

Cell line engineering for disease modelling and drug screening

Choice of relevant indication agnostic parental model systems:

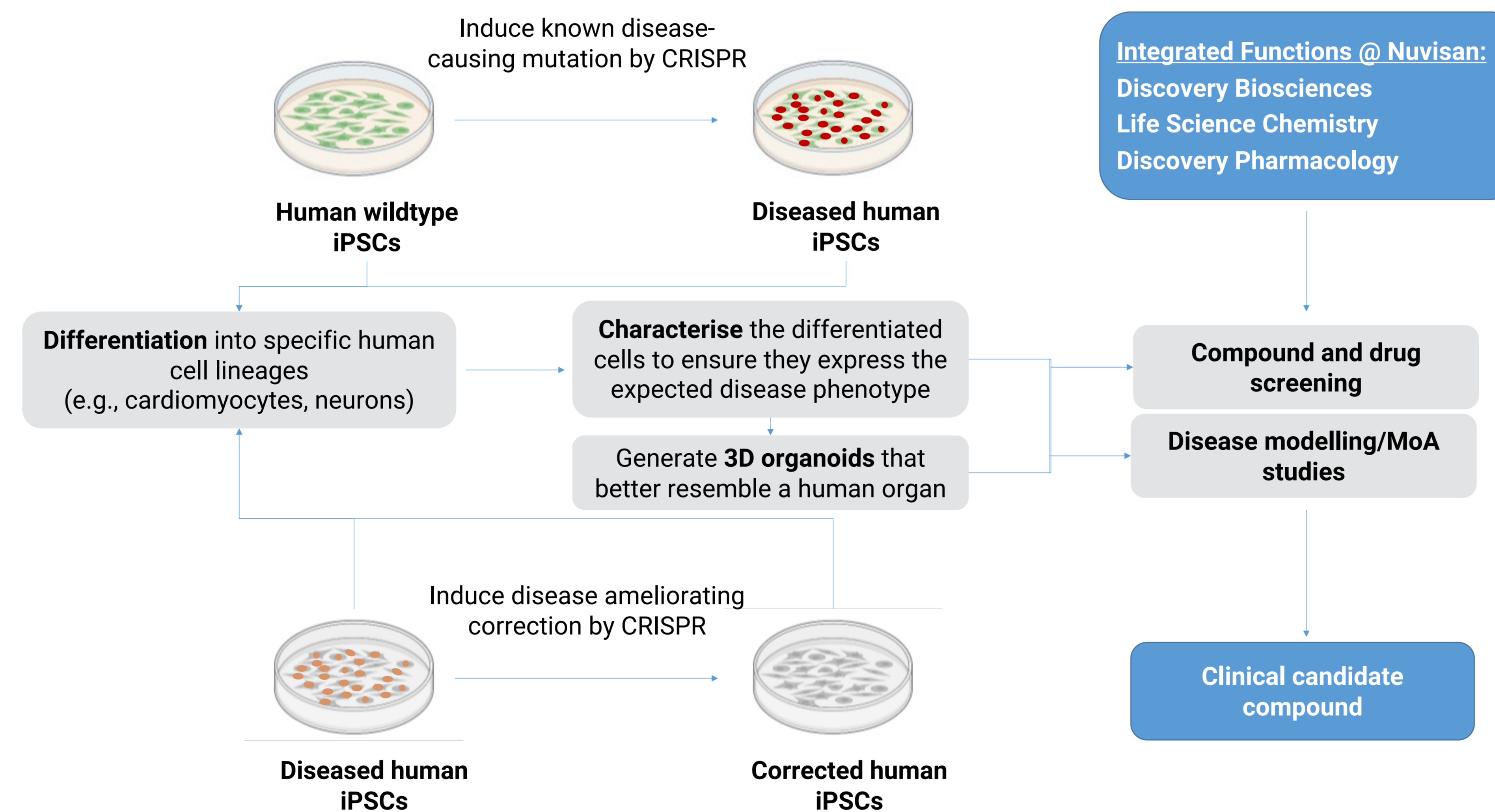
- Comprehensive cancer cell line collection (human, mouse, rat)
- Primary cells
- iPSCs

Portfolio of cell engineering tools:

