

**La Medicina Reproductiva**  
**El IVI como modelo científico y empresarial**

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IV IVI)

**LOUSE JOY BROWN:**  
23h 47m del 25 de Julio de 1.978  
Cesárea; 2.600 gramos



Patrick Steptoe & Robert Edwards



- Steptoe PC, Edwards RG. Birth after re-implantation of a human embryo. Lancet. 1978; 2: 336.



# Robert G. Edwards

**Doctor Honoris Causa, Universidad de Valencia, 1992**

**Premio Nobel de Medicina y Fisiología, 2010**





## El comienzo

- 1988
- 32 años
- Profesor Titular de Universidad
- Formado en Alemania (Universitäts Frauenklinik, Mainz)
- Fellowship en Reproductive Endocrinology (Yale University)
- Falta de interés político en Medicina Reproductiva
- Area emergente de la Medicina





## El comienzo



- Formación muy sólida
- Formación profundamente académica
  - Importante el mantenimiento económico de la estructura
  - Muy relevante la docencia
  - Muy importante la investigación y gestión del conocimiento
- Espíritu tremendamente competitivo basado en la excelencia
- Juventud

# PROYECTO IVI: ORIGEN Y SITUACIÓN ACTUAL

## PILARES DEL PROYECTO

- SATISFACCIÓN DE LAS PACIENTES: CUIDADO EJEMPLAR DE LAS PACIENTES Y LOS MEJORES RESULTADOS POSIBLES.
- CREACIÓN DE UN EQUIPO INTEGRADO Y UNA “ESCUELA” EN EL CAMPO DE LA REPRODUCCIÓN ASISTIDA.
- PRODUCCIÓN CIENTÍFICA.
- MANTENER LOS LAZOS CON LA UNIVERSIDAD Y ACTIVIDAD DOCENTE.



## MISIÓN, VISIÓN Y VALORES

### MISIÓN

Somos un equipo de profesionales cualificados que desarrollamos un proyecto común: hacer una medicina reproductiva de alto nivel, y fomentando la investigación, docencia y la excelencia profesional.

### VISIÓN

Ser un equipo líder a nivel mundial en el ámbito de la medicina reproductiva, llegando a ser el grupo con mayor presencia y con los mejores resultados clínicos. Ser referente internacional en calidad asistencial, investigación y docencia.

Potenciar el desarrollo de las personas y el espíritu de equipo como pilares de nuestro proyecto.



## MISIÓN, VISIÓN Y VALORES

### VALORES

- LIBERTAD PARA TOMAR LA INICIATIVA E INNOVAR.
- SATISFACCIÓN POR EL TRABAJO BIEN HECHO
- AFÁN DE SUPERACIÓN
- TRABAJO EN EQUIPO
- HONRADEZ
- LEALTAD

... para que todos estemos orgullosos de ser IVI



IVI)



# IVI EN CIFRAS

## Líder en Medicina Reproductiva

- Clínicas en 10 países
- 43 centros médicos
- 37.500 ciclos de TRA en 2015
- Más de 100.000 nacimientos hasta la fecha
- Aprox. 24% de pacientes de procedencia de otros países donde no disponemos de centros.
- Pacientes de más de 85 Países (históricamente 106)



