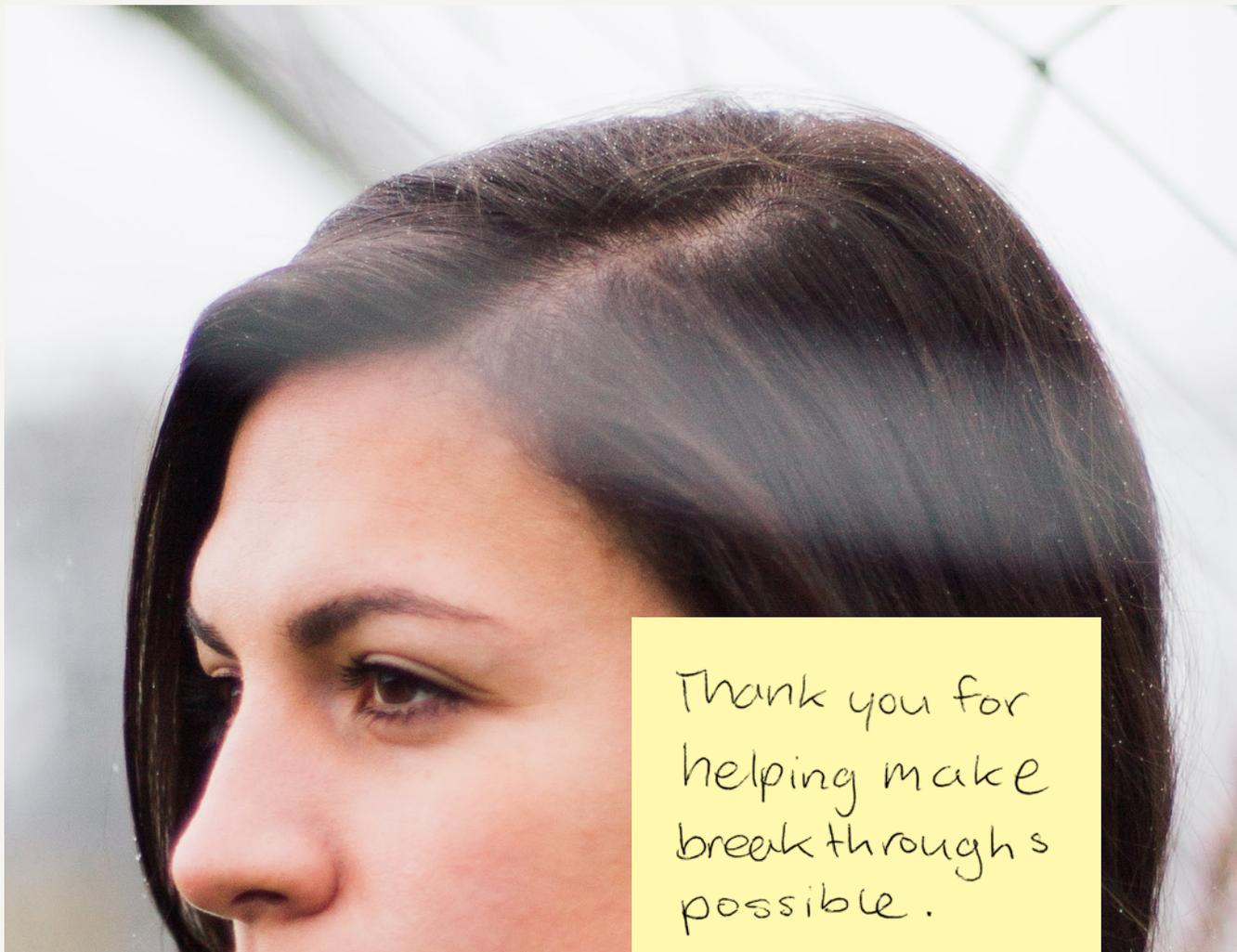


Brain Breakthroughs

It's About Time



Thank you for
helping make
breakthroughs
possible.

