Bioinformatics tools

The
Wright Lab

Microbiome

Antibiotic
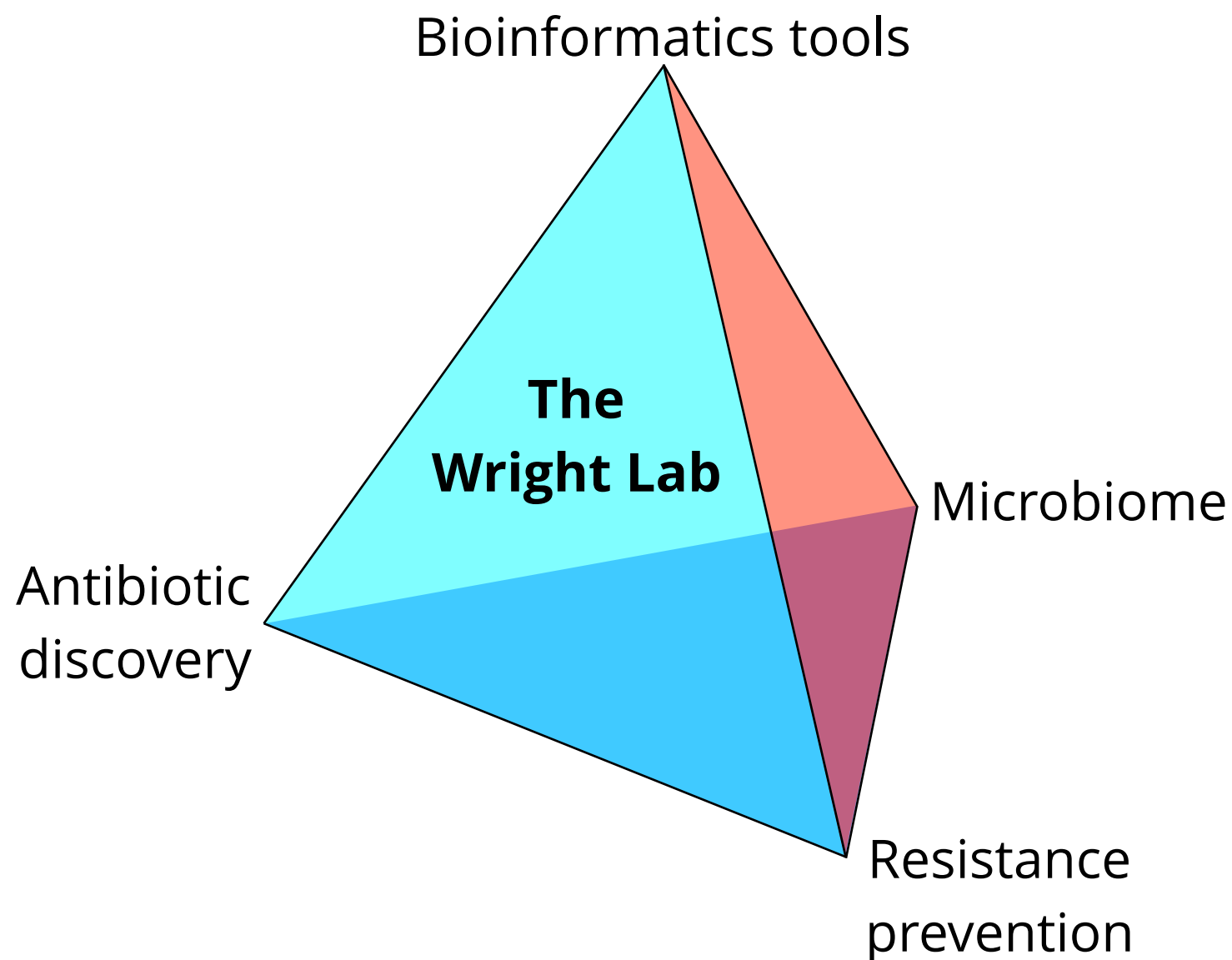discovery

Resistance
prevention
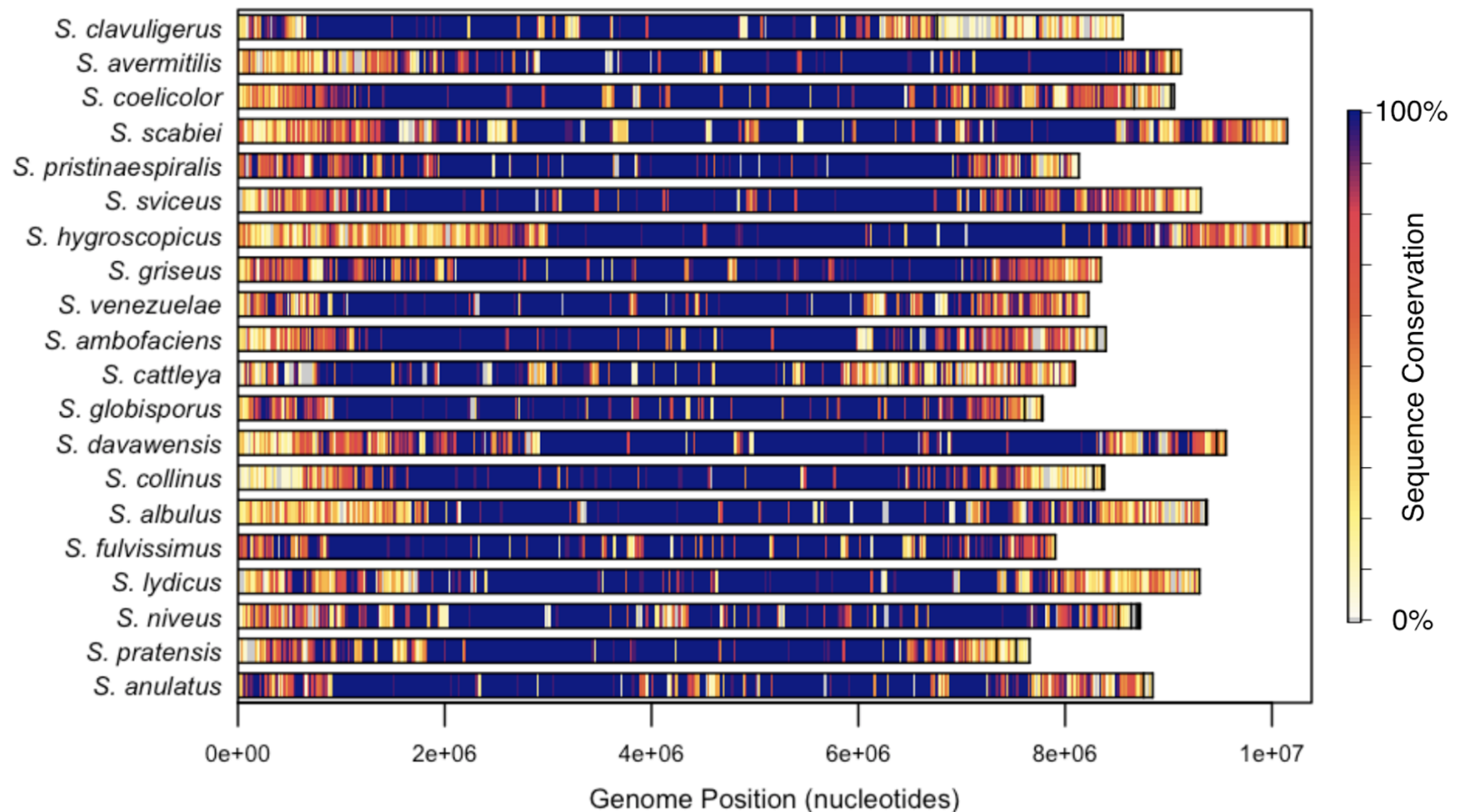
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How do naturally antibiotic producing bacteria ward off resistance in their competitors?

