

# IMA AMS FELLOWSHIP IN ANDROLOGY & SEXUAL MEDICINE





## About Us

MasterHealthPro ([www.masterhealthpro.com](http://www.masterhealthpro.com)) is an AI-powered healthcare education platform offering comprehensive self-paced online courses in andrology, men's health, and women's health. Our courses are meticulously designed to upskill healthcare professionals with evidence-based knowledge delivered through immersive learning experiences. Our programs empower clinicians to address patient issues in various healthcare settings effectively. By acquiring both diagnostic and therapeutic skills, clinicians are equipped to excel in their practice. Praised by practising doctors across 35 countries, we've earned recognition as a reputable platform, providing top-notch online education in andrology, men's health, and women's health.

Welcome to MHPro



# Course Introduction

Fellowship Program in Andrology & Sexual Medicine is an advanced academic and clinical training initiative designed for medical professionals seeking specialization in male reproductive health and sexual medicine. This program offers a comprehensive curriculum backed by the latest research, evidence-based practices, and expert-led clinical exposure. Endorsed by the Indian Medical Association – Academy of Medical Specialties (IMA AMS), the program sets a new benchmark for quality education in men's health and sexual wellness.



# Course Content (Theory)

## Learning Objectives :

- Understanding concepts in male infertility and sexual dysfunction, including evaluation, diagnosis and management
- Understanding Semen analysis and its role in clinical decision-making and its limitations
- Assessment of common reversible causes of infertility and their treatments
- Microsurgical videos on various reconstructive procedures in male infertility
- Various laboratory video spectrum of basic and advanced semen analysis, sperm preparation to cryo freezing and thawing
- Embryology laboratory videos of various ART procedures
- Understanding concepts in sexual cycle its physiological and pathological basis and clinical importance
- Understanding detailed female sexual cycle
- Recent advances in evaluation of sexual dysfunction and its clinical application
- Medical and surgical management for sexual dysfunction with video demonstration

## Learning Outcomes :

- Theoretical and technical knowledge of the clinical male infertility and sexual dysfunction
- Upgradation in medical knowledge and surgical skills in male infertility and sexual dysfunction
- Knowledge for setting up Andrology lab, men's health clinic
- Operational and Quality Management skills

## Qualification/Target Audience

MBBS, MD/MS in Urology, General Surgery, Obstetrics & Gynaecology, Reproductive Medicine, Endocrinology, Psychology, or an equivalent qualification.

## Eligibility

Must be IMA Life Member & IMA AMS Life Member & Post-Graduation completed in their respective field.

# Program Director



**Dr. S S Vasan**

Uro-Andrologist  
Medical Director & CEO, Ankur Healthcare  
Bengaluru, India

## Course Directors



**Dr. Peter HC Lim**

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Ankur Healthcare, Bengaluru, India



# Curriculum

## Module - 1 : Male Infertility & Female Sexual Dysfunction

### Chapter :

**The Need for Men's Sexual Health in Today's Era**

### Lecture Title :

- The Case for Men's Health

### Anatomy & Physiology of Male Reproductive Tract

- Anatomy of the Male Reproductive System
- Development of the Male Reproductive System
- Spermatogenesis and Spermiogenesis
- Sperm Transport and Maturation
- HPG Axis in Men and its Role in Spermatogenesis
- Seminal Plasma and its Role
- Hypothalamus and Pituitary Disorders

### Pathology & Genetics in Male Reproduction

- Hypothalamus and Pituitary Disorders, Testicular Disorders & Environmental Factors and its Influence on Sperm
- Early Diagnosis and Interventions in Hypogonadism
- Male Reproductive Endocrinology : Case Presentation
- Basics of Genetic Evaluation of an Infertile Male :
  1. Disorders of Seminal Vesicle and Ejaculatory Duct
  2. Klinefelter's Syndrome and Implications to Clinical Practice