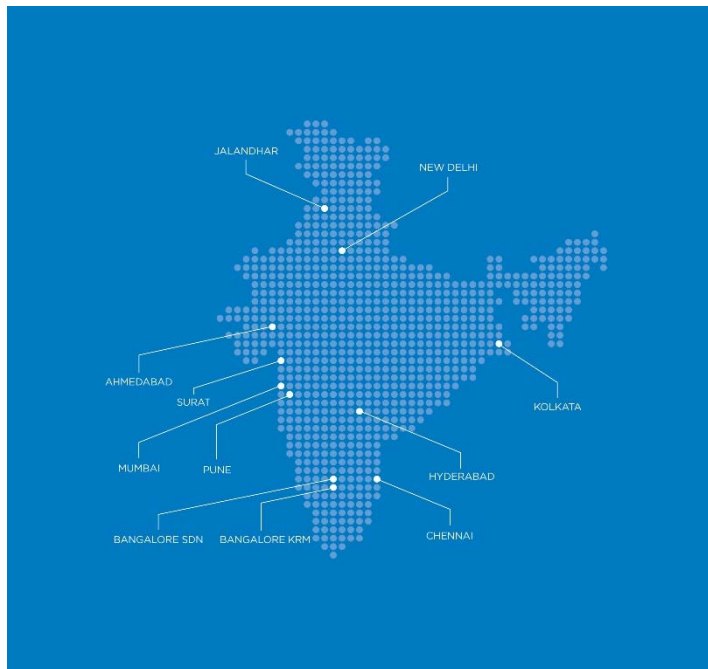
# IVI EN CIFRAS

Actividad Asistencial en 10 países con 43 Centros

★ Próximas aperturas



# PRESENCIA MUNDIAL NOVA IVI FERTILITY

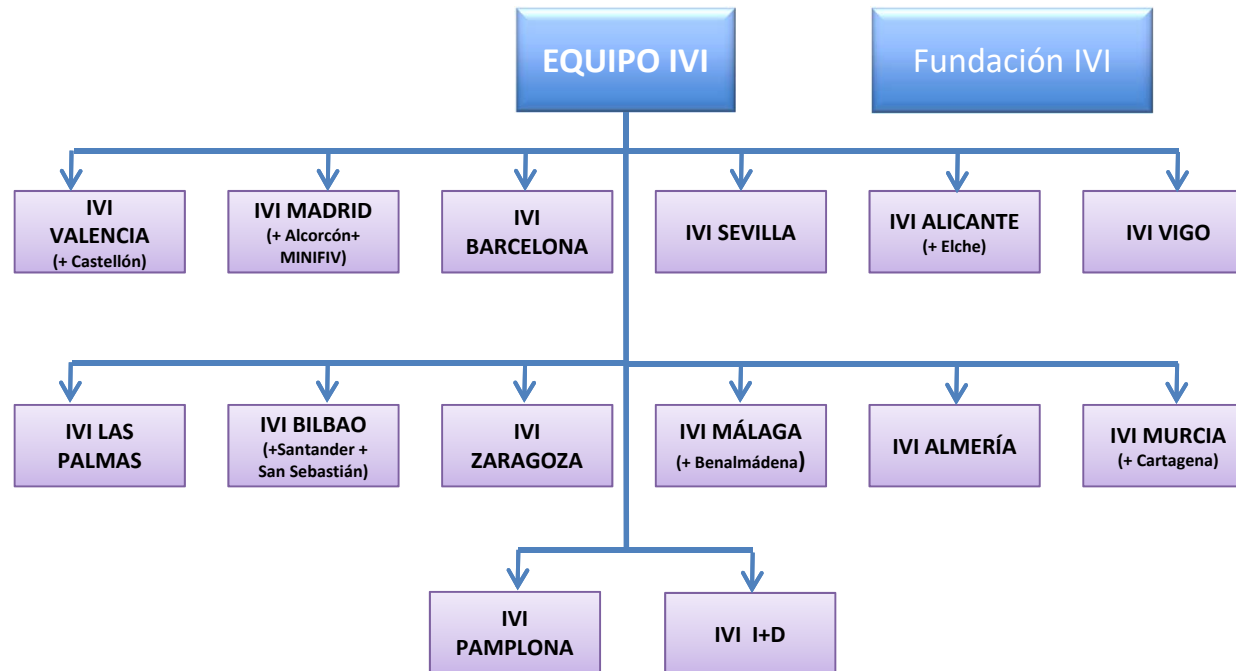


**NOVA IVI FERTILITY** es una joint-venture entre NOVA, uno de los grupos médicos más importantes de la India, e IVI, que actúa como socio tecnológico del proyecto.

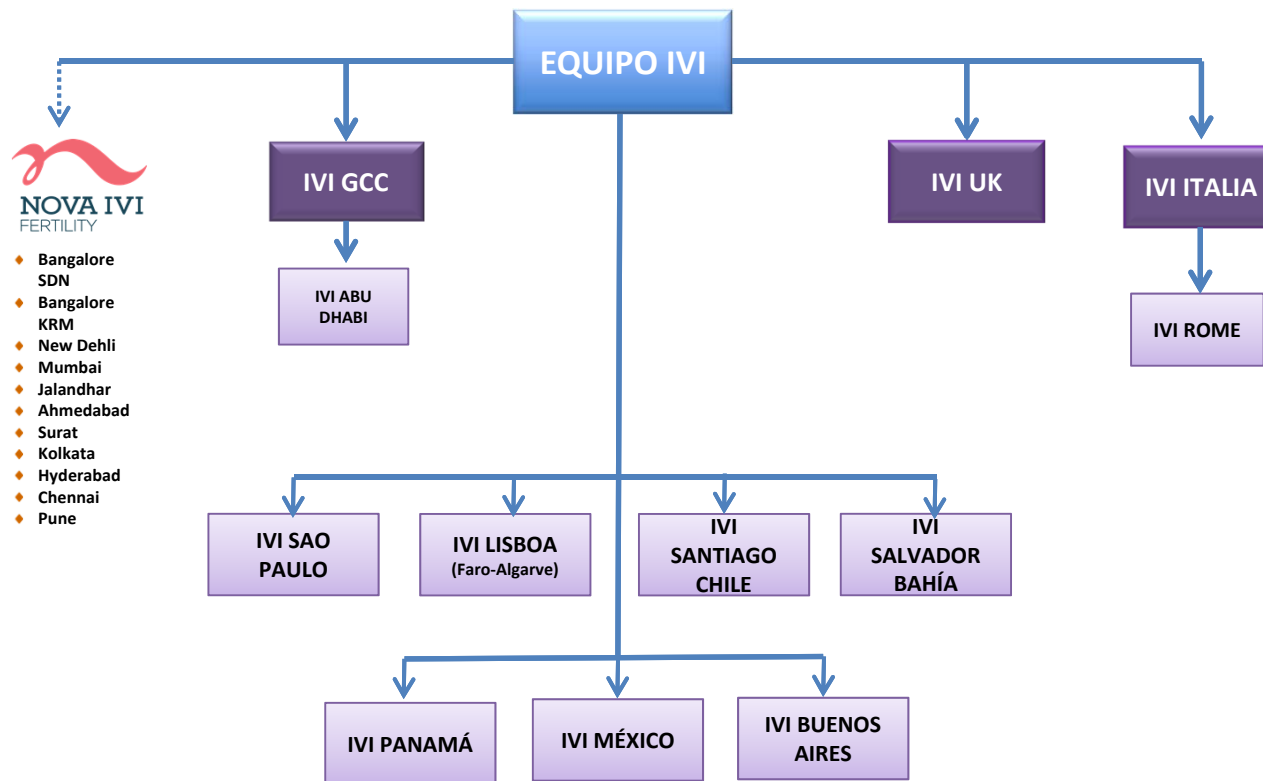
El objetivo es desarrollar una red de clínicas en la India para ofrecer medicina reproductiva de alta calidad, basada en la experiencia y capacidad de innovación del IVI.

