

3D-printed replacement organs may be close at hand

The advent of three-dimensional (3D) printing has generated a swell of interest in artificial organs meant to replace, or even enhance, human machinery.

Printed organs, such as a prototype outer ear developed by researchers at Princeton University in New Jersey and Johns Hopkins University in Baltimore, Maryland, were on the agenda at the Inside 3D Printing conference in April. The ear is printed from a range of materials: a hydrogel to form an ear-shaped scaffold, cells that will grow to form cartilage, and silver nanoparticles to form an antenna. The device is just one example of the increasing versatility of 3D printing.

Scientists are looking ahead to radical emerging technologies that use live cells as 'ink', assembling them layer-by-layer into rudimentary tissues, says Jennifer Lewis, a bioengineer at Harvard University in Cambridge, Massachusetts. Bioprinting firm Organovo of San Diego, California, already sells such tissues to researchers aiming to test experimental drugs for toxicity to liver cells. The company's next step will be to provide printed tissue patches to repair damaged livers in humans, says Organovo's chief executive, Keith Murphy.

The GLP aggregated and excerpted this blog/article to reflect the variety of news, opinion and analysis. Read full, original post: [The printed organs coming to a body near you](#)