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In addition to providing an excellent clinical experience, the training program also delivers a strong didactic curriculum. The academic half-day is designed to cover all core topics in cardiology, which are complemented by dedicated didactic teaching sessions during Cardiac Catheterization, Echo, Arrhythmia, and EKG rounds. We have recently introduced Morning Report, a weekly case-based teaching session for all residents on the CCU and CIU rotations. Additionally, monthly Patient Safety Rounds provide important teaching opportunities on quality control and patient safety. Research rounds complete the formal educational activities and provide the trainees with an in-depth exposure to research methodology and critical appraisal. Multiple evaluative tools (OSCE’s, written and oral examinations, and ITER’s) are used to assess a trainee’s progress and prepare him/her for the Royal College Sub-specialty examination in Cardiology.

RESEARCH PROGRAM

The major research programs in the division are in clinical trials and epidemiology studies on the major factors affecting cardiovascular health. These are on the following themes in which divisional members play leading roles as Principal/Lead Investigators, working through national and international networks: acute coronary syndromes and myocardial infarction, cardiac arrhythmias (sudden death, implantable defibrillators, rhythm and anti-thrombotic management in atrial fibrillation), heart failure (in-hospital and community management), prevention of cardiovascular disease (primary and secondary prevention, risk factors), and quality of care initiatives. 

All of these studies will have a large impact on the understanding and treatment of almost all aspects of cardiac and cardiovascular risk factors and diseases. Funding for these studies comes from numerous sources, including national granting agencies and industry partners. Members have been successful in obtaining major grants from the CIHR, Heart and Stroke Foundation and other granting authorities. A major strength of the division continues to be the mentorship, help and support provided to junior colleagues with research programs to help them become established. Reflecting broad involvement by members and the large areas of research, the division continues to maintain prolific publication productivity with over 100 publications per year. Findings from the research have influenced the prevention and treatment of cardiovascular diseases globally.

MAJOR ACHIEVEMENTS

Three members of the Division of Cardiology (Drs. Connolly, Teo and Yusuf) were amongst the top 1% of scientists in the world in the field of clinical medicine according to a report from Thomson-Reuters. Dr. Yusuf received the Arrigo Recordati International Prize for Scientific Research.

FUTURE DIRECTIONS

The Division of Cardiology, along with the Population Health Research Institute, will continue to develop its research activity in new areas affecting human health.

Dr. P.J. Devereaux will take over as the Division Director beginning July 2015.
The McMaster Clinical Immunology and Allergy training program is a highly integrated Adult/Pediatric program which successfully passed Royal College accreditation this year. Dr. Michael Cyr continues as Training Program Director and Dr. Jaclyn Quirt has taken over for Dr. Messieh as site supervisor and Deputy Program Director. There are six residents, from both Pediatrics and Internal Medicine currently in full-time training. Our division is very active in teaching medical and pediatric residents, and clinical clerks from McMaster as well as from other centres. Graduating trainees have proceeded to academic and clinical careers in Clinical Immunology and Allergy in Canada and internationally. In addition, a substantial number of postdoctoral PhD and MD research fellows, as well as visiting scientists, regularly join our division. Undergraduate teaching is well supported by our divisional faculty. Our weekly Allergy and Immunology Rounds, with internationally renowned invited speakers on occasion, are a major success. Other seminars, journal clubs and teaching sessions are a regular feature including the weekly academic half-days.

EDUCATIONAL ACTIVITIES

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RESEARCH PROGRAMS

Principal research themes are Inflammation and Immunity as they relate to the respiratory tract (allergic rhinitis, nasal polyps, asthma and peptide immunotherapy), food allergy (peanut desensitization, peanut allergy threshold studies, clinical food allergy challenges), autoimmune diseases, hereditary angioedema, and hematopoietic stem cells in the development and maintenance of allergy. Peer-reviewed and private sector funding, including trials of new biologics and peptide vaccines in pre-clinical and clinical models, continues to grow. Thus, there exist many research opportunities for students, postdoctoral fellows and others pursuing continuing medical education for an investigative career. The presence of AllerGen NCE at McMaster has allowed for major expansion of ongoing research collaborations, especially in food allergy, asthma and the development of atopy.

Dr. Mark Larché has established a T cell Epitope Research and Validation Centre, funded by the NIH, focusing on understanding the modulation of allergen-specific T cell function and trafficking, following interventions such as bronchial allergen challenge and peptide immunotherapy. Dr. Larché’s cat allergy immunotherapy has entered Phase 3 clinical trials and similar therapies for house dust mite allergy, ragweed allergy and grass pollen allergy are all currently in Phase 2 clinical trials in Canada.

MAJOR ACHIEVEMENTS

Dr. Paul Keith completed his term as President of the Canadian Society of Allergy and Clinical Immunology and is now Chair for the planning committee for the 2015 and 2016 annual scientific meetings. Dr. Susan Waserman is now President of the Canadian Allergy, Asthma and Immunology Foundation. Dr. Mark Larché holds the Canada Research Chair in Allergy & Immune Tolerance and the McMaster University/GlaxoSmithKline Chair in Lung Immunology at St. Joseph’s Healthcare. Dr. Denburg continues as CEO/Scientific Director of AllerGen NCE, which is in its second funding cycle (till 2019); see the separate report on AllerGen. Since 2012, Dr. Maggie Larché was president and is now (2015) Past President of the Canadian Rheumatology Ultrasound Society (CRUS), a not-for profit organization promoting the use of ultrasound by rheumatologists at point of care. She is also on the scientific committee and the research committee (CIORA) of the Canadian Rheumatology Association.

FUTURE DIRECTIONS

With all the above activity, maintenance of a critical mass of academically committed members of our division is a high priority. The growing outpatient load and the hospital restructuring make it necessary to provide greater service to a larger volume of both adult and pediatric patients over a larger area. Moreover, the international stature of research emanating from our division at McMaster, with new opportunities of linkage to respiratory health, rheumatology and inflammation provide continued opportunities for academic growth of our division.
EDUCATIONAL ACTIVITIES
Although the Division is the smallest in the Department, members play a major role in education. This includes year-round supervision of medical students and residents on internal medicine, intensive care and emergency department clinical services at St. Joseph’s Healthcare and Hamilton Health Sciences, as well as elective rotations through our specialty service. Faculty members are active supervisors in the undergraduate medicine program as well as postgraduate education at the Masters and PhD level in Health Research Methodology, Medical Sciences, e-Health, Global Health, and Pharmaceutical Sciences at both McMaster University and the University of Toronto. The division draws Doctor of Pharmacy students from across the country, as well as undergraduate pharmacology, health sciences and statistics students. We play a leading role in national and provincial training programs in Drug Safety and Effectiveness and Drug Policy.

Clinical Pharmacology and Toxicology (CPT) participates in a University of Toronto-coordinated clinical pharmacology and toxicology residency training program accredited by the Royal College of Physicians and Surgeons of Canada. We are actively recruiting trainees and graduates. We continue to lobby for joint specialty-clinical pharmacology training.

RESEARCH PROGRAMS
Despite its small numbers, the division continues to be highly successful in attracting research funding, largely because of a very wide collaborative network within medicine, pharmacy, nursing, epidemiology, economics and the social sciences. Grants come from a variety of peer-review sources. Our research topics focus on the benefits, harms, economics and evidence for therapies and include projects examining methods of improving prescribing, the impact of electronic medical records and computer-based decision support, the impact of changes in drug policies on health and health care utilization, patient preferences regarding therapies, the development, dissemination and implementation of evidence-based guidelines for therapies, medication management interventions, medication adherence support, patient needs for therapeutic information, drug interactions, comparative effectiveness and safety of competing medications, and educational interventions to improve prescribing skills. As well as scholarly papers and presentations, members of the division hold multiple copyrights and patents on research products, software, reports and guidelines.

One of the unique features of our division is its ability to directly impact professional practice and patient care through drug policy decision-making.

