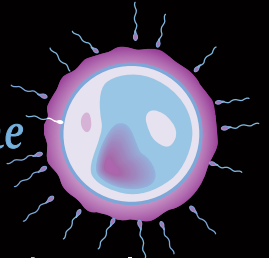




*Ranked One of America's Top 4 Hospitals*



*Center for Reproductive Medicine*



Training Program in Assisted Reproductive Technology





# Learn from the Leaders

## The Center for Reproductive Medicine

Cleveland Clinic's [Center for Reproductive Medicine](#) was established in 1993 with a two-fold mission: to conduct cutting-edge research into the causes of human reproductive and sexual disorders, leading to the development of new treatments and cures and to train physicians and scientists with a commitment to advancing the understanding of human reproduction, infertility and sexual function.

### Training program in assisted reproductive technology (ART)

We offer a unique opportunity to learn the latest techniques in this rapidly changing subspecialty at one of the world's premier ART centers:

- World-class faculty
- State-of-the-art training facilities
- Personalized hands-on training
- Multiple comprehensive course modules
- High program satisfaction rates
- 90 alumni from more than 20 countries certified since 2003
- [Certificate of Training](#) awarded at the end of training

This course is available exclusively to scientists, physicians with specialty interest in gynecology, andrology or embryology and other health professionals such as reproductive biologists.

Our intensive, 320-hour course teaches advanced laboratory techniques in the most sought after assisted reproductive technology:

- *In vitro* fertilization (IVF)
- Intracytoplasmic sperm injection (ICSI)
- Gamete cryopreservation
- Routine and advanced techniques in Andrology

## Course Content

### Assisted Reproduction (IVF and ICSI) - Module 5 (160 hours)

Learn basic and advanced techniques in:

#### IVF/ICSI

- Conventional IVF
- Oocyte handling
- Embryo handling, loading and scoring
  - Preparation of ICSI dishes
  - ICSI techniques (injection of spermatozoon into the oocyte)
  - Oocyte handling (using frozen mouse oocytes)

#### ART

- Assisted hatching (chemical and laser)

#### Pre-Implantation Genetic Diagnosis

- Cleavage stage/blastocyst fixation techniques
- Cell spreading

#### Cryopreservation

- Embryo cryopreservation (using mouse embryos)
- Ovarian tissue cryopreservation

#### Andrology

- Sperm preparation for IVF/ICSI
- Epididymal/testicular sperm retrieval - demonstration

[Virtual Tour of Facilities](#)



## Semenology - Module 1 (40 hours)

### Gain experience in:

- Routine semen analysis
- Sperm morphology
- Viability and leukocyte detection
- Antisperm antibody testing
- Evaluation of sperm membrane integrity

## Advanced Sperm Function Tests - Module 2 (32 hours)

### Learn the latest techniques:

- Sperm DNA fragmentation test by FACS (TUNEL assay)
- MACS technique for selection of non-apoptotic spermatozoa
- ROS measurement in semen
- Acrosome reaction (spontaneous and induced) by FITC test
- TAC measurement in seminal plasma
- Identification of apoptotic markers in ejaculated spermatozoa by fluorescence microscopy (Annexin V binding)

## Sperm Preparation Techniques - Module 3 (16 hours)

### Develop skills in sperm preparation for ART:

- Preparation of ejaculated sperm for ART:
  - Sperm wash
  - Double density gradient technique
  - Swim-up protocol
- Retrograde specimen processing techniques
- Epididymal/testicular sperm retrieval and preparation

## Cryopreservation of Male Gamete - Module 4 (8 hours)

### Learn the proper procedures for freezing ejaculated human spermatozoa:

- Freezing ejaculated and testicular human spermatozoa
- Cryopreservation of epididymal and vas deferens aspirates

## Vitrification - Module 6 (6 hours)

### Gain experience in the fundamentals of vitrification:

- Vitrification set up for routine use in an embryology laboratory
- Hands on training in vitrification of oocytes and embryos

## Quality Management of IVF and Andrology Laboratories - Module 7 (14 hours)

### Understand how to implement a total quality management program in your laboratory:

- Quality control and assurance
- Laboratory regulation, licensing, accreditation
- The latest quality management tools

## Preparing for Accreditation - Module 8 (14 hours)

### Learn how to prepare your laboratory or tissue bank for accreditation by the College of American Pathologists (CAP) Reproductive Laboratory Inspection Program or the American Association of Tissue Banks (AATB) inspection:

- Preparation for each step of the process, pre-inspection through follow-up
- Inspection techniques, quality management, FDA compliance



## Our Former Trainees Tell Us...



**Kelly Porter, HTL**  
New Jersey, 2010

*"Overall this was a great course with tremendous amounts of material. It was helpful to gain exposure to real patients in the clinical laboratory."*

**Christopher Danga, BS**  
Nigeria, 2009

*"Hands on training... given opportunity to participate in cell biopsy and fixation, advanced sperm function test... everything was NEW!"*



