



PLAS • FIGHTER

Plasmid Biology & Evolution

A groundbreaking project led by
our researcher Álvaro San Millán

Antimicrobial Resistance (AMR) Glossary



Extended-Spectrum Beta-Lactamases (**ESBLs**)

Enzymes produced by some bacteria that break down a wide range of antibiotics—including penicillins and cephalosporins—making infections harder to treat.



The **genes encoding ESBLs** are usually carried on **plasmids** that bacteria can transfer to one another.

This allows **resistance to antibiotics** like penicillins or cephalosporins to spread quickly between different species of bacteria.



Why are ESBLs a global concern?

They limit treatment options and are linked to serious hospital-acquired infections, making them a major clinical challenge worldwide.



By exploring how resistance-carrying plasmids interact with bacterial genomes, the **PLAS-FIGHTER project is uncovering new strategies to prevent persistent infections and combat antibiotic resistance.**



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