



FS

## 「Study of reservoir functions that support resilience\* of the brain and its enhancement to overcome dementia」

**ISA Tadashi PM**

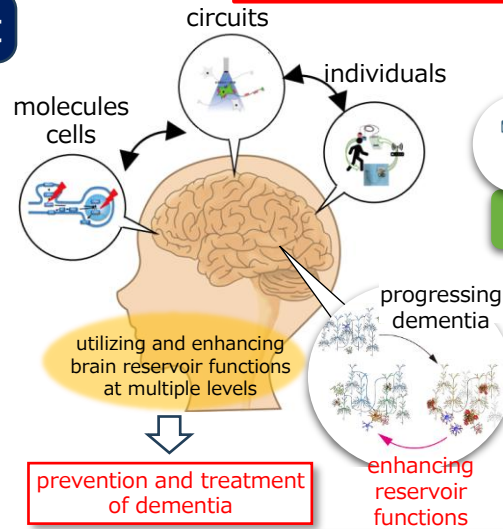
(Director General, National Institute for Physiological Sciences, The National Institutes of Natural Sciences)

\*resilience : ability to overcome difficulties flexibly and recover

**Creating a society where individuals can maintain resilient and healthy brain until reaching 100 years old**

### Outline of R&D Project

We will develop methods to enhance cognitive function by promoting the reservoir function, which involves inducing the activation and plasticity of intact neurons, in addition to traditional methods that prevent Alzheimer's disease pathology. Through this, we aim to realize a society where people can maintain a healthy brain up to the age of 100.



**Prevention and treatment of dementia by utilizing and enhancing brain reservoir functions**

Providing feasible technologies for clinical applications

Developing **methods to enhance reservoir functions** such as inflammation control, energy metabolism, cell transplantation, and compensatory circuits

Revealing reservoir functions at multiple levels (molecules, cells, circuits, individuals)

Identifying factors that enhance brain resilience from cohort and clinical data

### Expected Breakthroughs by 2040

- Finding promising reservoir functions to treat dementia.
- Developing methods to enhance reservoir functions.
- Creating prevention and treatment of dementia by utilizing and enhancing brain reservoir functions.