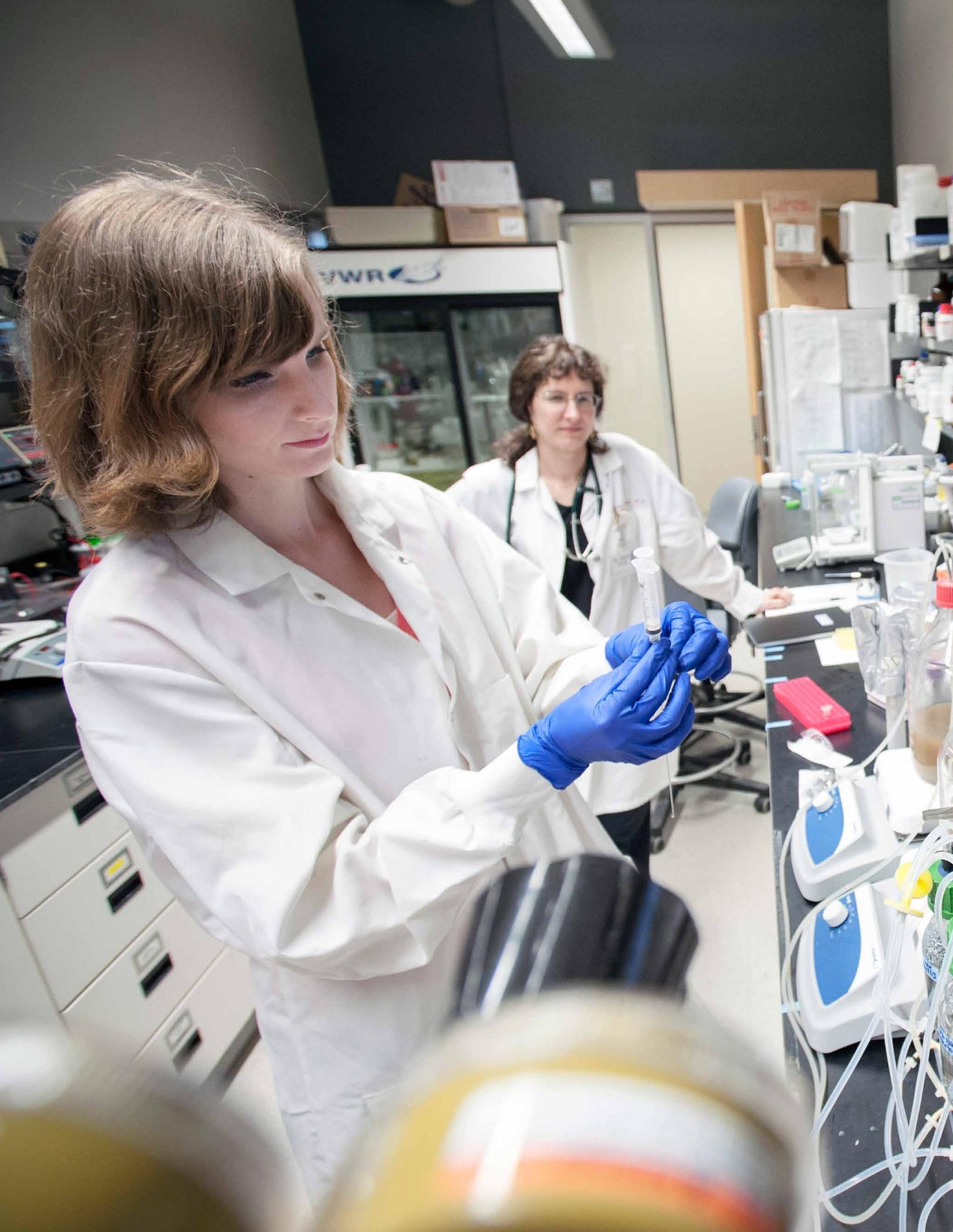


the first

3 years...

2010-13



Research for a lifetime

discovery today, treatment tomorrow

In June 2010, Kingston General Hospital launched its strategy for achieving Outstanding Care, Always, setting out four strategic directions:

- Transform the patient experience through a relentless focus on quality, safety and service
- Bring to life new models of interprofessional care and education
- Increase our focus on complex-acute and specialty care
- **Cultivate patient-oriented research**

The KGH Research Institute (KGHRI) was created in September 2010 as a tangible commitment to the goal of cultivating patient-oriented research. KGHRI is dedicated to building innovative partnerships and pursuing excellence in research through a collaborative approach that leverages the combined strengths of all partners in translating knowledge into effective therapies, treatments and best practices.

Our mission

We create and advance knowledge that brings evidence into practice for the benefit and empowerment of our patients, their families and our medical community.

Our strategic priorities

- Cultivate excellence in focused areas of research and education by increasing the number of outstanding scientists and trainees
- Invest in facilities and infrastructure to enable collaborative and multi-disciplinary research
- Increase external research funding
- Translate research into novel and effective therapies, treatments and best practices
- Increase the dissemination and commercialization of new knowledge
- Champion the creation of a Kingston Health Sciences Research Institute with our partner institutions

It is now a little over three years since the KGHRI was founded with a mission to foster patient oriented research at Kingston General Hospital. Much has been accomplished since then, despite very challenging fiscal times. This report is intended to feature some of those achievements and the people behind them.