RESEARCH AREAS
- Benefits, harms, economics and evidence for therapies
- Projects examining methods of improving prescribing
- Impact of electronic medical records and computer-based decision support
- Impact of changes in drug policies on health and health care utilization
- Patient preferences regarding therapies
- Development, dissemination and implementation of evidence-based guidelines for therapies
- Medication management interventions
- Medication adherence support
- Patient needs for therapeutic information
- Drug interactions
- Comparative effectiveness and safety of competing medications
- Educational interventions to improve prescribing skills

MAJOR ACHIEVEMENTS
The recent department initiative to quantify and rank academic activities of all faculty has shown that clinical pharmacologists are amongst the top percentile group. One of the unique features of our division is its ability to directly impact professional practice and patient care through drug policy decision-making. Our leadership in evidence-based therapeutics and interprofessional practice leads to multiple major advisory roles with the federal and provincial governments, as well as leadership positions in provincial and national professional societies.

FUTURE DIRECTIONS
Since therapies are a prevalent and increasingly costly sector of health care, clinical pharmacologists with training in medicine plus quality assurance or epidemiology are in high demand but critically short supply. Thus, a major immediate goal of the division is the recruitment of new members to allow us to address the significant needs for therapeutics and toxicology consultation, for education to improve prescribing practices and medication safety, and to expand our involvement in health policy and research.
EDUCATIONAL ACTIVITIES
The Critical Care Program continues to offer a Royal College accredited two-year Fellowship Program (Program Director: Dr. T. Karachi). We currently have 14 national/international fellows in the program. The Critical Care Program offers formal rotations for residents from a variety of other specialties. There are formal block elective/optional rotations in critical care offered to medical and elective students, as well as external residents (Organizer: Dr. H. Whittingham). We continue to provide a multidisciplinary Regional Critical Care Journal Club, as well as Regional Critical Care Rounds. We have a national advanced Critical Care Simulator Course (Organizer: Dr. A. Fox-Robichaud) using a state-of-the-art facility. We have organized a formal bedside ultrasound/echocardiography course for faculty/residents and fellows for the last two years (Organizer: Dr. C. Ainsworth). Faculty provide formal educational sessions on a daily basis, as well as once weekly academic half days for Critical Care residents/fellows.

RESEARCH
The Adult Critical Care Fellowship Program mandates all fellows to complete a research program under the supervision of faculty. There is an Annual Fellows Research Day in conjunction with the Fellowship Program at the University of Western Ontario. Many of the abstracts/projects are also presented at a variety of international conferences with subsequent peer-reviewed publications. Drs. D. Cook/M. Meade Co-Chair a research mentorship program dedicated to formal training in research methodology and stewardship. Members of the division are active participants in the Canadian Critical Care Trials Group dedicated to designing, implementing and publishing multi-centre, multi-national trials in Critical Care Medicine. Several members of the division are either principal or co-investigators in a variety of trials including studies involving modes of mechanical ventilation/weaning; management/mechanisms in septic shock; prophylaxis for thromboembolism; and end of life care, just to name a few.

MAJOR ACHIEVEMENTS
Dr. D. Cook is the Co-chair of the Evidence-Based Practice Centre at McMaster University, as well as the Director of ICU Clinical Effectiveness and Outcomes Research at St. Joseph’s Healthcare, Hamilton. She is the Academic Chair of Critical Care Medicine at McMaster University and holds the McMaster University/St. Joseph’s Healthcare Regional Academic Chair in Critical Care Medicine, as well as the Canadian Research Chair of Research Transfer in Intensive Care. She is an Officer of the Order of Canada and was recently named Distinguished University Professor, the University’s highest honour, going only to those professors who achieve the highest level of excellence in research, teaching and learning. The Canadian Critical Care Trials group has honoured her in creating The Deborah J. Cook Mentorship Scholarship Award.

Dr. Deb Cook is appointed as an Officer of the Order of Canada.

“...The Critical Care Program continues to offer a Royal College accredited two-year Fellowship Program.”

Dr. P. Kraus is the LHIN Lead for Critical Care Medicine, which advises government and/or creates policy with regards to future directions in Critical Care utilization, funding and standards of care. There is ongoing financial support for the Critical Care Assistants Program sponsored by the Ministry of Health and Long-term Care. Dr. D. Jichici is the Co-Founder and Co-Chair of the Canadian Neurocritical Care Society. Dr. J. Rudkowski is the Clinical Clerkship Coordinator. Drs. M. Soth (St. Joseph’s Healthcare), T. Karachi (Juravinski), H. Whittingham (Hamilton General) and A. Freitag (McMaster) are the Medical Directors and Site Leads for Critical Care Medicine.

FUTURE DIRECTIONS
We continue to provide support and leadership in the delivery of Critical Care Services both in Hamilton and in the LHIN. We not only practice evidence-based medicine, but create the evidence within Critical Care, which has and will change clinical practice locally, nationally and internationally. We have expanded our clinical borders by way of our Critical Care Response Teams and continue to work with our colleagues on quality of life/quality of life decision making.

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Number of national/international fellows in the two-year Fellowship Program.

Dr. Andreas Freitag
MD, FRCP\
Division Director
EDUCATIONAL ACTIVITIES

The Dermatology residency program based at University of Toronto with a McMaster University stream has been active for the last five years. Now, a new CMG CaRMS Dermatology residency position from McMaster University has replaced the former one. This new program is the first formal conjoint CaRMS residency matched position between McMaster University and the University of Toronto. It will also serve as a prototype for the creation of a future full Dermatology McMaster University residency program aimed to start in 2020. In the new program, one new resident per year will begin their PGY1 and 2 required rotations at McMaster University and then transfer to the University of Toronto for completion of the PGY3 to 5 years. Throughout the educational experience, the resident will have a blended opportunity to experience and be educated by both institutions. The McMaster University resident will become familiarized with the faculty and career opportunities in the Hamilton region, while attending an established and internationally recognized Dermatology residency training program at University of Toronto. This work is the combined effort of dermatologists from Hamilton and Toronto.

Undergraduate teaching continues to be offered through tutorial based dermatologic problems and E-learning modules. However, new modifications have been introduced where each medical student will experience a Dermatology Clinic experience with patient observation and clinical teaching; a true PBL experience. The purpose of this curriculum is to close the clinical practice gap by providing an efficient and effective way to teach dermatology to medical students and residents in the setting of a busy clinic. Clinical rotations in the form of block and horizontal electives are available for undergraduate medical students from McMaster and other Universities. Furthermore, Dr. Rosilene Lanzini has been actively organizing surgical skills teaching for medical students at McMaster University.

Residents from Internal Medicine, Family Medicine, Pediatrics, and Plastic Surgery also have the opportunity to interact with faculty members of the division at the new Boris Clinic. This work is the combined effort of dermatologists from Hamilton and Toronto.

CLINICAL RECRUITMENT

Dermatology is a specialized area of medicine with several subspecialties. Dermatologist practice frequently overlaps with other medical disciplines. In the recent years, Dermatology Division practice has become more multidisciplinary and team-based, mainly at the MUMC site with the daily presence of dermatologists at the Boris Clinic.

Dermatology is part of a changed health care landscape. The lack of uniform criteria that stimulate the practice of dermatology and its subspecialties has an adverse impact on the distribution of these specialists as medical resources. This problem is particularly true in Hamilton Health Sciences and St. Joseph’s Healthcare Hamilton structure. Furthermore, there is an increased demand for dermatologist’s services. There are many reasons for the unbalanced situation. Among them is the aging population, as well as population growth. Another important factor is the public awareness about skin diseases, particularly skin cancer, and dermatologists’ unique expertise. These issues highlight the need for academic activity expansion at McMaster University. The Division will be recruiting new GFT faculty members in the near future.

CLINICAL ACTIVITIES

Members of the Division continue to participate in subspecialty clinics outside of their individual practices. These include Dr. Rosilene Lanzini (MUMC out-patient clinics with special attention to Surgical Dermatology), Dr. Merino Lima (MUMC out-patient clinics, Program Director of Dermatology Residency, Grad Drs. Nathan Rosen and Channy Muhn (JCSC skin cancer clinic), Dr. Maureen O’Malley (Vascular Anomalies Clinic, MUMC; Organizer: Day in Dermatology), Dr. Ron Vender (Stone Church Clinic, international lecturer and expert in biologic therapies for psoriasis), Dr. Nellina Saveriano (St. Joseph’s Out-patient Clinic), Dr. Judy Wismer (MUMC Out-patient).

