Libin Life

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CALGARY PROTOCOL NOW WORLD STANDARD

As the result of almost 4 years of preparation and work, more than 20 experts in the area of myocarditis (inflammation of the heart muscle) have developed a consensus on recommendations regarding how to assess myocarditis by Cardiovascular Magnetic Resonance (CMR).

This multinational effort has been initiated and guided by Calgary cardiologist Dr. Matthias Friedrich, Director of the Stephenson Cardiovascular MR Centre at the Libin Cardiovascular Institute of Alberta.

Back in 1998, he published the first clinical study using contrast-enhanced CMR to study patients with this disease, which has since been found to be much more frequent than previously expected.

Because myocarditis does not come with typical symptoms and findings, it was very difficult for doctors to diagnose it. Standard diagnostic tools such as ECG and ultrasound are not very accurate and biopsy procedures, although by many still considered to provide a definitive diagnosis, are limited not only by the fact that inflammation often is a focal process (the biopsy tongues may miss it), but also by the invasiveness of the procedure (a catheter has to be threaded into the heart). So, many patients with their atypical symptoms left doctors' offices without a proper diagnosis.

CMR is a very versatile imaging modality that can be used for assessing morphology and function of the heart. It is non-invasive, does not use radiation or radioactive materials, and has no known persisting side effects. Importantly, it is considered the best technique to visualize abnormalities of the heart muscle tissue itself. CMR tissue characterization has emerged as a very powerful approach to understand and diagnose diseases of the heart muscle. This is of particular importance for myocarditis, which is both frequent and difficult to diagnose.

Although, since 1998 the utility of CMR in diagnosing myocarditis has been confirmed by several trials and many centres in the world have been using CMR, there as a lack of consensus about when and how to exactly use it in daily routine. That led Dr. Friedrich in 2005 to bring together a highly distinguished group of experts from Europe and North America to form the International Consensus Group on CMR in Myocarditis. The group has renowned clinicians and researchers such as cardiologists Dr. Udo Sechtem from Germany and Dr. Peter Liu from the Toronto General Hospital, who is the current Scientific Director, Institute of Circulatory and Respiratory Health of the Canadian Institutes for Health Research. In March 2006, the group met for two days in Lake Louise and established recommendations on indications for CMR, protocols, evaluation of CMR images and reporting. The criteria are since known as the Lake Louise Criteria. They have only been slightly modified since.

On April 27, 2009, the very prestigious Journal of the American College of Cardiology (JACC) published these recommendations as the very first JACC White Paper. This new category of articles is intended to provide guidance in cardiovascular areas, which are still evolving but require expert consensus on diagnostic or therapeutic strategies.

That the Lake Louise Criteria had initially been proposed by Dr. Friedrich and his team, and has already been in use for a number of years at the Stephenson Cardiovascular MR Centre, underscores the leading role of Calgary in this important achievement.

Stephenson Cardiovascular MR Centre at the Libin Cardiovascular Institute of Alberta.

INSTITUTE MOVES INTO NEW LOCATION

Health Research Innovation Centre. Photo credit – Al-Karim Walli

Libin Cardiovascular Institute of Alberta has officially moved into its new basic science labs in the Health Research and Innovation Centre (HRIC) at the Faculty of Medicine –and it couldn't have come at better time.

"We were at capacity in the old location. We had researchers on top of researchers," explains Jonathan Lytton, PhD, research director of the Libin Cardiovascular Institute of Alberta. "Now everyone has their own space ideally suited to the kinds of experiments they do."

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STAMPEDE CITY PERFECT FOR RESEARCHING GENES

Libin Life speaks to latest international recruit

Dr. Brenda Gerull is the latest international recruit joining the Libin Cardiovascular Institute of Alberta. Having already received an Alberta Heritage Foundation for Medical Research Clinical Investigator award, she arrived at the end of June 2009. Dr. Gerull obtained her MD from the Humboldt-University in Berlin in 1997. Subsequently she completed her training in Internal Medicine and Cardiology at the Charitè in Berlin-Buch and worked as postdoctoral fellow at the Max-Delbrueck-Center for Molecular Medicine. Most recently, she was Helmholtz Fellow and Junior Leader of a group interested in Genetic Disorders of the Cardiovascular System at the same Institute.

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LIBIN CARDIOVASCULAR INSTITUTE of Alberta

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For more information
about the Libin Institute please visit www.LibinInstitute.org

LIBIN MOVES TO NEW LOCATION

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Having their own labs will no doubt greatly benefit all of the researchers at the Libin Institute, but it's the design of the new space that Lytton believes is the biggest improvement.

"This new area brings us into a close proximity with one another, and science often advances through the serendipitous conversations you have in the hallways just by running into your colleagues. Having everyone in this type of working atmosphere and environment is going to lead to great things."

Layout aside, the Libin Institute's new digs are about 33% larger than the old space and contains three impressive new labs to aide in their continued research endeavours: **the Marlene and Don Campbell Family Cardiac Research Laboratory; the King Family Experimental Arrhythmia Laboratory; and the Derek H. Haworth Laboratories.**

"The researchers at the Libin Institute are doing some dramatically different types experiments that require special rooms and equipment. We were fortunate to be able to specifically design areas for these types of experiments, and having donor funds to help outfit some of those labs has been a boon for our researchers," says Lytton.

"The move also provides new laboratory space for recently recruited members of the Institute that were awaiting a laboratory space allocation," says Dr. Brent Mitchell, director of the Libin Institute, who's been heavily involved in the planning of the new site for the last five years. "Approximately 10% of the new space provides for the growth."

