

1. FOSTERING REGIONAL INNOVATION TALENT IN PRECISION MEDICINE

Precision Medicine Convergence Major

- ✓ Purpose and Objectives
 - To cultivate convergence talents in the field of precision medicine who possess not only knowledge related to data but also various practical skills required in actual medical and bio fields. These talents will be able to connect the regional IT, medical, and biomedical sectors
- ✓ Eligibility for Gangwon LRS Shared University Innovation Talent
 - Students enrolled in universities offering the Precision Medicine Convergence Major within the Gangwon Regional Innovation Platform.*
 - Students who can apply for the convergence major according to the academic management regulations of their affiliated universities.
 - Students who have completed or are expected to complete at least two semesters in their undergraduate program (excluding seasonal classes).
 - Students who have an overall GPA of 3.0/4.5 (2.88/4.3) or higher up to the semester prior to the application semester, or those recommended by a professor from their university.
 - * Catholic Kwandong University, Gangneung-Wonju National University, Gangwon National University, Sangji University, Yonsei University Mirae Campus, Halla University, Hallym University.

Microdegree

- ✓ Purpose and Objectives
 - To designate 3-5 convergence major subjects into various curriculum tracks and provide a small-unit academic curriculum that certifies the academic achievement of students who complete the modules at the shared university.
 - Eligible Participants : Students enrolled in universities participating in the Gangwon Regional Innovation Platform and residents or employees in Gangwon Special Self-Governing Province.
 - Benefits of Participation: Payment of innovation talent support funds and issuance of certificates.
 - * Existing innovation talent selectees and residents or employees are not eligible for innovation talent support funds.

Micro-Contract Department

- ✓ Operate industry-customized specialized curriculum tracks linked to employment through micro-contract departments.
- Establish a new micro-contract department track with Naver Cloud.

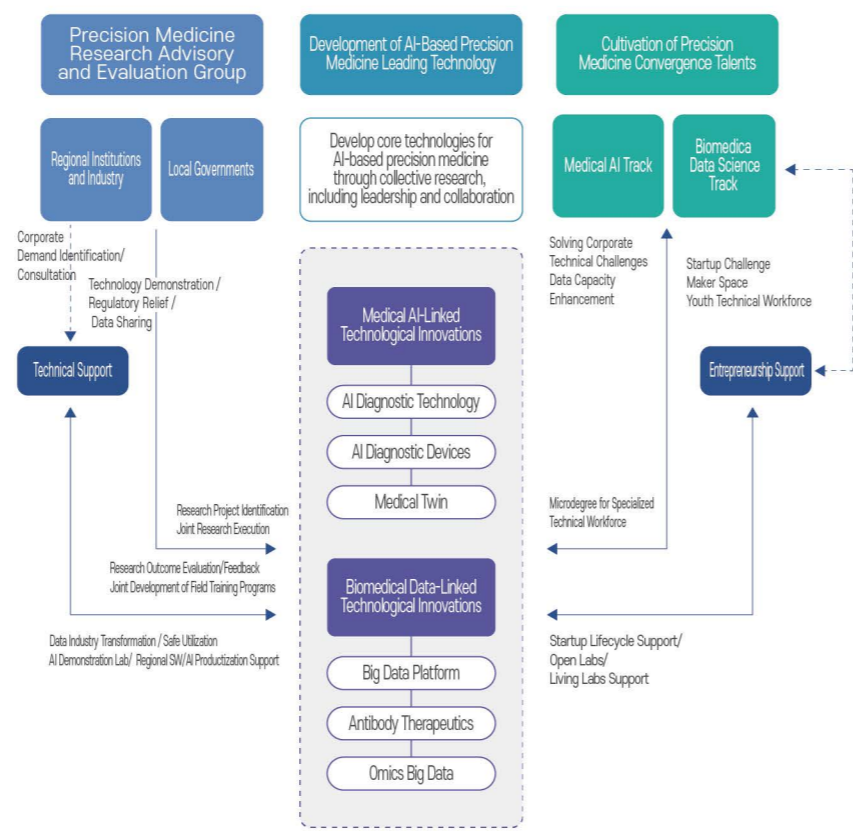
Track Names	Curriculum Details	Completion Requirements	
		Mandatory Courses	Mandatory Extra Curricular Activities
Cloud Engineer Track	Developer courses for cloud systems.	18 credits	Completion of 2 or more designated extra curricular activities.
Cloud STAF Track	Courses covering cloud industry sales, planning, marketing, and more.	9 credits	Completion of 3 or more designated extra curricular activities.

