a pharmacy degree.

"I completed an internship at a community pharmacy practice and also worked for a pharmaceutical company in research and development, which was really where I got excited about research and development," she says. "I also realized that I didn't have a lot of study and experience in research and development, so I decided to pursue a master's degree and then go back and work in the pharmaceutical industry in the U.K."

But the lure of going to another country to continue her studies was strong, so she made her way to Canada, where she began further studies and teaching at UBC.

"At that point research and teaching had really become my top priority in terms of a career, so I decided to explore the academic route rather than an industry route," she says. "Fortunately I was on a student visa and had applied for assistant professor positions across the country, and happily for me there was a position

Helen Burt, interim vice-president of research and international, University of British Columbia | CHUNG CHOW

becoming vacant at UBC in my own faculty. I have been at UBC since 1976, 41 years as a student and teacher. I call myself a UBC lifer."

Throughout her career, there have been many milestone moments, but one in particular stands out for her.

"When my research team and I got involved with Bill Hunter, the former CEO of Angiotech Pharmaceuticals, things really started to evolve," Burt says. "He had all of these ideas for taking medical devices and coating drugs on them to make them more effective at the site of action. I was intrigued by his work.

"We worked together on small grants and then he went on the road and started pulling in angel investors, and our lab became the lab that actually created many of the early prototypes of some of the Angiotech success stories, so it was incredibly exciting."

She also got the chance to work closely with the company developing its technology and departments.

"That really propelled my research group onto the international stage, so that was kind of a defining moment," she says.

As for mentors, she has been fortunate to have great colleagues along the way, but one person she recruited in 1983 has made a big impact on her career.

"It's kind of a cross-mentorship of sorts. John Jackson, who is also originally from the U.K., is a research scientist. We have just developed this incredible partnership that has just worked so beautifully over the years, and he has been the real key to the success of the lab," she says.

As her career begins to wind down – she jokingly suggests that UBC will be her last gig before she retires – she has great hopes for other women in the industry. But a few things need to change to help foster that hope.

"I think what women want is the full opportunity to be recognized as equal with men, so that covers everything from when you first start negotiating your first position to all the way through your career. It's an equal playing field that we are looking for," she says.

"When I look back on my career, I wouldn't change a thing. I'm now sitting in a position that I'm really enjoying. It's strategic, it's providing support and resources and leadership to the entire UBC research and innovation agenda. It's a huge privilege for me."

HEALTH AUTHORITY

Vancouver Coastal Health CEO aims to PHIX lag from lab to bedside

MARY ACKENHUSEN

PRESIDENT AND CEO, VANCOUVER COASTAL HEALTH

[I] found the most interesting thing I could to do

PETER MITHAM

Vancouver prides itself on being one of the leading centres in Canada for life sciences research. A world-class research university allied with a major teaching hospital, not to mention several centres of excellence, draw talent that proponents of clinical research say benefits local patients. Talent and new therapies are steps away from hospital beds where patients await treatment.

But often it takes years for research to make its way to bedsides.

"One of the challenges in life sciences is the translation of research. There have been a number of studies that say it can take up to 17 years for something that's been discovered on the bench in the lab to actually make it into improving care in the clinical setting," says Mary Ackenhusen, president and CEO of Vancouver Coastal Health.

One of her key interests as head of a $3 billion health authority is finding ways to enhance research opportunities as well as the effect they have on patient outcomes. The most recent initiative designed to accomplish this is the Pacific Health Innovation Exchange (PHIX), a partnership between the health authority, VGH & UBC Hospital Foundation and the University of British Columbia (UBC), among others. With a vision for a 210,000-square-foot facility at the corner of West 10th Avenue and Heather Street, PHIX will be an incubator for both ideas and practical solutions.

"The whole drive is to put in mechanisms and pathways to reduce that time [from lab to bedside] substantially," she says. "We have a lot of expertise here in B.C., but if you look at how well we've been able to commercialize it, we haven't done all that well."

Ackenhusen comes by her management expertise honestly, but it wasn't something she actively sought.

Born in 1959, she initially considered English, veterinary medicine and math.

"Finally, I happened to meet with a professor of engineering who said, 'You can't really major in math – there are no jobs in math, per se. Try to be an engineer,'" she says. "So that's how it all came together."

Ackenhusen earned a master's in industrial engineering from West Virginia University, followed by an MBA from Harvard Business School. At the age of 29, she was plant manager for Modicon AEG, a factory computer maker, overseeing 300 people.

"It was just wonderful to have total accountability for everything," she says. "You have all those levers to

improve the organization and really measure how well you're doing in terms of how you're putting out products or services or whatever your goal is."

She had married in 1983, and when her husband – Daniel Muzyka, now head of the Conference Board of Canada – became a professor at INSEAD business school in France, she left Modicon for Fontainebleau. There, she found work as a researcher, and then a facilities director. When a headhunter secured Muzyka an appointment as dean of UBC's Sauder School of Business in 1999, Ackenhusen was offered a position with what is now Fraser Health Authority.

"I just always went for jobs that were really interesting. I wasn't terribly ambitious," she confesses. "I went to wherever [my husband] was and then found the most interesting thing I could to do."

A variety of positions saw her arrive at Vancouver Coastal Health in 2007, where she rose to become COO and, in 2014, CEO.

Ackenhusen is a quick study and, with her expertise in applying insights to management across industries, may be just what the doctor ordered as hospitals face growing demand.

"The population is growing. If we didn't change and improve, we'd need about a six per cent increase in budget every year, and in reality we get about a two per cent increase in budget every year," she says.

A shift to community care rather than residential care has helped, with an additional 200 people a year now in community care. The next challenge is bringing family practices into alignment with health authority priorities.

This is where PHIX can help, accelerating the translation of research into practice.

"In health care, because of the political lens that's always there, we're very, very cautious and we don't take risks. Even with encouragement, people are afraid to get out of their box and try something different," Ackenhusen says. "PHIX is allowing us to, in a structured way, identify which of the research is most likely to succeed in terms of better patient outcomes."

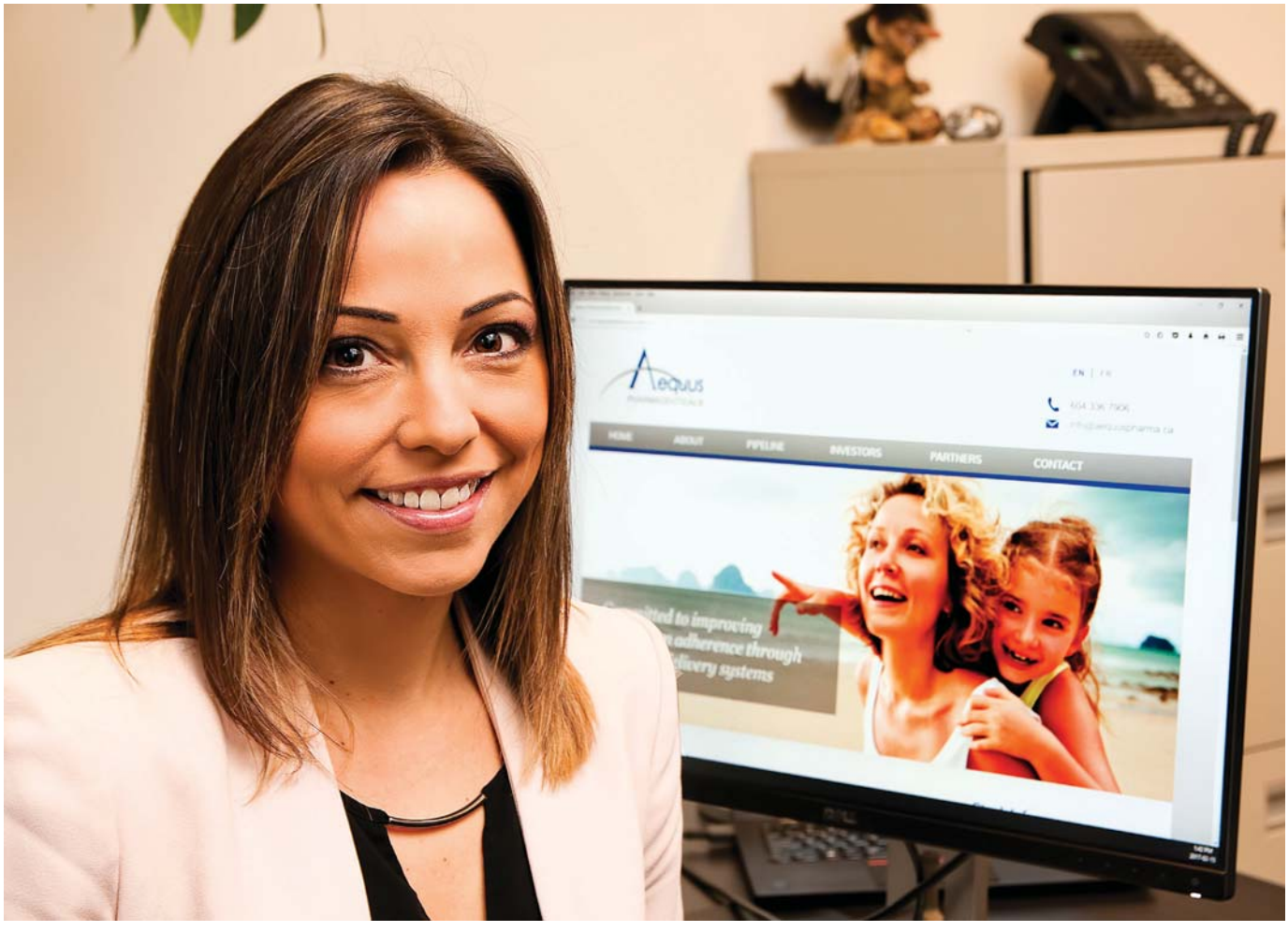
While meetings dominate her days, Ackenhusen cultivates personal connections that make people feel comfortable raising concerns with her. A self-described introvert, she says it's been challenging for her to make the effort – but she does well one-on-one, and the connections pay off.

Speaking from experience, with a leaf from Sheryl Sandberg's book *Lean In*, Ackenhusen says women need to do more to make their work known.

When she was vice-president of facilities at Fraser Health, Ackenhusen was surprised one day when she was told there was no longer a place for her. She felt she was doing a good job, but her supervisor wasn't aware of the full scope of the impact she was having. It took others speaking up for her to reverse the decision.

"You need to have that grace of how you help people understand the value you bring on an ongoing basis, particularly when you're in a new situation, without sounding boastful and arrogant," she says. "That's a challenge, particularly for women."

Mary Ackenhusen, president and CEO of Vancouver Coastal Health, aims to find ways to enhance research opportunities as well as the effect they have on patient outcomes | CHUNG CHOW



Anne Stevens, co-founder and chief operating officer of Aequus Pharmaceuticals, is proud to have a key role in creating a commercial-stage pharmaceutical company in Vancouver | CHUNG CHOW

ALL ABOUT ACCESS

Aequus Pharmaceuticals co-founder dedicated to finding better ways to deliver medications

BRIGITTE PETERSEN

Anne Stevens, co-founder and chief operating officer of Vancouver-based Aequus Pharmaceuticals Inc., is passionate about improving access to medication.

"The premise of Aequus is really finding different ways to deliver drugs that make it easier for the patient," says Stevens, a 2016 *Business in Vancouver* Forty under 40 award winner who has more than 10 years' experience in the pharmaceutical, biotechnology and medical device industries. "We spend a lot of time interacting with doctors and patient groups. So the products we've built in our pipeline I feel very strongly and passionately will eventually make a difference in patients' lives."

Born and raised in Vancouver, Stevens spent a few years living in Mexico as a child with her parents, who worked in the airline industry – an experience that opened her eyes to inequalities of access to medication and health care. Her cousin and her father encouraged her to pursue the life sciences path, but she also always had a natural affinity for math and sciences.

"The life sciences field is incredibly rewarding. It's challenging, it's always changing and there are a number of different ways you can grow and find your way in this field."

An avid tennis player, Stevens recently co-founded Northview LifeSciences, an industry-focused venture capital firm, which led to the development of Aequus Pharmaceuticals in 2013. Aequus, awarded the 2016 LifeSciences BC Growth-Stage Company of the Year award, specializes in securing licensing for drugs approved outside of Canada, and improving drug delivery systems while focusing on neurology, ophthalmology and transplant.

"Being part of Northview has been an incredible experience. It's allowed me to be part of a number of company formations," says the 36-year-old Yaletown resident. "But definitely the one that I feel the proudest of is Aequus."

Stevens has been involved with Aequus since its inception, helping to evolve the concept and seeing it come to life every step of the way.

"I feel like my career has taken a big step forward," she says. "I feel a lot of ownership in this company. The successes of Aequus are my own personal successes in a way. By no means did I do it alone, but I've definitely grown a lot in my own career with this company."