While the new area is mostly for basic science, the research conducted at the Libin Institute is focused on one long-term goal – improving the health and wellness of those dealing with cardiovascular diseases.

"The laboratories in the HRIC are dedicated to advancing our knowledge base regarding the origins and mechanisms of cardiovascular health and disease," says Mitchell. "These advances are then the subject of clinical science directed towards improving the cardiovascular health of the population of Alberta, Canada and beyond."

— By Kyle Glennie

Top - Alvin Libin (right) of the Alvin and Mona Libin Foundation and benefactor of the Libin Cardiovascular Institute of Alberta along with son Bobby Libin at the gateway to the new basic science labs in HRIC. Photo credit - Rebecca Rowley

Above - New HRIC laboratory of celebrated Libin researcher Dr. John V. Tyberg. Photo credit – Bruce Perrault

STAMPEDE CITY PERFECT FOR RESEARCHING GENES

Continued from pg.1

Libin Life recently spoke to Dr. Gerull with hopes of learning more about our new colleague.

LL: Let us start with a little about yourself - where are you from and what are you going to miss once you move?

BG: I am from Berlin, one of the most exciting cities in Europe providing a wide range of cultural events. I am very interested in classical music, theatre performances and art exhibitions, but I am also very impressed by the beautiful nature and sporting activities offered by Calgary and its surroundings. Without any question, I will miss close personal contact to my family, friends and especially my two little nephews, but I am sure I will make new contacts soon that will help to get settled in Calgary.

LL: The Libin Cardiovascular Institute of Alberta has been successful in recruiting several researchers from Germany, you being the latest. What attracts people to Calgary?

BG: Two years ago I was in Calgary for the first time and met Dr. Suchowersky, Dr. Mitchell and many other people who showed me the excellent research opportunities. Research in human cardiovascular genetics needs a close collaboration between clinical experts and basic researchers in the lab. The combined resources offered by the Libin Cardiovascular Institute and academic departments, and the innovative collaborative environment at the University of Calgary, seem to me a perfect environment to propel my research program that in my mind would be hard to find elsewhere.

LL: What led you to do research in the area of Genetics and the Cardiovascular Sciences?

BG: Between 1997 and 2000 I worked on my doctoral thesis focusing on the genetic basis of human heart muscle disorders in the lab of Dr. Ludwig Thierfelder, a leading expert in the genetics of cardiomyopathies. He supported me and encouraged my research interests. Later on, I pioneered the use of model organisms to extend the genetic studies towards mechanistic understanding. Genetically determined cardiomyopathies offer a unique opportunity to study fundamental mechanisms leading to heart failure and sudden cardiac death. I am particularly fascinated from an interdisciplinary concept in molecular medicine between patient oriented research and model systems oriented basic research with the main goal to further understand disease mechanisms.

LL: Can you tell us a little about your own research interests and where your work is heading?

BG: My main interest is in molecular genetics of cardiomyopathies (CMPs). CMPs are heart muscle disorders with a strong genetic component. We have identified that mutations in the largest known mammalian molecule, titin, are a cause of inherited dilated cardiomyopathy (DCM). Another cardiomyopathy, arrhythmogenic right ventricular cardiomyopathy (ARVC), results from the replacement of cardiac myocytes with fibro-fatty tissue and is clinically characterized by palpitations and ventricular tachyarrhythmias, which, in severe forms, often results in sudden cardiac death. We have identified that a high percentage of patients with ARVC carry a mutation in the cell junction protein plakophilin-2. The role of plakophilin-2 in establishing proper cell-cell contacts of cardiomyocytes as well as the question of how perturb plakophilin-2 mutations cardiac desmosome assemble and function in ARVC are main foci of my current work.

LL: We're very pleased to have you in Calgary. Thank-you for your time.

REFLECTIONS …

The Institute has provided the very important framework to harmonize the missions of the University and Health Services to give an overall better cardiovascular care outcome to the citizens of southern Alberta.

The Institute has better connected the University and Health Services to the community, and vice versa; a very important accomplishment.

To provide and continually maintain cardiovascular care in the top quartile of excellence requires a special kind of oversight that lies above the daily din of research and clinical care. In the future the Institute needs to do whatever is required to continue to fill this role and to perfect it. It will likely require financial support from the University and Health Services as well as from the community.

— Ken Stephenson
Member
Strategic Advisory Board

REFLECTIONS …

To me it seems impossible to realize that five years has passed since the Institute was formed. However, this is probably just a reflection of my age since so much has been accomplished in this time period.

For me, the development of the Institute was a prominent dream for many years before it came into existence. In the 1980's, I remember reflecting on how the Institute structure would be a great vehicle to coordinate the missions of the university and the health care systems in an effective way. I believe that the experience of the past five years confirms this expectation. Obviously, the structure we have developed is not simple – but the missions of patient care, research and education are not simple endeavors. To have all three missions coordinated and delivered under our leadership model is something that is widely admired in the rest of Canada and beyond. I strongly hope this can be continued as we transition from the outstanding leadership provided by Dr. Mitchell to that of the new Director.

Much remains to be accomplished, but I am very proud of what has been achieved in this first five years. This is perhaps best exemplified by the acknowledgement of our success that I consistently hear in my national initiatives. It is now time to develop the plan for the next five years. I hope we can look back on the next phase with the same sense of accomplishment that we should be feeling today.

