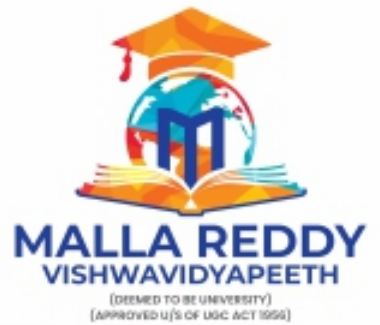


SCHOOL OF MEDICAL SCIENCES & TECHNOLOGY

Fellowship in Clinical Embryology & Assisted Reproductive Technology

A one-year programme



*This **one-year programme** aims to provide post-graduate students, scientists and clinicians with highly advanced theoretical and practical understanding of human reproductive biology, embryology, infertility and assisted reproductive technology (ART) along with intensive 'hands-on' practical training in essential laboratory skills, including the sophisticated micromanipulation techniques associated with ART. The programme is administered by the **School of Medical Sciences & Technology** at the Malla Reddy Vishwavidyapeeth (Deemed to be University) in collaboration with MOMSOON Academy.*

Fellowship in Clinical Embryology & Assisted Reproductive Technology

Clinical embryology is a relatively young branch of reproductive science that has undergone enormous expansion over the last twenty years. Louise Brown, the world's first 'test tube' baby, was born in 1978 as a result of pioneering research carried out by a team of British clinicians led by Dr. Patrick Steptoe and Sir Robert Edwards. Since then, infertility treatment has undergone phenomenal development and has become a highly specialised field involving a multitude of interventions known collectively as Assisted Reproductive Technology (ART). Worldwide, approximately one million ART treatments are now performed each year and over five million ART babies have been born. However, a major concern is that there are too few appropriately trained clinical embryologists, both within India and throughout the rest of the world, to maintain this pattern of growth. In addition, the field of clinical embryology is becoming ever more closely regulated, with greater emphasis on quality assurance. Meticulous training of new personnel in theoretical knowledge and practical skills is therefore critical to future advancement and ensuring patients consistently receive the best care. In response to these concerns, the Malla Reddy Vishwavidyapeeth (Deemed to be University) has developed an intensive, one-year Fellowship in Clinical Embryology & Assisted Reproductive Technology. Our intention is to inspire, motivate and train a network of future leaders in clinical embryology throughout the world.

Our Fellowship programme provides students with theoretical and practical understanding of

human reproductive biology, embryology, infertility and ART. The programme includes the very latest developments in ART including legislation, ethics, and quality management. Our Fellowship programme will include a considerable practical component. Students will learn skills and techniques directly relevant to ART, as well as a range of 'traditional' and 'cutting edge' scientific techniques and procedures. A particular strength of our programme is the fact that each of our students will be individually trained in gamete manipulation / injection. For this purpose, students will use gametes and embryos acquired from mice and sheep.

Our Fellowship programme will prepare students for active employment within the clinical embryology / ART sector and / or a research career in reproductive science. In particular, we expect our students to possess sufficient knowledge and skills to allow them to make a significant contribution to the design and establishment of new in vitro fertilisation (IVF) units, which need to incorporate the latest techniques and conform strictly to current legislation.

Once enrolled on the Fellowship programme, you will be allocated a Mentor who will provide individual support and guidance throughout the course and will meet you regularly to discuss course work and assessment. This level of individual support is a prominent and highly acclaimed feature of this program and will provide the support necessary for you to achieve maximum benefit from your studies.



Course outline

The course runs over a period of one year, incorporating two semesters. Andrology laboratory techniques, basic embryology and role of hormones are taught in the first semester.

