Fred Hutch
Cancer Center

Experience at the Therapeutic Products Program

Tenchi Vu, Fred Hutch LabLaunch Intern

About Me

My name is Tenchi, I'm an upcoming Freshman at University of Washington, studying Biochemistry. I joined this program to expand my viewpoint in the biotechnology field.

Lab Connection to Mission

Therapeutic Products Program (TPP) poduces the product proposed by labs in their clinical phase 1/2 trials which they can test on patients, and further develop the product until it's fully ready to fight against infectious diseases

Overview of my Lab

Facility Director: Folashade Otegbeye
Senior Director: Zita Mears
Provides Good Manufacturing Practice (GMP) - grade cellular therapeutic products for facilities currently developing a product which are in Phase 1/2 clinical trials.

Departments:

Process Development (PD): Executes laboratory projects to assist in the development of GMP manufacturing processes

Process Engineering (PE): Receives drafts from PD, and reviews it to ensure that all the processes are possible, as well as improving the efficiency of the process

Manufacturing: Utilizes batch record and standard operating procedure (SOP) to engineer cells

Quality Control (QC): Ensures the quality of both the product and lab space are in compliance with GMP standards

Quality Assurance (QA): Reviews batch record, SOPs, and all other documents for mistakes, and that documentation is being directly followed by the manufacturing team

My Experience

Besides from gaining a detailed understanding of how the whole TPP works - provided below are a list of examples of what I've done this summer:

- Upkeep of the GMP Facility - Performed periodical cleaning, restocking, and overall maintenance of the GMP facility
- Cell Sorter - Interacted with a SONY FX500, learned about the theory behind how a cell sorter works, as well as the start-up process
- TM-LCL - A feeder cell designed to boost the growth of the target cell. Trained to perform cell growth using aseptic techniques
- Flow Cytometry - Provided with the theory of flow cytometry in addition to being taught on how to analyze and interpret flow data
- Other Facility Equipment - Other equipment such as the LOVO cell processing system and the CliniMACS plus were also introduced

Final Thoughts

It was fascinating observing how the different department within TPP works together, ranging from Process Development, creating the process, to the Manufacturing team, acting upon the SOP. Since every team is connected together, a single mistake could affect the whole of TPP, highlighting the importance of collaboration here. Being there, and having each group either show me their usual process or explanation of them, my perspective of the Biotechnology field has grown to further appreciate the intricate system it inhabits.