— Eldon R. Smith OC, MD, FRCPC, FCAHS
Chair
Strategic Advisory Board

Left to Right: Alvin Libin OC, AOE, Eldon R. Smith OC, MD, L. Brent Mitchell MD

REFLECTIONS …

It is a great pleasure for me to acknowledge the 5th anniversary of the Libin Cardiovascular Institute of Alberta. It seems a long time since the planning for the Institute began and much has been accomplished - obviously through the hard work and dedication of so many. **It is really impressive to witness the role the Institute is now playing in patient care, research and education in our province, and to acknowledge the influence of the Institute and its programs nationally and internationally.**

Although much of what Mona and I had envisaged when our family Foundation committed the funding to establish the Institute has been accomplished, there remains much to be done. But with the dedicated membership of the Institute, I am confident that success will continue. However, at this time, it is appropriate to pause and celebrate what has been accomplished. In particular, I want to express my appreciation to Dr. Brent Mitchell for his five years of great leadership and to wish him well in all future.

— Alvin Libin OC, AOE
Chair
Community and Partners
Advisory Committee

FIVE YEARS OLD, BUT AFTER DECADES OF GESTATION

Reflections on where we've come from as torch set to be passed on to new director

Efforts to establish a "heart institute" in Calgary date back to the 1980's. Nevertheless, the planning process for such an institute did not gain serious traction until 2002-2003 when cardiovascular sciences was named one of the original six priorities of the Faculty of Medicine. These priorities were ultimately established as institutes. Recognizing the importance of, and local strengths in, vascular biology, the term "cardiovascular institute" was incorporated into the name of the institute rather than the more common term of "heart institute." The original Cardiovascular Institute Executive Planning Committee - including Dr. Brent Mitchell (chair), Dr. Norman Campbell, Dr. Wayne Giles, Dr. Merril Knudtson, Dr. Andrew Maitland, Dr. Tim Prieur, Dr. Robert Sheldon, Dr. Eldon Smith, and Ms. Janice Stewart - developed the vision for the Libin Cardiovascular Institute of Alberta: "to create a superb, efficient, integrated program of cardiovascular wellness, health care, research, and education". The Cardiovascular Institute Executive Planning Committee was assisted in their design efforts by a Cardiovascular Institute Planning Committee and a Representative Forum with widespread stakeholder input that allowed the development of a consensus regarding the values, goals and management structure of the Libin Cardiovascular Institute of Alberta. These initial plans were further developed into a business plan by an external consultant, Dr. Roger Jackson, former Dean of the Faculty of Kinesiology at the University of Calgary. This business plan, which formed the basis of the Memorandum of Understanding, was signed among the Alvin and Mona Libin Foundation, the Calgary Health Region and the Governors of the University of Calgary that created the Libin Cardiovascular Institute of Alberta on January 27, 2004. On this, our fifth anniversary, it is appropriate to reflect upon the success of our endeavours to date.

"Now is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."

In keeping with the Memorandum of Understanding, the Libin Institute is to include "all of the cardiovascular care, education, and research carried on by the Region or the University…to make cardiovascular care, education, and research more efficient." Although this broad mandate is not yet fully established, much has been done.

The Libin Institute is now a virtual, distributed institute that fully incorporates cardiovascular wellness and health care in an environment that fosters the integration of clinical care with the creation of new cardiovascular knowledge and the training of the next generation of cardiovascular scientists, clinicians, and educators. The Libin Institute includes 150 primary members and is located in the buildings of the Faculty of Medicine, the Foothills Hospital, the Peter Lougheed Centre, and the Rockyview General Hospital and has outreach community-based locations throughout Calgary and southern Alberta. In order to gain the clear advantages of investigator co-location, the basic scientists of the Institute have recently been relocated to new, purpose-built laboratories on the ground floor of the Heritage Research and Innovation Centre (HRIC) in proximity to the vascular smooth muscle research group cluster in the Heritage Medical Research Centre. Very shortly, a portion of the ground floor of the contiguous Teaching Research and Wellness (TRW) building will be delivered to the Institute to house its translational research laboratories, including the Human Cardiovascular Physiology Laboratory, the Cardiovascular Health and Wellness Centre, the Alberta Provincial Program for Outcome Assessment in Coronary Heart Disease (APPROACH) and STEMI Programs and the Cardiovascular Opportunities Network – Epidemiology and Clinical Trials (CON-ECT) Coordinating Centre.

The importance of infrastructure notwithstanding, the strength of the Libin Cardiovascular Institute of Alberta lies in its people. The creation of the Institute, the infrastructure that it has developed, and the philanthropic gifts that it has acquired were instrumental in attracting, among others, such new cardiovascular scientist and clinicians as Dr. Matthias Friedrich and Dr. Oliver Strohm (who, with Mr. Ken Stephenson, established the world-leading Stephenson Cardiovascular MR Centre); Dr. Paul Fedak and Dr. Jehangir Appoo (who established a Surgical Approaches To Heart Failure Program); Dr. Katherine Kavanagh, Dr. Russell Quinn, Dr. Glen Sumner, and Dr. George Veenhuyzen (who have rejuvenated the clinical and research activities of the Cardiac Electrophysiology Program); Dr. Doris Basic, Dr. Stuart Hutchison, Dr. Angie Kealey, Dr. Grant Peters, and Dr. Sarah Weeks (who represent important additions to the Cardiac Imaging Program); Dr. Andrew Howarth (who bridges the interface between clinical cardiology and basic science vascular biology); Dr. Jonathan Howlett (who has recharged the Heart Failure Program); Dr. Ronak Kanani (who joined the Interventional Cardiology Program); Dr. Sophia Ahmed (who adds additional renovascular expertise to the Institute); Dr. Ron Sigal (who bridges the interface between endocrinology and cardiovascular disease); Dr. Timothy Pollak (who bolsters the clinical pharmacology expertise of the Institute); and, the recently-arrived, Dr. Brenda Gerull (who is charged with advancing our Cardiovascular Genetics Program).

