

College of Arts and Sciences
Westbrook College of Health Professions

September 23, 2023



UNIVERSITY OF
NEW ENGLAND

Saturday, September 23, 2023 | 9–11 a.m.

A C

9–11 a.m.

10:30 a.m.

2023

()

!

Handwritten musical notation on a five-line staff, consisting of various rhythmic symbols, vertical stems, and slanted lines.

Handwritten musical notation on a five-line staff, including vertical stems, slanted lines, and a final exclamation mark.

Handwritten musical notation on a five-line staff, featuring vertical stems, slanted lines, and several dots.

Handwritten musical notation on a five-line staff, including vertical stems, slanted lines, and a horizontal dash.



63. Goat Island Alternative Energy Project

Student Author(s) Cameron Indeck '22 | _____, .D. _____ Faculty Advisor(s)

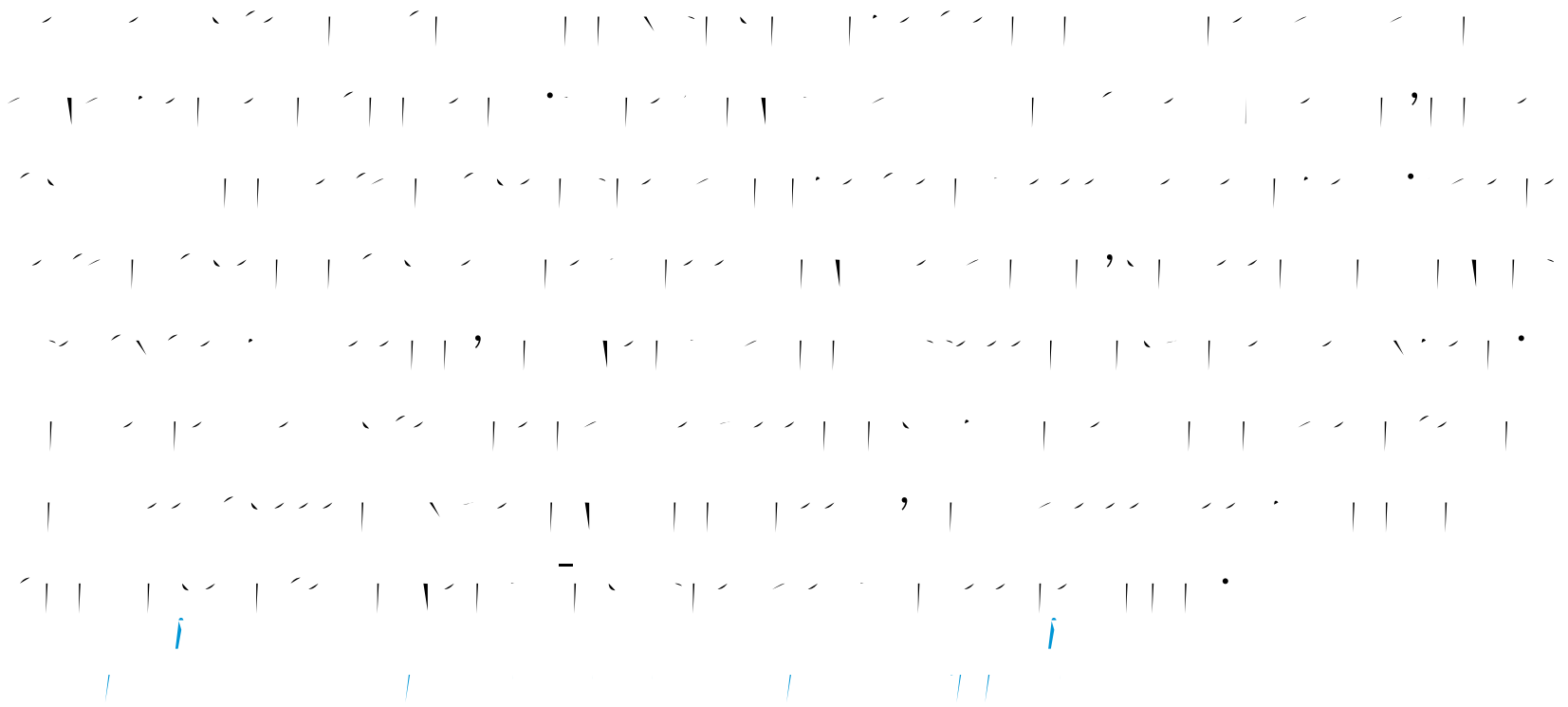
Abstract

_____ 1833. _____

Funded by

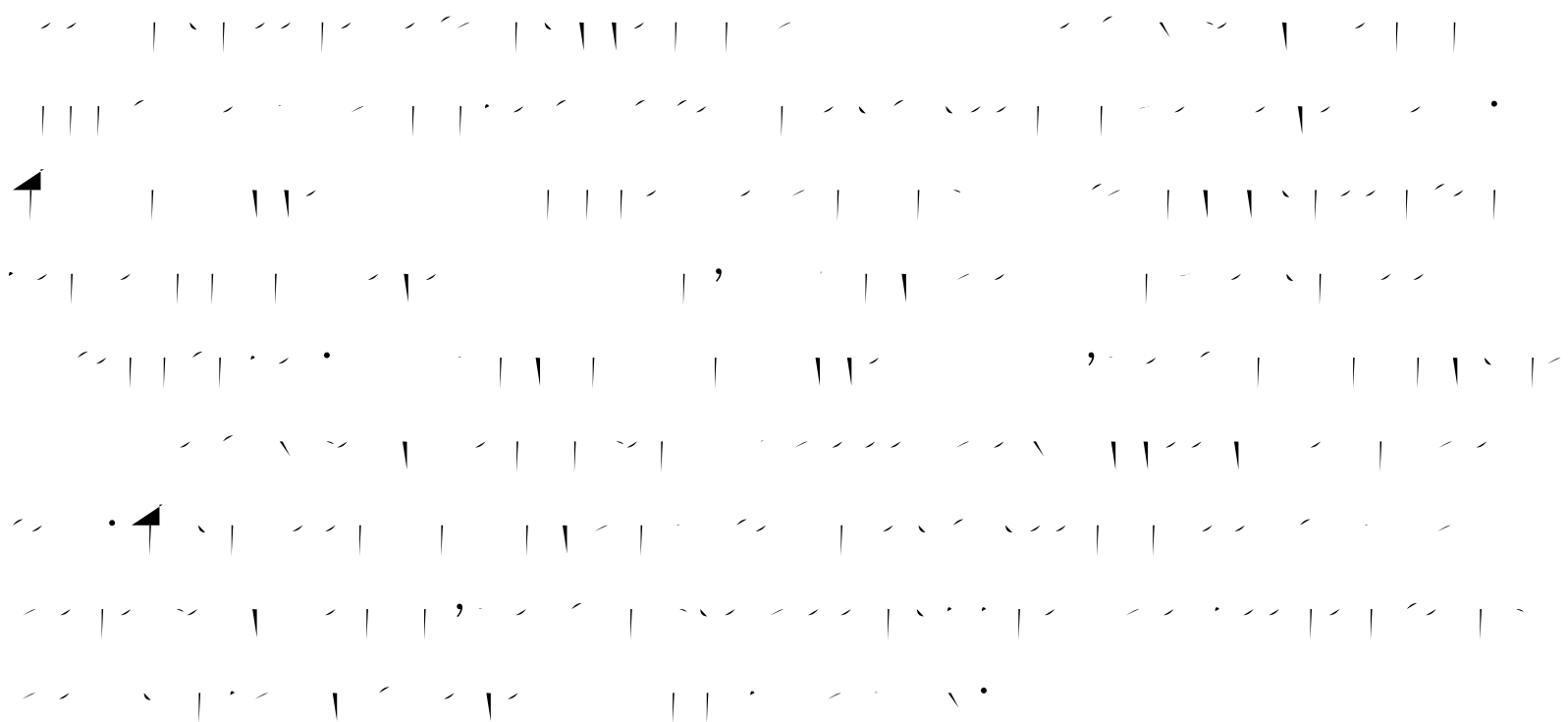
1. Novel Cultivation Technique for a Common Species: Sea Lettuce (*Ulva lactuca*)

Sophia Tearman '25 | C B , .D.



2. Using In Vivo Tagged RNA to Examine Autophagic Degradation of RNA Decay Fragments