### Semen Analysis & Practical Utility

- Semen Analysis : Practical Aspects
- Interpretation of Abnormal Semen Analysis

# Curriculum

## Module - 1 : Male Infertility & Female Sexual Dysfunction

Chapter :	Lecture Title :
<b>Semen Analysis &amp; Practical Utility</b>	<ul style="list-style-type: none"> <li>• WHO 5th &amp; 6th Manual - Differences and Clinical Implications</li> </ul>
<b>Advanced Sperm Function Tests &amp; Techniques</b>	<ul style="list-style-type: none"> <li>• Sperm Preparation Techniques and Practical Implications</li> <li>• Sperm Cryopreservation and Sperm Vitrification with Fundamentals of Cryobiology and Implications to Practice</li> <li>• Automation in Semen Analysis</li> <li>• Male Factor in Recurrent Pregnancy Loss</li> <li>• Clinical Decision Making in Male Infertility : Decoding the Black Box - Recent Advances               <ol style="list-style-type: none"> <li>1. Semen Analysis Methodology and Errors in Reporting</li> <li>2. Management of Seminal Plasma Abnormalities</li> </ol> </li> </ul>
<b>Clinical History, Examination &amp; Diagnostic Evaluation of an Infertile Male</b>	<ul style="list-style-type: none"> <li>• Principles of Clinical Evaluation in Male infertility</li> <li>• Hormonal Evaluation</li> <li>• Relevance of Inhibin, 17 Hydroxy Progesterone / FSH Receptor Assay</li> <li>• Genetic evaluation - Karyotyping, Y Chromosome and CFTR Genetic Testing and Relevance</li> <li>• Radiological Evaluation : What, When &amp; Why</li> </ul>
<b>Specific Conditions &amp; Male Infertility</b>	<ul style="list-style-type: none"> <li>• Inflammation and Male Infertility</li> <li>• Inflammation and Sexual Dysfunction</li> </ul>

# Curriculum

## Module - 1 : Male Infertility & Female Sexual Dysfunction

### Chapter :

#### Medical Management of an Infertile Male : Non Azoospermic

### Lecture Title :

- Functional Tests on Sperm - Evidence & Role in Infertility
  1. Management of Sperm Abnormalities
  2. Role of ART in Male Infertility
  3. Role of Antioxidants in Male Infertility
  4. Role of Medication in NOA
- Donor Insemination - Principles of Banking and Optimizing Success
- Role of Environment in Male Infertility

#### Azoospermia Diagnosis & Management

- Role of Surgery in Azoospermia - VVA, VEA, TURED
- Surgical Sperm Retrieval Techniques and Results :
  1. Role of Surgery
  2. Optimizing Sperm for ART - Surgical Options
  3. Challenges in Sperm Retrieval Techniques with Special Reference to Micro TESE
  4. Sperm Retrieval Techniques - Excluding Micro TESE

#### Infertility Management in Special Situations

- Treatment of HIV Positive Males and Conception
- Management of Anejaculation & Erection and Ejaculatory Dysfunction Relevant to Fertility
- Spinal Cord Injury and Male Infertility



# Curriculum

## Module - 1 : Male Infertility & Female Sexual Dysfunction

### Chapter :

#### Optimising Male Infertility Practice

### Lecture Title :

- Overview of IUI vs IVF vs ICSI and Guidelines for clinical Practice
- ART Law in India and Ethics in Management
- Adoption
- Optimizing Sperm in Azoospermia - Medical Options

#### Advances in Andrology & Change in Practice Patterns

- Fertility Preservation Strategies in Infertile Men
- Male Infertility Guidelines
- Devices in Andrology
- Low Intensity Shock Wave Therapy - The Challenges & Utility in Indian Subcontinent

#### Female Sexual Dysfunction : FSD

- History, Investigation & Classification of the Problem
- Female Hypoactive Sexual Desire Disorder (HSSD)
- Hypoactive Sexual Desire Disorder (HSSD) in Women
- Medical Management of Female Sexual Dysfunction : Critical Evaluation of Drugs
- Don't Know Whether I Have Orgasms
- UTI and Sex
- Treatment of Vaginismus
- FSD - Vaginismus
- Dyspareunia
- Urological Issues with Sex
- Flibanserin