Extra Curricular Programs

- ✓ Purpose and Objectives
 - To offer tailored educational programs through short-term intensive courses and track-based programs focused on precision medicine big data analysis and artificial intelligence.
 - Additionally, to enhance student creativity through various related competitions.

Program Names	Content
Extracurricular Program Linked to Medical Informatics Courses	<ul style="list-style-type: none"> Operating experiential practical courses and educational programs in precision medicine research, including clinical research design, big data visualization, basic/advanced analysis, AI techniques, genome analysis, and big data interpretation.
Precision Medicine Big Data Education Program	<ul style="list-style-type: none"> Data Labeler and pseudonymization, and cultivate skilled SW/AI convergence research personnel with practical capabilities. Employment Support Through a consortium of participating companies, provide employment support, field training, and practical project labs to cultivate skilled smart SW/AI personnel.
Precision Medicine Big Data/ AI Hackathon and Idea Competition	<ul style="list-style-type: none"> Holding various AI Hackathon and Idea Competition (solution design, hackathons, and makerthons.)
Intensive Bootcamp During Vacations	<ul style="list-style-type: none"> Medical Science Statistical Analysis Practical SW Education Program Precision Medicine Big Data Education Program

2. DEVELOPMENT OF AI-BASED PRECISION MEDICINE LEADING TECHNOLOGY



Purpose

To develop core technologies for personalized medical services based on medical big data through a big data platform and AI solutions.

Fields

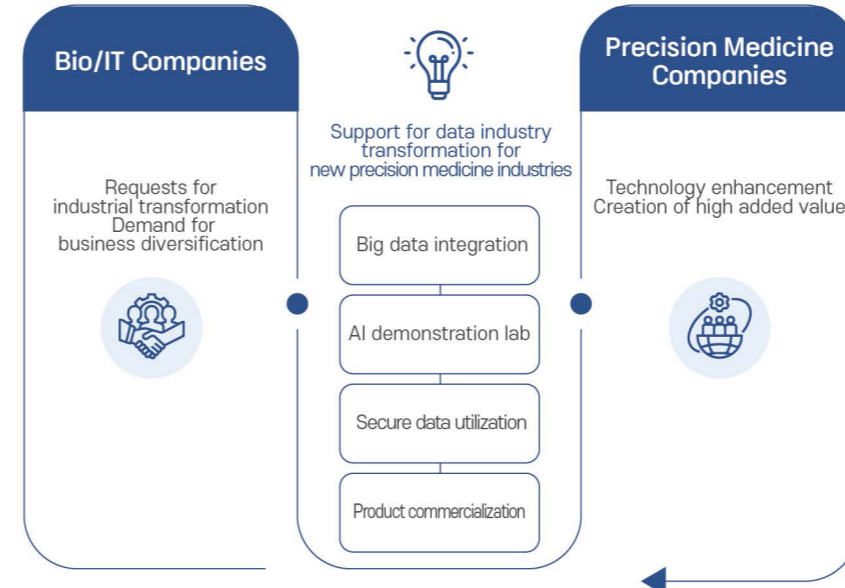
AI-Based Precision Medicine, Omics and Medical Big Data Platform, AI-Based Disease Prediction and Diagnosis, Medical Twin-Based Virtual Clinical Trials, Machine Learning-Based Biomarkers and Antibody Therapeutics, Precision Medicine Big Data Analysis System

Target Participants

Full-time and part-time faculty of universities participating in the Gangwon RIS project, Companies in Gangwon Province, Hospitals in Gangwon Province, Researchers from innovation institutions in Gangwon Province

Classification	Content	Project Scale
Short-Term Projects	Projects lasting less than 1 year, selected through a public call.	Up to 100 million KRW
Mid-Term Projects	Projects lasting 2 to 3 years, selected through a public call.	Up to 500 million KRW
Long-Term Projects	Projects lasting 5 years, pursued as designated projects.	Up to 400 million KRW

3. SUPPORT FOR DATA INDUSTRY TRANSFORMATION FOR NEW PRECISION MEDICINE INDUSTRIES



Public and Private Precision Medicine Data Integration and Utilization System

- (Technology Enhancement) Promoting mentoring projects to guide local precision medicine companies in data industry transformation.
- (Data Integration and Utilization) Supporting the standardization and construction of Clinical Data Warehouses (CDW) for each hospital to establish a health and medical data utilization system.
- (Experience Service Development) Supporting companies that develop experience services using big data to secure channels for collecting health data.

