

New french technician in Gynemed team

2022 will be placed under the sign of reinforcement, Francois-Xavier Legrand joins us and will be in charge of the development for the service part in France.

The number and complexity of technical devices in the field of reproductive medicine have increased significantly in recent years.

It is also important for us in the field of installation and maintenance to offer our customers a local, simple and flexible service. We attach great importance to satisfying our customers and are happy to increase our team.

We want to offer appointments quickly and also allow spontaneous visits in case of problems. Increasing and constantly new requirements for the quality management of interventions lead to more laboratory measurements and an increased documentation effort. In order to be able to continue to carry out the services according to our requirements, we now have additional reinforcements in the technical department in France:

Mr. Francois-Xavier Legrand.

At the beginning of his career, Mr. Legrand studied in electronic and computer science. He has previously worked in various fields and more recently in assisted reproduction. His duties included the installation, maintenance and repair of various devices.

Mr Legrand started on liquid handling robots for analysis and research and then continued in electronic development functions in the audiovisual sector. The desire to return to analysis and research equipment led to a position in electron microscopy and associated devices for many years. This will be followed by a position in optical and mass spectrometry to finish on medical equipment in the IVF industry. During his various experiences, Mr Legrand has deepened his experience and knowledge in various fields which are now his strength.

Mr. Legrand currently lives in Paris and can easily reach all customers thanks to his geographical



Francois-Xavier Legrand

location close to major highways and airports. In charge of development, management of the service division in France and after internal training on our equipment, Mr. Legrand will be able to meet customer expectations and manage the equipment for which he will be responsible.

We are very happy that Mr. Legrand is now with us - welcome!

Astec CCM-iBIS-SG Time-Lapse-Incubator

Do you know it? It is the most compact ASTEC Time-lapse CCM-iBIS on the market today with its 9 incubation chambers. Astec has been one of the time-lapse pioneers since 2005. GYNEMED started the new year

2022 with the first installation in France of the Time Lapse CCM-iBIS from Astec.

CCM-iBIS-SG: **C**ultured **C**ell **M**onitoring - **I**nnovative **B**lastocyst **I**ncubation **S**ystem - **S**econd **G**eneration

Main advantages:

- Compact and robust
- Advantageous investment and several option for consumables
- Integrated gas mixer and gas pre-heater

- Low gas consumption
- Very stable incubation parameters
- Easy network installation
- Intuitive and easy to use
- Very powerful software with many configuration and adjustment options for evaluation and documentation
- Automatic detection of wells containing sample
- Easy report creation with photos / videos

Feel free to contact use if you want more information or if you need demo / video presentation export@gynemed.de

By the way, the CHU Le Havre team, in France, will start using this new device. Available from Gynemed.

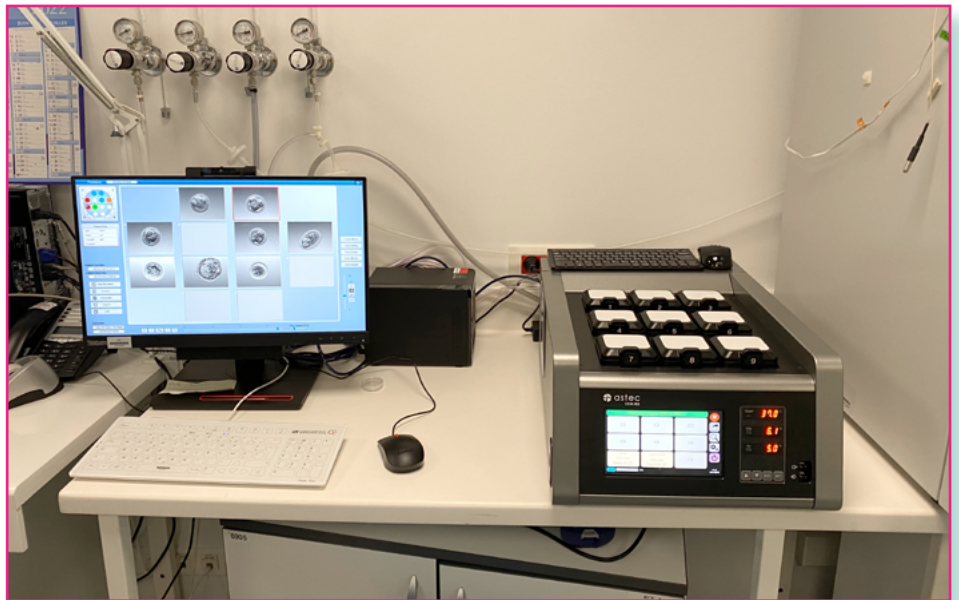


Many studies have been conducted to assess an increase in clinical results for the approach of continuous incubation and monitoring of embryonic development (time lapse) compared to more conventional incubation system. However, their benefits are still discussed controversially.

