

“New Treatment Options for Kidney Cancer Patients” GIST faculty startup PeLeMed selected for 3 billion won ‘Scale-up TIPS’ project

- Joint research between PeLeMed Co., Ltd. and Professor Jang-hee Han's research team at Seoul National University Hospital... Receives 3 billion KRW in government R&D support until June 2029

- Pursuing a path from 'candidate substance advancement' to 'preclinical research' with the goal of overcoming drug resistance in existing targeted therapies

- Pursuing entry into Phase 1 clinical trials following Investigational New Drug (IND) approval... Also aiming for technology transfer to global pharmaceutical companies



▲ Yong-Chul Kim, CEO of GIST faculty startup PeLeMed Co., Ltd. (Professor of Life Sciences).

The Gwangju Institute of Science and Technology (GIST, President Kichul Lim) announced that a project to develop a next-generation kidney cancer treatment, jointly pursued by GIST faculty startup PeLeMed Co., Ltd. (CEO Yong-Chul Kim, Professor of Life Sciences) and Professor Jang-hee Han's research team at Seoul National University Hospital, has been finally selected as a "Policy-Designated Project" under the "2026 Scale-up TIPS (Technology Development Program Linked with Investment and Financing)" program by the Ministry of Science and ICT and the Ministry of SMEs and Startups.

"Scale-up TIPS" is a program that supports the technological innovation and growth of promising small and medium-sized enterprises (SMEs) and venture companies in their growth stages by linking private investment with government R&D. The Policy-

Designated Project is a method in which government ministries identify and recommend promising companies based on policy needs and key support strategies.

With this selection, PeLeMed Co., Ltd. will receive a total of 3 billion won in government R&D support over three years, from July 2026 to June 2029, to develop a treatment to overcome drug resistance to existing targeted therapies for kidney cancer and to actively pursue non-clinical research for entry into clinical trials.

Kidney cancer is a cancer that occurs in the kidneys, and as the tumor grows, it creates new blood vessels to supply oxygen and nutrients.

Accordingly, "targeted therapies" that selectively block specific substances or signals involved in cancer growth are utilized in the treatment of kidney cancer; a representative example is the "vascular endothelial growth factor receptor (VEGFR) targeted therapy," which inhibits the formation of blood vessels around cancer cells.

However, there is a limitation in that long-term treatment can lead to reduced therapeutic efficacy as cancer cells adapt to the drugs and develop resistance.

In response, through this project, PeLeMed Co., Ltd. plans to develop a therapeutic agent that simultaneously inhibits the signaling pathways of "VEGFR2," which regulates angiogenesis, and "YAP (Yes-associated protein)," a protein involved in cancer cell survival and drug resistance. This strategy aims to control not only cancer angiogenesis but also drug resistance.

Through this project, PeLeMed will proceed in stages with the advancement of kidney cancer treatment candidates, verification of therapeutic efficacy and biomarkers using patient-derived models, and securing non-clinical data necessary for clinical entry, such as toxicity testing.

In particular, PeLeMed plans to confirm the therapeutic efficacy of the candidate substance and discover and validate biomarkers capable of predicting drug response by utilizing clinical specimens, including 'patient-derived tumor organoids' that replicate the characteristics of actual tumors by culturing tumor cells in three dimensions, 'patient-derived xenografts (PDX)' in which tumor tissue is transplanted into experimental animals, and tumor tissues obtained from patients.

Based on these research results, PeLeMed intends to proceed with entry into Phase 1 clinical trials following approval of the Investigational New Drug Application (IND) for the new drug candidate, while also pursuing a license-out with global pharmaceutical companies.

CEO Kim Yong-chul stated, "The selection for the Policy-Designated Scale-up TIPS program is a significant achievement that recognizes PeLeMed's capabilities in developing novel anticancer drugs and its potential for global commercialization." He added, "We will collaborate closely with researchers at Seoul National University Hospital to develop a treatment that can serve as a new therapeutic option for kidney cancer patients and accelerate our entry into the global market."

Meanwhile, PeLeMed is a GIST faculty startup established in 2019 based on novel anticancer drug technology developed by Professor Yong-Chul Kim's Laboratory of Drug Discovery at the Department of Life Sciences. The company is currently developing novel anticancer drugs to treat intractable cancers and overcome drug resistance to existing treatments.

PeLeMed is developing various anticancer drug candidates, including treatments for acute myeloid leukemia (AML), solid tumors such as kidney cancer, and antibody-drug conjugates (ADCs), by utilizing selective drug design technology targeting cancer development mechanisms and artificial intelligence (AI)-based drug development technology. Based on this, PeLeMed is pursuing commercialization through global technology transfer and joint development.