After earning a bachelor of science in microbiology, Stevens worked as a sales representative at Bayer AG. She later worked for Cardiome Pharma Corp., where she held the position of corporate and external affairs analyst while completing her master's degree in health administration at the University of British Columbia. After Cardiome, Stevens and other Cardiome executives, including Doug Janzen, founded Northview LifeSciences. She credits Janzen, CEO of Aequus, as being one of her main mentors, especially when it came to learning about capital markets.

"In general, [Janzen] has a lot of experience in this field. A lot of ups and downs he's been through and learned from; he's been very generous to pass on those learnings and experiences and has helped guide me through the past few years."

One of the highlights of Stevens' career involved negotiating a licence with a U.S. specialty pharmaceutical company to make once-daily medications available to Canadians with epilepsy. Prior to this success, patients needed to take medication up to three times daily.

Stevens offers some sage advice to those starting out in the life sciences field, something she would have liked to tell her younger self: "I think that one of the biggest things I've learned along the way is that it really is OK not to know it all. Knowing that and recognizing that pushes you to find the right team to fill in those gaps, and you end up with a group of people that complement each other."

With regard to women working in life sciences, Stevens says they are particularly underrepresented in some specialty areas. One of the main challenges she's experienced as a woman growing her career at the executive level has been facing the capital markets, where she says she's witnessed a big divide due to an underrepresentation of female CEOs in the industry.

"The capital market world is very much still a boys' club, but that doesn't mean that women aren't allowed in. I think that's one area where mentorship becomes really important."

Women can help themselves advance in the industry by becoming educated in order to build their confidence in the knowledge they bring to the table, especially at the executive level, according to Stevens.

"I think there's more awareness about where the imbalances are, and I think different organizations and [academic] faculties have made more of an effort to make sure a balance is introduced. If you look at university programs, health sciences and medicine in particular, I think we're starting to see more of a balance, gender-wise."

ANNE STEVENS

CO-FOUNDER AND CHIEF OPERATING OFFICER, AEQUUS PHARMACEUTICALS

The capital market world is very much still a boys' club, but that doesn't mean that women aren't allowed in

OUTCOMES AND IMPACT

Karimah Es Sabar's distinguished career has spanned 'the whole continuum of life sciences'

KARIMAH ES SABAR

CEO AND PARTNER, QUARK VENTURE

There still need to be more women at the C-suite and at the board tables making policy

BRIGITTE PETERSEN

Karimah Es Sabar is a life sciences leader recognized for her global experience and success in building a career spanning multinational pharmaceutical and biotechnology companies, startups, not-for-profit organizations and, most recently, venture investment firms.

Named a Canada's Most Powerful Women: Top 100 Awards recipient by the Women's Executive Network in 2013, Es Sabar became CEO and partner at Vancouver-based life sciences venture capital firm Quark Venture Inc. in 2016.

Born in Kenya, Es Sabar, who earned a bachelor of science in biochemistry and chemistry from the University of Salford in Manchester, England, and a master of science in neurochemistry from the University of London's Institute of Psychiatry, says she has always had a love of science.

"I have a great passion for making things happen. I want outcomes and I want to do things that have impact, so it made perfect sense to me to start my career in the pharmaceutical health-care sector," says the 2016 *Business in Vancouver* Influential Women in Business Award recipient.

"If I look at my career, it's really been across the whole continuum of life sciences. There have been many milestones in my career, but many of them are related to the teams and the wonderful people I've worked with."

Es Sabar, a mother of two, holds an executive certificate in management and leadership from the Massachusetts Institute of Technology's MIT Sloan School of Management. She encourages people to pursue their passions when embarking on their careers, while also taking time to nurture professional relationships.

"The single most important thing you need to do as you grow and nurture a career is to engage all of the talented people you meet on the way, build relationships with them and learn from them, so that your own talent can flourish," advises Es Sabar, a Vancouver resident since 2002.

Es Sabar, 59, first moved to Canada in 1988. She went on to hold senior management positions with multinational pharmaceutical companies in Toronto, including director of the international division, and later head of marketing and business development, at Pasteur Mérieux Connaught, now Sanofi Pasteur, where she championed the launch of two major first-in-class, first-to-market vaccine and biotherapeutic products and received Canada's Gold Award for Business Excellence. She served as vice-president and COO of Vancouver medical devices company Medsurge Medical Inc. and founded two startup companies in Kenya, both of which became leading organizations setting new standards for marketing and distribution of biopharmaceutical products in the region.

Karimah Es Sabar, CEO and partner at Quark Venture Inc., is focused on making Canada a global leader in life sciences | ROB KRUYT

In 2005, Es Sabar took on the role of leading BC Biotech and was instrumental in re-engineering and rebranding the organization to LifeSciences BC. As president, she led the organization to success as a strong business development organization for the life sciences industry.

She joined the Centre for Drug Research and Development (CDRD), Canada's national drug development and commercialization centre, in 2009 as senior vice-president, business and strategic affairs. She led the centre's business functions and successfully built an array of national and international alliances and strategic industry partnerships. She became CDRD's president and CEO in 2012. During her time with the organization, she enabled new public- and private-sector funding in excess of $180 million, multiple commercial transactions including six spin-out companies, and a merger and acquisition. She also grew the organization to include partnerships across Canada and in 12 countries, taking the CDRD "from what was a small B.C. incubator to a national and global world-leading translational centre for drug development."

She was appointed founding chair of the Global Alliance of Leading Drug Discovery and Development Centres in 2013. The association of international peer organizations is dedicated to translating health research into new medicines.

Es Sabar says she has had many mentors along the way, but she credits her father, a Kenyan entrepreneur, and her mother, a former teacher, as being the most influential.

"I encourage people to seek out mentors and people they admire and emulate and learn whatever they can. Mentors can play different kinds of roles, and it doesn't have to be a formal kind of mentoring role."

Es Sabar says the life sciences offer countless opportunities for people entering the field, regardless of gender.

"Today, it's much more balanced. There still need to be more women at the C-suite and at the board tables making policy, but in the workforce it's much easier for women to get in," she explains. "But there still is an expectation that women have to be better performers. I think that women just have to persevere, be their best and perform based on merit."

Es Sabar holds a number of board positions, including chair of Providence Health Care Research Institute's board of trustees and council member with the National Research Council of Canada. She is also a director of Knowledge First Financial and Knowledge First Foundation, and a board member with the Canadian Glycomics Network and the Vancouver Prostate Centre.

ACCELERATING LIFE SCIENCES

Industry influencer Natalie Dakers wants 'to see this sector flourish in Canada'

NATALIE DAKERS

PRESIDENT AND CEO, ACCEL-RX HEALTH SCIENCES ACCELERATOR

I was introduced to the notion of technology transfer ... the intersection of science with business, and something captured me

BRIGITTE PETERSEN

As one of B.C.'s most influential women in the biopharmaceutical industry, Natalie Dakers is well known for bringing a business perspective to life sciences.

An adjunct professor at the University of British Columbia (UBC), Dakers is president and CEO of Accel-Rx Health Sciences Accelerator, a company she founded in 2014. Based in downtown Vancouver's Yaletown neighbourhood, Accel-Rx provides seed capital and expertise to promising early-stage Canadian companies developing therapeutics, diagnostics and medical devices.

"I want to see this sector flourish in Canada," Dakers says. "I've spent so much time in the industry, and I see the incredible opportunities and what can happen when companies grow."

Winner of the 2015 Startup Canada Entrepreneur of the Year award and numerous other awards, Dakers successfully launched four startup companies. She was founding president and CEO of both the UBC-based Centre for Drug Research and Development (CDRD) and its commercial arm, CDRD Ventures Inc., and co-founded Neuromed Technologies Inc., a private biopharmaceutical company.

An outdoors enthusiast and mother of two adult sons, Dakers says she was fortunate to have worked for organizations where she did not often experience gender bias.

"I had some great bosses," recalls Dakers. "I was given lots of encouragement. I think that really allowed me to think outside the box, and it gave me courage to do more."

But when she did run into situations where she detected bias, she chose to not be insulted and to keep moving forward.

"When I was pregnant with my first, that's when I encountered the biggest challenge of the perception that once you're pregnant you're finished and kind of out of the game. It's interesting talking to younger women today, and it's obviously on their minds: 'How do I have a family and have my career?'"

For women who are considering working in life sciences, the Barrie, Ontario-born entrepreneur recommends that they be driven by their passions and have faith in the challenging process of building a successful career in the sector.

"Find where you really feel that you connect with what you're trying to do, and seek out people who have a like-mindedness with what you're trying to do. Don't waste time either in situations or with people that you find difficult to connect with. You really have to believe in what you're doing."

After successfully launching four startup companies, Natalie Dakers is focused on helping other life sciences entrepreneurs across the country | ROB KRUYT

Accelerating life sciences

NATALIE DAKERS

PRESIDENT AND CEO, ACCEL-RX HEALTH SCIENCES ACCELERATOR

The challenge becomes, how many [women] evolve into more senior management and onto the board of directors?

Raised in Ottawa, Dakers earned a bachelor of science in marine biology from the University of Guelph. She moved to Vancouver in 1983 and worked in the aquaculture industry before securing a position with UBC's life sciences technology transfer team.

"I had expected to have a career in science, but I was introduced to the notion of technology transfer, where it really is all about the intersection of science with business, and something captured me. I was fascinated by the opportunity to look at all kinds of interesting technologies and how you apply them."

Shifting gears from science to business took a big leap of faith, but it was a great stepping stone for her career. She now has more than 25 years of experience in biotechnology commercialization, company formation and growth. During those years, Dakers honed a broad range of experience in raising capital, business development, strategic planning, intellectual property, operations, drug research and development, financial analysis, recruitment and team building, leading her to where she is today.

"It's been an incredibly rich, productive career," says Dakers, summing up her experience. "I've worked with amazing people on meaningful projects, and there wasn't a defined path."

Dakers has served on many boards and advisory panels over the years. She is currently a member of the Natural Sciences and Engineering Research Council's research partnership advisory committee; sits on the boards of Augurex Life Sciences Corp., BIOTECanada and ImStar Therapeutics Inc.; and is a mentor with entrepreneurship@UBC's life science venture mentoring team and the BC Tech Association's HyperGrowth program.

While women are well represented in technical positions, improvements can be made when it comes to encouraging women into life sciences leadership roles.

"The challenge becomes, how many of them evolve into more senior management and onto the board of directors? The number gets smaller the more you go up the food chain," says Dakers. "We have to think hard about that when we are recruiting. People in senior positions have to think about it, and recruiters have to be thinking more about this. It has to be a conscious effort to bring people in and, if they don't have the experience, to be willing to train."

While the industry could do more to encourage a better gender balance, women still need to take responsibility for their own paths.

"We have to encourage women to participate," Dakers says. "The quickest way to be irrelevant is to not participate. If you don't put yourself forward, or you don't take some risk, it's just harder to get noticed."

CORPORATE PROFILES

2017

GROWING BRITISH COLUMBIA'S BIO-ECONOMY

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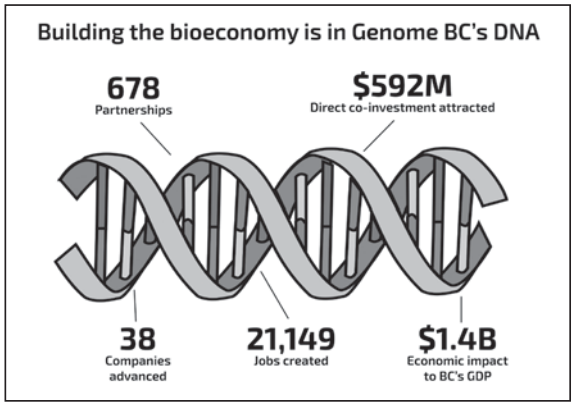
Economic growth through 21st century science

Genomics is the quintessential 21st century science aimed at unlocking the secrets of life, so it seems appropriate that Genome British Columbia (Genome BC) was incorporated in the inaugural year of the new millennium. While scientists have known DNA for decades, genomics has advanced at lightning speed. This disruptive technology offers problem solving, with unparalleled efficiency and precision, to key challenges experienced across BC's natural resource sectors and human health. Genomics converges knowledge from biology, engineering, computer science, social media, nanotechnology, social sciences and humanities.



Genome BC supports world-class research projects and technology platforms in pursuit of growing a globally competitive life sciences cluster and delivering sustainable social and economic benefits to BC, Canada and the world. Its programs develop knowledge, build capacity, attract co-investment and expand the boundaries of technology. In its continued pursuit of world-class genomics research and beneficial outcomes, the organization has always challenged itself to ask, "What comes next?"

Genomics has evolved to a point where commercialization is starting to build momentum as more companies are innovating and bringing commercial solutions to market. Genome BC supports the development of an enhanced research and commercialization continuum through diverse funding opportunities. This includes meeting the needs of industry and government users through a sustainable pipeline of discovery, applied and translational research, as well as supporting the creation of new companies, products and services helping BC develop opportunities for economic growth presented by the bioeconomy.

