

Yokogawa Solution, Tokyo Electron to co-develop quality management system for stem cell production

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Yokogawa Solution Service Corporation will join the Smart Cell Processing project, a joint undertaking of industrial, administrative, and academic organizations in Japan and the UK that is being led by Tokyo Electron Limited, and will work with Tokyo Electron to develop a total quality management system for the automated production of stem cells that will be used in regenerative medicine.

Tokyo Electron has established the Stem Cell Technology Centre (STC) in the UK and is working with 15 technology partners to establish and standardize smart cell processing technologies for cultivating and inspecting stem cells of clinical quality. For this purpose, a manufacturing control system is needed that can control cell quality during the automatic cultivation process. Leveraging its solid track record and experience with manufacturing control applications in the pharmaceutical industry, Yokogawa will develop a complete stem cell production quality management solution that will also control logistics and function as a manufacturing execution system (MES) and plant information management system (PIMS).

Based on CIMVisionPharms, a pharmaceutical manufacturing control package, and CellBrain, an online semiconductor manufacturing controller, this system would satisfy the specific requirements of stem cell production. To develop this management system, Yokogawa will make use of a fully-automatic cell culture and inspection apparatus that Tokyo Electron plans to install at the STC. Yokogawa will share information on its activities with the STC technology partners.