

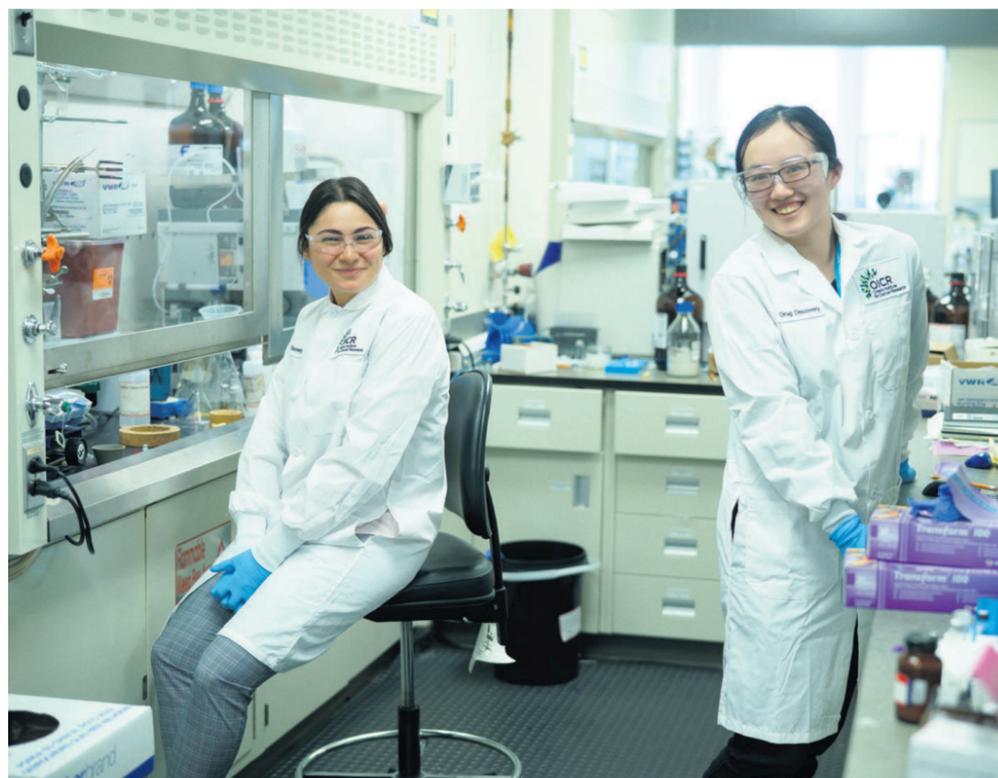
# COMMERCIALIZING INNOVATION FOR CANCER PATIENTS AND ECONOMIC IMPACT

From the development of cobalt-60 radiation for tumours to the use of small-molecule inhibitors to block the growth of cancer stem cells, Canada boasts a rich history of innovations in oncology. But driving these innovations from research laboratories to clinical applications remains a significant challenge.

"We've seen innovations languish in the lab because of the lack of investment capital to move them into clinical trials," says David O'Neill, president of FACIT, a commercialization venture group that works with the Ontario Institute for Cancer Research (OICR) to bring the province's best oncology discoveries to market. "Those discoveries that do make it past the lab are often acquired prematurely by U.S.-based pharmaceutical companies that might not make them a priority because they've got so many other projects in the pipeline."

This inability to bridge the gap between innovation and commercialization translates into lost economic opportunities for Canadians, as pharmaceutical jobs and manufacturing contracts leave the country in the wake of a foreign acquisition or licensing agreement for a drug discovery.

"But more importantly, Canadian patients with cancer may have to wait a decade for these innovations to come back to Canada," says Dr. O'Neill. "We really need to take responsibility for ensuring we capitalize on our investments in research and increase access to clinical trials



FACIT is helping to build industrial biotechnology in Ontario, creating new jobs for scientists. SUPPLIED

and treatment for Canadians living with cancer."

This was the reason behind the creation of FACIT, an independent for-profit corporation that drives local development of Ontario innovations by providing seed capital, executive

management, corporate and market guidance, and access to industry and investor networks.

While FACIT's primary focus is on discoveries originating from its strategic partner, OICR, it also identifies and supports innovative cancer tech-

nologies across the province through two funding programs: a Prospects Fund that provides up to \$200,000 for early-stage projects, and its Compass Rose Fund, which invests up to \$5-million for early-stage projects with clear commercial potential.

FACIT also promotes Ontario discoveries through its annual Falcons' Fortunes competition, where entrepreneurs pitch their cancer-focused innovations to an investor panel for a chance at a \$50,000 investment. This year's competition, which showcases six Ontario-based finalists, is scheduled to take place today, on World Cancer Day.

"Our goal is to drive commercialization in the province and make it attractive for entrepreneurs and investors to capitalize on the research and clinical infrastructure in Ontario," says Dr. O'Neill. "As home to many of the leading experts in cancer research and one of the most genetically diverse populations in the world, Ontario has the attractive characteristics for robust clinical trials."

