QUARTERLY NEWSLETTER

MEDNEWS

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IF YOU WANT TO KNOW MORE

Esco Medical at ESHRE:

UNVEILING REVOLUTIONARY TECHNOLOGIES

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Esco India in Full Swing:

EMPOWERING REPRODUCTIVE HEALTH TECHNOLOGY

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INSIDE STORY

ESCO MEDICAL AT ESHRE:

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After the resounding success of last year's post-lockdown convention in Milan, Italy, ***the European Society of Human Reproduction and Embryology (ESHRE)*** is thrilled to announce its return with another face-to-face event this year. Get ready for #ESHRE2023, ***taking place from June 25th to 28th, 2023, at the prestigious Bella Center in Copenhagen, Denmark.***

Esco Medical is proud to be a part of the 39th ESHRE convention, and we can't wait to meet you all and ***present our extensive range of cutting-edge IVF equipment and the latest advancements in reproductive medicine.***

Continuing our commitment to innovation and the development of technologies that facilitate IVF success, Esco Medical is excited to unveil new products during ESHRE.

Of course, we will also be showcasing our existing lineup of equipment, including MIRI® Multiroom Incubator, MIRI® Humidity Multiroom Incubator, MIRI® II Multiroom Incubator, MIRI® Time-lapse Incubator, Mini MIRI®, Multi-Zone ART Workstation, MIRI® GA and MIRI® AVT.

But our presence at ESHRE goes beyond a mere display at our booth. We have prepared interactive activities to engage our visitors with product demonstrations and hands-on experiences, ***allowing you to explore and manipulate our devices.*** Plus, we have some exciting freebies and giveaways in store for you!

Let's come together to celebrate the world's largest in-person gathering in the field of reproductive science and medicine. Join us for this highly anticipated annual meeting and immerse yourself in the joy of scientific discovery and the enchantment of Copenhagen, Denmark.

Visit Esco Medical at Booth C2-076 in Bella Center in Copenhagen, Denmark, and be a part of this remarkable event

ESCO INDIA IN FULL SWING:

EMPOWERING REPRODUCTIVE HEALTH TECHNOLOGY

Esco India is gearing up for action-packed months ahead, as they unveil a series of exciting activities both online and offline to educate and promote the latest trends in reproductive health technology.

IVF Time-Lapse Technology Webinar

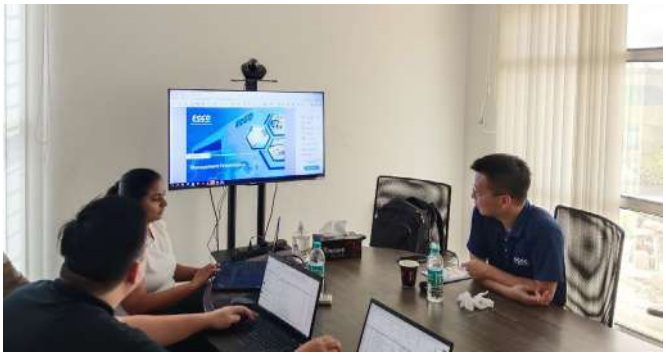
In a groundbreaking collaboration with IHERA (International Human Embryology Research Academy) and DSS Imagetech, Esco India recently hosted a highly informative webinar titled "IVF Time-Lapse Technology" on May 27, 2023. Esteemed IVF lab directors, Thomas Ebner from Kepler University and Irene Cuevas from Hospital General Universitario, graced the event as speakers. They covered topics ranging from the assessment of cytoplasmic strings using time-lapse technology to the effects of cytoplasmic loss on the development of the morula. The webinar saw an impressive turnout, with over 150 embryologists from across India joining in.

Time-Lapse Workshop

Mark your calendars for September 22, 2023, as Esco India is all set to host a dynamic Time-Lapse Workshop at Hotel Lalit Ashok Bengaluru, Karnataka. Esteemed experts, including Dr. Sanjay Bhojwani, Esco Medical's Director and Global Head for Sales and Marketing, Morten Kristensen, Esco Medical Application Specialist, and Regional Sales Manager, and Domantas Armonavicius, Esco Medical Product Specialist, will grace the event. Joining them will be renowned consultants Prof. Thomas Ebner and Prof. Irene Cuevas. This workshop promises to be a fantastic opportunity to delve deeper into the intricacies of time-lapse technology.