MAJOR ACHIEVEMENTS

Allergists and Dermatologists now apply patch tests in patients with cutaneous dermatitis to determine whether their skin condition may be caused or aggravated by a contact allergy. Patch tests are not the same as skin prick tests, which are used to diagnose hay fever allergy (house dust mite, grass pollens and cat dander). Usually, patients with a suspected Allergic Contact Dermatitis (ACD) are patch tested with a “standard” panel of allergens to screen for the most common sensitivities. Previously, patients with suspected contact dermatitis had been sent to dermatology services at the University of Toronto or private clinics in the Greater Toronto Area. The clinical need for patch tests triggered a collaborative proposal, which resulted in the creation of a novel and interdisciplinary Allergy and Dermatology Patch Test (ADPT) Clinic. Patch Test clinic arose of a collaborative approach by the Dermatology Division (Dr. Lima) and Allergy & Clinical Immunology Division (Dr. Wasserman). The ADPT clinic has achieved professional recognition and acceptance as a scientific tool available at MUMC in investigating allergic and dermatological conditions. The ADPT clinic has increased the number of patients seen by each specialty while decreasing non-value added time supported by appropriate clinical resources. Finally, the development of this interdisciplinary clinic may serve as a model at other medical schools for incorporating Patch Test Clinic into the busy clinical using multidisciplinary care in a diverse educational setting.

FUTURE DIRECTION

The Dermatology Division at McMaster University is making efforts to expand its academic participation. The Division has recently increased its clinical activities at the McMaster University Medical Centre, in the newly opened Boris Clinic. The new CMG CaRMS Dermatology residency position at McMaster University will serve as a template for the future establishment of McMaster University residency program in Dermatology in 2020. These changes are required to move the program to a position of excellence alongside the other medical fields at McMaster University. Moreover, the proposed plan will stimulate careers in academic dermatology.

The Dermatology Division is in the process of establishing the first mobile teledermatology service for inpatients in the country. Mobile teledermatology consists of live teledermatology consultation using a real time system. It uses applications in which health professionals can provide dermatological advice using mobile devices such as cell phones or personal digital assistants. Mobile teledermatology is useful in emergency situations, and inpatient situations when neither a dermatologist nor stationary telemedicine equipment is accessible.

The ultimate goal of this proposed expansion in the Dermatology Clinic is to provide medical professionals and patients access to specialized service while guaranteeing excellent patient experience and medical training in Dermatology. The establishment of a greater Dermatology service will take on the dual role of diagnosis and management of the most complex cases, and of supporting the development of medical capacity. Also, we will train dermatologists who will remain committed to supporting the clinical and academic goals of McMaster University and will ideally seek to stay professionally in the Hamilton, Niagara, and Waterloo metropolitan areas or Southwest Ontario regions.
The ED CTUs continue to operate at full capacity under the leadership of Dr. Amna Zaki at SJHH and Dr. Rebecca Mallin at HHS. Rebecca returns to this role after Dr. Cathy Sellens stepped down in June. Thanks to Cathy for the work she did for the past year.

The Undergraduate program curriculum has a new co-ordinator, Dr. Massoud Jalayer who took over from Dr. Barb Pek. Many thanks to Barb for her work to renew the curriculum and increasing the learning resources available to the clinical clerks.

The first fellow in Pre-Hospital Care completed his fellowship this past year and a second fellow has recently started, under the leadership of Dr. Michelle Welsford. The program has applied, in collaboration with other Universities, to the Royal College Diploma program as an Area of Focused Competence (AFC).

ClinEpi Blitz (for residents studying for their specialty examinations) under the leadership of Dr. Andrew Worster has been very successful, with increasing participation and attracting residents from a variety of specialties and universities. The 10EM conference, led by Dr. Teresa Chan, will be held in October and attracts residents, physicians, and allied health professionals.

The competency-based evaluation system is gaining national and international recognition as training programs transition into a competency-based education model.

Research continues to develop with our core of clinician researchers actively publishing and receiving grants. Since 2010 when there were 27 publications, the number has doubled to 51 in 2014, with 2015 staying on track with 20 by June. The Division Research Associate Wendy Bhanich Supapool has retired and Mat Mercuri, PhD joined the Division to continue increasing the research capacity.

Emergency Medicine CTUs at McMaster continue to provide clinical supervision and teaching to hundreds of students and residents annually. Faculty members are being recognized for their clinical and academic contributions locally, provincially, and nationally. Dr. Andrew Worster was promoted to Professor, the first person to achieve this rank in the Division of Emergency Medicine.

This Division has been able to recruit outstanding new faculty who will further contribute in teaching, mentoring, and research.

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The critical mass of academic emergency physicians now exists in our division as we have grown over the past six years from 17 to 41 members, 10 GFTs from 3 in 2009, and currently there are 16 AFP members. In the Spring, the Division went through a Strategic Visioning exercise. Key points were identified: develop vision and mission for the Division, pursue integration of separate efforts, increase and intensify commitment to excellent research, pursue active mentorship and leadership development, and promote the Division locally and abroad. Now the work begins.

Steady growth since 2009: from 17 Academic Emergency Physician members to 41 in 2014.
Highly productive, creative and effective researchers and educators underlie the Division’s local, and international reputation for excellence. The divisional faculty members are involved in all aspects of the undergraduate and postgraduate curriculum and their research productivity is reflected in an extensive list of publications.

**EDUCATION**

Medical undergraduates have opportunities to interact with Divisional faculty in large group sessions, during horizontal electives, as part of the LMCC review series, during tutorials and clinical skills preceptorships, and during self-initiated research projects. Postgraduate medical residents extensively interact with divisional members on the clinical teaching unit, in academic half days, during a variety of rounds and presentations, and during rotations in in-patient and out-patient endocrine environments. Divisional faculty are also Internal Medicine examiners for the Royal College.

The Division also supports a full subspecialty residency program in Endocrinology and Metabolism which has now been operating for five years and accommodates up to two fourth-year residents and up to two fifth-year residents at any one time. This program was very favourably reviewed in 2015 by the Royal College.

Divisional faculty are extensively involved in non-clinical education as well. They participate as PhD comprehensive and defense examiners and graduate thesis committees; train undergraduates, Master’s level, and PhD students every year (up to 15); and currently accommodate 10 postdoctoral fellows.

Outside of McMaster, divisional members are engaged in writing clinical practice guidelines, developing quality assurance initiatives with the Ontario CPSO, leading Canadian Medical Education initiatives in diabetes, parathyroid disease and general endocrinology, extensively speaking internationally on topics related to diabetes, and educating the public about diabetes, osteoporosis and other endocrine disorders. The Division also provides departmental leadership in global health education and training, and successfully fundraises for this cause every year.

**RESEARCH PROGRAMS**

Collaborative research across disciplines is the key distinguishing characteristic of the Division. All members of the Division are directly or indirectly involved in research. This research spans the spectrum from genetics, biochemistry and physiology to epidemiology and large international clinical trials comprising thousands of individuals. Specific topics currently being researched include obesity, diabetes pathophysiology, diabetes remission, muscle metabolism, AMP-activated protein kinase, inflammation, and fatty liver disease; the relationship between dysglycemia and serious health outcomes; imaging modalities and therapies for osteonecrosis of the jaw, osteoporosis, hyperparathyroidism and metabolic bone disease; and identification of novel biomarkers pertaining to diabetes care.

During the 2014-2015 academic year alone these research activities have led to the awarding of five new grants from peer-reviewed and industry sources, three patents, and the publication of more than 76 peer-reviewed articles or book chapters.

**MAJOR ACHIEVEMENTS**

The last academic year saw the completion of the NIH-funded 15-year ACCORD trial and subsequent ACCORDION study (led by Dr. Gerstein), which provided tremendous insights into the relationship between cardiovascular risk and diabetes. A metabolic bone disease fellow under the supervision of Dr. Khan was awarded the Young Investigator of the Year award by the International Society of Clinical Densitometry. In addition, Dr. Prebtani was also recognized with the PARD Teaching Award and Department of Medicine Postgraduate Medical Education Award; and Dr. Steinberg was inducted into the Royal Society of Canada’s College of new Scholars, Artists and Scientists, and was named a Distinguished University Scholar by McMaster.

