

**DEPARTMENT OF SURGERY – DIVISION OF UROLOGY  
APPLICATION FORM FOR FELLOWSHIP**

**Name of Institution:** McGill University – Department of Surgery – Division of Urology

**Location:** Montreal General Hospital (MGH) and Jewish General Hospital (JGH)

**Type of Fellowship:** Urologic Robotic Surgical Fellowship

**Fellowship Director:** Dr. Maurice Anidjar, MD, PhD

**Fellowship Co-Director:** Armen Aprikian, MD

**Program Information**

- 1-year clinical fellowship position requested beginning July 2010.
- Number of fellowship positions requested: one.
- Academic affiliation: McGill University – Department of Surgery – Division of Urology.
- Hospitals involved in training: Montreal General Hospital and Jewish General Hospital.
- The rotations will take place at both sites according to robotic surgical schedule.
- Background: the robotic surgical system interface provides breakthrough capabilities that allow many surgeons to use a minimally invasive approach, even when performing complex procedures. Robotic-assisted visualization, dexterity, precision and control can enable a surgeon to perform a wide array of procedures through small incisions, from nephrectomies to radical prostatectomies, while achieving better clinical outcomes. There is a strong background in Robotic and Minimally Invasive Surgery at McGill University. Dr. Anidjar was recruited in 2000 and started a MIS program in Urology. Dr. Anidjar is also responsible for establishing a robotic program at the JGH. Currently, a team of surgeons is almost entirely dedicated to Da Vinci procedures. The number of robotic procedures is rising rapidly and after the arrival of the new Da Vinci System at the MGH site during the spring, the volume will certainly grow exponentially. In the course of the last 12 months, more than 70 radical prostatectomies, 10 radical nephrectomies, 5 partial nephrectomies, 100 hysterectomies with pelvic and retroperitoneal lymph node dissections, 5 Nissen fundoplication, 5 sacrocolpopexies and 5 miomectomies were performed. There is no doubt that we have at McGill University a rapidly growing Robotic Surgery Program. We are interested in initiating a new Robotic Fellowship position. The main objective is to form surgeons to become leaders in new multidisciplinary robotic teams. The clinical fellow will have the opportunity to take part in the major areas of urologic robotic surgery.

**Description of Fellowship**

The Robotic Fellow will be exposed to the main areas of urologic robotic surgery.

According to the purpose to train a robotic surgeon, the robotic fellow will be exposed to the multiple procedures involving robotic surgery, although the main area of practice will be urology. The Fellow will be involved not only in the medical aspects of robotic surgery, but also in related research and education.

Combining education and research we will be able to explore new applications of robotic surgery as well novel surgical techniques. Upon completion of the fellowship, the Fellow is expected to have completed several learning objectives which will be achieved through exposure to both operative and outpatient robotic surgery. In addition, the Fellow will be expected to actively participate in hospital based activities including Surgical Teaching Rounds, Grand Rounds, Morbidity and Mortality conferences, Tumor Board, and combined

Nephrology/Urology and Urology Resident teaching sessions when applicable. Specific learning objectives include:

- Proficiency in robotic surgery in adults.
- Exposure to complex surgical procedures.
- Development of advanced skills for robotic procedures.
- Evaluation and non-surgical management of common complications of robotic procedures.
- Post-operative care of the patient undergoing robotic surgery.
- Development of consultant skills for in-hospital patients.
- Familiarity with the indications for an interpretation of radiologic investigations, namely endorectal magnetic resonance imaging.

### **Research Activity**

Protecting fifteen percent of the total curriculum for research activities, the Fellow will have opportunities to develop projects involving education, performance measurements and clinical outcomes. Dr. Anidjar is performing research in robotic and MIS since 2005. During the last two years we prospectively collected data about all robotic procedures done in our division and the Clinical Fellow will have a prospective and detailed data bank to perform multiple analysis about robotic surgery concerning indications, early and late results, complications and learning curves. We also developed an educational model to compare the results between experienced laparoscopic surgeons and former “open” surgeons migrating directly to robotic surgery. That research project will also be under responsibility of the Clinical Fellow. Results will be presented at national and international conferences, and will be submitted for publication at peer-reviewed journals. We believe that our Clinical Fellowship will be a unique opportunity for development of surgical techniques, new professionals, research and teaching in the prosperous field of robotic surgery.

### **Mission**

The main purpose of this fellowship is to form leaders and academic references in the urologic robotic surgery area. Several new centers in robotic surgery are being created in Canada and around the world. This fellowship program will form a specialist who will help in the development of new centers.