When KGHRI was established, we identified several major objectives:

- Increase externally funded research by 50% in the first five years
- Expand the number of clinician-scientists
- Establish a centre for patient-oriented research
- Champion a unified health research initiative with Queen's University, its Faculty of Health Sciences and our partner hospitals.

We have made substantial progress with respect to all of these goals.

Over the past three years, KGHRI has increased its research revenues by more than 40% and now ranks 22nd in funding among Canada's top 40 research-intensive hospitals. In addition to notable accomplishments by a number of our researchers, we have partnered with Queen's University to co-host a new federally funded Networks of Centres of Excellence (NCE) program, Technology Evaluation in the Elderly Network (TVN). TVN is a national multi-disciplinary and multi-sectoral network dedicated to improving care for the frail elderly. The proposal to create TVN was built on the many successes of our Clinical Evaluation Research Unit (CERU).

With the visionary support of the Southeastern Ontario Academic Medical Organization's (SEAMO) Clinician-Scientist Recruitment Program, nine new, outstanding clinician-scientists have been recruited in priority research areas, including neurosurgery/neurology, critical care, emergency medicine, gastrointestinal diseases, and chronic pulmonary and cardiovascular disease. Their talents contribute tremendously to our group of existing clinician-scientists, opening up exciting new opportunities for collaboration and discovery.

Our goal of creating a multi-disciplinary centre for patient-oriented research is well on its way to becoming a reality, thanks to the very generous support of a number of donors, a major pledge from the W.J. Henderson Foundation, and our researchers' successes in obtaining funding from the Canadian Foundation for Innovation. The W.J. Henderson Centre for Patient-Oriented Research will add approximately 10,000 square feet. of research space and will provide a much needed environment to bring clinician-scientists and patients together in a multi-disciplinary setting, expanding opportunities for our patients to participate in groundbreaking studies that may change the outcome and progression of their disease.

With respect to 'what's next', we are working with Queen's University, the Faculty of Health Sciences and our partner hospitals to build a virtual health research institute that will coordinate our \$85 million combined annual research activities, enhance our global profile and expand our collaborative reach. We are now poised to take the last steps necessary to bring this new venture into existence.

We are proud of our achievements over the past three years — and eager to build on this foundation of success.

I invite you to learn more about our activities through this report and to follow our progress as we continue to grow our research enterprise.

Roger Deeley, VP Health Sciences Research, KGH and President, KGH Research Institute





At a glance

- KGH is ranked **22nd** among Canada's **top 40** research hospitals
- **\$23M/year** in research revenue
- **585** active research **projects**
- **New centre for patient-oriented research**
- **Nine new** clinician-**scientists**
- **200** active clinical **trials**
- External research **funding increased by more than 40%** since 2010
- Research **space increased by 25% since 2010**

Investing in research excellence

A culture of discovery

Funding from the Southeastern Ontario Academic Medical Organization has enabled the recruitment of outstanding clinician scientists in key areas of our research.

New approaches to neurological recovery

Dr. Douglas (D.J.) Cook

Brain aneurysms can lead to a stroke, with devastating side effects that radically alter a patient's quality of life. Dr. D.J. Cook, a cerebrovascular surgeon-scientist, is developing new treatments that minimize trauma related to brain aneurysm surgery, resulting in better outcomes, shorter hospital stays and an earlier return to normal life. He also runs a parallel research program to develop new treatments to enhance brain recovery after stroke.

Dr. Cook's surgical approach is focused on minimally invasive techniques to treat brain aneurysms and skull-base tumours through keyhole openings in the skull, using specialized instruments and scopes. These techniques have improved outcomes, decreased admission times and freed up critical resources.

Research in action: a patient's perspective

Retired teacher Sharon Dowdall was enjoying a round of golf with friends when she felt a crushing pressure at the back of her head. "I knew immediately that something was wrong," she recalls. Sharon was taken to Kingston General Hospital, where she was diagnosed with a ruptured brain aneurysm. Dr. Cook and the neurosurgery team quickly treated her using a procedure that preserved normal neurological function and allowed her to recover quickly and return home early. Today, Mrs. Dowdall is back to her normal lifestyle with no side effects, and requires no ongoing medication.

"I would never have considered myself a candidate for a brain aneurysm. I go to the gym four times a week, walk every day and eat well. I had a physical a week before it happened and my doctor told me I was a model patient. So you just never know. What I do know is that I'm so glad that I had the team I did. The knowledge and expertise at KGH is phenomenal."
– Sharon Dowdall





“ We’re at a point where we’re just beginning to understand the mechanisms of neural recovery and how the brain is capable of remapping and rewiring itself after injury. As we unravel the mechanisms underlying these processes, we will be able to harness the adaptive potential of the brain in new treatment strategies.”



It takes a community: increasing bystander CPR rates

Dr. Steven Brooks

You may have seen an Automatic External Defibrillator (AED) unit at your local hockey rink or public fitness centre — but do you know how to use it? Dr. Steven Brooks, a clinician-scientist in emergency medicine, is working to improve outcomes for cardiac arrest patients by researching how we can improve response and treatment, both in the community and in the hospital.

While researching AEDs, Dr. Brooks discovered that it's not a matter of the quantity of the devices in the community — rather, it's a matter of knowing where they are and how to use them. He's worked with an engineer to devise a mathematical model that identifies the best locations in communities for AEDs, and is also working on ways to increase bystander use of them.

