

《3D打印机造出太空人造肉 或可供宇航员食用》

在宇宙飞船大口吃肉，享用完还可以自己3D打印一份留到下顿，这听着像不像科幻小说的情节？最近，科学家研制出的3D生物打印机就把这一梦想变为现实。



Sunrise over the surface of the earth as seen from the International Space Station, Feb 9, 2018. [Photo/IC]The prospect of astronauts tucking into a roast dinner has grown slightly closer after a successful experiment used a 3D printer to create meat on the International Space Station.

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The bioprinter produced beef, rabbit and fish tissue using magnetic fields in microgravity, a Russian medical technology company involved in the experiment said Wednesday.

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The experiment -- an international collaboration involving US, Russian and Israeli companies -- was carried out in September by cosmonaut Oleg Skripochka in the station's Russian segment using a 3D printer developed in Moscow.

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The creators say it is the first to create a small amount of artificial meat in conditions of weightlessness.

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"It's one small nibble for man, one giant bite for mankind," said Yusef Khesuani of 3D Bioprinting Solutions, the Russian laboratory that created the bioprinter.

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Photo taken on Sep 14, 2018 is the Soyuz MS-09 spacecraft docked at the International Space Station. [Photo/IC]The laboratory was founded by Invitro, a large Russian private medicine company.

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The Roscosmos space agency part-financed the experiment as of national importance.

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"It was really a breakthrough both for Roscosmos and Russia as a whole," said Nikolai Burdeiny, executive director of the state space corporation, which includes Roscosmos.

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"For us it was the first experience of international scientific collaboration in space," Khesuani said, using cells provided by Israeli and US food-tech companies.

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"Thank God the experiment went successfully... All the cells showed a good result in space," he added.

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Astronaut Stephen K. Robinson, STS-114 mission specialist, anchored to a foot restraint on the International

Space Station's Canadarm2, participates in the mission's third session of extravehicular activity (EVA) August 3, 2005. FLICKR/ SCOTT KELLY / NASA Astronauts eat meat on board that is vacuum-packed or dried on Earth but this technology could ultimately be necessary for long voyages into deep space, said veteran cosmonaut Oleg Kononenko.

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"If we're going to fly further from Earth to other planets in the solar system, we can't take that volume of food with us," he told AFP.

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"In any case we will have to grow and produce food onboard the spaceship."

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"I think progress is developing very quickly, science and knowledge, and I think this will be within our lifetimes," he said.

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Creating larger amounts of meat in the Russian segment will need more complex equipment than the current printer, said Khesuani.

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"Then we can create not just small objects but big ones, made of a large mass of cells."

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"I hope we will continue these experiments."

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