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Israel's Matricelf collaborates with Japan's CiRA Foundation to advance next-gen regenerative manufacturing

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Matricelf will assess the integration of iPSCs produced by the CiRA Foundation into its proprietary neural tissue engineering platform



Matricelf, a biotechnology startup based in Israel developing a novel autologous engineered neural tissue therapy for patients with spinal cord injury, has entered into a Collaborative Research Agreement with the CiRA Foundation, a global leader in induced pluripotent stem cell (iPSC) research and regenerative medicine.

The collaboration represents a strategic step toward evaluating advanced manufacturing approaches that may enable scalable, efficient, and cost-effective production of regenerative therapies.

Under the agreement, Matricelf will assess the integration of iPSCs produced by the CiRA Foundation into its proprietary neural tissue engineering platform. The objective is to evaluate whether combining these technologies can support the development of an automated, large-scale manufacturing process for engineered neural tissues.

Japan-based CiRA Foundation, established in 2019 as an extension of the Center for iPS Cell Research and Application at Kyoto University, is a global pioneer in the development and manufacturing of GMP-grade iPSCs.

As part of the collaboration, CiRA Foundation will supply iPSCs derived from 3 healthy donors. Matricelf will use these cells to evaluate the feasibility of generating engineered neural tissues in combination with its proprietary hydrogel platform based on human extracellular matrix. The resulting tissues will be assessed based on predefined criteria, including neural marker expression at the genetic and protein levels, as well as functional electrical activity.

Successful outcomes from this research may indicate compatibility between the platforms and support the future development of a scalable manufacturing solution, aligned with Matricelf's long-term strategy to broaden access to regenerative therapies.