

# Academic Pediatric Nephrology Fellowship

**Name of Institution:** McGill University, Department of Pediatrics, Division of Nephrology

**Location:** Montreal Children's Hospital

**Type of Fellowship:** Academic Pediatric Nephrology Fellowship (Clinical and/or Research)

**Names of the Teaching Faculty:** Dr. Lorraine Bell, Dr Martin Bitzan, Dr. Bethany Foster, Dr. Paul Goodyer, Dr. Indra Gupta, Dr. Michele Zappitelli

**Number of fellowship positions:** 2/year (maximum)

**Name of hospitals involved in training:** Montreal Children's Hospital, Royal Victoria Hospital, Montreal General Hospital

**Percent time spent by the fellow in each institution:** will depend on the stream chosen

## Application process:

Candidates must apply online through the McGill University website:

[http://www.medicine.mcgill.ca/postgrad/admission\\_applyonline.htm](http://www.medicine.mcgill.ca/postgrad/admission_applyonline.htm).

The **deadline for application** is Sept 1, of the year preceding the start of the fellowship (i.e. at least 10 months prior to the July 1<sup>st</sup> starting date).

## Program Information:

### Academic Pediatric Nephrology Fellowship: Extended Expertise in Pediatric Nephrology

#### Rationale

Current Canadian training programs in pediatric nephrology are intended to assure balanced clinical competence, preparing graduates in 2 years to deliver excellent general care to children with kidney disease. However, the nature of pediatric nephrology in North America requires that most, if not all, pediatric nephrologists practice within University-based hospitals, where it is assumed that each staff member will also contribute to academic teaching and to the advancement of new knowledge in the subspecialty. Unlike most American programs, Canadian training has not fully acknowledged the importance of the latter goals.

We now propose an extended 3-year training program to meet the realistic needs of University-based Canadian practitioners. In our new program, all trainees will have the option to develop special skills in one of the following streams: **A) Clinical Research; B) Fundamental Research; C) Teaching or New, Emerging Areas of Clinical Expertise.**

**Extended Streams A and B** will involve enrolment in McGill MSc programs under the supervision of one of our staff members and are intended to serve as an entree to further postdoctoral research training, targeting a career as an independent clinician-scientist.

**Extended Stream C** is intended to generate pediatric nephrologists who can train others and who can advance the field in the University hospital setting by developing new clinical care paradigms.

**Funding** for the 3<sup>rd</sup> year will need to be sought from recognized sponsoring agencies (e.g., Kidney Foundation of Canada, Montreal Children's Hospital Academic fellowships, recognized sponsors for Gulf stare trainees, etc)

## **Description of Fellowship:**

### **Streams A and B**

- Mission of fellowship  
To train pediatricians interested in pursuing a research career as a clinician scientist with the necessary clinical training and with a strong foundation of research training in either basic or clinical research.
- This program comprises three years of training and is aimed at producing clinician scientists through the Clinician Investigator Program.
- The first year of training will be an intensive year of clinical training, meeting all the goals of the Royal College of Physicians and Surgeons clinical training program. Please see page 3.
- Early in the first year, the candidate will be required to apply to an affiliated graduate program in one of the following departments: Epidemiology and Biostatistics, Human Genetics, or Experimental Medicine.
- Only candidates accepted into one of these programs will be considered to pursue this fellowship.
- The second and third years of the program will consist of the coursework, research project and thesis required for the chosen Masters program.
- A resident pursuing this program will be supervised by a thesis committee, composed of at least one member of the Division of Pediatric Nephrology, as well as two other faculty.
- Four potential primary supervisors are available from within the Division: Dr. Beth Foster (Epidemiology and Biostatistics), Dr. Paul Goodyer (Human Genetics, Experimental Medicine), Dr. Indra Gupta (Human Genetics, Experimental Medicine), and Dr. Michele Zappitelli ((Epidemiology and Biostatistics).
- Research activity and Publications related to Fellowship: *(supervisors' CVs available upon request)*

### **How this fellowship will enhance Pediatric Nephrology residency training:**

- This comprehensive residency training program will fill an important gap in the training of clinician scientists in the area of Pediatric Nephrology, greatly expanding the options available to trainees interested in an academic career.
- Completion of this program will significantly enhance the trainee's competitiveness for external awards to fund further research training and for academic faculty positions.

