

IMMUNOLOGY AND CELL BIOLOGY

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FIFTY SHADES OF STRESS: A COLOURFUL SCREENING PLATFORM FOR DETECTING BACTERIAL CELL STRESS

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Antimicrobial resistance poses a serious threat to global public health. The number of drug-resistant pathogenic bacterial strains is rising at an alarming rate, while only a handful of new marketable antibiotics have been introduced in the past three decades. Current drug discovery efforts suffer from tunnel vision: screening is limited to lethal compounds. This method overlooks a goldmine of compounds that do not directly kill the bacterial cell, but do induce stress. iGEM Leiden aims to develop an innovative screening platform, enabling rapid discovery of compounds which stress bacterial cells: Fifty Shades of Stress. This will allow high-throughput screening of compound libraries, which ultimately can be utilized to establish novel combination therapies. Fifty Shades of Stress will thereby help safeguard humanity against multi-drug resistant disease outbreaks.

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