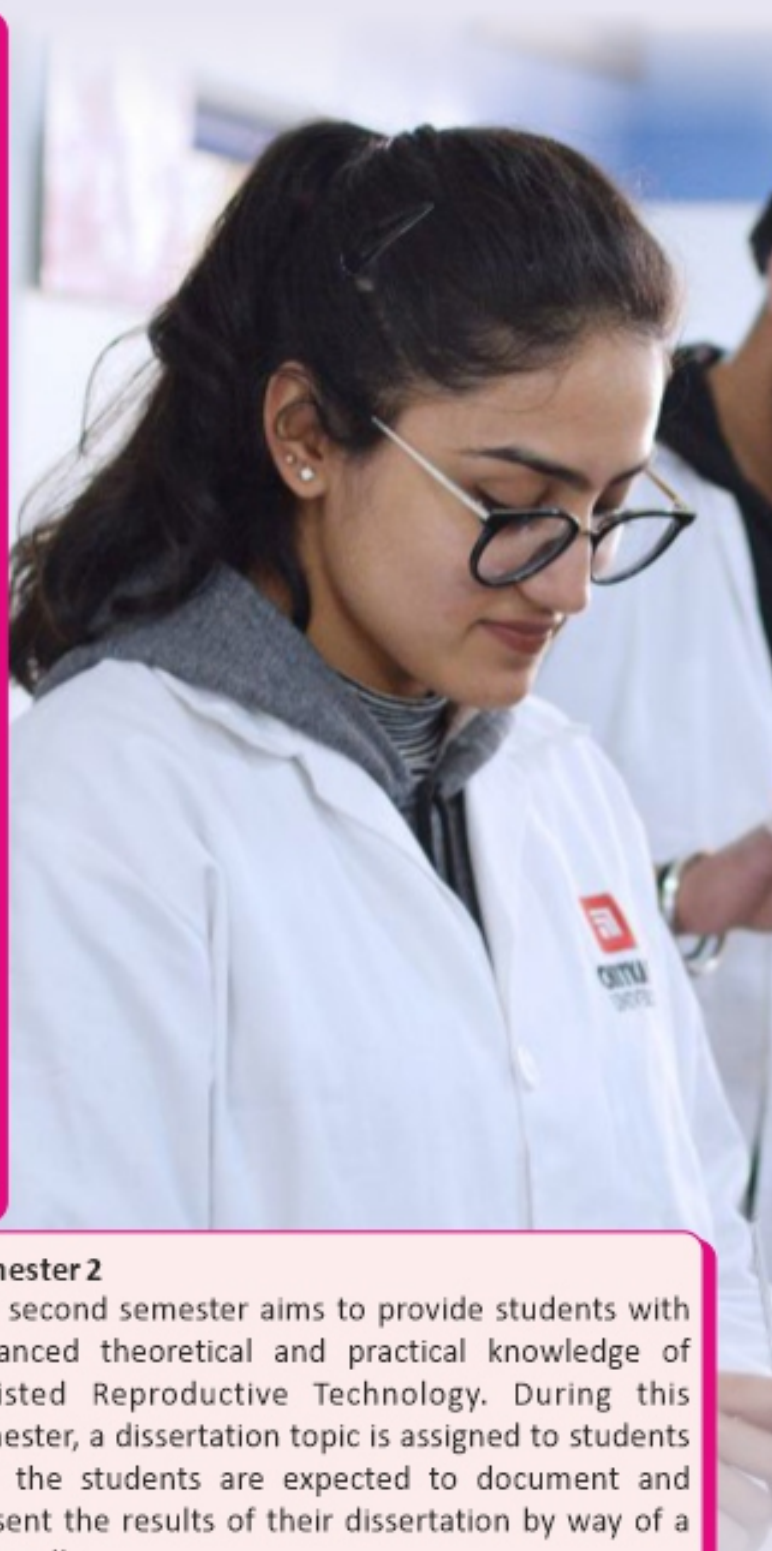
Assisted Reproductive Technology and clinical aspects of embryology are delivered in the second semester at the end of which students are required to present a dissertation.

Program Specific Outcomes (PSO)

Specific outcomes of the Fellowship in Clinical Embryology

On successful completion of the programme, the candidates will be able to

1. Analyse semen and determine if low sperm count and / or sperm dysfunction is the cause of infertility.
2. Prepare semen for ART procedures using techniques to separate human spermatozoa from seminal plasma to yield a semen preparation containing a high percentage of morphologically normal and motile cells, free from debris, non-germ cells and dead spermatozoa.
3. Carry out cryopreservation of spermatozoa oocytes and embryos
4. Develop embryos through IVF (In-vitro Fertilization) by fertilizing human oocytes with processed semen.
5. Perform ICSI, the procedure of injecting an oocyte with an immobilized spermatozoa and developing an embryo for achieving pregnancy in the case of male factor infertility.



Course Structure

Semester 1

The first semester is planned to ensure that students gain core knowledge in the fundamental principles of reproductive science and the application of essential laboratory techniques.

It comprises the following two units:

Theory:

- Andrology
- Clinical Embryology

Practical:

- Andrology Laboratory Techniques

Semester 2

The second semester aims to provide students with advanced theoretical and practical knowledge of Assisted Reproductive Technology. During this semester, a dissertation topic is assigned to students and the students are expected to document and present the results of their dissertation by way of a short talk.