**Darlaine Dorval, MD**  
Haiti, 2008

*"I think that [the] Cleveland Clinic is one of the best places to learn because the staff really guides you all the way."*

**Lina Garcia, MTCP**  
Puerto Rico, 2008

*"The experience was great. Everybody was very professional and willing to help me at all moments. I felt very happy about choosing this program and I will come back if I decide to expand."*



**Andrea Mustata, MD**  
Romania, 2007

*"Hands-on-training techniques were very well organized, very dedicated trainers, patient and helpful. Excellent ART training."*

**Luciana Lopes, BS**  
Brazil, 2007

*"Excellent professionals who taught my course ... I want to thank everyone for the care and attention!"*



**Israel Maldorado Rosas, BS**  
Mexico, 2007

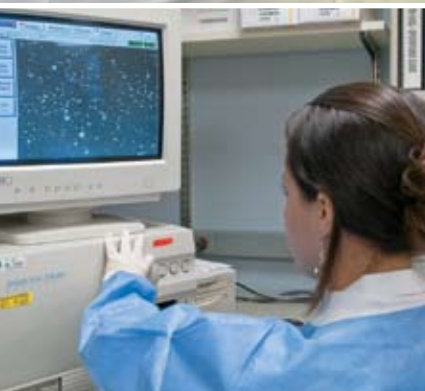
*"[Embryo Biopsy] I could make more than a 100 embryo biopsies in this course, very attentive staff."*

**Mary Roberts, MBBS, MD, DGO**  
United Arab Emirates, 2004

*"To sum up I could only say 'mission accomplished!'... Every point of my training was carefully planned and well balanced..."*



[Read Additional Evaluations](#)



## Cleveland Clinic Faculty



**Ashok Agarwal, PhD, HCLD**  
Director, Center for Reproductive Medicine  
Professor, Lerner College of Medicine



**Rakesh Sharma, PhD**  
Research Coordinator  
Center for Reproductive Medicine



**Tommaso Falcone, MD**  
Chairman, Cleveland Clinic OB-GYN & Women's Health Institute



**Franciele Lunardi, MS**  
Embryologist, Andrologist  
Center for Reproductive Medicine



**Edmund Sabanegh, MD**  
Chairman, Department of Urology  
Head, Section of Male Infertility



**Sajal Gupta, MD**  
Reproductive Endocrinologist  
Supervisor, Andrology Laboratory



**Aparna Thiyagarajan, MS**  
Embryologist, Andrologist  
Center for Reproductive Medicine



**Arozia Moazzam, MD**  
Andrologist  
Center for Reproductive Medicine

## External Faculty



**Ali Ahmady, PhD, HCLD**  
Director, IVF Laboratory  
University Hospitals  
Case Western Reserve University  
Cleveland, Ohio



**Alex Varghese, PhD**  
Scientific Director & Chief Embryologist  
AMRI Medical Centre  
Calcutta, India



**Peter Zsolt Nagy, MD, PhD**  
Scientific & Laboratory Director  
Reproductive Biology Associates  
Atlanta, Ga.



**Nabil F. Aziz, MB, ChB, FRCOG, MD**  
Consultant Gynecologist & Lead Clinician  
Liverpool Women's Hospital  
United Kingdom

## Learn More

For complete information, application instructions and course fees, visit [www.clevelandclinic.org/reproductiveresearchcenter/arttraining.html](http://www.clevelandclinic.org/reproductiveresearchcenter/arttraining.html)

[Virtual tour of the Center for Reproductive Medicine](#)

## Accreditation

**Accredited for 320 AMA PRA Category 1 Credits™**

Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association Council on Continuing Medical Education for Category 2 credit.

**Accredited by the American College of Embryology**



## About Cleveland Clinic

Located in Cleveland, Ohio, Cleveland Clinic is a nonprofit, multispecialty academic medical center that integrates clinical and hospital care with research and education. Founded in 1921 by four renowned physicians with a vision of providing outstanding patient care based upon the principles of cooperation, compassion and innovation, it is the second largest group practice in the world with 2,000 physicians and scientists practicing and researching in more than 120 medical specialties and more than 1,300 beds.

In addition to the main hospital located near Cleveland's historic University Circle, the Cleveland Clinic operates nine regional hospitals, a children's hospital, and 17 family health centers in Ohio, as well as hospitals in Florida, Las Vegas, Canada, and Dubai, employing more than 40,000 individuals and providing global world class medical care. Last year alone 3.7 million patients from over 80 countries and all 50 states received their care at the Cleveland Clinic.

The main hospital campus, located near downtown Cleveland, occupies 180 acres and 50 buildings. It includes a hospital, an outpatient clinic, a children's hospital, cancer institute, eye institute, research institute, a medical school and supporting labs and facilities. To learn more, visit [www.clevelandclinic.org](http://www.clevelandclinic.org).