

## **Aleah Davidsen**

8 Oriole Dr Andover, MA 01810 | 425-879-9689 | aleahkd@gmail.com

### **OBJECTIVE**

Biochemistry student seeking to utilize biotechnology techniques gained through high school lab experience to participate in research opportunities.

### **EDUCATION**

Brown University, concentrating in Molecular Biology & Biochemistry (3.76 GPA)

Andover High School, 2016-2020 (3.98 GPA)

- AP Biology, AP Chemistry, AP Physics, AP AB Calculus, Biotechnology
- Researched nanoparticle use for drug delivery and nanosponge development to combat pore forming toxins as part of AP Chemistry Final Presentation

### **LAB SKILLS**

Micropipetting. DNA extraction. ELISA. Making, loading, and running specific concentration agarose gel with electrophoresis chamber. PCR. Loading and balancing centrifuge. Transformation. Sterile technique. Spectrophotometry. Incubation. Restriction enzyme digestion. Vortexing. Golden Gate Assembly. Plate pouring. Growth of competent cells. Plating with beads and cell spreader. Genetic part optimization.

### **RESEARCH EXPERIENCE**

In a Biotechnology course, I extracted my DNA from cheek cells and used PCR and electrophoresis determine the number of repeats in my Per3 gene. This gene contains a VNTR, and the number of repeats is associated with an individual's circadian clock. I determined my sleep genotype through electrophoresis analysis and compared it with my observed chronotype.

### **VOLUNTEER EXPERIENCE**

Student Advocate, Mobility Outreach International

- Researched diabetes incidence and its relation to limb loss in order to assess possible changes in demand in participating countries and benchmarked competition landscape of similar organizations
- Only student speaker at Mobility Outreach International's Annual Gala in Seattle, spring, 2018 (helped raise over \$460,000 in donations)

### **AWARDS**

National Merit Scholarship Commendation (October, 2019)

WPI Leadership in STEM Book Award (May 2019)

Andover High School National Honor Society (November 2018)

Underclassman Awards

- Excellence in Physical Science, Foundation Studios, English 10, Chemistry, Algebra II, & Precalculus (2016-2019)

### **REFERENCES PROVIDED UPON REQUEST.**