# Curriculum

## Module - 1 : Male Infertility & Female Sexual Dysfunction

<b>Chapter :</b>  <b>Female Sexual Dysfunction : FSD</b>	<b>Lecture Title :</b> <ul style="list-style-type: none"> <li>• Mistakes in Use of PDE5 Inhibitors Leading to Failure of Therapy</li> <li>• Using PDE5I's</li> <li>• Testosterone / DHEA</li> <li>• Post Menopausal Syndrome</li> </ul>
<b>Case Discussions</b>	<ul style="list-style-type: none"> <li>• Male Infertility Clinical Cases</li> <li>• Male Infertility Clinical Cases - Seminal Plasma Abnormalities</li> </ul>
<b>Azoospermia Evaluation &amp; Management</b>	<ul style="list-style-type: none"> <li>• Practical Management of Azoospermia :               <ol style="list-style-type: none"> <li>1. Evaluation of the Azoospermic Man</li> <li>2. Role of Testicular Biopsy and its Relevance to Practice</li> <li>3. Unconsummated Marriage</li> </ol> </li> <li>• Sperm Retrieval Techniques : Critical Answers for Decision Making</li> <li>• Micro TESE - Clinical Challenges</li> </ul>
<b>Surgical Videos of Male Infertility Management</b>	<ul style="list-style-type: none"> <li>• Varicocele and Infertility</li> </ul>
<b>Laboratory Video on Diagnosis, Sperm Enhancement, ART Techniques to Facilitate Pregnancy</b>	<ul style="list-style-type: none"> <li>• Semen Analysis, IUI and Vitrification / Cryofreezing</li> <li>• New Technologies to Improve Fertility Outcomes :               <ol style="list-style-type: none"> <li>1. U Select</li> <li>2. ONOVA</li> </ol> </li> <li>• ICSI-IVF-IMSI-PICSI</li> </ul>

# Curriculum

## Module - 2 : Reproductive Health, Dermatology & Sexual Medicine

### Chapter :

#### Sexual Development & Sexuality

### Lecture Title :

- History of Sexual Medicine - The Evolution
- Sexual Development Male & Female - Sexual Response Cycle and its Determinants
- Hormones in Sexual Development / Behavior

#### Adolescent Sexual Medicine & Challenges in Management

- Introduction to Sexuality in Adolescents
- Evaluation of Puberty
- Components of Adolescent Sexuality and Terms related to it
- Stages of Sexuality Development in Adolescents - Early, Mid and Late
- Assessing Sexual Health - HEADSSS / Psychosocial History and Sexual Health History
- Sexual Behaviour and STD
- Media and Adolescent sexuality
- Comprehensive Sexuality Education

#### Evaluation of Sexual Dysfunction in Office Clinical Practice

- Male Sexual Dysfunction - Clinical Challenges Management Strategy for Gynaecologists
- Effects of Tobacco on Sexual Health

#### Sexual Evaluation by Psychologist Perspective

- Sexual Medicine Clinic - Do's & Don'ts - Consents
- Problem Classification
- Mindfulness in Sexual Therapy - The New Trend

# Curriculum

## Module - 2 : Reproductive Health, Dermatology & Sexual Medicine

### Chapter :

#### Sexual Evaluation by Psychologist Perspective

### Lecture Title :

- Steps of Mx. of Psychogenic ED :  
Psychotherapy or Drugs - Alone or Combined? How to Choose?
- Sex Therapy for PME - Is there a Role?
- Limitations & Concerns of Sex Therapy

#### Recent concepts in Sexual Dysfunction

- Relevance of Endothelial Testing

#### Management of Sexual Dysfunction / ED in Office Clinical Practice

- Quick History Format for Evaluating Male Sexual Dysfunction
- Using PDE5 Inhibitors Effectively
- Management of Non-Responders to PDE5 Inhibitors
- Treatment with Intra-Penile Self-Injection and VED
- Erectile Dysfunction - Evaluation. A Practical, Therapy-guided Approach for the Urologist
- Introduction to Penile Prosthesis
- Penile Prosthesis - Types and Approaches
- Complications of Penile Prosthesis
- Sex Therapy for Sexual Dysfunction
- Erectile Dysfunction
- Management of Priapism
- Congenital Penile Curvature & Peyronie's Disease
- Late Onset Hypogonadism
- Case Scenarios