**Content of training: Intensive 1<sup>st</sup> Year of 3 year Residency/Fellowship Programme  
Streams A and B**

| Description   | Duration  | Training Sites                                     |
|---|---|--|
| <p><b><u>In-patient</u></b><br/> <u>Admitted nephrology and consult patients</u><br/>           Primary responsibility for nephrology service patients, new consultations and their follow-up, and teaching of junior house staff<br/>           If there is/ are also pediatric resident(s) and/or student(s) on the In-patient service the nephrology resident is responsible to be aware of all the issues of each patient the junior resident or student is following, and to help supervise the care of those patients in collaboration with the attending staff.</p> <p><u>Emergency room consultations</u><br/> <u>Percutaneous ultrasound guided renal biopsies</u><br/> <u>Hemodialysis</u><br/>           Daily assessment of HD patients, acute and chronic HD orders, weekly HD rounds with HD nurse and dietician<br/> <u>CRRT</u><br/>           Evaluation of potential candidates for CRRT, prescription of treatment and ongoing monitoring</p>  | <p>6 blocks, each 4 weeks</p>   | <p>Montreal Children's Hospital</p>                |
| <p><b><u>Out-patient</u></b><br/> <u>Transplant</u><br/>           Weekly clinics (1 to 2), emergency drop-in patients, weekly transplant rounds with nurses, adolescent transition transfer summaries and pre-Tx donor assessment<br/> <u>Peritoneal Dialysis</u><br/>           Weekly clinic, emergency drop-in patients, weekly PD rounds with nurse and dietician<br/> <u>Chronic Renal Failure</u><br/>           Weekly clinic(s), weekly rounds with nurse and dietician<br/> <u>General Nephrology</u><br/>           Weekly clinics (1-2) with new consultations and follow-up for a wide spectrum of nephrology patients, including those with hypertension, glomerulonephritis, structural malformations, and renal genetic disorders<br/> <u>Nephrology Residents' Clinic</u><br/>           Weekly clinic (Wed) for pediatric nephrology residents only<br/>           Includes new consultations and long-term follow-up of a wide and <i>representative</i> spectrum of nephrology patients<br/> <u>Pre-transplant evaluations</u><br/>           Potential recipients on dialysis or with advanced chronic kidney disease<br/>           Brief, relevant informative letters should be promptly dictated, incorporating lab results of all relevant tests done the day of the clinic visit</p> | <p>5 blocks, each 4 wks</p> <p><b>Number of Clinics</b><br/> <i>The goal is to do the equivalent of 3 clinics per week while on these services;</i><br/>           generally Mon, Tue, Wed; if there is no Monday clinic, then Tue, Wed, Thu<br/>           Sometimes there will be 4 clinics to provide exposure to the Thursday genetics &amp;/or SLE clinics; in this case the resident will only see the Tx, PD, and advanced CKD pts in the Mon, Tue clinics</p> | <p>Montreal Children's Hospital</p>                |
| <p><b><u>Adult Nephrology</u></b><br/>           Dialysis – 2 wks (hemodialysis &amp;/or PD, CRRT)<br/>           Consult service – 2 wks (+CRRT)</p>   | <p>1 block<br/>           4 weeks</p>   | <p>Royal Victoria or Montreal General Hospital</p> |

## **Streams A and B, continued**

### **Teaching Faculty for Streams A or B: Second and Third Years**

#### **Dr. Beth Foster:**

- Role: Supervisor or Co-supervisor, Clinical Research, Clinical Nephrology
- Summary of clinical practice: Attending pediatric nephrologist (MCH),
- Research Scientist (MCH Research Institute), Associate Member of Dept. of Epidemiology and Biostatistics
- Major strengths: Clinician-scientist with interest in chronic kidney disease and transplantation, former KRESCENT New Investigator awardee participated in comprehensive research training program, MSc –clinical epidemiology (MSCE)