To date, FACIT has supported close to 60 projects and created 16 Ontario companies with direct and leveraged funding of over \$850-million. Its commercialization model has produced many success stories, including last year's historic \$1-billion (U.S.) partnership between Triphase Accelerator – a private drug development company with FACIT as majority shareholder – and New Jersey-based Celgene Corporation, to advance an OICR-discovered blood cancer therapy using Ontario researchers and clinical sites.

"With this partnership, we are providing a local pathway from discovery to development, and increasing access to future clinical trials for Canadian patients," says Dr. O'Neill. "This pathway is something we've never had before in Ontario."

## EMBRACING JOY IN THE BONUS YEARS

While Libby Yu calls her family's journey with cancer an "emotional rollercoaster," it's not the downward dips she wants to dwell on. Instead, she wants to share the valuable lessons she's learned during the "bonus years" before her husband Cliff So passed away.

"I could talk about how cancer disrupted our happy lives. I could talk about the grief, anxiety and numbness I felt at every stage of his cancer diagnosis. I could talk about the challenge to walk courageously while seeing my life partner weaken, suffer and face his last days," she says. "But what I want to talk

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Dr. Libby Yu

about instead is the gift of increased awareness of the present day, the gift of facing adversity with hope."

It started with Cliff's diagnosis of late-stage testicular cancer in 2013, at the time when he was 39 and their children were two, four and six years old. Despite a "poor prognosis," since the cancer had metastasized to his lungs and brain, "he fought like a warrior for four years," says Dr. Yu.

Cliff's battle with cancer included two brain surgeries, six rounds of conventional chemo, two rounds of high-dose chemo with stem cell transplants, and 20 rounds of radiation. Regardless of the countless

hours spent in the hospital and living with brain injury, he faced this journey with hope, faith and equanimity, says Dr. Yu, who recently shared her story in a keynote address at the B.C. Cancer Summit.

Shortly before his death, Cliff wrote, "I was supposed to die four years ago. The oncologist estimated that, if I had not started chemo when I did, I would have had only 48 hours to live, such as the tumour load in my lungs. Then I experienced a massive brain hemorrhage during treatment, from which I should have died. [Yet instead], I was given more time to be with my family."

Cliff's courageous outlook not only inspired his wife and children, it also shaped their time together. "Supporting Cliff, raising our young children and facing the possibility of a bleak future could have robbed my joy and my sanity," says Dr. Yu. "But instead, the cancer taught us to embrace each

day as a gift from God."

It taught them to embrace life "even when life didn't seem so joyful," she says. "As Cliff fought his battle, he inspired us to live and love intentionally. It also opened our eyes to the compassion, generosity and selfless love of our community, which included our medical team, family and friends, all of whom contributed to our mental, emotional and spiritual well-being."

It was also important to "live with hope," says Dr. Yu, "hope for each new treatment to cure Cliff or prolong his time on earth."

She now wants to pass this gift of hope to others and, as a renowned concert pianist, organizes benefit concerts and fundraising events. "It is our family's hope that the fundraising will help to further cancer research and give other families hope in more time to spend with their loved ones," says Dr. Yu.

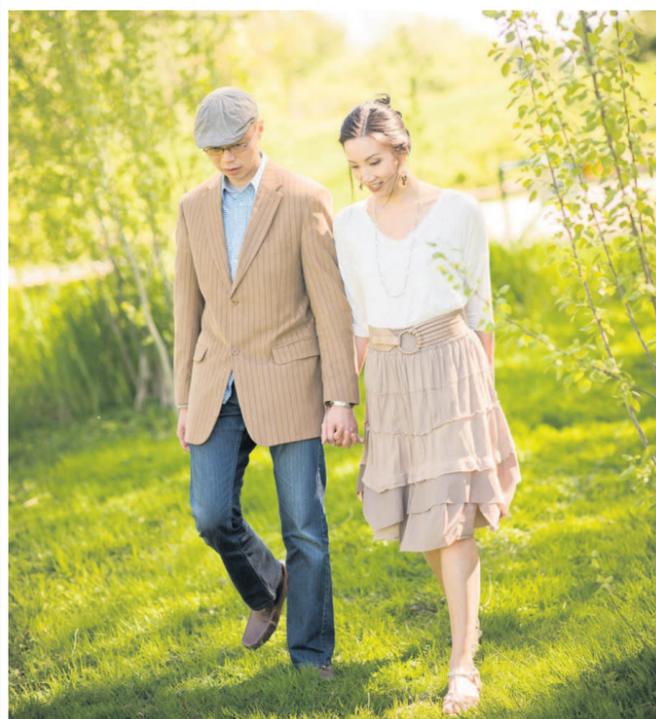
## Without commercialization, cancer discoveries too often languish in the lab

FACIT's portfolio has attracted \$850 million in investments to drive Ontario innovations to patients.

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**FACIT**  
 Cancer Breakthroughs. Realized.



Her husband's journey with cancer inspired pianist Libby Yu to share her insights and support hope through benefit concerts. SAKURA PHOTOGRAPHY/BC CANCER FOUNDATION