Bridging the gap

The Genomic Applications Partnership Program (GAPP) funds downstream R&D projects that address real world opportunities and challenges identified by industry, government, not-for-profits and other 'receptors' of genomics knowledge and technologies. GAPP projects are collaborations between academic researchers and receptor organizations, and are co-funded by Genome Canada, receptors and other stakeholders.

Sparking innovation

Genome BC's Sector Innovation Program (SIP) aims to foster the adoption of genomics in health, forestry, fisheries, aquaculture, agri-food, energy, mining and environment. SIP aims to support compelling research projects addressing the needs of key sectors in BC while ensuring projects have the potential to generate social, environmental and economic benefits well into the future.

Genomics solutions for real world challenges

GeneSolve is a web-based, open innovation platform that supports research projects providing solutions to challenges across various sectors. The program encourages a collaborative research approach between regional, national and international Sector Partners and academia in BC. Genome BC works with partners across sectors to post a specific challenge and select a research team whose proposed solution best fits the need of that challenge. The 'winning' research team works with the Sector Partner to develop the research plan and realize the challenge solution.

Realizing potential through Industry Innovation

Genome BC introduced its Industry Innovation Program (I^2) to help early stage companies move from seed to Series A or other significant financing events. The program offers repayable growth capital to businesses commercializing innovative life science technology-based products, processes or services. Funding through the I^2 program can come at a pivotal time in the development of a company, helping build a bridge between innovative research outcomes and commercialization that helps grow BC's bioeconomy.

A recognized catalyst for government and industry, Genome BC invests in research, entrepreneurship and commercialization in life sciences to address challenges in key sectors such as health, forestry, fisheries, aquaculture, agri-food, energy, mining and environment. Genome BC partners with many national and international public and private funding organizations to drive BC's bioeconomy.

Visit www.genomebc.ca

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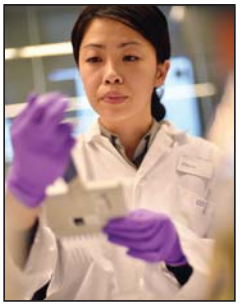
The Centre for Drug Research and Development (CDRD) www.cdrd.ca

Canada's drug development and commercialization engine

There are daily headlines in the news: "Exciting new breakthrough brings hope to patients." But most often, these promising breakthroughs are never actually developed into innovative life-changing/saving medicines because the universities and/or small companies that have made these discoveries do not have the specialized expertise, infrastructure and/or dedicated funding to develop them further and realize their full potential value.



These challenges are exacerbated by the fact that today's health research and commercialization landscape sees research and development, clinical evaluation, and healthcare delivery costs continually rising; regulatory and reimbursement hurdles getting higher and higher; and venture capital investors are often looking to less risky later-stage, validated opportunities, leaving little financing available to develop new therapeutics in the early stages.

As getting new drugs and other therapeutic products to market therefore becomes more and more difficult, and the associated costs and risks become increasingly greater, the drug development community (including academic institutions and granting agencies to translational research organizations, incubators, and accelerators to foundations, government and industry) must support one another in effectively advancing new technologies, leveraging resources, and filling the gaps in the commercialization continuum.

This is where The Centre for Drug Research and Development (CDRD) comes in

CDRD is Canada's drug development and commercialization engine. Headquartered here in BC, we bring together partners from across the country and around the world to turn cutting-edge health research in academia and nascent technologies in Small-and Medium-Sized Enterprises (SMEs) into innovative new products and a thriving Canadian health sciences industry.

CDRD has amassed strategic partnerships with over 50 affiliated universities and research institutes, 26 Canadian health sciences SMEs/entrepreneurs, six top global pharmaceutical companies, eight of the world's leading translational research centres, and three patient-focused foundations. Through this extensive network and relationships with the most influential Key Opinion Leaders, decision makers, and supporters shaping Canadian and global innovation, CDRD brings together the complementary expertise and resources required to proactively find and evaluate, and then collaboratively develop and commercialize the most therapeutically and commercially promising technologies. These are disruptive, game-changing technologies not only for patients, but for the critical mass of strong new Canadian health sciences anchor companies that are being built upon them.

Training opportunities that generate new industry-ready Highly-Qualified Personnel to lead the industry into the future is also a key cornerstone for CDRD's success (specialized, industry-focused training has been provided to 200 young drug developers and commercialization experts to date).

Since CDRD's founding in 2007, enabled by the support of the federal government primarily through the Centres of Excellence for Commercialization and Research (CECR) program, alongside that of the BC provincial government and the private sector, CDRD has developed and successfully implemented a shared risk/reward partnership model that has proven itself an effective means to advance innovative technologies forward along the innovation continuum, adding value throughout that process.

Through partnerships with universities, small health sciences companies, top multi-nationals, and patient-focused foundations from across Canada, and even around the world, CDRD proactively finds, evaluates, develops, and then commercializes the most promising discoveries. All told, the organization has:

- Incubated **269** disruptive technologies
- Successfully advanced **58** technologies toward commercialization (resulting in **72** new patents)
- Completed commercial transactions on **14** technologies
- Spun-off **7** companies which have generated over **$100M** in investment
- Trained **~200** highly-qualified personnel for the next generation of drug development

What this all amounts to is the fact that CDRD is actively and successfully enabling the growth of British Columbia and Canada's health sciences industry, creating tremendous value in these technologies, and building strong new BC-based companies. These companies alongside CDRD then attract private investment, offer long-term, high paying jobs and specialized training opportunities, and foster a diversified knowledge economy. **In total, CDRD has supported 26 scale-up health sciences companies by providing over 9,000 hours of drug development and commercialization** – adding value to these companies and positioning them to raise additional investment and/or secure strategic partnerships.

For more information on The Centre for Drug Research and Development, please visit www.cdrd.ca; and to find out more about how CDRD can add value to your technology, contact:

Dr. Jason Crawford
Vice President,
Scientific Operations
jcrawford@cdrd.ca
Direct: (604) 827-1119

cdrd The Centre for Drug Research and Development
Transforming Discovery into Opportunity

Life sciences companies at a glance

BIOPHARMACEUTICALS & BIOTECHNOLOGY

PLEASE REFER TO **WWW.LIFESCIENCESBC.CA** FOR FURTHER INFORMATION ON THESE COMPANIES

	Stage of development						Fields of study						Tools							Diseases						
	Drug discovery	Preclinical studies	Phase 1 clinical studies	Phase 2 clinical studies	Phase 3 clinical studies	On market	Bioproducts	Bioinformatics	Diagnostics	Environmental	Therapeutics	Vaccines	Bioprocessing	Drug delivery	Gene therapy	Genomics	High-throughput screening	Lab reagents	Proteomics	Autoimmune diseases	Cancer	Cardiovascular diseases	Infectious diseases	Inflammatory diseases	Metabolic diseases	Neurological diseases
AbCellera	•										•						•			•	•		•	•	•	•
Aequus Pharmaceuticals		•	•			•					•			•												•
Alectos Therapeutics																					•					•
Anandia Labs	•						•		•				•			•										
Aquinox Pharmaceuticals					•						•													•		
Arbutus Biopharma Corp.																							•			
Aspect Biosystems Ltd.	•	•					•																			
Augurex Life Sciences Corp.	•								•		•								•	•						
Aurinia Pharmaceuticals Inc.				•							•									•				•		
Boreal Genomics									•							•					•					
Celator Pharmaceuticals				•	•						•			•												
DelMar Pharmaceuticals	•	•	•	•							•										•					
ESSA Pharma Inc.			•								•										•					
Eupraxia Pharmaceuticals Inc.	•	•	•	•							•									•			•	•		•
GenomeDx Biosciences Inc.						•		•	•							•					•					
Green Sky Labs																					•			•	•	•
ImStar Therapeutics Inc.	•	•									•															•
Inception Sciences Canada																					•			•		•
Innovative Targeting Solutions Inc.	•	•									•									•	•		•	•	•	
iProgen Biotech Inc.	•										•			•						•	•	•	•	•	•	•
MedGenesis Therapeutix Inc.																										•
Microbiome Insights Inc.								•	•	•						•								•	•	•
Microbion Pharma Corp.		•	•	•							•												•			
MSI Methylation Sciences Inc.																										•
Neurodyn Life Sciences Inc.	•	•	•								•															•
New ß Innovation Ltd.	•	•	•								•										•	•				•
Novateur Ventures Inc.		•	•	•	•	•	•	•	•		•	•		•	•	•				•	•	•	•	•	•	•
OncoGenex Pharmaceuticals Inc.	•	•	•	•	•						•			•		•					•					
Ondine Biomedical Inc.		•	•	•	•	•					•												•			
Phoenix Molecular Designs	•	•									•										•					
Phyton Biotech LLC	•	•	•	•	•	•	•						•	•							•			•		
Precision Nanosystems Inc.	•										•			•	•	•		•		•	•	•	•	•	•	•
Qu Biologics Inc.																				•	•		•	•		
Response Biomedical Corp.																						•	•			
Sierra Oncology				•							•										•					
Sirona Biochem	•	•					•				•													•	•	
Sitka Biopharma Inc.		•	•								•			•							•		•	•	•	
SOHO Biotech Inc.																		•								
Starfish Medical																							•	•		
STEMCELL Technologies Inc.		•				•	•						•					•		•	•	•	•	•		•
Symvivo Corp.	•	•									•			•	•											
ViroGin Biotech Canada Ltd.																					•					
WEX Pharmaceuticals Inc.				•	•						•										•					•
Xenon Pharmaceuticals Inc.	•	•	•	•		•		•	•		•			•	•	•						•			•	•
Zymeworks Inc.	•	•					•	•			•										•			•		•

CONTRACT RESEARCH ORGANIZATIONS & SCIENTIFIC/HEALTH SERVICES

PLEASE REFER TO **WWW.LIFESCIENCESBC.CA** FOR FURTHER INFORMATION ON THESE COMPANIES

	Preclinical and clinical services												General services									
	Drug discovery	Bioinformatics	Bioanalytical services	Analytical services	Pathology services	Toxicology	Phase 1 clinical studies	Phase 2 clinical studies	Phase 3 clinical studies	Phase 4 clinical studies	Study monitoring and reporting	Data management and statistics	Strategic consulting	Regulatory	Contract manufacturing	Product development	cGMP/GLP compliance	Quality assurance	Teaching and training	Communications	Reimbursememnt market access	Lab supplies/ distribution	International distribution
Anandia Labs				•														•					
Biofilm Media																			•		•		
Campbell & Company Strategies Inc.													•	•							•		
The Clinical Trial Company							•	•	•	•		•	•										
Conquer Mobile													•						•				
Emergo Group													•	•			•	•	•				
Emmes Canada		•		•			•	•	•	•	•	•	•	•			•	•	•		•		
Health and Technology District							•	•	•	•	•	•	•	•		•		•	•				
IonsGate Preclinical Services Inc.	•					•											•						
JBL Group Inc.									•				•			•					•		
Leap Frog Innovators Consultancy Inc.													•										
LifeLabs				•	•	•																	
Medisacare Inc.													•										
Microbiome Insights Inc.	•	•	•										•										•
MotionHall													•										
Northview Lifesciences													•										
Novateur Ventures Inc.						•	•	•	•	•	•	•	•	•	•	•	•	•	•		•		
PHEMI Systems		•	•	•								•											
Phyton Biotech LLC															•	•							
PI Pharma Inventor Inc.	•			•											•	•	•						
Tantalus Medical Communications													•	•					•		•		
TRANSFERRA Nanosciences Inc.				•											•	•	•						
True North Synergy Inc.													•	•		•							
VWR International Ltd.																				•			
Wax-it Histology Services Inc.					•	•																•	

MEDICAL TECHNOLOGIES & DEVICES

PLEASE REFER TO **WWW.LIFESCIENCESBC.CA** FOR FURTHER INFORMATION ON THESE COMPANIES

	Fields of study							Company type		
	Dental device	Medical equipment	Medical supplies	Testing instruments	Imaging	Device design	Other(s)	Manufacturer	Distributor	Developer
AR Medical Technologies		•				•	Medical device prototyping, mobile medical applications			•
ARC Medical Devices Inc.			•					•	•	•
Aspera				•	•	•	Data transfer			
Biolux Research Ltd.										•
Boreal Genomics								•		•
Clarius Mobile Health Corp.		•			•	•		•	•	•
Conquer Mobile					•		Medical simulation, medical education	•		
Contextual Genomics Inc.		•					Genomic-based molecular diagnostics			•
Evasc Medical Systems		•				•		•		•
Equicare Health							Software			•
Farabloc Development Corp.			•					•	•	•
GenomeMe Lab Inc.							IVD test including molecular diagnostics and molecular pathology tests	•		•
Health and Technology District		•	•	•	•	•		•		•
Innovatek Medical Inc.				•				•		
Kardium						•	Medical device	•		
LightIntegra Technology Inc.				•				•		
LivaNova Canada Corp.		•	•			•		•	•	•
Lungpacer Medical Inc.		•				•		•	•	•
McKesson Medical Imaging Company					•		Medical imaging and clinical information software systems	•	•	•
Neovasc Inc.						•	Cardiovascular devices	•		•
Navigate Surgical Technologies Inc.	•						Dynamic surgical guidance			•
Novateur Ventures Inc.	•	•			•	•				•
Ondine Biomedical Inc.	•	•	•					•		•
PHEMI Systems							Big data software, managed services for data management, precision medicine platform	•	•	•
Response Biomedical Corp.								•		•
Rostrum Medical Innovations Inc.		•				•		•		•
Starfish Medical		•		•	•	•	Airway management, QMS	•		•
Tel-Array Diagnostics Inc.				•				•		•
ViewsIQ Inc.					•					•
ViroGin Biotech Canada Ltd.				•					•	
Xccepted Technologies Inc.						•				•

