

## **BCHM 421/422 – 2018/2019**

**Project #1 Outline:** Lung cancer kills more people than any other cancer. Diagnosis is often difficult and treatments have not been that effective. Immunotherapy is increasingly being used to treat this disease, but markers able to indicate if this therapy is effective are not available. We have developed a number of blood tests based on DNA methylation for other cancers and wish to apply this same technique to lung cancer specifically to be used to monitor the response to immunotherapy.

**Supervisor:** Christopher Mueller

**Project Title:** A blood test for Lung Cancer

**Keywords (3-5):**

- 1. Blood Test**
- 2. Liquid Biopsy**
- 3. Lung cancer**
- 4. DNA methylation**
- 5. Translational**

**Project Goals:** Create a clinically applicable liquid biopsy for lung cancer.

**Experimental Approaches:** Bioinformatic analysis of genomic methylation data. Creation and validation of multiplex probes for target regions. Next Generation Sequencing and analysis.

**References:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5709136/>