Mehr Licht!
More Photonics for Intelligence

#E23

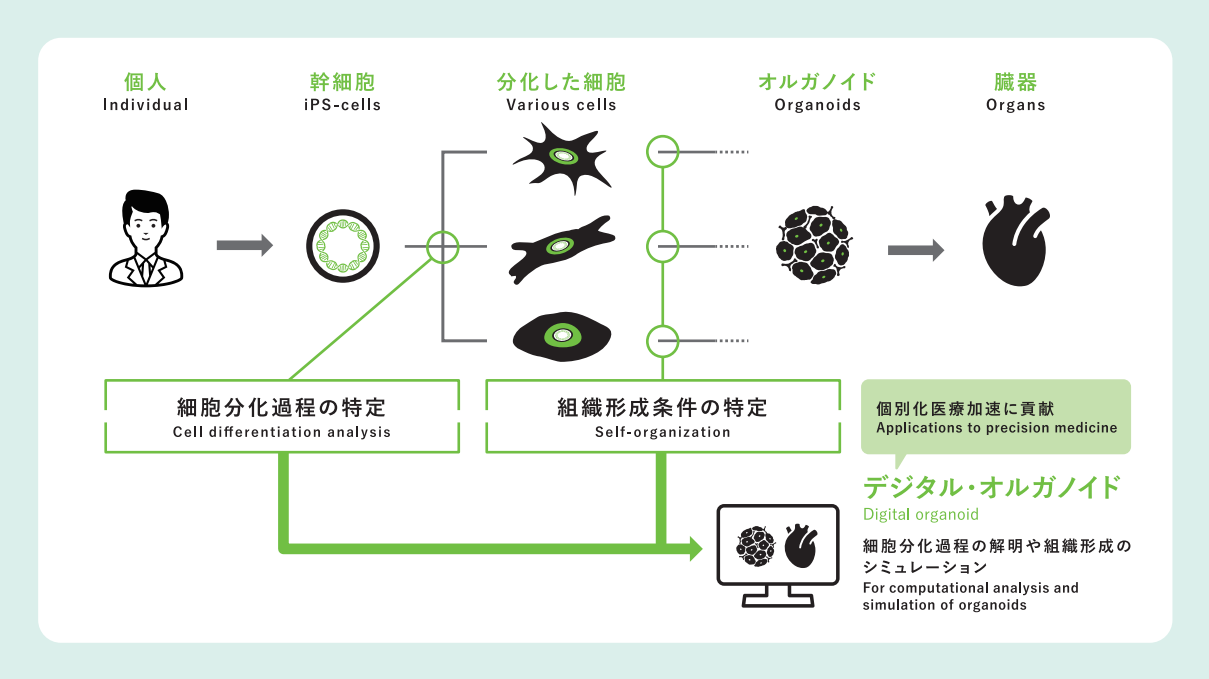
#Health & Well-being#Digital & AI Transformation#Safety and Security

Digital Organoids: Computational Tissues

Aiming at analysis and simulation of cell and tissue development

Technical Challenges & Goals

Creating small tissues called organoids is an active research field, but it is often difficult to reproduce the same structure and function as actual living tissue. This technology computationally simulates the cell and tissue development process for accelerating research of personalized medical treatment.



Key Technologies

Core Technologies

- Quantitative evaluation for the developmental pathways leading to target cells from all hypotheses
- Rapid identification of self-organization conditions for achieving target tissue structures

Key Differentiators

- Quantitative statistical accuracy evaluation for hypotheses on the cell-differentiation process
- Estimation of tissue-formation conditions without trial and error (world's first)

Use Cases

Healthcare

Support drug discovery by predicting outcomes using digital organoids and designing culture conditions for organoids with targeted functions, contributing to efficient drug discovery and personalized medicine in the future.

Exhibitors

NTT Communication Science Laboratories
NTT Bio-Medical Informatics Research Center

Related Links

https://group.ntt/jp/newsrelease/2026/05/12/260512b.html