

# Grain of rice-sized robot can steer through the human body to drop off drugs where needed

Similar to something you would see in a future sci-fi movie, Scientists at the School of Mechanical and Aerosol Engineering at Nanyang Technological University in Singapore have created groundbreaking min-robots

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By [Jerry Lawton](#) 23:22, 25 OCT 2024

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 The NTU soft robot, which is the size of a grain of rice (Image: NTU Singapore)

Boffins have invented a grain of **rice-sized robot** they can steer through the human body dropping off drugs where they are most needed - inspired by the plot of sci-fi movie classic *Fantastic Voyage*.

The **medical 'bot** can be inserted via keyhole surgery then driven to target destinations via magnetic fields.

It can drop off up to four different drugs at separate locations in one visit.

Assistant Professor Lum Guo Zhan told technology news website New Atlas: "In this work we have proposed a millimetre-scale soft robot which can be actuated by alternating magnetic fields to dispense four types of drugs with reprogrammable drug-dispensing sequence and dosage.

"This drug-dispensing functionality is unprecedented for small-scale robots.

"Our soft robot has great potential to enable advanced targeted combination therapy where four types of drugs must be delivered to various disease sites each with a specific sequence and dosage of drugs.

"What was a scenario in a sci-fi movie is now becoming closer to reality with our lab's innovation.

"Traditional methods of drug delivery like oral administration and injections will seem comparatively inefficient when stacked up against sending a tiny robot through the body to deliver the drug exactly where it is needed."

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