

**Upscale Protein Production**  
**Professor Juan Morata**  
**BSC-2943L**  
**BioScience Internship (Ref# 588749)**  
**Wolfson Campus**

This research will expose students to the different phases of upscale protein production as they are performed in the bioscience manufacturing industry. In this internship, students will learn to apply aseptic and sterile techniques while performing various good manufacturing processes (GMPs), including but not limited to:

- 1) transformation (*bacterium Escherichia coli with a recombinant vector containing green fluorescent protein*)
- 2) fermentation,
- 3) precipitation,
- 4) purification (*using mini-ultrafiltration and column chromatography*); and
- 5) bottling of final products for mass production at the manufacturing level.

Student commitment for this project will depend on interest and motivation. This project is funded through a National Science Foundation grant – “*The Biotechnology Research Learning Collaborative*”.

**IF YOU ARE INTERESTED IN ENROLLING IN THIS COURSE,**  
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