Dez Schrankel '24 | G , .D.



3. The Effects of Vegetation Dieback Areas on New England Salt Marsh Vegetation

Caroline Fales '25 | *B.S.*, *D.*, *D.*

Abstract: This study examines the effects of vegetation dieback areas on New England salt marsh vegetation. The research focuses on the impact of dieback on the structure and function of salt marsh ecosystems. Key findings include a significant reduction in biomass and species diversity in dieback areas compared to healthy vegetation. The study also highlights the role of dieback in altering hydrological processes and nutrient cycling within the marsh. The results suggest that dieback areas may serve as a source of sediment and nutrients, potentially influencing the recovery of adjacent healthy vegetation. Further research is needed to understand the long-term implications of dieback on salt marsh resilience and ecosystem services.

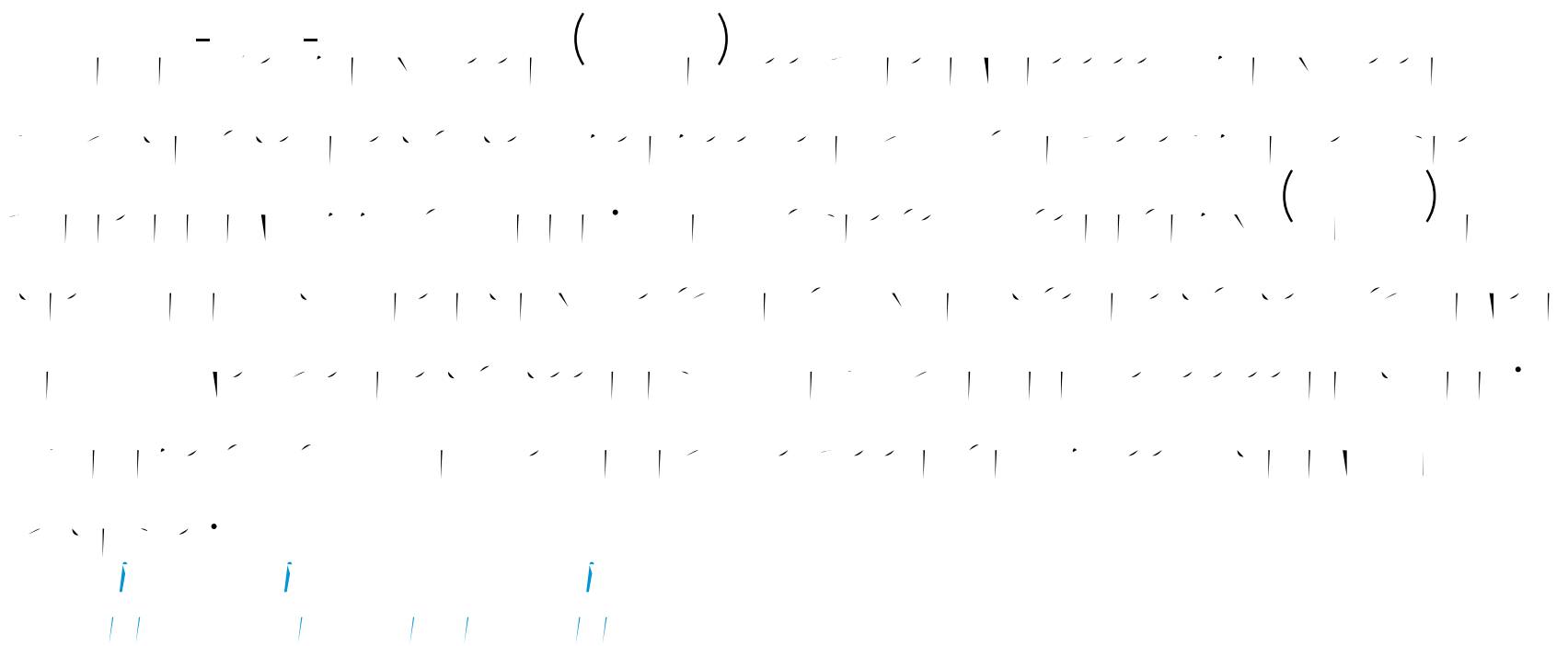
4. Impact of Prophylactic Ceftriaxone on Antimicrobial Resistance in Out-of-Hospital Cardiac Arrest Patients