In our Gynemed in November 2021, we mentioned the interest of monitoring embryo culture by Time Lapse Imaging System, and the benefits of selecting a blastocyst to reduce the time to birth.

In the article presented below, the author compared in 451 cycles (208 ICSI-TESE / 243 ICSI ejaculated sperm) the appearance of pronuclei and the embryo cleavage stage for ICSI cycles with testicular sperm versus ejaculated sperm in a Time-Lapse system.

It seems that the pronuclei of oocytes resulting from ICSI cycles with testicular sperm, appear faster (0.55h) compared to ICSI cycles with ejaculated sperm, but with a longer disappearance time. However, there is a significant difference for unequal embryo cleavage



CCM-iBIS Time-Lapse-Incubator from ASTEC



Left Mr. Legrand and right Mr. Gaisbauer at the Installation

vage stage for the embryos resulting from ICSI-TESE compared to ICSI embryos with ejaculated sperm (20.5% vs 13.6%) especially for the 1-3 cell stage. The transfer of embryos with unequal cleavage (regardless of the origin of the sperm) considerably reduces the rate of live births, 8.9% vs 30.5% for an embryo with equal cleavage.

This publication provides a lot of information on the embryo culture of ICSI-TESE cycles and shows the interest of using a Time-Lapse system for a more refined observation of early stages of embryo development.



Abstract: Time-lapse imaging of human embryos fertilized with testicular sperm reveals an impact on the first embryonic cell cycle.

van Marion ES, Speksnijder JP, Hoek J, Boellaard WPA, Dinkelman-Smit M, Chavli EA, Steegers-Theunissen RPM, Laven JSE, Baart EB.

Biol Reprod. 2021 Jun 4;104(6):1218-1227. doi: 10.1093/biolre/iaob031. PMID: 33690817; PMCID: PMC8181962.

Testicular sperm is increasingly used during in vitro fertilization treatment. Testicular sperm has the ability to fertilize the oocyte after intracytoplasmic sperm injection (ICSI), but they have not undergone maturation during epididymal transport. Testicular sperm differs from ejaculated sperm in terms of chromatin maturity, incidence of DNA damage, and RNA content. It is not fully understood what the biological impact is of using testicular sperm, on fertilization, preimplantation embryo development, and postimplantation development. Our goal was to investigate differences in human preimplantation embryo development after ICSI using testicular sperm (TESE-ICSI) and ejaculated sperm. We used time-lapse embryo culture to study these possible differences. Embryos (n = 639) originating from 208 couples undergoing TESE-ICSI treatment were studied and compared to embryos (n = 866) originating from 243 couples undergoing ICSI treatment with ejaculated sperm. Using statistical analysis with linear mixed models, we observed that pronuclei appeared 0.55 h earlier in TESE-ICSI embryos, after which the pronuclear stage lasted 0.55 h longer. Also, significantly more TESE-ICSI embryos showed direct unequal cleavage from the 1-cell stage to the 3-cell stage. TESE-ICSI embryos proceeded faster through the cleavage divisions to the 5- and the 6-cell stage, but this effect disappeared when we adjusted our model for maternal factors. In conclusion, sperm origin affects embryo development during the first embryonic cell cycle, but not developmental kinetics to the 8-cell stage. Our results provide insight into the biological differences between testicular and ejaculated sperm and their impact during human fertilization.

Keywords: assisted reproductive technology; fertilization in vitro; gamete biology; infertility; intracytoplasmic sperm injections; preimplantation embryo development; sperm maturation; testicular spermatozoa; time-lapse imaging.

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Lykos Clinical Laser with DTS from Hamilton Thorne Available at GYNEMED

The Dynamic Targeting System (DTS) option for the LYKOS represents the next generation of clinical lasers for Assisted Reproductive Technology. With precise targeting features, automated calibration and built-in quality control reporting, LYKOS with DTS provides computer-controlled accuracy and enhanced ease-of-use. With the laser and RED-i built into the LYKOS objective, the LYKOS with DTS offers portability, easy installation, and out-of-the-box compatibility with all current models of inverted microscopes.

