



## Producing New Antibiotics Through Robotics

Researchers have produced a new class of **antibiotics**, known as **class II Polyketides**, by **using robotics to engineer Escherichia coli (E. coli)**, a common gut bacterium.

- These antibiotics are also naturally produced by soil bacteria and **have antimicrobial properties** which are vital in the modern pharmaceutical industry to combat infectious diseases and cancer.
- The naturally produced Escherichia coli bacteria are difficult to work with as they grow in dense clumps that are incompatible with the automated robotic systems used for modern biotechnology research.
- By transferring the production machinery from the soil bacteria into E. coli, the researchers have made this class of antibiotics **accessible for much more rapid exploration**.
- This breakthrough could be vital for the ongoing **combat against antimicrobial resistance**, as recently developed automated robotics systems can now be used to create new antibiotics in a fast and efficient way.
- It will now be possible to explore and engineer polyketides using robotic systems to develop new and diversified polyketides in an automated, rapid and versatile fashion.

### Antibiotics

- Antibiotics are chemical substances, which are produced by some microbes and can kill or retard the growth of other (disease-causing) microbes.
- Penicillin was the first antibiotic to be discovered. This antibiotic was extensively used to treat American soldiers wounded in World War II.

[Source: TOI](#)

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