Cailyn Wheeler '25 | *B.S.*, *D.*

Abstract: This study investigates the impact of prophylactic ceftriaxone on antimicrobial resistance in out-of-hospital cardiac arrest (OHCA) patients. The research examines the effectiveness of ceftriaxone in preventing infections and its potential contribution to the development of antimicrobial resistance. Key findings include a significant increase in the prevalence of antimicrobial resistance in OHCA patients treated with prophylactic ceftriaxone compared to those who did not receive the antibiotic. The study also highlights the importance of prudent antibiotic use in the management of OHCA patients to minimize the risk of antimicrobial resistance. The results suggest that the use of prophylactic ceftriaxone in OHCA patients may be associated with a higher risk of antimicrobial resistance, which could have implications for the effectiveness of future antibiotic treatments. Further research is needed to explore alternative strategies for infection prevention in OHCA patients.

7. Visualizing Elastin-Like-Polymer Behavior with Atomic Force Microscopy

Ben Wheeler '24 | E B , .D., , .D.



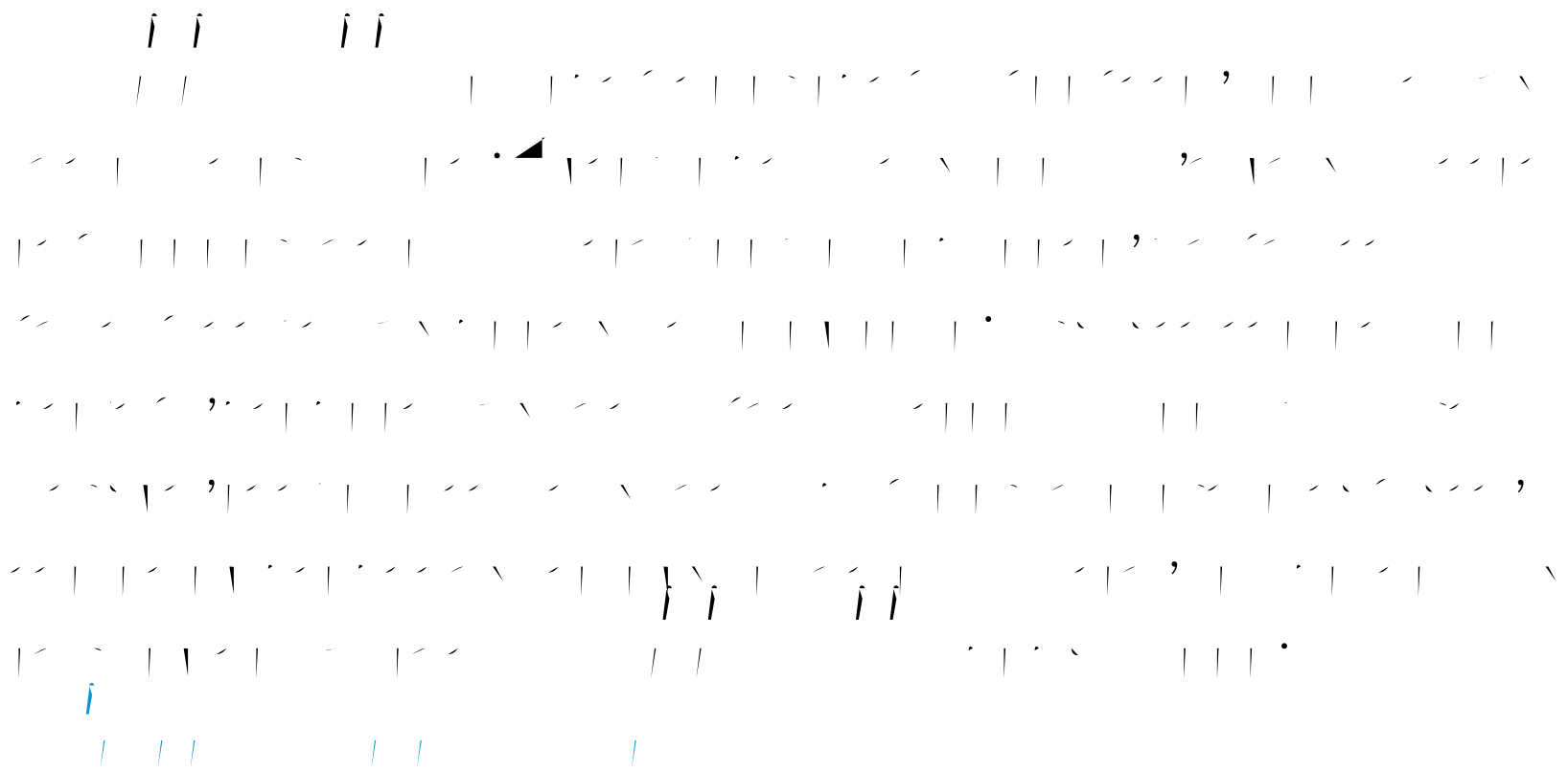
8. Effects of Early Life Pain on Amygdalar CRF Expression in Developing Rodents

