University: Fujita Health University (University Functions to be Enhanced: ①, ②)

inappropriate environmental factors, lifestyle, and age-related decline in brain adaptability

Collaborators: Hamamatsu University School of Medicine, National Institute for Physiological Sciences, Gifu Pharmaceutical University

Participators: Nagoya University, Mental and Neurological Medical Research Center, Nara Institute of Science and Technology, Quantum Science Research Development Organization, Toyohashi University of Technology, University of Helsinki, University of Tübingen, Cardiff University, Massachusetts Institute of Technology, University of California Irvine, Duke University, University of North

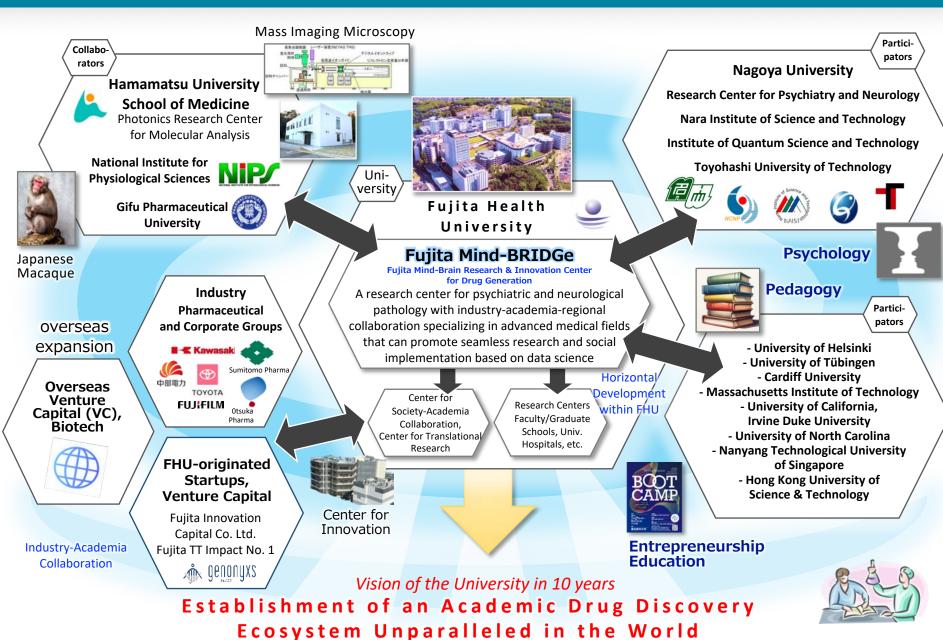
Cardiff University, Massachusetts Institute of Technology, University of California Irvine, Duke University, University of North Carolina, Nanyang Technological University in Singapore, Hong Kong University of Science and Technology. Summary Global Issue: Brain Diseases and Mental Disorders; i.e. Schizophrenia, Bipolar Disorder, Alzheimer's Disease R&D ecosystem integrating data science, advanced medical science, Fostering diverse human resources and career paths that Strategy and humanities and social sciences challenge original and innovative research Strategy 1 **Participators** FHU Investment of **Support Programs for** to Achieve Univ. of Tübingen, **Research Physician Young Professors and** Grad. & Int'l Students the Vision management Nagoya Univ., etc **Training Program Junior Pls** resources Support for graduate Mentoring and Actively promote Al-based students and Mind-BRIDGe training graduate drug young professors, international students in Strengthen research capabilities by upgrading students and young Center for their daily lives, screening Recruitment of laboratories and cutting-edge equipment, and physicians who Entrepreneurial and (Translational) promote system reforms to strengthen system iunior Pls aspire to become presentation skills Research the network research physicians education Lead Rent and research expenses compounds Data Scientist Technical Scientist Innovation Center Occupancy by companies and Training Program Training Program A portion of profits development start-ups déveloping drug Gifu returned to new compound discovery, diagnostics and devices Pharm. the university's Establish job classifications to secure Establish a new Data Science course in Univ. research fund excellent research and technical personnel, the PhD program of Grad. Sch. of Medicine Entrepreneurship Compounds Domestic and and improve their compensation. education Practice data-driven research foreign VCs Startups Fujita Principal Tech. Scientist · Bioinformatics **Fujita Innovation** Application: Senior Chief Tech. Scientist · Al Analysis Capital Co. Ltd. etc. Mind-BRIDGe · Mathematical modeling Chief Tech. Scientist · Database creation, etc. Overseas Realization of advanced Overseas Tech. Scientist rgest patient-derived genome sample set expansion Clinical Trials in Japan, patient-derived iPSs and organoids, patient data from the largest teaching **Global Impact of the University** Strategy Strategy Sustainable Research to Create Future Society lospital in Japan, drug discovery seeds Proposing an academic field that integrates psychiatry, neurology, pediatrics, psychology, education, and and identification of lead Establishment of satellite laboratories, overseas offices, cutting-edge neuroscience research to pursue lifelong brain health, growth, social adaptation, and resilience compounds, University of Helsinki 💜 and cooperative bases Satellite Laboratory University of California, Fundamental problem of modern society: unresolved issues involving the brain and Irvine mind that emerge throughout life and cause great social and economic loss. Satellite Lab Shanghai Jiao Tong University Cooperation Base **Dhaka University Duke University** Cooperation Base Satellite Lab Honolulu Office Nanyang Technological University Cooperation Base and humanities, and business will participate beyond the conventional framework to create a future society by protecting the brain Strengthening brain circulation by sending young researchers abroad with neurodegenerative diseases throughout life through drug discovery, disease prevention, and lifestyle and education reform. Accepting and strengthening support for Number of patients with psychiatric disorders international students and researchers **Establishment of Advisory Board** Significant social loss associated with psychosocial stress.

