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ASIA EDITION

GE Healthcare joins CMRI to optimize gene therapy manufacturing

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The collaboration with Children's Medical Research Institute will boost the efficiency of AAV purification, leading to increased access to the viral vectors needed to manufacture gene therapies



GE Healthcare Life Sciences and Children's Medical Research Institute will jointly drive the development of new affinity ligands for the purification of adeno-associated viral (AAV) vectors used in gene therapies. The focus of the collaboration is to bring to market-specific ligands for multiple AAV types, enhancing the chromatographic separation of AAV-based vectors. This will improve the manufacturing efficiency and scalability of gene therapies, enabling the availability of viral vectors on a global scale.

With more than 800 gene therapies currently in clinical trials, there is an increasing demand for the raw materials needed in the manufacturing process of viral vectors. AAVs are viral vectors used in more than 70% of the in vivo gene therapy clinical trials. According to GlobalData, the 2025 gene therapy in vivo therapeutic market is expected to reach USD 32 billion with an estimated CAGR of 105% between 2019-2025.

The collaboration combines the expertise from the latest available research on AAVs with application testing, advancing a comprehensive understanding of the clinical functionality and the commercial opportunities of AAV-based gene therapies. Children's Medical Research Institute will share with GE Healthcare Life Sciences AAV capsid variants targeting different tissues. GE Healthcare Life Sciences will then design and test ligand prototypes, which Children's Medical Research Institute will assess. Based on the performance results, GE Healthcare Life Sciences will manufacture and commercialize novel improved AAV affinity ligands.

Dr Leszek Lisowski, the lead gene therapy scientist at Children's Medical Research Institute, says: "Bringing the fruits of our work to the patients requires a joint effort between academia and the industry. The collaboration with GE Healthcare Life Sciences will allow us to expedite the development of novel clinical options at a lower cost."

Olivier Loeillot, General Manager, Bioprocess at GE Healthcare Life Sciences, says: "The industry needs better and more personalized technologies to speed biopharmaceuticals through clinical trials and bring them to market. Our long biomanufacturing expertise combined with Children's Medical Research Institute's pioneering research will lead to purification

technologies that will streamline the production of gene therapies."

Catarina Flyborg, General Manager, Cell and Gene Therapy at GE Healthcare Life Sciences, says: "Collaborations with organizations such as Children's Medical Research Institute are critical to developing the technologies needed to move the industry forward. By working directly with world-class researchers, GE Healthcare Life Sciences can develop the purification technologies that will contribute to increasing the availability of viral vectors globally."

Children's Medical Research Institute in Australia is globally recognized for its work on microsurgery, cancer research, neurobiology, embryology and gene therapy. The AAV affinity ligands resulting from this collaboration will be compatible with GE Healthcare Life Sciences' resin-based chromatography portfolio used in the purification of most FDA-approved biopharmaceuticals.