Brooklynn Merrill '25, Megan Tomasch '25 |
B , .D., , B. .



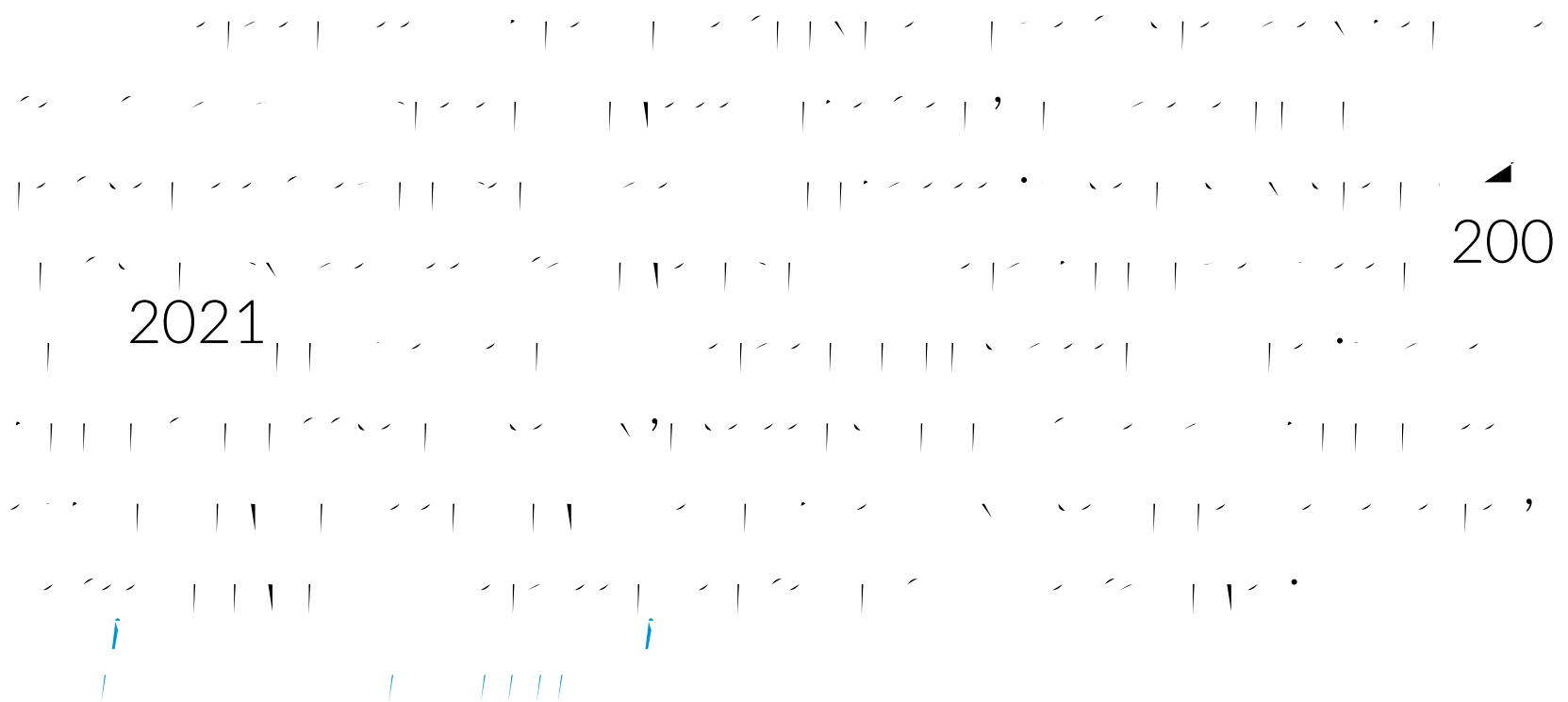
9. Establishing Pre-restoration Sites of *Agalinis maritima* on the Biddeford Pool Salt Marsh

Sam Walsh '24 | , .D.