ACE 2023

Esco India is thrilled to announce their participation at the prestigious 11th ACE (Academy of Clinical Embryologists) International Congress from September 22 to 24, 2023, at the Lalit Ashok in Bengaluru. Be sure to visit Esco India's exhibition booth, where they will showcase cutting-edge equipment, including the revolutionary MIRI® Humidity Multiroom Incubator, MIRI® Time-lapse Incubator with TL viewer and software, and the state-of-the-art Multi-Zone ART Workstation.



CEO VISIT

Esco India recently had the honor of hosting XQ Lin, the Chief Executive Officer of Esco Lifesciences Group. This visit not only strengthened team connections but also served as an opportunity to celebrate past achievements and discuss future plans for the organization. It further showcased Esco's dedication to fostering global collaboration and recognizing the invaluable contributions of the Indian team.

Stay Connected with Esco India

To stay up-to-date with all the latest news and events from Esco India, make sure to follow them on their social media accounts:

LinkedIn:https://www.linkedin.com/company/esco-india/
Facebook:https://web.facebook.com/EscoSouthAsia

Don't miss out on the exciting developments and breakthroughs in the world of reproductive health technology brought to you by Esco India. Join the conversation and be a part of the future!

ESCO MEDICAL AND ESCO PHILIPPINES JOINS PSRM 2023

The Philippine Society of Reproductive Medicine (PSRM) stands at the forefront of promoting and advancing reproductive health in the Philippines. Comprised of dedicated medical professionals, researchers, and advocates, PSRM plays a pivotal role in shaping policies, providing education, and driving advancements in the field of reproductive medicine. PSRM plays a crucial role in formulating guidelines and standards of practice in reproductive medicine.

These guidelines ensure that healthcare professionals adhere to the highest standards of care, ethics, and safety. By disseminating these guidelines, PSRM helps standardize reproductive health practices throughout the country, ultimately benefiting patients and providers alike.

PSRM organizes educational seminars, conferences, and workshops, bringing together experts from different specialties to share their knowledge and experiences.

These events provide a platform for discussing emerging technologies, advancements in reproductive medicine, and ethical issues related to reproductive health.

This year, PSRM's Midyear convention was held at the Clark Marriott Hotel, Pampanga last May 12, 2023. Esco Medical together with Esco Philippines participated as exhibitors at Booth #09. During the event, we met with esteemed IVF clinicians and embryologists at our booth and Esco has showcased our Mini MIRI incubator with integrated SAFE Sens technology for continuous pH monitoring. The Mini MIRI® Dry and Humidity incubator is a two-chamber mini bench top incubator that takes after the classic MIRI® Multiroom incubator. This mini version of the MIRI® is a perfect-fit for IVF laboratories that prioritize on footprint and affordability.

OVERVIEW OF EMBRYO FERTILIZATION TECHNIQUES AND THEIR EVOLUTION OVERTIME

Robert Edwards along with Patrick revolutionized a new way for the treatment of fertility for couples who are trying to have a baby, through In-Vitro Fertilization (IVF). Before then, fertilization of oocyte outside of the mother's body is considered to be fully experimental and would usually result in miscarriage and failed pregnancy. IVF, however, had been widely used for animal breeding, but was still somewhat unachievable to be applied on human.

Not until the late year of 1978, when Louise Brown was successfully born through C section following the IVF experiment by Robert Edward when Lesley Brown seeks for his help after being diagnosed with primary infertility for 9 years. Following the birth of Louise Brown, the practice of IVF has continued to thrive across the globe. Today, through Assisted reproductive technology (ART), 2 million babies have been successfully born worldwide.

In Vitro Fertilization is usually recommended to women or couples who have been trying to conceive through unprotected sex for 2 years or who have taken 6 failed cycles of intrauterine insemination (IUI). It is suggested that women in their 20s and 30s will have the most success with IVF but there have been cases of success live birth through IVF from a woman at the age of 60s.

During an IVF procedure, the retrieval of eggs from the woman's ovaries is done and then the oocytes will be fertilized with the male's sperm outside of the woman's body, inside a laboratory dish. The sperm and the oocyte will be left inside the dish to undergo natural fertilization on their own.

According to NHS, the success rate of IVF which yielded to live birth include:
- 32% for women <35
- 25% for women between 35-37
- 19% for women between 38-39

With the increased use of IVF as a treatment for female infertility, there was still a pending progress for fertility treatment on the male's factor. Conventional IVF will not be sufficient for the success of ART if the semen parameters were "disturbed". When the reference value for the sperm concentration, motility of the sperm, and morphology were below the requirement range, rate of fertilization will be significantly lower.