LifeSciences BC membership directory

ACADEMIC & RESEARCH INSTITUTIONS

BC Cancer Agency
675 West 10th Ave., Vancouver, BC V5Z 1L3
604-877-6000 www.bccancer.bc.ca

BC Preclinical Research Consortium
4145 Wesbrook Mall, Vancouver, BC V6T 1W5
604-822-6283 www.bcprc.ca

British Columbia Centre for Excellence in HIV/AIDS
608 – 1081 Burrard St., Vancouver, BC V6Z 1Y6
604-806-8477 www.cfenet.ubc.ca

cdrd The Centre for Drug Research and Development
Transforming Discovery into Opportunity

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4th floor – 2405 Wesbrook Mall,
Vancouver, BC V6T 1Z3
604-827-1147 www.cdrd.ca

Centre for Heart Lung Innovation
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Vancouver, BC V6Z 1Y6
604-806-8346 www.hli.ubc.ca

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6163 University Blvd., Vancouver, BC V6T 1Z1
604-822-0600 entrepreneurship.ubc.ca

Genome BritishColumbia
Leading > Investing > Connecting

Genome British Columbia
400 – 575 West 8th Ave.,
Vancouver, BC V5Z 0C4
604-738-8072 www.genomebc.ca

ICORD
3rd floor – 818 West 10th Ave., Blusson Spinal Cord Centre, Vancouver, BC V5Z 1M9
604-675-8810 www.icord.org

Jackson Laboratory
841 – 236 West Portal Ave.,
San Francisco, CA 94127
415-548-0863 www.jax.org

Life Sciences Institute
1.365b – 2350 Health Sciences Mall,
Vancouver, BC V6T 1Z3
604-827-4383 lsi.ubc.ca

Michael Smith Foundation for Health Research
200 – 1285 West Broadway,
Vancouver, BC V6H 3X8
604-730-8322 www.msfhr.org

PROOF Centre of Excellence
10th floor – 1190 Hornby St.,
Vancouver, BC V6Z 2K5
604-682-2344 ext. 62612 www.proofcentre.ca

Providence Health Care Research Institute
10th floor – 1190 Hornby St.,
Vancouver, BC V6Z 2K5
604-806-9464 www.providenceresearch.ca

Research Universities' Council of British Columbia
400 – 880 Douglas St., Victoria, BC V8W 2B7
250-480-4859 www.tupc.bc.ca

Rick Hansen Institute
6400 – 818 West 10th Ave., Blusson Spinal Cord Centre , Vancouver, BC V5Z 1M9
604-827-2421 www.rickhanseninstitute.org

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Rm. 3195 Strand Hall, Simon Fraser University,
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778-782-4152 www.sfu.ca

Simon Fraser University Innovation Office
8900 Nelson Way, MTF Rm. 230,
Burnaby, BC V5A 4W9 www.sfu.ca/io

Trinity Western University, Biotechnology Program
7600 Glover Rd., Langley, BC V2Y 1Y1
604-888-7511 www.twu.ca/academics/faculty-natural-applied-sciences/biotechnology

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4004 Wesbrook Mall, Vancouver, BC V6T 2A3
604-222-1047 www.triumf.ca

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Rm. 103 – 6328 Memorial Rd., Old Admin. Building, Vancouver, BC V6T 1Z2
604-822-4571 www.ubc.ca

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3309 – 2405 Wesbrook Mall,
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University of British Columbia Sauder School of Business
2053 Main Mall, Vancouver, BC V6T 1Z2
604-822-8555 www.sauder.ubc.ca

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103 – 6190 Agronomy Rd.,
Vancouver, BC V6T 1Z4
604-822-8580 www.uilo.ubc.ca

University of Northern BC
3333 University Way, Prince George, BC V2N 4Z9
250-960-5555 www.unbc.ca

University of Victoria
3800 Finnerty Rd., Victoria, BC V8P 5C2
250-721-7211 www.uvic.ca

Vancouver Coastal Health Research Institute
Rm. 3665 – 910 West 10th Ave., Jim Pattison Pavilion North, VGH, Vancouver, BC V5Z 1M9
604-875-4372 www.vchri.ca

ASSOCIATIONS

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Toronto, ON M5A 1S2 www.acctcanada.ca

ACETECH
900 – 1188 West Georgia St.,
Vancouver, BC V6E 4A2
604-683-5852 www.acetech.org

AdvantageBC
3093 – 595 Burrard St., PO Box 49067, Three Bentall Centre, Vancouver, BC V7X 1C4
604-683-6626 www.advantagebc.ca

Ag-West Bio Inc.
101 – 111 Research Dr., Saskatoon, SK S7N 3R2
306-975-1939 www.agwest.sk.ca

BC Technology Industry Association
101 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
604-683-6159 www.bctia.org

BioAlberta
9707 110 St., Edmonton, AB T5K 2L9
780-425-3804 www.bioalberta.com

BioTalent Canada
300 – 130 Slater St., Ottawa, ON K1P 6E2
613-235-1402 www.biotalent.ca

BIOTECanada
600 – 1 Nicholas St., Ottawa, ON K1N 7B7
613-230-5585 www.biotech.ca

DigiBC – The Digital Media and Wireless Association of BC
750 – 1333 West Broadway,
Vancouver, BC V6H 4C1 www.digibc.org

E-Fund
Vancouver, BC www.e-fund.ca

Greater Vancouver Board of Trade
400 – 999 Canada Pl., World Trade Centre,
Vancouver, BC V6C 3E1
604-681-2111 www.boardoftrade.com

Innovative Medicines Canada
1220 – 55 Metcalfe St., Ottawa, ON K1P 6L5
613-236-0455 innovativemedicines.ca

Life Science Washington
300 – 1551 Eastlake Ave. East,
Seattle, WA 98102-3706
206-456-9567 www.lifesciencewa.org

MEDEC
900 – 405 The West Mall, Toronto, ON M9C 5J1
604-353-5233 www.medec.org

Student Biotechnology Network
2386 East Mall, Box 11, Gerald McGavin Building, Vancouver, BC V6T 1Z3
www.thesbn.ca

VANTEC (Vancouver Angel Technology Network)
Vancouver, BC www.vantec.ca

BIOINFORMATICS

aspera an IBM® company

Aspera, an IBM company
E – 5900 Hollis St., Emeryville, CA 94608
510-849-2386 www.asperasoft.com

GenomeDx Biosciences Inc.
1038 Homer St., Vancouver, BC V6B 2W9
888-792-1601 www.genomedx.com

Zymeworks Inc.
540 – 1385 West 8th Ave.,
Vancouver, BC V6H 3V9
604-678-1388 www.zymeworks.com

BIOPHARMACEUTICALS

AbCellera
305 – 2125 East Mall, Vancouver, BC V6T 1Z4
604-827-2128 www.abcellera.com

Aequus PHARMACEUTICALS

Aequus Pharmaceuticals
2820 – 200 Granville St., Vancouver, BC V6C 1S4
604-336-7906 www.aequuspharma.ca

Alectos Therapeutics Inc.
8999 Nelson Way, Burnaby, BC V5A 4B5
604-628-7129 www.alectos.com

Anandia Labs
322 – 2259 Lower Mall, Vancouver, BC V6T 1Z4
778-874-6923 www.anandialabs.com

Aquinox Pharmaceuticals Inc.
450 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
604-629-9223 www.aqxpharma.com

Arbutus Biopharma Corp.
100 – 8900 Glenlyon Pky., Burnaby, BC V5J 5J8
604-419-3200 www.arbutusbio.com

Augurex Life Sciences Corp.
125-1 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
778-839-3319 www.augurex.com

Aurinia Pharmaceuticals Inc.
1203 – 4464 Markham St., Victoria, BC V8Z 7X8
250-708-4272 www.auriniapharma.com

Biopep Solutions Inc.
220 – 13071 Vanier Pl., Richmond, BC V6V 2J1
604-773-5409 www.biopeps.com

BirchBioMed Inc.
103 – 1917 West 10th Ave.,
Vancouver, BC V6J 1M7
778-989-5104 www.birchbiomed.com

Boreal Genomics Inc.
302 – 2386 East Mall, Vancouver, BC V6T 1Z3
604-822-8268 www.borealgenomics.com

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250 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
604-708-5858 www.celatorpharma.com

DelMar Pharmaceuticals Inc.
720 – 999 West Broadway,
Vancouver, BC V5Z 1K5
604-629-5989 www.delmarpharma.com

ESSA

ESSA Pharma Inc.
720 – 999 West Broadway,
Vancouver, BC V5Z 1K5
778-331-0962 www.essapharma.com

Eupraxia Pharmaceuticals Inc.
204 – 2590 Cadboro Bay Rd.,
Victoria, BC V8R 5J2
250-590-3968 www.eupraxiapharma.com

Green Sky Labs
285 – 1627 Fort St., Victoria, BC V8R 1H8
778-430-5177 www.greenskylabs.com

iCo Therapeutics Inc.
760 – 777 Hornby St., Vancouver, BC V6Z 1S4
604-602-9414 www.icotherapeutics.com

ImStar Therapeutics Inc.
600 – 1285 West Broadway,
Vancouver, BC V6H 3X8
604-551-6782 www.imstartx.com

Inception Sciences Canada
210 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
604-343-1549 www.inceptionsci.com

Innovative Targeting Solutions Inc.
309 – 4475 Wayburne Dr., Burnaby, BC V5G 4X4
604-433-6779 www.innovativetargeting.com

iProgen Biotech Inc.
126 – 11782 River Rd., Richmond, BC V6X 1Z7
415-800-4392 www.iprogen.com

MedGenesis Therapeutix Inc.
730 – 730 View St., Victoria, BC V8W 3Y7
250-386-3000 www.medgenesis.com

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MSI Methylation Sciences Inc.
108 – 4475 Wayburne Dr., Burnaby, BC V5G 4X4
604-435-5155 www.methylationsciences.com

Neurodyn Life Sciences Inc.
439 Helmcken St., Vancouver, BC V6B 2E6
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New β Innovation Canada

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168 – 8508 Glenlyon Pky., Burnaby, BC V5J 0B6
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Nucleo Life Sciences
953 Indiana St., San Francisco, CA 94107
www.nucleolifesciences.com

OncoGenex Technologies Inc.
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604-736-3678 www.oncogenex.com

ondine

Ondine Biomedical Inc.
888 – 1100 Melville St., Vancouver, BC V6E 4A6
604-669-0555 www.ondinebio.com

Phoenix Molecular Designs
125 – 887 Great Northern Way,
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Phyton Biotech LLC
1503 Cliveden Ave., Delta, BC V3M 6P7
604-777-2340 www.phytonbiotech.com

QLT Inc.
250 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
877-764-3131 www.qltinc.com

Qu Biologics Inc.
138 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
604-734-1450 www.qubiologics.com

RepliCel Life Sciences Inc.
2020 – 401 West Georgia St.,
Vancouver, BC V6B 5A1
604-248-8730 www.replicel.com

Sierra Oncology
2150 – 885 West Georgia St.,
Vancouver, BC V6C 3E8
604-558-6536 www.sierraoncology.com

SignalChem LifeSciences Corp.
110 – 13120 Vanier Pl., Richmond, BC V6V 2J2
604-232-4600
www.signalchemlifesciences.com

Sirona Biochem Corp.
605 – 889 West Pender St.,
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Sitka Biopharma Inc.
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Symvivo Corp.
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ViroGin Biotech Canada Ltd.
408 – 3800 Wesbrook Mall,
Vancouver, BC V6S 2L9
604-720-8981 www.virogin.com

Wex Pharmaceuticals Inc.
420 – 1090 West Pender St.,
Vancouver, BC V6E 2N7
604-683-8880 www.wexpharma.com

Xenon Pharmaceuticals Inc.
200 – 3650 Gilmore Way, Burnaby, BC V5G 4W8
604-484-3300 www.xenon-pharma.com

BUSINESS CONSULTANTS

Campbell & Company Strategies Inc.
23195 96th Ave., Box 770,
Fort Langley, BC V1N 2S2 www.ccom-pr.com