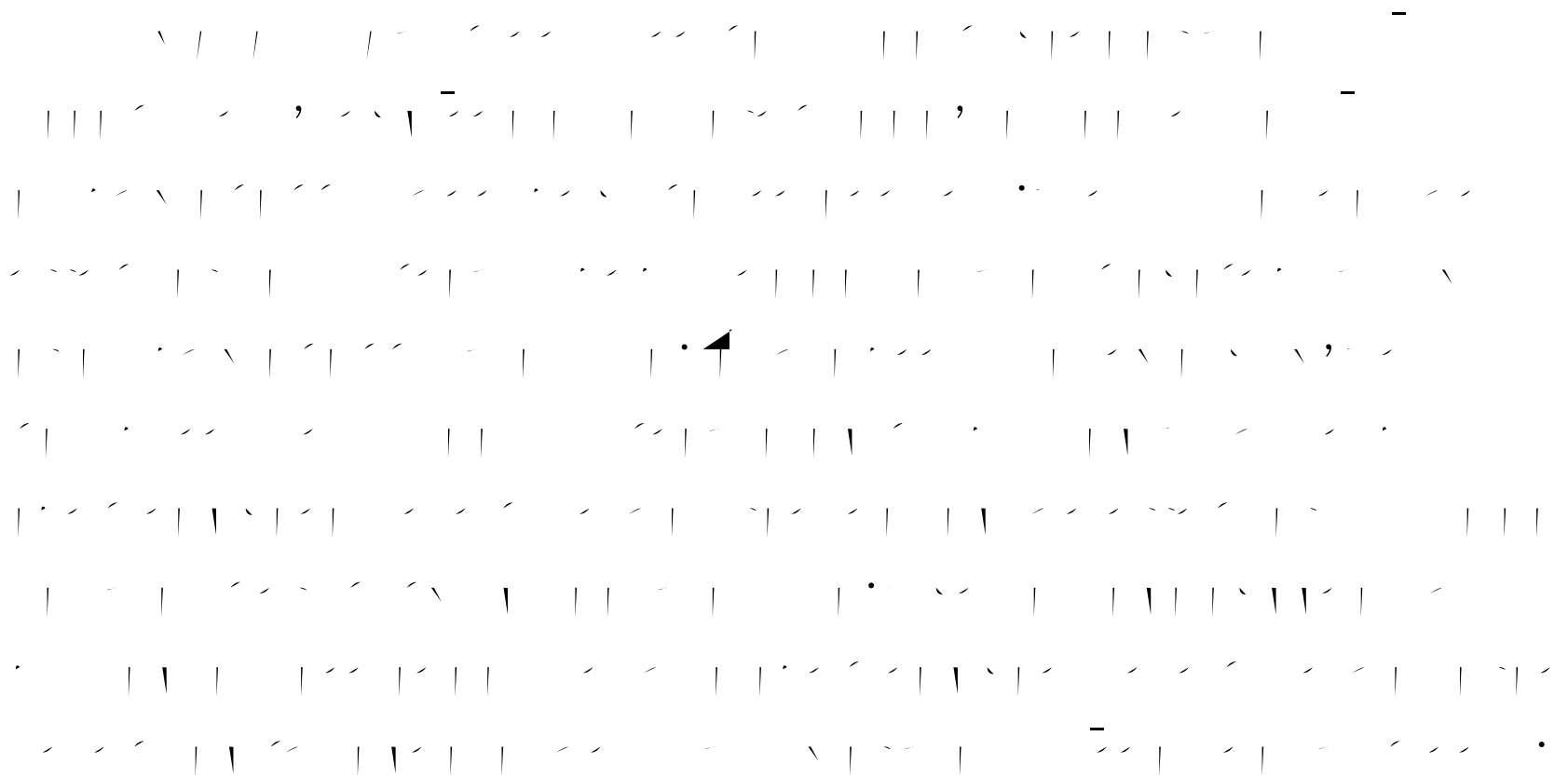
10. The Growth of Mega Pool Systems in 12 Maine Salt Marshes From 2009 to 2021

Katelyn DeWater '25 | , .D.