We can also do more for cardiac arrest patients once they arrive at the hospital. Dr. Brooks is researching best practices for health care teams treating stroke patients in acute care settings, including targeted temperature management and special teams that can follow the patient for the first 24-72 hours to ensure optimal recovery.

“For every minute that a patient with cardiac arrest does not receive CPR and defibrillator treatment, their chances of survival decrease by about ten percent. AEDs need to be accessible, but we also need to be sure that bystanders can find them and confidently use them.”

Improving diagnostic techniques for better patient care

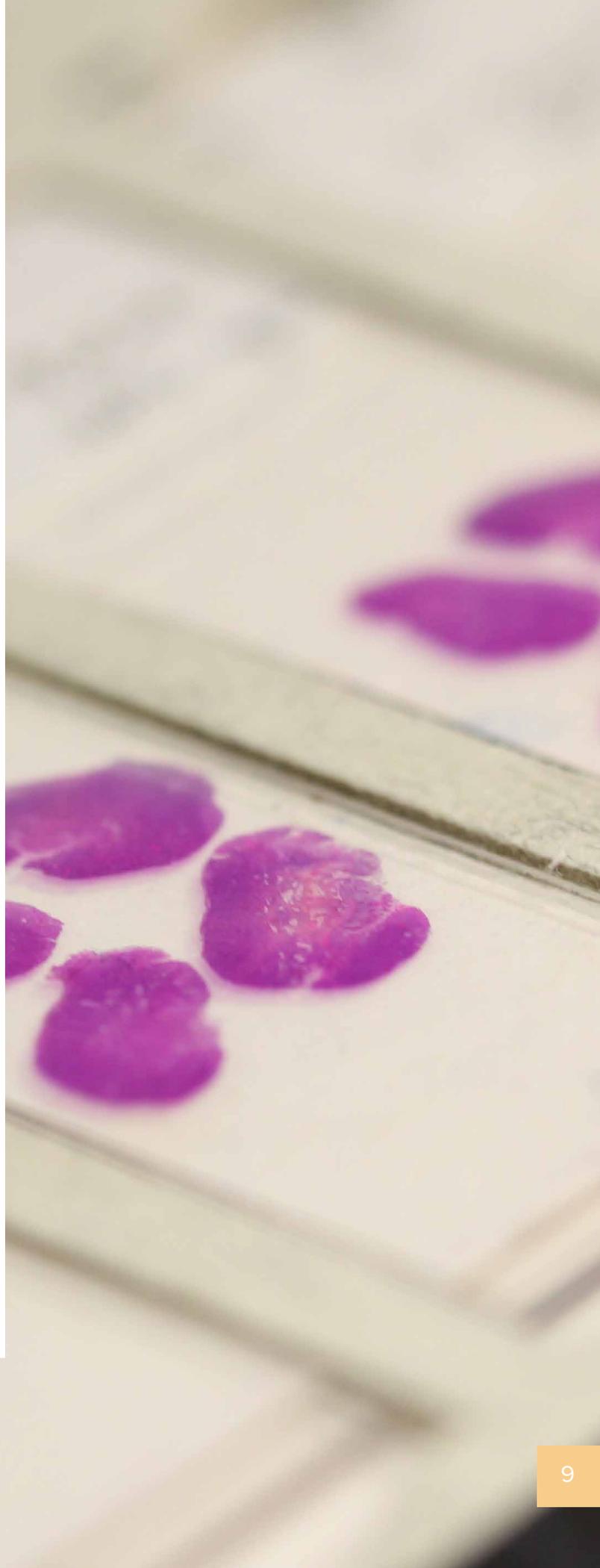
Dr. David Berman

While cancer is often a serious and life-threatening disease, there are some slow growing cancers that may be better left untreated. Learning to distinguish between the two can save patients unnecessary surgery, chemotherapy or radiation treatments, as well as the risk of serious side-effects.

Pathologist and researcher Dr. David Berman specializes in developing and improving existing diagnostic techniques to help doctors more accurately determine whether or not a cancer merits treatment, and if so, what might be the best course of care to offer their patients.

Dr. Berman's work in bladder and prostate cancer involves identifying biomarkers that can improve diagnosis, as well as tests that can identify which patients would most benefit from specific types of chemotherapy. By developing techniques that can identify dangerous cancers while minimizing the use of invasive surgical procedures, researchers can help to improve standards of care.

“If we find molecular features of prostate cancer that are really specific to harmful cases, then we might be able to look for those in the bloodstream or in the urine and skip the biopsy procedure altogether. These techniques might also work better, faster and cheaper than biopsies, decreasing the wait times for diagnosis and treatment.”



Re-engineering the brain

Dr. Ron Levy

Neurological diseases, such as Parkinson's and epilepsy, can have exceptionally debilitating effects on quality of life. While the symptoms of these illnesses can be managed to some extent by drug therapies, treatments can result in other side effects or require subsequent invasive surgical therapy. Dr. Ron Levy is working to develop improved treatment methods by understanding how the brain reacts to and functions with disease.

Dr. Levy examines how neurons within the brain interact in the presence of disease and also studies the use of deep brain stimulation to stabilize or even reverse symptoms. Translated into clinical practice, his work can transform the daily lives of patients suffering from the symptoms of neurological disease.

