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ACRO Biomedical to conduct trials on acellular cornea product

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ACRO has successfully performed world's first canine corneal transplantation using ABCcollaÃ?Â® Collagen Ophthalmic Matrix.



ACRO Biomedical Co., Ltd., the first company in the world to utilize “supercritical CO_2 extraction technology” on cleansing animal tissues and organs, has been approved by the Department of Health and Welfare for conducting human clinical trials on the acellular cornea product, “ABCcolla® Collagen Ophthalmic Matrix.” The clinical trials are currently being conducted in four major medical centers in Taiwan.

Corneal transplants are difficult to perform and often result in transplant rejection. Therefore, patients having undergone transplant surgery have to take anti-rejection medicines on a regular basis for their whole life. After years of research and development, ACRO has successfully utilized an old technology called “supercritical CO_2 extraction technology” on removing cells, fat, non-collagenous proteins, and anything that would cause immune rejection from animal tissues and organs including skin, bone, cartilage, cornea, blood vessel, nerve, heart, kidney, liver, pancreas, and brain. Many of the products have received approval from USFDA, Singapore, Vietnam, Philippines, Thailand, and Taiwan FDA.

ABCcolla® Collagen Ophthalmic Matrix is an acellular porcine cornea prepared by supercritical CO2 extraction technology, which consists of natural corneal collagen scaffold. It is intended for corneal transplantation in replacement of human donated cornea. The natural corneal collagen scaffold is suitable for limbo stem cells to migrate, attach, proliferate, and differentiate into the right cell types and restores the full function of a natural cornea. ACRO has successfully performed world’s first canine corneal transplantation in using ABCcolla® Collagen Ophthalmic Matrix. A pet dog Chihuahua went from blind to visible in just one month, and the case was interviewed and broadcasted in North America by Discovery Channel.

ACRO has also licensed out the product to Oculus BioMed for launching simultaneous clinical trials in Australia. For the global patent map, ACRO has acquired patents from Taiwan, USA, Japan, South Korea, and EU for the preparation of acellular corneas by utilizing supercritical CO_2 extraction technology. Patents from India, Hong Kong, and China are also on their way. Related papers has also been published in international journal and more than ten important seminars on ophthalmology. The approval for human clinical trials will bring great opportunities to the treatment for vision loss caused by the acquired injury.

ACRO’s technology is highly efficient, low cost, time-saving, in comparison to other products in the market that are decellularized with acid-base solutions or organic solvents. Thus, it greatly reduces the chance of allergy and immune rejection and inspires future development of the global regenerative medicine.