- CRISPR ko, ki, a/i
- RNAi
- Overexpression
- Drug resistance
- Reporter and tags: HiBiT, NanoLuc, luciferase
- Isogenic cell pair generation
- Variety of delivery options (S2/BS2)

Functional analysis of engineered models

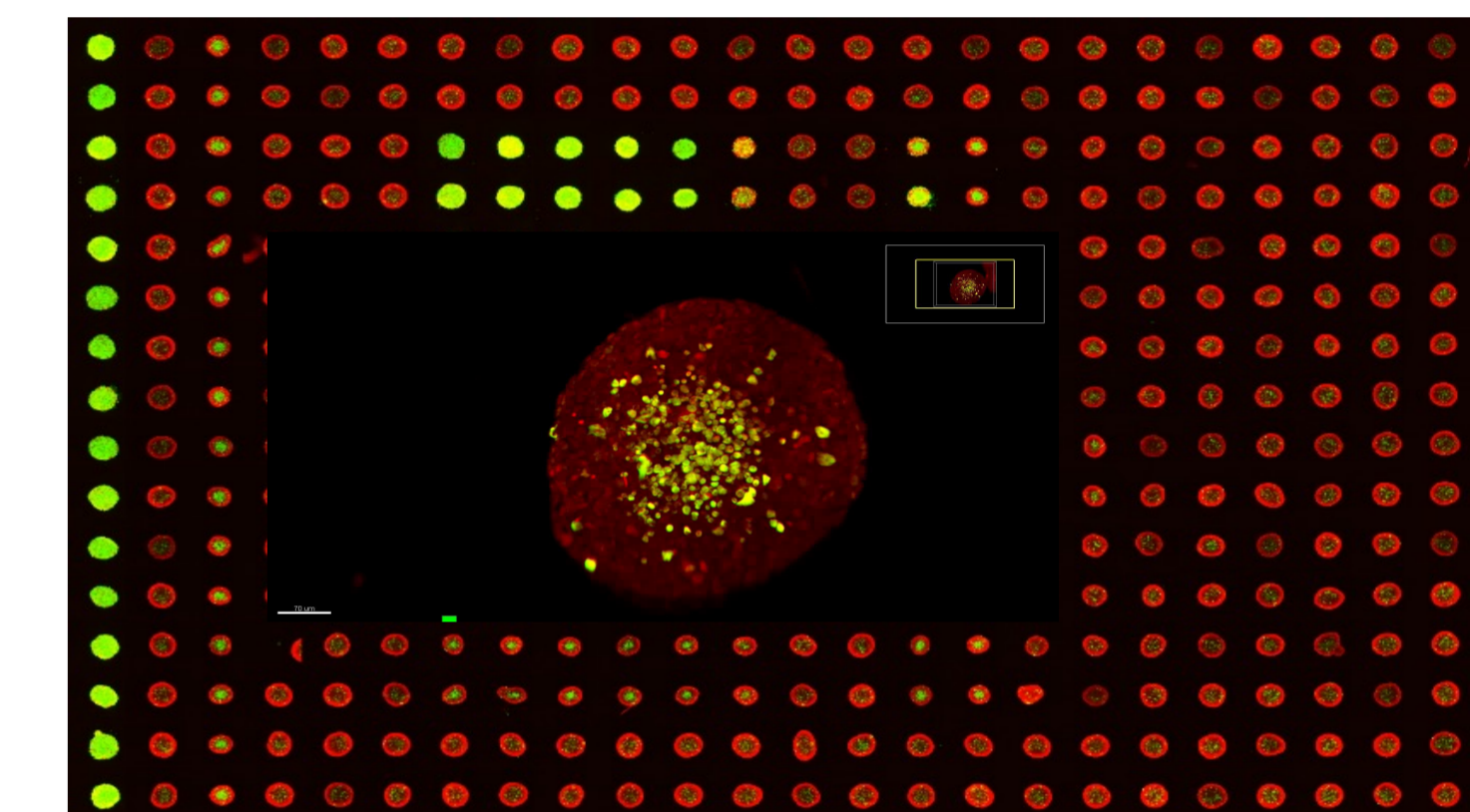
Induced pluripotent human stem cells (iPSCs)



- Humanized, highly physiologically relevant *in vitro* platform for disease modelling and screening
- Combination with CRISPR/Cas enables the investigation of diseased gene variants
- Readout options comprise contractility (muscle), multielectrode array (MEA) measurements