"We're learning enough about the brain to have the ability to re-engineer how it works, and to tailor treatments to patients with a specific neurological injury to improve the course of their disease."





An integrated approach to heart and lung disease

Dr. Alberto Neder

Cardiovascular and respiratory diseases can have a devastating impact on a patient's quality of life. But what if exercise could ease adverse symptoms and even help treat the illness? Clinician-scientist Dr. Alberto Neder has developed a unique lab that studies patients with both heart and lung disease, with the goal of better understanding how the various systems within the body work together under the stress of physical exercise.

Exercise might seem like an odd way to help people with breathing problems, but Dr. Neder's lab can customize the activity to meet a patient's individual needs and abilities.

"Because these patients are limited by shortness of breath and muscle fatigue, we need to discover new ways to improve their exercise capacity," he says. "For instance, by providing breathing systems during exercise, we can improve muscle function and have a significant impact on quality of life. At the end of the day, this knowledge could define the best treatment to improve a patient's tolerance for daily life activities."

"Respiration is an intricate dance involving lungs, heart, blood and cells. We need to better understand how this complex multi-organ system works, and how helping one of the systems can actually make the whole body work better."

Life after cardiac arrest: changing outcomes

Dr. Gordon Boyd

No matter how brief, a critical illness can do long-term damage to the body and brain. Dr. Gordon Boyd, a neurologist, intensive care physician and clinician-scientist, is studying brain function, how it correlates with long-term neurological recovery, and how to improve outcomes for those who have suffered from cardiac arrest.

Dr. Boyd's research is focused on predicting how patients react the first few days after a cardiac incident, and how to create tests to better gauge the level of damage to each individual by understanding how neurons in the brain react to the loss of blood and oxygen during an arrest. By doing so, he hopes to be able to develop processes and treatments in the ICU that have a significant impact on patient recovery.

“As a clinician, my ultimate goal in everything I do is to improve the quality of life of the people we look after in the ICU. Having an investigative unit within the hospital allows us to translate our research into better outcomes for our patients.”

Dr. Boyd's research makes use of the KINARM™, a robotic system developed in Kingston by b-kin technologies. Used throughout the world, the KINARM™ is a powerful new tool for measuring and monitoring sensory, motor and cognitive performance in patients with a wide range of neurological impairments.

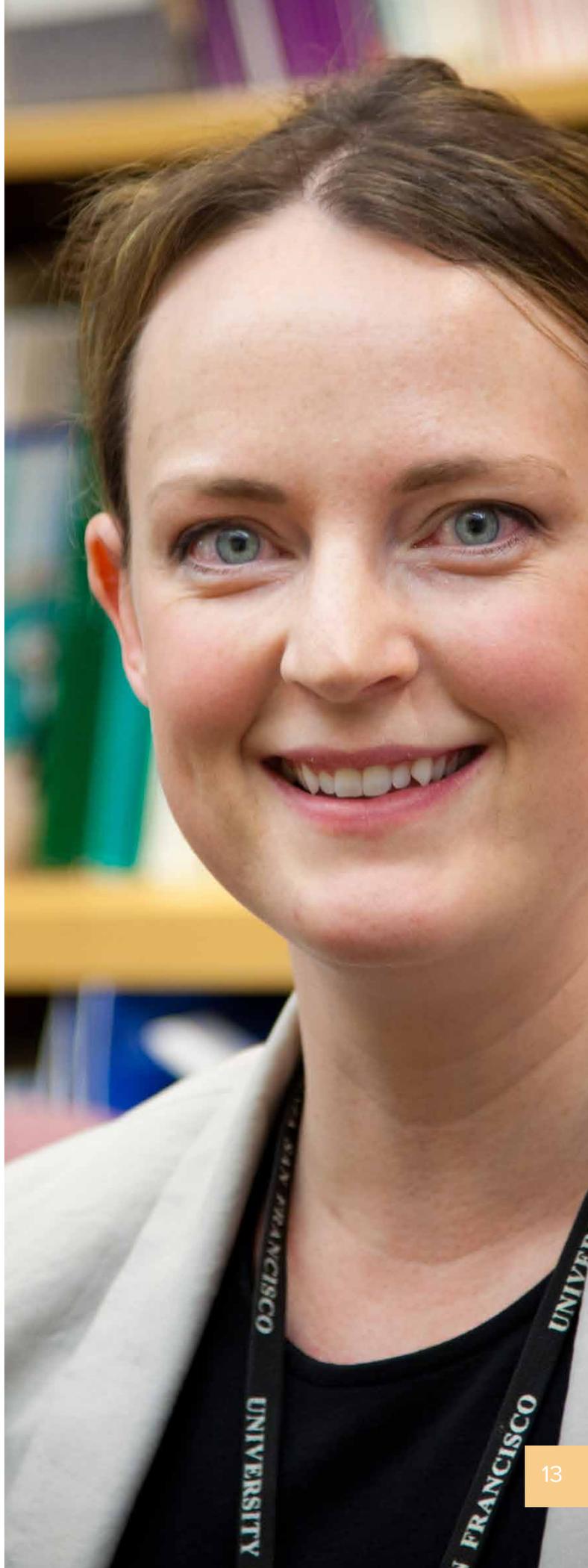
Liver disease: a growing concern

Dr. Jennifer Flemming

Breast and prostate cancer are often headline news – but liver cancer remains a largely hidden disease. According to the Canadian Liver Foundation however, the death rate from liver illnesses has risen nearly 30% over the past eight years, and it's estimated that one in ten Canadians has some form of the disease. Dr. Jennifer Flemming, a clinician-scientist with training in Epidemiology and Biostatistics, is working to raise awareness about the looming impact of this illness on our health care system.

