

Research matters.



ANNUAL REPORT 2005-2006



Arthritis & Autoimmunity
Research Centre Foundation
University Health Network

Message From Our Chair, Board of Directors



THE WORLD OF MEDICAL RESEARCH IS FOREIGN TO MANY OF US. Using complex equipment and mysterious terms, research is often not entirely understood by many people. Consequently, we rely on the brilliance and dedication of the highly trained basic and clinical researchers to uncover the mystery and accelerate discoveries that will benefit all of us.

The Arthritis & Autoimmunity Research Centre at University Health Network is Canada's largest and most comprehensive research collaborative on over 100 chronic and debilitating illnesses associated with arthritis and related autoimmune diseases. It has set the standard for collaboration amongst basic scientists, bioengineers, clinical experts, orthopaedic surgeons and population health interrogators. They work every day trying to unlock the mysteries of this group of complex diseases.

In this annual report we hope to provide a better understanding of this unique environment. We are taking the opportunity to introduce this fascinating world to our donors through stories about our researchers, their work and the diseases or conditions they interrogate. From the investigation of genes and proteins, to the patient databases and new surgical implant materials, AARC researchers are the world leaders in musculoskeletal and arthritis programs.

At the AARC Foundation we are extremely proud to support the work of these committed individuals. With the financial generosity of individuals, corporations and foundations, life is being made better for the over four million Canadians affected by these debilitating disorders.

Thank you for being a partner in this world of discovery. *Research matters.*

John W. Teolis
Chair

Our Researchers

DR. ELEANOR FISH | IMMUNOBIOLOGY



Big science requires big technology



“WE LOVE TALKING SCIENCE,” explains Dr. Eleanor Fish, Director of the Arthritis & Autoimmunity Research Centre. As a visitor in her lab, one can easily tell that Dr. Fish not only just “loves” the science, but also leads in science.

As a world leader in immunobiology, Dr. Fish is helping to accelerate the rate of discovery in medicine. With projects focusing on rheumatoid arthritis and multiple sclerosis, Dr. Fish is giving new hope to patients whose lives have been affected by these diseases.

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Dr. Fish and her collaborators are making unprecedented advances in rheumatoid arthritis research. Examining tissues from affected joints and blood from arthritis sufferers, Dr. Fish brings these specimens to life trying to understand the biology that is taking place in the cell populations of affected patients. Once the biology is understood, Dr. Fish brings science to the big stage: “Big science,” as Dr. Fish explains, “requires big technology.” Using complex technologies and normal control specimens from healthy individuals for comparison, specific genes or proteins are identified that are turned “on” or “off” in affected patients, but not in healthy patients. Identifying this difference is only one piece of a very complex puzzle. Armed with

this knowledge, which genes or proteins are disease-specific, Dr. Fish then sets up model systems in the lab to find out how to regulate these disease-specific factors.

Animal models are critical to laboratory research. Often, researchers work with mice because their genetics and immune systems have been well studied. In addition, mice reproduce quickly, have short life spans, and the exact time of disease onset and course of disease can be accurately followed. Another significant advantage of working with mice is that they can be genetically manipulated at the molecular level. In Dr. Fish’s lab, mice are bred with specific characteristics, such as specific genes deleted. These mice are often called transgenic mice and are used in animal models of disease, such as rheumatoid arthritis, to study the effects of particular genes on disease progression and outcome.

In addition to genetic profiling, proteomics play a critical role in Dr. Fish’s research. Studying the activation state of proteins, sophisticated proteomic technologies are used to interrogate cell populations. Although the presence or absence of specific genes in diseased tissues may suggest their role in contributing to diseases, the possibility is always there that the protein may also be abnormally modified, thereby influencing disease progression. Dr. Fish’s studies also focus on looking at the state of proteins in different cell populations.

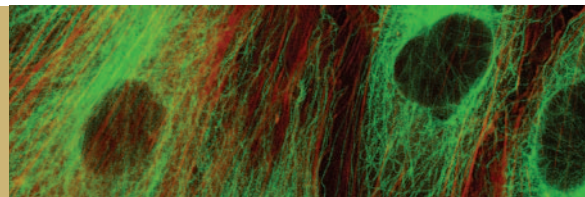
Combining the gene and protein data permits a complete analysis of different cell populations and provides insights into which cell populations contribute to disease and, more pertinently, which factors in those cells are causing the problem. Dr. Fish’s optimism for the future shines brightly, and makes one think that the future really will be better.