International

Symposiums

International symposia and lecture series

Framework



Program for Forming Japan's Peak Research Universities (J-PEAKS)

Fujita Mind-BRIDGe: a 10-year plan to establish a "World-Class Academic Drug Discovery Ecosystem"

Targets

FY2025

FY2026

FY2027

FY2028

FY2029

Year 10

Strategy 1: Realize a hub for R&D and the ecosystem

- Establish drug discovery, neurodevelopment departments, and open labs., introduction of drug candidate screening and discovery equipment.
- Set up the Research Base Expansion Committee.
- Establish data science labs.
- Introduce mass spectrometry (FHU), mass imaging devices (HUSM), 7T-MRI (NIPS), and other analysis equipment at each university/institute.
- Develop molecular and cellular biological analytical systems using metabolomics and spatial gene/protein expression with multi-omics.
- Strengthen histological and functional analysis by introducing imaging systems into open labs, common equipment facilities, and animal experimentation facilities.
- Introduce electron microscope systems enabling spatial morphological analysis of cells at the Open Facility Center.

detection systems and

new technologies.

social implementation of

Contribute to solving social issues through the practical application of integrated research results in the medical and health fields.



Strategy 2: Promote Sustainable Research

- Promote translational research and integrating broad expertise.
- Prepare for the next-gen medical development.
- Build an academic-driven drug discovery platform.
- Strengthen translational research seed exploration.
- Expand integrated research with psychology and education.
- Strengthen screening of new compounds.

Note: Implement plans during the period even if outside specified years (same approach applies to other areas).

- Expand systems across the institution by Year 3 (also for other goals).
- Develop Al-based diagnostic and stratification methods.
- Real-world data (RWD) analysis.
- Deepen industry-academia collaboration.
- Accelerate translational research seed exploration.
 Full-scale synthesis and evaluation of new compounds with Gifu PU.
- Conduct preclinical trials and preparing for clinical trials.
- Begin clinical application of target disease seeds, including early disease
 Create startups.
 Realize success
 academic-drive
 - Realize success stories in academic-driven drug discovery.
 - Establish an international research network.

Strategy 3: Fostering human resources and career



- Start the recruitment and training of research doctors, junior PIs, data scientists, young researchers, research technicians, URA, etc.
- Provide education and support for graduates (entrepreneurship, presentations, etc.).
- Full-scale support for research doctors, data scientists, etc., achieving a reduction in clinical duties for research doctors.
- Start full-scale operation of the research technician training program.
- Strengthen the development system for young researchers, including junior PIs.
- Start full-scale operation of a talent exchange program with overseas bases.
- Expand the URA office and establishing the URA Center by the same year.
- Expand the research doctor training program.
- Actively support participation of graduates and young researchers in overseas symposia, etc.
- By the end of the year, train 10 research doctors, 4 junior Pls, 10 data scientists, 10 young researchers, 15 research technicians, and 5 URA staff members.
- Achieve the goal of increasing talent, including doubling the number of research doctors, data scientists, and graduate students by FY2029.
- Establish an international brain circulation program.

Strategy 4: University Global Impact



- Establish satellite labs and overseas hubs.
- Strengthen the support of international students and foreign researchers.
- Establish an advisory board of renowned international researchers.
- Host international symposia.
- Start short-term stays for young researchers at satellite labs.
- Strengthen the functions of overseas cooperation bases.
- Provide support for international students and foreign researchers.
- Continue and implement various efforts.
- Expand systems and knowledge related to internationalization across the institution.
- Mid-term evaluation by the advisory board.
- Continue and implement each effort.
- Strengthen the overseas research network.
- Implement reforms based on the advisory board's evaluation.
- Establish a research network through satellite labs and cooperation bases.
- Evaluation by the advisory board.
- Expand the knowledge and systems of the project to external institutions.
- Implement reforms based on the advisory board's evaluation.
- Returning researchers and international students recruiting the next generation of overseas researchers and international students.