A common cause of liver cancer is Hepatitis C, which typically displays no symptoms until patients are diagnosed with end-stage liver disease. Dr. Flemming's research focuses on trends and patterns in the disease to demonstrate how increased screening and diagnosis of this asymptomatic infection can help health professionals consider curative treatments that can prevent the development of liver cancer and cirrhosis.

“Estimates from the Canadian Liver Foundation suggest that the incidence of liver cirrhosis and liver cancer won't peak until 2020, which means that over the next several decades our health system is going to be burdened by patients with liver disease. We need to better understand, diagnose and treat this disease.”



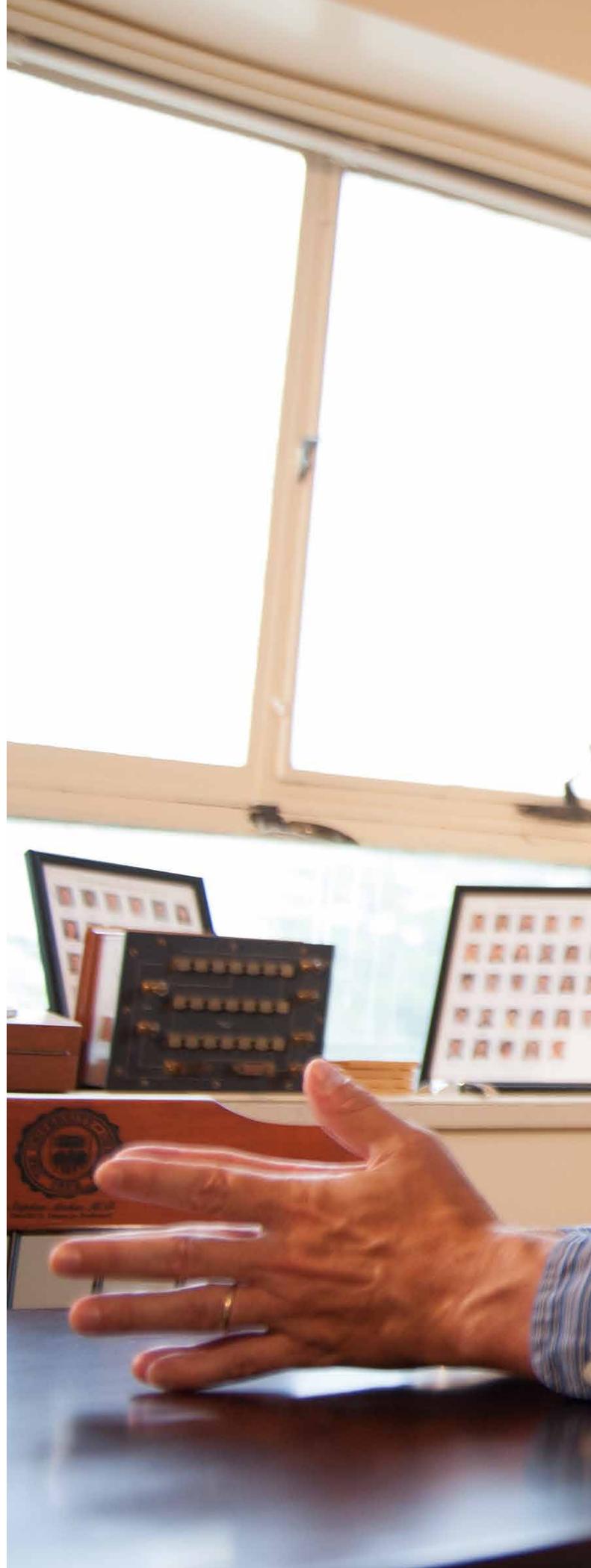
Getting to the heart of the matter

Dr. Stephen Archer

Pulmonary hypertension, high blood pressure in the lungs, is not just a chronic illness — it can also be fatal. Dr. Stephen Archer, the Head of Medicine at KGH and Queen's University and a clinician-scientist, is working to better understand how to treat and potentially cure pulmonary hypertension by delving deep inside the human body, examining cell structures to find abnormalities that can cause this disease.

Dr. Archer's research in pulmonary hypertension revolves around the mitochondria, what he refers to as the 'power plants' of the cell. "The mitochondria in patients with pulmonary hypertension are structurally abnormal," he says. "We've been able to identify the particular protein that's abnormal and target it with a small molecule to fix the problem." He notes that the same therapy appears to also show promise in lung cancer treatments. Dr. Archer's work in pulmonary hypertension was selected by the National Heart, Lung and Blood Institute as one of its Top Discoveries in 2010.

"In a patient-oriented research centre, we can actually go to the operating room, get cells with permission from patients, look at them under a microscope and diagnose this structural abnormality, and potentially give a molecular therapy. That's research in action."





“A bench to bedside journey sounds really attractive ... but you need a place where that translational research can happen.”