Actualmente, **NOVA IVI FERTILITY** cuenta con 11 centros en la India

# EQUIPO IVI: ESTRUCTURA SOCIETARIA ESPAÑA

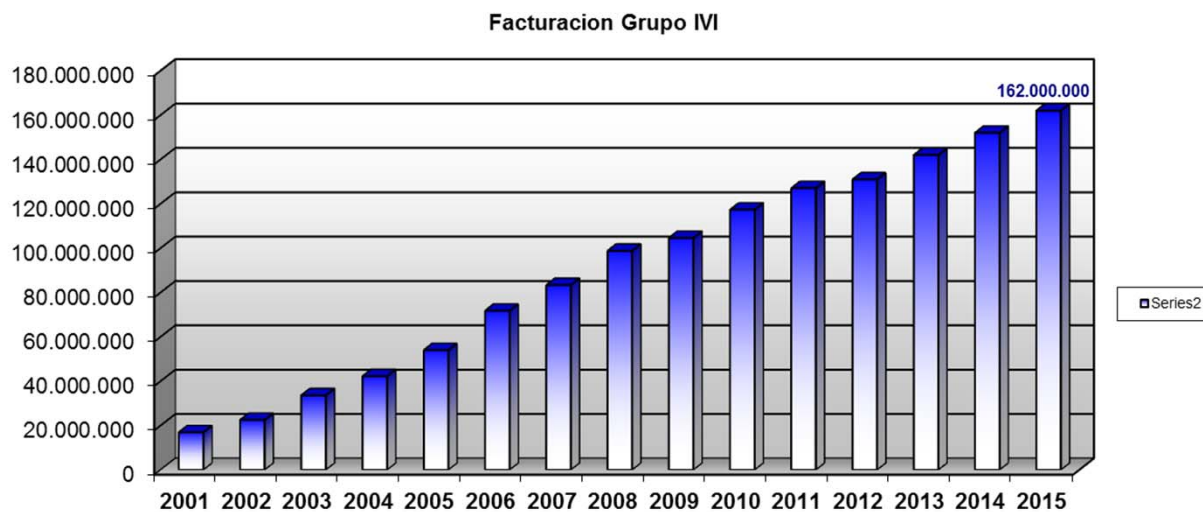


# EQUIPO IVI: ESTRUCTURA SOCIETARIA INTERNACIONAL



# IVI EN CIFRAS

## Evolución de la cifra de ventas del Grupo IVI



## Cómo lo hacemos? Creación de Equipo Integrado



### Selección de personal

- ❑ Staff joven
- ❑ Habilidades profesionales
- ❑ Habilidades personales
- ❑ Entusiasmo por el proyecto



## Cómo lo hacemos? Creación de Equipo Integrado



### Liderazgo

- 📺 Enseñar adecuadamente
- 📺 Apoyo continuo
- 📺 Compromiso personal con el proyecto
  - Autonomía
  - Responsabilidad





## Cómo lo hacemos? Satisfacción de las pacientes



### Mejores resultados clínicos posibles

- Instalaciones
- Historia clínica informatizada
- Formación profesional continuada
- Apuesta por las nuevas tecnologías
- Apuesta por la mejora continua (Filosofía Kaizen)



# Cómo lo hacemos? Satisfacción de las pacientes



## Excelencia en las instalaciones



# Cómo lo hacemos? Satisfacción de las pacientes



## Excelencia en las instalaciones



## Factores de éxito: Satisfacción de las pacientes



### Excelencia en el equipamiento



## Cómo lo hacemos? Satisfacción de las pacientes



### Los mejores resultados clínicos

#### CLÍNICAS IVI EN EL MUNDO

ABU DHABI

Director:  
Dr. Human Fatemi



# FUNDACIÓN IVI: UNA FUNDACIÓN LLENA DE VIDA

## Investigación y Desarrollo

Dirigido por el Prof. Dr. Carlos Simón (1994-2016) y actualmente por el Dr. Nicolás Garrido

Equipo multidisciplinar de médicos, biólogos, químicos, farmacólogos, bioquímicos, etc.

