



Esco Medical gears up for the 38th ESHRE Annual Meeting

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Two years since the Vienna edition of the European Society of Human Reproduction and Embryology (ESHRE) transpired, the annual gathering finally returns to a face-to-face setup this year. The 38th edition of ESHRE is happening on July 03 – 06, 2022 at the Milano Convention Center in Milan, Italy.

Due to the global impact of the Covid pandemic, the annual meeting was transformed into a virtual/ online event for two consecutive years. So this year's live event is an exciting celebration where everyone is given the opportunity to resume from the last point two years ago. ESHRE 2022 intends to be a platform for several essential concerns on matters concerning "pregnancy, human

reproduction, andrology, embryology, reproductive medicine, and reproductive surgery". Based on the released program, some of the notable topics that will be discussed during the congress include: "Advanced sperm selection techniques under the evidence-based medicine scrutiny", "Revisiting standards in the IVF laboratory: optimizing outcomes with precision treatment", "Infertility: explaining the unexplained", "Controversies in reproductive genetics", "How to master ovarian stimulation for journey towards precision medicine, automation, machine learning and artificial intelligence" and many more.

Esco Medical is equally delighted to be back at the exhibitor's hall of ESHRE.

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Esco Medical gears up for the 38th ESHRE Annual Meeting

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To date, Esco Medical will be showcasing the biggest line of its existing and new products. From its multiroom incubators (MIRI®, MIRI® II-12, Mini MIRI® Dry and Humidity) to its time-lapse incubators (MIRI® TL 6/12) to its workstations (MAW), the Esco Medical booth is expected to be packed with these innovative fertility solutions.

Esco Medical new products like the MIRI® Evidence (a traceability tool), a new AI for our MIRI® TL, a new model of the MIRI®

in the form of MIRI® Humidity, some consumables (ICSI pipettes), and the MIRI® Laminar Flow (a new model of the workstation) will all be exhibited.

Moreover, these various Esco Medical products go beyond being displayed in our booth. We have prepared some interactive activities wherein our visitors are in for product demonstrations and will be given the chance to work on and manipulate our devices. We have also prepared some exciting freebies/ giveaways.

Let us together celebrate the world's largest in-person occasion in reproductive science and medicine. So come and join us in this highly anticipated annual meeting and as one, let us relish the enjoyment of science and the enchantment of Milan, Italy. You can find Esco Medical at **Booth A73-B86** of the Milano Convention Center.



Esco Medical to Launch a Series of On-Demand Webinars

To keep up with delivering accessible and relevant information in today's world, Esco Medical is launching a series of on-demand webinars on its website, esco-medical.com, this coming July 2022. Such addition to the Esco Medical website aims to provide a fascinating and informative platform for new and existing customers that will bring in valuable content. We believe this is another excellent way to further our

relationships and create awareness on relevant matters concerning IVF and ART.

What is "On-demand Webinars"? These are informative, pre-recorded videos that audiences can watch or attend on their own time. Accessibility to such is easy, simple, and usually automated since these videos are recorded live, edited, uploaded, and published online to a specific hosting platform (in our case, the Esco Medical website).

Benefits of On-demand Webinars: Aside from being 'on demand' and accessible anytime and anywhere (so long as there is an internet connection), webinars are also

deemed more convenient as they do not depend on time-zone scheduling. In contrast, technical concerns like internet lag or sudden power interruption can be avoided in live events. Moreover, these on-demand webinars digitally transform face-to-face events, especially when anything digital is one of the primary options for human connection.

Esco Medical hopes that with these on-demand webinars, we can revolutionize our global accessibility. Watch for our first two webinars on HEPA/VOC filters and the Implementation of Time-lapse Incubators in a Clinical Setting.

Spermbots: A Futuristic Approach to Solving Infertility

A German research team from the Institute for Integrative Nanosciences at IFW Dresden in Germany has created small robot suits that can help sperm become more mobile. Their recently published research in the Journal Nano Letters addresses one of the most common reasons of male infertility. Furthermore, the material discusses how spermbots could be a new alternative for couples struggling to conceive.

