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Top -level research and data

Highly accurate omics analysis across various organisms, from viruses and microorganisms to animal cells.

- Microbiome research based on single-cell genomics.
- Identification of intracellular molecules by Raman imaging
- Multi-omics analysis at the cellular level
- Development of tools and algorithms for complex data

Deployment targets (sites, materials, etc.)

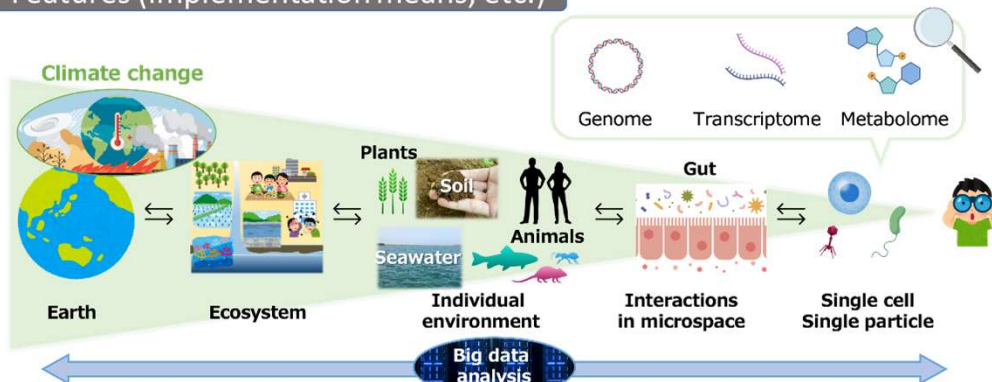
【Microbial cells, Viral particles】

Diverse environments including seawater, soil, gut, etc.

【Eukaryotic cells】

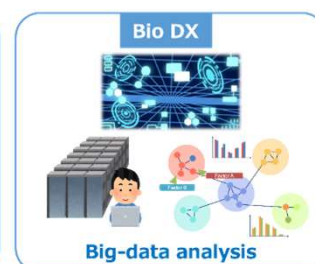
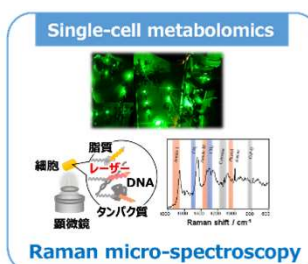
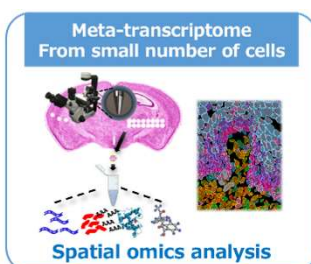
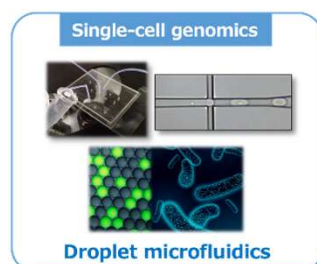
Cardiomyocytes, nerve cells, cancer cells, yeast, etc.

Features (implementation means, etc.)



Keyword

- Single-cell analysis
- Multi-omics analysis
- Genetic engineering
- Molecular biology
- Microbial engineering
- Biomass energy
- Biometrics
- Raman micro-spectroscopy
- Microfluidics
- Bioinformatics



- Analysis of cellular and viral genome information, which are components of the environment.
- Multi-omics analysis that can capture various biological components from multiple perspectives

Related projects

- **Construction of Agri-soil microbe atlas for diagnosis of healthy soils**
Moonshot R&D Program, The cabinet office
- **Development of LC-Raman system through industry-academia collaboration**
- **Development of the Centre for Spatial Omics Analysis Research (CECOAR)**
Basis for supporting INnovative Drug discovery and life Science research

Assumed outlets / applications

- Elucidation of disease mechanisms towards personalized medicine
- Development of new drugs using microorganisms
- Environmental biomonitoring

Associated SDGs