#### **Dr. Paul Goodyer:**

- Role: Supervisor or Co-supervisor, Basic Research, Clinical Nephrology
- Summary of clinical practice: Attending pediatric nephrologist (MCH)
- Research Scientist (MCH Research Institute), Associate Member of Depts. of Human Genetics and Experimental Medicine
- Major strengths: Internationally recognized researcher in renal development; currently working on prenatal determinants of renal development and post-natal impact, including collaboration with nephrologists in India

#### **Dr. Indra Gupta:**

- Role: Supervisor or Co-supervisor, Basic Research, Clinical Nephrology
- Summary of clinical practice: Attending pediatric nephrologist (MCH)
- Research Scientist (MCH Research Institute), Associate Member of Depts. of Human Genetics and Experimental Medicine
- Major strengths: Basic science researcher in kidney development

#### **Dr. Michele Zappitelli:**

- Role: Supervisor or Co-supervisor, Clinical Research, Clinical Nephrology
- Summary of clinical practice: Attending pediatric nephrologist (MCH)
- Research Scientist (MCH Research Institute), Associate Member of Dept. of Epidemiology and Biostatistics
- Major strengths: Clinician-scientist with interest in acute kidney injury, former KRESCENT trainee and current KRESCENT New Investigator awardee participating in comprehensive research training program, MSc (epidemiology)

### **Academic Facilities**

#### **First (Clinical) Year**

- The fellow will be provided with a work area with a desk, computer, internet access, and telephone

#### **Second and Third Years**

- The fellow will be provided with a work area with a desk, computer, internet access, and telephone
- Fellows choosing the basic science stream will work within either Dr. Goodyer's or Dr. Gupta's laboratory, and will be provided with all the necessary laboratory equipment for their chosen research project.
- Fellows choosing the clinical science stream will work within either Dr. Foster's or Dr. Zappitelli's laboratory, and will be provided with the necessary statistical and data management software packages
- Library access, materials relevant to fellowship training: readily obtainable through McGill

## Streams A and B, continued

### Fellow Duties and Responsibilities

#### First (Clinical) Year

**Clinical experience:** see "Content of training: Intensive 1<sup>st</sup> Year of 3 year Programme". Pg 3

#### Call responsibilities to cover service

Call duties are from home.

- According to the resident contract, there are up to 9 calls per month from home. When there are more than 3 residents/fellows, the total number of calls will be less. Each resident /fellow is expected to cover 1 full weekend per block. Statutory holidays need to be covered by a resident. The resident may then take an extra vacation day for the statutory holiday that he / she has worked. These extra vacation days include those taken over the Christmas / New Year period.
- Nephrology patient emergency room visits  
Generally if a nephrology patient presents to the Emergency Room it is the Nephrology resident's responsibility to see the patient. Exceptions are for conditions unlikely to be related to the underlying nephrology problem, or for minor problems late in the evening or overnight.
- Evening and weekend hemodialysis may be covered from outside the hospital, *after* the resident has assessed the patient clinically in the dialysis unit. However the resident must be able to return to the unit within 10 to 15 minutes maximum, should a patient complication arise. If there is an unstable patient in the hemodialysis unit the resident on call should remain in hospital until the treatment has been completed.
- New transplant patients  
It is important to see as many fresh transplants as possible to gain management experience. On the day of a transplant the resident is expected to remain in the hospital to closely follow the patient for at least the 1<sup>st</sup> 5-6 hours after the patient comes out of the operating room (longer if the patient is unstable). The resident should also attend the operating room during the procedure, particularly for the time period immediately before and during the anastomosis and vascular clamp release.

#### Protected Teaching and Presentations by the Residents and Fellows

Friday 10:30 -1300 Usually at RVH (sometimes MGH or MCH)

There are 2 hours of protected teaching time on Friday morning.

*Morning clinical duties must be taken care of prior to the start of the protected teaching time.*

10:30-11:30 Nephrology Resident/Fellow Lecture Series

Noon-13:00 MUHC-wide Clinical Nephrology Teaching Rounds

Wednesday afternoon 13:00 – 15:45 Montreal Children's Hospital

13:00-14:45 Journal Club and patient discussion (each 45 - 60 minutes)

Sometimes one of these items will be replaced by Quality Assurance/ Risk Management or Pathology Rounds.