The activities of these, and of the established members of the Libin Cardiovascular Institute of Alberta, have been funded, in part, by philanthropic support. Over the past five years, the Libin Institute has raised over $30 million from the community in support of its mission.

So where are we now? The cardiovascular research activities of the Institute are recognized as being among the best (as witnessed by the level of funding, the level of publication output, and by both Faculty of Medicine and external assessment), the educational activities of the Institute are recognized as being among the best (as witnessed by the fully-subscribed basic science and clinical education programs), and the clinical activities of the Institute are recognized as being among the best (as recognized by the annual reports of the Canadian Institute for Health Information). Further integration of these activities can only catalyze further achievement.

In November of 1942, Sir Winston Churchill recognized forks in the road of life with a statement that clearly applies to the present state of the Libin Cardiovascular Institute of Alberta: "Now is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."

The very best to all in the future.

— Dr. L. Brent Mitchell

Dr. L. Brent Mitchell, a well respected Cardiac Electrophysiologist, is Director of the Libin Cardiovascular Institute of Alberta and has served in

FROM M.I.T. TO THE LIBIN INSTITUTE TO OXFORD...

"Come here for your training," I encourage aspiring cardiology residents who ask about the Libin Core Cardiology Program "people here open doors for you."

Having recently completed my training as a cardiologist at the University of Calgary, I am now at the University of Oxford pursuing a PhD in Cardiovascular Medicine, conducting research using cardiovascular magnetic resonance imaging (CMR). I am honoured to share with you fond memories of my three years spent in the Department of Cardiac Sciences at the Libin Cardiovascular Institute of Alberta as a cardiology resident.

While still a visiting internal medicine resident from Vancouver, I was very much impressed by the caliber of the Core Cardiology Program in Calgary from the beginning. I spent a month doing an elective here, rotating through the Cardiac Intensive Care Unit (CICU) and the Cardiology Wards at Foothill Medical Centre. It quickly occurred to me that this is a solid training program, with a high-volume tertiary referral centre where I was exposed to patients presenting with a variety of cardiac issues, and where there is ready access to a 24-hour interventional cath lab, an echocardiography lab, a nuclear cardiology lab, an electrophysiology lab and cardiovascular surgery. Most excitingly, there was the Stephenson CMR Centre – making this one of only a few centres in Canada with a dedicated cardiovascular MR service. The cardiology residents in-training and the cardiologists I met were highly-skilled. At the end of my one-month elective here, all I knew was: I want to be trained here.

What especially appealed to me was the sense of both welcome and belonging that seems to exude from those in this department. Dr Lisa Welikovitch, program director of the Core Cardiology Program, was the first contact person I met; getting to know her in person convinced me that I would want her as my program director for the next three years, and I was right – she proved to be a very caring mentor during my training. Dr. Bob Sheldon was the Division Head of Cardiology at the time; he and Dr. Andrew Howarth (then a core cardiology resident; now Assistant Professor) took much time out of their schedules to show me the research facilities at the University of Calgary and aspects of the TORCH (Tomorrow's Research Cardiovascular Health Professionals) Program, dedicated to training the next generation of cardiovascular health research leaders. Cardiology training programs are known to be strenuous, but, having spent time with the cardiology residents on a daily basis, I could tell that, even though work was hard, they were still enthusiastic to be here. All this spoke to me that this training program not only places the utmost importance in training their cardiology residents as both clinicians and researchers, but, most of all, people here take the time and they care.

I was ecstatic when Dr. Welikovitch offered me a position as a cardiology resident to start July 2005. My experience here reaffirmed what I already knew about the program, but there was more. I met my mentor Dr. Katherine Kavanagh during my initial months here. She would have lunch with me regularly to ensure that I was getting any help I needed and to provide academic guidance. Searching for a research supervisor and wanting to learn more about Cardiovascular MR, I approached Dr. Matthias Friedrich, who was more than happy in helping me develop a research project. My research interest here focused on myocardial tissue characterization and prognosticating features of CMR in ST-elevation type myocardial infarctions. Dr. Friedrich's warm personality as well as his enthusiasm in research and CMR were extremely conductive to inspiring a serious research interest in me as well. There aren't many supervisors who would come in on a Saturday afternoon to spend a few hours teaching a trainee how to use CMR software for her research project!

The three years that I spent here did more than just transform me into a cardiologist. During this time, I met exceptional mentors, clinicians, researchers and colleagues who were not only inspiring, but more importantly, were friends who cared enough to help a young cardiologist in very concrete ways. In early 2007, I was looking into CMR training programs and wanted to travel to yet another city for my next stage in training; Dr. Friedrich strongly recommended an on-site interview for me at the University of Oxford Centre for Clinical Magnetic Resonance Research (OCMR) at The John Radcliffe Hospital (Oxford, UK), with world-leading CMR expert Professor Stefan Neubauer. I was very fortunate that my mentors in Calgary and Professor Neubauer were extremely supportive of my application. With their assistance, I was successful in securing the Alberta Heritage Foundation for Medical Research (AHFMR) Clinical Fellowship and The Clarendon Scholarship from the University of Oxford, to pursue a Doctor of Philosophy (DPhil, or PhD) degree in Cardiovascular Medicine at the University of Oxford for the next three years. Currently, I am conducting research in myocardial tissue characterization of non-ischemic cardiomyopathies, and am training to perform clinical CMR. I cannot be more convinced that I was given a golden opportunity four years ago to join the Core Cardiology Program at the University of Calgary – people here really do open doors for you.