**FUTURE DIRECTIONS**

The current focus of research in the Division is on identifying effective and robust means of achieving type 2 diabetes remission using medical approaches and to understanding the pathophysiology behind diabetes remission. Members are continuing to research ways of characterizing and preventing obesity in children and adults, reducing the metabolic consequences of obesity, and identify therapies that may mitigate both obesity and diabetes. Members are also involved in understanding the treatment and prevention of atypical femoral fractures and metabolic bone disease.
EDUCATIONAL ACTIVITIES

The popularity of the Division of Gastroenterology’s national endoscopy training programs continues to grow. The ninth annual McMaster Residents’ Endoscopy Training Course organized by Dr. David Armstrong, Dr. Frances Tse and Dr. Eric Greenwald is a national course teaching GI residents from Vancouver to Halifax. This continues to be very popular. We also have a regular “Train the Trainers” course and are one of only two sites in Canada to run such programs. These are important in ensuring that endoscopy teaching remains of the highest standard. We also run endoscopy Master Classes to ensure gastroenterologists maintain their endoscopy skills and learn new techniques. This has been particularly important in Ontario with the proliferation of colonoscopy screening facilities.

RESEARCH PROGRAMS

The Division has been at the forefront of GI research for over 30 years, culminating in the creation of the Farncombe Family Digestive Health Research Institute (FFDHRI) thanks to a generous gift of $15 million from the Farncombe family. Many of the GI Division faculty are also members of the Institute. The close proximity between clinicians and scientists with diverse disciplines such as immunology, physiology and microbiology has provided an environment for truly innovative bench-to-bedside research. The FFDHRI houses the Farncombe Family Gnotobiotic Facility, the only germ-free facility in Canada. Together with the metagenomic lab this will allow us to understand how gut flora interact with the host to cause disease in the GI tract and beyond. We also have appointed a psychiatrist, Dr. Rebecca Anglin, to work in our clinic as a joint appointment with psychiatry – the first of this type in Canada. This will allow us to explore the close relationship between psychiatric and GI diseases and how the gut microbiome influences this.

The Upper Gastrointestinal and Pancreatic Diseases (UGPD) Cochrane Review Group also has its base within the FFDHRI under the leadership of Dr. Paul Moayyedi and Dr. Grigorios Leontiadis. This produces systematic review published in the Cochrane Library that informs clinicians and patients worldwide on evidence-based medicine. We are the top GI research group in Canada and three of the top ten most cited gastroenterologists worldwide in Google Scholar are from FFDHRI. GI division members have published over 2,000 papers that have been cited over 85,000 times.

MAJOR ACHIEVEMENTS

Dr. David Armstrong has been elected President of the Canadian Association of Gastroenterology for 2016-17. Dr. Paul Moayyedi is the joint Editor-in-Chief of the American Journal of Gastroenterology, the highest impact clinical GI journal. Dr. Jan Huizinga was awarded the Canadian Association of Gastroenterology Visiting Professor for 2015.

FUTURE DIRECTIONS

The Farncombe Family Digestive Health Research Institute will provide an innovative environment with the collaboration of clinical and basic science researchers. Our challenge is to maintain this integrated approach of bench-to-bedside research with the reorganization of health care in Hamilton. Our goal is to unravel how nutrition and gut flora interact with the intestinal mucosa to produce health and disease. This applies not only to disorders of the digestive tract, but has implications for diseases in all organ systems.

Dr. Paul Moayyedi
BSc, MB, ChB, PhD, FRCP, FRCPG, AGAF, FACG
Division Director

Associate Professor Bruno Salena is developing fluorescent DNAzymes that will detect cancer markers in stool samples. If cancer is present, the molecules will glow, leading to early treatment and better outcomes for patients.
The last 12 months have been extremely exciting for the Division of General Internal Medicine at McMaster University. The Division continues to excel in providing clinical care, educational activities, and research activities. The Division members are located at all three academic teaching hospitals in Hamilton. We continue to have vibrant Clinical Teaching Units and preceptor based (MD Based) teams at each of the sites.

We have had the Hospitalists Program at Juravinski Site. The creation of the Hospitalist Program has enabled our members to focus on scholarly and educational activities for the housestaff, alternate level of care patients, and patients with sub-acute severity being cared for by the Hospitalist Program. We are grateful to the Chiefs of Medicine at Hamilton Health Sciences and St. Joseph’s Healthcare, who have been very helpful in creating the Hospitalist Program, which has enabled us to concentrate on acute patients on the Clinical Teaching Unit.

On the Ambulatory Care side, we now have two educational sites for Ambulatory Care teaching. Phase II of The Boris Clinic is now complete and we have a very vibrant and educationally enriching environment for different levels of learners in the Ambulatory Clinical Teaching Unit, which we believe is the first one of its kind in Canada. We are grateful to Drs. Mohamed Panju, Shariq Haider, and Martha Fulford who have assisted in creating an educational environment for ambulatory teaching. This was one of the care gaps that was previously identified in Royal College reviews and we feel that we will now be able to provide our housestaff with an excellent experience in management of ambulatory care.

We continue to have our quarterly Regional General Internal Medicine meetings which are extremely well attended. During those meetings we discuss issues related to clinical, educational, and research activities at each of the four sites. The meetings are preceded by the GIM Resident Journal Club, which is well attended by the GIM attendings and fellows.

Our GIM Fellowship Program was once again successful in attracting high caliber individuals and we now have a total of six GIM Fellows in the training program. These GIM trainees have been doing scholarly activities and educational activities at each of the sites. We are indebted to Dr. Raj Hammiah who has been an effective leader in the GIM Fellowship Program.

In the last 12 months, we recruited Dr. Jason Cheung, Dr. Samir Raza, and Dr. Ahraaz Wyne and Dr. Daniel Brandt Vegas, who completed two years of Clinical Scholar. All of these individuals had training in General Internal Medicine in Hamilton and were GIM Fellows. Our recruitment plan calls for three further GIM academic physicians over the next two years and we have already identified those individuals.

We continue to have a very collegial division where everybody contributes to the clinical and educational activities.
With the growing number of seniors, “Ontario’s health, social, and community human resources need to be better prepared and supported to meet the needs of our aging population” (Samir Sinha), the division has played a central role in capacity building and promoting evidence-based practice. With the support of the Department of Medicine in the Faculty of Health Sciences (FHS), members of the division have sustained excellence and recognition in education and research and this, in turn, has allowed others to learn and change.

EDUCATIONAL ACTIVITIES

The division has continued to collaborate with the GERAS Centre, Regional Geriatric Program Central (RGPc), and inter-professionaldepartmental planning committee to host the 4th Annual Geriatric Education day “Update in Dementia”. Our keynote speaker, Dr. Susan Mitchell, Geriatrician and Health Services Researcher and Professor of Medicine/Senior Scientist at Harvard Medical School, presented on advanced dementia and decision-making. Our “Life Long Achievement Award” recipient for 2014 was, Dr. Irene Turpie, Professor Emeritus. As a leader and mentor she has inspired and taught with integrity medical and inter-professional trainees locally, nationally, and internationally. Her contribution to McMaster University and our health care communities has been exemplary. She has emulated the qualities of leadership, commitment to lifelong learning, and given selflessly to the building of caring communities.

Division members, with key educational leaders, continued to support the Geriatric Certificate Program (GCP) and currently have more than 280 clinicians are registered and 42 clinicians have successfully completed their program. GCP has been recognized as an accredited McMaster University Continuing Health Science Education Certificate Program. In the upcoming year, GCP will be offering evidence-based e-learning courses. One of the core GCP courses offered by the Advanced Gerontological Education (AGE) is the Geriatric Persuasive Approaches (GPA). Division member, Dr. David Cowan, has been a key board member of the AGE Committee since its inception. With its growing popularity, GPA has been presented to over 230,000 front line staff across Canada. Other educational initiatives include the International Outreach Program and under the leadership and vision of Drs. Joy St. Onge and Irene Turpie, the Division of Geriatric Medicine has sponsored and welcomed Dr. Harriett Mayanja (Internist) from Uganda, Africa as she completes a six-month geriatric fellowship at McMaster University.