# Curriculum

## Module - 2 : Reproductive Health, Dermatology & Sexual Medicine

### Chapter :

#### Influence of Dermatological Conditions on Sexual Function

### Lecture Title :

- Dermatological Conditions those can Adversely Influence the Sexual Relationship
- Genital Dermatoses those can Result in Sexual Dysfunctions
- Certain Genital Conditions Raises Concern and Sexual Dysfunctions
- Genital Hygiene

#### Influence of STI/HIV & Genital Variations on Sexual Function

- The Role of Prepuce - Phimosis, Paraphimosis and Circumcision
- Balanoposthitis and Vulvovaginitis
- Epididymitis, Orchitis, Epididymo-orchitis and Prostatitis
- Genital Discharges in Men
- Female Genital Discharges
- Impacts of STI-HIV on Marriage, Parenthood and Resuming Sex after Treatment
- Myths and Misconceptions on STI-HIV
- Serology of Syphilis and HIV
- Post Exposure Prophylaxis, Pre-Exposure Prophylaxis & Universal Work Precautions
- Venerophobia and HIV Phobia

#### Sexual Evaluation by Dermatologist Perspective

- Role of Female Partners and the Health Care Providers and Others in ED
- Physiological Discharges and Sexual Dysfunctions

#### Psychiatry & Sexual Medicine

- Sexual Evaluation by Psychiatrist Perspective

# Curriculum

## Module - 2 : Reproductive Health, Dermatology & Sexual Medicine

### Chapter :

#### Psychiatry & Sexual Medicine

### Lecture Title :

- Psychiatric Disorders and Sexual Problems - Introduction
- Treatment of Psychiatric Disorders and Treatment Emergent Sexual Dysfunctions
- Adult Sexual Violence: Harassment, Assault and Rape
- Psychiatric Disorder and Sexual Dysfunction
- Sexual Addiction Disorders
- Pornography & Sexuality

#### Co-Morbidity & Sexual Dysfunction

- Sexual Evaluation & Mx. by General Physician Perspective
- Sexual Evaluation by Geriatrician Perspective & Mx.
- Approach to Erectile Dysfunction in Diabetes

#### Non ED Sexual Dysfunction : A Practical Approach

- Retrograde Ejaculation - Management
- Patient Concerns in Young: Shrinkage / Lack of Early Morning / Thin Semen / Decrease in Force of Ejaculation
- Premature Ejaculation - Treatment Advances and Future
- LGBTQIA+
- Traction Devices of Length and Peyronies
- Testicular, Penile and Postejaculatory Pain - Mx. and Role of Surgery
- Hypoactive Sexual Desire Disorder
- Phimosis: Foreskin Stretching Devices
- Infertility & Sexual Dysfunction
- Case Scenarios



# Curriculum

## Module - 2 : Reproductive Health, Dermatology & Sexual Medicine

### Chapter :

#### Guidelines and Complexities in Sexual Dysfunction Management

### Lecture Title :

- Sexual Medicine and Sexual Dysfunction
- PME - Clinical Challenges and Treatment Modalities
- Sexual Desire Disorders - Part 1
- Sexual Desire Disorders - Part 2

#### Gender & Sexuality

- Purpose of Knowledge & Knowhow in Gender Issues
- Terminologies : Why the Changes? Present State of Art
- Hormone Therapy

#### Surgical Videos and Tips & Tricks

- Penile Lengthening
- Fat Derived Stem Cell Girth Augmentation
- Use of Fillers and More
- Peyronies Disease Treatment
- Peyronies Disease - Treatment with Injection & Other Drugs
- Solutions for Psychological Problems for Sexual Dysfunction
- Male to Female (MTF) - Part 1 - Gender Reaffirmation Surgery - Surgical Principles - Procedures
- Male to Female (MTF) - Part 2 - Gender Reassignment Surgery - Surgical Steps : Live Video

#### Set Up and Maximize your Practice in Sexual Medicine

- Setting Up of Sexual Health & Men's Health Services in Your Center - An Effective And Simple Way
- How to Evolve a Multidisciplinary Practice

# Curriculum

## Module - 2 : Reproductive Health, Dermatology & Sexual Medicine

Chapter :

