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Chennai-based doc develops Indiaâ??s first 3-D printed heart valve

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Cuttingâ??edge biotechnology puts India on the world map



Chennai-based Dr Sanjay Cherian has designed and developed India’s first 3D printed heart valve. A working prototype of the new 3D printed heart valve was recently displayed. The new 3D printed heart valve overcomes most of the disadvantages/complications associated with the currently available artificial heart valves that are in use today.

The scientific innovation was undertaken in collaboration with the Centre for Automation and School of Mechanical Engineering, Vellore Institute of Technology (VIT), Chennai.

“An added advantage of this 3D printed heart valve is that its design was developed using specialised computer-aided design software and modelling techniques, based on the MRI scan images of the human heart, as a result of which, we are now able to customise & 3D print heart valves that will fit exactly to the dimensions of the patient’s heart,” said Dr Sanjay Cherian.

Dr Cherian added, "We are now in the process of patenting this 3D printed heart valve and testing it to confirm its bio-compatibility, efficacy and durability."