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WAIT TIMES DECR
CARDIAC ARRHYTH

The Cardiac Arrhythmia Service of the Libin Cardiovascular Institute has been widely commended for international leadership in its field. The clinicians and staff are committed to a process of continuous improvement to ensure patients continue to receive the highest quality of care available.

Recently the Cardiac Arrhythmia Service has undergone a remarkable transformation. Using a grant provided by the Wait Times Management Committee through the government of Alberta, the arrhythmia team, which includes physicians, nurse clinicians and clerical staff, has made changes to processes and service delivery. These have resulted in a significant reduction in wait –times for patients with rhythm disturbances. In some cases, waitlists for initial physician appointments were reduced from 14 months to within just 6 weeks!

How did they do it?

The additional funding has allowed for expansion by hiring new staff and developing the Cardiac Arrhythmia Access Clinic. According to Peggy Cassidy, Nurse Instructor and manager of the clinic "this new process places the patient at the centre of the care plan." The new service includes the addition of specialized nurse clinicians who review incoming referrals to ensure they are complete and to make initial contact with patients by phone consultation. The key to the new design, according to Ms. Cassidy, is early patient education: "now, when patients are referred to our service we can begin educating them about their condition before they come in to see the physician." Patients are not only provided with information over the phone, they also receive educational materials about their conditions via mail and have a direct line to the new clinic should they have questions and concerns while waiting for their appointments.

LIBIN MEMBER DR. ANNE GILLIS CHOSEN AS PRESIDENT OF HEART RHYTHM SOCIETY

"I'm obviously delighted. Being a member of this society has enhanced my professional development and enabled me to provide better care to my patients with heart rhythm disorders."

While Dr. Anne Gillis may be delighted by her appointment as 2nd vice president of the Heart Rhythm Society (HRS) – a post that will eventually lead to her becoming president in three years – her patients and her colleagues at the University of Calgary Faculty of Medicine must be ecstatic.

The international leader in science, education and advocacy for cardiac arrhythmia professionals and patients, the HRS is the primary information resource on heart rhythm disorders. Gillis, a professor in the Department of Medicine and a member of the Libin Cardiovascular Institute of Alberta at the Faculty of Medicine, is only the second non-American to ever be chosen as president of the HRS.

The level of achievement Gillis has accomplished with this appointment certainly hasn't been lost on Dr. George Wyse, one of her colleagues at the HRS and a Distinguished Alumni of the University of Calgary.

"Being chosen as president of this major international society is an important recognition of Dr. Gillis personally, and also a recognition of the stature of the cardiac arrhythmia program at the Libin Institute and the University of Calgary."

Five year presidential track

The HRS' clear cut government structure will see Gillis become the second vice president this year, then she'll graduate to first vice president next year before moving on to president-elect, president and finally past-president in the three subsequent years.

"For me the most exciting part right now is planning our annual scientific sessions over the next couple of years," Gillis says, speaking of the HRS' yearly conference that attracts close to 15,000 professionals. "You don't get an opportunity to plan such a large meeting like that very often."

Dr. Anne Gillis (Centre) pictured in front of the Derek H. Haworth Laboratories where she conducts her research, flanked by patrons Tine Haworth (left) and Elaine Tanton (right). Photo Credit – Rebecca Rowley

Having a member of the Faculty of Medicine in such a prominent position will also benefit those around Gillis; namely her patients and fellow faculty members.

"Whenever you have members of the Faculty receiving a key appointment it brings prestige to the university," Gillis says. "It benefits my colleagues and will provide them with opportunities to be involved in the educational aspects and other roles within the society."

Just like most doctors, Gillis also points to her involvement in the HRS as a great way to improve access to treatments for her patients. She also credits the Faculty of Medicine and the Libin Institute for giving her the ability to offer her patients the best care possible.

"The strong research and academic mix that we have in the electrophysiology group is essential for us to bring new treatments and new therapies for our patients," says Gillis.

Spoken like a true doctor. Or president.

— Kyle Glennie

EASED IN THE HMIA SERVICE

Decisions regarding patient care and treatment are enhanced with early review of the referral by the nurse clinical. In many cases a treatment plan can be initiated while awaiting the initial clinic visit. This may include the scheduling of tests or changes to medications and is done in consultation by the nurse specialist with the referring physician and the physician specialist.

Because patients are now educated about their conditions earlier in the process, when they have their initial consultation with the physician they can focus on treatment options as well as further education. This allows physicians time to see more patients than in the prior system and is empowering for the patients. Of the new service one patient said:

"These clinics are the best idea that I have experienced in the last twenty years. I have more understanding of my condition and I feel more secure in my care with only telephone call away when I have problems."

The benefit of the newly developed clinic is also felt in other areas of the healthcare system. Now that patients receive education and support while waiting for an appointment, they are no longer presenting to Emergency Departments or the family physician's office as frequently. This positively impacts wait times in these areas.