These 'spermbots' are tiny metal helices that wrap around the tail of a single sperm and aid it in its journey to the egg. The bots are propelled by a magnetic field that is controlled by the scientists. The metal casing can reverse course and detach itself once the sperm has reached its objective and been implanted in the egg. All of the trials so far have been conducted with bull sperm on a petri dish. These tiny bots are 50 microns long, 5-8 microns in diameter, and constructed of iron and titanium nanoparticles (1,000 microns equals a millimeter).

Simply put, spermbots are made up of a small micromotor and a spiraling piece of metal that wraps around a sperm's tail and acts as an on-board power supply.

The research team's inspiration for creating the spermbots are their natural counterparts, namely the flagella and cilia, which are employed by live microorganisms to propel themselves. This effort began roughly two years ago, with the team doing trials in the lab with oocytes or female gametocytes, which are germ cells involved in reproduction.

Unless successful fertilization is achieved in the lab, human trials for spermbots are not yet feasible and allowed. There will also be various technical and biological challenges to overcome that must be thoroughly addressed before moving on to clinical trials. While there are currently no plans to conduct human trials, this remains a significant goal of the research.

While the research is still in its early stages, the new spermbots might theoretically provide couples with a more effective and less expensive alternative to artificial insemination and in vitro fertilization, where the egg is evacuated from the body before being fertilized.

Spermbots are a significant advancement in the rapidly expanding field of nanotechnology, more specifically micromotors and nanomotors that are used in drug delivery, single cell manipulation, microsensors, and lab-on-a-chip devices. The passionate development of hybrid micromotors that harness biological power sources for medically suitable nano/microdevices has recently attracted a lot of attention from the international research community looking for a solution for microscale actuation and mobility.

While there are compelling barriers to clinical trials, its current state is a promising start.



Battling the Psychological Impact of Infertility

Infertility is a significant life event that causes various social and psychological issues. The nature and severity of these issues may vary according to socio-cultural contexts, geographical places, sex, and gender. It is a serious problem because it can take a toll on one's physical and mental well-being.

Infertility is described as the inability to conceive or reproduce after one year (or more) of unprotected sex. According to the World Health Organization (WHO), infertility is a worldwide health problem that affects more than 48 million couples and 186 million people globally.

While it's not a disease, infertility (and the treatments for it) can lead to a variety of psychological disorders and emotional repercussions, such as anxiety, frustration, sadness, hopelessness, guilt, feelings of worthlessness, and depression.

The more common knowledge about infertility is its biological causes, wherein each or both partners are incapable of reproducing due to hormonal disorders, genetic disorders, and disruption of testicular or ejaculatory function among men. On the other hand, disruption of ovarian function or presence or absence of ovulation and effects of ovarian age,

fallopian tube obstruction, and physical characteristics of the uterus.

However, data available suggests that the majority of infertile people reside in poor nations, where having children is frequently the only opportunity for women to improve their social status. It can be a surprise to see more articles online discussing female infertility than male.

This goes to show the gender inequality present worldwide, most especially developing countries. Even though a big percent of infertility rates are male-related, women are often on the receiving end of the stigma and gender oppression.

Married couples who are unable to conceive may choose to get divorced and deal with the repercussions of a major life decision. This is more common in countries with a culture supporting heteronormative norms. According to a research of 47,500 Danish women, those who do not have a child after treatment are three times as likely than those who do to divorce or end cohabitation.

H2: Common Cognitive and Emotional Reactions to Infertility and Treatment

Here are the most common reactions of infertile people to infertility and

treatment: (maybe you could briefly briefly give a short description for each?)

Mental engagement

- Psychological turmoil and agitation; disquiet: mental unrest brought on by complex judgments.
- Being challenging to control in some situations.
- Reduced self-esteem: They are unsure who they are and what they can accomplish. They frequently feel inept, neglected, or insufficient. People with low self-esteem are always fearful of making errors or disappointing others.
- Feelings of failure
- Fear is an emotional reaction to an upcoming threat usually associated with the fight or flight response, which involves either staying to fight or running to avoid danger.
- Anxiety is indicated by tension in the

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Battling the Psychological Impact of Infertility

