

# The adventures of *E. coli* and its shield

- iGEM Ecuador



Once upon a time, in a small town in Ecuador, there was a bacterium called *Escherichia coli* but its friends called it *E. coli*. Little *E. coli* was trained by scientists to get any superpower she wanted. The townspeople loved and admired her because with her powers she helped solve everyone's problems. *E. coli* could create medicine for the children, clean polluted rivers, and make fuel for the town's farmers.



One day the town was attacked by the great villain *Fusarium oxysporum* also known as Foctopus. The evil fungus used its powers to weaken plants and make them sick. The townspeople were very worried because Foctopus was making more and more crops sick every day.



The townspeople, very angry at the fungus' evil deeds, decided to set a trap for Foctopus. They would feed him delicious cakes, with a little medicine, that would make him sleep for a long time.



I'm very sleepy. I will go to sleep in the crops

**Foctopus, happy to have so many cakes, ate them in one bite and some time later fell fast asleep. The townspeople were very excited because they thought that the effect of the cakes would keep the mushroom asleep for a long time.**



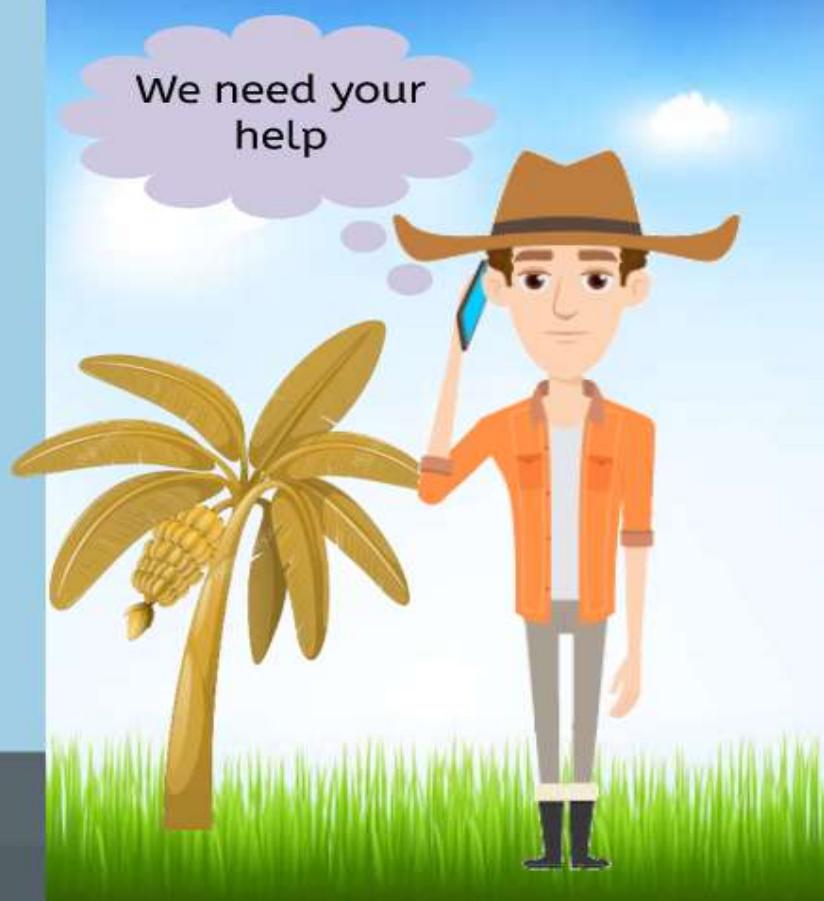
They have cheated  
me  
I will destroy all the  
crops!

**While the people were celebrating their achievement, Foctopus woke up from his sleep and very angry when he discovered what the people had done, he decided to destroy all the crops.**



Friends, our plan did not work. It is best to ask for help from super E. coli

**The people were very sad after this event and did not know what to do, so the Mayor of the town came up with another plan.**