### **Source of funding for fellowship**

For the academic year 2010-2011, the fellowship funding will be managed by the Division of Urology and will consist of funds from the following sources:

Intuitive Surgical, Inc \$ 75,000.00 (per year)

### **Outline how intended fellowship will enhance residency training**

There will be no detrimental impact on residents’ training since robotic urologic surgery is not part of the Royal College of Surgeons objectives in urology. It is possible, that this fellowship position in robotic surgery should enhance residency training through multiple teaching duties of the fellow in relation to our residents. The Fellow will help the residents to get knowledge about robotic surgery as well their indications, outcomes and possible complications.

### **Names of the Teaching Faculty**

Teaching staff will include Dr. Maurice Anidjar, Dr. Armen Aprikian, Dr. Serge Carrier, Dr. Jacques Corcos, Dr. Simon Tanguay, Dr. Wassim Kassouf, and Sero Andonian .

#### **Summary of clinical practice:**

The clinical practice of Dr. Anidjar focuses on robotic radical prostatectomies.

Dr. Carrier's practice involves radical and partial robotic nephrectomies.

Dr. Corcos is involved in novel robotic procedures as robotic promontofixations.

Dr. Aprikian, Dr. Tanguay and Dr. Kassouf will be involved in many aspects of Oncologic Robotic Surgery in the treatment of prostate cancer as well bladder and kidney malignancies.

Major strengths: the teaching faculty is widely and internationally recognized for its excellence in urological malignancies and minimally invasive surgery from both a clinical and research perspective. The teaching members are dedicated to teaching. The volume of patients assures an excellent exposure to the robotic surgical cases. The academic program is well organized and interaction with surgeons, researchers, fellows, residents and students is very stimulating.

### **Roles of Teaching Faculty**

Assess and instruct the fellow of relevant information to clinical practice and also assess:

- The fellow's clinical judgment, diagnostic and therapeutic skills;
- The fellow's surgical skills in order to perform an efficient and safe robotic procedure;
- The fellow's capacity to consult with other physicians and allied health professionals,
- The fellow's contribution to effectively improve residents' knowledge in robotic surgery.

### **Academic Facilities**

- JGH: a Da Vinci S System is operating since 2007 which allows excellent exposure to a well trained surgical staff and nursing team.

- MGH: a new Da Vinci Si System with several teaching tools will be available shortly (Spring 2010) at Montreal General Hospital. This system allows real-time teaching interaction between staff and fellow, favoring patient safety and education. The same site has a well settled animal facility which allows the Fellow to participate in many educational and research activities in experimental surgery. The Fellow will also have full access to a reference simulation lab for Minimally Invasive Surgery.

Facilities for clinical and academic pursuit: the clinics are managed and run by dedicated staff and experienced nurses and allied health professionals. Teaching is delivered by staff and senior residents or fellows on a regular basis. Specialized clinics are organized. Library access, internet access to the main sources of robotic surgery literature. The Fellow will obtain a hospital card and a pass to the different libraries as well to the multimedia learning material. He will also have access to the photocopying machine.

## **Fellow Duties and Responsibilities**

The Fellow is responsible for attending all clinics related to robotic procedures and will participate actively in all aspects of the in-patient clinical service including ward rounds, the consult service for both sites wards and emergency room. He is expected to actively participate in the care and preparation of patients pre- and post-operatively. The Fellow will also assist in the teaching of residents and students.

The Fellow will be the first call person in case of any event regarding patients who underwent or are planned for robotic procedures at both sites, namely MGH and JGH.

The Fellow will rotate among the two hospitals cited above: JGH and MGH.

The Fellow's outpatient clinical responsibilities will be to:

- Assess the patient and report in the chart, in a clear manner, the patient's medical condition, needs, therapeutic modalities and functional prognosis.
- Organize a comprehensive surgical plan.
- Report to the staff.
- Insure a regular follow-up and help organize, if needed, different investigation tests.

Teaching responsibilities of the Fellow towards residents in their field of specialization (e.g. robotic surgery) consists of:

- Delivering teaching on a regular basis (basics of robotic surgery and robotic urologic procedures).
- Providing the residents with different review articles or books chapters for the purpose of reviewing their basic knowledge.
- Jewish General Hospital will soon be acquiring a robotic simulator in association with University of Buffalo, NY. The Robotic Fellow will be directly responsible for the robotic education program for all residents and medical students on that platform.

Participation in academic activities: the Fellow participates in the Department academic activities under the supervision of the surgeon in charge of the activity (seminars, M&M rounds, etc). The Fellow will be supervised by a staff surgeon in her academic activities and in her preparation of outcome assessment. The organization of the meetings and the distribution of academic material will be done by the surgery staff's secretary. The Fellow will attend at least one international meeting: IRUS (International Robotic Urology Symposium) in Las Vegas, NV or WRUS (World Robotic Urology Symposium) in Orlando, FL. Other symposiums on the topic of minimally invasive and robotic surgery may be added during his fellowship year. The Fellow is encouraged to present a poster or deliver presentations during the event and will receive some funding to support this activity.