14:45-15:45 Pediatric Nephrology Resident/Fellow Topic Reviews

Clinical duties will need to be completed after the teaching sessions end.

Thursday afternoon (once per month)

16:30-17:45 MUHC Renal Pathology Rounds

#### Resident teaching responsibilities

- Each pediatric nephrology resident/fellow and each rotating resident or student is expected to give 1 presentation each block, whether it be critical appraisal of a journal article, a topic review, or quality assurance/risk management rounds.
- Residents will be evaluated on their presentations. Factors that will be considered will be preparation, appropriate outline of learning objectives, content, final summary of the talk, clarity of delivery and time management.
- Other aspects of residents/fellows teaching and scholarly activities that we assess are: Teaching of nurses, junior staff, and patients/patient families, Medline scans/searches and reading around complex, challenging or unusual patient problems.

### **Second and Third Years, Streams A and B**

- The fellow will attend one half-day general nephrology clinic per week. This will provide him/her with ongoing clinical training and the opportunity to follow his/her own patients long term. The fellow will have the opportunity to select patients in line with his/her own interests.
- The fellow will be expected to provide on call coverage one weekend per month in order to maintain his/her clinical skills.
- During these years the fellow will have no teaching or supervisory responsibilities toward other fellows or residents.
- The fellow will be expected to present one journal club per year and to present his or her proposed research project to the Division in the 2<sup>nd</sup> year and the results of his or her project in the 3<sup>rd</sup> year
- The fellow will be strongly encouraged to attend the American Society of Nephrology meeting each year. Other meetings of relevance to the fellow's chosen research area will also be available (i.e. Transplantation meetings, Dialysis meetings)
- The fellow will be expected to produce at least one manuscript for publication

### **Description of Fellowship:**

#### **Stream C**

- This extended stream can be elected by the trainee during his/her first year.
- It involves construction of a personalized program with a primary mentor, crafted within one of the principle areas of Divisional strengths below.
- The program should include a clear academic goal which may be a scholarly clinical research project or major literature review intended to culminate in a peer-reviewed publication, or it could involve construction of a detailed teaching module.
- A draft of the program will be presented to a Stream C committee by 1/April of the first Nephrology Fellowship year; the committee will consist, of the proposed mentor, at least one other member of the Pediatric Nephrology Division and one member from outside the Division. Any revisions to the proposed program should be completed by 1/June of the same year, allowing final committee approval by 1/July.
- Clinical training will occur over a 2 year period, with elective time used to further the resident's Stream C goals. (see description on pages 7 and 8)

## Stream C - Mandatory Content of Training

| Description  | Duration   | Sites in which this training may be taken          |
|--|--|--|
| <p><b><u>In-patient</u></b><br/> <u>Admitted nephrology and consult patients</u><br/>           Primary responsibility for nephrology service patients, new consultations and their follow-up, and teaching of junior house staff<br/> <u>Emergency room consultations</u><br/> <u>Percutaneous ultrasound guided renal biopsies</u><br/> <u>Hemodialysis</u><br/>           Daily assessment of HD patients, acute and chronic HD orders, weekly HD rounds with HD nurse and dietician<br/> <u>CRRT</u><br/>           Evaluation of potential candidates for CRRT, prescription of treatment and ongoing monitoring</p>  | <p>§ 7- 8 blocks, each 4 weeks</p>   | <p>Montreal Children's Hospital</p>                |
| <p><b><u>Out-patient</u></b><br/> <u>Transplant</u><br/>           Weekly clinics (1 to 2), emergency drop-in patients, weekly transplant rounds with nurses, adolescent transition transfer summaries and pre-transplant donor assessment<br/> <u>Peritoneal Dialysis</u><br/>           Weekly clinic, emergency drop-in patients, weekly PD rounds with nurse and dietician<br/> <u>Chronic Renal Failure</u><br/>           Weekly clinic(s), weekly rounds with nurse and dietician<br/> <u>General Nephrology</u><br/>           Weekly clinics (1-2) with new consultations and follow-up for a wide spectrum of nephrology patients, including those with hypertension, glomerulonephritis, structural malformations, and renal genetic disorders<br/> <u>Nephrology Residents' Clinic</u><br/>           Weekly clinic (Wed) for pediatric nephrology residents only<br/>           Includes new consultations and long-term follow-up of a wide and <i>representative</i> spectrum of nephrology patients<br/> <u>Pre-transplant evaluations</u><br/>           Potential recipients on dialysis or with advanced chronic kidney disease</p> | <p>9-10 blocks, each 4 wks with exception of Wed Nephrology Residents' Clinic which is attended weekly during all blocks except In-patient</p> | <p>Montreal Children's Hospital</p>                |
| <p><b><u>Adult Nephrology</u></b><br/>           Dialysis – 2 wks (hemodialysis &amp;/or PD, CRRT)<br/>           Consult service – 2 wks (+CRRT)</p>  | <p>1 block<br/>4 weeks</p>   | <p>Royal Victoria or Montreal General Hospital</p> |

