

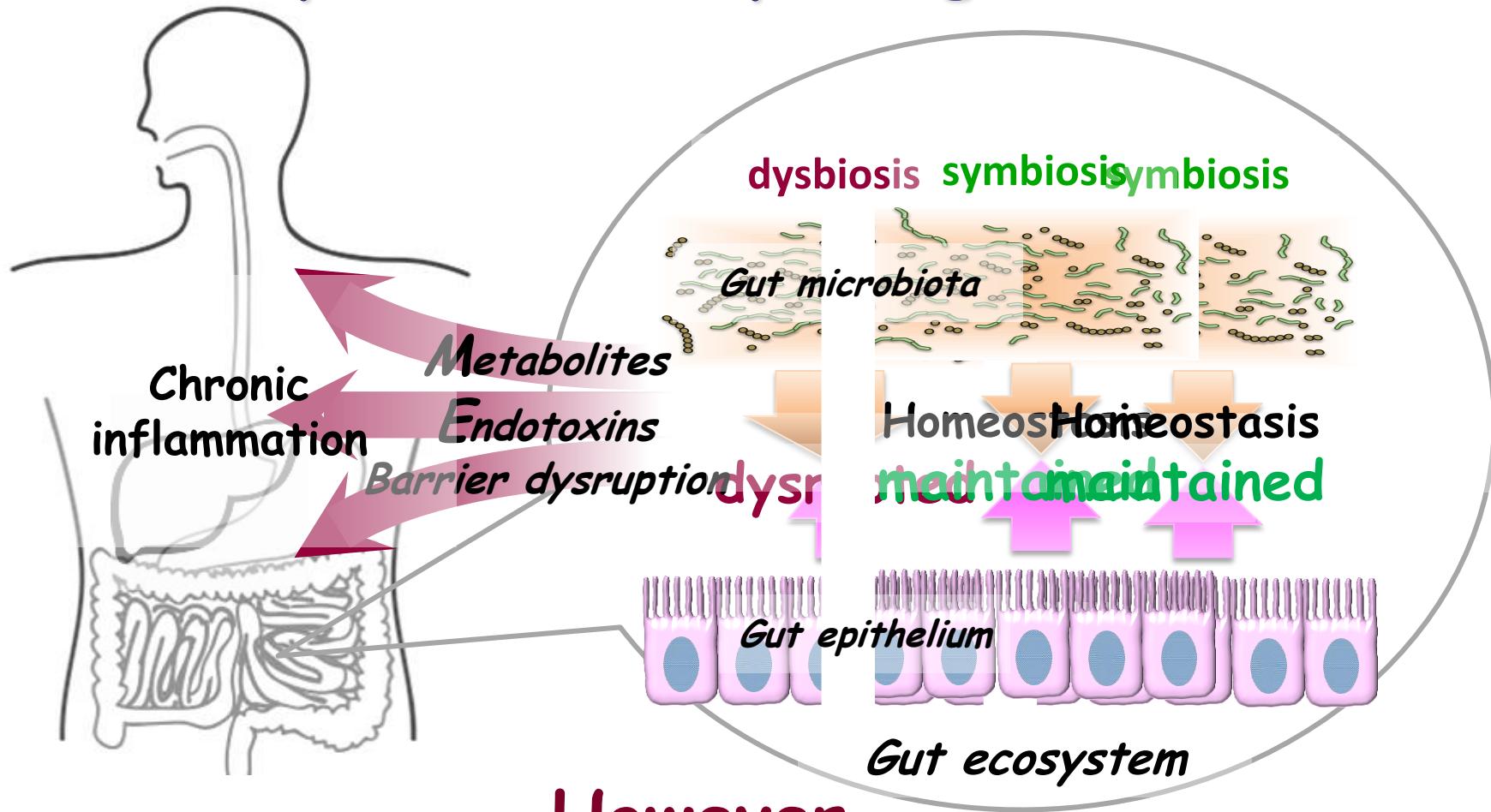
Symposium 7 - OECD Session (Microbiome)
Human Genome Meeting 2018
March 14, 2018
PACIFICO Yokohama, Japan