Emergo
205 – 15957 84th Ave., Surrey, BC V4N 0W7
604-909-1265 www.emergogroup.ca

Infinitus International Market Development
207 Kinlock Rd., Stratford, PEI C1B 2M5
www.infinitus.ca

JBL Group Inc.
2613 East 21st Ave., Vancouver, BC V5M 4E8
778-737-8369 www.jbl.ca

Leapfrog Innovators Consultancy Inc.
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400 – 570 West 7th Ave.,
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604-874-4004 www.malachite-mgmt.com

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115 – 887 Great Northern Way,
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COMMUNICATIONS

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Business in Vancouver
303 West 5th Ave., Vancouver, BC V5Y 1J6
604-688-2398 www.biv.com

CONTRACT RESEARCH & SCIENTIFIC/ HEALTH SERVICES

CEQAL Inc.
307 – 2083 Alma St., Vancouver, BC V6R 4N6
604-336-3695 www.ceqal.com

The Clinical Trial Company (Canada) Ltd.
203 – 91 5th Ave., Pincourt, QC J7V 5K8
438-257-1161
www.theclinicaltrialcompany.com

Emmes Canada
10905 Applied Sciences Bldg.,
8888 University Dr., Burnaby, BC V5A 1S6
778-822-7267 www.emmes.ca

GenomeMe Lab Inc.
1 – 3691 Viking Way,
Richmond, BC V6V 2J6 www.genomeme.ca

IonsGate Preclinical Services Inc.
Rm. 2.340 – 2350 Health Sciences Mall, Life Sciences Institute , Vancouver, BC V6T 1Z3
604-827-1733 www.ionsgate.com

LifeLabs Medical Laboratory Services
3680 Gilmore Way, Burnaby, BC V5G 4V8
604-412-4539 www.lifelabs.com

Microbiome Insights
4608 West 11th Ave., Vancouver, BC V6R 2L3
www.microbiomeinsights.com

Novateur Ventures Inc.
427 – 2030 Marine Dr.,
North Vancouver, BC V7P 1V7
604-357-5272 www.novateur.org

TRANSFERRA Nanosciences Inc.
8855 Northbrook Crt., Burnaby, BC V5J 5J1
604-222-2548 www.northernlipids.com

Wax-it Histology Services Inc.
202 – 2386 East Mall, Vancouver, BC V6T 1Z3
604-822-1595 www.waxitinc.com

World Courier, an AmerisourceBergen company
170 – 3751 Shell Rd., Airport Executive Park,
Building B, Richmond, BC V6X 2W2
604-232-9444 www.worldcourier.com

DIGITAL HEALTH

Curatio Networks
1200 – 555 West Hastings St.,
Vancouver, BC V6B 4N4
1-855-888-2031 www.curatio.me

Equicare Health
2020 Yukon St., Vancouver, BC V5Y 3N8
604-708-9075 equicarehealth.com

Molecular You
5451 – 2350 Health Sciences Mall,
Vancouver, BC V6T 1Z3 molecularyou.com

Xccepted Technologies Inc.
201 – 13737 96th Ave., City Centre Professional Building 1, Surrey, BC V3V 0C6
778-300-5605 www.xccepted.com

FACILITIES & REAL ESTATE

Chernoff Thompson Architects
110 – 1281 West Georgia St.,
Vancouver, BC V6E 3J5
604-669-9460 www.cta.bc.ca

Discovery Parks Realty Corp.
155 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
604-734-7275 www.discoveryparks.com

FINANCIAL SERVICES & INSURANCE

AON
1200 – 401 West Georgia St.,
Vancouver, BC V6B 5A1
604-688-4442 www.aon.com

Goulet Associates – SR&ED Consultants
25 – 285 17th St., West Vancouver, BC V7V 3S6
1-888-477-3373 www.gouletassociates.com

Jardine Lloyd Thompson Canada
1600 – 1111 West Georgia St.,
Vancouver, BC V6E 4G2
604-682-4211 www.canada.jlt.com

KPMG LLP
777 Dunsmuir St., PO Box 10426,
Vancouver, BC V7Y 1K3
604-691-3000 www.kpmg.ca

Northview LifeSciences
2820 – 200 Granville St., Vancouver, BC V6C 1S4
604-428-4641 www.northviewventures.ca

OGEE Finance Solutions Corp.
3602 – 939 Homer St., Vancouver, BC V6B 2W6
604-657-3882 www.ogeecorp.com

PricewaterhouseCoopers LLP
700 – 250 Howe St., Vancouver, BC V6C 3S7
604-806-7000 www.pwc.com

Versant Ventures
3630 – One Sansome St.,
San Francisco, CA 94104
415-801-8100 www.versantventures.com

GOVERNMENT

Accel-Rx
301 – 1224 Hamilton St., Vancouver, BC V6B 2S8
604- 602-5234 www.accel-rx.com

BC Innovation Council
900 – 1188 West Georgia St.,
Vancouver, BC V6E 4A2
604-683-2724 www.bcic.ca

BC Ministry of International Trade
730 – 999 Canada Pl., Vancouver, BC V6C 3E1
www.britishcolumbia.ca

City of New Westminster
511 Royal Ave., New Westminster, BC V3L 1H9
604-521-3711 www.newwestcity.ca

Innovation Boulevard
13450 104th Ave., Surrey, BC V3T 1V8
604-591-4011 www.surrey.ca

National Research Council Canada
650 – 1185 West Georgia St.,
Vancouver, BC V6E 4E6 www.nrc.ca

NSERC Pacific
407 – 1138 Melville St., Vancouver, BC V6E 4S3
604-666-8818 www.nserc-crsng.gc.ca

HUMAN RESOURCES

Lock Search Group
810 – 1040 West Georgia St.,
Vancouver, BC V6E 4H1
604-639-3701

INTERNATIONAL PHARMACEUTICAL CORPORATIONS

3SBio Inc.
No. 3 A1, Road 10 Shenyang Economy & Technology Development Zone Shenyang, China 110027, Shenyang, Liaoning
+86 24 2538 6000 www.3sbio.com/en

AbbVie Corp.
8401 Trans-Canada Hwy.,
Saint-Laurent, QC H4S 1Z1
514-906-9700 www.abbvie.ca

Amgen British Columbia
7990 Enterprise St., Burnaby, BC V5A 1V7
604-415-1800 www.amgen.ca

AstraZeneca Canada Inc.
1004 Middlegate Rd., Mississauga, ON L4Y 1M4
905-277-7111 www.astrazeneca.ca

LifeSciences BC membership directory

Celgene Corp.
600 – 6755 Mississauga Rd.,
Mississauga, ON L5N 7Y2
877-923-5436 www.celgenecanada.net

GlaxoSmithKline Inc.
7333 Mississauga Rd.,
Mississauga, ON L5N 6L4
905-819-3000 www.gsk.ca

Hoffmann-La Roche Ltd.
7070 Mississauga Rd.,
Mississauga, ON L5N 5M8
800-561-1759 www.rochecanada.com

Janssen Inc.
19 Green Belt Dr., Toronto, ON M3C 1L9
416-449-9444 www.janssen.ca

Merck Canada Inc.
16750 Trans-Canada Hwy.,
Kirkland, QC H9H 4M7
514-428-8600 www.merck.ca

Novartis Pharmaceuticals Canada Inc.
385 Bouchard Blvd., Dorval, QC H9S 1A9
514-631-6775 www.novartis.ca

Pfizer Canada Inc.
17300 Trans-Canada Hwy.,
Kirkland, QC H9J 2M5
514-695-0500 www.pfizer.ca

Sanofi Canada
2905 Place Louis-R.-Renaud, Laval, QC H7V 0A3
514-956-6200 www.sanofi.ca

Takeda Canada Inc.
700 – 2201 Bristol Circle, Oakville, ON L6H 0J8
905-469-9333 www.takedacanada.com

LEGAL SERVICES

Blake, Cassels & Graydon LLP
2600 – 595 Burrard St., PO Box 49314, Three
Bentall Centre, Vancouver, BC V7X 1L3
604-631-3300 www.blakes.com

Christensen O'Connor Johnson Kindness
3600 – 1201 Third Ave., Seattle, WA 98101
206-682-8100 www.cojk.com

DuMoulin Black LLP
10th floor – 595 Howe St.,
Vancouver, BC V6C 2T5
604-687-1224 www.dumoulinblack.com

Farris, Vaughan, Wills & Murphy LLP
25th floor – 700 West Georgia St.,
PO Box 10026, Pacific Centre South ,
Vancouver, BC V7Y 1B3
604-684-9151 www.farris.com

Fasken Martineau DuMoulin LLP
2900 – 550 Burrard St., Bentall 5,
Vancouver, BC V6C 0A3
604-631-3131 www.fasken.com

Gowling WLG (Canada) LLP
2300 – 550 Burrard St., Bentall 5,
Vancouver, BC V6C 2B5
604-683-6498 www.gowlingwlg.com

McCarthy Tétrault LLP
2400 – 745 Thurlow St., Vancouver, BC V7Y 1K2
604-643-7100 www.mccarthy.ca

Norton Rose Fulbright Canada LLP
1800 – 510 West Georgia St.,
Vancouver, BC V6B 0M3
604-687-6575
www.nortonrosefulbright.com/ca/en

Oyen Wiggs Green & Mutala LLP
480 – 601 West Cordova St., The Station ,
Vancouver, BC V6B 1G1
604-669-3432 www.patentable.com

Seed Intellectual Property Law Group LLP
5400 – 701 Fifth Ave., Seattle, WA 98104
206-622-4900 www.seedip.com

Smart & Biggar/Fetherstonhaugh
2300 – 1055 West Georgia St.,
Vancouver, BC V6E 3P3
604-682-7780 www.smart-biggar.ca

MEDICAL DEVICES

Aeri Health
V3-318 CSB – 950 West 28th Ave.,
Vancouver, BC V5Z 4H4
866-944-8607 www.aerihealth.me

Aquila Veterinary Diagnostics Ltd.
1099 West 8th Ave., Vancouver, BC V6H 1C3
www.aquiladiagnostics.com

AR Medical Technologies
306 – 5050 Kingsway, Burnaby, BC V5H 4V7
888-875-3039 ar-medical.com

ARC Medical Devices Inc.
8 – 3071 No. 5 Rd., Richmond, BC V6X 2T4
604-222-9577 www.arcmedicaldevices.com

Biolux Research Ltd.
230 – 825 Powell St., Vancouver, BC V6A 1H7
604-669-0674 www.bioluxresearch.com

bioLytical Laboratories Inc.
1108 – 13351 Commerce Pky.,
Richmond, BC V6V 2X7
604-204-6784 www.biolytical.com

Clarius Mobile Health Corp.
350 – 3605 Gilmore Way,
Burnaby, BC V5G 4X5 www.clarius.me

Evasc Medical Systems Corp.
107 – 1099 West 8th Ave.,
Vancouver, BC V6H 1C3
604-742-3811 www.evasc.com

Farabloc Development Corp.
211 – 3030 Lincoln Ave., Coquitlam, BC V3B 6B4
604-941-8201 www.farabloc.com

Fusion Genomics Corp.
Discovery 1 1450 Simon Fraser University,
Burnaby, BC V5A 1S6
604-428-7701 www.fusiongenomics.com

Healthtech Connex Inc.
1500 – 13737 96th Ave., Surrey, BC V3V 0C6
604-576-2935 www.healthtechconnex.com

Innovatek Medical Inc.
3 – 1600 Derwent Way, Delta, BC V3M 6M5
604-522-8303 www.innovatekmed.com

Kardium Inc.
155 – 8518 Glenlyon Pky., Burnaby, BC V5J 0B6
604-248-8891 www.kardium.com

LifeScan Canada Ltd.
210 – 4321 Still Creek Dr., Burnaby, BC V5C 6S7
800-663-5521 www.onetouch.ca

LightIntegra Technology Inc.
330 – 2285 Clark Dr., Vancouver, BC V5N 3G9
604-734-3548 www.lightintegra.com

LivaNova Canada Corp.
5005 North Fraser Way, Burnaby, BC V5J 5M1
604-412-5650 www.livanova.com

Navigate Surgical Technologies
1758 West 8th Ave., Vancouver, BC V6J 1V6
604-637-4497 www.inliant.com

Neovasc Inc.
5138 – 13562 Maycrest Way,
Richmond, BC V6V 2J7
604-270-4344 www.neovasc.com

ReFleX Wireless Inc.
300 – 1055 West Hastings St.,
Vancouver, BC V6E 2E9
778-800-0841 www.reflexwireless.com

Rostrum Medical Innovations Inc.
3687 East 1st Ave., Vancouver, BC V5M 1C2
604-439-3054 www.rostrummedical.com

SHEV Labs Nanotechnologies Ltd.
426 – 7088 14th Ave.,
Burnaby, BC V3N 0E7 www.shevlabs.com

SOHO Biotech Inc.
162 – 628 East Kent Ave. South,
Vancouver, BC V5X 0B2
604-325-4609 www.sohobio.com