Mining the genomes of antibiotic producing microorganisms to discover new antibiotic treatments.
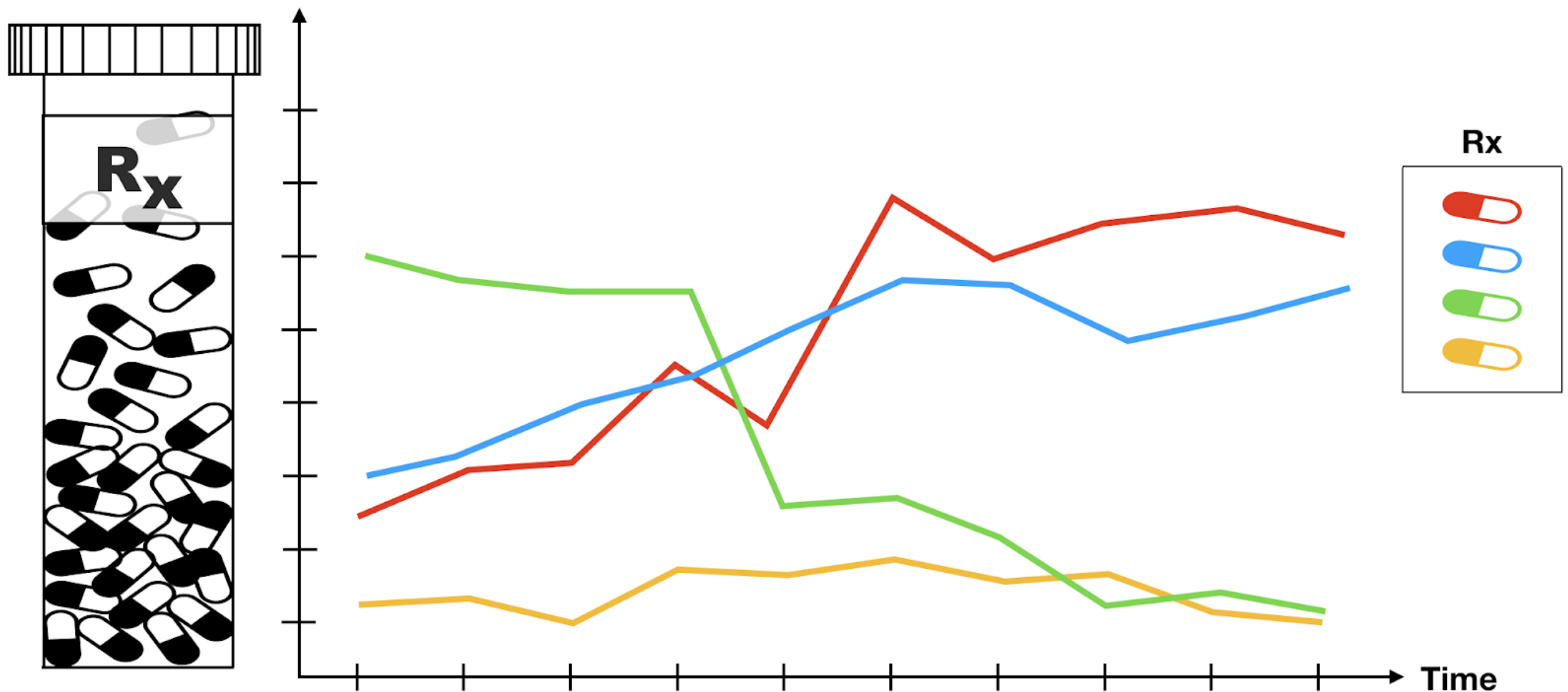
How does the physical landscape shape the metaphorical adaptive landscape?