Our Researchers

DR. ED KEYSTONE | RHEUMATOID ARTHRITIS



*Every patient
teaches me something new*



“EVERY PATIENT TEACHES ME SOMETHING NEW,” says Dr. Ed Keystone, Rheumatologist and Senior Scientist. As a world expert with over three decades in rheumatology, the lessons have indeed been plentiful, and his individual patient impact impressive. He has a way of explaining his research that makes you truly believe the future will be better for arthritis patients, and demonstrates an unwavering commitment to the future.

Collaborating with a number of experts across a broad spectrum, Dr. Keystone’s research is multifaceted. Working to find answers to critical questions, Dr. Keystone brings research from the bench to the bedside, and eventually to the community. “Our research has four components, clinical trials, genetics, imaging, and outcomes,” explains Dr. Keystone.

**“Our research has four
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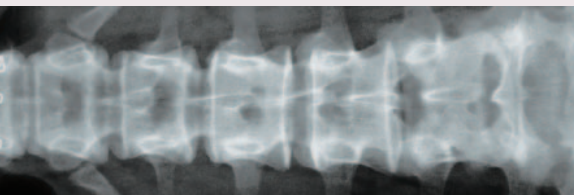
Clinical trials, research studies developed to test the effectiveness and safety of a new therapy or drug, are fundamental in advancing the available treatments for rheumatoid arthritis patients. Clinical trials are not simply a matter of administering drugs. A very specific cohort must be developed for the study, and monitored very closely throughout the duration of the project, carefully documenting any changes that may be due to the new therapy or drug. At present, there are at least 45 new agents going into clinical trials, keeping Dr. Keystone very busy.

In the past decade, new drug therapies have been developed at unprecedented rates in response to

advances in technology and science. In fact, prior to 1996 it took almost 15 years to produce one new therapeutic, however in the past 8 years, six novel biologic therapies alone have been approved in Canada. Biologic response modifiers selectively target abnormal elements in the joints. They present an alternative to previous therapies that could not distinguish between normal and abnormal cells, and show great promise for the future of rheumatoid arthritis treatment.

In addition to Dr. Keystone’s expertise in clinical trials, he works in collaboration with a number of internationally recognized researchers to find the answers to the plethora of other puzzling questions surrounding RA in three other critical disciplines: genetics, imaging, and outcomes. The unique component of this research is that it brings together key researchers focusing on one specific disease, rheumatoid arthritis. Genetic research is fundamental to the future of all arthritis and autoimmune diseases.

Focusing on questions regarding patients’ predisposition of such diseases, Drs. Kathy Siminovich and Eleanor Fish work to identify why patients have the disease, to predict what medications will or won’t work, and to identify an individual prognosis, enabling better and more individualized therapies. With this information, along with the use of novel imaging technology, Dr. Keystone will be able to diagnose and determine the prognosis of the disease much earlier, leading to more effective treatments, less joint deterioration, and a better long term outcome. Dr. Claire Bombardier is the final piece of the puzzle, bringing the science back to the community and focusing on the effectiveness and safety of therapies outside of the controlled hospital environment. Together, they represent a much brighter future for people with RA.



Research is like a motion picture



“RESEARCH IS LIKE A MOTION PICTURE. In research, we get to slow the process down and observe it frame by frame,” explains Dr. Rob Inman, Rheumatologist and Director of the Arthritis Centre of Excellence, as he describes his research on ankylosing spondylitis (AS). A world expert in AS, Dr. Inman represents a beacon of hope to the 1 in 100 Canadians affected by AS. As someone who has seen the progress over the past decades, his excitement for the future is reassuring.

Affecting men three times more than women, AS, like many arthritis and autoimmune diseases targets people in their prime, most often between the ages of 15 and 40 – making experts like Dr. Inman crucial to accelerate the rate of discovery and improve the lives of those affected by AS. Focusing his research on AS and a related disease, reactive arthritis, Dr. Inman works with a number of investigators, with different approaches, targeting the questions why and how these diseases take over the body.

“The Clinic is the motion picture of the disease process, animal models can provide the individual slides,” explains Dr. Inman as he describes the animal labs used in AS and reactive arthritis research. “Using animal models, we can be eye-witnesses to events just before, during, and after the onset of arthritis – something we can’t do with our patients.” Patients generally do not see physicians until symptoms are felt, often long after the disease has begun.