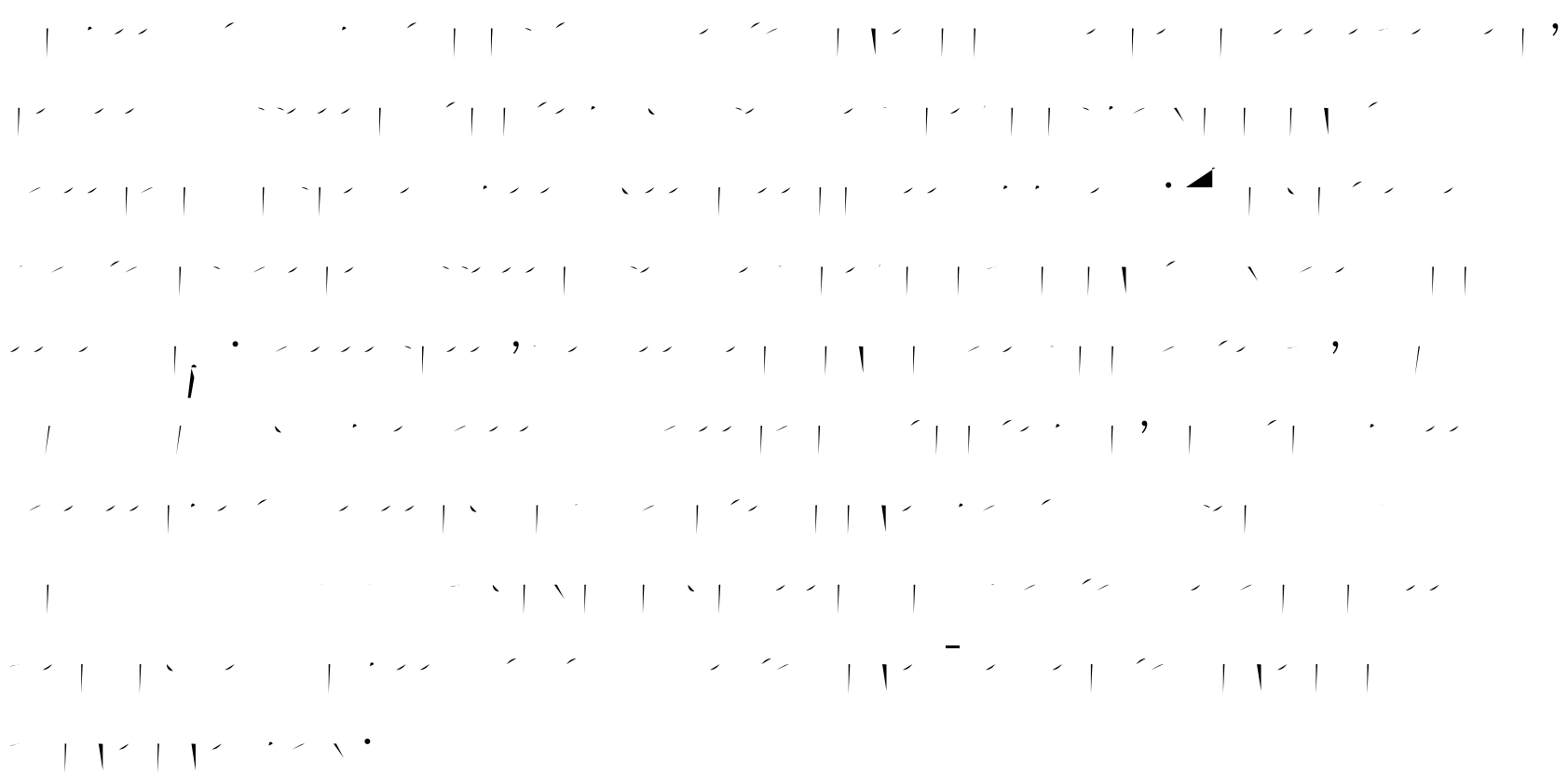
11. Effect of Antimicrobial Peptides on Antibiotic-Mediated Killing of Bacterial Biofilms

Anjanadevi Govindaraj '24, Alya Theriault '24 |
B, *.D.*



12. Thermal Tolerance and Temperature Thresholds in Jonah Crabs

Anna Sinclair '24 | *F*, *.D.*



13. Comparison of Bone Density in College Male and Female Ice Hockey Players Throughout a Season

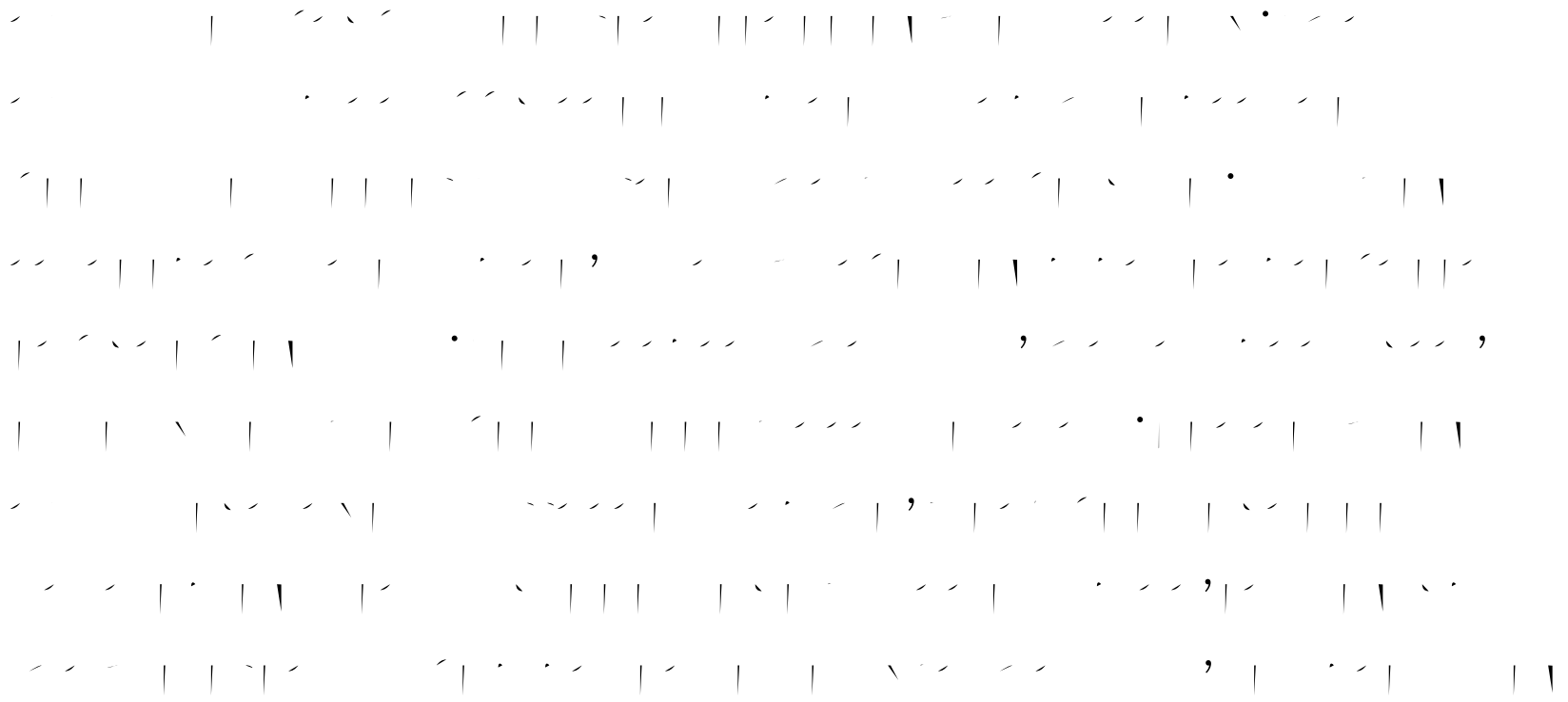
Sarah Collins '24 | [Presentation](#), *D.*, ...

