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IVI FOUNDATION TAKES THE FIRST STEP ALONG THE PATH TO OBTAINING GAMETES PRODUCED FROM SKIN CELLS

- **Through direct cell reprogramming, researchers at FIVI have succeeded in transforming skin cells into precursor germ cells**
- **This research, which has already shown successful results in animal models, is the latest breakthrough in the attempt to produce gametes *in vitro* in humans**

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After five years of work, IVI Foundation (FIVI) has published a study in the scientific journal *Scientific Reports*, in the *Nature* group, in which starting with fibroblasts (from skin) researchers managed to produce cells with markers compatible with germ cells (gametes). This research represents the first step in a larger ultimate goal: obtaining a gamete originating from an individual who does not have any of their own. Although various studies have been presented on this subject, this latest approach is the most innovative to date.

The starting point for this research was cell reprogramming, a concept that won Shinya Yamanaka the Nobel Prize in Medicine in 2012. In its study, FIVI employed direct cell reprogramming: researchers took skin cells and, by means of transfection with a specific cocktail of genes, they managed to get these adult cells to transform, their chromosomes to halve in number after entering meiosis, and to present the genetic and epigenetic markers typical of germ cells.

“Although this study is only an initial step in humans, its application in mice has already revealed successful results. The ultimate aim of the research is to take skin cells and to manipulate them genetically so that a person who does not have their own gametes can attain these and can have children whose genetic make-up matches their own,” explained Dr Carlos Simón, Scientific Director of FIVI.

This research, carried out in collaboration with Stanford University, represents the first step in an ambitious long-range project on which work is still continuing.

About IVI Foundation

IVI Foundation is the first foundation in Spain devoted to basic applied research in the field of human reproduction and it provides a service that is scientific, educational and social in nature. It is part of the Parc Científic, the cluster of science and technology businesses at the University of Valencia and it is the research and scientific support department of IVI.



About IVI

IVI was set up in 1990 as the first medical institution in Spain to specialise exclusively in human reproduction. It currently has more than 50 clinics in 11 countries and is a leader in reproductive medicine.

Further information

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