## **Eligibility**

Candidates for the fellowship must be graduates of a recognized Medical School and must have completed 5 years of training in urology or general surgery with satisfactory background in urologic surgery. At least one year of previous research training in urology is desired but not mandatory. Candidates need to be fluent in English and/or French.

## Curriculum

Two hospitals will be involved in this Fellowship: Jewish General Hospital and Montreal General Hospital.

The Fellow will attend urologic clinics and will see with the attending staff every patient considered for robotic operation as well patients who already underwent robotic procedures. The Fellow will also supervise some of the junior residents' case loads. The Fellow is expected to get a balanced exposure to the population with surgical disease suitable for robotic procedures.

The Fellow will attend all robotic procedures at both sites (MGH, JGH) and act as the assistant surgeon as well as, in some instances, as the primary surgeon.

The Fellow will participate in all clinical rounds of the Urology Division at MGH and Urology Department at JGH, including Grand Rounds, Tumor Boards, M and M rounds as well lectures from visiting professors.

We will also provide sufficient time for training sessions at ISI (Intuitive Surgical Inc.), education and hands-on courses, which show themselves essential for the formation and overall performance of the fellow.

Urological malignancies will compose a major part of patients with whom the fellow will be involved. Considering the current routine and anticipating a reasonable volume from the new Da Vinci System, for the 2010-2011 year, the Robotic Fellow will have the opportunity to perform at least: 5 sacrocolpopexies, 40 radical prostatectomies, 10 radical nephrectomies and 10 partial nephrectomies.

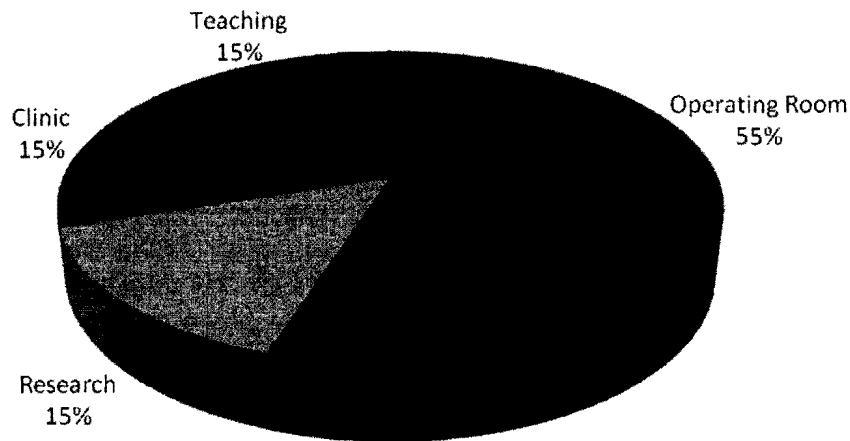
The Fellow will spend at least 15% of his time in teaching residents on all aspects of robotic surgery.

Another 15% of the Fellow's time will be spend in research activities. The Fellow will be assigned a specific research project involving robotic surgery and will also be responsible for mentoring potential research robotic projects coming from urology residents. Reading material and reference books will be provided by the staff surgeon.

### Week - Robotic Fellowship - Jewish General Hospital/Montreal General Hospital

	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>	<b>Sunday</b>
<b>7-8AM</b>	Inpatient visits	Tumor Board	Inpatient visits	Rounds and M&M's	Teaching Sessions	Inpatient visits	Inpatient visits
<b>8-12PM</b>	OR time Robotic	OR time Robotic	Research Activities	OR time Robotic	Research Activities	On Call	On Call
<b>12-17PM</b>	OR time Robotic	OR time Robotic	Teaching Sessions	Urology Clinic	Oncology Clinic	On Call	On Call
<b>17-18PM</b>	OR time Robotic	Teaching Sessions	Grand Rounds	Simulation Lab	Simulation Lab	On Call	On Call

## Distribution of Activities - Robotic Fellowship



### Evaluation methods

The MIS Department at McGill University is well known as a pioneer in the field of performance evaluation in Laparoscopic Surgery. Several projects and publications were done at our centre involving education and assessment of training quality. Some models developed at McGill University are now being used in Canada, USA and around the world. The evaluation of the Robotic Fellow will include but will not be limited to these steps:

The robotic program staff will have a regular meeting every three months in order to assess the Fellow's progress in:

- OR performance as an assistant and primary surgeon, based on video reviewing of every robotic case;
- teaching activities using feedback from urology residents;
- all academic activities, including the fellow's main research project, oral presentations at meetings and manuscript writing. The fellow is expected to present abstracts in at least two international meetings and write at least one research paper and one clinical paper regarding robotic surgery.

During these meetings the fellow will be welcomed to provide comments and suggestions regarding his training and progress.