The DTS feature is available in various markets worldwide. Depending on the market and application, the DTS feature may be enabled in both Clinical1 and Validation2 Modes, or Validation Mode only. When DTS is enabled, you may choose one of several options to create the laser path:

- **Single Shot:** Click any single point on the screen and a single laser pulse will be applied to that exact point.
- **Line / Curve:** Draw a straight line of any length and then select and drag to create a curve.
- **Freehand:** Any freeform path may be drawn by clicking and dragging the mouse pointer.
- **Multipoint:** Click up to 10 non-connected locations to apply laser. Each point may have a different laser setting.
- **Rectangle:** Click and drag to draw a rectangle of any proportion.



Automated Calibration

The automated initialization process calibrates the system and can be run any time from the control panel. This initialization process maps the position of the RED-i tar-

get in relation to the entire field of view to optimize accuracy.

Built-in Quality Control Reporting

Quality control is a vital part of laboratory procedure. The DTS positioning can be easily verified prior to use and the results of the verification saved. With the built-in quality control reporting, you can view the results of the daily verification in both numerical and graphical form. In addition, a Trend Chart lets you see the results over a selected period of time.

Specification Lykos DTS Biopsy available in EU.

You can check a video



ZANDAIR Air Purification System available

No matter how well you maintain your laboratory, your work area can be filled with air pollutants, dust particles, mold spores, dander, pollen, dust mites, cleaning chemicals, volatile organic compounds (VOCs), chemically active compounds (CACs), aldehydes, carcinogenic materials, carbon monoxide, viruses and bacteria. Therefore, we have a solution, the ZANDAIR 100!

The components of the ZandAir is a highly effective, a carbon filter, a HEPA filter, photocatalytic oxidation and UV light. The activated carbon filter absorbs organic hydrocarbons from various sources, e.g. made of outgassing plastic material, disinfectants and cleaning agents, paint coatings, traffic fumes etc. The certified HEPA filter reduces Particles up to a size of 0.3 μm with an efficiency of 99.97%.

By using a catalyst (titanium dioxide) and UV light become hydroxylradicals and superoxideions on the catalyst itself oxidized and

to water and carbon dioxide degraded. The catalyst is not coming ineffective over the time. Viruses or bacteria too are small to be filtered, are eliminated by UV light.

The use of UV light in combination with the photocatalytic Oxidation is a unique and important one feature of the 100C Air Purifier. The ambient air is from 100C constantly monitored by sensors and measured, in case of increase in pollutants, yet before they are perceptible by humans.

ZANDAIR™ 100C CLEAN AIR System Technical Specifications:

- **Dimensions:** 21.5" w X 18" h X 8" d (55cm X 46cm X 20cm)
- **Weight:** 23 lbs. (10.43 kg)
- **Max Air Flow:** 265 CFM /7.5 m³ per minute
- **Max Watts:** 110 watts
- **Voltage:** 120v 60hz /220v 50hz
- **Blower:** Reversed curved motorized impeller
- **Catalyst:** Metal oxides
- **U.V. Range:** 254 nm (produces no ozone)



- **Particle Filter:** 0.3 micron HEPA
- **Gas Adsorption:** Activated carbon media
- **Application:** 1,000 Cubic feet max./ 29 cubic meters
- **Service:** U.V. Lamps 1 year, Filters 6 months
- **Warranty:** 5 years limited warranty subject to provisions (excluding light and filters)

The ZANDAIR™ 100C CLEAN AIR Photocatalytic Air Purification System is a portable unit specifically developed to meet the demands of IVF laboratories.

Introducing GY-ML13 (HEPA) Filter for Zandair 100C

Gynemed is happy to introduce the new Gy-ML13 Filter (exclusively designed and produced by Camfil, Germany), enabling improved filter capacity for the Zandair 100C filter system.

The Gy-ML13 perfectly fits in the Zandair 100c housing and is classified H13 (according to EN 1822:2009) which attests a filtration efficiency of at least 99.95% (most penetrating particle size). The filter material consisted of grid

protected glass fibers built into an anodized aluminum profile.

The new GY-ML13 filter shows increased efficiency particularly with smaller particles.

Each filter is individually tested and a test certificate declaring the H13 classification (EN1822:2009) is included.

For further information please contact us directly!



GY-ML13 Filter

LEGAL NOTE

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