§ The minimum number of in-patient and out-patient blocks will depend on the resident's evaluations and progress.

### Stream C Potential Elective Content of Training

| Description   | Duration                       | Sites in which this training may be taken   |
|---|--------------------------------|---|
| Epidemiology<br>McGill Epidemiology May/ June Courses<br>A full course load is 2 courses per semester<br>If only one course taken per semester, the resident is expected to devote half the week to another approved activity such as a research project, or scholarly endeavor, or clinics | 1 to 4 blocks, each of 4 weeks | McGill University   |
| Renal Pathology   | 4 weeks                        | Montreal Children's Hospital  |
| ★Urology<br>Clinics, urodynamics, surgery observation   | 4 weeks                        | Urology Division<br>Montreal Children's Hospital  |
| ★Research   | 2 to 6 blocks, each of 4 weeks | Renal Division, Montreal Children's Hospital or in related area at MUHC   |
| ★Renal Imaging  | 1 block of 4 weeks             | Hôpital Ste. Justine  |
| ★Medical Education  | 1-4 blocks                     | McGill University Medical Education   |
| ★Scholarly Project<br>(e.g. case report(s), comprehensive topic review suitable for submission for publication)   | 1-3 block                      | Montreal Children's Hospital  |
| ★Extramural Clinical Rotation   | 1-3 blocks                     | Requires approval by Pediatric Nephrology Programme Director<br>Some, such as extramural clinical rotations, may also require approval by the Associate Dean of Post Graduate Medical Education |

★Electives marked with an asterisk require that the resident take responsibility for their arrangement, with clearly defined written goals and objectives.

This should be done 3-6 months prior to the projected start date of the elective and further in advance for those that may require approval by the Associate Dean.

Once clearly outlined the elective must be approved by the Pediatric Nephrology Programme Director;  
Some electives, such as extramural clinical rotations, may also require approval by the Associate Dean of Post Graduate Medical Education and RAMQ (for RAMQ funded positions).

## Stream C Options

### **Advanced training in Renal Genetics (Mentor: Dr Paul Goodyer)**

- This will involve attendance at the Renal Genetics clinic, attendance in selected academic activities in the Montreal Children's Hospital (MCH) Medical Genetics unit, experience with molecular genetic diagnostics, exposure to interpretation of leukocyte cystine monitoring results, attendance of weekly prenatal ultrasound diagnostic program, participation in development of new therapeutic strategies for hereditary renal disease and exposure to antenatal counselling for inherited renal disease.
- Trainees will conduct a clinical research project concerning the clinical phenotype, therapy or diagnosis of a particular hereditary renal disease and will have the option to perform original laboratory analyses relevant to the study. This will culminate in an original peer-reviewed publication.

### **Advanced training in glomerular disease (Mentor: Dr Martin Bitzan)**

- This will include a renal pathology elective, development of innovative or improved protocols for treatment of nephrotic syndrome, immune complex disease/vasculitis and/or haemolytic uremic syndrome, participation in the joint lupus clinic with Rheumatology group at MCH, and attendance in MUHC Rheumatology/Immunology academic rounds (*this needs to be verified with Rheumatology*).
- Trainees will develop experience with immunology laboratory techniques and interpretation.
- Trainees will establish/improve glomerular disease database.
- A clinical research project culminating in an original peer-reviewed publication will be strongly encouraged.