Expert Opinions {One to One}

Lecture Title :

- Mx. of ED Rx. Failures / Sudden Non Responders - Medically
- ED Management Overview
- Male Infertility Management Overview
- Peyronie's Disease
- Premature Ejaculation Diagnosis and Management

## Module - 3 : Psychiatry & Sexuality

Chapter :

Introduction to Sexual Health

Lecture Title :

- Introduction to Sexual Health - Why it is Important
- Dimensions of Sexuality
- Kamasutra and Other Classics - Lessons to Learn
- Demystifying Sex

Psychosexual Development – Clinical Issues

- Psychosexual Development in Children
- Genetic Issues & Intersex Conditions
- Cognitive, Behavioural & Interpersonal Perspectives of Male Sexual Dysfunction
- Cognitive, Behavioural, and Interpersonal Perspectives of Sexual Dysfunctions in Females
- Human Sexual Response - Male
- Human Sexual Response - Female
- Adult Sexuality : Pre-marital, Marital & Extra Marital Issues

# Curriculum

## Module - 3 : Psychiatry & Sexuality

### Chapter :

#### Basics of Sexuality

### Lecture Title :

- Male Sexual Anatomy - Part 1
- Male Sexual Anatomy - Part 2
- Female Sexual Anatomy - Part 1
- Female Sexual Anatomy - Part 2

#### Bio-Psycho-Social Issues in Sexuality

- Understanding Brain, Behavior & Sex
- Understanding Biochemistry of Sex
- Hormones & Sex
- Bio-Psycho-Social Aspects of Sexual Dysfunction

#### Sex & Sexuality, Myths & Misconceptions

- Male Myths
- Female Myths
- Sexual Myths
- Dhat & Psychasthenic Syndrome
- PLISSIT Model for Managing Sexual Dysfunctions
- OP Clinic Management

#### Classification of Sexual Disorders

- Classification of Psychosexual Disorders: Historical Aspects, Current Status & Future Directions

## Module - 4 : Psychosexual Techniques, Counselling & Therapies

### Chapter :

#### Introduction

### Lecture Title :

- Psychosexual Therapy : An Introduction

# Curriculum

## Module - 4 : Psychosexual Techniques, Counselling & Therapies

### Chapter :

#### Common Psychological Causes of Sexual Dysfunction

### Lecture Title :

- Psychological Factors Responsible for Sexual Dysfunctions
  1. Psychosomatic Circle of Sex
  2. Origin of Psychological Problems
  3. Immediate Psychological Causes
  4. Conflict-Intrapsychic Causes of Sexual Dysfunctions
  5. Cultural Genesis of Sexual Conflict
  6. The Relationship-Dyadic Causes of Sexual Dysfunction

#### Sex Counselling

- Counselling for Psychosexual Dysfunctions
  1. Therapeutic Alliance and Relationship
  2. Counselling Skills
  3. Approaches to Counselling for Psychosexual Dysfunctions
  4. Case Studies
  5. Key Takeaways

#### Cognitive Behavior Therapy

- Sexual Dysfunction and Cognitive Behavior Therapy (CBT)
  1. CBT Explained
  2. CBT Repertoire
  3. CBT Process
  4. Sex and Brain
  5. Case Studies
  6. Management strategies

# Curriculum

## Module - 4 : Psychosexual Techniques, Counselling & Therapies

### Chapter :

#### PLISSIT Model

### Lecture Title :

- PLISSIT Model of Psychological Interventions for Sexual Problems
  1. Introduction
  2. Components of PLISSIT Model
  3. EXPLISSIT Model
  4. Permission Level and Case Scenarios
  5. Limited Information and Case Scenarios
  6. Specific Suggestions and Techniques
  7. Intensive Therapy
  8. Summary and Take Home Knowledge

#### Principles of Sex Therapy

- Principles of Sex Therapy
  1. Explanation of Sex Therapy
  2. The Formulation
  3. Groundwork to be Undertaken before Sex Therapy
  4. Dynamics of Therapeutic Actions
  5. List of Sex Therapeutic Strategies
  6. Guidelines for Therapists
  7. The Vicious Circle of Failure and Breaking It