**The next day while E. coli was resting in the Ecolicueva he received an emergency call from the mayor:**

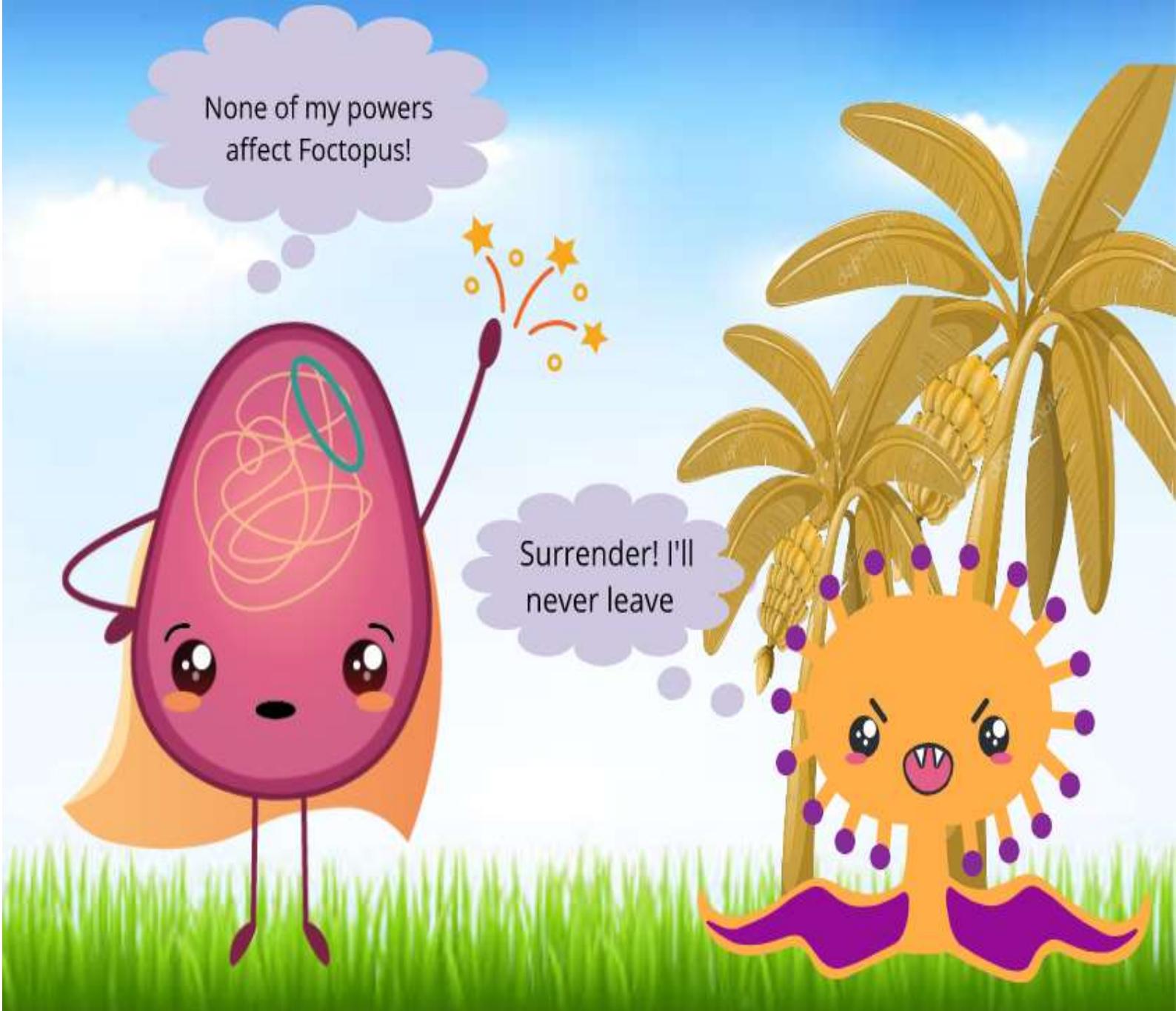
- **E. coli:** Hello, this is E. coli, how can I help you?
- **Mayor:** Mighty E. coli we need your help, our town is under attack by a new supervillain named Foctopus.
- **E. coli:** Foctopus? I've never heard of him. What has this villain done?
- **Mayor:** Foctopus has destroyed all our banana crops.



Foctopus you must  
leave this town. You  
are a very bad  
mushroom

I will not do  
it

**When E. coli arrived in town he noticed that all the crops were diseased. The villagers explained the situation to him and E. coli decided to go and look for the fungus to drive him out of the village.**



None of my powers  
affect Foctopus!

Surrender! I'll  
never leave



**E. coli.** very angry about the bad actions of the fungus, used all her powers to try to drive the fungus out but none of them worked.