THALIA, CONCUSSION PATIENT

2023 CAMPAIGN UPDATE

[BRAINBREAKTHROUGHS.CA](https://brainbreakthroughs.ca)

VGH+
UBC hospital
foundation

WITH GRATITUDE

Thanks to your philanthropic support of VGH & UBC Hospital Foundation's *Brain Breakthroughs* campaign, **we exceeded our goal and raised over \$40 million**. This incredible achievement is the result of your collective generosity. We thank each individual, family, friend, company and organization whose selfless contribution allowed us to amass truly transformational funding to improve the lives of those impacted by brain disease or injury.

Brain Breakthroughs was a catalyst for making meaningful advances in research and care for well-known diseases such as stroke and Alzheimer's, and less prominent and often overlooked diseases such as Multiple Sclerosis (MS) and Epilepsy.

Today, we are thrilled to report on what has been accomplished since the campaign launched in 2019. Together, we welcomed exceptional neurologic specialists, introduced groundbreaking technology and launched innovative programming. Your generosity extended across our key sites: Vancouver General Hospital (VGH), UBC Hospital, GF Strong Rehab Centre, and the Djavad Mowafaghian Centre for Brain Health (DMCBH).

Throughout our *Brain Breakthroughs* campaign, our Cabinet members provided invaluable guidance. These volunteers played an integral role in our success. We are grateful for their leadership and generosity to elevating BC's health care.



"Together, we achieved countless brain breakthroughs, both big and small, providing time for the people of British Columbia. Time for research and discovery. Time that saved lives. And more time with the people we love. Thank you for your generosity."

A handwritten signature in black ink, appearing to be 'AC' with a long horizontal stroke extending to the right.

ANGELA CHAPMAN

PRESIDENT & CEO, VGH & UBC HOSPITAL FOUNDATION

EQUIPMENT & TECHNOLOGY

Your brain is your most vital organ and it cannot be replaced. When something goes wrong, time is vital.

Specialists at our hospital sites play a critical role across the spectrum of care, starting with the all-important moment of diagnosing a disease. A fast, accurate diagnosis saves lives and leads to the prescription of the most appropriate treatment and rehabilitation plan to help restore the health of a patient and improve their quality of life.

Thanks to your generous support for the *Brain Breakthroughs* campaign, VGH was able to purchase cutting edge equipment that will aid physicians in saving lives for generations to come. This will help them make more accurate assessments, diagnoses and treatment decisions when time means everything.

HIGHLIGHTS



3TMRI

The first 3TMRI for VGH, enhancing diagnosis for a broad range of neurological conditions, including advanced/complex stroke, epilepsy, brain tumours and many more.



NEUROCRITICAL CARE

VGH is home to one of the world's premier Neurocritical Care Programs. Here, Dr. Myp Sekhon and team apply Brain Bolt to save the lives of trauma patients.

Brain Bolt is a revolutionary technology that manipulates blood pressure and oxygen levels to heal the injured brain.



3TMRI AT VGH, BLACKMORE PAVILION, ARRIVED DECEMBER 2022

3TMRI

Advanced magnetic resonance imaging (MRI) technology is the lynchpin that drives faster, better diagnostic services. The high resolution MR images enable specialists to detect minuscule irregularities, lesions and suspicious-looking masses in different organs early on, before they become an issue. Once detected, the team can provide the most effective treatment, including non-invasive, image-guided therapies that can save or dramatically improve lives.

A pivotal goal achieved by the *Brain Breakthroughs* campaign was to bring the very first 3TMRI machine to VGH. The new MRI has recently been delivered, and is expected to be operational in 2023.

The 3TMRI is a highly advanced technology with the greatest possible degree of performance power. It provides faster and extremely clear and vivid images, which decreases overall scan time. These benefits are of great value to patients in terms of access, diagnostic precision and overall comfort.

