

CONSTRUCT A BUG

Gene profile

Environmental protection genes

TviA

Involved in capsule production protecting bacteria from environmental factors

MprA

Involved in capsule production protecting bacteria from environmental factors

SptP

A protein released into hosts that suppresses the immune system

Toxin defence genes

KPC-2

An enzyme that breaks down penicillin based antibiotics

CcpA

Removes toxins produced from radiation

OqxB

Removes chemical toxins from the bacteria

MexF

Pumps chemicals like antibiotics out of the bacteria cells

Lifestyle genes

MtrC

A molecular wire that discharges electrons (essentially making electricity)

AtpA

Part of the system that releases energy for cells to live and function

PrgI

Forms a needle-shaped structure that injects effector proteins into host cells

Community genes

FlhA

Makes flagella (a tail) that allows the bacteria to move in its environment

IpfC

Enables bacteria to colonise the gut

LuxS

Allows bacteria to sense how many of them there are in an area (quorum sensing)

BpfA

Helps bacteria stick together in biofilms