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- muscles and avoidance behavior in anticipation of a future worry.
- Worry is a series of negative-affecting thoughts and pictures that is difficult to regulate. It's an attempt to engage in mental problem-solving on a topic with an uncertain resolution but the potential for one or more undesirable outcomes. As a result, worry is linked to the fear response.
- Loneliness can be defined in more ways than one. It is a complex and individual experience for each person: a state of solitude or being alone; the perception of being alone and isolated; a subjective, negative feeling related to deficient social relations; or a feeling of disconnectedness or isolation.
- Guilt is an unpleasant sensation described as a self-conscious emotion accompanied by self-reflection. Guilt is both personal and socially significant. It can overload anyone who is exposed to it unnecessarily.
- The natural emotion of loss is grief. Grief is a universal as well as a unique experience. It is a powerful, sometimes overpowering feeling for people, whether from the loss of a loved one or a fatal diagnosis they received.
- Depression, also known as major depressive disorder, is a widespread and significant medical condition that harms how you feel, think, and act.
- Regret is a negative emotion associated with a cognitive construction of an alternate behavior or decision. It happens when a person believes the outcome would have been better if their past acts or behaviors had been different.
- Fatigue is a phrase that refers to a general feeling of exhaustion or lack of energy. Lifestyle choices, physical condition, and mental issues can cause fatigue.
- Hopelessness is defined by a lack of optimism, enthusiasm, and hope. A person who feels hopeless may have little to no hope for future achievement or progress

Dealing with the emotional repercussions of infertility is difficult, but not impossible. There are thousands of credible sources online discussing the normal responses to infertility and how to deal with them. Learning about it thoroughly can also help a person understand his or her situation much better. Reaching out to your family, friends, and partner is definitely recommended. Joining support groups can also help. Seeking professional psychological help can make a difference as well.

Esco Medical to introduce its own fertility clinic traceability tool

As an IVF professional, have you always been wary of potential witnessing problems within the IVF lab? Worry no more as Esco Medical introduces a traceability tool for fertility clinics.

IVF witnessing is a process that involves the identification of patients and the traceability of their reproductive cells in every clinical and laboratory procedure involving paperwork. This is the process of making sure that embryos, gametes and patient samples are managed and mixed correctly.

One of Esco Medical's newest products that will be launched next month is the MIRI® Evidence. It is a tool designed in close cooperation with fertility clinics to establish traceability for all procedures in the laboratory and office to comply with regulations, eliminate double witnessing, save time, and ultimately provide all staff members' peace of mind knowing that the system prevents mix-ups.

This tool makes use of Radio Frequency Identification (RFID) to identify and monitor activities in the IVF clinic. Such kind of system moderates the potential hazards of worker mistakes whenever samples are moved from one dish or tube to another, thus it cautions each step of the IVF cycle.

The MIRI® Evidence can run directly on a workstation or an incubator utilizing the existing display as an embedded application. It can be controlled by either a cleanable keyboard and mouse or even a remote tablet. In terms of labelling, each device (dish, vial) is labelled with a human readable tag including a globally unique data matrix code. The tags can be printed individually or as A4 sheets with tags for all devices in the treatment.

Some of the notable features of the new MIRI® Evidence include the following:

- **Tracking:** The scanners used with MIRI® Evidence are 2D imagers with no laser from a market leading supplier and specially made for healthcare.
- **Compliance:** MIRI® Evidence Tracking has been made to comply with the EDQM guidelines and EU regulations.
- **Mix-up Prevention:** Oocytes, embryos, and semen samples are tracked and validated in and out of the containers eliminating the need for human double-witnessing.
- **Workflow:** The MIRI® Evidence workflow offers tools to enhance scheduling and documentation procedures, improving both clinical and administrative workflows in a fertility clinic

This new product will be showcased at the upcoming 38th annual ESHRE in Milan, Italy this July 03-06, 2022.