EPILEPSY

Doubling bed capacity for BC's only **Seizure Investigation Unit** (SIU) to broaden access to diagnose seizures in patients who do not respond to standard treatment



"We can now assess, diagnose and treat more patients than ever before in our expanded SIU, and do it in less time. Philanthropy has made that possible for epilepsy patients in BC."

DR. YAHYA AGHAKHANI
MEDICAL DIRECTOR
VGH EPILEPSY PROGRAM

NEUROSURGERY

A **special robotic microscope** called Blue 400 to facilitate ultra precise removal of brain tumors with less damage to healthy tissue



"Thanks to philanthropy, VGH now has access to Blue 400 technology to help improve patient outcomes".

DR. PETER GOODERHAM
MEDICAL HEAD
VGH NEUROSEURGERY

PEOPLE & CARE

Collectively, our care sites are the provincial referral centre for patients who are suffering from complex brain disease, disorder or injury. What sets them apart is not just the top-tier facilities or cutting edge technology being used, it's the people – expert teams who have made it their mission to solve the most difficult challenges in brain health. That's what makes them such a successful place for treatment and recovery.

The advancements in care and research inspires clinicians from around the globe to come to Vancouver to share their knowledge and learn from teams here, joining the brightest and the best doctors, technicians, nurses and care workers. Stroke survivor Trevor Norris and his wife Mena are only one of the hundreds of grateful patients saved by the exceptional team at VGH.



DR. PHILIP TEAL,
HEAD OF NEUROLOGY,
VANCOUVER ACUTE

HIGHLIGHTS

Reaching more British Columbians with **telestroke**

Testing strategies to **screen and prevent stroke** in those at risk (eg. people with congenital heart disease or living in the Downtown Eastside)

Deploying **“code stroke” simulations** to optimize care

Thanks to philanthropic support of *Brain Breakthroughs*, teams were able to jumpstart or expand various neurology fellowship programs, from stroke and epilepsy to neurocritical care. Your generosity helped provide fellows with the training and experience to become future leaders in their field. They will take this knowledge with them wherever they may practice to help more patients.

Meet the next generation of neurology superstars:



“This training was possible only due to the generous contributions of donors to Brain Breakthroughs, and I will forever be appreciative for the crucial support to my education and early career.”

DR. JONATHAN GORMAN

VGH STROKE FELLOW
RECRUITED TO VGH
STROKE TEAM



“I was inspired to join the team by the numerous exceptional clinicians who trained me at VGH and the examples set by phenomenal stroke researchers like Dr. Thalia Field. I cannot wait to make a difference to patients in my care. Thank you for your trust and support.”

DR. LILY ZHOU

VGH STROKE TEAM RECRUIT



“It is a privilege being supported and mentored in such a nurturing environment to help save lives and improve outcomes for patients with brain injury following cardiac arrest.”

DR. RYAN HOILAND

VGH POSTDOCTORAL FELLOW
RECRUITED TO VGH NEURO-
CRITICAL CARE TEAM



“The fellowship program you are supporting is an important part of offering better care to more patients.”

DR. GRACE SERRANO
VGH EPILEPSY FELLOW
GRADUATE



“I am so grateful for the opportunity to hone my skills and train with the specialists at VGH. Thank you!”

DR. SANAZ AHMADI KARVIG
PEARSON FAMILY FELLOW IN
EPILEPSY AT VGH



“Canada needs more epilepsy specialists, so you are offering the opportunity for more clinicians skilled in epilepsy treatment to help more patients now and in the future.”

DR. MAHER ARABI
JOSEPH CHUNG FELLOW IN
EPILEPSY AT VGH

OTHER HIGHLIGHTS

- a new web tool from the experts at GF Strong to help patients recover from concussion, located at concussion.vch.ca
- a progressive study to measure outcomes for patients with neuroinflammatory neuromuscular conditions
- support for caregivers in the community caring for aging loved ones with neurodegenerative conditions

RESEARCH & DISCOVERY

Advances in health care do not happen by accident. They come about when passionate clinician-scientists determinedly pursue answers to seemingly intractable medical problems; when doctors who care for patients are able to take the time to study and solve a problem they encounter in their daily work; when philanthropy seed-funds innovative research that saves and extends lives, shortens recovery times, alleviates pain and suffering and improves quality of life for patients alongside their families and loved ones.