Dr. Inman has long been a world expert in ankylosing spondylitis, trying to uncover the molecular events that occur causing the fusion of back bones in ankylosing

spondylitis patients. While it is known that a single gene leads to this fusion, the research is also examining the chemicals that are involved in the process.

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Dr. Inman’s expertise does not stop with AS. Reactive arthritis, a form of arthritis that develops as a reaction to infection, is another focal point of his research. Using animal models, Dr. Inman is dissecting the pathways of arthritis, identifying the activated cells in reactive arthritis. Profiling the genes that are turned on in affected joints will enable Dr. Inman to determine how gene regulation is controlled in reactive arthritis patients. While it is known that infection is associated with reactive arthritis, Dr. Inman is studying other environmental factors, such as environmental toxins that may cause the genes to be turned on, and how these factors affect reactive arthritis.

Dr. Inman’s research is critical to the future of those suffering from AS and related diseases. His research will lead to earlier diagnosis, and the ability to more accurately predict prognosis. In addition, the identification of trigger genes that may be specifically targeted by drugs early in the process will allow development of new therapies and greatly improve the quality of life of those affected with both diseases.



*The potential for
new therapies is exciting*



DR. MARK ERWIN CAN BARELY HIDE HIS EXCITEMENT as he explains the progress that has been made in degenerative disc disease. His devotion to his research seeps through his words as he convincingly explains the mystery behind chronic back pain. Indeed, Dr. Erwin has much to be excited about. “Chronic back pain is a huge problem, with no cure” he explains, and as one of the most expensive healthcare dilemmas in Canada, Dr. Erwin’s research is critical to the future of all Canadians.

Degenerative disc disease creates abnormal back mechanics, increased micro motion and can lead to disc herniation and neurological compromise. With few treatments available, and a large population suffering from the disease, Dr. Erwin is working to understand more about the disease so that it can be identified earlier, and he can learn how to fix it.

Using a variant of two different animal models and collaborating with colleagues in Ohio, Australia, and the University of Western Ontario, Dr. Erwin is well on his way to answering some important questions.

Notochord cells, an area of focus in his research, secrete growth and protective factors that could be critical to treating degenerative disc disease and used in the broader field of regenerative medicine. Two contrasting models are critical to his success, the first model, like humans, lose notochord cells after only one year of life and experience degenerative disc disease, and the second maintain notochord cells until much later in life, and do not experience the disease. The intervertebral

disc has immune privilege and is therefore ‘protected’ from the immune system; making it a very good potential site for biological therapeutic intervention.

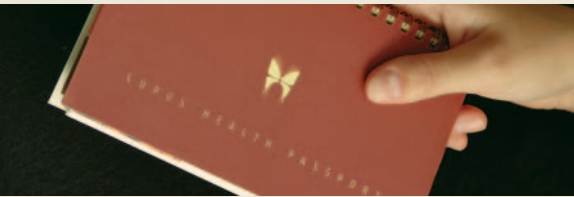
With these answers on the horizon, Dr. Erwin is already thinking of potential therapies for those suffering from degenerative disc disease. Mature cartilage cells, known in the science world as chondrocytes, could play a critical role in therapies for this disease, “stimulating cartilage cells to produce healthy matrix is one possibility,” explains Dr. Erwin, “but we are also looking at potential cell based therapies, or a combination of both” he says.

While much progress has been made, there is still a great deal to do, and Dr. Erwin is moving forward with optimism and determination.

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Our Researchers

DR. PAUL FORTIN | LUPUS



The power of knowledge is significant



LISTENING TO DR. PAUL FORTIN EXPLAIN HIS RESEARCH, it is impossible to question his commitment to his job. A rheumatologist and Chair of the Canadian Network for Improved Outcomes in Systemic Lupus Erythematosus (CaNIOS), Dr. Fortin is committed to improving the outcomes of lupus patients in Canada, and indeed around the globe. Lupus research has made significant progress over the past decade, but with it affecting 1 in 2000 Canadians, and targeting women 10 times more than men, Dr. Fortin still has a big job ahead.

