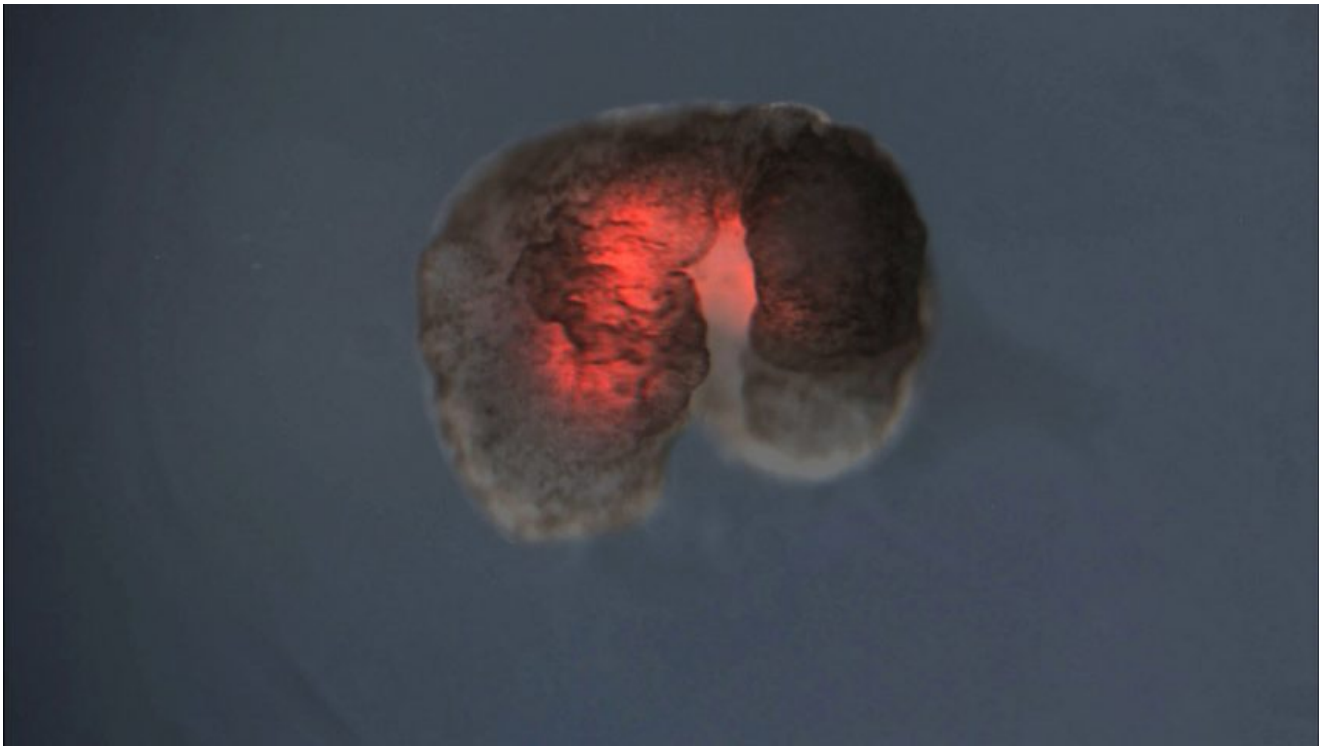
TRENDING

Scientists Used Frog Cells to Create the First Living Robot

By bestfolkmedicine · 24/01/2020 · 2 min read



A group of scientists from the US Tufts University have successfully created xenobots.

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These are tiny robots made from the skin of frogs and heart cells that are able to walk, work together, and heal themselves.

The configuration of the frog cells is defined by algorithms and then, they're constructed into living robot which is known as a xenobot, named after the Xenopus laevis frog species from which they're made of.

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Xenobots- Made from the Heart & Skin Cells of Frogs

These aquatic organism are able to live for up to 7 days and the scientists hope that in the future, they can serve as a means of delivering drugs into the human bloodstream, clean the oceans from microplastics, and manage radioactive spills of waste.

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Using a computer algorithm, several variations of the 07 millimeter-long robots have been designed.

The team explains that the computers model the dynamics of the building blocks (the heart and skin muscle) and use them like LEGOs to create distinct anatomies of organisms.

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An evolutionary algorithm begins with a population of random designs and then it removes the worst ones and replaces them with copies of the better ones.

Inside the computer, the scientists explain, it's like the 'survival of the fittest'.

Let's Meet the Team of Scientists

The team is consisted of Douglas Blackiston, research scientists and microsurgeon, Sam Kriegman, PhD student and expert on artificial intelligence, professor of biology at Tufts Michael Levin, and professor of computer science at Vermont University, Josh Bongard.

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The organisms are able to walk, push things, and work together with other xenobots.

They're more advantageous over the metal ones because of their self-healing ability in case of damage.

Since they're made of organic material, they're less potentially damaging inside a body of a human or any other environment they're introduced to.

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After completing their function, they're able to biodegrade.

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