The brain is the most complex and least understood organ in the body, and many brain diseases and disorders are still poorly understood in the medical field. For many of the one in three Canadians who will be impacted by a brain disease, disorder or injury, there is still no cure.

But there is hope.

At VGH and DMCBH, dynamic clinician-scientists are charting bold new directions in brain research with the generous support of your philanthropy. Their innovations have translated into tangible benefits for their patients here at home and across the world, lighting a beacon of hope for longer, fuller lives, and getting us closer than ever to a possible cure.

Because of your generosity, researchers have made breakthrough advancements across a spectrum of diseases:

ALZHEIMER'S

Dr. Haakon Nygaard and team created brain cells in the lab to build a first 3D brain structure of its kind in the world.



"Thanks to your generosity, we will be able to screen for known indicators of Alzheimer and related dementia, alongside potential drugs that may inhibit or prevent the onset or progression of disease."

DR. HAAKON NYGAARD

DIRECTOR, CLINIC FOR ALZHEIMER DISEASE AND RELATED DISORDERS, UBC HOSPITAL



MULTIPLE SCLEROSIS

Dr. Jacquie Quandt is developing sophisticated lab models to understand progression and neuroprotection in MS in an effort to put a halt to it.



PARKINSON'S

Dr. Silke Cresswell is identifying links between the Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) diet and a later onset of Parkinson's disease, while Dr. Martin McKeown is advancing treatment modalities for patients with a new portable brain stimulator.



STROKE

Dr. Thalia Field is Co-Director, Research, Vancouver Stroke Program.

As a leading site for clinical trials in acute stroke treatment, stroke prevention and recovery, the program rolled out a number of advanced studies including:

- coordinated the first Canadian trial studying cerebral venous thrombosis;
- acted as a participating site in a groundbreaking drug trial, which will change the way that clot-busting drugs are used worldwide; and
- was a leading recruitment site for a transformational drug trial that was first of its kind to demonstrate potential benefits for a neuroprotective agent in stroke.



DR. TREVOR HURWITZ,
DIRECTOR, BC
NEUROPSYCHIATRY
PROGRAM

A STEP FORWARD IN MENTAL HEALTH

For those living with a neuropsychiatric disorder like obsessive-compulsive disorder (OCD) or depression, they can usually find relief from their symptoms through standard medication and psychotherapy treatments. However for some, these standard therapies do not make a difference, and it is almost impossible to find relief from their discomfort.

Thanks to your support of neuropsychiatric research, clinicians like Dr. Trevor Hurwitz are making advancements in alternative therapies for those suffering from treatment-resistant mental health disorders. A common treatment for these disorders that do not respond to conventional therapies is stereotactic limbic system lesions, a surgery that targets the limbic system by creating lesions on the brain to reduce the symptoms of OCD and depression.

Dr. Hurwitz and his team have developed an innovative surgical technique by making use of modern MRI techniques to map the surgical site in a more targeted way. This reduces the surgical lesion size by half, preserving surgery benefits while reducing side effects for patients.

Your generosity has made these advancements possible, giving hope where there was none before to patients with neuropsychiatric disorders who do not respond to standard treatment.

IN THE SPOTLIGHT

British Columbians are living longer, and thanks to great advances in medicine we can now spend more time learning, playing and enjoying life. However, as our population ages, the prevalence of neurodegenerative diseases in adults will only increase.

The BC Brain Wellness Program you helped launch provides evidence-informed lifestyle and wellness programs for individuals living with chronic brain conditions, their care partners and healthy agers. It brings together an interdisciplinary team of specialists to deliver a combination therapy that supports our brain health with classes facilitating:

- exercise
- music, performance and visual arts
- mindfulness and self-management
- nutrition and sleep
- group learning and community building



PHOTOS COURTESY
BC BRAIN WELLNESS PROGRAM



JOSÉE'S STORY

Eight years ago, Josée was diagnosed with MS. The prognosis was not good. MS has no cure and over time most patients lose their vision, suffer fatigue and dizziness, and may even become unable to walk. In 2019, Josée thought she'd taken her last steps.