It comprises the following units:

Theory:

- Assisted Reproductive Technology

Practical:

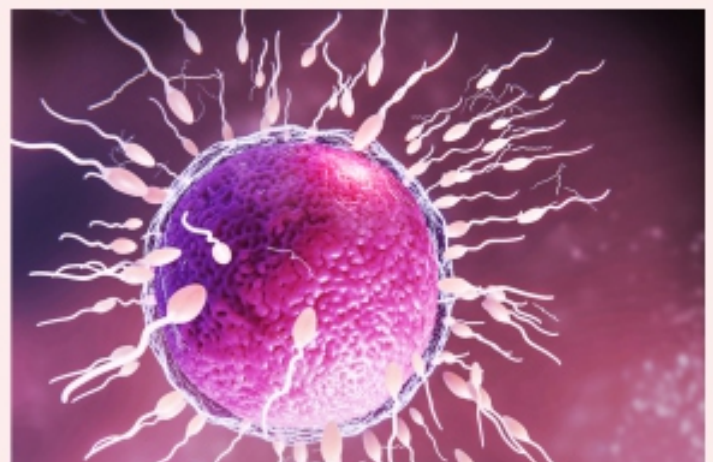
- Assisted Reproductive Technology procedures
- Dissertation

Practical Skills

Our Fellowship programme places significant emphasis on practical skills and techniques, particularly those relevant to andrology laboratory and clinical embryology laboratory. Students will learn a wide array of 'hands on' practical techniques, these include:

- Safety, liquid handling, aseptic techniques, waste management
- Preparation of media and buffers
- Sperm counting and morphological analysis
- Oocyte and embryo grading
- Cryopreservation of gametes and embryos
- Vitrification protocols
- In vitro maturation of oocytes
- Micromanipulation of gametes (animal model)
- Intra-cytoplasmic sperm injection (animal model)

Emphasis is placed directly on our students acquiring 'hands on' experience, facilitated by experienced scientific and clinical instructors. Our teaching laboratory has been purposefully designed to provide a stimulating learning environment.



Teaching and Learning Methodology

The programme will be taught by the faculty at Malla Reddy Vishwavidyapeeth (Deemed to be University) and also by the clinicians and embryologists of MOMSOON Academy & MOMSOON Fertility.

A variety of teaching methods will be employed to enhance and optimise student learning, e.g. class lectures, laboratory practical classes, and in-house demonstrations by visiting companies. Students will also receive regular lectures from many visiting scientists who are world experts in their field. Our programme places special emphasis on the development of practical laboratory skills, especially those that are applicable to ART and the routine duties of a clinical embryologist.

Self-directed learning strategies allow students to study topics of interest on an individual basis without formal facilitation and subsequently present their findings to the rest of the class, aided by programme teaching staff. Additional problem-based learning techniques allow the class to analyse and research a given problem collectively. In these cases, the group will be led by a student. Findings are subsequently presented and discussed with programme teaching staff.

Student Resources

Mentors

Each student will be allocated a mentor for the duration of their Fellowship programme. Students will meet regularly with their mentor to discuss progress. The mentor will read and appraise first drafts of essays and laboratory reports, ensure that essays are marked and discussed, and will be available to offer help and advice throughout the programme. The mentor will additionally provide one-on-one feedback to the students.

Libraries

The University has all the reference books required for the Fellowship programme. Our students can access all the required academic journals and textbooks needed during the programme.

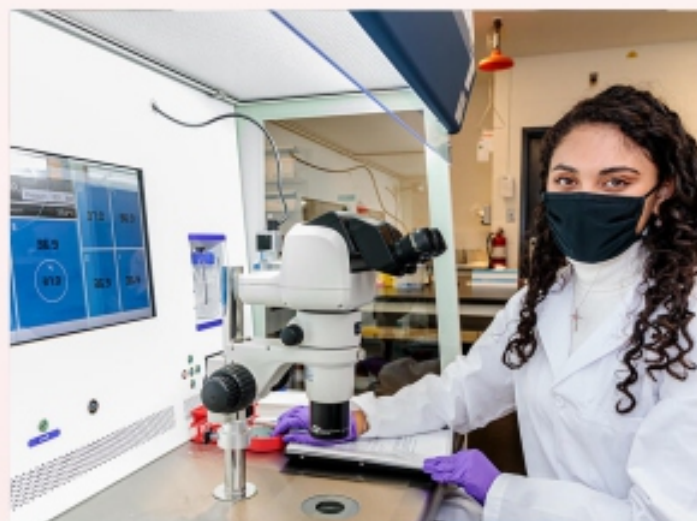


IT Resources

Our Fellowship students are provided with dedicated office space and teaching facilities. The student office is equipped with a variety of IT equipment including personal computers, printer and scanner. Computers are connected to the MRV network and possess all the necessary software required by the Fellowship programme in terms of word processing, presentation preparation and data analysis. Photocopying facilities are also available.

