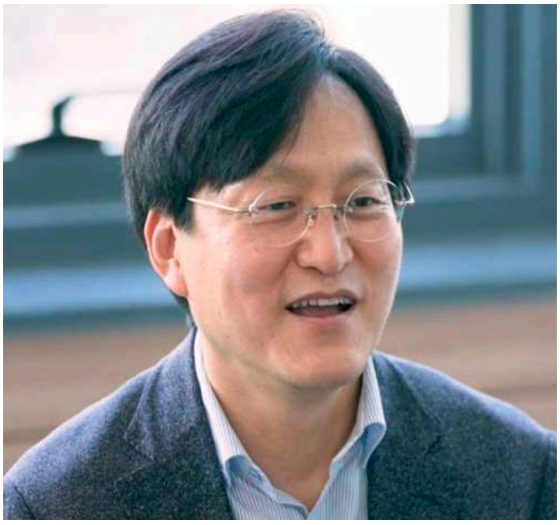
GIST, selected as a global leading research center (IRC/advanced bio) and supported by 50 billion won for 10 years

- ‘AI-based Large Molecule Research Center’ led by Professor Jin-Hee Ahn of the Department of Chemistry, pioneering the ‘large molecule’ field that does not include existing small molecule drugs (such as aspirin) or large molecule drugs (such as vaccines)
- Promoting original research and new drug development (including antibody drug conjugates (ADC)) through the establishment of a large molecule platform... “Leading game-changing technology innovation”
- Collaboration with industry (Ligachem Bioscience Co., Ltd., Heetsu Co., Ltd.), research institutes (Korea Institute of Chemical Technology), university hospitals (Seoul National University Hospital), and international research groups (Caltech, Harvard Medical School, etc.)
- Participation of GIST faculty with startup experience, contributing to technology development, technology transfer, and commercialization beyond academic boundaries



▲ GIST Department of Chemistry Professor Jin-Hee Ahn

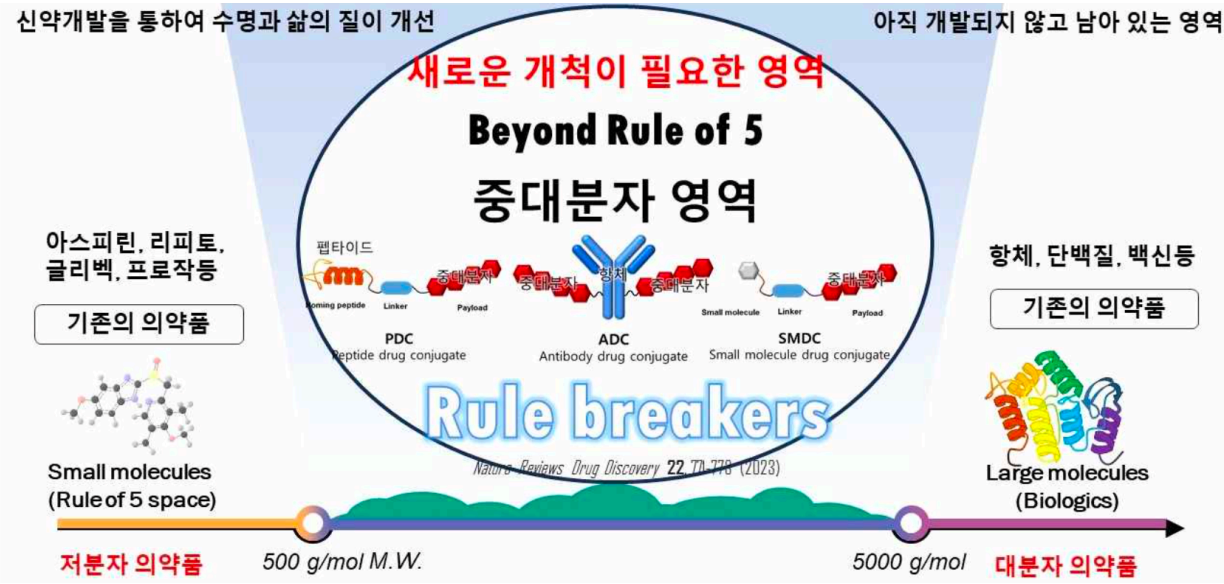
The Gwangju Institute of Science and Technology (GIST, President Kichul Lim) announced that the ‘Artificial Intelligence (AI)-based Large Molecule Research Center (Director: Professor Jin-Hee Ahn, Department of Chemistry)’ was selected for the 2024 Global Leading Research Center (IRC) support project hosted by the Ministry of Science and ICT.