#### Sex Therapeutic Strategies

- Sex Therapeutic Strategies
  1. Concept Definition
  2. Importance of Multi Disciplinary Team Approach

# Curriculum

## Module - 4 : Psychosexual Techniques, Counselling & Therapies

**Chapter :**

**Sex Therapeutic Strategies**

**Lecture Title :**

3. Strategies in Sex Therapy
  - Sensate Focus
  - Erectile Dysfunction
  - Pre Mature Ejaculation
  - Male Orgasmic Disorder
  - Anorgasmia in Women
  - Female Orgasmic Disorder
  - Vaginismus
4. Modern Behavioural Techniques
5. Marriage & Couples Therapy
6. Family Counselling

## Module - 5 : Andrology Laboratory & Embryology Laboratory

**Chapter :**

**Setting Up of IUI Lab**

**Lecture Title :**

- Setting Up of Andrology Laboratory
  1. Requirements
  2. Guidelines to Setup IUI Lab

**Lab Maintenance**

- Quality Analysis and Quality Check
  1. Media and Disposables Handling
  2. Handling of Liquid Nitrogen
  3. LN2 Tank Maintenance
  4. Handling of Sero Positive Samples

**Upskilling**

- Macro Evaluation, Micro Analysis & DFI by Flow Cytometry

**Cell Biology of Embryology**

- Anatomy of the Female Reproductive System
- Oogenesis, Spermatogenesis & Embryogenesis



# Curriculum

## Module - 5 : Andrology Laboratory & Embryology Laboratory

### Chapter :

#### Setting Up an ART Lab

### Lecture Title :

- Setting up of ART Lab
  1. Clean Air System
  2. Incubators
  3. Laminar Air Flow System
  4. Microscopes
  5. Micromanipulators
  6. Other essential Equipments

#### Introduction to IVF & ICSI Procedures

- Media & Disposables
  1. Contents of Media
  2. Handling of Media
  3. Types of Disposables
  4. Usage

#### Preparing Lab for the ART Procedures

- Preparing Lab for the ART Procedures
  1. Particulate Check
  2. VOC level Check
  3. pH Check
  4. Temperature Check
  5. CO2 Check
  6. Daily Check List
  7. Monthly Check List
  8. Annual check List

#### ART Procedures & Preparation

- Ovum Pick Up
- Conventional IVF
- Denudation

# Curriculum

## Module - 5 : Andrology Laboratory & Embryology Laboratory

### Chapter :

#### ART Procedures & Preparation

### Lecture Title :

- Dish & Media Preparation
- ICSI & Oocyte Morphology
- Fertilization Check and Embryo Grading
- Embryo Transfer

#### Cryopreservation Procedures

- Oocyte & Embryo Vitrification & Embryo Warming

#### Trouble Shooting

- Trouble Shooting in IVF Lab

#### Documentation

- Documentation According Guidelines

#### Upgrading of Skills

- Upgrading of skills
  1. Timelapse technology
  2. IMSI
  3. PICSi
  4. Embryo Biopsy
  5. Testicular Sperm Selection
  6. Laser Assisted Hatching
  7. Artificial Activation of Oocyte

# Practical Objectives :

- General and Operative Andrology related to male infertility and reproductive medicine.
- Microsurgery and prosthetic surgery
- Reproductive endocrinology including laboratory techniques and biological processes of aging and identification of modifiable factors.
- In addition, individuals completing this training program will be able to: Evaluate the clinical literature on erectile dysfunction and reproductive health in a critical fashion and make contributions to the field
- Teach the specialty of Andrology, and organize a multidisciplinary approach to
- erectile dysfunction and male infertility care.