RESEARCH PROGRAM HIGHLIGHTS

Dr. Alexandra Papaioannou and the GERAS team announced their new Post-Doctoral Research Fellow, Dr. Aliez Hazan, with training under the supervision of Dr. Papaioannou. Dr. Hazan has a key member of the team with a research focus on caregiver burden in dementia and knowledge translation. Mr. Thom Ringer (MD Candidate 2016) with the Michael DelGroots School of Medicine and under the supervision by Dr. Papaioannou, was awarded the Willard and Phoebe Thompson Award at the CS’s annual scientific meeting for his presentation on “Frailty Predicts Degree of Caregiver Burden in Older Adults Attending a Geriatric Out-Patient Clinic”.

Dr. Papaioannou, the principal investigator, has led the “Gaining Optimal Osteoporosis Assessments in Long-Term Care (GOAL)” project, which was a knowledge translation initiative. The purpose of GOAL was to disseminate the 2010 Osteoporosis Clinical Practice Guidelines, adapted for long-term care (LTC) and the frail elderly, using a multifaceted knowledge translation model to gain optimal osteoporosis assessments for residents in long-term care homes in Ontario to prevent future falls and fractures.

Additional research collaborations include: Dr. Papaioannou (PI) - Evaluating LTC Homes’ Intervenous Therapy Experience (LIVE) Study and the development of the LTC fracture prevention guidelines and the development of education and practice guideline tools; Dr. Tricia Wui (CI) - Labarge Aging Curriculum – An Innovative Interprofessional Education Approach to Caring for Older Adults; Dr. Cowan (CI) - NeuroVISION Pilot examining the incidence of occult strokes in non-cardiac surgical patients and HipATACK evaluating the benefit of rapid surgery in Hip Fracture patients vs usual care; Dr. Aiyah Khan (PI) - Developing a Canadian National Registry for Hypoparathyroidism and Chair of the International Osteoncrosis of the Jaw Task Force; Dr. George Ioannidis (CI) - Risk Factors that are Associated with Osteoporosis Treatment in High Risk Residents Living in LTC Homes.

MAJOR ACHIEVEMENTS

We want to congratulate the following students/residents and division members for their outstanding accomplishments: Ms. Stephanie Kwolek, recipient of the “Dr. Irene Turpie Award” for her outstanding clinical performance during her Geriatric Subspecialty Clerkship; Mr. Ringer was the Tri-City Annual Geriatric Research Day Medical Student Oral Presentation Award recipient; Dr. Kanna Piggott - Annual Resident Research Day Quality Award (Supervisor Dr. Papaioannou); Drs. Eric Wong and Justin Lee - Dr. Christopher Patterson Award for Excellence in Geriatric Research for their qualitative study on delirium assessment on a surgical ward; Dr. Papaioannou - Senior Leadership and Dr. Cowan - Individual RGPc Service Award for Geriatric Excellence; Dr. Sadhana Prasad - Ontario College of Physicians and Surgeons of Ontario Council Award; Dr. Cheryl Aliabyl - Teaching Award Undergraduate Medicine Selectives Program; Dr. Woo –Teaching Award in Undergraduate Teaching DUM.

FUTURE DIRECTIONS

With the increase in demand for our clinical services and the focus of the HNHB WW LHIN for its clinical programs to focus on high-risk seniors, those with mental health and alcohol problems, and persons with multiple chronic conditions as priorities, our division will continue to grow and develop. It is evident that we must ensure that our group is able to provide innovative education and research activities, in addition to essential clinical services within our academic centre, and our neighbouring communities.

Special thank you to: Dr. P. O’Byrne and Ms. A. Rosati and their administrative staff, Dr. J. Kelton, Ms. R. Repa, Mr. K. Sulcik, Dr. B. Lumb, Dr. A. Ingrain, Dr. A. Papaioannou, Dr. M. Sagnon, Dr. B. Misiaszek, Dr. J. St. Onge, Dr. T. Woo, Ms. J. Pacheco, Ms. L. Consoli, RGPc; and all of our division members and their administrative staff for their incredible support and dedication.

Dr. Sharon Marr
BSc, MD, FRCP(C), MEd, Division Director
HEMATOLOGY AND THROMBOEMBOLISM

EDUCATIONAL ACTIVITIES

Division members continued to make important educational contributions at all levels, including clinical mentorship of medical students, internal medicine residents, residents from other specialty programs, and clinical fellows; as well as supervision at the Masters and PhD level in Health Research Methodology, Biochemistry and Biomedical Sciences. Both the Hematology Residency Program and Transfusion Medicine Area of Focused Competence Diploma Program (which is housed in the Department of Pathology and Molecular Medicine) underwent successful Royal College accreditation visits. The Transfusion Medicine Program was recognized for its exemplary leadership (Dr. Donnie Arnold), enthusiastic teaching faculty, outstanding educational environment, well-developed competency-based educational program, and rigorous portfolio monitoring. The only cited weakness was the absence of a specific elected trainee representative on the Program Committee. Noted strengths of the Hematology Program included our renowned and accessible faculty, strong faculty mentorship, a rich learning environment, well-designed curriculum, innovative Leadership curriculum, comprehensive evaluation and assessment of resident progress, thoughtful integration of the intrinsic CanMEDS roles into the rotations, and a dedicated administrative assistant (Ms. Gail Campbell, and Program Director (Dr. Wendy Lim). Weaknesses were few but included a need to complete ITERS in a more timely fashion and to modify the longitudinal clinic rotation to ensure resident ownership of patients. Dr. Kylie Lepic successfully took on the role of coordinator for our divisional Rounds, which continue to be very well attended and highly regarded. We hope to have our local Diploma Program in Adult Thrombosis Medicine ready to start accepting trainees for the 2016 academic year.

RESEARCH PROGRAM

The division has achieved world-wide recognition for its research in thrombosis and hemostasis, platelet physiology and function, blood transfusion therapy, the molecular biology of red cell disorders and clinical trials in malignant hematologic diseases. Funding for our research comes from a variety of sources, including CIHR and the Heart and Stroke Foundation. Division members were responsible for well over 150 publications during the 2014-2015 year, including manuscripts in New England Journal of Medicine, Nature, Annals of Internal Medicine, and Blood.

MAJOR ACHIEVEMENTS

In December 2014, Dr. John Kelton was named to the Order of Canada. Faculty receiving academic recognition this year included Dr. Mark Cudworth (Jack Hirsh Award for Outstanding Academic Achievement; named Chair of the Department of Pathology and Molecular Medicine), Dr. Donnie Arnold (appointed Director of the McMaster Centre for Transfusion Research, inaugural holder of the John G. Kelton Chair in Translational Research), Dr. Lori Links (appointed Director of Medical Foundation 1) and Dr. Isaaq Nazi (Department of Medicine Internal Career Award), Ms. Linda Halihuk (Nancy Heddle Teaching Award), and Dr. Howard Chan (Irwin Walker Teaching Award). Drs. Paul Kim, Brian Leber and Madeleine Vrbovsek received this year’s Hematology & Thrombosis AEP-funded-Student Research Awards. Dr. Sam Schulman presided over an immensely successful 2015 Congress of the International Society on Thrombosis and Haemostasis in Toronto. The 2nd Irwin Walker Day in Blood and Marrow Transplant (co-chaired by Drs. Kyle Lepic and Parveen Wasil), 10th McMaster Update in Thrombosis and Hemostasis (held in conjunction with Thrombosis Canada’s Annual Conference; co-chaired by Drs. Mark Cudworth, James Douketis, and Wendy Lim), and the 2nd Annual Division of Hematology and Thromboembolism Winter Gala (planned by Drs. Menaka Pai, Chris Douketis, and Wendy Lim), and the 2nd Annual Division of Hematology & Thromboembolism Winter Gala (planned by Drs. Menaka Pai, Chris Douketis, and Wendy Lim) were also great successes.