“A single centre study can only go so far,” explains Dr. Fortin, who works in collaboration with 19 different centres across Canada in efforts to uncover the mystery surrounding lupus. Working with the network gives Dr. Fortin and his colleagues the flexibility to target many of the complex questions surrounding lupus.

Dr. Fortin believes very strongly in improving the lives of those already suffering from lupus. With this focus in mind, he developed the Health Improvement and Prevention Program (HIPP). Lupus patients are often at a higher risk of experiencing a heart attack and developing osteoporosis, and while some health risks are uncontrollable, such as heredity, many others can be modified. HIPP was developed to aggressively address risk factors that can be modified such as cholesterol, hypertension, smoking, and exercise. Using two groups of lupus patients, one receiving HIPP care, and the other not, outcomes are measured in terms of these controllable risk factors associated with lupus. After one year the group of patients receiving usual care is transferred to the HIPP program. It appears from

preliminary results that patients receiving HIPP care are experiencing better outcomes. Definitive results will be available when all patients enrolled complete the study in four years.

“The power of knowledge is significant,” explains Dr. Fortin as he discusses one of his newest projects, the Lupus Health Passport. In an attempt to help lupus patients understand their disease better, the passport was developed to chronicle patient information and progress. In effect, it complements the HIPP study by manually recording patient progress in a small pocketbook. In addition to transferring the power of knowledge to the patient, the Lupus Health Passport is also useful during doctor visits, or in worse circumstances visits to the Emergency Department. Doctors can quickly access all patient history in this small pocket book. The future of the passport could potentially exist on a memory stick, a small and simple electronic key the size of a thumb holding all patient history, easily carried and accessed by those who need it.

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*Efficiency plays a critical role
in letting us do our jobs*



DR. NIZAR MAHOMED HAS ALWAYS BEEN KNOWN as someone who strives for the best. As the Head of Musculoskeletal Health and Arthritis Program at University Health Network and the founder of the Total Joint Network (TJN), Dr. Mahomed has devoted his career to providing superior patient care and improving patient outcomes once they have left the hospital. It is indeed his pursuit of excellence and exemplary leadership that have led to unprecedented advances in the division of orthopaedics.

Working with a dynamic team of surgeons, Dr. Mahomed and his colleagues are able to gain a broad perspective.

Working with a dynamic team of surgeons, Dr. Mahomed and his colleagues are able to gain a broad perspective of the challenges facing orthopaedic surgery and musculoskeletal health in general. Dr. Mahomed's colleagues, all experts in their own right, are working in their respective areas of expertise to evaluate patient outcomes post-surgery. Whether it is spines with Drs. Lewis and Rampersaud, feet and ankles with Dr. Lau or joint replacement surgery with Drs. Davey and Syed, they are working across the board for the betterment of their patients.

The TJN was developed in April 2005 as a city-wide partnership, in response to a growing concern for patient care and system efficiency in joint replacement surgery. Dr. Mahomed was instrumental in developing this state-of-the-art network to address the growing

concern. Bringing together acute care hospitals, rehabilitation centres, and community care access centres, the TJN is working to develop a standardized model of patient care from beginning to end.

With a number of projects currently in operation, the TJN is proving its success to all those involved. Working with patients undergoing their first joint replacement surgery, the TJN collects patient data on a monthly basis to identify patient progress. Preliminary results from this project suggest that patient outcomes are improving. Patients are given more education and preparation prior to surgery, fewer transfers between hospitals, and better rehabilitative care post-surgery than in the former system. In addition to the benefits directly to the patients, the synergy between the various services has led to improved efficiency within the system making it more effective in doing what it needs to do – help patients.

Following models developed by colleagues in the UK and Alberta, Dr. Mahomed is striving for optimal efficiency in orthopaedics. “In a specialty that includes more patients than doctors,” Dr. Mahomed explains, “efficiency plays a critical role in letting us do our jobs.” In this capacity, he is developing a triage screening clinic available only for arthritis patients. Patients will be seen in the clinic by allied health professionals, and, if appropriate, treated. If further consultation is needed with an orthopaedic surgeon, the patient will then be referred. Reducing the volume of patients seeing orthopaedic surgeons also leads to a reduced wait-time for those who are referred to the surgeon, leading to happier and more satisfied patients. Dr. Mahomed is changing the face of orthopaedic surgery, increasing efficiency, and most of all improving patient care – making the future of orthopaedics seem very optimistic.