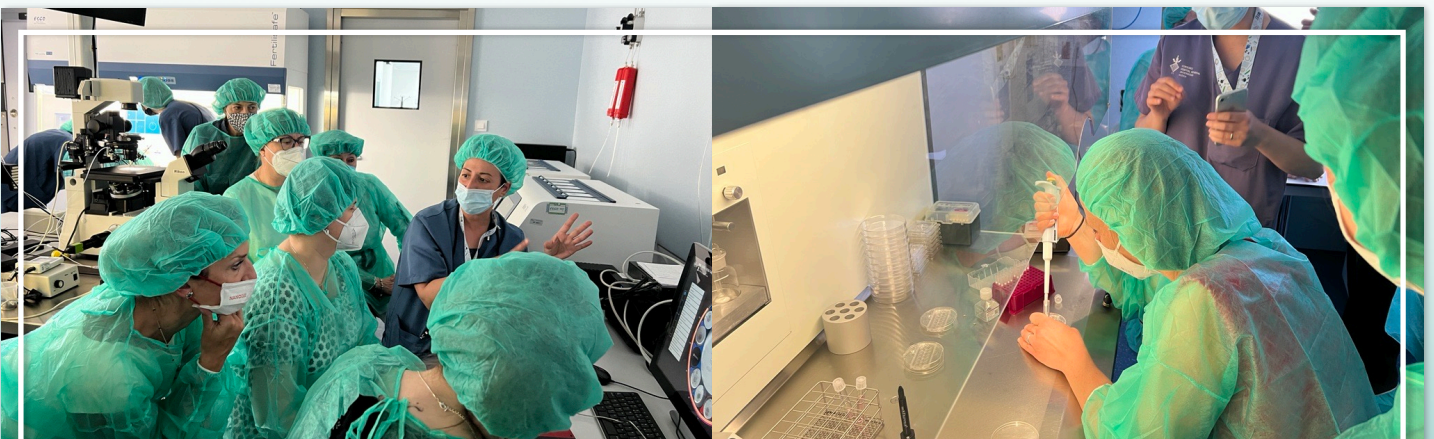


Esco Medical Events



3rd Zweiländer-Treffen of Die Arbeitsgemeinschaft Reproduktionsbiologie des Menschen (AGRBM) and Embryologenforum Austria (EFA)
April 01 – 03, 2022
Salzburg, Austria

Kazakhstan Association of Reproductive Medicine (KARM) IX Regional Conference
April 8 - 9, 2022
Shymkent, Kazakhstan



MIRI®TL Workshop organized by Esco Medical Germany
April 2022
Valencia, Spain

2nd Quarter

Esco Medical Events



Philippine Society for Reproductive Medicine Inc.

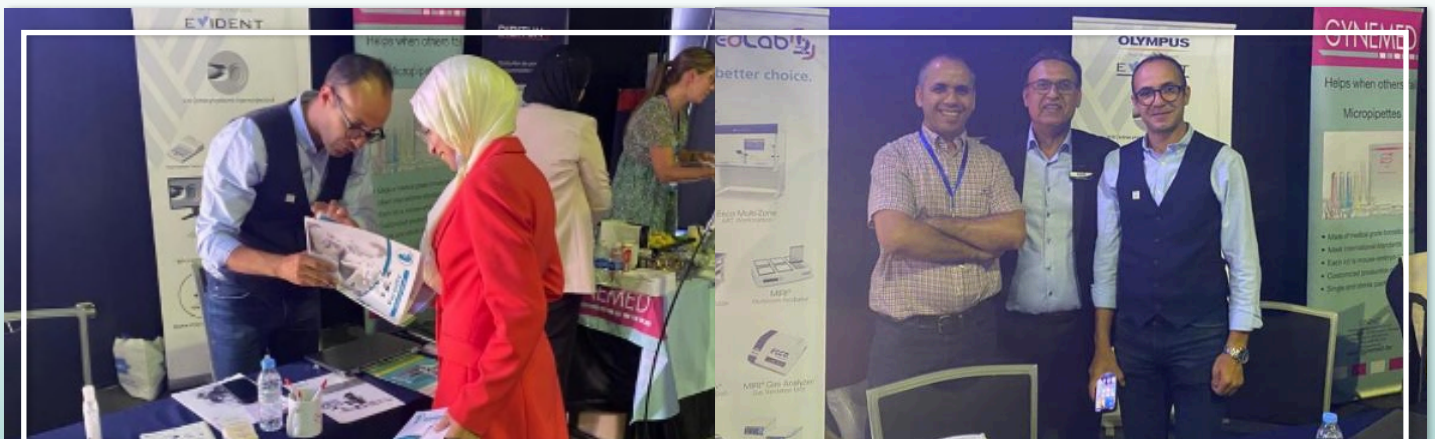
Annual Virtual Conference

May 12 and 13, 2022

Virtual Conference



8th Portuguese Congress of Reproductive Medicine May 12-14, 2022 Azores Island, Portugal



Moroccan Society of Reproductive and Fetal Medicine (SMMR)

June 09 – 11, 2022

Casablanca, Morocco.

