Introduction:

Centro de Entrenamiento Avanzado Ciudad de México was inaugurated in México City on July 28, 2008. The Training Center is directed by Dr. Miguel A. Valdovinos.

Aims/Objectives:

The objectives of the Mexico City Training Center are:

- to provide theoretical and practical training in advanced techniques of gastroenterology, hepatology, gastrointestinal motility and endoscopy
- to improve the learning process through effective teaching activities: conferences, discussions, workshops with animal models and electronic simulators, live demonstrations with patients, tutorials and interactive video and computer programs
- to promote interaction between regional and international experts and gastroenterology and endoscopy associations
- to diffuse knowledge of advanced techniques in gastroenterology in the geographical region, with the multiplier effect achieved when the trained student returns to his or her place of origin

Facilities:

The Mexico City Training Center is located at the Instituto Nacional de Ciencias Médicas y Nutrición. Fundamental to the Center are the medical and paramedical personnel and infrastructure of the departments of Gastroenterology, Gastrointestinal Endoscopy, Imageology and the Medical Skills Development Center (Centro de Desarrollo de Destrezas Médicas, CEDDEM).

The Training Center is composed of the Departments of Gastroenterology and Endoscopy, the GI Motility and GI molecular labs, as well as the Medical and Surgical Skills Center.

- The motility lab is fully equipped with Medtronics and Sandhill working stations to perform manometries and pH studies.
- The Digestive Endoscopy Unit consists of 5 endoscopy rooms; 2 for gastrosopes, 1 for colonoscopy, 1 for enteroscopy and endoscopic ultrasound and 1 for ERCP. All rooms are equipped with state of the art Olympus and Fujinon
videoendoscopes, endoscopic ultrasound, electrosurgical generators, argon plasma coagulators, and accessories for therapeutic endoscopy. A room for disinfection and sterilization process is also available in this unit.

- A fully equipped angiography suite is used for hepatic hemodynamics and TIPS placement.
- GI lab is mainly dedicated to research activities. It is equipped with real time PCR, blood chemistry multiprocessor, cell culture chamber, electrophoresis, ELISA and other lab techniques used in molecular biology.
- The Medical and Surgical Skills Center, the first of its kind in Mexico and Latin America, provides a laboratory setting where basic and complex medical and surgical procedures can be learned and practiced. The models used in the Center vary from very basic knot-tying boards used for basic skills, partial simulators, and animal models to virtual reality simulators.

To enhance the learning experience, the Center is equipped with telecommunications capability. Directly linked with operating and endoscopy rooms in the hospital, participants have the opportunity to view live endoscopy or surgery in the context of the course and are able to interact directly with the operating surgeon or endoscopist. Using this telecommunications system, the Center is also able to connect with any similarly equipped facility in the world and continues to expand their video conference capabilities.

In house video taping of expert endoscopies and other procedures has also provided a number of key applications:

- The person who performed the endoscopy or procedure has the opportunity to reflect and evaluate their technique
- Students have the opportunity to review and learn from the taped expert

As research has confirmed that video learning is an effective way of training, particularly for early learners, the Center has placed a strong emphasis on this style of education.

State of the art virtual reality simulators (Simbionix®) are part of the equipment of the Center; there are 2 simulators for laparoscopic surgery, 1 for urology, 1 for gastrointestinal endoscopy, 1 for bronchoscopy, which also has the capability to have software for gastrointestinal endoscopy, 1 for vascular access, 1 for angiography, and 1 simulator for all areas of medicine. The gastrointestinal endoscopy simulator is composed of modules for upper GI (Gastroscopy), lower GI (colonoscopy), endoscopic retrograde cholangiopancreatography (ERCP), flexible sigmoidoscopy, and endoscopic ultrasound. In addition, there are also partial simulators for different areas such as anaesthesia, nursing and critical care, for instance difficult airway, vascular access, ultrasound, arrhythmias, cardiovascular resuscitation, etc.

Multimedia Library and Scientific Journals are also available for trainees.

