



Marshallplan-Jubiläumsstiftung
Austrian Marshall Plan Foundation
Fostering Transatlantic Excellence

Bar LAUB

Field Report

Practical Training Semester WS 2019/2020

The Role of micro-RNA-3161 propagation in Melanoma





The research agenda

This project will be focused on discovering what genes miR-3161 regulates in melanoma cell lines and miR-3161 effect on the tissue. A better understanding of the role of miR-3161 in melanoma cell lines on the growth, survival, and progression of melanoma could lead to a potential lead for new therapeutics.

Personal Project Work

My project focused on the effects of micro RNA 3161 on melanoma cell lines. My supervisor Dr. Altaf Dar determine the relative expression of micro RNA 3161 in 7 melanoma cell lines and healthy melanocytes. I transfected the cells. I validated the transfection with reverse transcriptase quantitative polymerase chain reaction and determine the over expression efficacy (in folds). I plated the transfected cells and determined observed a reduction in the colonies formation. I then used flow cytometry assays to determine the micro RNA apoptotic effects as well and its effects on the cell cycle. Lastly, I tested various potential protein targets that were determined bioinformatically.

General work

I assisted my supervisor with his other experiments which includes cytotoxicity for numerous drugs, done cell culture, proteins and nucleic acids extractions, polymerase chain reactions and western blots assays.

My impression of the US

I learned a lot about American culture and lifestyle. I did not anticipate the life in the US to the way they are. I talked to many people, met scientist communicators in Los Angeles and Atlanta, visited national parks and observed San Francisco. Living here for one semester change the way I perceive the US. The concentration of big companies in a 20 minutes walking distance from the CPMC lab. I enjoyed attending science and technology meetups. I find my time in the US enriched my skills and knowledge.

The CPMC

The California Pacific Medical Centre is the biggest medical institution at the northern part of California. It comprised out of hospitals and research institutes. The CPMC research institute conduct basic research and clinical trials.

Acknowledgments

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