



## 「Understanding and harnessing the role of the gut microbiome in healthy longevity」

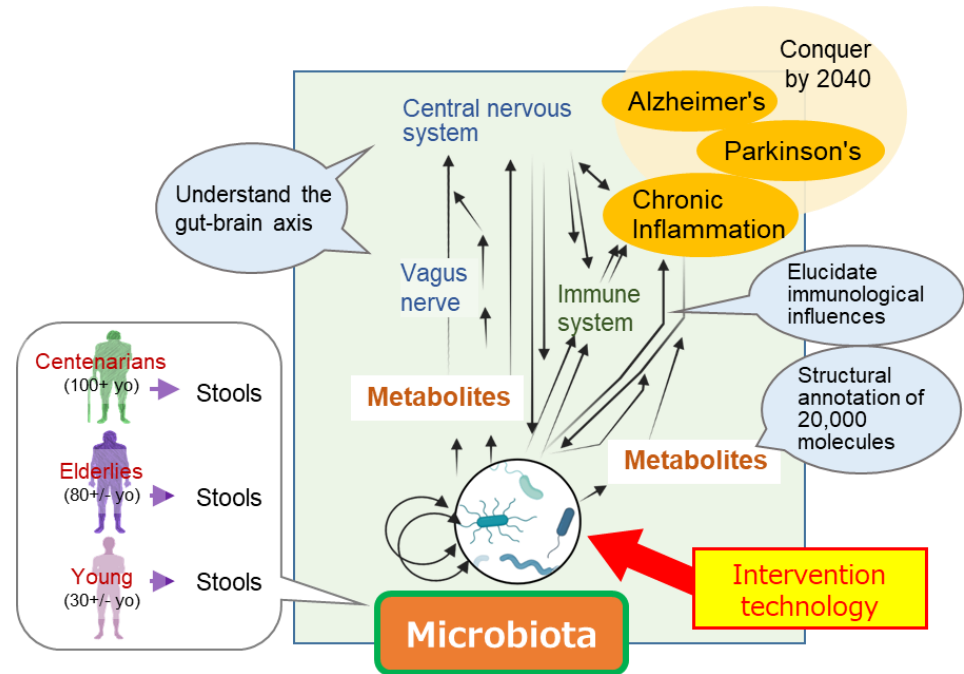
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### Outline of P&D Project

We will illuminate the structure of metabolites produced by intestinal microbiota, which are currently poorly defined, and understand their operating principles as well as their effects on the nervous and immune systems.

Through these studies, we aim to conquer Alzheimer's disease, Parkinson's disease, and chronic inflammation, realizing the unprecedented prevention and treatment methods.



### Expected Breakthroughs by 2040

- Structurally annotate more than 20,000 metabolites derived from intestinal microbiota and leverage the knowledge for the remote health monitoring and disease management.
- Extend cohorts of centenarians and build the world's largest data resource.
- Understand the molecular and cellular basis of the gut-brain axis and develop "connector" molecules that can artificially manipulate neural networks.
- Control chronic inflammation and neurological disorders by rational manipulation of intestinal microbiota through the dietary and other interventions.