Investigación básica y aplicada

Laboratorios propios

Colaboraciones con Universidades Nacionales e Internacionales



IVI



# FUNDACIÓN IVI: UNA FUNDACIÓN LLENA DE VIDA

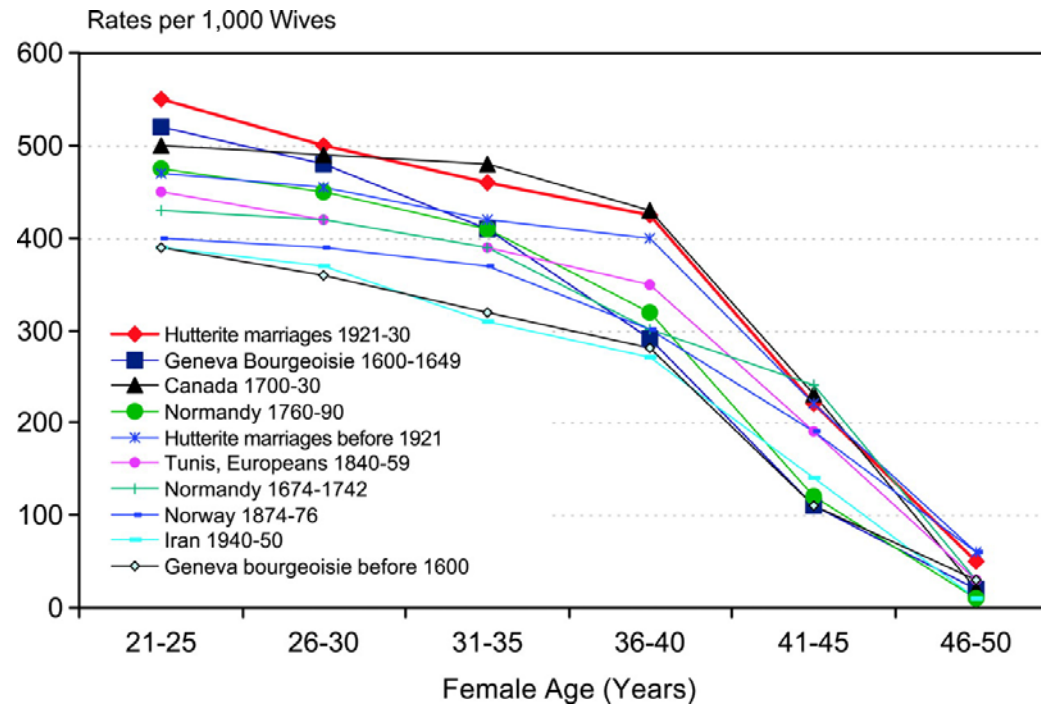
## Investigación y Desarrollo: Principales líneas de trabajo

- Viabilidad embrionaria
- Bioingeniería uterina
- Endometriosis
- Implantación Embrionaria
- Genética/Diagnóstico Genético Preimplantacional, DGP
- Indicadores de calidad embrionaria
- Indicadores de fertilidad en espermatozoides
- Criopreservación de ovocitos y tejido ovárico
- Líneas celulares de células madre
- Rejuvenecimiento ovárico



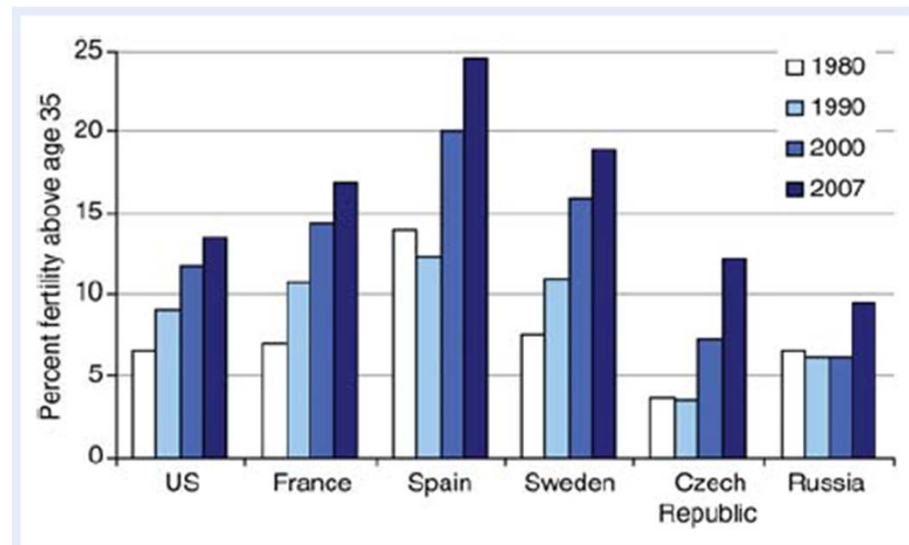
IVI)