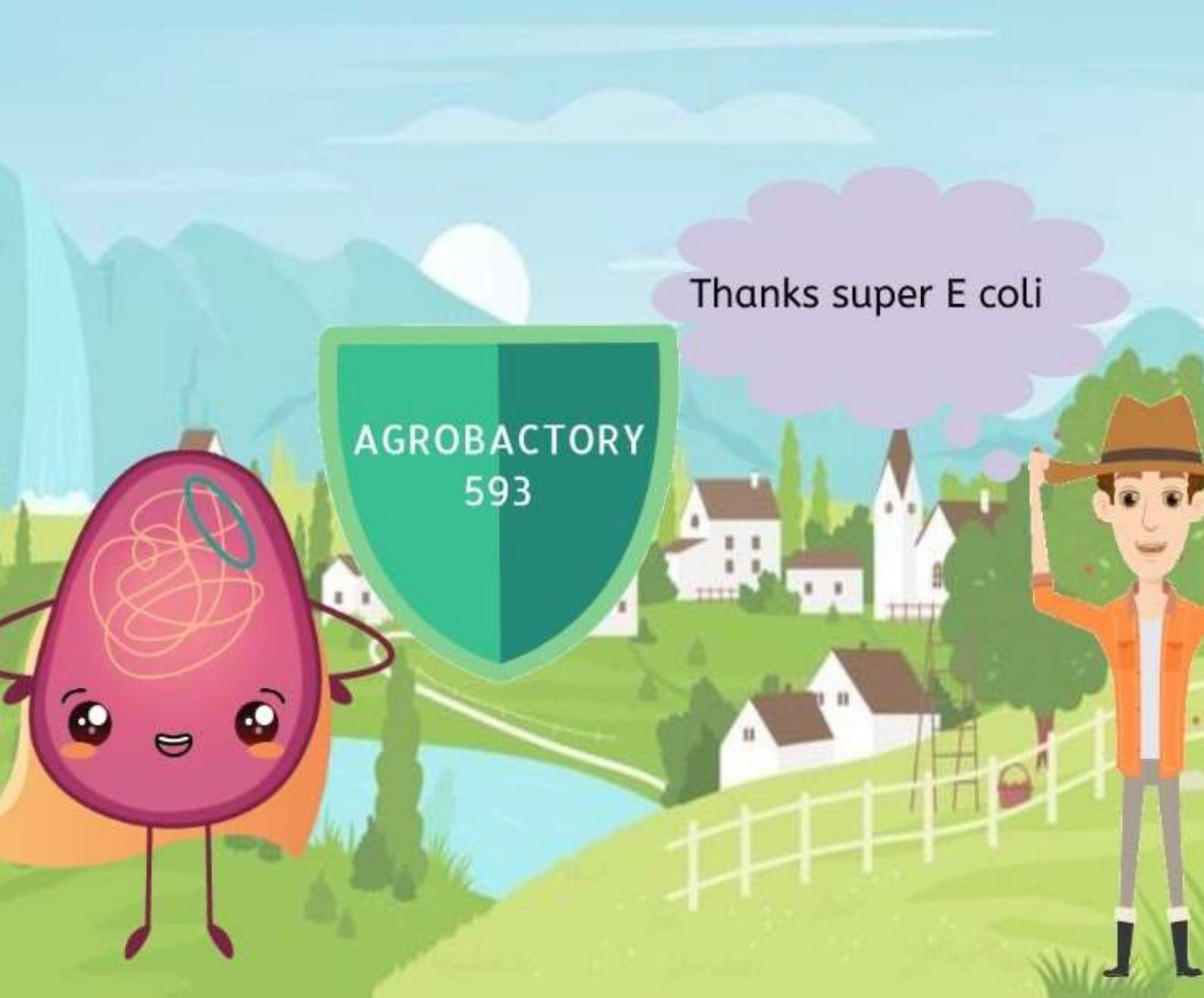
**Then E. coli realized that none of her powers were effective, so she decided to create a shield to protect the crops from the tentacles of Foctopus.**

**- E. coli: Eureka! I'm going to build a super shield, to protect all the crops.**  
For several days, E. coli and a group of super scientists worked tirelessly in his laboratory. The scientists trained E. coli day and night to make it stronger. In addition, they designed a very special shield to protect the crops from the tentacles of Foctopus.



**E coli**, very excited to finish her training and help the people with the shield, came up with a new plan to defeat **Foctopus**. At night, while the fungus slept, little **E coli** placed her super shield on all the crops and the next morning when the fungus tried to touch crops it was unable to do so.

- **Foctopus:** Why can't I touch the crops?
- **E coli:** I have this super shield to protect the crops. As long as the shield is protecting the crops you won't be able to touch them. Only the townspeople will be able to do that.



**Foctopus very angry about his defeat decided to leave the village. All the townspeople were very happy because the evil mushroom was gone.**