Leading the way in patient-oriented research

Improving care for our frail elderly

An aging population has significant social and economic implications for our country - but more importantly, this demographic shift has revealed the need to improve care for our frail elderly – especially because they are often excluded from research trials and can be subjected to intensive treatments that may negatively affect their quality of life.

The Technology Evaluation in the Elderly Network (TVN) was created to improve care for our frail elderly by fostering and funding the creation of evidence-based best policies and practices, mobilizing knowledge to ensure that these innovations reach patients and families, and training the next generation of highly qualified personnel to care for this vulnerable population.

TVN focuses on the frail elderly across all settings, promoting a collaborative approach that fosters multi-disciplinary, multi-sectoral teams working to develop solutions to improve care. To date, the Network has provided over \$14M in funding for research and training programs, and is actively facilitating new partnerships with key stakeholders to guide their national agenda.

The Network concept was originally created by founding Scientific Director Dr. Daren Heyland, the Director of KGH's Clinical Evaluation Research Unit and an internationally recognized researcher in nutrition, infection and end-of-life care.

The current Scientific Director, Dr. John Muscedere, is an intensivist and critical care researcher at KGH. TVN is co-hosted by Queen's and KGH and funded by the Government of Canada's Networks of Centres of Excellence (NCE) program.





“There are significant gaps in understanding the health needs of our aging population, and it’s critical that we work together to understand and improve the quality of life for these Canadians.”
– the Hon. Sharon Carstairs, P.C.,
Chair, Board of Directors, TVN

Clinical Evaluation Research Unit

The Clinical Evaluation Research Unit (CERU) provides expertise in research and quality improvement initiatives in acute care medicine, providing valuable opportunities for scientists to participate in innovative, cutting-edge clinical research with a high impact on the health outcomes of patients and families. CERU has developed evidence-based clinical practice guidelines in areas of nutrition and ventilator associated pneumonia, as well as palliative and end-of-life care.



Best foot forward

In 2013, the Canadian Foundation for Innovation recognized Tim Bryant, a member of the Human Mobility Research Centre, for his contributions to the “Niagara Foot”, an artificial prosthesis that can be easily and cost-effectively assembled using easy-to-source plastics.

The Niagara Foot is unique: it’s affordable, easy to adjust, durable and adaptable to all types of terrain. It’s perfect for use in developing countries or post-conflict areas with high numbers of amputees.

Human Mobility Research Centre

The Human Mobility Research Centre (HMRC) is a partnership between Queen’s University and Kingston General Hospital and serves as a point of collaboration between the disciplines of medicine, engineering, health sciences, and computer science. The Centre is committed to helping people live fuller, more mobile lives by pioneering the development of innovative and effective treatment strategies for bone and joint disorders caused by arthritis, osteoporosis, injury and other related problems.

HMRC provides shared research space and services for clinicians, orthopaedic surgeons, university faculty, students and industry, with over 40 faculty members and 90 trainees. The core of HMRC is modeled around Integrated Research Teams and represents a unique combination of engineering, biological and computing technologies for novel diagnostic techniques, new drug therapies, improved repair and reconstruction procedures, and enhanced rehabilitation strategies.

Relief for chronic pelvic pain

Patients with prostate and bladder pain often experience moderate to severe pain, but have little understanding as to why it's occurring. Dr. Curtis Nickel, a clinical researcher with the Centre for Applied Urological Research (CAUR), is working to improve the quality of life for individuals suffering from urologic pelvic pain.

Chronic urologic pain affects up to 10 per cent of the general population and can cause serious side effects such as sleep disturbance and depression, while affecting work performance and the ability to socialize with family and friends. Dr. Nickel, who has helped thousands of patients manage pain symptoms, has also raised awareness of the serious impact that urinary tract diseases can have on everyday life and has helped to shape the evolution of treatment for patients.

“Ongoing research is unlocking some of the mysteries surrounding pelvic pain and the management of symptoms, so that people can better understand their pain and find ways to manage it.”

Centre for Advanced Urological Research

The Centre for Advanced Urological Research is devoted to innovative research in urological diseases, including pain, infection, stones, incontinence, erectile problems and cancer.





A new tool in the fight against C.difficile

Hospitals are meant to be a place of healing, but the antibiotic treatments used there can actually wipe out natural bacteria that protect us from harm. As a result, a challenging infection, C. difficile, has become a growing problem in many health care facilities. A new trial synthetic stool treatment transplanted into the colons of C. difficile patients at KGH, however, has been shown to cure those who experience chronic C. difficile infections with just one dose.

Working with collaborators at the University of Guelph and University of Western Ontario, Dr. Elaine Petrof in the Gastrointestinal Diseases Research Unit (GIDRU) created a synthetic stool, dubbed 'Re-POOPulate', to replace the need for human fecal matter normally used in stool transplants, a treatment that has been successful in overcoming stubborn C. difficile infections. The synthetic stool treatment was tested in two patients with recurring C. difficile infections, and both experienced relief of their symptoms within three days of treatment, and tested negative for the C. difficile bacterium six months later.

“Our hope is that this could become an alternate therapy for treating C. difficile — it has many benefits, including being safer for patients and medical staff as well as being easily and quickly reproduced based on a patient’s needs.”