Establishing a Secure Utilization System for Precision Medicine Data

- (Building Data Safe Zones) Supporting the establishment of data safe zones in three key areas to ensure the safe opening of sensitive data.
- (Supporting Safe Data Utilization) Assisting companies lacking in data processing and security solutions to handle sensitive data like personal information, thereby creating a safe data utilization foundation.

Building a Precision Medicine Big Data Cluster for Commercialization Support

- (Business Transformation) Encouraging data-based business transformation and diversification for local companies, including bio companies, to establish a precision medicine industrial cluster.
- (SW/AI Development Support Center) Establishing a development support center through the activation of software development and technical support for local precision medicine companies. This includes utilizing a tech master talent pool for technology transfer, solving technical issues, and providing technical training for employees, thereby fulfilling the role of a technical support center within the precision medicine industrial cluster.

4. GDV PRECISION MEDICINE STARTUP CHALLENGE AND COMPREHENSIVE ENTREPRENEURSHIP SUPPORT

01 GANGWON REGION PRECISION MEDICINE BIG DATA STARTUP SUPPORT

- To identify and support (prospective) entrepreneurs with precision medicine big data-based startup ideas, ensuring successful startup activities.
- ✓ Target Participants
 - Professors, Ph.D.-level researchers, undergraduate and graduate students, and individuals with startup ideas from participating universities.
 - Funding for commercialization, including prototype production costs.
 - Startup investment acceleration support, including investment IR demo days.
 - Consulting for startup commercialization.

02 BECOME A FACILITATOR PROGRAM

- To train facilitators who help group members actively participate and interact according to effective techniques and procedures to achieve their goals.
- ✓ Target Participants:
 - Undergraduate and graduate students from participating universities, and participants of the Healthy Gangwon Living Lab Project.
 - Innovation talent support funds upon completion.
 - * Existing innovation talent selectees and employed individuals are not eligible for support funds

03 THE HEALTHY GANGWON LIVING LAB PROJECT

- To conduct experimental projects that allow participants to verify startup ideas or business models related to precision medicine big data.
- ✓ Target Participants
 - Undergraduate and graduate students from participating universities, Gangwon residents, and companies.
 - Team-specific experiment funds (varies by track) and professional coordinator support.
 - Subsequent support for related business projects upon successful startup.

04 GANGWON TITO WORKSHOP AND PRECISION MEDICINE IDEATHON

- To gather various stakeholders in Gangwon Province for workshops to understand living labs and concretize ideas, culminating in an ideathon.
 - * Bonus points for Healthy Gangwon Living Lab-Project applications for winners of the precision medicine ideathon.
- ✓ Target Participants
 - Undergraduate and graduate students from participating universities, and participants of the Precision Medicine Project's extra curricular programs.
 - Innovation talent support funds for 100% participation in the education program.
 - * Existing innovation talent selectees and employed individuals are not eligible for support funds.

05 GANGWON LIVING LAB FORUM VOL. 2

- To review and consolidate the year's living lab programs in a forum, featuring expert lectures and citizen workshops, providing a comprehensive understanding of the situation in Gangwon Province.
- Innovation talent support funds for participation in citizen workshops.
 - * Existing innovation talent selectees and employed individuals are not eligible for support funds.
- Additional support funds for participants of facilitator training who serve as facilitators during the forum.

STUDENT SUPPORT

Cultivating Talent for Precision Medicine Convergence Major

- (Target Participants) Students selected as innovation talents at Gangwon LRS Shared University.
- (Financial Support) 500,000 KRW per 3 credits per semester, up to 1,500,000 KRW. (Including seasonal semesters, a maximum of 2,000,000 KRW)

Data-Based Extracurricular Program Support

- (Programs) Big data and precision medicine-based programs, hackathons and competitions, data labeling, and employment programs.
- (Target Participants) Undergraduate students from participating universities.
- (Benefits) Innovation talent support funds according to program-specific criteria.

