The Centre for the Advancement of Minimally Invasive Surgery (CAMIS) offers a one-year Academic Fellowship Program for Advanced Minimally Invasive/Bariatric Surgery under the auspices of CAMIS, the University of Alberta Faculty of Medicine and Dentistry, and Alberta Health Services, Edmonton Zone.

The Academic Fellowship Program in Advanced MIS/Bariatric Surgery provides advanced training for qualified surgeons who wish to expand and further their skills in minimally invasive and bariatric surgery in a combined clinical, research, and educational experience.

**PREREQUISITES**

- The successful applicant must have completed the RCPSC (Royal College of Physician and Surgeons of Canada) training requirements in General Surgery or equivalent, and must be eligible for medical licensure with the College of Physicians and Surgeons of Alberta: [http://www.cpsa.ab.ca/Homepage.aspx](http://www.cpsa.ab.ca/Homepage.aspx)
- International students, please refer to the University of Alberta website: [http://www.med.ualberta.ca/education/pgme/img.cfm](http://www.med.ualberta.ca/education/pgme/img.cfm)

**GOALS**

At the completion of this program, the fellow will:

1. Through clinical, technical and/or cognitive experience, meet requirements of the American Society for Metabolic and Bariatric Surgery (ASMBS) by:
   a. understanding the essentials of a bariatric program
   b. understanding management of obesity including current epidemiology, physiology and nutritional deficiencies
   c. working with a multidisciplinary team including involvement in support groups for bariatric patients
   d. participating in preoperative evaluation and psychology of the morbidly obese patient including involvement of support group sessions
   
   e. understanding current bariatric procedures including bypass, banding, other restrictive and diversion procedures, etc., as well as the approach used, i.e. laparoscopic versus open surgery
   f. managing bariatric patients postoperatively including complications, regaining of weight; need for revisional surgery
   g. maintaining logs of bariatric procedures performed, auditing outcomes and altering practice accordingly
2. Further develop clinical and technical expertise in minimally invasive and bariatric surgery by participating in a minimum of:

<table>
<thead>
<tr>
<th>Number Required</th>
<th>Procedure / Activity</th>
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<tbody>
<tr>
<td>100</td>
<td>Weight loss operations of which at least 51% are as the primary surgeon (performed key components of the surgery)</td>
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<tr>
<td>50</td>
<td>Weight loss operative procedures with a variety of stapling and/or anastomosis, with at least 10 purely restrictive and five open procedures</td>
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<td>15</td>
<td>Upper GI procedures: paraesophageal / Nissen fundoplicaitons Heller myotomy</td>
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<tr>
<td>40</td>
<td>Segmental colorectal resections</td>
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<tr>
<td>25</td>
<td>Incisional / ventral hernia repairs</td>
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<tr>
<td>5</td>
<td>Solid organ procedures</td>
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<tr>
<td>50</td>
<td>Endoscopic procedures (diagnostic/therapeutic)</td>
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<tr>
<td>50</td>
<td>Patient pre-operative evaluations</td>
</tr>
<tr>
<td>100</td>
<td>Postoperative inpatient management encounters</td>
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<tr>
<td>100</td>
<td>Postoperative outpatient evaluations</td>
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Documentation of case procedures will be maintained through the Fellowship Council Case Log and outcomes evaluated during the formal evaluations every six (6) months.

Technical expertise skills will include:
- suturing and knot tying
- using staplers
- using light and energy sources including electrocautery and harmonic scalpel
- using tacking devices
- performing anastomoses
- using da Vinci Robot

3. Further advance his/her knowledge of minimally invasive and bariatric surgery by involvement in research and education by:
- publishing research abstracts and/or papers
- presenting posters, papers and/or topics
- attending Provincial Surgical Grand Rounds
- actively participating in the Journal Club
- completing designated textbook and journal reviews
- attending Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) Advanced Laparoscopic Workshop for Surgical Residents/Fellows
- attending relevant conferences, including: Canadian Surgery Forum, SAGES, and American Society of Metabolic and Bariatric Surgery
4. Demonstrates clear involvement in education and training of surgical residents by:
   a. presenting topics for the monthly surgical resident training
   b. assisting as a preceptor at the monthly surgical resident training wet and dry labs
   c. assisting surgical residents as needed in meeting their program standard
      requirements set for the endotrainers, FLS training boxes, and LapMentor
   d. providing instructions during surgical procedures as opportunities present

**ASSESSMENTS**
As the fellowship is a continuous learning process and it is imperative that feedback be provided in a timely manner, both informal verbal and formal written feedback will be provided through:

a. Continuous feedback to fellow from faculty:
   i. immediate on-going verbal feedback during procedures whether it is during
      operative procedures, wet or dry labs
   ii. verbal feedback at regularly scheduled monthly meetings with various faculty
       involved in research

b. Formal feedback to fellow from faculty:
   i. scheduled written Performance Reviews with relevant faculty at six months
      involving self-assessment, attitudinal domain from non physician colleagues
      (nurses, researchers, administrative staff, etc.), a review of the current log of
      procedures including outcomes, and goal setting for the final six months
      including knowledge, skills or attitudes that need to be addressed
   ii. final performance review upon completion of Fellowship Program which
      includes a self assessment portion, a review of the current log of procedures
      including outcomes

c. Exit surveys to be used by the fellowship program and team members to improve
   and expand the curriculum for future learners:
   i. review by Director, General Surgery Program
   ii. review of fellowship program by exiting fellow
   iii. review of faculty by exiting fellow

**RESOURCES**

**Research Support**
✓ CAMIS Research Consultant

**Simulators**
✓ LapMentor
✓ Endotrainers
✓ FLS Trainer Boxes
Library
✓ E-Journals
✓ NEOS Consortium Library (includes libraries across Alberta including medical libraries)
✓ University of Alberta (JW Scott Health Sciences Library)
✓ Royal Alexandra Medical Library
✓ CAMIS

Books
- Atlas of Minimally Invasive Surgery
- Minimally Invasive Bariatric Surgery
- Surgical Management of Obesity

Journals
- Journal of the American College of Surgeons
- Canadian Journal of Surgery
- Surgical Endoscopy and Other Interventional Techniques
- Surgery for Obesity and Related Diseases