— Shauna Wilkinson

THE CARDIOVASCULAR SCIENCES IN CALGARY

Dr. Henry Marshall Tory, D.Sc., the founding President of the UofA, was widely known throughout Alberta for his belief that:

"The ultimate teaching of all education is just this – that every man owes to the generation in which he lives the last full measure of devotion to whatsoever things are true,"

…to which should be added, the responsibility to pass that knowledge onto the next generation.

Although he may not have heard Tory's dictum, Dr. George Wyse undertook the task of gathering together "whatsoever things are true" in the field of cardiovascular sciences in Calgary, in a form that can be shared with the next generation – through a recorded history.

Starting in the spring of 2008, an editorial and publication committee was brought together to begin the task. It included Dr. Wyse, myself, Al-Karim Walli and a writer, Barbara Kermode-Scott. Dr. Wyse added a 50 page memoir to kick-start the project, and asked his colleagues to draft similar memoirs as he and Dr. John Morgan had done.

The book plan is to cover the growth and evolution of the Cardiovascular Sciences in Calgary beginning with the first "cardiologist" Dr. E.P. Scarlett who arrived in 1930 bringing with him Calgary's first ECG. The second chapter starts with the Calgary Associate Clinic convincing Dr. George Miller to come back to Calgary and begin the Cardiovascular Surgery program at the Holy Cross Hospital. The book continues with the establishment of the UofC's Faculty of Medicine, the establishment of the Department of Cardiology and the subspecialty Divisions that followed.

No better time could be chosen to acknowledge the fifth anniversary of the Libin Institute – to recall the achievements as a yardstick by which future growth may be measured. Fortunately, Dr. Wyse's labour of love comes when most of the original cast at the University of Calgary are still available to personalize to the story. Without this initiative, it would be much like Dr. Christiaan Bernard when he looked into the chest of his first heart transplant patient and saw no heart – there was something missing.

The book is not intended to be a play-by-play of each period but rather a readable summary of the work of the original cardiologists and cardiac surgeons, who chose the heart of medicine as their vocation, and on whose shoulders today's program was built. It will have a strong emphasis on the accomplishments, the key successes, and the stories of early and recent patients.

Former and current members of the cardiology and cardiovascular surgery department and readers of the newsletter who have anecdotal stories, pictures or seminal patients to share, may do so by contacting the editorial committee or Dr. Wyse at dgwyse@ucalgary.ca.

As one recent example demonstrated, it is exciting to realize that a patient awaiting a heart transplant could go golfing with his support equipment instead of waiting anxiously in a hospital bed for word of a heart donor and transplant for him.

Lab at the Foothills Medical Centre - May 1984
Left to Right: Dr. D. George Wyse, Karen Hillier, Ruth Bond, Dr. Henry Duff, Frances Hinton, Dr. L. Brent Mitchell
Image courtesy of the University of Calgary Archives UARC 84.005_45.30_01

Research so far has uncovered some interesting findings. The Faculty of Medicine in Calgary stemmed from the Hall Royal Commission Report (1964), which recommended a Health Resources Fund to create four new medical schools in Canada. A decade later, the Alberta Heritage Trust Fund began to contribute toward the equipping of CVS units and cardiac laboratories in Alberta. In 1980, the Honorable Peter Lougheed and his cabinet created the Alberta Heritage Foundation for Medical Research, which accelerated the growth of medical research and the development of the CVS postgraduate teaching program in Calgary.

In the short space of two generations, the cardiovascular sciences in Calgary have gone from a catch up mode, to one that now provides leadership, not just in Southern Alberta but in Canada.

Like all high quality and comprehensive publication plans, this one will have some expenses attached to it to research and write. Willing donors or former patients may contact Dr. Wyse if they wish to participate in the project in this manner.

— Robert Lampard, MD

Formerly the Medical Director at the Foothills Hospital in Calgary, Dr. Robert Lampard is currently Medical Director of Michener Centre in Red Deer. He is particularly well known as a medical historian, with several works about the Alberta story to his credit. Dr. Lampard's most recent book "Alberta's Medical History, Young and Lusty and Full of Life" is available from him at robert.lampard@gov.ab.ca.

REFLECTIONS …

Establishment of the Libin Institute has had a major positive effect on cardiovascular research in general, and in Calgary in particular. It was a pleasure to see it grow from an idea to a first-rate organization meeting concrete objectives in the years I participated as member of the Institute's International Experts Advisory Committee.

— Douglas P. Zipes, MD
Past Member, International Experts Advisory Committee
Editor-in-Chief, HeartRhythm

REFLECTIONS …

Five years is a short amount of time, but for the Libin Cardiovascular institute of Alberta, it has represented impressive achievements on the care delivery front. The results speak for themselves:

- Lowest post MI mortality rate in Canada
- Lowest post PTCA mortality in Canada
- Third lowest post-CABG mortality rate in Canada
- Lowest post-CABG mortality rate in Alberta

Over this time, our membership has grown to 150 multidisciplinary members from Molecular Biology to Kinesiology and Community Health Sciences to Biomedical Engineering. This kind of multidisciplinary team provides unique opportunities to investigate, measure and create new forms of care provision.

Complimenting the core areas of focus for the Institute, it has been particularly successful in engaging the community and developing partnerships. As of January of this year, the Institute has successfully raised or has been committed over THIRTY-SEVEN MILLION DOLLARS! The opportunity this money presents to advancing research, education, clinical care, and wellness within Cardiac Sciences for Southern Albertans is astounding.