ENTREPRENEURSHIP SUPPORT PROGRAM INNOVATION TALENT SUPPORT FUNDS AND FOLLOW-UP PROGRAMS

Gangwon Region Big Data Startup Academy

- (Target Participants) Undergraduate and graduate students from participating universities.
- Entrepreneurship education and consulting, including idea discovery and business development based on mini I-Corps (entrepreneurship track), Practical training on developing machine learning MVPs using AWS (employment track).
- Innovation talent support funds upon completion of each course
 - * Existing innovation talent selectees and employed individuals are not eligible for support funds.

Entrepreneurship Club

- (Target Participants) Undergraduate and graduate students from participating universities.
- Funding for prototype production and other entrepreneurship club activities, Basic entrepreneurship education and special lectures, Consulting for enhancing startup ideas.
- Innovation talent support funds upon completion of club activities.
 - * Existing innovation talent selectees and employed individuals are not eligible for * support funds.

Startup Competition

- (Target Participants) Undergraduate and graduate students from participating universities.
- Presentation of team-based startup ideas (items) to select outstanding ideas.
- Awarding of top teams and opportunities to participate in follow-up startup programs.

CORPORATE SUPPORT

Classification	Support Content	Support Scale
Technological Advancement	• Provide consulting for technical diagnosis and improvement plans to enhance Technology Readiness Levels (TRL).	Up to 50 million KRW per company.
Support for Big Data Experience Services Development	• Funding for the development of MyData experience services using big data.	Up to 10 billion KRW per company.
Support for Data Safe Utilization Solutions	• Provide solutions for safe data utilization. ① Anonymization processing, ② Implementation of safe utilization solutions, ③ Development of big data AI/SW, ④ Personal data protection.	Up to 3 million KRW per company.
Development of Technical Solutions	• AI/SW-Based Precision Medicine Technical Solutions ① Prototype production, ② Technology transfer.	Up to 5.5 million KRW per company.

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I CONTACT INFORMATION I

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GANGWON REGIONAL INNOVATION PLATFORM PRECISION MEDICINE PROJECT TEAM

Overall Lead University

KANGWON NATIONAL UNIVERSITY

Central University

GANGNEUNG-WONJU NATIONAL UNIVERSITY

YONSEI UNIVERSITY

Participating University

CATHOLIC KWANDONG UNIVERSITY

GANGNEUNG YEONGDONG COLLEGE

GANGWON STATE UNIVERSITY

KYUNGDOONG UNIVERSITY

SANGJI UNIVERSITY

SAEKYUNG COLLEGE

SONGGOK UNIVERSITY

SONGHO UNIVERSITY

CHUNCHEON NATIONAL UNIVERSITY OF EDUCATION

HALLA UNIVERSITY

HALLYM UNIVERSITY

HALLYM POLYTECHNIC UNIVERSITY

GANGWON REGIONAL INNOVATION PLATFORM PRECISION MEDICINE PROJECT

Introduction

- ✓ Definition
 - The project aims to establish an ecosystem for personalized medical services (prevention, diagnosis, treatment) based on medical big data using big data platforms and AI solutions.
- ✓ Vision and Goals
 - To build a leading regional ecosystem for the precision medicine industry.
- ✓ Implementation Strategies
 - ✓ Enhancing Major Competencies and Fostering Convergence Talent
 - Train future medical data and AI talents to address healthcare disparities and strengthen the fragile industrial base in Gangwon Province.
 - ✓ Leading Future Technologies and Service Development
 - Promote standardized health and medical data utilization and personalized disease treatment research for innovative medical AI development.
 - ✓ Strengthening Corporate Competitiveness and Capabilities
 - Establish a public-private linked research data utilization platform and foster local companies in related fields.
 - ✓ Building an Entrepreneurship Growth Ecosystem
 - Identify excellent models >> Demonstrate data linkage >> Reward and commercialize innovative technologies, and provide full-cycle support for precision >> medicine big data startups.