StarFish Medical
455 Boleskine Rd., Victoria, BC V8Z 1E7
250-388-3537 www.starfishmedical.com

Target Tape Inc.
201 – 13737 96th Ave.,
Surrey, BC V3V 0C6 www.target-tape.com

Tel-Array Diagnostics Inc.
418 – 3800 Wesbrook Mall,
Vancouver, BC V6S 2L9
604-221-9227 www.telarray.com

Telus Health Solutions
107 – 5550 152nd St., Surrey, BC V3S 5J9
866-879-9653 www.telushealth.com

Torus Biomedical Solutions Inc.
202 – 125 Milross Ave., Vancouver, BC V6A 0A1
778-822-2581 www.torusbiomedical.com

ViewsIQ Inc.
40 – 10551 Shellbridge Way, Airport Executive
Park, Building 2 , Richmond, BC V6X 2W9
855-847-7226 www.viewsiq.com

MEDICAL TECHNOLOGIES

Allied BioScience Inc.
31 Marine Dr., Point Roberts, WA
214-432-5584 www.alliedbioscience.com

Aspect Biosystems Ltd.
146 – 2259 Lower Mall, Vancouver, BC V6T 1Z4
604-822-8838 www.aspectbiosystems.com

BC Platforms
Innopoli 2, Tekniikantie 14 FI-02150,
Espoo www.bcplatforms.com

Conquer Mobile,
Health Tech Innovation Hub
201 – 13737 96th Ave., Surrey, BC V3V 0C6
604-629-5972 www.periopsim.com

Contextual Genomics Inc.
204 – 2389 Health Sciences Mall,
Vancouver, BC V6T 1Z3
778-379-2931 www.contextualgenomics.com

ELIX Wireless
104 – 334 East Kent Ave. South,
Vancouver, BC V5X 4N6
778-200-5097 www.elixwireless.com

Health and Technology District
1500 – 13737 96th Ave.,
Surrey, BC V3V 0C6 www.larkgroup.com/
health-and-technology-district

McKesson Medical Imaging Company
130 – 10711 Cambie Rd., Richmond, BC V6X 3G5
604-279-5422 www.mckesson.com

PHEMI Systems Inc.
180 – 887 Great Northern Way,
Vancouver, BC V5T 4T5
604-336-1119 www.phemi.com

SCIENTIFIC SUPPLIERS

GE Healthcare Life Sciences
500 Morgan Blvd., Baie-d'Urfé, QC H9X 3V1
800-463-5800 www.gelifesciences.com

PI Pharma Inventor Inc.
202-215 – 3800 Wesbrook Mall,
Vancouver, BC V6S 2L9
604-339-3244 www.pharmainventor.com

Precision NanoSystems Inc.
50 – 655 West Kent Ave.,
North Vancouver, BC V6P 6T7
888-618-0031 www.precisionnanosystems.com

Promega Corp.
2800 Woods Hollow Rd., Madison, WI 53711
608-274-4330 www.promega.com

STEMCELL Technologies Inc.
400 – 570 West 7th Ave.,
Vancouver, BC V5Z 1B3
604-877-0713 www.stemcell.com

VWR International Ltd.
2360 Argentia Rd., Mississauga, ON L5N 5Z7
800-932-5000 www.vwrcanlab.com

FIVE TIPS FOR PROTECTING YOUR STARTUP'S INTELLECTUAL PROPERTY

Intellectual property (IP) protection is essential for fostering innovation. If your startup is developing something truly new and inventive, these five tips will help you to get started securing your IP.

1. **Own your IP**. Science is a collaborative enterprise. You'll be working closely with contractors, employees, and other associates, any of whom may wish to claim an ownership interest in the intellectual property (IP) that they've helped develop. Ensure that your startup retains control of its innovations through the appropriate use of clear and precise agreements.

2. **Protect your IP**. IP protection is inherently fragile. For example, you cannot secure valid patent protection if you publicly disclose an idea before you've filed a patent application (with a limited grace period in some countries). In one recent Canadian case, discussions on an investor conference call, which had been made open to the public, were found to amount to a patent-invalidating public disclosure. Know ahead of time what steps you'll need to take to protect your IP so that you can avoid inadvertently losing your IP rights.

From left to right, top to bottom: Jennifer Marles, Tom Bailey, Christina Kwok, David Takagawa, Stephanie Melnychuk, and George Kondor Q.C.

3. **Secure your IP at the right time**. Most countries have a first-to-file patent regime. Earlier patent applicants gain priority over later applicants claiming the same subject matter. However, to obtain valid patent protection, you'll have to balance the advantages of being first with the need to gather enough data to enable a skilled person to practice the full scope of your invention. A clear strategy will help you to evaluate what IP should be protected and when applications should be filed.

4. **Avoid infringing others' IP**. Before you launch, or even invest in developing a new product or service, you need to ensure that you won't be infringing on another company's patents. While it is impossible to fully eliminate risk, careful patent searching can help you to identify pitfalls and can help you to identify workarounds.

5. **Understand what can be patented**. To be patentable, an invention must be truly new and inventive. It must also be patent eligible subject matter. What constitutes patent eligible subject matter varies by country and is currently in a state of flux in many jurisdictions. Diagnostic methods and computer-implemented inventions are two areas where the law may be problematic for your startup. Be sure to consider these issues with care while developing your IP strategy.

At Oyen Wiggs, we help our clients navigate their IP-related concerns through every stage of the process. Whether it is preparing a non-disclosure agreement, ensuring that employment and independent contractor agreements adequately protect a company's IP rights, filing a provisional patent application before a journal article is published, licensing IP to others, or conducting due diligence on the transfer of IP, we have the expertise to help advance our clients' IP interests. Our clients are inventors and entrepreneurs; we're here to help protect their innovations. ■

Biggest life sciences companies in B.C.

RANKED BY | Number of R&D employees in 2016

Rank '17	Company	Top local executive(s)	Areas of research	Ownership	Year founded	No. staff globally '16/'15	No. B.C. staff '16/'15	No. R&D staff '16/'15
1	**Stemcell Technologies Inc** 1618 Station St, Vancouver V6A 1B6 P: 604-877-0713 F: 800-567-2899 **www.stemcell.com**	**Allen Eaves**, president and CEO	Provides cell culture media, cell separation tools and accessory reagents for cell biology research, including stem cell biology, regenerative medicine, immunology and cancer research	Privately held	1993	846 701	625 515	**224** 195
2	**Arbutus Biopharma Corp** 8900 Glenlyon Pky Suite 100, Burnaby V5J 5J8 P: 604-419-3200 F: 604-419-3201 **www.arbutusbio.com**	**Mark Murray**, president and CEO, **Bruce Cousins**, EVP and CFO	RNA interference (RNAi) therapeutics	TSX:TKM; Nasdaq:TKMR	1992	122 134	NP NP	**90** 105
3	**Kardium Inc** 8518 Glenlyon Pky Suite 155, Burnaby V5J 0B6 P: 604-248-8891 F: 604-304-3478 **www.kardium.com**	**Doug Goertzen**, CEO	Cardiovascular	Privately held	2007	95 99	95 99	**80** 80
4	**Xenon Pharmaceuticals Inc** 3650 Gilmore Way Suite 200, Burnaby V5G 4W8 P: 604-484-3300 F: 604-484-3450 **www.xenon-pharma.com**	**Simon Pimstone**, president and CEO	Pain, epilepsy, dermatology	Nasdaq:XENE	1996	100 83	91 76	**70** 55
5	**Novadaq Technologies Inc** 8329 Eastlake Dr Suite 101, Burnaby V5A 4W2 P: 604-232-9861 F: 604-232-9841 **www.novadaq.com**	**Arthur Bailey**, VP, engineering and manufacturing	Fluorescence imaging for devices used in a variety of both open-field and minimally invasive surgery.	TSX:NDQ, Nasdaq:NVDQ	1999	NP NP	100 NP	**60** NP
6	**Zymeworks Inc** 1385 8th Ave W Suite 540, Vancouver V6H 3V9 P: 604-678-1388 F: 604-737-7077 **www.zymeworks.com**	**Ali Tehrani**, president and CEO	Antibody and protein therapeutics development with a primary focus in oncology	Privately held	2003	117 70	98 64	**56** 60
7	**Amgen British Columbia Inc** 7990 Enterprise St, Burnaby V5A 1V7 P: 604-415-1800 F: 604-676-8349 **www.amgen.ca**	**John Delaney**, director of research	Antibody therapeutics for the treatment of oncology, inflammation and infectious diseases	Nasdaq:AMGN	1980	18,000 18,000	NP 50	**50** 50
8	**ABM Applied Biological Materials Inc** 3671 Viking Way Unit 1, Richmond V6V 2J5 P: 604-247-2416 F: 604-247-2414 **www.abmgood.com**	**Peter Li**, CEO, **Lisa Young**, CFO, **Vivian Gao**, VP, corporation development	Focuses on premium research reagents including: enzymes, expression libraries for ORF, siRNA and miRNA; lentivirus, adenovirus and AAV systems. Also offers custom solutions for cell immortalization service, stem cells generation and more	Privately held	2004	150 120	67 55	**45** 45
9	**AbCellera Biologics Inc** 2125 East Mall Suite 305, Vancouver V6T 1Z4 P: 604-827-2128 F: NP **www.abcellera.com**	**Carl Hansen**, president and CEO	Antibody discovery	Privately held	2012	32 13	27 10	**29** 12
10	**Neovasc Inc** 13562 Maycrest Way Suite 5138, Richmond V6V 2J7 P: 604-270-4344 F: 604-270-4384 **www.neovasc.com**	**Alexei Marko**, CEO	Develops, manufactures and markets innovative vascular devices offering pericardial tissue processing, vascular product development and design and manufacturing solutions to industry partners	TSX:NVC; Nasdaq:NVCN	2000	205 197	NP 132[1]	**25**[1] 25[1]
11	**Boreal Genomics Inc** 2386 East Mall Suite 302, Vancouver V6T 1Z3 P: 604-822-8268 F: 604-822-2938 **www.borealgenomics.com**	**Andre Marziali**, president and CSO	Developed a sensitive and cost-effective liquid biopsy technology that allows detection of rare DNA mutations in blood; applications include early cancer detection, monitoring and non-invasive tumour profiling	Privately held	2007	19 NP	19 NP	**15** NP
12	**Qu Biologics Inc** 887 Great Northern Way Suite 138, Vancouver V5T 4T5 P: 604-734-1450 F: 604-676-2235 **www.qubiologics.com**	**Hal Gunn**, CEO	Treatment of cancer and immune-related diseases such as Crohn's disease and ulcerative colitis	Privately held	2007	NP 17	18 13	**14** 11
13	**Aquinox Pharmaceuticals Inc** 887 Great Northern Way Suite 450, Vancouver V5T 4T5 P: 604-629-9223 F: 778-331-4486 **www.aqxpharma.com**	**David J. Main**, president and CEO	Discovering and developing targeted therapeutics in disease areas of inflammation and immuno-oncology that target SHIP1, a key regulator of an important cellular signalling pathway in immune cells	Nasdaq:AQXP	2006	NP NP	NP NP	**11**[1] 11
14	**Alectos Therapeutics** 8999 Nelson Way, Burnaby V5A 4B5 P: 604-628-7129 F: 604-628-0137 **www.alectos.com**	**Ernest McEachern**, president and CEO	Neuroscience, oncology	Privately held	2007	NP NP	NP NP	**10** 7
14	**Kinexus Bioinformatics Corp** 8755 Ash St Suite 1, Vancouver V6P 6T3 P: 604-323-2547 F: 604-323-2548 **www.kinexus.ca**	**Steven Pelech**, president and chief scientific officer	Proteomics and bioinformatics products and services	Privately held	1999	13 13	13 13	**10** 10
16	**MSI Methylation Sciences Inc** 4475 Wayburne Dr Unit 108, Burnaby V5G 4X4 P: 604-435-5155 F: 604-435-5110 **www.methylationsciences.com**	**Nancy Harrison**, president	Develops and markets S-Adenosyl methionine, a prescription drug used as a dietary supplement	Privately held	2007	NP NP	NP NP	**7**[1] 7[1]
17	**PNP Pharmaceuticals Inc** 9388 North Fraser Cres, Burnaby V5J 0E3 P: 604-435-6200 F: 604-435-6213 **www.pnppharmaceuticals.com**	**Glen North**, president and CEO, **Dennis Thneah**, vice-president	Nutraceutical, over-the-counter orally disintegrating tablets	Privately held	1999	NP NP	NP NP	**6** 6
18	**Del Mar Pharmaceuticals** 999 Broadway W Suite 720, Vancouver V5Z 1K5 P: 604-629-5989 F: NP **www.delmarpharma.com**	**Jeffrey Bacha**, chairman and CEO	Cancer therapeutics	Nasdaq:DMPI	2010	15 12	5 5	**4** 4
19	**GenomeMe Canada** 3691 Viking Way Unit 1, Richmond V6V 2J6 P: 604-244-9962 F: NP **www.genomeme.ca**	**Mohammad Tabesh**, CEO	Genetic testing, molecular diagnostics, and molecular pathology	Privately held	NP	NP NP	NP NP	**3** NP
20	**LivaNova Canada Corp** 5005 North Fraser Way, Burnaby V5J 5M1 P: 604-412-5650 F: 604-412-5690 **www.livanova.com**	**Jennifer Arntorp**, director of operations	NP	NP	2015	4,600 NP	312 NP	**2** NP

Sources: Interviews with representatives of the above biotech firms and *BIV* research. Other firms may have ranked but did not respond to information requests by deadline. NP Not provided **1** - *BIV* estimate

Business in Vancouver makes every attempt to publish accurate information in the List, but accuracy cannot be guaranteed. Researched by Anna Liczmanska, *lists@biv.com*.


