

Discovering new antibiotics by exploring soil bacterial life



Short name

Science à la Pelle

Formal name

Discovering new antibiotics by exploring soil bacterial life.

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Resolving a global thread by exploring our local environment



Summary

Raising public awareness to the risk of future pandemic due to antibiotic resistance has become a major objective of public health in recent years. This follows decades-long deficit in discovering new antibiotics due in part to lack of investment but mainly to saturation of current approaches. To help mitigate both obstacles, Science à la Pelle (SciPelle) will enable direct contributions from the public to discover new antibiotics. A team of INSERM researchers developed a new systematic antibiotic discovery strategy that specifically addressed Actinobacteria, a filamentous bacterium largely present in soils which forms a genus known to produce a wide variety of antibiotics exploited for human health. However, this approach relies on having the largest collection of soil samples; each sample potentially contains a large number of Actinobacteria containing novel genes coding for the production of molecules with therapeutic interest. The aim is now to engage specific groups of participants in exploring their deep knowledge of their local surroundings. We expect that such approach will further contribute to explore questions related to biodiversity loss, climate change or pollution.