

# **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



## PrqI

Forms a needleshaped structure that injects effector proteins into host cells

## **Community genes**



#### **FIhA**

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 there are in an area (quorum sensing)



## **BpfA**

Helps bacteria stick together in biofilms