2nd Quarter

Esco Medical Installations




KOC
Kuwait
April 2022

Almanee General Hospital
Kingdom of Saudi Arabia
May 2022

Aashirwad Nursing Home & IVF Center
Indore India
June 8, 2022

ESCO MEDICAL
2022年学术会议第一季 第2期
卵子人工激活技术-受精障碍的终极法宝?



罗金 武汉大学人民医院生殖医学中心
副主任医师
医学博士, 加拿大英属哥伦比亚大学妇产科学系博士后, 硕士生导师。
武汉大学人民医院第五届青年重点人才培养对象
湖北省医学会生殖医学分会第二届青年委员会委员
中国优生优育协会助孕优生专委会委员
湖北省免疫学会生殖免疫专业委员会委员

完全受精失败是辅助生殖技术实施过程中令临床医生和胚胎学家都感到非常棘手的问题之一。本次会议中, 将以一个真实的临床病例为线索, 层层揭开IVF和ICSI完全受精失败的原因及应对策略, 引出卵子人工激活应用的机理、有效性、安全性等。


直播时间: 3月2日 18:10-19:10
扫码进入直播
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卵子人工激活技术-受精障碍的终极法宝?

罗金

武汉大学人民医院生殖医学中心
湖北省辅助生殖与胚胎发育临床研究中心





Quality control index of embryo culture Laboratory

Hongqing Liao

Nanhua Xinghui Reproductive Health Specialist Hospital

March 24, 2022

ESCO MEDICAL
2022年学术会议第一季 第3期
胚胎培养室质控指标



廖宏庆 衡阳南华星辉生殖健康专科医院
院长
生殖工程学博士, 副研究员, 硕士研究生导师
衡阳南华星辉生殖健康专科医院院长
中华医学会湖南省生殖医学专业委员会常务委员
中华医学会计划生育协会男性生育调控学组委员
中国性学会生殖医学分会常务委员
中国优生科学协会生殖医学与生殖伦理学分会委员
湖南省健康服务业协会生殖健康管理分会副理事长
湖南省人类辅助生殖技术质量控制专家组成员

在IVF实验室中, 质控指标是质量管理体系的重要组成部分, 反映了胚胎培养室的运行情况。如何有效选择并利用关键指标进行质控? 如何在指标波动时进行分析处理? 敬请收看廖院长带来的经验分享。

直播时间: 3月24日 16:00-17:00
扫码进入直播
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Time Lapse 胚胎动态观察

- 在培养箱内安装摄像装置, 实时记录胚胎形态。保证了稳定的培养环境; 观察立体; 可以记录胚胎发育过程中的动态变化。
- 5-10分钟拍照, 5天720-1440次。
- 每次曝光时间15ms左右, 总曝光时间1分钟左右, 大大低于传统观察的2-3分钟。
- 光源波长集中于635nm, 避开对胚胎发育有影响的<550nm波长





Discussion on management and service model of reproductive hospital

Jinlong Ma

Reproductive Hospital affiliated to Shandong University

April 17, 2022

2nd Quarter Esco Medical Webinars

2022年学术会议第二季 第1期

**生殖医院管理
和服务模式经验谈**

主讲嘉宾
国家辅助生殖与优生工程技术
研究中心 副主任
山东大学附属生殖医院
原院长 **马金龙**

医学博士，教授、主任医师、博士研究生导师。国家辅助生殖与优生工程技术研究中心副主任、教育部生殖内分泌重点实验室副主任，兼任山东省医学会生殖医学专业委员会主任委员、医学遗传与优生学分会副主任委员、山东省妇幼保健协会副会长等。长期从事胚胎发育和优生学研究，重点研究出生缺陷的发生机理。

主持人
浙江省人民医院
生殖内分泌科主任 **舒静**

主任医师、硕士生导师。浙江省人民医院生殖医学中心和产前诊断中心创始人，《中华生殖与避孕杂志》编委，中国康复医学会生殖健康专业委员会常委，中国医师协会生殖医学专业委员会委员，浙江省妇产科学分会常委、浙江省医师协会常委，浙江省生殖医学分会常委、浙江省医学遗传学会分会常委。

