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GSK collaborates with Plasticell for stem cell technology

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In the collaboration, Plasticell will use its CombiCult technology to screen combinations of molecules provided by GSK to identify and optimise iPSC differentiation protocols.

Plasticell, the biotechnology company specialising in stem cell screening and cell therapy development, has entered into a collaboration with GSK to use its combinatorial stem cell screening technology, CombiCult, to optimise the directed differentiation of induced pluripotent stem cells (iPSCs) to specific blood cell lineages for use by GSK in its therapeutic research.

In the collaboration, Plasticell will use its CombiCult technology to screen combinations of molecules provided by GSK to identify and optimise iPSC differentiation protocols. Plasticell's proprietary technology will allow the simultaneous screening of multiple iPSC lines, facilitating the development of a robust protocol that is applicable across lines.

Commenting on the collaboration, Plasticell's founder and Executive Chairman, Dr Yen Choo, said: "During the course of developing its therapeutic programmes, Plasticell has acquired considerable expertise in pluripotent and hematopoietic stem cells, the derivation of specific hematopoietic cell types and the use of small molecules to drive stem cell differentiation. Moreover, Plasticell's combinatorial and multiplexing technologies are an ideal solution for iPSC differentiation where high developmental potency and variability between different patient-derived cell lines often frustrates the search for robust and efficient differentiation protocols."

Plasticell's hematopoietic cell therapy portfolio includes the expansion of hematopoietic stem cells, currently in late pre-clinical development for cell and gene therapy applications. In addition, the company is working on the manufacture of red blood cells, platelets and immune cells from iPSC.

Plasticell and GSK have worked together on various stem cell research projects for more than a decade. Plasticell is co-located at the Stevenage Bioscience Catalyst, an emerging cell therapy hub on the site of GSK's Medicines Research Centre.