# Practical Outcomes :

**On completion of the course, the candidates will be capable of the following:**

- Methodical investigation of problems leading to infertility, aging and erectile function in men, including female sexual dysfunction
- Categorizing them according to clinical condition
- Conducting necessary investigations and diagnostic procedures
- Trans rectal / doppler ultrasound examination for study of testis, prostate and seminal vesicles for evaluation of the pathophysiological processes of testicular, seminal, ejaculatory dysfunction
- Bio Chemical assays of reproductive hormones in serum
- Display detailed knowledge and understanding of human Gamete Biology and Molecular perspective
- Critical evaluation of new advances in Biotechnology
- Acquire ability to establish and IVF Centre
- Conductive Quality Control procedures that are essential to the reliable operations of a IVF clinic
- To familiarize oneself with the technique or handling Male and Female Gametes use in IVF / ICSI etc
- Competence in In Vitro Culture techniques used for Gametes and Embryos
- To be capable of Andrology laboratory procedures – semen analysis, sperm processing, donor semen banking, motility enhancers for sperm, cryopreservation of Gametes, Embryos and Tissues for later use in human infertility treatment
- Reasonably predict the viability of an Embryo prior to its transfer in IVF

- Achieve/demonstrate skills for Micromanipulation Procedures as in Intra
- Cytoplasmic Sperm Injection required for clinical ART
- Display some knowledge about the techniques used for Karyotyping (e.g. Lymphocyte cultures, amniotic fluid, cell culture etc.,)
- Understand the ethical implications of ART and Cloning
- Develop adequate skills in report writing, oral and visual presentations
- Basic use of computers, data analysis and record maintenance

## Practical Details:

<b>Men's Health Opd:</b>	<ul style="list-style-type: none"> <li>• Evaluation of the Aging Male - Clinical examination</li> <li>• Lab evaluation &amp; related aspects</li> <li>• Endocrinology, male reproduction, which tests/how useful/Cost &amp; Validity</li> <li>• Aging &amp; the Brain</li> <li>• Hormonal Aspects of Andropause, somatopause, adrenopause etc.</li> <li>• Health Screening of the Aging Male</li> <li>• Clinical Approach &amp; Philosophy of anti-aging program goals for the short &amp; long term</li> <li>• Chronic Prostatitis/BPH/Cancer of Kidney/ Bladder Cancer &amp; Prostate Cancer</li> <li>• Transrectal ultrasound of the prostate</li> <li>• Counseling the Aging Male</li> </ul>
<b>Male Infertility Opd</b>	<ul style="list-style-type: none"> <li>• Examination of Male</li> <li>• Taking History</li> <li>• Clinical Examination</li> <li>• Endocrine Assay</li> </ul>

# Practical Details:

<b>Male Infertility Opd</b>	<ul style="list-style-type: none"><li>• AIH/IUI/ICSI/Sperm concentration/ separation/freezing/storage etc.</li><li>• The trainee will attend the Laboratory / Theatre at the time of andrological procedures. PESA, MESA, TESA. TESE and learn aspects of harvesting and preserving the sperm in the laboratory</li><li>• Counseling of infertile Couples</li><li>• ED Management</li><li>• Co-morbidity Management: diabetes/ depression/anxiety/loss of energy/ impotence/hypertension</li><li>• Counseling of the ED patient</li><li>• Pharmacological Intervention in ED – past/present &amp; future</li></ul>
<b>Training In Ultrasonography</b>	<ul style="list-style-type: none"><li>• The trainee will learn to:</li><li>1. Evaluate testicular size / morphology / epididymal size assessment</li><li>2. TRUS – assessment of prostate seminal vesicle, ejaculatory ducts, any pathology in them</li><li>3. Penile cavernosal vasculature, arterial / arteriolar assessment both in flaccid and erect state and identification of plaques</li><li>4. Post prosthetic surgery assessment of complications</li><li>5. Torsion testis and identification of the artery</li></ul>
<b>Training In Andrology Related Surgery:</b>	<ul style="list-style-type: none"><li>• Operation theatre and ward work consisting of male infertility and erectile dysfunction related Operation Theatre ward work consisting of:</li><li>1. Operative Andrology</li></ul>

