

The digital revolution: technological innovations to enable automation in cell therapy manufacturing

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The manufacturing process is complex, labor-intensive, and requires many open manipulations. It is also difficult to synchronize different instruments and products to make the workflow traceable and compliant with regulatory requirements. To solve these issues, a closed modular system can help minimize contamination and maintain flexibility. Most importantly, automating the process can reduce labor and human error. It is in this third aspect that digitalization plays a particularly vital role.

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At Thermo Fisher, we are designing cell therapy instruments to be equipped with the OPC-UA, the standard interface to allow an instrument to exchange data with other platforms or control systems. With OPC-UA, Thermo Fisher instruments have the capability to connect to other systems.

Dr Sean Chang

DeltaV can provide a bubble around your entire control system. We are compliant and allow end users to achieve ISA Secure SSA Level 1 certification for their control system from a cyber security perspective. The up and out communications go through our secure Emerson smart firewall. Using industry standards like OPC-UA, we also have web services tools that will be used for connecting to the ERP or MES layers.

Bruce Greenwald

Integrating process analytics, supply chain data, and cost modelling components would greatly improve the process and the product quality and reproducibility, reduce batch failures, and drive down cost.

Dr Krish Roy



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