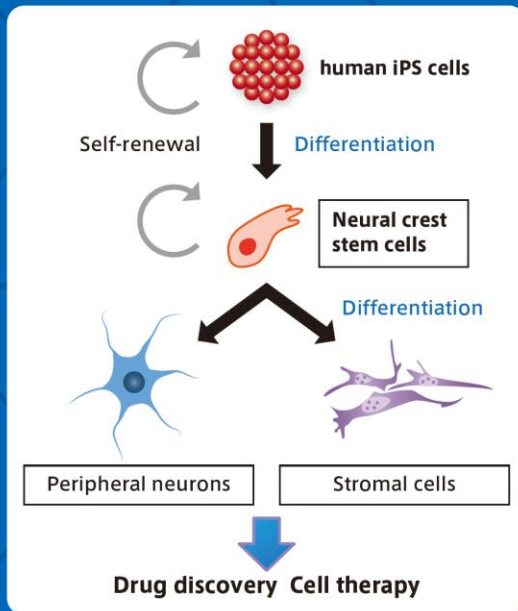


<Concept/Strategy>



Makoto Ikeya

<Neural Crest Cell Project: A new research platform with human iPSC-derived neural crest cells and its applications for drug discovery and regenerative medicine>

Neural crest cells (NCCs) differentiate into diverse cell type lineages such as bones and peripheral neurons, suggesting their great potential for clinical applications. Dr. Ikeya's team aims to create methods to maintain and culture human iPSC-derived NCCs and to induce them to differentiate into various types of cells. Moreover, they hope to construct an *in vitro* disease model in combination with related technologies and apply it to drug development and regenerative medicine.



<Concept>

- ▶ Neural crest cells are a unique cell population that exists only in the early stages of development. However, much about them remains unknown.
- ▶ It is very difficult to culture neural crest cells *in vitro* while maintaining their undifferentiated state. But if basic technologies to maintain neural crest cells are established using human iPSCs, the application possibilities are extensive.

<Progress>

- ▶ The team identified multiple differentiation protocols to induce various cell types from NCCs. The differentiated functional cells will be used for development of drug discovery and cell therapy platform.

<Progress>

