

Press release

A study from Institut Marquès presented at the 10th Congress of the Spanish Association for the study of Reproductive Biology (Asebir) takes a step further in changing the embryo assessment criteria

The struggle for life begins in the first days of embryo development

- **Embryos are able of self-repairing from the second day of life**
- **Institut Marquès proposes a change of criteria to select those embryos suitable to transfer into the mother's womb in Assisted Reproduction treatments**
- **Scientific contribution awarded with the ASEBIR Prize 2019**

Barcelona, October 23rd, 2019

The line of research opened by [Institut Marquès](#) about embryo evolution is revolutionising the embryo assessment criteria that, until now, were used in the laboratories of Assisted Reproduction. In In-Vitro-Fertilisation (IVF) treatments embryos are classified according to guidelines based on their appearance and the way they develop. In this way, those considered more likely to be implanted and continue to evolve are transferred to the patient. Institut Marquès's research has led to changes on the criteria about some embryos that do not follow normal evolution patterns but, as it has been shown, may end up becoming a healthy baby.

Researchers of this Assisted Reproduction Centre in Barcelona showed at the last Congress of the European Society of Human Reproduction, that was held some months ago, that embryos that are able [to reabsorb their own altered cells](#) on their second or third day of life are actually self-repairing, hence they can correctly evolve. Now they have proved at the Asebir meeting, that it is being held in Cáceres, that some embryos that were considered disposable because of their several nuclei (multinucleated) have actually the [ability to remove the anomalous cells](#) in the 4th or 5th day of life and end up leading to a pregnancy. This scientific contribution has been awarded with the ASEBIR Prize 2019.

A discovery about the beginning of life

“Finding out that the human being, in its second or third day of life is already capable to determine that one of its cells has been altered and that it has the potential to remove it and keep growing in a healthy way is an amazing thing”, explains Dr Marisa López- Teijón, Manager of Institut Marquès. “This proves that life doesn’t consist in being born perfect, but in being able to correct one’s defects. Not only those which seem perfect manage to live, but also those who have fought to be perfect”, adds the renowned gynaecologist.

As well as there are not two people who are physically identical, with the exception of identical twins, there are not two equal embryos. The number of possible genetic combinations is infinite. Because of this, from the moment of fertilisation we all have our own exclusive features that make us unique from that precise moment.

This happens in all embryos, not only in those created by means of IVF. “Every embryo works as a cell team controlled by a leader, with the purpose of living. If some cells start dividing in an abnormal way and are not able to be controlled, the bad ones will win and the embryo will not be able to develop. It is amazing to see how, from the beginning of life, human beings are able to remove their weaknesses in order to follow the correct criteria and get moving forward in life”, states Dr López-Teijón.

23340 analysed embryos

This discovery has been possible thanks to [Embryoscope](#), an embryo incubator that has a video camera attached that films the development of the embryos. In this way, it is possible to observe them in continuously without endangering them. In order to carry out this study, the development of **23340 embryos** was analysed, from the fertilisation moment to their 5th day of development.

About Institut Marquès

Institut Marquès is a Barcelona based centre of international standing in Gynaecology, Obstetrics and Assisted Reproduction with branches in Barcelona, London, Ireland (Dublin and Clane), Italy (Rome and Milan) and Kuwait.

In Italy, thanks to its centre in Milan and to the collaboration with the clinic Villa Salaria in Rome, Institut Marquès offers a comprehensive solution to people with sterility problems.

The centre, with a wealth of experience in particularly difficult cases, helps people

in more than 50 countries achieve their dream of parenthood. Institut Marquès offers the highest pregnancy success rates, with 89% per cycle in IVF with egg donation.

Leader in innovation, it conducts an important line of research on the benefits of music in the early stages of life, foetal stimulation and the male role in Assisted Reproduction treatments.

Institut Marquès is also involved in the research of the relationship between toxics and fertility, taking part in many initiatives that support the defense of the environment. In 2018 it started its Corporate Social Responsibility project, “The Forest of Embryos”. For every child born with the help of assisted reproduction treatments, a tree is planted. Institut Marquès also supports the manifesto “Citizens for Science in Pesticide Regulation”, a coalition of civil society, institutions, scientists and legal experts that demands a reform on the use of pesticides in the European Union.

Links of interest

<https://institutomarques.com/en/assisted-reproduction/special-techniques/embryoscope/>

<https://www.fertility-experiences.com/embryos-have-the-capacity-to-self-repair-from-their-second-day-of-life/>

Ability to expel abnormal cells
<https://youtu.be/S4s5eTACP4k>

Reverse division
https://www.youtube.com/watch?v=vq8ki_UA2-E&feature=youtu.be

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