Integrated “Omics” for
understanding gut ecosystem

Hiroshi Ohno

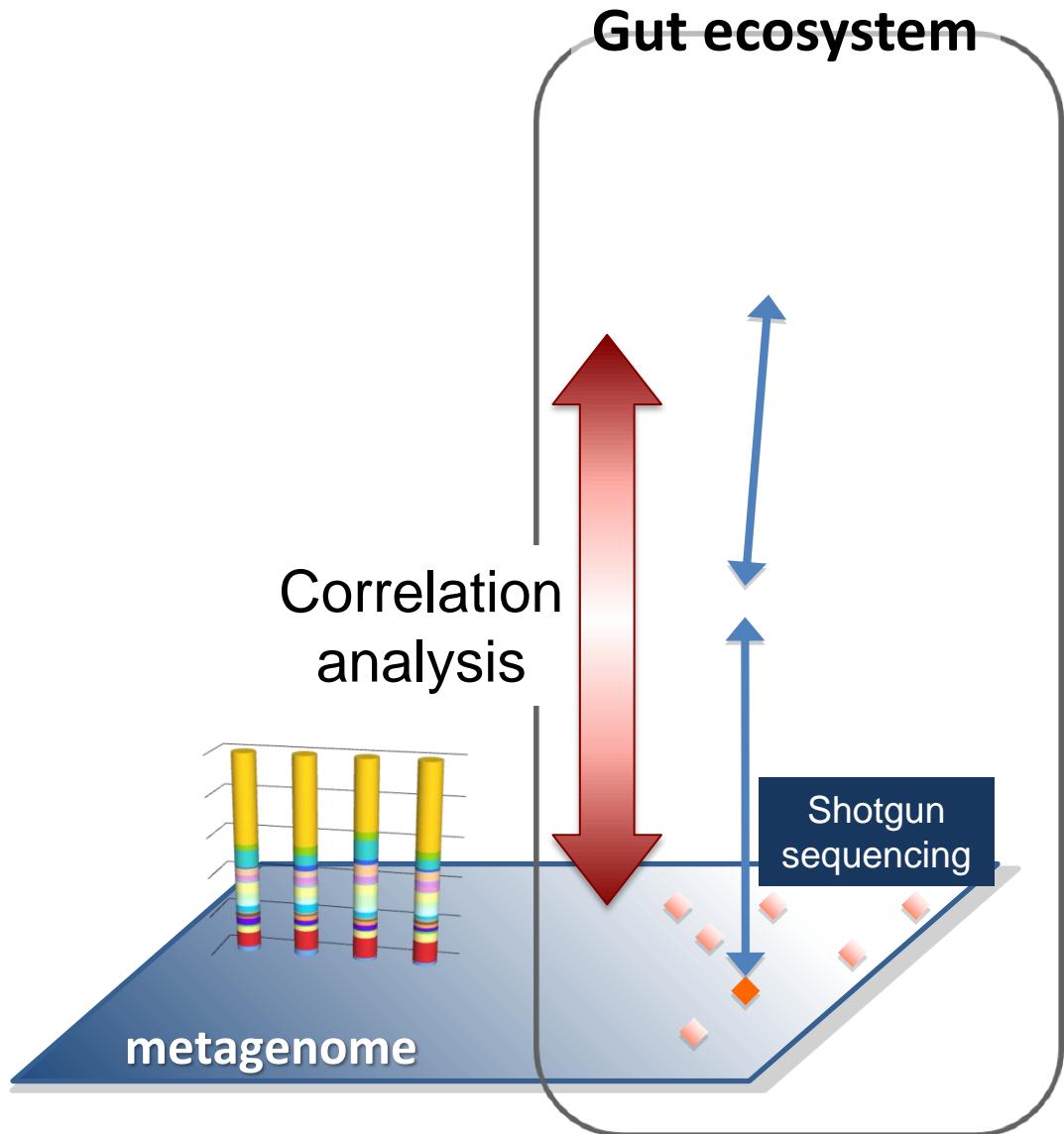
RIKEN Center for Integrative Medical Sciences, Japan

