**Instructions:**

1-Please be specific and to the point, no need to write an assay when you can answer the question in one line.

2-Please use scientific language.

3- If you find an online recourse, that guided to the answer pls include “ Web page/phrases”.

**Question 1:**

**In less than 30 lines explain the PhoP-PhoQ two-component system in *Salmonella* and how it contributes to virulence. You can add an image to show how this system works. Make sure to include data on key virulent genes regulated by this system and results from mouse infection studies. Make sure to include references when needed.**

**Question 2:**

**Pick an AB toxin and describe in less than 10 lines how in enters the cells and interfere with cellular function.**