

ORGANS

Capsules for transplants

| Organ transplantation. History

Organ transplants have been a milestone in the treatment of many diseases that affect the deterioration or loss of human organs. Since successfully performed the first heart transplant by Dr. Barnard and several decades later, research has not stopped and it has been developed exponentially.

Spain is one of the leading countries in organ transplants and this year has reached 100,000 organ transplants. It is also the country in which more organ donations occur, indicating that the high sensitivity of Spain around this need.

However, despite the level of development achieved in recent years around the world, it is still only possible to use organs within hours after the death of the donor.

It remains unresolved adequately the long distance transportation and especially the suitable cryopreservation (including the correct dosage of the cryo-preserved) that prevents avoid problems of aqueous crystallization in organs preserved and get the correct vitrification thereof, and their correct thawing for later use.



| COOLING |

Allow controlled cooling of the body in a certain time for proper vitrification.



| TRANSPORT |

For transporting organs with dry ice (CO2) or simple water ice.



| CONSERVATION |

Capsules for proper preservation of organs at cryogenic temperature

Cryocapsules for transplants allow organ preservation at temperatures near -196°C.



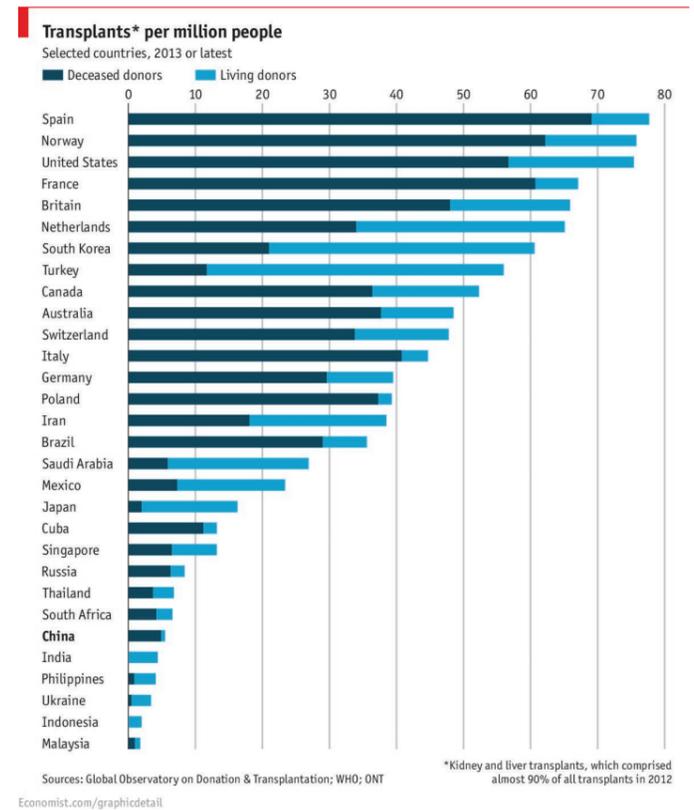
| Capsules for organs to transplant

Our thermoplastic cryo-capsules for organs have been designed specifically for preservation in the context of the transplant process.

GIBiomed collaborates with its technology in the most promising scientific research to achieve cryopreservation (without crystallization or fractures) indefinitely and subsequent reuse of human organs in patients who need them. For this it brings capsule controlled cooling and monitoring (by CT) the exact contribution of cryo-preserved, which is key to ensuring the process.

Currently, the team with which GIBiomed has signed an important agreement has already been successful with organs of mammals, and it seems that in the very short term this technique will be developed similarly to human organs.

Undoubtedly, this milestone is another social and medical unprecedented revolution that will totally change the context of organ transplants in the world, able to improve and extend the lives of many people.



The capsule includes features for easy storage and lightweight transport of the organ preserving it through various types of refrigerants according to current requirements like water ice, dry ice and ultimately the use of liquid nitrogen (or other refrigerants to comply air transport regulations) maintaining the organ at temperatures near -196 ° C. An additional feature is that our cryocapsule may friendly define and display outside the correct storage temperature as a function of cryopreserved organ.

The Thermoplastic transport capsule increases safety, autonomy and control of the constant maintenance, ensuring this part of the process.

The capsule with controlled cooling will be key in the final stages and above all in the final process of cooling the cryopreserved organs.

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Key Points

| The product

According to the procedures used today for human organ transplantation GIBiomed manufactures capsules for the standard preservation of organs at the required temperatures above 0°C. However we are prepared for the very near future stage of advanced cryopreservation and subsequent thawing of organs for transplants where different technology is used -recently and only experimentally-available today for smaller mammals organ cryopreserved trasplanting.

Cryogenic temperatures will be required at the GIBIOMED's specific human organ cryopreservation capsules that should be used to cryopreserve and transport then human organs for transplant while in perfect conditions for storage process.

These Organ Cryopreservation Capsules may incorporate a refillable LN2 tank and/or a liquid nitrogen generator (active in land transport but inactive on flights where LN2 is substituted by dry ice). That will allow to Medical Transplant Authorities worldwide to ensure a safe storing and transporting of all organs donated in these GIBiomed organ cryopreservation capsules and take them anywhere in the world where needed.



| GIBiomed Patent

Capsules for transplants are legally protected by various international patents granted worldwide exclusive the right to market this product to GIBiomed.

