GE Healthcare to personalise tissue regeneration

09 December 2019 | News

Pairs up with Advanced Solutions Life Sciences to create new opportunities for regenerative tissue manufacturing

GE Healthcare Life Sciences and Advanced Solutions Life Sciences (ASLS) will enter into a strategic R&D and distribution partnership that sets out to personalize tissue regeneration. The integration of IN Cell Analyzer and BioAssemblyBot® systems technologies will embed cellular-level assessments into the 3D-bioprinting workflow used to create human tissue models.

Bioprinted tissues are small in size and die quickly, due to an inability to engineer small blood vessels – the body's supply network. ASLS' patented Angiomics® technology enables bioprinted microvessels to self-assemble into functional capillary beds, which deliver nutrients, oxygen, and hormones to the 3D tissue model and remove waste. This partnership would allow life scientists and tissue engineers to quickly design, build and image living, vascularized 3D tissues in a single, agile process.

Emmanuel Abate, General Manager of Genomics & Cellular Research, GE Healthcare Life Sciences, says: "Printing multi-material 3D objects inside of microwell plates allows scientists to efficiently move away from traditional 2D monocultures on plastic, to 3D discovery and cytotoxicity models that more accurately reflect native biology and disease. By combining this flexibility and precision of the BioAssemblyBot® with the image quality and speed of the IN Cell Analyzer 6500 HS confocal screening platform, the prospect of automating high content screening in 3D models can become a reality."

Currently, biopharmaceutical companies test their drugs in 2D models and animal models. Precise 3D models provide a more physiologically relevant environment for drug testing because they mimic human reactions.