FUTURE DIRECTIONS

As a specialty, we are facing rapidly increasing service demands regionally, as well as locally, and our challenge as a group will be to ensure that we continue to deliver exemplary clinical care while building regionally, as well as locally, and our challenge as a group will be to ensure that we continue to deliver exemplary clinical care while building on our educational and research successes. Dr. Michelle Zeller, a graduate of our Transfusion Medicine Diploma Program with a Masters of Health Professions Education from the University of Maastricht, will join our division as an Assistant Professor in July 2015. Her planned use of the MASCOT database and McMaster Data Driven Research Program to develop and answer a wide variety of educational and clinical research question will bring a new and exciting research dimension to our division.

“Division members were responsible for well over 150 publications... including manuscripts in New England Journal of Medicine, Nature, Annals of Internal Medicine, and Blood.”

Dr. Shannon Bates
MDCM, MSc, FRCP(C)
Division Director
EDUCATIONAL ACTIVITIES
Under the leadership of Residency Program Director Dr. Kevin Woodward and Deputy Director Dr. Eva Piessens, the residency program in Infectious Diseases was successful in receiving full approval following external review by the Royal College. The division shared trainees with Medical Microbiology in the program, headed by Dr. Cheryl Main. Dr. Haider was nominated for PARO Program Director of the Year. Dr. O’Shea co-chaired the postgraduate Internal Medicine Global Health curriculum. Dr. Smieja developed a new graduate course in the HRM program titled “Methods in Diagnostic and Prognostic Research”. Dr. Smieja also taught a workshop in “Diagnostic Research Methods” to the MClinEpid graduate students at Stellenbosch University, South Africa.

RESEARCH PROGRAMS
Dr. Mertz was awarded an external grant from the PSI Foundation for $170,000 for his proposal “Prevention of Infections in Cardiac Surgery (PICS)”. Dr. Loeb was awarded a $5 million grant by MRC Welcome Trust Global trials fund to conduct a randomized controlled trial of influenza vaccine to prevent adverse vascular events as well as funding from NIH for a population genetics analysis on dengue. Dr. Loeb received a $225,000 grant from CIHR to assess the effect of oseltamivir to prevent complications of influenza. He has completed the third year of a large CIHR-funded randomized controlled trial in the Hutterite community comparing live influenza vaccine to inactivated vaccine in order to assess the effect of herd immunity. Dr. Loeb has been conducting a pilot study to assess if randomizing children in Vietnam to Vitamin D or placebo will reduce respiratory infections. Dr. Loeb presented findings from a randomized trial of live attenuated influenza vaccine versus inactivated influenza vaccine to a the WHO Meeting to Assess Live Attenuated Influenza Vaccines to Prevent Pediatric Disease in Low and Middle Income Countries. Dr. Loeb served as a peer reviewer for the NIH, MRC, UK, CIHR, and the Government of Hong Kong.

MAJOR ACCOMPLISHMENTS
Dr. Haider was promoted to full Professor and was elected to the board of directors of the Canadian Association of HIV Research and a central planning committee of AMMI Canada. Dr. Main became an examiner for the General Pathology exam with the Royal College and is now an external reviewer for the University of West Indies. Dr. Main also took on the role of vice chair of the ID subspecialty committee for the Royal College. Dr. Haider was invited as a plenary speaker at AMMI 2015 trends in invasive fungal infections and was invited to speak to the Korean society of bone marrow transplantation. Dr. Loeb served as a committee Member, World Health Organization Task Force to Evaluate Influenza Data to Inform Vaccine Impact and Economic Modelling, World Health Organization, and was the Lead for a sub-group reviewing pregnancy and influenza.

FUTURE DIRECTIONS
We will continue to expand studies using biomarkers, such as genetic and immunologic studies, and continue to work closely with colleagues doing bench research. Division members will continue to engage in various aspects of vaccination research and hospital epidemiology.

research impact
A study led by Assistant Professor Jocelyn Srigley found that hospitalized patients wash their hands infrequently, an important factor in the risk of picking up infections in hospitals. The team used new electronic hand hygiene monitoring technology involving sensors on all soap and sanitizer dispensers.
Clinical research continues to flourish in the division. Dr. Walsh’s study of plasmapheresis in severe vasculitis (PEXIVAS) is exceeding recruitment targets and will be the largest randomized controlled trial in vasculitis ever conducted. He is also the recipient of a CIHR Young Investigator’s award, and has received CIHR funding to initiate one of the world’s largest randomized trials of dialysis patients evaluating the role of aldosterone antagonism in reducing the risk of cardiovascular events.

Dr. Ribic is conducting a randomized control trial examining extracorporeal anticoagulation in dialysis patients. Dr. Catherine Clase continues to serve as deputy editor for the new Canadian Journal of Kidney Health and Disease. Working with PHRI, she publishes analyses from the Ontarget and Transcend databases, identifying risks for kidney and cardiovascular outcomes. Several divisional members continue to pursue research interests in dialysis, CKD and transplantation.

Basic science research in the division has been very successful, led by the Amgen Chair of Nephrology research, Dr. Richard Austin. Dr. Austin’s work focuses on novel cellular mechanisms leading to arteriogenesis and vascular calcification, an important contributor to premature morbidity and mortality in patients with CKD. Clinician-scientist, Dr. Joan Krepinsky, funded by both CIHR and KFOC, studies the pathogenesis and potential therapies of diabetic and hypertensive kidney disease.

Dr. Margetts, also a clinician-scientist, continues his research into basic mechanisms of peritoneal and renal injury. New projects include the role of epigenetic modification of fibroblasts and fibrocytes in leading to ongoing tissue injury. Dr. Jeff Dickhout holds two CIHR operating grants for his studies on the role of ER stress and sodium in progressive renal injury, and has recently secured a Krescent salary award from KFOC. Other research areas of interest include, in collaboration with the Division of Urology, the underlying mechanisms that lead to the development and progression of renal and prostate cancer.

MAJOR ACHIEVEMENTS

The remarkable educational and research achievements over the past year would not be possible without the ongoing substantial clinical and administrative support provided by many division members. Remarkable growth in peritoneal dialysis, a home-based dialysis therapy, has led to the program becoming one of the fastest growing in Canada. The renal transplant program continues to be an innovative leader in Canada. Participation in the National Living Donor Paired Exchange registry has provided the opportunity for many patients, including those at high immunological risk, to receive a kidney transplant.

The strong leadership from Dr. Gangji has led to the development of what is now a large and diverse training program. The program was recently accredited by the Royal College with the distinction of having no weaknesses identified. Dr. Walsh has rapidly become a leading clinical trialist in nephrology, helping to narrow a long-standing evidence gap in the clinical care of patients with kidney disease.

Dr. Karen To and Robert Yang developed and are co-directors of the McMaster Peritoneal Dialysis Access Center by SJHH (MPACS), a center of excellence for peritoneal dialysis access. In 2015, they launched their inaugural, high fidelity simulation course to provide physicians and nurses with a unique hands-on experience with peritoneal dialysis catheter insertions.

FUTURE DIRECTIONS

The division will continue to lead the way in educational innovation at an undergraduate and postgraduate level.

Several divisional members are leading important clinical trials in nephrology, leadership in the nephrology research community is expected to grow. Increasing research collaborations between divisional members has begun to yield exciting findings in translational research that may lead to novel therapies and tools in the management of patients with kidney disease. Dr. Molnar, who joins the division in 2015, will further her research interests in evaluating outcomes of patients with acute kidney injury and CKD through her work at ICES.

A number of division members now have important leadership roles with the Ontario Renal Network (ORN), a provincial agency which provides more than $600 million/year in funding for kidney disease care. This provides a unique opportunity for these individuals to help shape the delivery of kidney disease care in Ontario.

The division continues to pride itself in the delivery of high-quality, patient-partnered care; its academic pursuits will always focus on the ultimate goal to improve the lives of patients with kidney disease.
FacultY

Over the last year, the division has been further rejuvenated by the recruitment of younger colleagues, namely Dr. Perera in stroke, Dr. Menon in Multiple Sclerosis, and Dr. Perumpillichira in epilepsy. Dr. Turnbull will step down as Division Director after 11 years and Dr. Oczkowski will take over on July 1, 2015. In the past 11 years we have almost doubled in size to 28 members, of whom 24 are full-time members and 10 are in their first 10 years of professional life. Two colleagues in neuromuscular disease, Drs. Baker and Tarnopolsky are cross-appointed to Neurology (from physical medicine & rehabilitation and pediatrics respectively) and collaborate closely with the program, as does Dr. Jichici in critical care neurology.

