

# Position Available for an Undergraduate Lab Research Assistant

Salyers Lab, Department of Microbiology

Our lab works on *Bacteroides thetaiotaomicron*, which is an abundant member of the human intestinal microbiota. *B. thetaiotaomicron* is important for the health of the human host in that this organism aids the host in nutrient acquisition, in addition to preventing the proliferation of pathogens within the human colon. However, *B. thetaiotaomicron* also plays a more sinister role in the human gut by aiding in the dissemination of antibiotic resistance determinants. One such mechanism is by the use of conjugative transposons, which are mobile genetic elements that are transferred via conjugation and are stably maintained in the chromosome of both the donor and recipient. Our lab is focused on the conjugative transposon, CTnDOT, which encodes resistance to the antibiotic tetracycline. Interestingly, transfer of this element is stimulated by exposure to tetracycline. Upon exposure to tetracycline, conjugative transfer of CTnDOT is enhanced whereas in the absence of tetracycline there is no detected transfer of CTnDOT. My research is focused on the small RNA, RteR, which is the regulator that mediates inhibition of CTnDOT transfer in the absence of tetracycline.

This position would be for a student interested in performing research for credit (e.g. MCB 290) or as an unpaid internship.

If you are interested in the possibility of joining our lab or have any further questions, please contact:

**Jillian Waters**   [waters3@illinois.edu](mailto:waters3@illinois.edu)