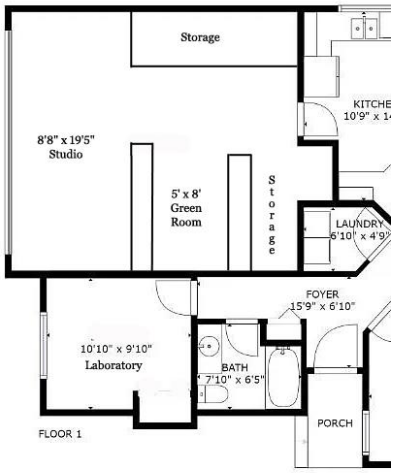
BSL 1 Lab

Construction 2017

In the fall of 2017, I became employed by the Washington State Department of Health as a Researcher in the Childhood Immunization section. My prior careers had been in statistical analysis so I didn't have a problem applying my background to epidemiology (Diekmann, Heesterbeek, and Britton 2013). But the most common book used in the department was the CDC handbook on immunizations and communicable disease called the "Pink Book" (Hambrosy, Kroger, and Wolf 2015). I needed to understand the biology in order to ensure that my statistical findings were not spurious. There is really no way to fully grasp the subject of Biology without applying the knowledge in the lab so I determined to build a small Biosafety Level One (BSL 1) laboratory for practical knowledge of the subject.

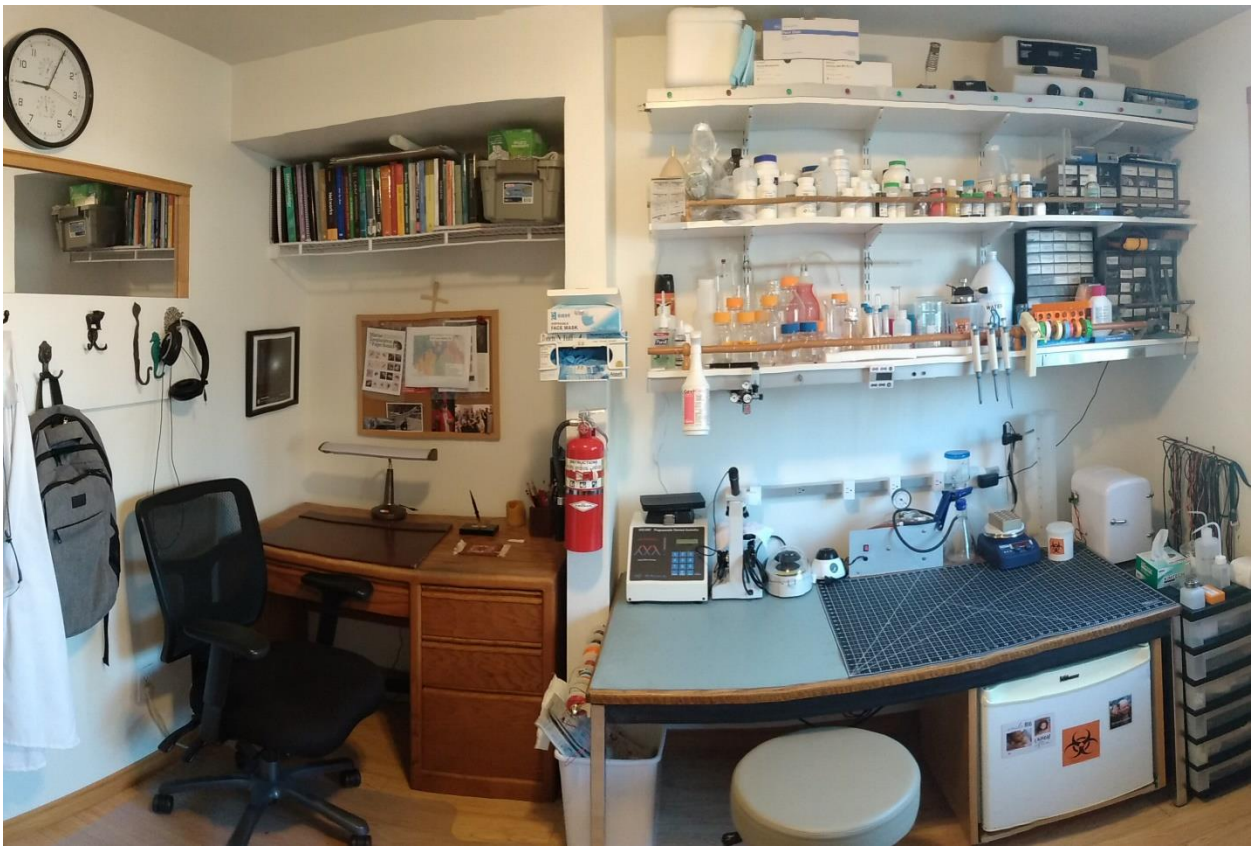
One of the three bedrooms in my 3-bedroom home is a 10' 10" by 9' 10" space with the closet door removed and a desk and bookshelf inserted.



Adjacent to the closet space is a 6' 5" x 3' space for the Bench, shelves, refrigerator and rolling cupboard.

On the opposite side of the room I mounted a 6' magnetic white board which use all the time.

The lab is adjacent to the guest bathroom so I have access to a sink and water but it's not enough to be called a wet lab. I have installed filters beneath the sink and have a distiller for purifying my bench water but I still purchase DI water for making reagents.



Between the labs completion in 2018 and the end of COVID isolation in 2021 I've done bench work that followed the following protocols.

16s RNA Amplification

CRISPR gene editing in bacteria

Bacterial Transformation

PCR

Gel Electrophoresis

PTC Genotyping

In most cases I was able to add the sequence information to a SQLight database from an NCBI Blast.

Since then, I have moved to marine biology with an emphasis on Phytoplankton and Zostera Marina in the South Puget Sound.

Immunology

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