Educational activities

Nearly all members participate in the training of clinical skills in neurology for undergraduate medical students. At the postgraduate level, Dr. Sahlas has adroitly steered the residency program through a successful RCPSC accreditation in early 2015. We now have 15 residents in the program, and Drs. Connolly (HGH), Torres-Trejo (Juravinski), and Goodwin (SJH) are site coordinators. Drs. Goodwin and Shapiro continue to coordinate the neurosciences rounds at the HGH, and Dr. Goodwin and Dr. Steven Baker again coordinated the annual regional CME program in neuromuscular diseases. Drs. Rathbone, Mazurek, Turnbull and Tarnopolsky are all involved in graduate education. The Division presently has 13 clinical fellows, and the fellowship program in stroke neurology, under the leadership of Dr. Hart, has been particularly successful. Nearly all members have been active in continuing education for community neurologists and family physicians. Dr. Bill Brown has maintained his ties with the division and has just published his latest book.

Research activities

There are several funded ongoing studies in stroke involving Drs. Hart, Oczkowski, Perera, Dr. Silve, and Shoamanesh. Dr. Van Adel has been the CIHR-funded neuro-restorative group, with particular interest in the trophic role of purinergic compounds. Dr. Tarnopolsky remains prolific in neuromuscular research, as does Dr. Baker. Dr. Mazurek continues his research in neuropsychiatry, and Dr. Turnbull continues with basic research in motor neuron disease. Dr. Upton has commercialized the smart pacemaker and the responsive brain stimulator, as well as a portable magnetic stimulation device for the self-treatment of migraine. Drs. Morillo and Dr. Shapiro are undertaking pharmaceutical trials and trials into sudden unexpected death in epilepsy. Dr. Perumpillichira is active in educational research activities in the Netherlands and will maintain these links.

Clinical activities

The stroke program at the HGH has undergone a significant expansion, and is now the busiest in the province. Drs. Oczkowski, Silva, Sahlas, Sharma, Jichici, Hart, Yegappan, and Van Adel are involved, and joined by Drs. Ng and Shoamanesh, and more recently by Dr. Perera. Dr. Giammarco continues her complex headache clinic. Neuromuscular activities and ALS have been greatly expanded, and Drs. Tarnopolsky, Baker, Brown, Goodwin and Turnbull are involved. Dr. Jichici continues to provide neurocritical care expertise, and coordinates the neuro step-down unit at the HGH. Drs. Morillo, Shapiro, Attar collaborate to provide adult care in epilepsy, and have been joined by Dr Perumpillichira from the Netherlands. The epilepsy monitoring unit on the 7th Floor at the HGH is working well. Drs. Paulseth, Connolly and Attar are running the movement disorders clinics. Dr. Paulseth has been joined by Dr. Menon and they are receiving assistance from Drs. Silva, Yegappan and DelRubens in the MS clinics. Dr. Torres-Trejo is looking to expand the neuro-oncology presence at the Regional Cancer Centre, and Dr. Colleen Connolly is a neuro-oncology fellow. Dr. Gomez has replaced Dr. Kronby at St. Joseph’s Hospital. Dr. Rodriguez continues to provide his valued neuro-ophthalmology clinic, and Drs. Mazurek and Rosebush continue to run a very busy neuro-psychiatry clinic.

Future directions

In spite of the significant growth in the Division, the societal need for greater attention to diseases of the brain and behaviour will necessitate further expansion, yet space and resource limitations are constraining. Dr. Upton has commercialized the smart pacemaker and the responsive brain stimulator, as well as a portable magnetic stimulation device for the self-treatment of migraine.

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FacultY
The division welcomed Dr. Shariff Dessouki this year. Dr. Dessouki serves as an attending physician on the orthopedic rehabilitation unit at the Juravinski Hospital. Dr. Dessouki completed his postgraduate and undergraduate medical education at McMaster University. The division also welcomed Dr. Vlad Djuric. Dr. Djuric completed his postgraduate training at Ohio State University and is developing an interventional physiatry practice at the Michael G. DeGroote Pain Management Program.

EduCATion
Dr. Agnes Chmiel was appointed Associate Residency Program Director. Dr. Chmiel completed her undergraduate and postgraduate medical training at McMaster University. She also serves as the medical director of spinal cord unit. Dr. Peter Varey continues to serve as the residency program director.

As in previous years, the department was successful in recruiting outstanding residents via the CaRMS match. The McMaster program is the second largest PM&R Residency Program in Canada.

RESeaRCh
Dr. Steve Baker continues to be the leading researcher in neuromuscular rehabilitation in the country with tremendous innovation and groundbreaking research in peripheral nerve and neuromuscular disorders.

CLINICAL PROGRAMS
The division provides the full spectrum of rehabilitation services for patients with general and specialized rehabilitation needs. Of particular note, the division is working on quality improvement initiatives in the domain of electrodiagnostic medicine.

FUTuRE DiRECTIONS
The division continues to actively recruit new faculty to support inpatient and outpatient programs. Although the division is one of the largest academic programs in North America, there are still many unmet clinical needs in the medical schools catchment area.

“The department released the second edition of the monograph “The Essentials of Inpatient Rehabilitation” in this past academic year.”
The Division of Respirology has been successful in a variety of educational and research activities and continues to provide tertiary care service for the South-Western Ontario. We have had some recent changes in the leadership structure and are in the process of rejuvenating our faculty. Some of the important highlights are following.

EDUCATIONAL ACTIVITIES

In July 2014, Dr. Rebecca Amer started her new role as Program Director for the Respirology Residency Training Program. The program continues to very successful and passed the formal accreditation by the Royal College in Spring 2015 without any major deficiency. In July 2014 the program welcomed two new trainees.

Our capacity to provide a Respirology training experience for rotating residents from other postgraduate programs such as Internal Medicine, Anesthesia, Radiation Oncology, and Head and Neck Surgery has been considerably enhanced by offering electives at the Hamilton General and Juravinski sites.

Two new clinical scholars have joined the division. Dr. Rami Abdelshaheed and Dr. Taryn Simms started July 2014 with an academic and clinical focus on sleep medicine.

Members of the division are heavily involved in graduate and non-MD postgraduate education. Several members supervise both MSc and PhD graduate students. Two very successful graduate courses are organized, Pulmonary Physiology by Dr. Mark Imman, and Pathophysiology of Lung Diseases by Drs. Gail Gaureau and Roma Sehmi.

Dr. Kjetil Ask has developed a highly successful undergraduate course and general lecture series at McMaster University called “Demystifying Medicine”. Further, members of the division frequently contribute to Continuing Medical Education programs. Our divisional rounds at St. Joseph’s Healthcare are video-conferenced and regularly attended by physicians at other hospitals, from HHS Hospitals to Toronto and even Thunder Bay.

RESEARCH PROGRAMS

Some of the major research interests of faculty are the epidemiology, pathophysiology and treatment of asthma; the physiology and pathophysiology of airway and vascular smooth muscle; the cellular and molecular biology of pulmonary fibrosis; controlled trials of therapy in respiratory disorders, and the impact of the environment on respiratory health.

Faculty have been very successful in obtaining major CIHR operating grants. Dr. Malcolm Sears was successful in obtaining a 5-year $1,022,000 grant to the Canadian Healthy Infant Longitudinal Development study (CHILD) which is now beginning evaluation of the cohort at age 5 years for the primary outcome of childhood asthma. Dr. Martin Kolb was awarded a 5-year $701,000 grant to study the role of abnormal matrix in the progression of pulmonary fibrosis and Dr. Luke Janssen was successful in obtaining a 5-year, $895,000 grant to study calcium-signaling and gene expression human fibroblasts. Dr. Parameswaran Nair is a Co-PI in a randomized controlled trial of oseltamivir in outpatients with chronic pulmonary disease. Dr. Nair’s study received a 1-year $278,000 grant.

Several other international, national and local team projects in interstitial lung disease (Drs. Labiris and Kolb), pulmonary fibrosis (Drs. Janssen, Ask and Kolb) and smoke cessation (Dr. McIvor) are currently developed under the leadership and active participation of Firestone faculty members.