Patents
Trademarks
Copyrights
Related Litigation
Seed IP
Seed Intellectual Property Law Group LLP
Science is in
our DNA.
Seed IP Law Group provides Custom Crafted Intellectual Property Solutions™ to clients pursuing patents, trademarks, copyrights and other IP protection. With expertise in cell and molecular biology, immunology, chemistry, biochemistry and pharmacology, Seed IP helps clients patent biotechnology inventions by offering a team of scientists who also understand the legal and business sides of biotechnology.
206.622.4900 www.SeedIP.com 701 Fifth Avenue, Seattle, WA 98104

2016

Clinical milestones in British Columbia's life sciences sector

Date	*Company/organization*	*Clinical milestones*
Jan 8	Zymeworks Inc. and Kairos Therapeutics	Zymeworks and Kairos Therapeutics enter into strategic partnership to develop antibody drug conjugates and bi-specific antibodies
Jan 11	RepliCel Life Sciences	RepliCel receives European patent for its innovative dermal injector technology
Jan 13	DelMar Pharmaceuticals Inc.	DelMar Pharmaceuticals to collaborate with MD Anderson Cancer Center on development of DelMar's VAL-083 in brain cancer
Jan 19	Zymeworks Inc.	Zymeworks announces the successful achievement of a milestone with Eli Lilly in bi-specific antibody therapeutics collaboration
Jan 20	AbCellera Biologics Inc.	AbCellera announces successful completion of collaboration for the discovery of fully human antibodies against pathogenic *E. coli* and Ebola virus
Jan 27	AbCellera Biologics Inc. and Merck	AbCellera and Merck sign novel therapeutic antibody discovery collaboration
Feb 2	Teva Pharmaceutical Industries Ltd. and AbCellera Biologics Inc.	Teva and AbCellera enter into agreement to discover rare monoclonal antibodies
Feb 4	Aequus Pharmaceuticals Inc.	Aequus announces positive results from single-dose bioavailability study of aripiprazole transdermal patch
Feb 10	Xenon Pharmaceuticals Inc.	Xenon initiates Phase 2 clinical trial of XEN801 to treat moderate to severe acne
Feb 16	Aequus Pharmaceuticals Inc.	Aequus licenses Canadian commercialization rights to Trokendi XR and Oxtellar XR from Supernus
March 2	Aurinia Pharmaceuticals Inc.	Aurinia receives U.S. Food and Drug Administration (FDA) Fast Track designation for voclosporin for the treatment of lupus nephritis
March 16	Ondine Biomedical Inc.	Canadian photodisinfection technology heads to China
March 22	BioLytical Laboratories Inc.	BioLytical Laboratories successfully develops preclinical prototype assay for detection of antibodies to the Zika virus
March 22	Zymeworks Inc.	Zymeworks completes acquisition of Kairos Therapeutics, creating a leader in biologics drug discovery and development
April 6	Qu Biologics Inc.	Qu Biologics awarded Genome BC funding to study QBECO Site-Specific Immunomodulator (SSI) for ulcerative colitis
April 26	Zymeworks Inc. and GSK	Zymeworks and GSK enter second strategic collaboration to develop and commercialize bi-specific antibodies
May 11	Lungpacer Medical Inc.	Lungpacer Medical receives Expedited Access Pathway designation from FDA for the Lungpacer Diaphragm Pacing System
May 25	DelMar Pharmaceuticals Inc.	DelMar Pharmaceuticals announces successful completion of end of Phase 2 meeting with FDA on VAL-083 for the treatment of refractory glioblastoma multiforme
June 24	Zymeworks Inc.	Zymeworks establishes research collaboration with University of Victoria and BC Cancer Agency to develop engineered cytokine and cytokine receptor pairs
July 11	DelMar Pharmaceuticals Inc.	DelMar Pharmaceuticals announces approval for listing on Nasdaq
July 19	Centre for Drug Research and Development	Centre for Drug Research and Development expands global industry partnerships with addition of AstraZeneca
Aug 11	Zymeworks Inc. and Innovative Targeting Solutions Inc.	Zymeworks and Innovative Targeting Solutions enter collaboration and licence agreement to advance biotherapeutics research and development
Aug 18	Zymeworks Inc.	Zymeworks' ZW25 and ZW33 granted Orphan Drug designation for ovarian cancer by FDA
Aug 19	BioLytical Laboratories Inc.	BioLytical Laboratories announces patent filings in U.S. for Zika detection assays
Aug 23	Innovative Targeting Solutions Inc.	Innovative Targeting Solutions announces collaboration with Johnson & Johnson Innovation to advance drug discovery
Aug 24	AbCellera Biologics Inc.	AbCellera completes antibody discovery project with Kodiak Sciences to identify lead therapeutic
Sept 2	Stemcell Technologies Inc.	GE Healthcare expands cell therapy portfolio with licence of Stemcell Technologies' T-cell reagents
Sept 13	Arbutus Biopharma Corp.	Arbutus' chief scientific officer, Dr. Michael J. Sofia, awarded the 2016 Lasker-DeBakey Clinical Medical Research Award
Sept 13	Centre for Drug Research and Development	Centre for Drug Research and Development launches new company developing life-saving sepsis diagnostic
Sept 16	Biolux Research	Biolux Research announces Irish distribution agreement with Promed for OrthoPulse
Sept 29	Aequus Pharmaceuticals Inc.	Aequus obtains Ontario provincial listing for PrVistitan
Nov 14	BioLytical Laboratories Inc.	BioLytical launches world's fastest HIV self-test in U.K.
Dec 14	DelMar Pharmaceuticals Inc.	DelMar Pharmaceuticals receives notice of allowance from the U.S. Patent and Trademark Office for key patent for VAL-083

2016

Investments into British Columbia's life sciences sector

Date	*Company/organization*	*Type of investment*	*Amount (CAD)*
Jan 8	Zymeworks Inc.	Zymeworks closes on Series A financing	$80.6 million
Jan 12	Aequus Pharmaceuticals Inc.	Aequus closes previously announced equity financings	$2.65 million
March 23	Centre for Drug Research and Development	Centre for Drug Research and Development earns federal support in 2016 budget	$32 million
April 12	Qu Biologics Inc.	Qu Biologics closes private financing	$4 million
May 5	DelMar Pharmaceuticals Inc.	DelMar Pharmaceuticals announces private placement of preferred shares	$5.6 million
May 31	Celator Pharmaceuticals Inc.	Jazz Pharmaceuticals and Celator Pharmaceuticals announce agreement for Jazz to acquire Celator for $30.25 per share	$1.97 billion
June 16	Aquila Diagnostic Systems Inc.	Aquila Diagnostic Systems raises $1.75 million	$1.75 million
June 17	Response Biomedical Corp.	Response Biomedical announces closing of first tranche of private placement	$1.3 million
June 28	Transferra Nanosciences Inc.	Transferra Nanosciences enters into sale agreement with Evonik Industries	Private
July 21	Arbutus Medical Inc.	University of British Columbia venture Arbutus Medical receives $1 million to expand in Asia and Africa	$1 million
Sept 8	Xenon Pharmaceuticals Inc.	Xenon Pharmaceuticals announces public offering of common shares	$39 million
Sept 13	Aequus Pharmaceuticals Inc.	Aequus Pharmaceuticals closes financing	$2.7 million
Sept 13	Xenon Pharmaceuticals Inc.	Xenon Pharmaceuticals announces exercise in full of option to purchase additional shares and closing of $34.5 million public offering	$45.2 million
Sept 19	Aquinox Pharmaceuticals Inc.	Aquinox prices public offering of common stock	$86 million
Dec 2	Neovasc Inc.	Neovasc and Boston Scientific reach agreement	$98 million
Total			$2.37 billion

BEHIND THE SCENES

The staff who make it all happen at LifeSciences BC: from left, **Irma Zukic**, executive assistant to Dr. Lesley Esford; **Susan Ogilvie**, communications and external affairs manager; **Dr. Lesley Esford**, president; and **Elizabeth Sun**, business development manager

CHUNG CHOW

LIFESCIENCES BC ANNOUNCES 2017 ANNUAL AWARD WINNERS

DR. LESLEY ESFORD | PRESIDENT, LIFESCIENCES BC

There can be no greater pleasure than to recognize the many talented scientists, researchers, innovators and life science companies and organizations in British Columbia, that work so very hard on health discovery that will impact patient outcomes

LifeSciences BC is pleased to announce the recipients of the 19th Annual LifeSciences BC Awards, presented by Farris. These awards are presented annually in recognition of the significant achievements of talented individuals and organizations that embody the life science community of British Columbia. Our award winners exemplify the full spectrum from discovery to commercialization and underscore the full breadth and depth of knowledge that impacts the B.C. bio-economy.

THE 2017 LIFESCIENCES BC AWARD WINNERS ARE:	
Dr. Leonard Foster	Genome British Columbia Award for Scientific Excellence
Dr. James Russell	Michael Smith Foundation for Health Research – Aubrey J. Tingle Prize
Dr. William Hunter	Milton Wong Award for Leadership
Dr. Alan Winter	Dr. Don Rix Award for Lifetime Achievement
Celator Pharmaceuticals Inc.	Deal of the Year
Innovative Targeting Solutions Inc.	Growth Stage Life Sciences Company of the Year
Clarius Mobile Health Corp.	Growth Stage Medtech Company of the Year
Industrial Research Assistance Program (IRAP) – Pacific Region	Strategic Life Sciences Partner of the Year
McKesson Imaging and Workflow Solutions	Life Sciences Company of the Year

GENOME BRITISH COLUMBIA AWARD FOR SCIENTIFIC EXCELLENCE
DR. LEONARD FOSTER

Dr. Foster is a professor in the department of biochemistry and molecular biology and in the Michael Smith Laboratories at the University of British Columbia (UBC). He grew up in McBride, B.C., and completed undergraduate studies at Simon Fraser University (SFU). After SFU he attended the University of Toronto and completed a doctoral degree in cell biology and biochemistry. After completing his doctoral degree he attended the University of Southern Denmark to study mass spectrometry and proteomics with Dr. Matthias Mann.

After completing his Danish studies, in 2005 he started at his current position at UBC. Dr. Foster's research interests revolve around the application of mass spectrometry-based proteomics to study host-pathogen interactions. He uses proteomics to understand, at a systems biology level, how human pathogens manipulate their host cells and how the cells, in turn, respond to infection. In particular, he has developed, with other collaborators at UBC, potential vaccines for chlamydia and salmonella bacteria. He is also known for his research in honeybees, particularly for understanding the mechanisms of disease resistance and using this knowledge to try to guide selective breeding in this important insect.

In the 12 years that he has been an independent investigator at UBC, Dr. Foster has held the Canada Research Chair in Quantitative Proteomics, has published 143 papers and has trained more than 30 undergraduate and graduate students, as well as post-doctoral fellows. He remains very active in outreach and extension and frequently engages the public on various aspects of human health, honeybees and biotechnology.

About LifeSciences BC
LifeSciences BC is a non-profit industry association that supports and represents the life science community of British Columbia through leadership, investment, advocacy and promotion of our world-class life science community.

LifeSciences BC undertakes numerous initiatives including local, national and international partnerships, helping to facilitate investment and global partnering opportunities while nurturing economic development in B.C. through the life sciences industry.

MICHAEL SMITH FOUNDATION FOR HEALTH RESEARCH – AUBREY J. TINGLE PRIZE

DR. JAMES RUSSELL

Dr. Russell is an internationally renowned researcher with expertise in critical care and severe infection. He is also one of the most sought-after experts in clinical trial design in North America.

Dr. Russell is professor of medicine at the University of British Columbia (UBC) and principal investigator at the Centre for Heart Lung Innovation at St. Paul's Hospital, where his work focuses on the acute organ failures seen in critically ill patients. In 1982, he founded the Critical Care Division at UBC and St. Paul's Hospital, which he has grown to an internationally recognized group that provides world-class care and leads translational research to continually improve that care. In his research career spanning over 35 years, he has published 237 peer-reviewed journal articles, 42 book chapters and 186 research abstracts, while supervising 38 past and three present trainees.