Gastrointestinal Diseases Research Unit (GIDRU)

GIDRU houses a multidisciplinary team of clinician-scientists from the Departments of Medicine, Surgery and Pathology, and basic science faculty from the Department of Biomedical and Molecular Sciences. The Unit offers exceptional collaborative research and training opportunities and is designed to facilitate bench-to-bedside discovery.



Global good

Dr. Karen Yeates may live and work in Kingston, but part of her heart is in Tanzania, where she's introducing a novel screening program that uses affordable technical devices to take important medical readings from women in remote locations, and relay them to health care professionals in larger centres.

Dr. Yeates, a nephrologist at KGH and Co-Director of the Queen's Office of Global Health, is working with a local gynecologist to train local health care workers in Tanzania to snap smartphone photos of cervixes and send them to a team located in

a larger health centre. This technique allows for ongoing education and follow-up for complicated cervical lesions, and is almost equivalent to a Pap smear, something that is not available to most women in sub-Saharan Africa due to cost and available resources.

Dr. Yeates is also using a Bluetooth-enabled device that monitors blood pressure and sends the readings to patients and community health workers, enabling a system for follow-up and medication adjustment.

Breathing new life into treatment: respirology studies

At first, Annetta Black thought she had asthma. It was an effort to walk up hills and stairs. Eventually, even vacuuming became difficult. But after an appointment with Dr. Denis O'Donnell at KGH, she learned she has Chronic Obstructive Pulmonary Disease (COPD), a condition that afflicts approximately 10% of Canadians.

Respiratory Investigation Unit

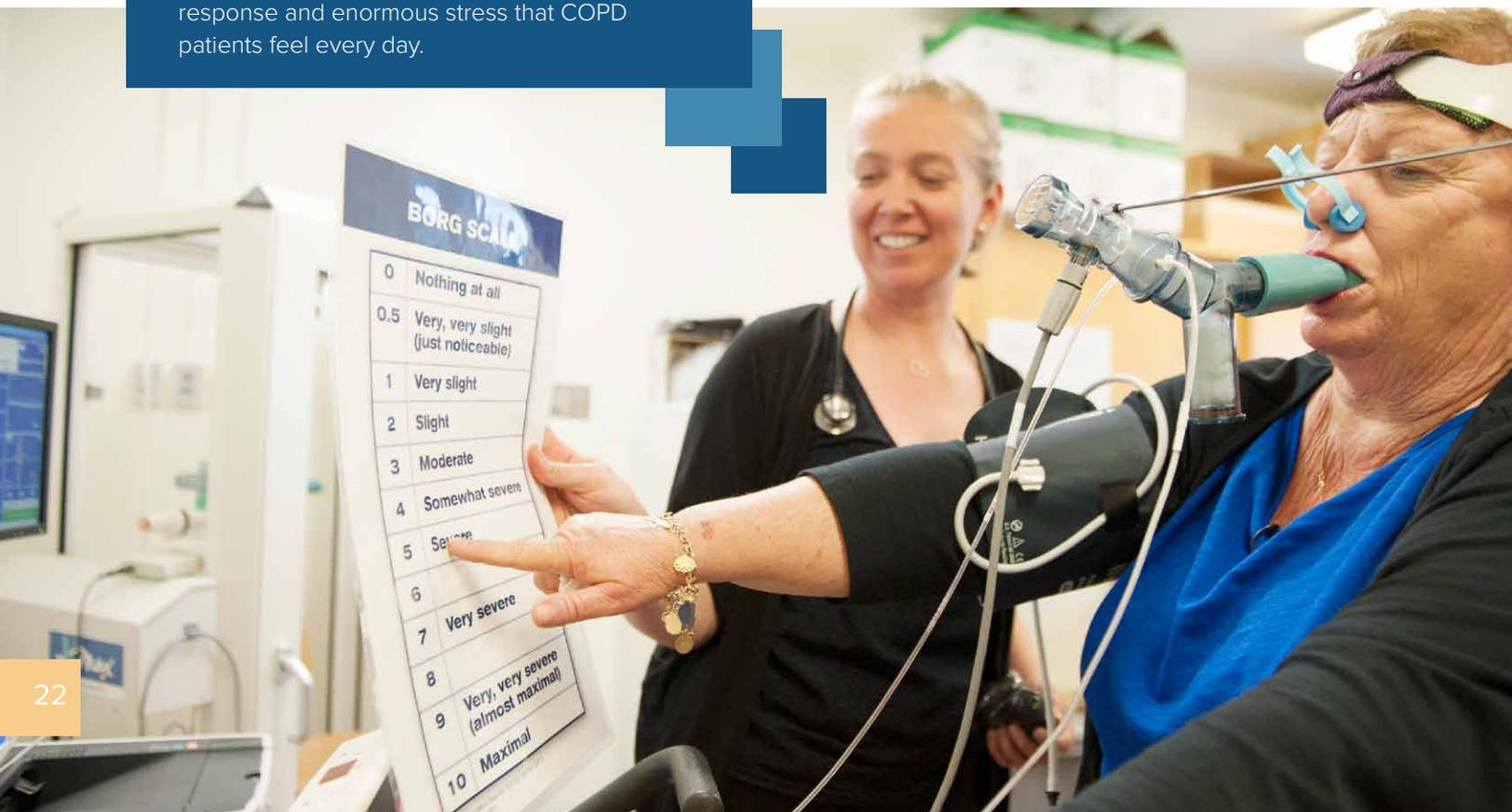
The Respiratory Investigation Unit at KGH and Queen's University studies the mechanical, chemical and psychological mechanisms of dyspnea (respiratory discomfort) and activity limitation in patients with a variety of cardiorespiratory diseases.