# Marital fertility rates



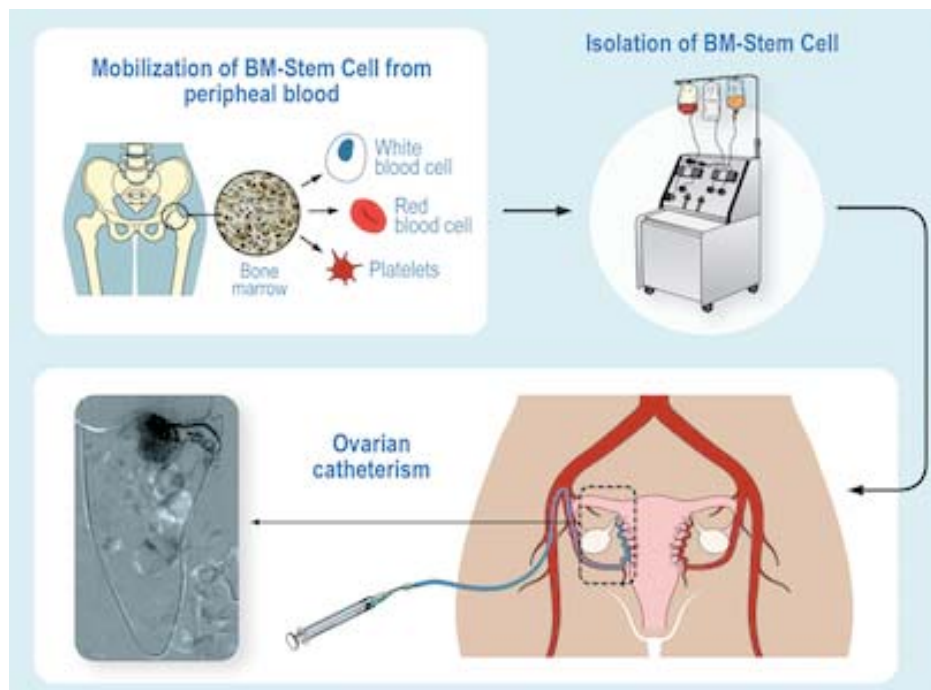


## Maternal Age



**Figure 2** Per cent birth rates by women aged 35 and higher, selected countries, 1980–2007. Sources: Own computations based on Eurostat (2009) and national statistical offices.

## Experimental design



1. Mobilization of BM derived stem cells by 5-days G-CSF treatment (10 ug/kg/ day).

2. Recovery of BM derived stem cells by apheresis.

3. CD133+ cells quantification (no cell selection).

4. Infusion of whole aphaeresis containing  $50 \times 10^6$  CD133+ cells in ovarian artery.

# FUNDACIÓN IVI: UNA FUNDACIÓN LLENA DE VIDA

## DOCENCIA

- Coordinado por el Dr. Nicolás Garrido.
- Instituto Universitario adscrito a la Universidad de Valencia y a la Universidad Rey Juan Carlos de Madrid
- Congresos, simposios, jornadas
- Cursos (95) (ver: [www.ivi.es/ividocencia](http://www.ivi.es/ividocencia))
- Máster
  - Medicina reproductiva - Universidad Valencia
  - Biotecnología de la Reproducción - IU IVI
  - Medicina reproductiva - Universidad Rey Juan Carlos Madrid
  - Cirugía endoscópica ginecológica - ADEIT
  - Cirugía del suelo pélvico - ADEIT
- Formación en Medicina reproductiva para postgraduados
- Formación continua (visitas, rotación residentes 4º año)



