



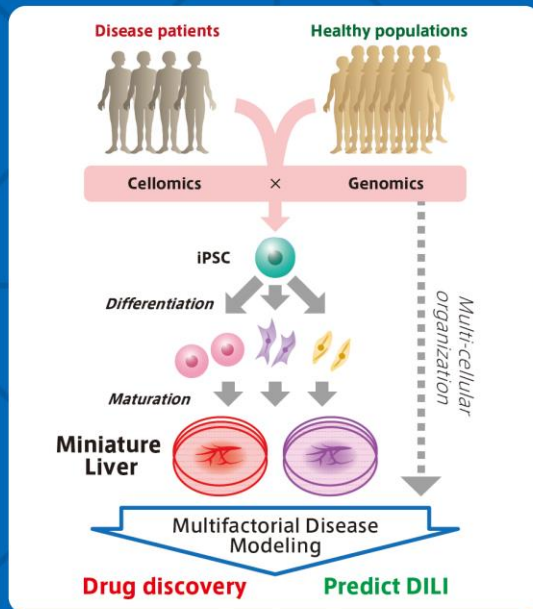
Takanori Takebe



<Organoid Medicine Project : Miniature liver technology as a platform for research towards pharmaceutical applications>

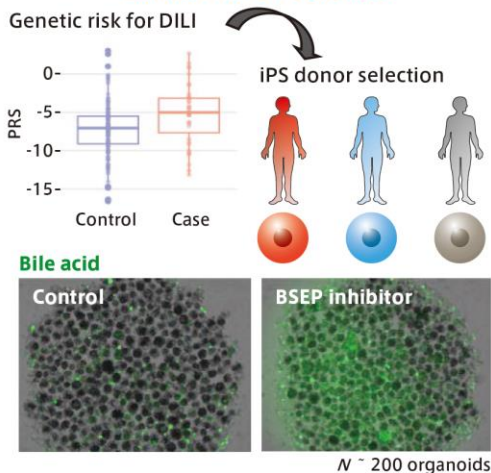
Based on human iPSC-derived miniature liver technology developed at Yokohama City University, Dr. Takebe's team is developing an innovative system that can reproduce the complex phenomena found in patients' bodies. This research will create a novel drug discovery system for intractable diseases and a novel predictive platform for expression analysis of rare adverse events unforeseen in traditional drug discovery research.

<Concept/Strategy>



DILI: Drug-induced liver injury

Clinical trial on dish: DILI



Bile salt export pump (BSEP) inhibitor induced bile acid accumulation in liver organoids, thus suggesting functionality of the organoids

<Concept>

- ▶ Genomic information is used for the strategy to create iPSCs that allows the team to establish a method of screening donors that could be useful for predicting the phenotype of rare diseases.
- ▶ Furthermore, by creating a mini-liver consisting of multiple types of cells, the team will construct a method to reproduce complex patient pathology in vitro.
- ▶ By integrating these two proprietary methods of genome research and cellome research, the team will contribute to the creation of an innovative drug discovery system.

