

GIST selected for 11 billion won 'AI Support Program for Top-Tier Emerging Researchers'... Developing core technologies for next-generation medical AI

- Led by GIST with joint participation from Sungkyunkwan University, the project aims to develop core medical AI technologies and train early-career researchers by 2031

- It connects the entire spectrum from disease detection to health management through a continuum of "Scientist AI," "Clinician AI," and "Personal Physician AI," while pursuing clinical validation and prototyping in collaboration with hospitals and companies



▲ *Participating researchers from GIST and Sungkyunkwan University pose for a commemorative photo at the first kick-off workshop held at GIST on September 4, following their selection for the "AI Top-Tier Early-Career Researcher Support Program." (From left) Professors Mansu Kim, JiYeon Kang, and Sung Chan Jun (GIST Dept. of AI); Professor Hyun-jin Park (Sungkyunkwan Univ. School of Electronic and Electrical Engineering); Professor Hyunju Lee (GIST Dept. of AI); Professors Il-yong Jeon (School of Electronic and Electrical Engineering) and Hyun-seung Chu and Gyu-hong Sim (Dept. of Software); and Professor Lee Seung-won (School of Medicine) from Sungkyunkwan University.*

The Gwangju Institute of Science and Technology (GIST; President Lim Ki-chul) announced that it has been selected for an interdisciplinary project under the "2026 AI

Top-Tier Early-Career Researcher Support Program," an initiative driven by the Ministry of Science and ICT and the Institute of Information & Communications Technology Planning & Evaluation (IITP).

Through this selection, GIST will develop core technologies for next-generation medical AI and foster top-tier early-career researchers to lead this field.

** early-career researcher: Refers to a postdoctoral researcher or a faculty member within seven years of their initial appointment.*

The project will run for five and a half years, from July 2026 to December 2031, with total government R&D funding of 11 billion KRW. GIST will serve as the lead institution, with Sungkyunkwan University participating as a joint research and development partner.

Specifically, Professor Hyunju Lee of the GIST Department of AI will serve as the principal investigator, while Professor Hyun-jin Park of Sungkyunkwan University will serve as the co-principal investigator.

Participating early-career researchers include Professors Mansu Kim and JiYeon Kang (GIST Dept. of AI) and Professor Geonho (GIST Dept. of Mathematical Sciences), as well as Professors Seung-won Lee (Sungkyunkwan Univ. School of Medicine), Il-yong Jeon (School of Electronic and Electrical Engineering), and Gyu-hong Sim (Dept. of Software). Mid-career researchers Professor Sung Chan Jun of the GIST Department of AI and Professor Hyun-seung Chu of the Sungkyunkwan University Department of Software will jointly lead the project.

The core of this research is the development of "MIND" (Medical INtelligence for Discovery, Diagnosis, and Daily care), which is a foundational technology enabling AI to perform distinct roles across various medical contexts, ranging from disease discovery and clinical decision-making to daily health management.

The research team plans to develop three specific "medical AI" technologies that constitute the MIND system and integrate them into a unified medical AI framework.

"Scientist AI" analyzes complex medical data, such as multi-omics (genomic and proteomic data), medical imaging, and single-cell data, to elucidate the pathogenesis of cancer and brain diseases and to identify novel biomarkers and therapeutic targets.

"Clinician AI" operates reliably across diverse environments (varying hospitals, patients, medical equipment, and testing methods) to predict diagnoses, prognoses, and treatment responses, while also providing the rationale for its assessments and indicating levels of uncertainty.

"Home Doctor AI" analyzes long-term lifestyle data, including sleep, activity, and behavioral patterns collected via wearables and in-home sensors, to detect early warning signs of health issues.

To validate the developed medical AI technologies in real-world clinical settings, the team plans to collaborate with hospitals and companies, such as Samsung Medical Center, Vuno, and Neurophet, on multi-center clinical validation and prototype development.

Cultivating world-class, next-generation researchers in the field of medical AI is another key objective of this project.

The team intends to empower early-career researchers to lead studies as independent Project Leaders (PLs) rather than mere participating researchers; in addition to providing research funding, the team will supply the necessary GPU infrastructure, clinical data, hospital networks, and opportunities for international collaborative research.

This initiative establishes a research environment where early-career researchers can grow into world-class, independent researchers by gaining hands-on experience across the entire spectrum from the development of core medical AI technologies to clinical validation and commercialization.

Professor Hyunju Lee stated, "Through this project, we aim to connect medical AI research with actual clinical settings and daily life, while creating an environment where early-career researchers can take the lead in demonstrating their research capabilities."