



Six Months Masters Course in

# **Andrology Laboratory**



# About Us

MHPro is a Continuing Medical Education (CME) platform to upskill healthcare professionals with evidence-based knowledge delivered online with immersive learning experience. The MHPro curriculum aims to prepare clinicians to master Basic Sciences, which then empowers them to deal with patients and their problems in a hospital or outpatient milieu. During the program, new clinical skills and considerable medical knowledge, and domain-specific core competencies will be stressed as clinicians acquire both diagnostic and therapeutic skills



MHPro is committed to a competency based curriculum. Learners will be graded and receive pertinent feedback

**Welcome to MHPro**





# Course Introduction

This master's andrology laboratory encompasses both the laboratory aspects and its clinical application in a detailed format for a comprehensive understanding of the subject for a pellucid reporting system. This course helps evaluate semen and its properties and elaborate on semen preparation for various ART procedures. The module delivered by experts includes lessons on all laboratory and Andrology protocols including Semen Analysis, Sperm Preparation Techniques, Semen Freezing, Advanced Sperm Function tests (Fructose, HOS, Vitality, Peroxidase Staining), Sperm DNA Fragmentation, Semen Banking & Sperm Retrieval Techniques. The module involves ample number of video sessions for the audience to familiarize with laboratory routines





## Learning Objectives:

- Understanding the workup for male infertility, including the importance of the physical examination
- Semen analysis and its role in clinical diagnosis and decision making
- Restate the limitations of the primary semen analysis and importance of advanced semen analysis
- Learn semen analysis and ancillary tests by the WHO sixth edition criteria
- Learn advanced sperm preparation methods used in assisted reproduction such as: IUI, IVF and ICSI
- Understand advanced sperm function tests
- Learn methods for male fertility preservation for use in ART



## Learning outcomes:

- Theoretical and technical knowledge of the clinical Andrology
- Knowledge of setting up Andrology lab
- Operational and Quality Management skills





# Program Director



## Dr. S S Vasan

Uro-Andrologist & Medical  
Director, Ankur Healthcare,  
Bengaluru, India  
President SASSM



# Course Directors



## Ms. Jayalakshmi Shoraff

Senior Embryologist,  
Ankur Healthcare,  
Bengaluru, India



# Who should take up this course?



Lab technicians in the field of Andrology and Embryology, PG Students in the field of Urology, General Surgery, Gynecology, and Reproductive medicine





# Curriculum

Module Name	Chapter Name
Physiology & Anatomy	<ul style="list-style-type: none"><li>Anatomy of the male reproductive system</li><li>Sperm Transport and Maturation</li><li>Seminal Plasma and Its Role</li><li>Spermatogenesis and Spermiogenesis</li></ul>
Setting up of IUI Lab	<ul style="list-style-type: none"><li><b>Setting Up of Andrology Laboratory</b><ol style="list-style-type: none"><li>Requirements</li><li>Guidelines to setup IUI Lab</li></ol></li></ul>
Lab Maintenance	<ul style="list-style-type: none"><li><b>Quality Analysis and Quality Check</b><ol style="list-style-type: none"><li>Media and Disposables Handling</li><li>Handling of Liquid Nitrogen</li><li>LN2 Tank Maintenance</li><li>Handling of Sero Positive Samples</li></ol></li></ul>
Semen Analysis	<ul style="list-style-type: none"><li><b>Macro Evaluation, Micro Analysis &amp; DFI by Flow Cytometry</b></li><li><b>Semen Analysis: Practical aspects</b></li><li><b>Interpretation Of Abnormal Semen Analysis</b></li><li><b>WHO 5th &amp; 6th Manual - Differences and Clinical Implications</b></li></ul>
Sperm Processing Techniques	<ul style="list-style-type: none"><li><b>Sperm Preparation Techniques and Practical Implications</b><ol style="list-style-type: none"><li>Simple Wash</li><li>Swim Up</li><li>Double Density Gradient</li></ol></li></ul>





# Curriculum

Module Name	Chapter Name
<b>Sperm Processing Techniques</b>	<ol style="list-style-type: none"><li>4. Microfluidics</li><li>5. Retrograde Ejaculation Sample Preparation</li><li>6. TESA Sperm processing Technique</li></ol>
<b>Sperm Freezing Techniques</b>	<ul style="list-style-type: none"><li>• <b>Sperm Cryopreservation and Sperm Vitrification with fundamentals of cryobiology and implications to practice</b></li></ul> <ol style="list-style-type: none"><li>1. Slow Freezing Methods</li><li>2. Vitrification</li><li>3. TESA Sample Freezing</li></ol>
<b>Upskilling</b>	<ul style="list-style-type: none"><li>• <b>CASA</b></li><li>• <b>MACS &amp; U Select Method</b></li></ul>





# Certificate Sample



## CERTIFICATE OF MASTERS

This is to certify that **YOUR NAME** has successfully completed the course in **COURSE NAME** on DD/MM/YYYY (Completion Date)

Certified by MasterHealthPro Inc., USA

Dr. SS Vasan  
Program Director

Suresh Elangovan  
President & CEO

In Association with



ACADEMY FOR MEN'S HEALTH  
SINGAPORE



INTERNATIONAL SOCIETY OF FERTILITY &  
REPRODUCTIVE HEALTH



SOUTH ASIAN SOCIETY FOR  
SEXUAL MEDICINE

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