CISION

AIVITA Biomedical's Stem Cell Therapeutic in Vision Loss Published in Investigative Ophthalmology & Vision Science

IRVINE, Calif., Oct. 9, 2020 /PRNewswire/ -- AIVITA Biomedical, Inc., a private biotechnology company developing personalized vaccines for the treatment of cancer and COVID-19, announced today the publication of the peer-reviewed manuscript, "Retina organoid transplants develop photoreceptors and improve visual function in RCS rats with RPE dysfunction," in the journal Investigative Ophthalmology & Visual Science. The study, led by researchers at AIVITA Biomedical and the Sue & Bill Gross Stem Cell Research Center of the University of California, Irvine, used 3D-retina organoids generated from human stem cells developed by AIVITA to provide insight into the potential use of transplanted retina organoids as a therapeutic option for blinding diseases.

In the study, transplanted retina organoid sheets were examined to determine if human stem cell-derived photoreceptors could develop, survive and function *in vivo* without the support of healthy retina pigment epithelium (RPE). Visual function was examined through a variety of tests, including optokinetic testing (OKT), electroretinogram (ERG), and superior colliculus (SC) brain recording. These tests concluded that retina organoid transplantations demonstrated significant improvement in visual function compared to non-surgery and sham surgery controls, supporting the application of AIVITA's stem cell technologies in visual disease therapeutics.

"Leveraging our expertise in stem cell growth and differentiation, I'm excited to see the promise of our technology platform in potential therapeutics for vision loss," said Hans Keirstead, Ph.D., chief executive officer of AIVITA and a contributing author to the paper. "To our knowledge, this study is the first to show that it's possible for photoreceptors derived from stem cells to survive and function after transplantation when a host has a dysfunctional RPE."

This work is supported by funding from the California Institute for Regenerative Medicine (CIRM) and National Institutes of Health (NIH).

About AIVITA Biomedical

AIVITA Biomedical is a privately held company engaged in the advancement of commercial and clinical-stage programs utilizing curative and regenerative medicines. Founded in 2016 by pioneers in the stem cell industry, AIVITA Biomedical utilizes its expertise in stem cell growth and directed, high-purity differentiation to enable safe, efficient and economical manufacturing systems which support its therapeutic pipeline and commercial line of skin care products. All proceeds from the sale of AIVITA's skin care products support the treatment of people with cancer.

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