

Of Mice and Men: Using a Mouse Model to Understand How Certain Diets Can Affect Immune Responses in Septic Humans

Description:

Our Writing 510: Research Methods for Technical Communicators class was tasked with developing content for the Center for Life in Extreme Environments (CLEE) website at Portland State University. For my part, I was assigned to write a blurb about Dr. Brooke Napier and her research despite not having any scientific background myself. To undertake this task, I interviewed Dr. Napier, transcribed the interview and wrote several paragraphs outlining her research based on the transcription.

Competencies:

Written Communication: This project displayed my ability to use my writing skills to communicate to readers. I decided to write in a voice that was simple, concise and easy-to-understand for all levels.

Project Planning/Project Management: I had to arrange a time and location to meet with Dr. Napier to interview her. In addition to making these arrangements, I had to study her research and think of applicable questions to ask her in order to formulate an accurate and informatively written deliverable.

Editing: After writing my blurb, I channeled my work experience as a copyeditor and proofreader to edit my writing to ensure it was coherent and grammatically correct.

Working with SMEs: Dr. Napier is a subject matter expert in the scientific field—I am not. This written artifact displays my ability to communicate with an SME to complete a project.

Personal Characteristics:

Creativity: As a professional with a background in writing and editing, I am unfamiliar working in a scientific field. This project displays my creativity in using my literary background to deliver a piece of scientific writing.

Learning: I love to learn new things, regardless of if they relate to science, literature, pop culture or more. My blurb not only describes Dr. Napier's sepsis research, it shows a writer who was enthusiastic and appreciative of the topic.

Time Management: I interviewed Dr. Napier on a Thursday and was expected to deliver my written work the following Wednesday. I had to interview her, transcribe the interview then use the transcription to produce a written document. This was all accomplished despite the short turnaround and complexity of the project.

Technologies Used:

Otter: I used Otter to record and transcribe my interview with Dr. Napier.

MS Word: I transcribed the interview and did all of my writing in Microsoft Office, for PC and Mac, as I used my personal computer along with computers at the PSU library.

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Dr. Brooke Napier, Napier Lab
Napierlab.com

Dr. Napier studies the immune responses to sepsis, the 10th leading killer in the world and the first killer of people in the ICU. Her lab focuses on what populations of people are more susceptible to sepsis, and how to develop a therapeutic that septic patients can take.

Sepsis is a disease that has existed for as long as medical records have been kept, dating as early as ancient Egyptian times. Dr. Napier is interested in the difference between septic patients and non-septic patients who have identical infections. A non-septic patient can eventually recover from a standard infection with antibiotics, whereas a septic patient's blood vessels collapse, causing organ failure. What are the factors that cause this disease, and why?

Studying the effects of obesity can help us understand how different diets can manipulate immune responses to sepsis. By examining septic mice who are fed a standard diet versus septic mice who are fed an obese diet (also known as the Western Diet), we can observe patterns which may eventually help medical professionals treat this disease.

To perform this research, the Napier Lab currently collaborates with the Oregon National Primate Research Center, Oregon State University and the Oregon Health & Science University Hospital.

Did You Know?

- Sepsis doesn't pick certain people or countries or demographics to kill—it can kill anybody.
- The Western Diet for humans consists of eating the equivalent of a Big Mac, large fries, pumpkin spice latte, Chipotle burrito, margarita and Noosa Yoghurt—all in one day! Dr. Napier's mice are obviously not fed these exact foods, but a mouse version of them.
- 75 percent of the world is now eating the Western Diet, or something similar to it.
- Monkeys who are fed a diet similar to the Western Diet often tire of this food and stop eating. In order to appease these monkeys, a Snickers bar or something similar will be gifted to them.

For more information or to get in touch with Dr. Napier, please contact brnapier@pdx.edu.