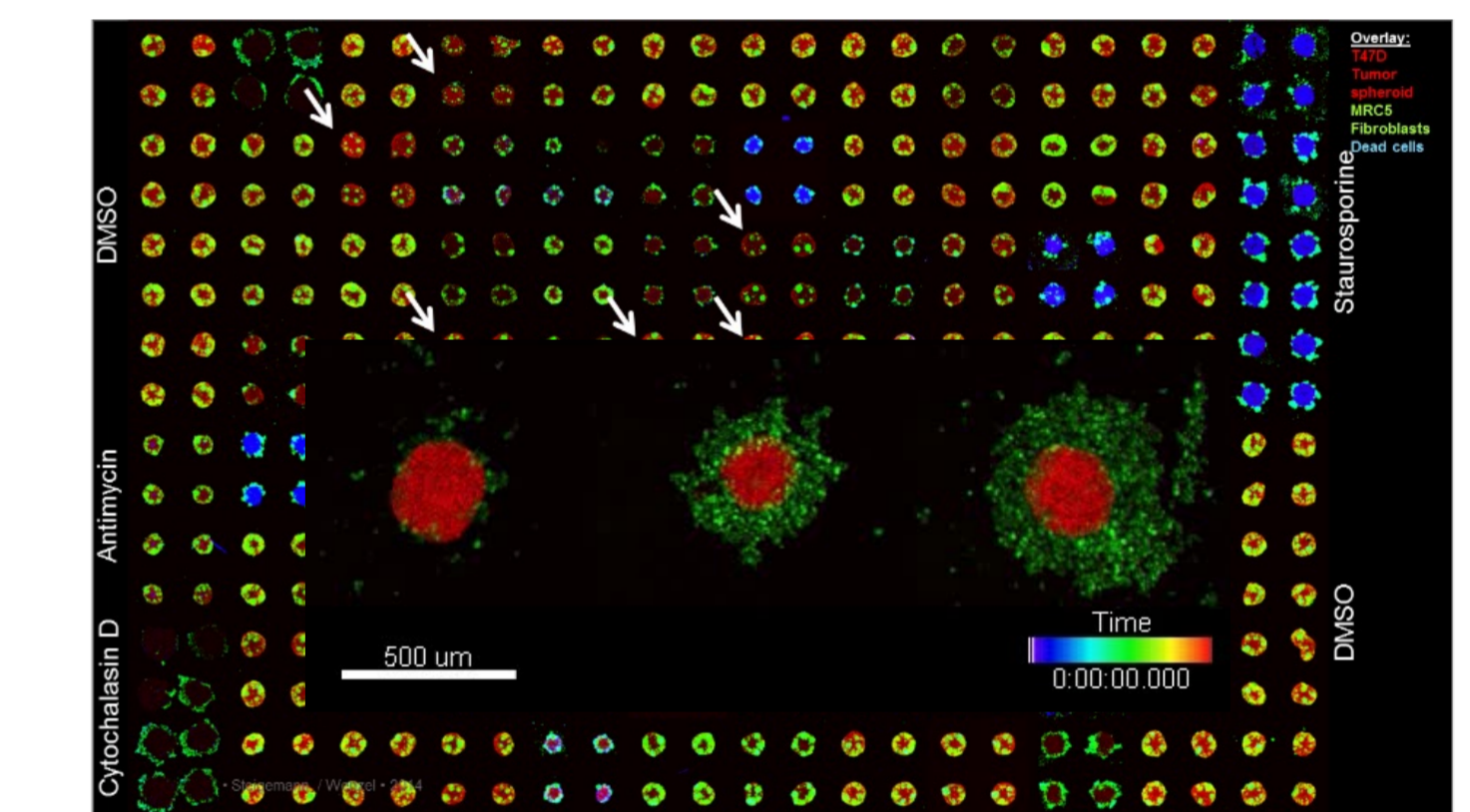
Tumor spheroids

- Predictive *in vitro* evaluation of compound efficacy for oncology
- Co-culture with primary human immune cells (PBMCs, T cells, monocytes)



Cell-tissue Interactions

- Evaluation of cell-tissue (surrogate) interactions



Organoids

- Evaluation of organoid biology
- Assay development ongoing for several indications