直播时间：4月17日 20:00-21:00

扫码进入直播
参与提问互动有礼

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设计 切换 动画 幻灯片放映 录制 审阅 视图 帮助 PDF工具 图片工具 流程图 更多工具 操作说明搜索

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4.远程医学会诊系统和视频会议系统的
线上门诊和移动医疗



实现医院内部、基层医院30个终端的互联

Experience Sharing of IVF Laboratory Upgrade and Quality Control
Yu Ding
Affiliated Hospital of Qingdao University
April 20, 2022

ESC MEDICAL

2022年学术会议第二季 第2期

**IVF实验室升级改造及
质控经验分享**

丁钰 青岛大学附属医院生殖中心
实验室负责人

医学硕士 副主任技师
中国性学会女性生殖医学分会委员
山东省免疫学会生殖免疫专业委员会委员
山东省医院品质管理联盟委员
山东省研究型医院协会生殖医学分会委员
青岛市医学会男科专委会委员
从事IVF实验室工作十余年，积累了丰富的实验室操作和质控管理经验。

随着国内IVF周期的增加，很多IVF实验室都正在经历或即将面临实验室升级改造或搬迁的问题，如何有准备的进行实验室搬迁？如何进行搬迁后的质控？又如何根据搬迁或改造后的实际情况，优化相应操作流程？敬请关注青岛大学附属医院丁钰主任带来的经验分享。

直播时间：4月20日 16:00-17:00

扫码进入直播
参与提问互动有礼

新址搬迁

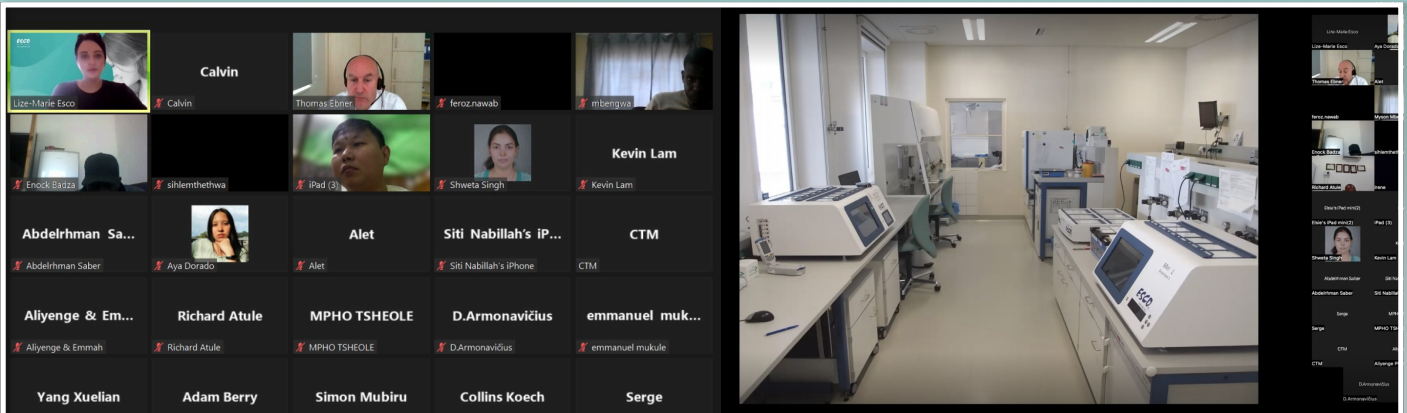
• 设备布局根据操作习惯反复确认：遵循最短路径原则！
功能区划分既要有区分又应该紧凑，战线不要太长！



Experience Sharing of embryo biopsy
Yu Wang
Shanghai First Maternal and Infant Health Hospital
May 25, 2022

2nd Quarter

Esco Medical Webinars



Implementation of Time-lapse Incubators in a Clinical Setting

Prof. Thomas Ebner

Organized by Esco South Africa

June 14, 2022

Manufacturer:

Esco Medical Technologies, Ltd.

Draugystes g. 19, 51230 Kaunas, Lithuania

Service address: Please contact your local distributor for details. Users of Esco Medical products should not hesitate to contact us if there are any unclear points or ambiguities in this newsletter.

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