### **Advanced training in renal transplantation (Mentor: Dr Lorraine Bell)**

- The goal of this stream is to enhance training for those who wish to practice clinical pediatric transplantation.
- It will include rotations through the Adult Nephrology Transplantation service to ensure exposure to large number of renal transplants, HLA laboratory experience, and a minimum of basic training in clinical epidemiology and biostatistics through the McGill Department of Epidemiology, Biostatistics and Occupational Health.
- The trainee will attend the operative procedures for both deceased and living donor transplantations at the Montreal Children's Hospital and donor multi-organ procurements at the MUHC hospitals.
- He /she will participate in teaching Pediatric nephrology residents specialized transplantation topics and in clinical supervision of residents during their transplantation rotations at the Montreal Children's Hospital.
- He/she will be expected to do a scholarly project in clinical transplantation. Suggested areas include:
  - Collaboration with Dr. Foster in analysis of public transplant databases and plan an original clinical research project concerning renal transplantation or an analysis of current health policy on renal transplantation, with the aim of producing a peer-reviewed publication.
  - Collaboration with researchers in the MUHC Adult Solid Organ Transplantation Programme with the goal of writing a peer-reviewed publication.

## **Advanced training in acute kidney injury and extracorporeal therapy (Mentor: Dr Michele Zappitelli)**

- The goal of this stream is for the trainee to acquire advanced expertise in pediatric renal replacement therapy (chronic and acute hemodialysis, chronic and acute peritoneal dialysis, continuous renal replacement therapy, plasma exchange therapy, intimate knowledge of K/DOQI guidelines and management of the end-stage renal disease patient) and/or in acute kidney injury (AKI) prevention and management.
- This stream may be either primarily clinical nature or research in nature and this must be decided **3-6 months** prior to initiation of the fellowship year.
- This stream will include rotations through the McGill Adult Nephrology hemodialysis and peritoneal dialysis services (2 to 6 months) to ensure exposure to large number of dialysis patients.
- Fellows who select a more **clinical** AKI/extracorporeal therapy fellowship year will have more intensive and prolonged clinical training in dialysis units (e.g. 4-6 months in adult dialysis units rather than 2 months) and will be encouraged to perform 1 to 3 rotations in non-McGill centres.
- Fellows who select to have a primarily **research** focus will perform fewer clinical rotations in dialysis/AKI but will have significantly more important research expectations.
- A minimum of basic training in clinical epidemiology and biostatistics through the McGill Department of Epidemiology, Biostatistics and Occupational Health will be required. For research-oriented trainees, more in-depth training in biostatistics and database management will be expected.
- The fellow will participate in teaching Pediatric Nephrology residents specialized dialysis topics and in clinical supervision of residents during their dialysis rotations at the Montreal Children's Hospital.
- He/she will be expected to supervise and actively participate in running the plasma exchange program, to be present for plasma exchange therapies and to be an integral and active member of the Dialysis Unit of our Pediatric Nephrology Division (including teaching, administrative, equipment and quality assurance responsibilities).
- For fellows with a clinical focus, elective rotations may include:
  - 1) Toronto Sick Kids Hospital (for more extensive training in continuous renal replacement therapy)
  - 2) Rotations (either clinical or observational) in pediatric US medical centres with large dialysis units (such as Texas Children's Hospital or Boston Children's or University of Michigan). It will be the fellow's responsibility to seek out these electives and to enquire as to the State/host university requirements (e.g. VISA, USMLE).  
If an observership rather than a fully participatory clinical elective is done because of licensing restrictions, there will be additional expectations of a scholarly nature, to be discussed and decided in advance with the programme director and/or mentor.
- Fellows with a primary research focus will be expected to develop a particular research expertise (example: nutrition in dialysis; acute kidney injury biomarkers; drug clearance during continuous renal replacement therapy), to be discussed and decided upon with their mentor 3-6 months prior to initiating the fellowship year.
  - A research project must be formulated in advance in order for the fellow to initiate work on this project as soon as fellowship year begins.
  - The fellow will be expected to write one review paper, submit research project findings for presentation at a national and/or international meeting and to write one manuscript on their research project.
  - Research projects may include primary clinical studies or database studies.