Laboratory Equipment

The dedicated teaching facility at MRV (Deemed to be University) is equipped with the very latest laboratory equipment, as well as several sophisticated micromanipulation workstations. A sufficient number of equipment set-ups are provided to ensure that each student is guaranteed to have hands-on practical experience in all the laboratory sessions.



MOMSOON Academy

MOMSOON Academy is backed by over a decade of expertise in providing excellent teaching-learning and research experience to Clinical Embryologists and Infertility Specialists. Students are significantly benefited from our diverse community of specialists who are dedicated to providing a stimulating learning environment and ensuring adequate hands-on practice.

The research activities of the students have been enormously enhanced as a result of a close partnership with the MOMSOON Fertility & IVF Centre, a fertility treatment unit founded in 2009. The MOMSOON Fertility's mission is 'to provide efficient and cost-effective fertility treatment in a caring and professional environment, and to foster research and development in the field of reproductive medicine'. The Unit offers a wide range of treatments including intra-uterine insemination, in vitro fertilisation, intracytoplasmic sperm injection, surgical sperm extraction, donor insemination, IVF with donor sperm / egg, sperm and embryo storage, oocyte in vitro maturation (IVM) and pre-implantation genetic diagnosis. MOMSOON Fertility & IVF Centre is ranked among the Best ART Clinics as per the survey conducted by the Times Group in 2022. For more information, visit the website: www.momsoonacademy.com

Malla Reddy Vishwavidyapeeth (Deemed to be University)

Malla Reddy Vishwavidyapeeth (Deemed to be University) under Distinct (Existing) Category is sponsored by the Chandramma Educational Society (CES) by visionary, founder Shri. Malla Reddy CH. MRV aspires to evolve into a Center of Excellence by undertaking new initiatives, building world-class infrastructure, fostering international collaborations, introducing innovative programs, establishing partnerships with industries, hiring well-qualified and globally trained faculty, promoting talent, nurturing research and innovation, and engaging in outreach activities with a sustainable fund flow.

Encompassing a sprawling 70-acre campus, MRV boasts state-of-the-art facilities within academic, administrative, and amenity blocks. The cosmopolitan ambiance attracts a diverse student population from across the globe, fostering an environment conducive to learning. This atmosphere provides access to experienced teaching faculty with international exposure, nurturing students' creative abilities and encouraging new innovations through knowledge partnerships. Our curriculum includes cutting-edge technologies and innovative coursework, preparing students to navigate the dynamic developments in the contemporary world.

MRV is comprised of following constituent colleges dedicated to various disciplines: Malla Reddy Institute of Medical Sciences (MRIMS), Malla Reddy Medical College for Women (MRMCW), Malla Reddy Institute of Dental Sciences (MRIDS), Malla Reddy Dental College for Women (MRDCW), Malla Reddy College of Nursing (MRCN), Malla Reddy Institute of Pharmaceutical Sciences (MRIPS), Malla Reddy College of Engineering for Women (MRCEW)

Further information

For further information about the Fellowship in Clinical Embryology & Assisted Reproductive Technology, visit: <https://mrvv.edu.in/medical-fellowships/>

For further details about Malla Reddy Vishwavidyapeeth (Deemed to be University), visit: <https://mrvv.edu.in/>

Admissions

Applicants must have a minimum of Master's degree in Biological Sciences / Life Sciences / Veterinary Sciences / Medical Sciences / Pharmacy

Fees

Rs. 3,50,000/- for Indian applicants
Rs. 3,50,000/- for international applicants
(from Srilanka, Bhutan, Nepal and Bangladesh)
6300 USD for international applicants
(except Srilanka, Bhutan, Nepal and Bangladesh)

Applications

The application procedure for the Fellowship in Clinical Embryology & ART is as follows:

- Apply online (The link to apply online is <https://mrvv.edu.in/apply-now/>)
- Mail scanned copies of certificates for verification to info@momsoonacademy.com along with a short essay (no more than 500 words) describing why they wish to study for the Fellowship in Clinical embryology and how they think our programme might influence their future career. (once verified, you will receive an invitation to proceed further)
- Pay 50% of the course fee and share the transaction details (you will receive an admission confirmation letter)

Further details can be obtained from:

The Programme Co-ordinator,
Fellowship in Clinical Embryology &
Assisted Reproductive Technology,
Call or WhatsApp: +91 98864 47093
Email: info@momsoonacademy.com
Website: www.momsoonacademy.com