# FUNDACIÓN IVI: UNA FUNDACIÓN LLENA DE VIDA

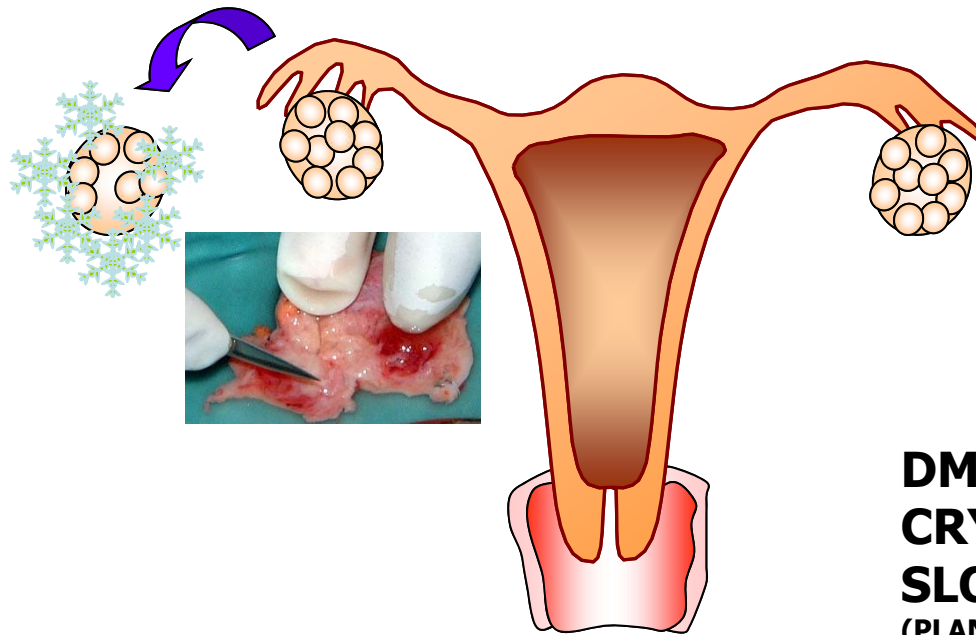
Acción Social



# Ovarian cortex transplantation

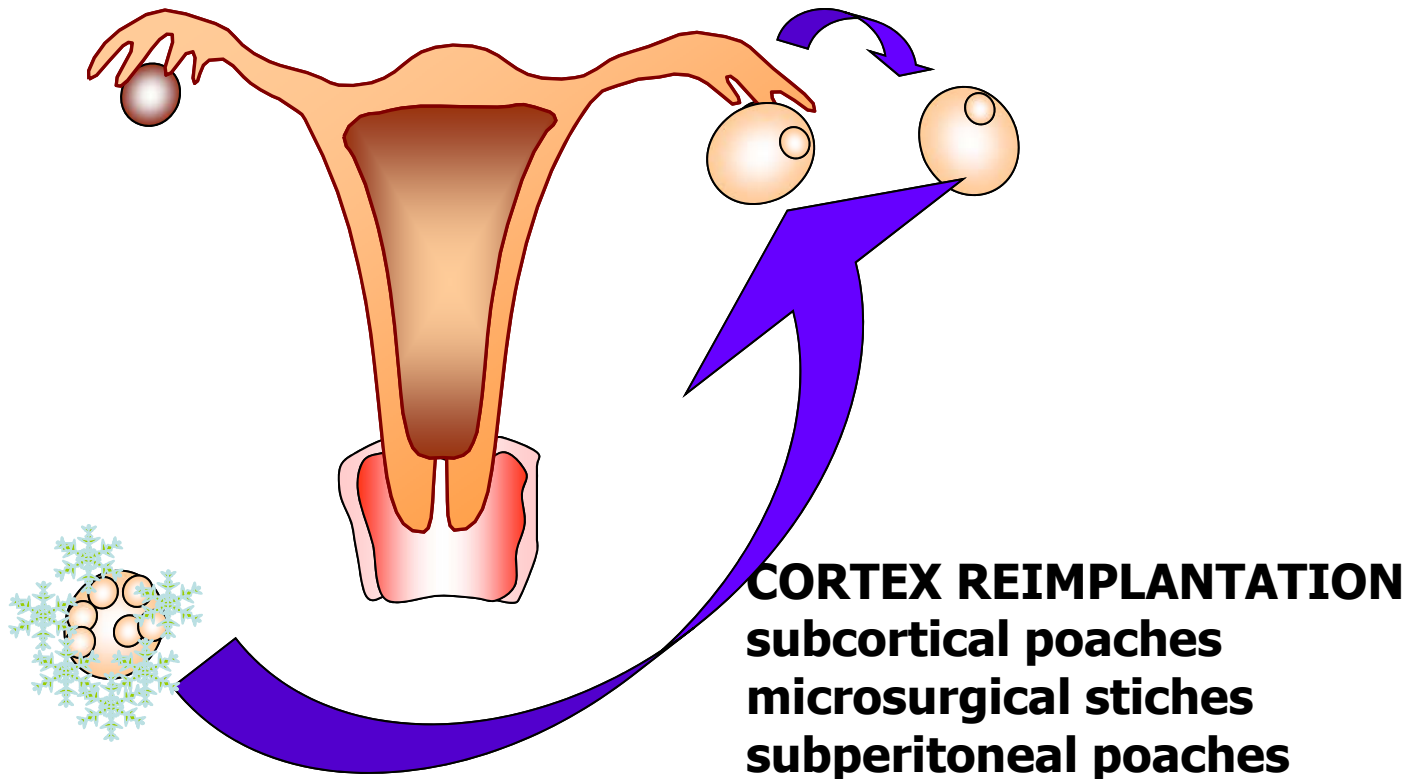
**(ESTABLISHED IN 2005)**

**BEFORE CANCER TREATMENT**

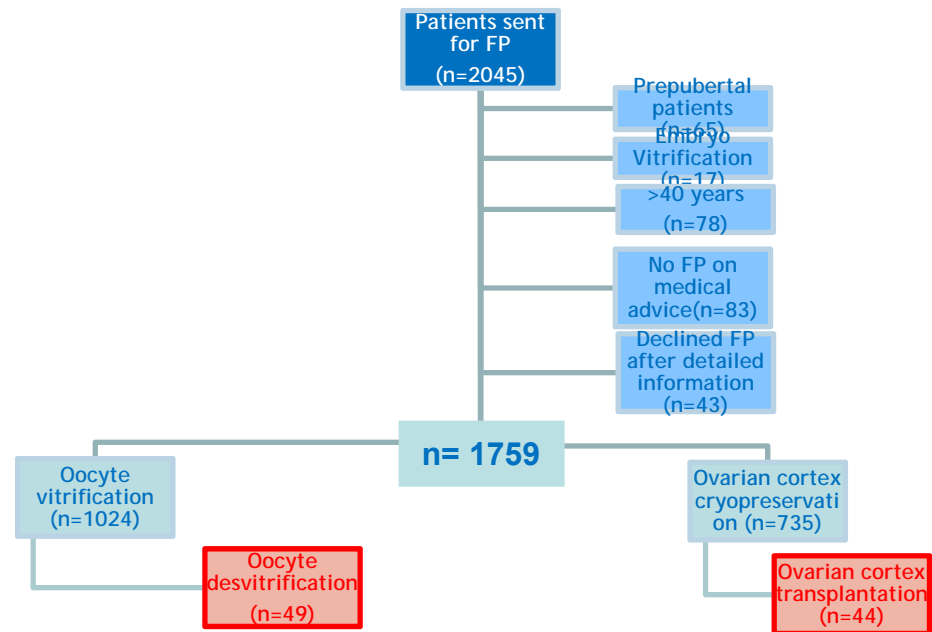


**DMSO**  
**CRYOCYTE BAGS**  
**SLOW FREEZING**  
**(PLANER MACHINE)**

## AFTER CANCER TREATMENT



# PATIENTS FLOW DIAGRAM



	Oocyte vitrification (n=49)	Ovarian cortex transplantation (n=44)
Clinical Pregnancy rate	20 (40.8%)	12 (27.3%)
Live birth rate	16 (32.7%)	8 (18.2%)

p = n.s.



# RECONOCIMIENTOS Y PREMIOS

## Premios ASRM

- Fundamentalmente destacan los 9 premios recibidos por la American Society for Reproductive Medicine, la Asociación más prestigiosa a nivel internacional del sector.