As one of the founders of the Personalized Medicine Initiative, Dr. Russell also played a major role in bringing personalized medicine to British Columbia. This umbrella organization of personalized health-care stakeholders is working to introduce an individualized molecular approach to health management at a preventive, diagnostic and therapeutic level. Individually, Dr. Russell was one of the first sepsis experts to recognize the importance of personalized approaches for this complicated clinical syndrome, and see its potential for reducing hospital readmissions and improving quality of life after sepsis.

In addition to his clinical and academic work, Dr. Russell has co-founded two UBC spinoff companies for translation of the findings of his and his colleagues' research: Sirius Genomics Inc., a company that focused on discovery and development of pharmacogenomic kits (so-called predictive biomarkers) for drugs in sepsis; and Cyon Therapeutics, focused on development of a PCSK9 inhibitor for the treatment of sepsis.

Dr. Russell holds an undergraduate degree in biology from Princeton University and a degree in medicine from the University of Toronto. He did his residency in medicine at the University of Toronto and critical-care medicine and research fellowships at the University of California, San Francisco.

MILTON WONG AWARD FOR LEADERSHIP

DR. WILLIAM HUNTER

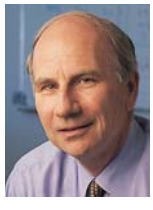
Dr. Hunter has been president and CEO of Cardiome Pharma Corp. in Vancouver since 2012. Cardiome (TSX:COM; Nasdaq:CRME) is an integrated commercial specialty pharmaceutical company that markets and sells acute care parenteral drugs in Europe, Canada and more than 50 countries around the world. Dr. Hunter co-founded and previously served as president and chief executive officer of Angiotech Pharmaceuticals (1992-2011).

His research career has revolved around examining ways to make implantable medical devices "bioactive" and "smarter" through the use of technologies borrowed from outside the industry, such as pharmaceutical coatings, surface modification and sensor technologies. As an inventor with over 200 patents and patent applications to his name, he has been involved in the discovery and development of TAXUS Drug-Eluting Coronary Stent, the Zilver PTX Peripheral Drug-Eluting Stent and the Quill barbed wound closure device; combined, these products have been used in more than 20 million patients and recorded revenues exceeding $15 billion. His latest venture, Canary Medical, uses implanted sensor technology to allow implanted medical devices to "self-report" on function, activity, wear, complications and patient outcomes.

Dr. Hunter has a B.Sc. from McGill University and an M.Sc. and MD degree from the University of British Columbia.

DR. DON RIX AWARD FOR LIFETIME ACHIEVEMENT

DR. ALAN WINTER



Dr. Winter was president and CEO of Genome B.C. from December 2001 to June 2016. Genome BC is a non-profit research organization established in Vancouver to enable British Columbia to become a world leader in selected areas of genomics R&D and to develop a vibrant life sciences cluster in the province. Dr. Winter is also a trustee of the Providence Health Care Research Institute and a former board member of LifeSciences BC. He was also chair of the BCCDC Foundation for Population and Public Health. In 2007, Dr. Winter received a Leadership Award from LifeSciences BC.

Dr. Winter has 30 years of experience at senior levels in the technology industry and in government, including being founding president and CEO of the New Media Innovation Centre in Vancouver, president of the Com Dev Space Group in Ontario, and president and CEO of MPR Teltech in Vancouver. During his tenure as president, six companies were spun out of MPR, including PMC-Sierra and Sierra Wireless. Prior to MPR, Dr. Winter worked for Telesat Canada and as a scientist in Canada's space program at the federal Communications Research Centre in Ottawa, where he was responsible for the satellite-aided search and rescue project (SARSAT). To date, the international Cospas/SARSAT system has been instrumental in saving more than 35,000 lives.

Dr. Winter is a fellow of the Canadian Academy of Engineering and the American Association for the Advancement of Science. He is a fellow of the Canadian Aeronautics and Space Institute and received its inaugural Alouette Award. He was a director of Alberta Innovates Technology Futures, Oceans Network Canada and several technology companies in Canada. He was chair of the board of the Communications Research Centre, deputy chair of the federal Council of Science and Technology Advisors, a member of the B.C. Premier's Council on Science and Technology, a founding director of CANARIE, and chair of the Canadian Research Management Association and of PRECARN Associates. Dr. Winter was also a member of the Expert Panel on Science Performance and Research Funding, Council of Canadian Academies.

Dr. Winter received his PhD from Queen's University, Kingston, and was recognized by the Queen's Alumni Legacy of Achievement.

2017 Annual LifeSciences BC Award Winners

DEAL OF THE YEAR
CELATOR PHARMACEUTICALS INC.

Vancouver-based Celator Pharmaceuticals Inc. was purchased by Jazz Pharmaceuticals for US$1.5 billion in July 2016. Jazz acquired Celator because of Vyxeos, the company's lead compound for treating high-risk acute myeloid leukemia, a cancer of the blood and bone marrow.

GROWTH STAGE LIFE SCIENCES COMPANY OF THE YEAR
INNOVATIVE TARGETING SOLUTIONS INC.

Innovative Targeting Solutions Inc. (ITS) is engaged in the discovery of antibody therapeutics using a novel, proprietary, fully human monoclonal antibody (mAb) technology.

ITS' technology is unlike any existing approach to making fully human mAbs. It was founded by Dr. Michael Gallo, who was part of the core team responsible for the creation of XenoMouse. He was also formerly vice-president of research at Abgenix Inc. and executive director of research/site head at Amgen's subsidiary in British Columbia, which focused on fully human mAb discovery using the XenoMouse platform. ITS' platform, because it exploits the human V(D)J recombination system, is capable of "de novo" antibody generation and, for the first time, allows for mammalian display repertoires of >10^9 to be exploited effectively. This represents a significant advance in display technologies and offers advantages over existing protein engineering approaches; unlike phage or yeast display, reformatting is not required, engineering can take place within the final scaffold, and reported assays and selection strategies can be engineered into the host cell allowing for upfront functional screens.

GROWTH STAGE MEDTECH COMPANY OF THE YEAR
CLARIUS MOBILE HEALTH CORP.

Laurent Pelissier founded Clarius in 2014 with the goal to enable more clinicians to use high-performance ultrasound imaging systems at point of care. Prior to this, he was founder and CEO of Ultrasonix, the leader in research ultrasound systems, acquired by Analogic. He holds an M.Sc. in electrical engineering from ENSEA, France.

Clarius Mobile Health was founded by experienced innovators who have played an instrumental role in the ultrasound industry. Its developers were the brains behind the first PC-based platform for ultrasound research. It also introduced the first touch-screen ultrasound system with a simplified user interface.

Thanks to the power of smartphones, advanced technology and decades of collective ultrasound experience, the Clarius team is getting ready to deliver a high-quality Point-and-Shoot Ultrasound device that works with virtually any smart device. Clarius began filing for regulatory clearance in May 2016.

Clarius started with a simple mission: to enable more clinicians to use ultrasound to improve patient care. Then it talked to users. It listened to physicians who wished for an ultrasound device that worked with their iPhone. Clarius heard from new users of ultrasound who asked for a device that is easy to use and more affordable. The company talked to clinicians who tried other hand-held ultrasound devices and asked for better image quality and flexibility – that is what drove the design and development of the Clarius Ultrasound device.

STRATEGIC LIFE SCIENCES PARTNER OF THE YEAR
INDUSTRIAL RESEARCH ASSISTANCE PROGRAM (IRAP) – PACIFIC REGION

For nearly 70 years, the National Research Council of Canada Industrial Research Assistance Program (NRC-IRAP) has been stimulating wealth creation for Canada through technological innovation. This is largely accomplished by providing technology assistance to small and medium-sized enterprises (SMEs), at all stages of the innovation process, to build their innovation capacity and successfully take their ideas to market. NRC-IRAP helps SMEs identify and understand technology issues and opportunities and provides linkages to the best business and R&D expertise in Canada.

LIFE SCIENCES COMPANY OF THE YEAR
MCKESSON IMAGING AND WORKFLOW SOLUTIONS

McKesson's Imaging and Workflow Solutions business is headquartered in Richmond, B.C., and provides industry-leading radiology and cardiology medical imaging software. With more than 25 years in medical imaging IT, its Imaging and Workflow Solutions team has developed broad diagnostic imaging domain expertise as well as deep enterprise IT capabilities. McKesson works with global health-care leaders and some of the world's largest health networks and systems in Canada, the U.S., Europe, Asia and Australia. Its software solutions are installed in more than 3,000 clinical facilities worldwide.

Powering Big Data Movement for Global Research

Connect. Collaborate. Share. Accelerate.

Data drives innovation in the life sciences. Collaborative teams in biomedical research, pharmacology, academia, government and national laboratories need to quickly and efficiently exchange and process vast amounts of data. New research technologies – in particular, next-generation genomic sequencing – create tens of hundreds of gigabytes of data for each experimental run.

Supporting the movement of these huge data sets, Aspera software provides breakthrough high-speed file transfer across the globe for projects such as 1000 Genomes, BGI's "EasyGenomics" cloud-based bioinformatics solution and GigaScience, the online life sciences journal and integrated database.

Aspera software can help you address the challenges associated with sharing extremely large data sets.

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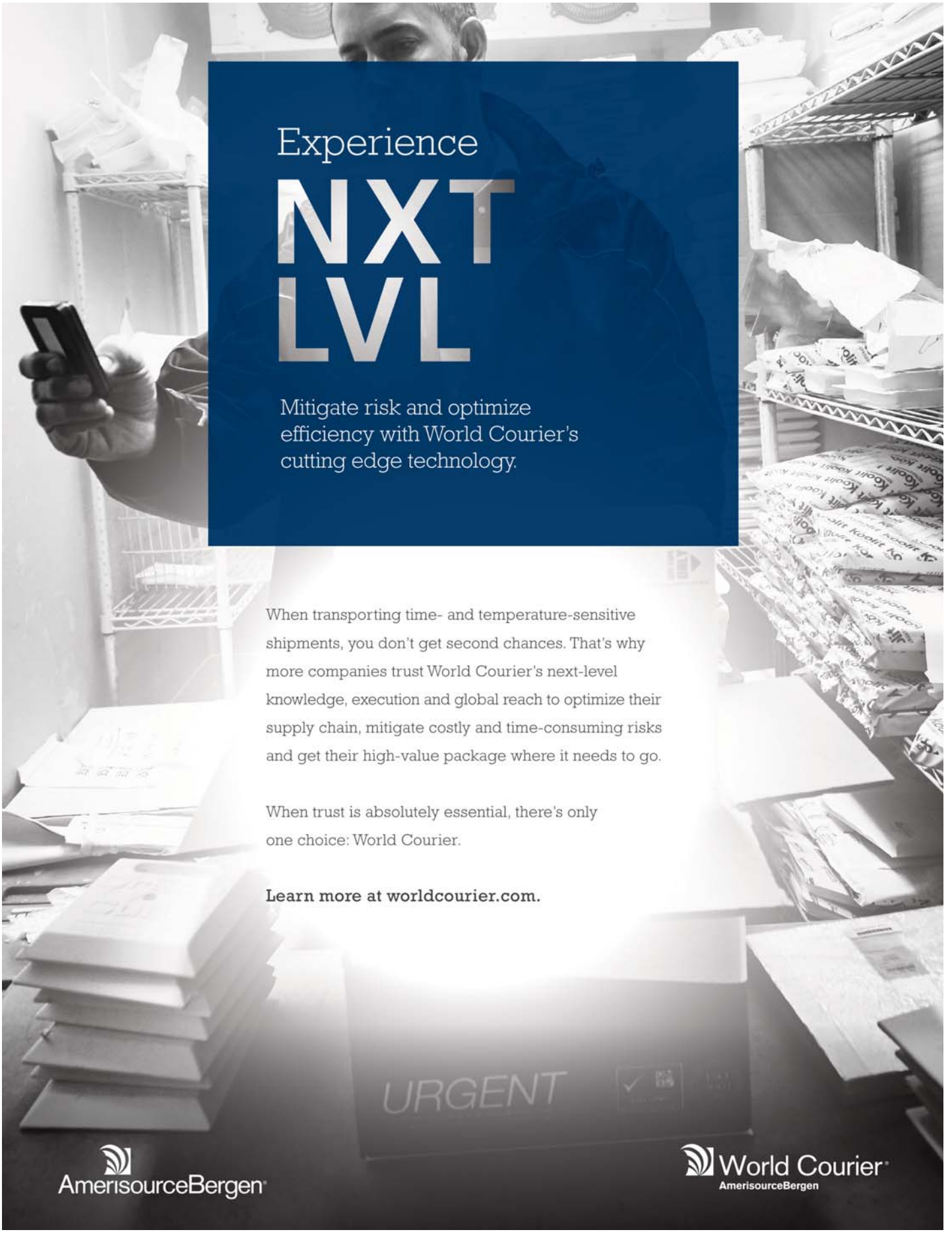
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