Gut ecosystem dysbiosis and pathogenesis

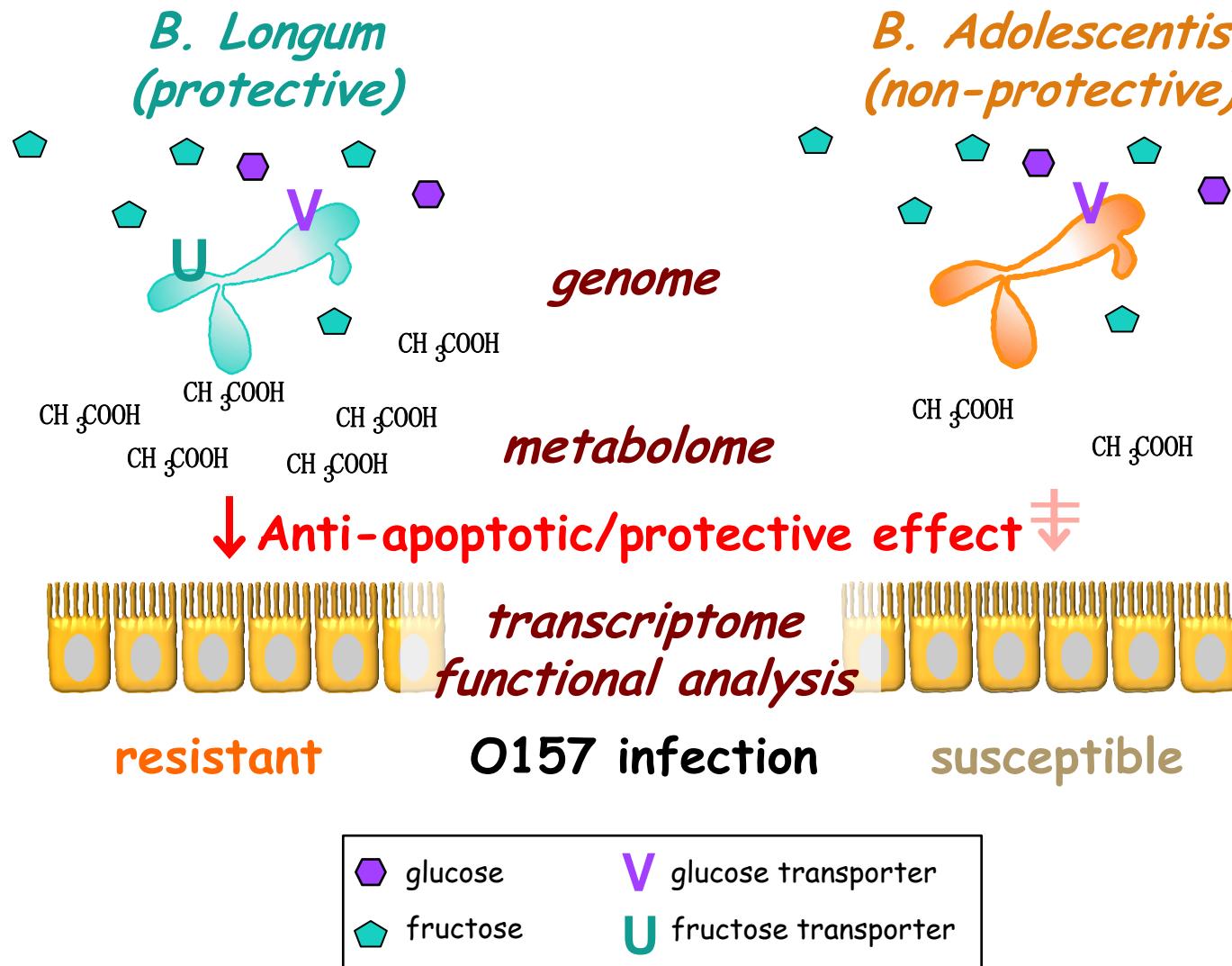


However...
a gene catalogue cannot tell functions

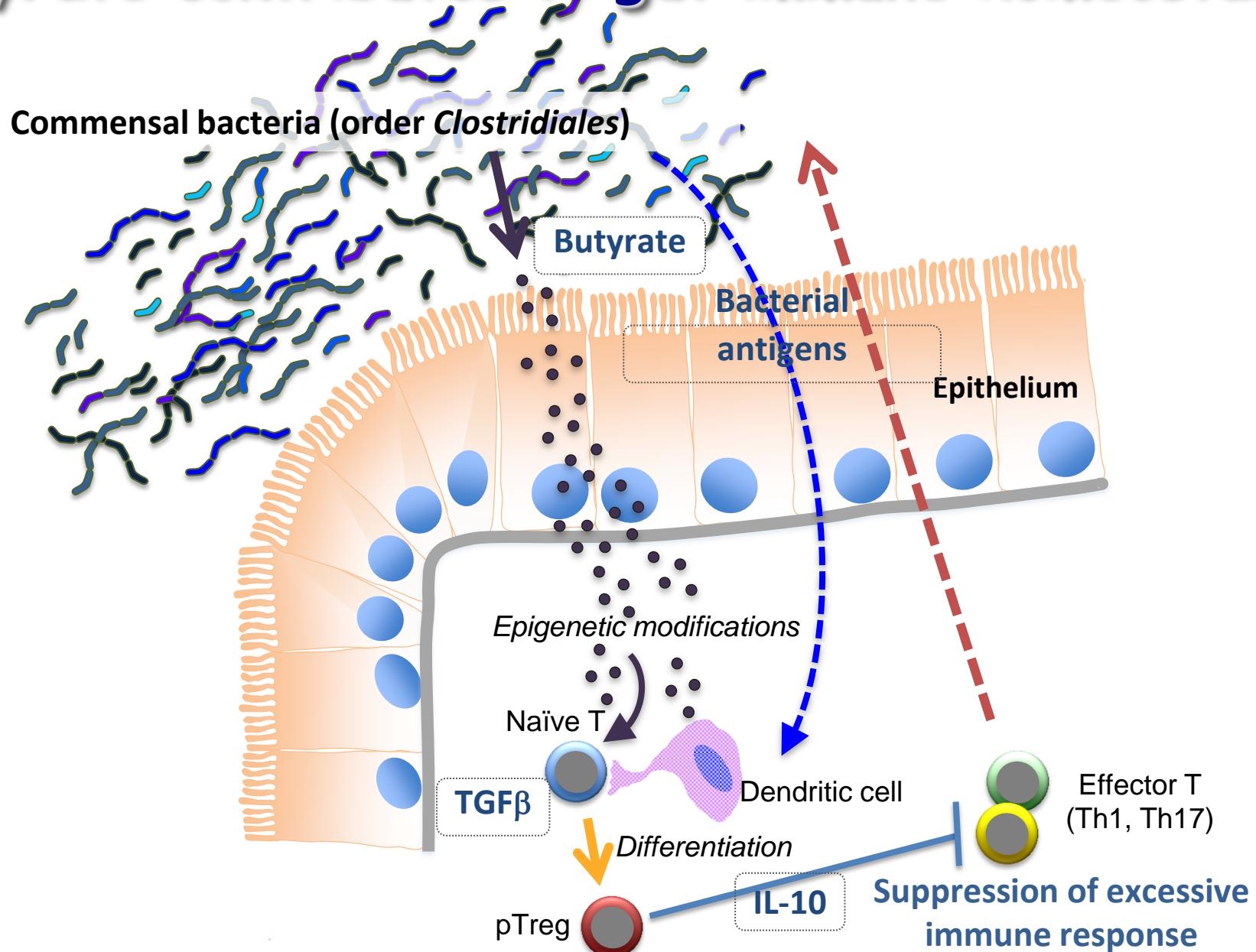
Integrated multi-omics approach



Bifidobacterial acetate protects mice from O157 infection



Butyrate contributes to gut immune homeostasis



Future perspective

Host-commensal microbiota interaction



Comprehensive understanding with Integrated multi-omics approach



Understanding physiopathology of humans as superorganisms

Comparison of gut-ecosystem pre-/post-pathogenesis



Identification of pathogenic biomarkers and
preventive medicine based on them

Problems to be solved (for Japan?)

- **Consolidate ‘Healthy’ microbiome database**
- **Standardize the methods for microbiome study**
Data compatibility/sharing
- **Establish an industry-government-academia relationship**