MAJOR ACHIEVEMENTS

Dr. Paul O’Byrne has been named Distinguished University Professor, the University's highest honor. The title, created in 1996, goes only to those who achieve the highest level of excellence in teaching, learning and research. Those recognized with the honour are considered “complete scholars” and have demonstrated an outstanding and sustained research record, innovation in teaching and learning and a history of service that has had an impact on the community.

Our residents vote each year for winners of two local awards, one for clinical education and one for research mentorship. The winners for the 2014/15 academic year were Dr. Jacob Gelberg and Dr. Helen Neighbour respectively.

FUTURE DIRECTIONS

A major area of change is the development of collaborative clinical programs. Dr. Gerard Cox is coordinating these activities within our city between HHS and SJH and the larger LHIN in the region. The most ambitious initiative is the Diagnostic Assessment Program for Lung Cancer – a joint undertaking with Cancer Care Ontario (CCO) and St. Joseph’s Healthcare, Hamilton that involves nursing, Thoracic Surgery, Respirology, Diagnostic Imaging and Pathology. This successful program has been developed to reduce wait times for patients undergoing investigation of suspicious lung lesions. Since its initiation in 2010, it has grown to be one of the largest programs in the country. Team members of a new Pleural Space Clinic, led by Dr. Gelberg and Thoracic colleagues, were honored with an award presented by the Collaborative Management of Patient Care in Advanced Stages of Malignancy, Cancer Quality Council of Ontario. Another innovative program is the combined Respirology/Rheumatology/Renal clinic that cares for patients with complex multi-system and lung disorders (Drs. Cox, Kolb, Khalidi, and Walsh). Further, we are expanding our Sleep Medicine Program, led by Drs. Powles, Guttchuk, and Li, in which we have trained several scholars over the last few years and several new recruits in the near future. The pediatric respirology group at McMaster University has grown by recruitment of a Pediatric Respirologist, Dr. Jackson Wong, who is now heading this important Division and who is keen to have close links with the adult respirology group. We believe that developing such patient-centered, multi-disciplinary clinics will be an important element of our efforts to provide best care to our patients.
Dr. Maggie Larché continues to supervise the Clerkship Rheumatology Selective as well as training residents. She has been instrumental in her role as President of the Canadian Rheumatology MSK Ultrasound training program, a national initiative. Dr. Larché’s focus is the care of patients with Inflammatory Arthritis and Scleroderma. She is the Chair of the Hamilton Scleroderma Group.

Dr. Kim Legault has recently completed her MSc. degree in Health Research Methodology. She has been active in teaching within the undergraduate and postgraduate program as well as writing two book chapters. She coordinates the Rheumatology/Renal Radiology rotation.

Dr. Arthur Lau will join the faculty in July 2015. He has been prolific in writing book chapters, as well as systematic reviews, while providing elective opportunities for residents and students.

Dr. Raja Bobba has been a tutor in Medical Foundations 2 to 5 as well as organizing clinical skills in MF5.

Dr. Walter Kean has been actively supervising undergraduate student projects. He continues as Assistant Editor for the Journal Inflammapharmacology.

Dr. Mark Mattos oversees the Residents’ Academic Half-Day and has a new role as site chief for the Internal Medicine Residency Program while pursuing his clinical research interests in SLE. He continues to serve as medical advisor to Lupus Ontario.

All of our clinical faculty have energetically participated in teaching activities, with special thanks to Drs. Walter Kean, Tulio Scocchia, Pauline Boulos, Viktoria Pavlou, Sanjay Dixit, Lani Famorca, Brian Hanna, Rafat Faraawi, and Saeed Shaikh. Dr. Scocchia has been essential in teaching professional skills to our residents. Our part-time faculty have been dedicated to the teaching of undergraduate and postgraduate learners and the division would not be able to complete its mandate without their assistance.

RESEARCH PROGRAMS

We have received major peer-reviewed and corporate funding in our areas of research.

Dr. Rick Adachi has received grant funding from CIHR for evaluation of bone-muscle interactions. In 2014 he published 35 peer reviewed articles.

Dr. Karen Beattie continues her work in knowledge translation and musculoskeletal education having recently completed a CIHR-funded study (2 manuscripts) and a CIOA-funded study. She also continues to expand her research in musculoskeletal imaging using X-ray, MRI and ultrasound, identifying disease specific features in osteoarthritis (OA) and rheumatoid arthritis (RA) that can be quantified and used as outcomes to monitor disease progression. In collaboration with Dr. Monica Maly (School of Rehabilitation Science), the collection of imaging and biomechanical data from knee OA patients over 2 years (CIHR) has recently been completed.

Dr. Raj Carmona actively participates in clinical trials in spondyloarthropathy and osteoarthritis

Dr. Cividino received additional funding support from the Canadian Rheumatology Association ($100,000) in support of Phase Two of a study “Training the Rheumatologist of Tomorrow”. This work will form the basis for a national collaboration on tool development for the recruitment of trainees to Rheumatology.

Dr. Walter Kean continues his research interest in anti-rheumatic drug pharmacology and pain mechanisms in osteoarthritis. He has published extensively in this area.

Dr. Nader Khalidi continues working with two major research groups, the Canadian Scleroderma Research Group and the Vasculitis Clinical Research Consortium. As a result of his efforts, Hamilton is now recognized as a major center in vasculitis care and research. He has been a major recruiter for key clinical trials in vasculitis.

Dr. Maggie Larché has been active in assessing various imaging modalities in joint diseases. She is active in several cohort studies in JIA, RA and Scleroderma. Dr. Larché has received a $600,000 grant to study the use of ultrasound for imaging in the feet of patients with newly diagnosed RA. She is an active clinical trials and basic science researcher in RA and Scleroderma.

Dr. Arthur Lau will soon complete his MSc. degree in clinical epidemiology. He has led a cohort study assessing the risk of infections in patients treated with a biologic DMARD and denosumab therapy, which will be presented at the upcoming ACR conference. He has also worked closely with the Ontario Best Practices Research Initiative and supervised a number of projects for undergraduate, medical students and residents.

Dr. Kim Legault’s research is focused on neurospsychiatric Lupus as well doing systematic reviews of lupus treatment and plasma exchange in APLS. She is the principal investigator in an investigator-initiated multicenter cohort study—studying neurocognitive in antiphospholipid syndrome. This is supported by the Heart & Stroke Foundation Dr. Legault has been instrumental in developing Resident Research Rounds.

Dr. Mark Mattos continues clinical trials in Lupus therapeutics at the McMaster Lupus Clinic.

Dr. George Ioannidis has continued his work with CaaMes, GLOW, Quality Circles and VISOs (Vitamin D and Osteoporosis in long-term care) projects. He provides valuable statistical support for the entire division.

MAJOR ACHIEVEMENTS

Dr. Rick Adachi received the International Osteoporosis Foundation 2014 Olaf Johnehll Science Award in honour of outstanding worldwide scientific contribution to the field of osteoporosis.

Dr. Maggie Larché was co-applicant on a successful $255,000 CIHR grant to study peptide therapy in RA.

Dr. Kim Legault has been awarded a Department of Medicine Internal Career Award providing salary support for three years to begin her career as Assistant Professor. She received an Internal Medicine Research Award and Ontario Rheumatology Association Development and Education Award

Dr. Mark Mattos has been awarded The Arthritis Society Clinician Teacher Award as salary support of $45,000/year for five years.

Most of the division members have contributed a chapter or two to a new book 'Essential Imaging in Rheumatology' in collaboration with Dr. John O’Neill as editor.

Royal College Internal Review of the Rheumatology Program was completed with accolades and no weaknesses identified.

Faculty recruitment has been a focus of the division and we look forward to the contributions of Dr. Kim Legault and Dr. Arthur Lau.

FUTURE DIRECTIONS

The division has collectively developed a consensus document in the form of a strategic plan to lay out the current and proposed activities for the next three to five years.

Our vision is to be recognized for leadership and innovation in education, research and inter-disciplinary patient-centered care.

As director of the Division of Rheumatology, I am excited by our strategic plan. Together with my esteemed colleagues and excellent trainees, I anticipate execution of several objectives to meet our main goals of exemplary patient care, education and ongoing research.