Dr. Denis O'Donnell, a Canadian leader in the development of best practices for treating COPD patients, is using new breathing tests and brain imaging techniques on patients with advanced COPD to discover what parts of the brain are activated during breathlessness. His goal is to better understand the physiological and emotional aspects of breathlessness and develop ways to reduce the emotional threat response and enormous stress that COPD patients feel every day.

In its more advanced stages, COPD can significantly affect quality of life, as many patients are housebound and suffer from emotional anxiety. "They avoid doing things, because even the smallest activity is related to shortness of breath," says Dr. O'Donnell. "In our studies, we challenge patients with exercise and do detailed physiological testing to try and characterize the disease, which allows us to intervene much earlier than we're used to doing."

Dr. O'Donnell's research studies test various therapies to help COPD patients in their daily activities. Annetta initially agreed to participate to help others, but she's also found that some of the trial medications have improved her own quality of life.

"Dr. O'Donnell mentioned the studies and I thought taking part in them would be a good thing – if not for me, then for somebody else in the future. But it's also really helped me."



“About 40 percent of the Canadian population will be affected by at least one type of allergic reaction in their lifetime. Our work will help us understand allergic reactions and enable people who suffer from allergies to overcome them.”



New hope for allergy sufferers

New allergy treatments being tested at KGH have the potential to provide dramatic relief for millions of Canadians who suffer from this seasonal condition. Dr. Anne Ellis, the Director of the Allergy Research Unit at KGH, is working in the hospital's Environmental Exposure Unit (EEU) to test new vaccines developed by national and international pharmaceutical companies.

Environmental Exposure Unit

The EEU is an indoor allergen challenge facility that allows researchers to gauge the effectiveness of antihistamines, nasal corticosteroids and other investigational medications used to treat allergic rhinitis. Developed in Kingston in the late 1980's, the EEU provides a controlled atmosphere to produce and evaluate symptoms and is now internationally recognized as the gold standard for testing airborne allergens.

Improve mom's health, improve family health

An obstetrician at KGH has founded one of the first clinics to use pregnancy and the postpartum period to focus on disease prevention in women. Dr. Graeme Smith's Maternal Health Clinic screens women for heart disease risk factors and provides resources and tools for maternal and family health.

"Pregnancy is a stress test, in that it can reveal underlying health issues in the mother that may indicate an increased risk of future heart disease," says Dr. Smith. "Approximately 20 percent of expectant mothers exhibit at least one of six indicators during pregnancy."

The Maternal Health Clinic targets women who have had at least one of these pregnancy complications, and invites them to be screened six months after their baby is born. The clinic's results and recommendations are forwarded to the woman's family doctor for further follow-up and management.

Dr. Smith has also developed a website and apps that women can use to track various health indicators during pregnancy, such as baby movements and weight gain.

"One of the problems with medical systems is that they are reactive rather than preventative," says Dr. Smith. "Pregnancy is a perfect time for health promotion and disease prevention. We can improve mom's health, and by doing that, we can positively affect the whole family."

"As a clinician, I make a difference for my patients, but as a scientist, I make a difference for everybody's patients."





What's next?

We intend to:

Expand our research facilities for interdisciplinary collaboration and discovery

The W.J. Henderson Centre for Patient-Oriented Research will provide an innovative translational environment for scientists and practitioners from across the continuum of care. We'll continue to grow and foster a collaborative approach by growing the Centre into a world-class facility for all stakeholders.

Champion stakeholder/partner efforts to enhance research capacity

The creation of a virtual Institute (Health Research Kingston) will unify the research activities of partner hospitals and Queen's Faculty of Health Sciences. Together, we'll build stronger research teams with the ability to significantly impact patient-centred practices at both the local and global levels.

Continue to build excellence in priority research areas

We will drive discovery through selective investment in research that aligns with our current and emerging areas of strength.

Attract more investment

As a leading research facility, we will maximize funding from private and public streams by strategically nurturing research capabilities that are aligned with funder capabilities and goals, and recognize the full value of commercialization and intellectual property.

Recruit and retain outstanding scientists and teams

Exceptional research teams are the heart and soul of a great research institute. We're committed to creating a culture that entices and retains innovative and collaborative scientists, as well as highly qualified personnel and trainees who want to work with them.



The W.J. Henderson Centre for Patient- Oriented Research

Imagine a research environment that brings scientists, treatment teams, patients and families together to improve health care. Thanks to a generous donation from the W.J. Henderson Foundation, the new W.J. Henderson Centre for Patient-Oriented Research will house a multi-disciplinary hub for researchers working to improve disease prevention, diagnoses and treatments. The Centre will foster a spirit of collaboration and innovation, attracting top scientists whose investigations will translate into new treatments, new health policies and improved clinical care.

“When fully operational, the Centre will provide much-needed 24-hour support for medical research in multiple areas of patient care. Everyone in the community stands to benefit from the discoveries made there.” – David Pattenden, board member, W.J. Henderson Foundation

Learn more about how you can help make discovery happen: www.uhkf.ca



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