

Designing a Cancer Fighting Microbe

Background:

Researchers found that when some cancerous tumor cells are also infected with bacteria it can trigger an immune response in which the body learns to recognize and kill the cancerous cells.

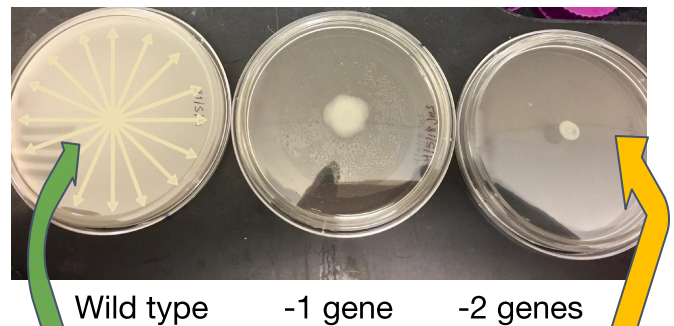
The Problem:

A major hurdle in using this insight is the difficulty of directing the bacteria to the tumor cells without also infecting the entire body.

Our Solution:

I genetically modified the potentially useful bacteria so that the cells were immobile—unable to move or spread by themselves, it stays where the researchers put it.

Then, by injecting the genetically modified bacteria into cancerous tumors, researchers can hope to trigger and then study the desired immune response without risking infection of the entire body.



Wild type bacteria spread all the way to edge of the plate, but **genetically modified** bacteria stay put.