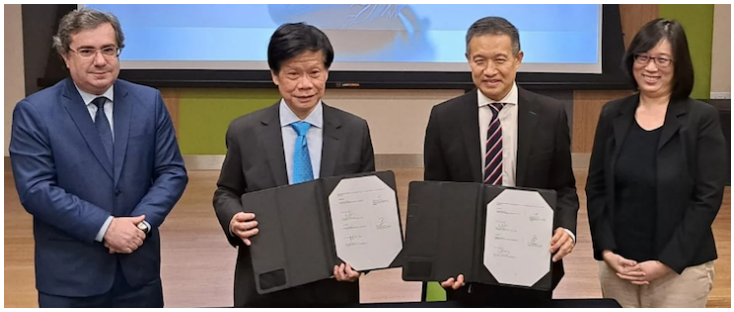
BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

NTU & Singapore General Hospital to advance 3D printing in healthcare with joint R&D lab

December 6, 2023 | News

Representing a significant leap towards pioneering healthcare solutions that could redefine patient treatment



Singapore General Hospital (SGH) patients are expected to benefit from healthcare innovations, such as customised medical devices and implants, under a collaboration with Nanyang Technological University, Singapore (NTU Singapore) to set up a Joint Research & Development Laboratory in additive manufacturing (AM), also known as 3D printing.

The Joint R&D Lab in additive manufacturing will focus on areas such as Prosthetic & Orthotic Devices; Bioprinting for Regenerative Medicine; 3D Printed Implants at Point-of-Care; and Additive Manufacturing Technology Landscaping for Healthcare Applications.

The project will focus on conducting research into new areas of bioprinting that hold high clinical significance, such as human organ printing, to further enhance its potential impact in regenerative medicine.

Developing capabilities for 3D printing medical implants directly at the point-of-care is a key area of research focus. This will involve exploring the potential of technologies like PEEK, a type of plastic known as Polyetheretherketone, and metal 3D printing to create implants for specific medical procedures such as surgical repair of a bone defect in the skull and reconstruction of the bones surrounding the eyeball.

Further, reviewing and enhancing the additive manufacturing technology landscape specific to healthcare 3D printing involves identifying and developing potential applications with clinical significance, such as food printing and flexible electronics for medical monitoring devices.