ICSI shorts for intracytoplasmic sperm injection is more widely used when the male patient's is the one having issue with their quality as well as quantity of the sperm. The technique was first described in 1992 and since then has been gaining popularity across the world. In the beginning ICSI was introduced as a replacement for the unexplained fertilization failure but has now been widely used for the best treatment option for couples with male infertility issues.

Through ICSI, a single sperm is injected directly into the oocyte by the embryologist. ICSI requires the use of micromanipulators which has magnification up to 400 times, considering that the subject being handled is relatively very small. The oocyte is held steadily using an equipment known as the holding micropipette and a tiny needle known as injection micropipette is used to inject the sperm into the centre of the egg.

The main difference between the traditional IVF and ICSI lies in the concept of human intervention. In traditional IVF, thousands of sperm ejaculated by the male patients is left inside a laboratory dish together with the eggs overnight to allow the fertilization to occur on their own. In the other hand, ICSI is done through the injection of a selected sperm into the egg, done by an embryologist.
In today's world, more and more women are delaying their age of childbearing with the intention to pursue their education and careers, not only that the age of marrying has now occurred way later in life. However, as known, the chance of getting pregnant naturally is decreasing with age hence why there is an increased demand for fertility treatment which in returns encourage more research to be done to optimize the IVF guidelines to improve the rate of success as well as pregnancy rates.

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THE APPROPRIATE AGE FOR EGG CRYOPRESERVATION

Egg freezing is also known professionally as oocyte cryopreservation, in which a woman's egg is retrieved from the ovaries and furthermore frozen and stored as the means to preserve the reproductive potential of the woman at the age of the freezing time.

Using frozen egg as an assisted reproductive method has resulted in successful live birth meaning, one can benefit from using this specific method. Women's fertility would start to gradually decline following the age of 24, however a significant decline of a woman's fertility would only be somewhat significant starting from the age of 37.

Women who are planning to have a child only later their life, or those who wish to postpone the childbearing, and women who are facing fertility issues which could either caused by a disease or some other factor can be benefited from doing oocyte cryopreservation. Considering that, the quality of the egg will remain to be the same as the egg quality at the time of freezing.

The eligibility of a women for oocyte cryopreservation lies in the level of AMH hormone.

The higher the AMH hormone level the more eligible the woman will be to have their egg frozen because these women would usually have a greater number of viable eggs within their ovaries.

There has been an increased demand for oocyte cryopreservation worldwide, especially during the Corona Virus pandemic egg freezing has been gaining more acceptance within the society through the influence of social media. Once the woman has confirmed that they would want to have their egg frozen, they will have to undergo vaginal ultrasound to evaluate the egg supply and hormone measurement. The key hormones that need to be reviewed are FSH, estradiol and AMH. Each hormone is responsible for triggering the growth of ovarian follicle prior to ovulation, indicates the quality of oocyte, and correlates the woman's egg count, respectively.

These 3 key hormones will eventually determine the potential of fertility and the correct dose of ovarian stimulation medication to be given to the woman.

After being on medication for sometimes, the woman will then undergo oocyte retrieval using ultrasound-guided needle to collect all the viable eggs. Afterwards, the egg will be frozen through method of either slow-freezing or vitrification, also known as flash-freezing and stored at -196Celcius. When the woman has decided that it would be time to use the egg, it will be thawed and then for certain will be fertilized.

Clinical pregnancy rate is known to decline with the more advanced maternal age during the time of the freezing procedure. This would mean that the older the women get the success rate of egg freezing would also become more limited. Therefore, successful pregnancy or live birth cannot be said for certain. Normally, the egg freezing is usually offered to women who are in the age of under 38 years old who wish to bear a child only later on in life. Older women over the age of 38 might have their egg quality decreased and not as good as once it was.

E-SPOT

MIRI® EVIDENCE

MIRI® Evidence is redefining the way traceability in laboratory procedures is managed and stored in fertility clinics, eliminating errors, preventing system mix-ups, saving time, and helping clinics to comply with regulations. This tool provides a single, secure platform that ensures all patients are scheduled on time and documented properly - saving time and improving outcomes across the board.