The Ministry of Science and ICT announced the results of the selection for ‘Global Leader Research’ and ‘Global Leading Research Center’, which support the best researchers and research groups in Korea among basic research projects, on the 25th, and the ‘AI-based Large Molecule Research Center’ led by Professor Jin-Hee Ahn was selected as an IRC (Innovation Research Center) among the global leading research centers and will receive research funds of up to 5 billion won per year for up to 10 years.

Pharmaceuticals developed so far are largely classified into small molecule compounds with a molecular weight of 500 or less (small molecule or rule of 5 region) or large molecule pharmaceuticals (or biopharmaceuticals) such as antibodies and protein drugs. The mid-sized molecule region (beyond rule of 5

region or rule breaker region) located in the middle of these two is attracting attention as a new field of new drug development.

Professor Jin-Hee Ahn, who proposed a research topic on the large molecule area that requires new development in the field of new drug development, plans to build a large molecule platform and conduct research on original technologies based on it while promoting new drug development.



▲ Overview of research in the area of large molecules

In particular, this study, which pursues an open innovation strategy, is expected to create new research results through university research institutes and industry-academia-research collaboration on technologies and ideas that companies need.

To this end, excellent industry-academia-research-hospital and international research groups (Caltech, Harvard Medical School, etc.) including GIST, industry (Riga Chemba IoScience Co., Ltd., HITSU Co., Ltd.), research institutes (Korea Research Institute of Chemical Technology), and university hospitals (Seoul National University Hospital) are expected to participate in the 'AI-based Large Molecule Research Center' research.

In addition, the business division will be joined by GIST faculty members with experience in starting companies: ▲ Professor Jin-Hee Ahn of the Department of Chemistry (JD Bioscience Inc.), ▲ Professor Yong-Chul Kim of the School of Life Sciences (Pelemed Inc.), ▲ Professor Hansoo Park of the Department of Biomedical Science and Engineering (Genome & Company Inc.), ▲ Professor Hong Kook Kim of the School of Electrical Engineering and Computer Science (AunionAI Inc.), and ▲ Professor Min-Gon Kim of the Department of Chemistry (GMD Biotech Inc.). They are expected to contribute to technology development, technology transfer, and commercialization beyond interdisciplinary boundaries.

Professor Jin-Hee Ahn said, "To achieve research innovation in the field of large molecules for industrial development in the advanced bio field, one of the 'three game-changing technologies' in Korea, long-term collaboration with various research institutes at home and abroad is the most important task."

Meanwhile, the Innovation Research Center (IRC) is a project to support excellent research groups of the Ministry of Science and ICT aimed at ▲ building a 'world-class research base' by integrating research capabilities and human resources in

specialized fields of universities into a sustainable research institute system, and ▲ strengthening the role of universities in strengthening mission-centered R&D capabilities and fostering talent in strategic technology fields, and establishing a cooperative system between industry, academia, and research in related fields.

A total of 98 research groups applied for this year's Leading Research Center project, and 18 centers were finally selected through a comprehensive evaluation of the creativity and originality of the research, and the capabilities of the joint research team. Among them, 4 centers (2 Advanced Bio, 1 Next-Generation Communication, and 1 Quantum), including GIST's 'AI-based Large Molecule Research Center', were named in the innovative project (IRC), which will provide an unprecedented average of 5 billion won in research funds per year for up to 10 years.

President Kichul Kim said, "GIST has set a goal of providing solutions to solve the challenges of humanity and the nation, and is spurring the domestic production of medical devices and the commercialization of new drugs through mission-oriented R&D in the healthcare security field including advanced biotechnology. We are leading the creation of the biomedical industry in the Jeonnam region through the establishment of the GIST-Jeonnam Advanced Bio Campus in the Hwasun Vaccine Industrial Complex. In the selection process for this Global Leading Research Center (IRC), we also expressed our policy of full support at the university level.

President Lim also said, "It is expected that the 'AI-based Large Molecule Research Center' to be established through the leading research project will be able to provide a breakthrough in overcoming new pandemics and aging medical crisis that the world is facing."

GIST
Since 1993