**Introduction**

- The Nutrition and Metabolic Health Initiative (NMHI) is a clinical research facility in the Department of Nutritional Sciences under the College of Human Sciences at Texas Tech University (TTU).
- Interned at various locations on campus: NMHI, TTU Medical Center, Covenant Hospital, Lubbock Gastroenterology Clinic, Mechanical Engineering Research Lab, Human Sciences Research Lab, and Experimental Sciences Lab.

**Objective of Internship**

Gain insights into the role of managing one’s nutritional and metabolic health through lifestyle changes on the individual and systematic levels. Further, I hoped to gain clinical experience and technical skills to prepare for a career in healthcare.

**Work Profile**

- Observed and assisted physicians in the gastroenterology, endocrinology, and general internal medicine clinics; registered dieticians and psychologists in nutrition health coaching sessions; researchers in nutrition biochemistry mice studies.
- Involved in consolidating a research paper for a weight-gain clinical study; attended lab meetings and verified data.
- Helped plan and lead week-long high school immersion programs.

**Clinical Experiences**

- Learned to take patient history and interact with patients in out-patient clinics, learned to perform auscultations.
- Discussed with physicians the thought process behind forming a diagnosis and learned about their personal experience pursuing medicine.
- Observed clinical procedures such as colonoscopies and upper endoscopies.

**Research Experiences**

- Observed and assisted researchers in the Nutrition Biochemistry lab with an ongoing study on the effects of E4orf1 on high-fat diet-induced liver steatosis and associated cardiovascular risk factors in mice.
- Learned and experimented with 3D food printing research at the Medicine, Mechanics, and Manufacturing (M3D) Design Lab.

**Reflection**

**Lifestyle Modifications and Health Outcomes**

- Fixation on immediate solutions vs nurturing lifestyle changes.
- Effectiveness of nutrition and health counseling at NMHI through lifestyle alternations.

**Questions**

- To what extent should nutritional health and lifestyle changes be emphasized in the clinical setting by physicians to patients (instead of medical interventions alone)?
- How can we experimentally investigate the impact of daily habits on one’s health outcomes, given how difficult it is to establish causality due to potential confounds?

**Conclusion**

- While medications and treatment interventions play an undeniably crucial role, the significance of lifestyle choices cannot be understated.

**Acknowledgements**

I would like to express my sincere gratitude to Dr. Binks for coordinating my experience and providing me with invaluable mentorship, as well as to the many physicians, researchers, and students who provided me with guidance. I would also like to acknowledge the CHW and the Global Health Program for generously funding this experience and the respective coordinators for their continuous support.

**Looking Ahead**

- Reaffirmed my decision to pursue a career in healthcare.
- Became critically aware of the significance of lifestyle changes and creating habits.

**Nutritional and Metabolic Wellness: A Multidisciplinary Exploration in Medicine, Psychology, Engineering, and Research**

**Tiffany Tsai, 2025, Psychology**

Texas Tech University, Nutrition and Metabolic Health Initiative, Lubbock, TX

Funded by CHW under the Internships in Global Health Program