# Practical Details:

<b>Training In Andrology Related Surgery:</b>	<ol style="list-style-type: none"> <li>2. Microsurgical techniques in Andrology</li> <li>3. Surgery for Male Infertility</li> <li>4. Electro-Vibration, Electro-ejaculation</li> <li>5. Penile Implant</li> <li>6. Venous leak surgery</li> <li>7. Arterialisation of the Dorsal Vein of the Penis</li> <li>8. Penile Curvature Correction &amp; treatment of peyronie's disease</li> <li>9. The trainee will be allowed to attend IVF and ICSI procedures and will have a global view of follicular assessment protocols, pharmacologic drugs used, follicular aspiration methodology, and embryo transfer process.</li> </ol>
<b>Biochemistry Laboratory</b>	<ul style="list-style-type: none"> <li>• Learn the principles of steroid assays</li> <li>• Quality control aspects of steroid assays and trouble shooting</li> <li>• Inhibin assessment</li> </ul>
<b>Andrology Laboratory</b>	<ul style="list-style-type: none"> <li>• Evaluation of Sperm Quality - Morphology</li> <li>• Processing of Semen</li> <li>• Motility enhancers for sperm</li> <li>• Cryopreservation of Sperm and testicular tissue</li> <li>• Optimization of sperm recovery</li> <li>• Thawing protocols</li> <li>• Trouble shooting in andrology lab</li> </ul>



# Practical Details:

## Andrology Laboratory

- Advanced sperm function tests – ROS, DNA damage estimation, SCSA / TUNEL assays. Hemizona binding assay, HOS,
- i. Research methodologies

## Training In Art Laboratory

The laboratory aspects of the fellowship training would form a major part of the training programme and much will be hands on training. The programme will comprise of the following

- **ART Laboratory Maintenance**
  1. Setting up of the laboratory
  2. Selection of equipment and consumables
  3. Design of equipment, positioning of equipment and environment standards
  4. Staff selection and training.
  5. Cleaning methods.
  6. Maintenance of Millie – Q – Systems
  7. Sterilization of consumables
  8. Quality control and quality assurance
  9. Microscope selection, usage and maintenance
- **Aseptic Techniques**
  1. Laminar flow and work bench maintenance
  2. Pipetting technique
  3. Media preparation and handling
  4. Dish Preparation
  5. Handling of consumables

# Practical Details:

## Training In Art Laboratory

### Oocyte handling - Observation

1. Oocyte cumulus washing
2. Denuding

### Sperm Processing - Observation

1. Sperm analysis – morphology, motility, viability etc.,
2. Sperm processing methods, swim up, gradient method etc.,
3. Sperm preparation for IUI / IVF / ICSI – obtaining required concentration of motile Cryopreservation of sperm

### Embryo handling

1. Embryo Culture
2. Cryopreservation of embryos
3. Zygote of embryo grading
4. Selection of embryos for transfer and freezing

### Insemination Methods

1. IVF
2. ICSI – Set up of equipment, needle aligning, dish preparation, sperm preparation and technique.

### Cell Culture

1. Cell line culture – serial passage
2. Co-culture

### Trouble shooting in IVF laboratory



# Exit Exam

1. A minimum of 80% attendance shall be maintained by students.
2. "Theory examination" shall be conducted by IMA AMS Karnataka state branch.
3. "Practical examination" i.e. Clinicals, log book discussions and general viva shall be conducted by Ankur Healthcare Hospital, Rajajinagar, Bangalore.
4. Examination results shall be announced within one week after the exam.
5. If any student does not appear for the exam, there will be no supplementary exam. The candidate has to appear as a fresher candidate for the exam whenever the exams will be conducted.
6. Certificates to the students will be distributed by IMA AMS headquarters.
7. The patron of the question paper is as follows:

## **Theory Examination (Total 100 Marks) consisting of**

1. Two long Questions each carrying 20 Marks.
2. Six short Questions each carrying 5 Marks
3. Thirty MCQ's each carrying 1 Mark (30 MCQ'S)

## **Practical Examination (Total 250) consisting of**

1. One long case carrying 50 Marks
2. Two short cases each case carrying 25 Marks
3. 10 Spotters each Spotter Carrying 5 marks
4. Log Book, 10 different Cases, each case carrying 5 Marks
5. General Viva carried 50 marks.

## **The pattern of passing the examination (Theory & Practical):**

The candidates will appear for theory and practical examinations on consecutive days. They need to secure minimum 50% marks in both theory and practical examination to be declared passed. Inability to clear either theory or practical will be deemed a failure. If they fail, they will have to reappear for both theory and practical examination with the next batch.

# Certificate Sample



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