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3D bioprinting of organ-on-a-chip

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Organ-on-a-chip is a technology to building organ prototype on the microfluidics, which can be widely used in drug screening and understanding disease. Here, we reported some progress of our group about the fabrication of organ-on-a-chip with 3D bioprinting. We developed some new 3D printing methods which can directly print 3D PDMS-based

biofluidics, hydrogel-based biofluidics. Also our group offered a novel bioprinting method, in which scaffold and built-in microchannels in the cell-laden hydrogel 3D structures can be concurrently fabricated. With these methods we successfully fabricated heart chips and vascular chips.

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