**Advanced training in urinary tract malformations (Mentor: Dr Indra Gupta)**

- This extended stream will focus on an in-depth understanding of malformations in the upper and lower urinary tract.
- The trainee will attend the bi-weekly Urology-Nephrology Clinic with practical training in interpretation of urodynamic studies.
- The trainee will also have practical training in various imaging techniques (ultrasound, MRI etc) through elective time in the MCH Radiology Department.

**Advanced training in Medical Education, in collaboration with the McGill Centre for Medical Education (MCH Nephrology Mentor: Dr Lorraine Bell)**

- The trainee will be expected to do a minimum 3 months elective in medical education in his/her second year of pediatric nephrology with development an educational project, and to apply for a post-graduate fellowship in Health Sciences Education at McGill for the 3<sup>rd</sup> year of training.
- Additional activity during the 3<sup>rd</sup> year will include enhancement of expertise in one of the 5 domains described above.

**Advanced Training in Global Health, with a focus on Pediatric Nephrology in the Developing World, in collaboration with the McGill Humanitarian Studies Initiative for Residents (MCH Nephrology Mentors: Dr Martin Bitzan and Dr Paul Goodyer)**

- This would be an extension of the intensive 2 year program described on page 11
- The fellow will be expected to do both a 2 to 3 month elective in our sister nephrology programs in the developing world (currently Bangalore India) *as well as* a 1 to 3 month-long, supervised international field placement in a humanitarian setting with mentorship by both McGill and Harvard HSIR faculty.
- Production of an academic work related to pediatric nephrology in the developing world will be required. This could take the form of clinical research or creation of a teaching module or other educational material for nephrology in the developing world and should be produced with the intent of submission for publication in a peer reviewed journal.

**PEDIATRIC NEPHROLOGY RESIDENCY OR CLINICAL FELLOWSHIP WITH FOCUS ON PEDIATRIC NEPHROLOGY AND GLOBAL HEALTH IN THE DEVELOPING WORLD: INTENSIVE 2 YEAR PROGRAMME**

Residents will be considered for this 2 year program if they demonstrate above average performance in their 1<sup>st</sup> year of clinical pediatric nephrology training

**Outline of the 2 year program**

**Year 1**

- 10 blocks of clinical pediatric nephrology (In-patient, outpatient, dialysis, CRRT, transplant)
- 2 blocks of elective, usually in epidemiology (2 courses / block)

**Year 2**

- Participation throughout the year in the McGill Humanitarian Studies Initiative for Residents (HSIR) <http://www.mcgill.ca/familymed/international/hsir/general/>

This will include

- Monthly evening seminar sessions (July to June) at McGill University
- A two-week intensive HSIR course on humanitarian issues at Harvard University
- Contribution as mentors in the McGill Interprofessional Global Health Course for health-profession students
- A weekend field simulation exercise in Harold Parker State Forest (Massachusetts)
- A 1 to 3 month supervised international field placement in a humanitarian setting (see below\*)
- Mentorship by both McGill and Harvard HSIR faculty
- Guided production of an academic work in humanitarian studies
- A certificate in Humanitarian Studies upon program completion
- 5-6 blocks clinical pediatric nephrology (MUHC -MCH)
- 1 block clinical adult nephrology (MUHC - MGH or RVH)
- 1 block tropical medicine elective at the Montreal General Hospital (optional – if relevant to planned field work)
- 1 block pediatric nephro-pathology (MUHC-MCH)
- *Up to 3 blocks* of clinical research project or scholarly activity (e.g medical education elective, preparation of report for publication)
- *\*Up to 3 blocks* of field work either organized in conjunction with the HSIR (as above) or through our International Society of Nephrology Sister Renal Centre in Bangalore India, in a recognized Pediatric Nephrology Residency Training Program.
  - Resident must outline the goals and objectives of his/her elective in India and have them approved both by the McGill and Bangalore Pediatric Nephrology Program Directors
  - Please see
    - Linked website on the Sister Nephrology Programs of the International Society of Nephrology) [http://www.nature.com/isn/society/outreach/isn\\_20088.html](http://www.nature.com/isn/society/outreach/isn_20088.html)

### **Stream C Academic Facilities**

- The fellow will be provided with a work area with a desk, computer, internet access, and telephone
- Library access, materials relevant to fellowship training: readily obtainable through McGill

### **Fellow Duties and Responsibilities: First and Second (Clinical) Years**

**Clinical experience:** see "Content of training", pages 7 and 8

#### **Call responsibilities to cover service**

Call duties are from home.