**Teaching Facilities:**

- Two are the maximum number of trainees accepted per course
- Twelve courses (3 month duration) per year with proper funding can be held in our Training Center
- Courses start in January, April, July and October
- Six trainees/faculty can be accommodated for periods of 12 weeks
Housing facilities: Four double rooms in the medical residency which can be used to accommodate 6 foreign trainees free-of-charge simultaneously for periods of 12 weeks (2 meals per day included). Low cost rooms in a nearby hotel can also be arranged.

**Faculty and Staff:**

- **Director:** Miguel A. Valdovinos-Díaz MD, AGAF  
  - **Co-directors:** Francisco Valdovinos-Andraca MD, Sergio Zepeda MD.

  - **Training Course Coordinators:**
    - GI Motility Tests: Miguel A. Valdovinos-Díaz MD, AGAF  
    - Endoscopic Ultrasound: Dr Miguel A. Ramirez MD  
    - Enteroscopy: Dr Rafael Barreto MD  
    - ERCP and Bilio-Pancreatic Therapeutic Endoscopy: Dr Sergio Zepeda MD  
    - Hepatic Hemodynamics: Dr Eric López  
    - Complications of Liver Cirrhosis: Dr Aldo Torre

- **Additional Local Faculty:**
  - Dr. Rafael Barreto  
  - Dr. Javier Elizondo  
  - Dr. Miguel Angel Tanimoto  
  - Dr. Misael Uribe  
  - Dr. Kazuo Yamamoto

**Areas of Training:**

- GI Motility Tests  
- Endoscopic Ultrasound  
- Enteroscopy  
- ERCP and Bilio-Pancreatic Therapeutic Endoscopy  
- Hepatic Hemodynamics  
- Liver Cirrhosis

**Training/Courses Offered:**

One trainee is accepted for each of the training courses listed above for a training duration of 3 months. The curriculum is flexible according to the experience and background education of trainees and special requirements of the home institutions. Please see attached core curriculum overview.

**Regulatory Requirements:**

- Medical insurance for foreign trainees

**Certifications:**

- **3 month courses:**  
  - Trainees will receive a diploma sponsored by WGO, INNSZ; AMG and AMGE to certify training in (ERCP, Enteroscopy, EUS, Motility, Hepatic hemodynamics or Complications of liver cirrhosis)

- **Short duration courses**  
  - Trainees will receive a certification of attendance for specific courses
Trainee Application Process and Requirements:
- Trainees must have completed a 3-year residency in gastroenterology or general surgery and a 1-year training period in basic gastrointestinal endoscopy at an institution accredited by the Mexican Board of Gastroenterology or a foreign equivalent.
- Medical insurance for foreign trainees
- Trainees are responsible for their own travel expenses to and from the course

Further Academic Activities:
- Trainees are able to participate in the annual postgraduate courses organized by the GI and Endoscopy Departments (1st week in July)
- Trainees are able to participate in the National Gastroenterology and Endoscopy Weeks sponsored by the Mexican Association of Gastroenterology and Endoscopy (2nd week of September and 3rd week of November)

Endorsements:
The Mexico City Training Center has been endorsed by
- the World Gastroenterology Organisation (WGO)
- the Mexican Associations of Gastroenterology and Endoscopy

Funding / Sponsorship:
Funding and/or sponsorship is currently received from the following sources:
- World Gastroenterology Organisation (WGO)
- Instituto Nacional de Ciencias Médicas y Nutrición
- The Mexican Association of Gastroenterology
- Danone Institute
- Olympus
- Fujinon

Philanthropic Endeavors:
- Patients are treated free of charge by trainees

Site-Seeing Experiences
- Sala Nezahualcoyotl Music Hall
- Gardens of Xochimilco
- Town of Taxco (The town of silver)
- Historic Plazas: Coyoacan, San Angel, Tlalpan
- Mexico City Historic Center and Templo Mayor
- Teotihuacan Pyramids
- San Angel Bazaar
- Diego Rivera & Frida Kahlo Museum and Houses
- The Museum of Anthropology
- Dolores Olmedo Museum
- Campus of The National University of Mexico

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<th>Training Center Needs:</th>
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<td>Scholarships are mainly for non Mexican trainees</td>
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**Mexico City Training Center Scholarship Amount:**
USD 6600