"I said goodbye to my legs. I said goodbye to walking." But with the support of BC Brain Wellness, she took her first steps again. Today she can now take more than 200 steps and is able to climb stairs. "The BC Brain Wellness Program saved my life; it enabled me to change my life for the better."

Read more about Josee's story here: bcbrainwellness.ca/stories



SERVING ALL OF BC

Thanks to your support, over the past two years, the program has been able to build up a province-wide reach by offering online classes. As the program moves to a hybrid model, it is building partnerships with centres in Prince George, Kelowna and Victoria. It will reach remote and under-served communities, while providing highest quality care in urban centres too.



ONE FAMILY'S BRAIN BREAKTHROUGH

TREVOR AND MENA NORRIS SHARE THEIR GRATITUDE

ON JULY 29TH I HAD A STROKE. I CAN'T REMEMBER, BUT MY WIFE TOLD ME I WAS SHAKING, SLURRING MY SPEECH AND FELL LIMP.
WE WERE UNBELIEVABLY FORTUNATE TO HAVE QUICK PROFESSIONAL HELP FROM 911, AMBULANCE, HOSPITAL SCAN (PEACE ARCH), TRANSPORT TO VGH, SURGERY BY DR. GARY REDEKOP, CARE AND ADVISE FROM DR. THALIA FIELD AND ASSOCIATE, CARSON AND WONDERFUL HELP AND CARING FROM ICU NEUROLOGY NURSES AND TEAM (HOPE NOT TO MISS ANYONE!) VGH

WITH STEADY OUT PATIENT REHAB AT FRASER HEALTH, PEACE ARCH HOSPITAL, I AM RECOVERING. WITH VIRTUAL CHECK-UPS FROM VANCOUVER STROKE RESEARCH PROGRAM - CARSON AND DR. ALY PRECASH - THEY ARE KEEPING TABS ON ME AND GIVE THUMBS UP TO MY PROGRESS. PLEASE ACCEPT THIS DONATION FROM A VERY GRATEFUL SURVIVER AND PLEASE KNOW YOU ARE ALL VERY MUCH APPRECIATED FOR THE WORK YOU DO AND YOUR COMMITMENT. ALL THE BEST AND STAY SAFE.

TREVOR & MENA NORRIS

P.S. WE HEAR A LOT OF SIRENS IN OUR AREA AND WE USED TO COMPLAIN, BUT NOW WE CHEER, BECAUSE WE KNOW SOMEONE WILL BE HELPED



CAMPAIGN CABINET

We are grateful to the following volunteer cabinet members who partnered with us to raise awareness and funds to help make *Brain Breakthroughs* possible.

COMMUNITY LEADERS

Joseph Segal, Honorary Chair (d)

President & Founder, Kingswood Capital Corp

Dr. Angus Reid, Co-Chair

Chair, Angus Reid Institute

Andrew Reid, Co-Chair

Founder & CEO, Rival Technologies

Rita Andreone

Corporate Director

Hamid Eshghi

President, Djavad Mowafaghian Foundation

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Movement Disorder Neurologist

Dr. Thalia Field

Stroke Neurologist

Dr. Haakon Nygaard

Director, Clinic for Alzheimer Disease and Related Disorders, UBC Hospital

Dr. Jacqueline Quandt

Associate Director, UBC Hospital MS Research Program

Dr. Lynn Raymond

Director, Djavad Mowafaghian Centre for Brain Health

Dr. Gary Redekop*

Head, Department of Surgery

Dr. Jon Stoessl

Professor & Head, Neurology, UBC

* VGH & UBC Hospital Foundation Director

Thank you for supporting Brain Breakthroughs



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