Goal9 Realization of a mentally healthy and dynamic society by increasing peace of mind and vitality by 2050.

MOONSHOT RESEARCH & DEVELOPMENT PROGRAM

Realization of a society where child abuse, depression and suicide are "zero"

● **Project manager**

(selected in 2023)

HISHIMOTO Akitoyo

Kobe University Graduate School of Medicine, Professor

● **Leader's institution**

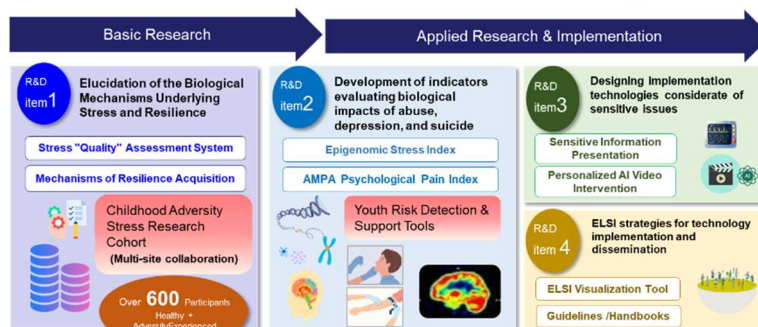Kobe University

● **R&D institutions**

Kobe University

Fujita Health University

Keio University

Yokohama City University

Summary of the project

By leveraging our proprietary epigenomic data from juvenile suicide cases and innovative AMPA receptor-based brain technologies, we aim to: 1）develop biomarkers that visualize risks and recovery from abuse, depression, and suicide in youth; 2) uncover biological mechanisms of stress and resilience from early adversity; 3) design evidence-based systems to support emotional regulation; 4) identify ethical, legal, and social barriers to real-world implementation. These efforts seek to make invisible risks visible, reveal therapeutic targets, and advance a society free from child abuse, depression, and suicide.
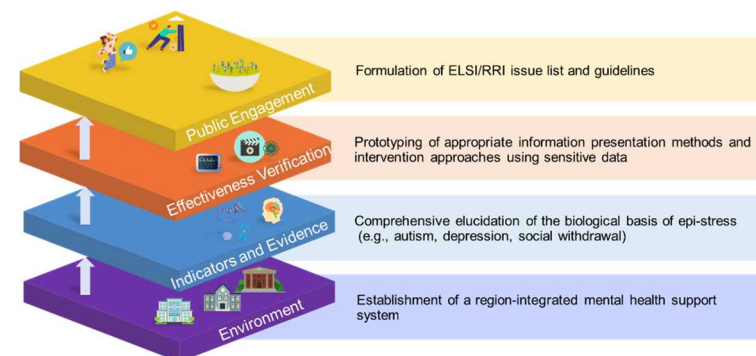

Milestone by the end of the project (2032)

Development and validation of "*the Youth Mental Stress and Resilience Test* (YM-STAR)":

To establish non-invasive and feasible biological markers capable of predicting child abuse and suicide risk, and to evaluate their applicability and effectiveness in clinical, welfare, and educational support settings.

Milestone by the end of the project (2027)

Epigenomic age and related data were analyzed in 400 individuals, with additional assessment of information impact and ELSI awareness.

Project structure

New R&D items have been launched this year to study stress from childhood adversity and promote implementation strategies for real-world impact.

Principal investigators (PIs)

R&D Item 1: Comprehensive Elucidation of Biological Mechanisms
FURUYASHIKI Tomoyuki (Kobe University)
MAKINODAN Manabu (Fujita Health University)
R&D Item 2: Discovery of Novel Biomarkers for the Well-being
OTSUKA Ikuo (Kobe University)
MIYAZAKI Tomoyuki (Yokohama City University)
R&D Item 3: Biomarker-Based Feedback and Intervention
TERADA Tsutomu (Kobe University)
R&D Item 4: Frameworks for ELSI and RRI for Innovation
SHINEHA Ryuma (Keio University)

JST Japan Science and Technology Agency