The Carvunis Lab

■ Change and Innovation in Biological Systems ■■■

University of Pittsburgh

SUMMER INTERNSHIP 2023

FOR UNDERGRADUATE STUDENTS

Paid hands-on immersive research experience at the Carvunis Lab at the Computational Systems Biology Department of the University of Pittsburgh School of Medicine (www.carvunis.com)

ABOUT US:

The Carvunis lab studies the molecular mechanisms of change and innovation in evolution. In trying to understand how novel protein-coding genes evolve, our lab recently discovered that translation of seemingly random intergenic transcripts can be beneficial for the cell (Vakirlis et al, Nature Communications 2020).The students will begin answering this question by examining these novel "proto-genes" and working out how their overexpression impacts the growth of our model organism budding yeast, *Saccharomyces cerevisiae,* in different environmental conditions. The Carvunis Lab is a very diverse team that actively promotes equality for all members.

INTERNSHIP DESCRIPTION:

- Learn how to design and execute a research experiment while practicing various wet-lab techniques including cloning, microbial phenotyping, high-throughput robotic, and bioinformatics.
- Closely mentored by Dr. Anne-Ruxandra Carvunis and senior research specialist Nelson Castilho Coelho.
- The students will meet weekly with their summer mentor, participate in the laboratory's journal clubs, small group meetings, local seminars, write a publication about their findings and present their research at the weekly group meeting at the end of the summer.
- **30 hours a week compensated at $20/hour for 10 weeks from May 22-July 28 2023.**
- **Up to $2,000 will be reimbursed to compensate additional costs related to moving to Pittsburgh for the summer**.
- **No accommodations for housing will be provided.** Referrals for housing options can be provided upon request.

HOW TO APPLY:

- CV including courses and GPA information
- One page essay explaining their motivation
- A letter of reference (from an instructor of a laboratory course or a research advisor)
- Send above documents to Avani Chhabra (avc41@pitt.edu) **by March 15 2023**
- Virtual interview before acceptance into the program

(Previous research experience is valuable, but it is not necessary for application. Having participated in an ORFAN workshop or otherwise done work on yeast orphan genes in the past will be considered a plus.)

ELIGIBILTY CRITERIA:

- Current undergraduate students only
- USA citizens and permanent residents only

For any further information,
Contact avc41@pitt.edu or Dr. Carvunis (anc201@pitt.edu)