Looking to the future, we need to be mindful that the economic landscape is changing as is the health care landscape. I believe this is a great time of opportunity for the Libin Institute, to continue it's innovative approaches and to sustain and improve the excellence that exists in Cardiovascular care in Alberta.

— Andrea Robertson
Member, Strategic Advisory Board
Senior Vice President, Nursing
Alberta Health Services, Calgary Zone

REFLECTIONS …

The aspects that have most impressed me are the enthusiasm, drive and innovation of the Libin faculty. They clearly aim to not only be current with medical advances, but also to provide those advances to the rest of the world. I have also been impressed with the collaborative atmosphere, which is often missing when bright, ambitious individuals come together. The Institute's process of intense external and self evaluation is also impressive and guarantees success.

The Institute's achievements have been outstanding and have far exceeded what could have been reasonably expected from a newly organized institute. An international leadership position has been achieved in a number of areas including magnetic resonance imaging and electrophysiology and arrhythmias.

I anticipate the Libin will be one of the thought leaders among cardiovascular institutes. It will be the training ground for many of the next generation of academic cardiovascular leaders. Physicians and scientists from around the world will come to the Libin to acquire clinical and investigational skills.

— Anthony N. DeMaria, M.D.
Member, International Experts Advisory Committee
Editor-in-Chief, Journal of the American College of Cardiology

REFLECTIONS …

What I am struck about most with the Institute is the collaboration between the University, the Community and the Health Region. I see it being illustrated in the cooperative development of strategic projects such as the Cardiac Imaging Center, the HRIC development and the support of both academic recruitment and basic scientist support. I also think the ability of the Institute to support local, national and international efforts around cardiovascular events has been an excellent means of becoming recognized as a leader in Cardiovascular Science, Education and clinical excellence.

I am very pleased to see the Institute broadening its membership and engagement beyond the faculty of Medicine. I believe the ability to engage all team members will strengthen the Institute's capabilities. I believe the Institute has to lead integration provincially and work collaboratively with the Mazankowski Team to support initiatives that enhance Alberta's edge in delivering Cardiovascular Science, Education and Clinical Excellence.

— Tracy Wasylak
Past Member, Strategic Advisory Board
Vice President, South Health Campus,
Alberta Health Services – Calgary Zone

GROWING NETWORK OF RURAL CARDIAC FUNCTION CLINICS IN SOUTHERN ALBERTA

The newest clinic in Southern Alberta is the Medicine Hat Heart Function Clinic (HFC), which opened in October 2008. Even though this clinic has been open for only a few months, it already has an active patient list of 50 and it's growing daily.

This clinic has a very unique service delivery model. Through an established partnership, health care providers from both Medicine Hat and Calgary collaborate to offer this specialized heart failure care. Calgary cardiologists travel to Medicine Hat for scheduled visits and work with the HFC Registered Nurses (RN), dietician, pharmacist and admin support, to provide excellent patient care. The cardiologists, who work through a scheduled rotation, aim to travel to Medicine Hat for one clinic day every couple of weeks. In preparation for a clinic day, the Medicine Hat HFC staff book patient appointments, prepare patient charts and organize a full clinic day for the cardiologist. The RN's, pharmacist and dietician will also assess the patient, offering support to the cardiologist and providing an interdisciplinary approach to care for the patient. Through this distinctive model, patients are getting the care they need; they are able to stay in their community and receive this care locally and they are able to be seen in the clinic in a timely manner.

The Foothills Medical Centre CFC in Calgary opened its doors in 1991 and was the first CFC in southern Alberta. With the steady increase in patient volumes over the years, there was a need to expand. New clinics were opened at the Rockyview General Hospital (October 2005) and at the Peter Loughheed Centre (December 2005). These clinics also offer an interdisciplinary approach to care, providing nurse only clinics, physician clinics, and more recently, social work and pharmacy support.

With the number of heart failure patients in Alberta continuing to rise, there is an increased demand to provide specialty care in areas other than Calgary. This increase in numbers has caused these specialty clinics to open up in other communities, such as Red Deer (2005) and Lethbridge in (2001). These clinics are doing a wonderful job creating relationships with their rural areas by providing heart failure education to staff and patients, ensuring that the rural patients receive specialty heart failure care, forming partnerships with physicians and caring for their own patients in the clinic. These clinics are also steadily growing as their patient volumes continue to increase.

This growing network of Cardiac Function Clinics throughout Southern Alberta has improved patient access to care and created a stronger bond between health care professionals. On one day, clinic staff can be found shadowing in another city's clinic, learning how they do business and sharing some of their experiences. The next day, the same staff can be found hosting employees from a new clinic, sharing their expertise, experience and knowledge. With all of the clinics participating in this sharing, relationship-building, educating, networking and expanding, the heart failure patients they care for will be provided with the best care this province has to offer.

— Michelle Biegler

FROM M.I.T. TO THE LIBIN INSTITUTE TO OXFORD

Continued from pg 4

Dr. Vanessa Ferreira at the University of Oxford Centre for Clinical Magnetic Resonance Research (OCMR)

My mentors at the Libin Cardiovascular Institute of Alberta who were instrumental in making this academic endeavor possible include Dr. Matthias Friedrich, Dr. Lisa Welikovitch, Dr. Katherine Kavanagh, Professor Todd Anderson and Professor L. Brent Mitchell. I would like to sincerely thank all my mentors, as well as all the cardiologists and staff with whom I have worked and from whom I learned so much.