- According to the resident contract, there are up to 9 calls per month from home. When there are more than 3 residents/fellows, the total number of calls will be less. Each resident /fellow is expected to cover 1 full weekend per block. Statutory holidays need to be covered by a resident. The resident may then take an extra vacation day for the statutory holiday that he / she has worked. These extra vacation days include those taken over the Christmas / New Year period.
- Nephrology patient emergency room visits  
Generally if a nephrology patient presents to the Emergency Room it is the Nephrology resident's responsibility to see the patient. Exceptions are for conditions unlikely to be related to the underlying nephrology problem, or for minor problems late in the evening or overnight.
- Evening and weekend hemodialysis may be covered from outside the hospital, *after* the resident has assessed the patient clinically in the dialysis unit. However the resident must be able to return to the unit within 10 to 15 minutes maximum, should a patient complication arise. If there is an unstable patient in the hemodialysis unit the resident on call should remain in hospital until the treatment has been completed.
- New transplant patients  
It is important to see as many fresh transplants as possible to gain management experience. On the day of a transplant the resident is expected to remain in the hospital to closely follow the patient for at least the 1<sup>st</sup> 5-6 hours after the patient comes out of the operating room (longer if the patient is unstable). The resident should also attend the operating room during the procedure, particularly for the time period immediately before and during the anastomosis and vascular clamp release.

#### **Protected Teaching and Presentations by the Residents and Fellows**

Friday 10:30 -1300 Usually at RVH (sometimes MGH or MCH)

There are 2 hours of protected teaching time on Friday morning.

*Morning clinical duties must be taken care of prior to the start of the protected teaching time.*

10:30-11:30 Nephrology Resident/Fellow Lecture Series

Noon-13:00 MUHC-wide Clinical Nephrology Teaching Rounds

Wednesday afternoon 13:00 – 15:45 Montreal Children's Hospital

13:00-14:45 Journal Club and patient discussion (each 45 - 60 minutes)

Sometimes one of these items will be replaced by Quality Assurance/ Risk Management or Pathology Rounds.

14:45-15:45 Pediatric Nephrology Resident/Fellow Topic Reviews

Clinical duties will need to be completed after the teaching sessions end.

Thursday afternoon (once per month)

16:30-17:45 MUHC Renal Pathology Rounds

#### **Resident teaching responsibilities**

- Each pediatric nephrology resident/fellow and each rotating resident or student is expected to give 1 presentation each block, whether it be critical appraisal of a journal article, a topic review, or quality assurance/risk management rounds.

- Residents will be evaluated on their presentations. Factors that will be considered will be preparation, appropriate outline of learning objectives, content, final summary of the talk, clarity of delivery and time management.
- Other aspects of residents/fellows teaching and scholarly activities that we assess are: Teaching of nurses, junior staff, and patients/patient families, Medline scans/searches and reading around complex, challenging or unusual patient problems.

**Fellow Duties and Responsibilities: Third Year, Stream C**

- The fellow will attend one half-day general nephrology clinic per week. This will provide him/her with ongoing clinical training and the opportunity to follow his/her own patients long term. The fellow will have the opportunity to select patients in line with his/her own interests.
- The fellow will be expected to provide on call coverage one weekend per month in order to maintain his/her clinical skills.
- Teaching or supervisory responsibilities will depend on the Stream C option chosen (as described above)
- The fellow will be strongly encouraged to attend the American Society of Nephrology meeting each year. Other meetings of relevance to the fellow's chosen research area will also be available
- The fellow will be expected to produce at least one manuscript for publication