## Otros Premios

- 2 ASA (American Society of Andrology)
- 4 Salud 2000
- 12 SEF (Sociedad Española de Fertilidad)
- 4 SEGO (Sociedad Española de Ginecología y Obstetricia)
- Jaume I de Medicina Clínica (Prof. Pellicer y Prof. Simón)
- Premio NOVA (Mejor Empresa Sector Biomedicina) de la C.V
- **Medalla Oro de la Ciudad de Valencia** (Investigación + Docencia)
- Empresa catalogada como “Best Place to Work” – España 2008, 2009 y 2010
- Premio Empresa Revelación de la Comunidad Valenciana por la revista Actualidad Económica
- Premio Valencianos del Siglo XXI de Las Provincias
- Premio a la Innovación 2012 (Premio Emprendedores del Año de Ernst & Young)
- Premio Jacques Salat-Baroux 2014 de la Academia de Medicina de Francia al Prof. Antonio Pellicer
- Premio Embajadores de la Marca España en Ciencia e Innovación 2015 (Prof. Remohí y Prof. Pellicer)
- Medalla de Oro JM Dexeus 2016 (Prof. Pellicer)





# Reconocimientos del IVI

REGIONAL PROFILE

## Valencia's formula for getting ahead is by thinking big

The city on the east coast has become skilled in orchestrating large-scale projects and getting private and public sectors and even academia working together, writes Leslie Crawford

The devastation caused by Hurricane Katrina in New Orleans struck a special chord with the citizens of Valencia, Spain's third largest city.

Residents with long memories recall the terrifying floods of 1867, when the River Turia burst its banks and submerged most of the city, which was still recovering from the hardships of the Spanish civil war. Valencia appealed to Gen Francisco Franco for help, but none came.

Guided by the Valencians rebuilt the city themselves. A huge engineering enterprise to divert the course of the Turia south of the city was financed with a 1.6m€ levy on outgoing mail. The meandering, old river bed was covered into a park, providing a sunken haven of tranquillity in the heart of the bustling city.

Valencia's self-starting entrepreneurial spirit is still very much in evidence today. When you are a mid-sized regional capital, with fewer than 800,000 inhabitants, and have neither the financial pull of Madrid, nor the industrial clout of Barcelona, the drive to make things happen in your small patch is not a virtue but a necessity.

If you add to that the fact that the region's traditional industries - economy, car manufacturing, furniture and footwear - are under threat from globalisation, the need to reinvent yourself becomes imperative.

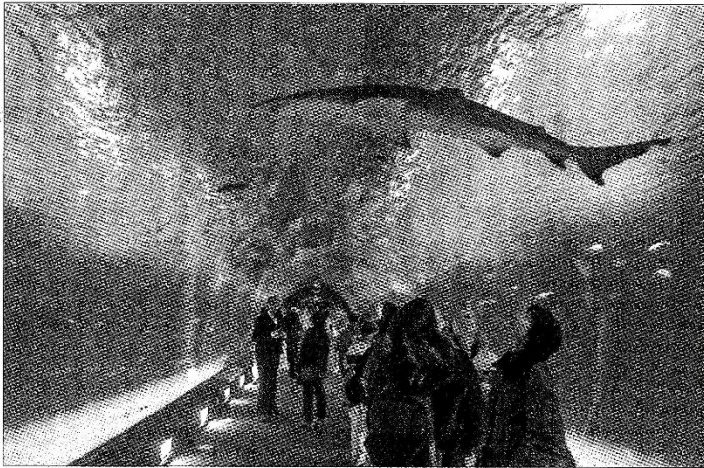
Valencia has gone about this with particular flair and ingenuity.

A 600m arts and science park, gracefully designed by local architect Santiago Calatrava and which includes the Oceanographic - Europe's largest marine park - and shortly to include the largest opera house in Europe, has become a magnet for the city's tourist industry. This has prompted no fewer than 15 low-cost airlines to include Valencia in their scheduled routes.

More than 2.5m tourists flew to Valencia in the first six months of 2005, a 50 per cent increase over the year before and a graphic illustration of how low-cost airlines are reshaping the Spanish tourist map. The hotel industry has responded by increasing capacity by 50 per cent in the last five years.

More hotels plan to open in time for the Americas Cup, which Valencia will host in 2007. The port area itself - a gritty industrial zone - is undergoing a €2bn facelift that is drawing comparisons with the renovation of Barcelona's waterfront for the 1992 Olympic Games.

But the city authorities are keen to stress that an elite sporting event will not have the same economic impact as hosting the Olympic Games. Welcome



Big fish: visitors at the Oceanographic marine park. The city has shown great flair and ingenuity in reinventing itself and has become a magnet for the tourist industry

though it may be, the city authorities are not predicating Valencia's economic revival on the Americas Cup. "We are not using the Americas Cup as a lure to get Valencia," says Juan Eduardo Santón, the city's economic development officer. "The fact that we were chosen to host the event is more a consequence of our dynamism, and the ability of our public and private institutions to work together."

"The indirect publicity for Valencia is invaluable," says Juan Delgado, marketing and sales director for the port authority in Valencia. "All the world's canneries will be trained on those beautiful yachts, with the port of Valencia as the backdrop. Everyone will know where we are. It will place us, at last, on the world map."

Mr Delgado spends much of his time in Asia, drumming up business for the port authority, and his presentations always begin with a map that locates Valencia on the Mediterranean. After 2007, that may no longer be necessary. His efforts have borne fruit. In 2003, Valencia overtook Barcelona in the handling of container traffic. It is now the third biggest port in southern Europe, after Gijón (Spain) in southern Italy and Algiers in Spain's northern tip, which mainly handles trans-shipments. Since 2000, Valencia has been the fastest growing port in southern Europe with a 52 per cent increase in tonnage handled. A logistics park that will add 600,000 sq m of warehouse space is expected to be ready this year.