... () ...
 ...
 ...
 (, 1 6).
 ...
 ...

14. Postural Effects on Power

15. Using eDNA as a Tool to Monitor Biodiversity

Josephine Pikowski '26 | *E* . , . ., *C*
 , .*D.*, *B* , *F* , .*D.*



19. Assessing the Efficiency of a Microprocessor-based Bycatch Reduction Device on the Atlantic Spiny Dogfish (*Squalus acanthias*) in Recreational Fisheries

Clayton Nyiri '25 | *.D.*, *D.*, *.*, *.*, *.*,
B, *.D.*, *B*, *.*, *.D.*,
G, *.D.*, *.*, *.D.*, *B* *D*, *.D.*

(157, 0() 115, 130,6 (?) (?)

23. Microplastic Contamination and Tissue Distribution in Atlantic Sea Scallops

Amber-Rae Pesek '24 | B.S., M.S., Ph.D.

Abstract: Microplastic contamination in Atlantic sea scallops (*Argopecten irradians*) has been documented in various studies, highlighting the potential for ingestion and tissue accumulation. This presentation will discuss the distribution of microplastics in different tissues of the scallop, including the digestive gland, muscle, and mantle. The results show that microplastics are most prevalent in the digestive gland, which is the primary site of food intake. The presence of microplastics in the muscle and mantle suggests that these organisms can accumulate contaminants from their environment. The implications for human consumption and the broader marine ecosystem will be discussed.

24. Antimicrobial Compounds in Reproductive Parts of the Seaweed *Fucus vesiculosus* and Their Effectiveness Against Human Pathogens

Claire Dyer '26 | B.S., M.S., Ph.D.

Abstract: The seaweed *Fucus vesiculosus* is a rich source of natural antimicrobial compounds. This presentation will focus on the identification and characterization of these compounds in the reproductive parts of the seaweed. The effectiveness of these compounds against various human pathogens, including bacteria, fungi, and viruses, will be evaluated. The results show that the reproductive parts of *Fucus vesiculosus* contain a variety of antimicrobial compounds, including polyphenols, terpenoids, and alkaloids. These compounds exhibit strong antimicrobial activity against several human pathogens, suggesting their potential as natural antimicrobials. The implications for the development of new antimicrobial drugs and the use of seaweed in food and medicine will be discussed.

300

25. Observing Mitochondrial Dysfunction in *Saccharomyces cerevisiae*

Abigail Blouch '24 | G , .D.



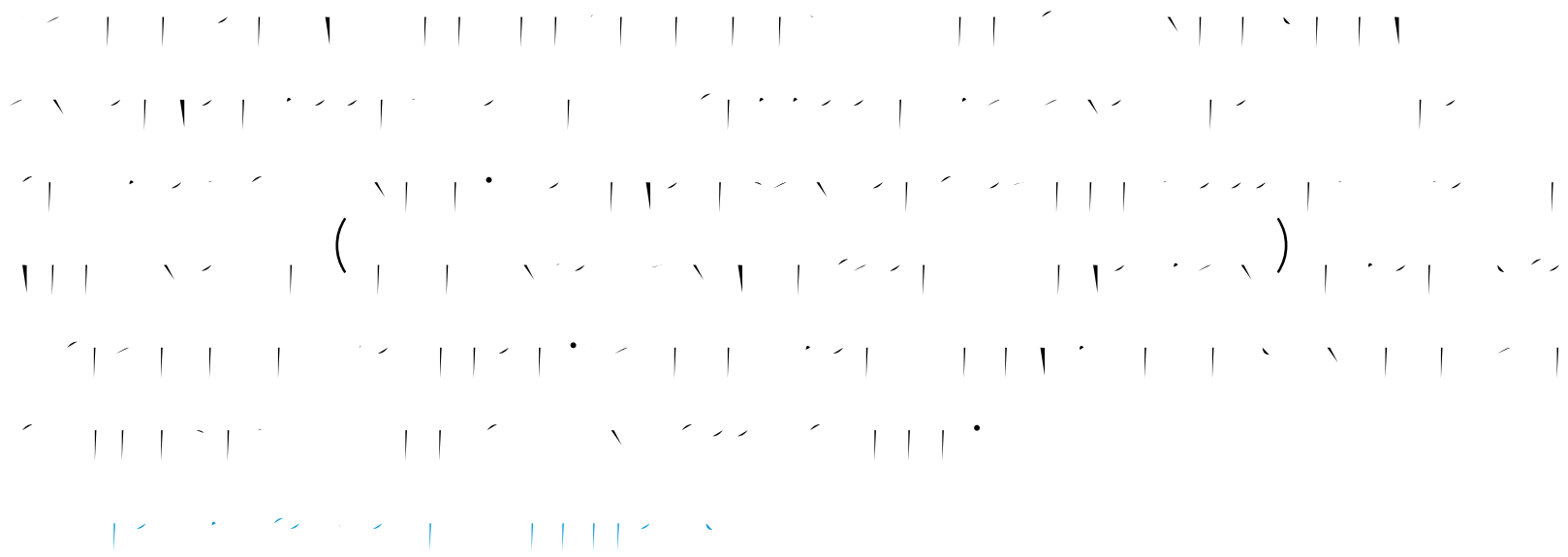
26. Phase Behavior of Multi-Stimuli Responsive Biopolymers

Peter Swanson '24, Ben Wheeler '24 | E B , .D.