FEATURES

HYBRID RFID LABEL

MIRI® Evidence uses an intuitive labelling system that makes use of human-readable labeling, barcode and RFID tags. This combination on each label offers a powerful solution to improve efficiency, accuracy, traceability, and security in embryology labs. It minimizes the potential for errors, enhances quality assurance, and ultimately contributes to better patient care and treatment outcomes.
- Complete labels for your labware (under labelling) Complete range of labels for your specimen cups, conical tubes, culture dishes, and vitrification straws.

CHAIN OF CUSTODY

A chain of custody is a form of management system that is required in many laboratories, clinics or hospitals to have that allows every step of the lab process to be properly documented from the beginning to the end of the process.

• TRACKING AND TRACEABILITY

Chain of custody is an assimilated part of MIRI® Evidence. It can visualize a full-blown chain of custody for any gamete or embryo. It will document the process from the beginning of a cycle until the very end of it. Traceability also covers the lot numbers and the specific utensils that the gamete or embryo has been in contact with.

• USER-FRIENDLY APPLICATION

MIRI® Evidence works on desktop PCs, laptops, and tablets. The tablet allows you to capture data in real-time independent of whether you perform vitrification, embryo scoring, or assign a location in the cryobank. The dedicated workspaces will guide you safely through timed processes. Once you scan the tube or dish, MIRI® Evidence will present the relevant options based on the previously performed steps. The scanners work independently of the workstations and tablets allow you to bring the wireless scanner between the workstations. MIRI® Evidence is designed as a native touch application.

AUTOMATIC MISMATCH PREVENTION

• The RFID technology system employed in the MIRI® Evidence will automatically detect any mismatch during a procedure once a labelled dish is placed within the area covered by the RFID scanner with our pole reader and tube reader.

• Eliminate the need for double witnessing with continuous monitoring of the workspace through RFID tag.

• MIRI® Evidence system can provide detailed logs and records of all procedures, including the usage of items and any detected discrepancies. This feature enables efficient auditing and traceability, enhancing quality control and accountability in forensic or laboratory settings.

RETROFIT

The MIRI® Evidence can be retrofitted to existing equipment. There is no need to replace or do customizations on the tabletop of your workstations. Our RFID pole scanner is compatible with all available workstations in the market. Aside from that, an incubator monitor can be designated to display whose embryo has been assigned to which specific chamber of the incubator. The monitor is compatible with various kinds of embryo culture incubators on the market.

GENDER SELECTION WITH IVF: BALANCING SCIENCE WITH ETHICS

In vitro fertilization (IVF) has revolutionized the field of reproductive medicine, offering hope to couples struggling with infertility. However, alongside the medical advancements, the ability to select the sex of a baby through IVF has sparked debates surrounding ethics and societal implications. This article aims to delve into balancing the effects of sex selection with IVF, exploring its methods, applications, controversies, and the ethical considerations that come into play.

Sex selection with IVF involves separating sperm carrying either an X or Y chromosome and selecting embryos of the desired sex for implantation. Two primary methods are commonly used: Pre-implantation Genetic Testing for Aneuploidy (PGT-A) and Pre-implantation Genetic Diagnosis (PGD). PGT-A, also known as comprehensive chromosome screening, assesses the chromosomal makeup of embryos to identify chromosomal abnormalities/ploidy of the embryo being tested. By analyzing chromosomes of the embryos before implantation, this technique allows IVF practitioners to identify the gender of the embryos before being transferred back to the patient. PGD, on the other hand, involves examining the genetic makeup of embryos to identify specific sex-linked genetic disorders. This method allows couples who are carriers of such disorders to select embryos of the opposite sex, thereby reducing the risk of passing on the condition to their child.

Sex selection with IVF finds application in several scenarios. Some couples may choose sex selection for medical reasons, such as the prevention of sex-linked genetic disorders. For instance, families with a history of X-linked conditions like hemophilia or Duchenne muscular dystrophy may opt for IVF with sex selection to avoid passing on the disorder to male children. In other cases, balancing family dynamics, gender ratios, or cultural expectations might motivate couples to pursue sex selection. However, it is crucial to distinguish between genuine preferences and gender bias or societal pressures that may perpetuate gender imbalances.

Sex selection with IVF raises important ethical questions that demand thoughtful examination. The key concerns revolve around gender equity, potential for misuse, and the unintended consequences of sex selection practices. There is a concern that unrestricted access to sex selection may lead to misuse, where couples use it for non-medical reasons or gender preference alone. This could perpetuate gender discrimination and reinforce harmful stereotypes. Regulations and guidelines are necessary to prevent misuse and ensure responsible use of the technology.