China Shipping and the Geneva-based Mediterranean Shipping Company have both chosen Valencia as their Mediterranean hub, attracted by its modern facilities for very big container ships, and an ongoing expansion plan, which the construction of dedicated docking areas for individual shipping lines.

"We plan to build three smaller terminals in line with a tendency in the shipping business, which now prefers to have dedicated docking areas to cut waiting time at sea," Mr Delgado explains. "In that way, if bad weather or whatever delays your entry to port, there is no risk of losing your slot."

Valencia's dynamic trade fair is also planning to capitalise on the Americas Cup with a host of nautical and technical shows. Its recent expansion to

transform Forú Valencia into the largest exhibition space in Spain is yet another example of the philosophy that appears to drive the city build big, and the business will come.

At present, Forú Valencia has a 15 per cent share of trade fairs in Spain, measured by exhibitors, but its expansion leaves ample room for growth.

Last year, it held more than 50 shows which attracted 1.2m visitors and 18,000 exhibitors. IFMG, the consultant, estimates the Feria generated more than €70m in direct spending by visitors and exhibitors and sustains more than 8,400 jobs.

"The port authority and the Feria are the motors of Valencia's economic growth today," says Mr Santón. "The challenge now is to develop high-tech,

high value added activities centred on the knowledge economy."

Valencia is doing what every regional European city aspires to, but it pursuing its ambitions in a particularly effective way.

Unlike the rest of Spain, where academics rarely venture from their ivory towers, Valencia encourages its universities to develop partnerships with private sector companies in research projects and start-ups. One example is the Institut Valencià de Fertilidad (IVF), a Spanish leader in fertility treatments created by Antonio Pellicer, professor of obstetrics and gynaecology at the University of Valencia and his colleague José Benabí, a senior lecturer at the university.

The first thing a visitor sees at the IVF reception centre are walls covered with photos of happy babies - 12,530 of whom have been born to couples treated at the clinic over the past 16 years. IVF's success rate in pioneering fertility treatments has allowed the clinic to grow throughout Spain, and recently in Mexico. It has 400 professional staff, and 20 per cent of its patients come from abroad.

A good part of the income is invested in research at the IVI Foundation, a non-profit institute with ties to the universities of Manchester, Stanford, Adelaide and Kansas. It is a model for the kind of high-tech enterprise that should become the basis of Valencia's prosperity. "There is no lack of private money for investment," Mr Santón says. "What entrepreneurs are suffering from is a lack of ideas. One of my jobs is to marry the money to the ideas," Mr Santón says.

And here again, Valencia is thinking and spending big. It set up a centre for bio-medical research in 2002, which this year moved to €50m headquarters near Calatrava's arts and science complex.

The Prince Felipe Research Centre has begun to attract international scientists such as Miodrag Stojkovic, leader of the research team that produced the UK's first cloned human embryo at Newcastle University this year.


Christopher Edwards, Newcastle University's vice-chancellor, said the loss of Prof Stojkovic was a huge blow. "His move confirms our belief that if we are built to attract and keep world class scientists in the UK, we have to offer them the best facilities."

"What Valencia has created by aiding the Prince Felipe Research Centre in its City of Arts and Sciences is very much what Newcastle hopes to achieve by the development of Science City."






# OTRAS UNIDADES DE NEGOCIO



AN IVI GROUP DIVISION


About Us Services Contact

In IVICO our aim is to provide a number of services to assisted reproduction units worldwide on theoretical knowledge, training, and business/lab consultancy. We work to give answer to all your needs in IVF and for share all our know-how to achieve all your goals




**TEACHING**

Theoretical or practical lessons covering the most relevant knowledge in andrology, embryology, and reproductive genetics for both, established professionals aiming to be updated in the most cutting-edge knowledge in assisted reproduction, and also beginners aiming to have a strong theoretical background previous to the initiation of their careers as ART professionals.



**TRAINING**

Hands-on and fully customized training in all the Assisted Reproduction Techniques, including Andrology, IVF, Cryobiology and Preimplantational genetic screening, at IVI facilities, in a real clinical environment, where over 28000 cycles are performed each year. Tailor-made programs, with different length depending on the previous attendee background, also including the option of short guided visits to IVI centres.



**AUDIT & CONSULTING**

The Main goal of this part is to offer external consultancy services to ART units worldwide in Andrology and Embryology laboratories, by IVI experts; highly specialized professionals with a wide IVF running and setup experience, able to move for a period to the laboratories to be evaluated and counsellor. Troubleshooting, QC&QA, Performance auditing, and IVF labs design are some of the covered areas.

Web: [www.ivi-co.com](http://www.ivi-co.com)

## OTRAS UNIDADES DE NEGOCIO



**IVIDA** recoge, procesa, crio-conserva y almacena las células madre de la Sangre de Cordón Umbilical (SCU) para el tratamiento de diversas enfermedades como linfomas, leucemias o anemias, con la garantía de que será íntegramente gestionada por empleados de la compañía (en nuestras propias instalaciones), **asegurando así su trazabilidad y completo control sobre todo el proceso.**



IVI)

# AGRADECIMIENTO

A todas y todos los profesionales que desde su  
puesto de trabajo hacen cada día IVI