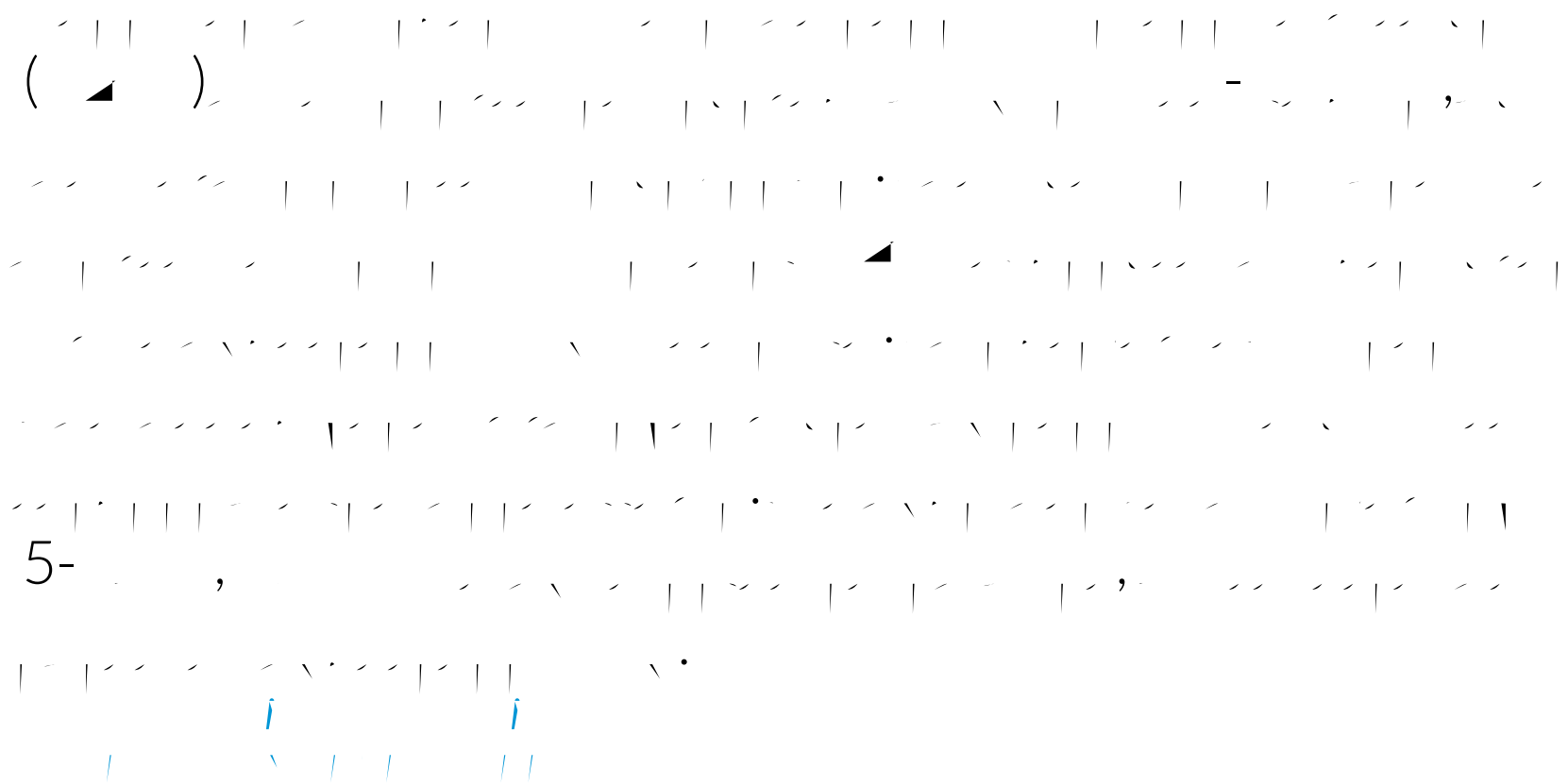
27. Oxidation Reactions with Dicopper Catalysts in Hydrogen Peroxide Solution

Will DeFroschia '24 | *F*, *.D.*



28. Epigenetic Changes in DNA Methylation are Involved in the Lasting changes in Pain Sensitivity Following Neonatal Intensive Care Unit (NICU)-like Treatment in Rats

Aidan J.G. Fox '24, Emma Naess '24, Megan Tomasch '25 | *B*, *.D.*, *B.*





Name

Poster #

...	20	...	23
...	25	...	15
...	23	...	12
...	22	...	26
...	13	...	1
...	17	...	11
...	27	...	8, 28
...	10	...	2,
...	24	...	16
...	3	...	7, 26
...	28	...	4
...	11		
...	18		
...	6		
...	21		
...	8		
...	14		
...	28		
...	1		
...	1		
...	5		



THANK YOU

2023

16

... ..
... ..
... ..

... ..
... ..
... ..
... ..
... ..
... ..
... ..

2023.

i

... ..
... ..



N