Our lab is our community



“OUR LAB IS OUR COMMUNITY,” Dr. Monique Gignac says as she describes the research that she and her colleagues lead at the Arthritis Community Research Evaluation Unit (ACREU) at Toronto Western Hospital. With a focus on how patients living with arthritis are coping at home and in the community, Dr. Gignac’s research presents critical questions and information into the lives of patients outside of the hospital.

Daily living for people coping with arthritis can often be a struggle, and it is Dr. Gignac’s goal to reduce this struggle and help people with arthritis continue with their regular activities, including their jobs. Losing employment because of limitations from arthritis is a devastating situation for anyone, and while some companies have made progress in allowing more flexibility for their employees there is still more progress to be made.

Using questionnaires, forums, and interviews in person and on the telephone, Dr. Gignac collects her data from people living with arthritis in the community. Beginning with the aspects of life that arthritis patients find the most stressful, Dr. Gignac is working to identify elements that will help people cope better. “The aspects of arthritis that are the most upsetting are not always the current symptoms that a person experiences, but worries and concerns about the future, balancing multiple roles in life, and accepting the changes that arthritis brings with it,” Dr. Gignac explains as she discusses her research on patients coping at home and at work. People cope and manage their conditions in many diverse ways, including planning and pacing activities, modifying routines, giving up activities, and

getting help. Finding what works best for a person can take time and varies from situation to situation.

Progress is being made, and the future for arthritis patients is optimistic. Dr. Gignac is finding the answers to bring back to the clinics, which will inevitably lead to the modification of treatments and better suggestions for the self management of arthritis. Collectively, these answers will lead to improved quality of life and happier, healthier patients.

The benefit of research carried on by the ACREU team is far-reaching. This research will inevitably contribute to improved public awareness and provide healthcare decision makers with the most current information on which to act – changing the way we all think of arthritis and related diseases. Knowledge is power, and ACREU puts this power in the hands of Canadians, with intentions for a better future.

“The aspects of arthritis that are the most upsetting are not always the current symptoms that a person experiences, but worries and concerns about the future.”



THE HUMAN BODY IS PRETTY COMPLICATED – even when everything is working correctly. And, as you have seen in the preceding pages there are many many things that can go wrong leading to one of the various forms of arthritis. Everyday we learn more about the human body in health and disease and the challenge faced by our researchers is a daunting one.

How do we assimilate this knowledge and use it effectively to improve the lives of our patients? The answer is brains. Brains that specialize narrowly to discover the details of how organs, tissues, cells, proteins, genes, and everything else come together to produce a healthy (or not so healthy) human body. And brains that share that deep understanding with each other to piece together the puzzle. Innovations and insights then begin to emerge. Concepts that could not be seen in isolation now become clear. And medical research moves forward.

We have some of the best brains in the world working on arthritis in laboratories and clinics across University Health Network. Working together and with colleagues around the world they form teams of talent which increase the pace of discovery and the rate of improvement.

Oh, and resources too. The brains need resources. But you knew that because you are a member of the team too, *aren't you?*

Christopher J. Paige

Vice President, Research, University Health Network

Our brilliant minds are helped by the generosity of donors like you. Whether you've been giving for years or for months – your generosity is making important things happen.

SPEAKING WITH GEORGE AND RUTH CRAWFORD, their affection for the AARC Foundation is apparent. Diagnosed in 1975 with two autoimmune diseases, Ruth began her journey first at the Wellesley Hospital as a patient of Dr. Murray Urowitz. Now a patient of Dr. Edward Keystone, Ruth knows that “great things are happening.”

For three decades, Ruth has received exemplary care from both physicians who have devoted their lives to ensuring that people like Ruth are quickly and effectively treated and cared for. Drs. Keystone and Urowitz have also spent their careers thinking of the future, in hopes that people diagnosed with these diseases today will not suffer the way that Ruth did. To recognize this level of care, Ruth and George have generously donated since 1976, and over the past thirty years have been amazed by and thankful for the advances in arthritis and autoimmune disease research.

“I AM INTRIGUED BY THE SCIENCE,” explains Elizabeth Wirth as she discusses why she gives to the AARC Foundation. A former science student turned economist, Liz began giving two years ago to contribute to the advances being made in science and research. Interested in innovative and forward-thinking projects, Liz is investing in the future of medicine. Indeed, it is the future that makes giving so worthwhile.