— Dr.Vanessa Ferreira

Dr. Vanessa Ferreira joined the Core Cardiology Training Program at the University of Calgary from July 2005 to June 2008. She received her Bachelor of Science degree from Massachusetts Institute of Technology (Cambridge, MA, USA. Major- Biology; Minors-Chemistry and Music). She obtained her M.D. degree and completed her Internal Medicine Residency Training at the University of British Columbia (Vancouver, BC). She is currently pursuing a Doctor of Philosophy degree in Cardiovascular Medicine at the University of Oxford (Oxford, United Kingdom).

THE LIBIN AND THE MAZ PARTNER FOR THE CANADIAN CARDIOVASCULAR CONGRESS

The Libin Cardiovascular Institute of Alberta and the Mazankowski Alberta Heart Institute will be partnering at this year's Canadian Cardiovascular Congress by jointly sponsoring a symposium on the patient journey as it relates to heart failure and acute coronary syndromes. Co-chaired by Dr. Todd Anderson and Dr. David Johnstone, the symposium will feature nationally renowned cardiologists Dr. Merril Knudtson, Dr. Justin Ezekowitz and Dr. Mouhieddin (Dean) Traboulsi, along with a senior executive from Alberta Health Services. This will be a session of interest to not only those from Alberta, but also those from outside the province, as the presentations will speak not only to our successes and achievements, but also to what has been learned and how best to improve and go forward.

Symposium Topic: Challenges and Opportunities to the Delivery of Quality Cardiac Care in a Rapidly Changing Environment - The Alberta Case Study

Date and time: Saturday October 24th, 12:00 – 14:00

Location: Canadian Cardiovascular Congress 2009, Shaw Conference Centre, Edmonton

LIBIN CARDIOVASCULAR INSTITUTE of Alberta

MAZANKOWSKI ALBERTA HEART INSTITUTE

IN MEMORY OF DR. GEORGE EMMERSON MILLER

September 29, 1919 - June 20, 2009

By the time Dr. George E. Miller arrived in Calgary in 1945, he had already received his B.Sc. and MD degrees from the University of Alberta and served as a Captain in the Canadian Medical Corps during World War II. After a period away at the Mayo Clinic, he specialized in cardio-thoracic surgery and attended the University of Minnesota, obtaining his M.Sc. in surgery. Dr. Miller returned to Calgary in 1956 as the city's first cardio-thoracic surgeon. Leading the Holy Cross Hospital's cardiac surgical team, he conducted the first open heart by-pass surgical procedure in the city on October 17, 1962. After a long and successful career as a hard-working, skilled and gifted surgeon, a pioneer, a leader and a Professor Emeritus at the University of Calgary, Dr. Miller retired in 1993, but continued to provide volunteer cardiac counseling at the Kerby Centre. In 2002, the City of Calgary honoured this humble, dedicated, kind healer with the Grant MacEwan Lifetime Achievement Award. This award recognized George Miller's devotion to improving the quality of life of his patients and his significant contributions to his community. Throughout his life he always believed and taught others that: "The patient is number one – the patient is the most important person in the room."

During an interview with Barbara Kermode-Scott on February 6, 2009 for the History of the Cardiovascular Sciences in Southern Alberta project, Dr. Miller shared the following:

"We have come a long, long way since 1957. It has never been dull and there has been some hard slogging against formidable odds. The constant support and faith of administration helped us achieve excellence… The cardiovascular group at the Holy Cross worked hard for many years…. I can tell you honestly, though, that I never felt stressed. I never felt tired… I loved it day and night, anytime."

Calgary will miss you Dr. Miller.

Our condolences to George's wife, Marilyn, to his children, grand-children and all his other family members.

REFLECTIONS …

The defining characteristic of the Institute thus far is the generosity of spirit that is seen on a regular basis. Firstly, the creation of the Institute has allowed me to witness great acts of selfless philanthropy. We have many donors who have given greatly of their time and financial resources to kick start the Institute. This has been key for the development of several very important programs that have been highlights over the last few years and will continue to be priority items in the future. These individuals have a great passion for cardiovascular medicine and we are fortunate to be associated with them.

The same dedication of spirit is represented by many individuals that work within the Institute. This is not restricted to the physicians and researchers but permeates the entire operation. The hard work and dedication of these individuals has certainly advanced the cause and created an important base for the Institute moving forward.

Thirdly, I have been struck by a real integration of multiple disciplines whose common thread is an interest in cardiovascular disease. While this certainly can be expanded in the years to come, I have established more interaction in the last few years than I would have without this structure. This not only includes integration with basic, translational, and clinical science, but, includes multiple other specialties with an interest in cardiovascular disease. The institute structure has allowed this to occur and will hopefully foster further collaborative efforts down the road.

As we move forward, the new space in the HRIC and TRW buildings will be key for us to retain and recruit scientists within the Institute. As a translational scientist, the building of the human physiology labs in the TRW building will be important to advance the understanding of cardiovascular pathophysiology. I very much look forward to interacting with my colleagues in the new building. The most important thing for us going forward will be our ability to recruit young scientists to replace the more senior members of our department. Making this a reality will require ongoing dedication of our Institute members and philanthropists. I am very excited about the possibilities for the Institute in the upcoming years.

— Todd Anderson, M.D.
Chief, Division of Cardiology
Libin Cardiovascular Institute of Alberta

UNIVERSITY OF CALGARY

Alberta Health Services

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