

Mentor Visit Assessment #1

Mentor: Melanie Ecker

Profession: Assistant Professor of Biomaterials at University of North Texas

Location: At Home

Date: 1/12/2021

Time: 6:00pm- 7:00pm

Assessment:

During this first meeting, I wanted to learn more about the mentorship plan and brainstorm product ideas. Firstly, I went through the FISC Mentor Handbook and answered any questions Dr. Ecker had. She wanted to know the ISM course plan and any changes caused due to COVID-19. I told her that we had to cancel the Showcase night, but we are still planning to organize the Final Presentation night on April 21, 2021. I also explained the course division of original work and product in between two semesters. Then I asked some questions about her preferences as a mentor. For attire, she described she is comfortable with casual attire during general visits but preferred professional attire whenever I am presenting. Besides, she also explained her past experiences as a mentor for undergraduate students. Dr. Ecker is a hands-off mentor who likes to guide her students in creating their path. Furthermore, throughout the meeting she treated me like an adult and gave me freedom which made me excited to embark on my mentor journey.

Later I shared my original work project with Dr. Ecker to give her an overview of the research I have conducted in the past. She was impressed with the work and suggested that I create a shared folder for both of us where we can store the work I am doing and store it in one place. After discussing my original work project, we began to brainstorm potential product ideas. Furthermore, I initially had the idea of creating a headrest attachment that absorbs the shock from impact and keeps the neck and spine safe. The headrest would have been made from a gel-like material, used in the latest shoes, that is shock absorbent and more adjustable than the headrests attached to cars. Through this headrest attachment, the passenger would be protected from spinal cord injuries as unlike the headrest in the car, this attachment would extend to the spine as well and absorb the force caused by the change in momentum from cars. Initially, Dr. Ecker liked this idea and felt that it could be a helpful invention for the community. However, after we further discussed the idea, we decided that in the current circumstances and the lack of an appropriate funding source that it would be beneficial to explore a project that can be completed

virtually and still have a significant impact. At this moment, Dr. Ecker had the idea of completing a comprehensive literature review over nerve conduits.

Moreover, nerve conduits are new technological advancements that enable nerves to regenerate within tubes. This form of regenerative medicine is revolutionary for spinal cord injury research as it allows fractured and damaged nerves to regenerate under healthy circumstances inside a tube. I was intrigued by this topic but was not sure how to approach writing a literature review on various publications. However, Dr. Ecker showed me examples of her past mentees who have completed similar projects on other topics and showed me the steps they took to achieve their goal. Then she even provided resources such as the Mendeley database citation tool and potential websites where I could publish my review. We discussed that the best way to approach my product would be to complete a comprehensive literature review about the different publications regarding nerve conduits and conclude with final thoughts about the efficiency of the technology and detail future experiments that should be conducted to advance the subject.