Advances made in science today translate into better and more effective treatments for future patients. Liz is interested in learning how researchers interrogate science to find the answers they are looking for – a challenging task for anyone. Liz recognizes the importance that research plays in the future of medicine, and understands how innovative research will inevitably mean a better future for all Canadians.

Through the generosity of donors like Liz and the Crawfords, research is made possible – and answers will be found.



AARC Foundation supporter
Liz Wirth

Donor List Fiscal 2005-2006

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Research focusing on Scleroderma
The Powell-Struthers Endowment
Morris & Vivian Saffer Arthritis Research Fund
Scotiabank Group Director's Chair,
Centre for Medical Discovery at UHN
W.P. Scott Fund
Marion Smith Medical Research Fund
The Smythe Chair in Arthritis Research
John and Beth Teolis Fund for Lupus Research
Wellesley Auxiliary Fund
Wirth Endowment for Arthritis Research

Named endowments can be established with gifts or pledges of \$25,000 or more, and are a wonderful way to create a lasting legacy.

Financial Report 2006

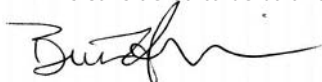
(\$000)

On behalf of the Arthritis & Autoimmunity Research Centre Foundation board of directors, I am pleased to report another successful year in our fundraising activities. This year our Fund Balances increased by 18%, from \$16,562 to \$19,558. Our investment portfolio earned 13.2% compared to 6.5% in fiscal 2005, while revenue from donations and bequests increased by 22% from \$3,454 to \$4,233. We met our annual commitment of \$1,250 in core research funding for the Research Centre, and disbursed an additional \$1,358 in donor-directed funds. Fundraising and administrative expenses were held to a level slightly lower than in 2005.

The Board of Directors and Foundation staff are committed to you, our donors, and we ensure that donations are used for the purpose for which they are given. While donors sometimes direct their funds to particular areas of research, we also require "unrestricted" donations to cover important areas of core research as well as the cost of fundraising and administration of the Foundation. The latter are paid through a General Fund, which is primarily supported by fundraising events, annual programs, and certain investment income.

On the matter of good governance, the Finance Committee continues to ensure that adequate practices are followed by the Foundation with regard to raising, managing and investing funds in support of the groundbreaking research taking place across University Health Network, to find a cure for arthritis and related autoimmune diseases. In addition, an Investment Committee was struck earlier in the year, under the leadership of Allan Crosbie. This committee is currently reviewing governance, spending and investment policies.

The investment portfolio is measured on a market value basis and figures here are reflective of market value performance. Mercer Investment Consulting is hired annually to evaluate the performance of our investment manager McLean Budden. Since inception in 2000, investment returns have performed well relative to their respective index benchmarks. The asset mix is considered to be balanced, similar to other hospital foundations.



Brian T. Harrison
Treasurer

The figures below have been extracted from the Arthritis & Autoimmunity Research Centre Foundation's audited financial statements as at March 31, 2006. You are invited to call the Foundation office at 416-340-4989 if you would like a copy of these Audited Financial Statements. Auditors – Ernst & Young LLP

A Five Year Perspective

Summary of Revenue, Expenditures and Grants As at March 31, 2006

Amount in \$000's

| | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---------------|---------------|---------------|---------------|---------------|
| Revenue | | | | | |
| Donations and Bequests | 2,504 | 4,278 | 3,159 | 3,454 | 4,233 |
| Grants from Toronto General & Western Hospital Foundation | 406 | 488 | 250 | – | – |
| | 2,910 | 4,766 | 3,409 | 3,454 | 4,233 |
| Investment Income (loss) | 926 | (1,160) | 2,329 | 902 | 1,986 |
| Expenses | | | | | |
| Fundraising, Administrative and General | 523 | 713 | 694 | 635 | 615 |
| Grants | | | | | |
| Grants to University Health Network for research, medical education & patient care programs | 1,825 | 3,214 | 2,808 | 1,827 | 2,608 |
| Transfer of Funds to various health care institutions | – | 100 | – | – | – |
| | 1,825 | 3,314 | 2,808 | 1,827 | 2,608 |
| Fund balances, end of year | | | | | |
| General Fund | 490 | 561 | 56 | – | 3 |
| Restricted Fund | 1,916 | 2,487 | 1,110 | 2,162 | 3,600 |
| Endowment Fund | 10,447 | 9,384 | 13,502 | 14,400 | 15,955 |
| | 12,853 | 12,432 | 14,668 | 16,562 | 19,558 |