Studying the ecology and evolution of microorganisms in their natural context and in engineered 3D environments.
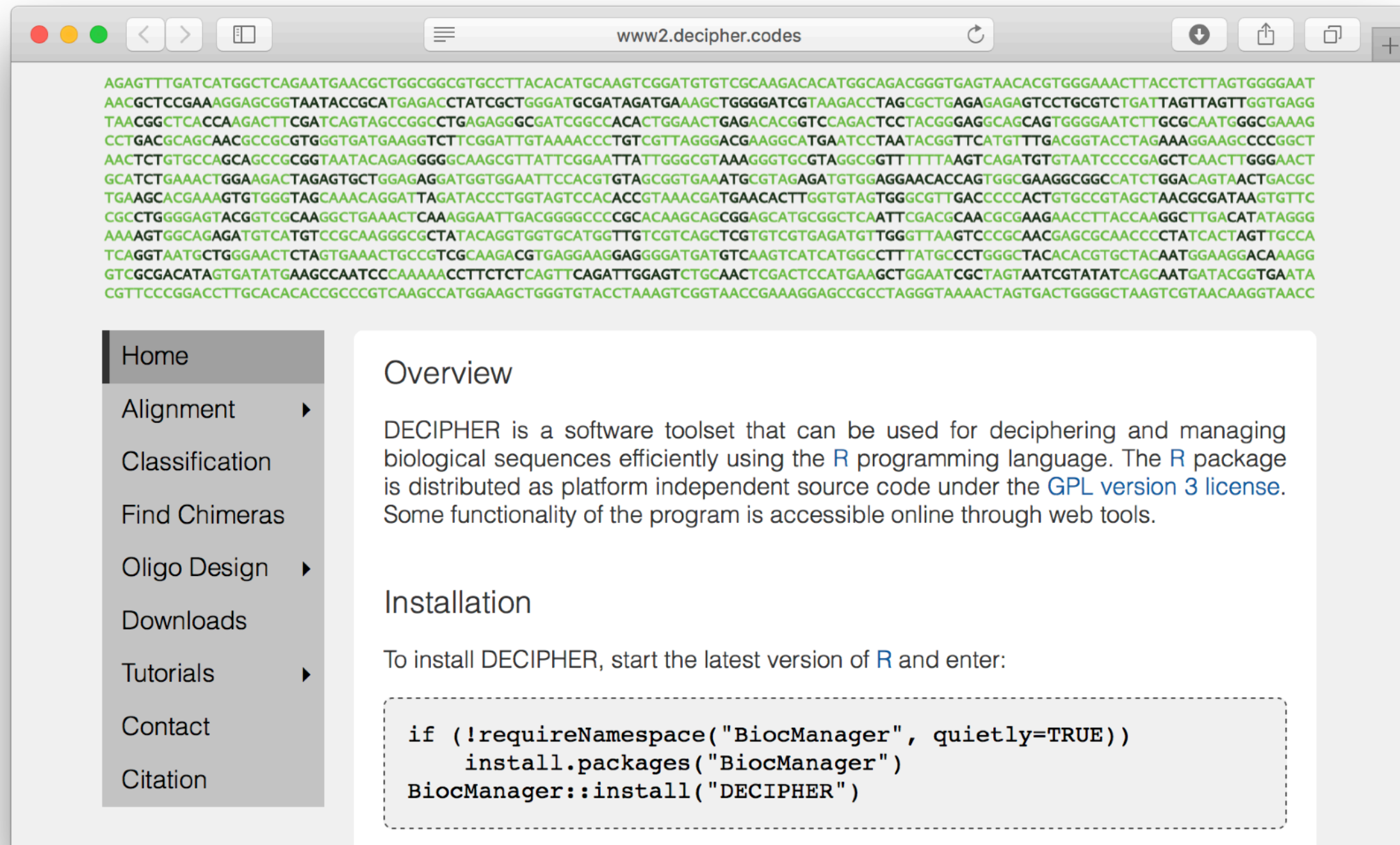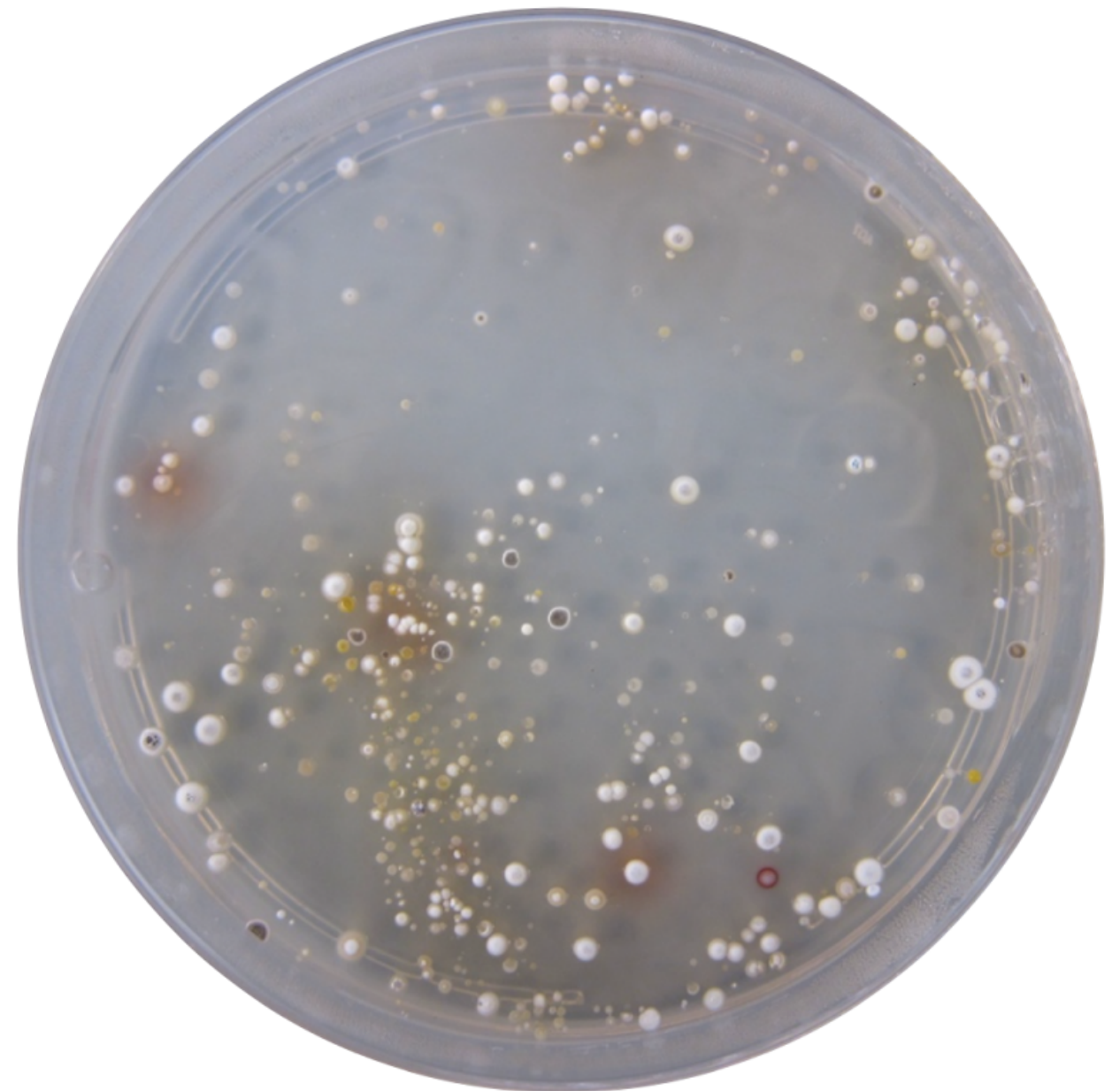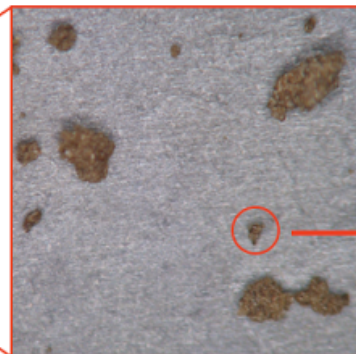
What is the optimal way to treat multi-drug resistant infections in the clinic?

Mining electronic health records for insights into how we can better conduct antimicrobial stewardship.

Can we communicate with the microbiome by learning its molecular language?

Using high-throughput mass spectrometry to decode the language of the microbiome.

What powerful insights can we draw from tens of thousands of microbial genomes?

Developing the next generation of bioinformatics tools for mining thousands of microbial genomes.

Overview

DECIPHER is a software toolset that can be used for deciphering and managing biological sequences efficiently using the R programming language. The R package is distributed as platform independent source code under the GPL version 3 license. Some functionality of the program is accessible online through web tools.

Installation

To install DECIPHER, start the latest version of R and enter:

```
if (!requireNamespace("BiocManager", quietly=TRUE))
    install.packages("BiocManager")
BiocManager::install("DECIPHER")
```