

Consortium

Consortium for Gene Therapy and Regenerative Medicine

遺伝子治療・再生医療コンソーシアム

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In recent years, gene and cell therapy and regenerative medicine have been actively researched and developed, leading to an increasingly close relationship between these fields, both scientifically and in clinical practice. They share many common target diseases as well as overlapping technologies. Based on this background, researchers in gene and cell therapy and regenerative medicine at IMSUT have worked closely together to establish a consortium aimed at building an international hub for these fields. This consortium brings together IMSUT's human resources and technological strengths, encompassing not only gene and cell therapy and regenerative medicine, but also research in ELSI (ethical, legal, and social issues) and regulatory science, to promote cutting-edge research. As part of these activities, four research support projects—namely, the viral vector manufacturing and provision infrastructure development project, the test manufacturing support project (vector), the test manufacturing support project (cell), and the commercialization strategy support project—were selected as representatives of the AMED Acceleration Program of R&D and Implementation for Regenerative Medicine and Cell and Gene Therapy, with support commencing in FY2023. Through these initiatives, we aim to provide comprehensive support to facilitate the realization and implementation of gene and cell therapy and regenerative medicine in Japan. The following are our recent advances.

Regulatory Approval and Clinical Implementation of the World's First Academia-Originated Oncolytic Virus Therapy for Brain Tumors

- Development of a virus that induces selective cancer cell death

- Currently provided as insured clinical care at the IMSUT Hospital

Clinical Translation of Novel Therapeutic Technologies Developed at the Gene and Cell Therapy Center

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- Cell therapy for muscular dystrophy using amniotic mesenchymal stromal cells
 - Low-dose vector gene therapy for inherited diseases
 - Industrialization of rapid, high-precision vector purification technology

Cell Processing Facility

- Supports cell product manufacturing from collection to clinical delivery

- Licensed as a manufacturer of “regenerative medical products”

Therapeutic Vector Development Center

- Academia’s first GMP-compliant viral vector manufacturing facility (ISO 9001 certified)
- Expansion with Vector Unit II: New GMP facility for production of adeno-associated virus (AAV) and lentiviral vectors