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Sandra Balind

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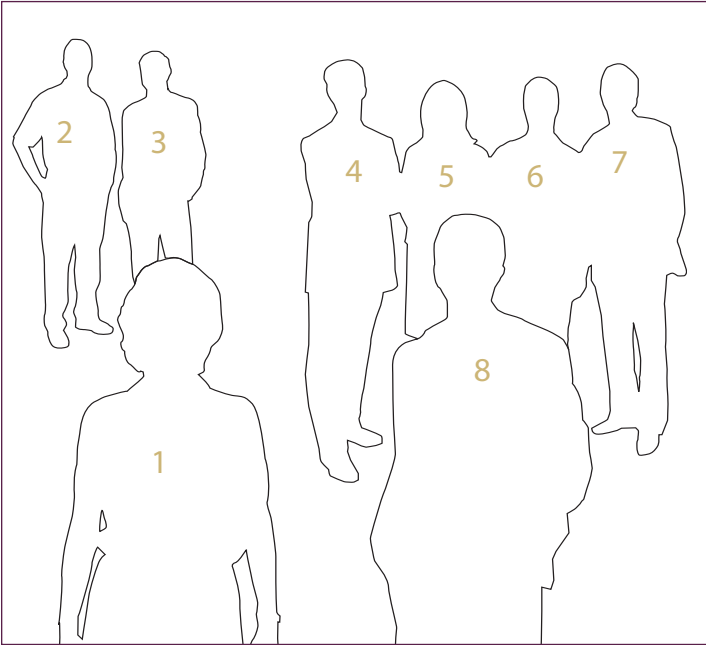
Kelly Whitelock Latimer



Brian T. Harrison, Treasurer and
Allan H. T. Crosbie, Chair, Investment Committee

AARC researchers as featured on cover:

- 1. Eleanor Fish, PhD**
Senior Scientist, Division of Cellular & Molecular Biology
Professor, Department of Immunology, UofT
Director, AARC
Head, Division of Cellular & Molecular Biology, TGRI
- 2. Mark Erwin, DC, PhD**
Assistant Professor, Department of Surgery,
Division of Orthopaedic Surgery, UofT and TWH
- 3. Robert Inman, BA, MD, FRCPC**
Senior Scientist, Division of Cell and Molecular Biology, TWRI
Professor, Departments of Medicine and Immunology, UofT
Director, Arthritis Centre of Excellence (ACE), UHN
Member, Clinical Studies Resource Centre, TWRI
- 4. Paul Fortin, MD, MPH, FRCPC**
Senior Scientist, Division of Outcomes & Population Health, TWRI
Associate Professor, Department of Medicine, UofT
Member, Clinical Studies Resource Centre, TWRI
Director, Clinical Research, Arthritis Centre of Excellence (ACE), UHN
Chair, CaNIOS, UHN
- 5. Monique Gignac, PhD**
Senior Scientist, Division of Outcomes & Population Health, TWRI
Associate Professor, Department of Public Health Sciences, UofT
Research Investigator, ACREU
Adjunct Scientist, Institute for Work and Health
- 6. Edward Keystone, MD, FRCPC**
Senior Scientist, TGRI
Director, Rebecca MacDonald Centre for Arthritis
and Autoimmune Disease
Professor, Department of Medicine, UofT
Director, Centre for Advanced Therapeutics in Arthritis, MSH
Clinical Director, Canadian Arthritis Network
Chairman, Canadian Rheumatology Research Consortium
Member, Clinical Studies Resource Centre, TWRI
- 7. Christopher J. Paige, PhD**
Vice President, Research, UHN
Senior Scientist, Division of Stem Cell & Developmental
Biology, Ontario Cancer Institute
Professor, Departments of Medical Biophysics and Immunology, UofT
Director, Ontario Cancer Institute, UHN
- 8. Nizar Mahomed, MD, ScD, MPH, FRCSC**
Senior Scientist, Division of Outcomes and Population Health, TWRI
Associate Professor, Department of Surgery, UofT
Director, Musculoskeletal Health and Arthritis Program, UHN
Deputy Director, AARC



Donate. Volunteer. Get Involved.

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