To address these ethical concerns, countries vary in their approach to regulating sex selection with IVF. Some nations have banned the practice for non-medical reasons, while others permit it under strict regulations and guidelines. Striking a balance between reproductive autonomy and societal interests is crucial to ensure responsible use of sex selection with IVF and to safeguard against potential harms.

EVENTS & INSTALLATIONS

Events

AGRBM Conference
April 21-23, 2023
Münster, Germany

PSRM Midyear Conference
May 12, 2023
Clark, Pampanga

65th AAB Conference
25th CRB Symposium &
Cryopreservation Workshop
May 9-12, 2023
Las Vegas, Nevada

Installations

Feto Maternal Centre
Doha, Qatar
MIRI® Multiroom Incubator

ESCO MEDICAL

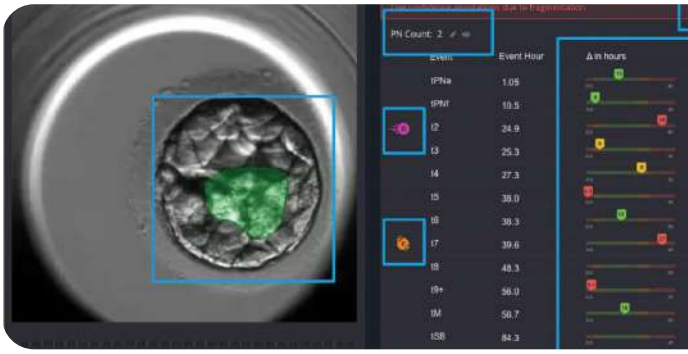
Fairtility

Introducing a revolutionary partnership: **Esco Medical and Fairtility join forces to bring the power of artificial intelligence to our valued customers.**

The collaboration will provide a joint offering of Esco Medical's MIRI® Time-Lapse Incubator with CHLOE™ as the embryo viability assessment AI decision support tool integrated with the MIRI® server.

Meet CHLOE™

CHLOE™ is the first and only transparent AI-based decision support system that equips IVF professionals with biological insights based on millions of data points to determine an embryo's potential for implantation consistently and accurately. CHLOE™ automates processes including embryo assessment and annotation, KPIs, and patient communication to create a fully digitized workflow, aiming to augment the outcome of IVF care.

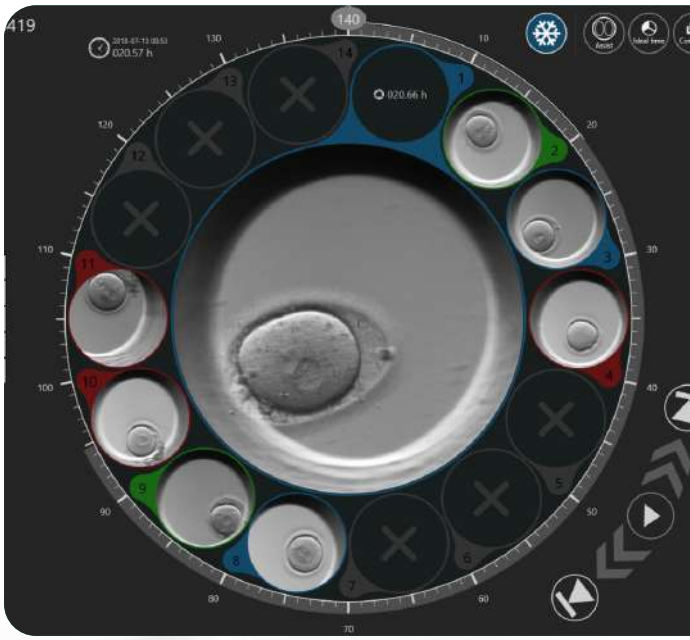


About MIRI® Time-lapse Incubator

The MIRI® TL is a multiroom incubator with a built-in camera and microscope that allows embryologists to view the development of the embryo from fertilization until the day of transfer without any disturbances. This significantly reduces the environmental stresses on the embryo when compared to current standard incubation practices.

Features

- Heated Lid
- Time-Lapse Monitoring
- Multiroom System
- Direct Heat Transfer
- Touch Screen Control Panel
- CultureCoin®
- Advanced CO_2 + O_2 Regulation
- High Quality Recirculated Airstream
- Easy Parameter Validation
- Sophisticated Tools for Annotation



www.esco-medical.com

Scan the QR code to learn more and to book a demo.