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## New Workforce Development Programs Through ARI

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# New Workforce Development Programs Through ARI

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# Collaborative Effort

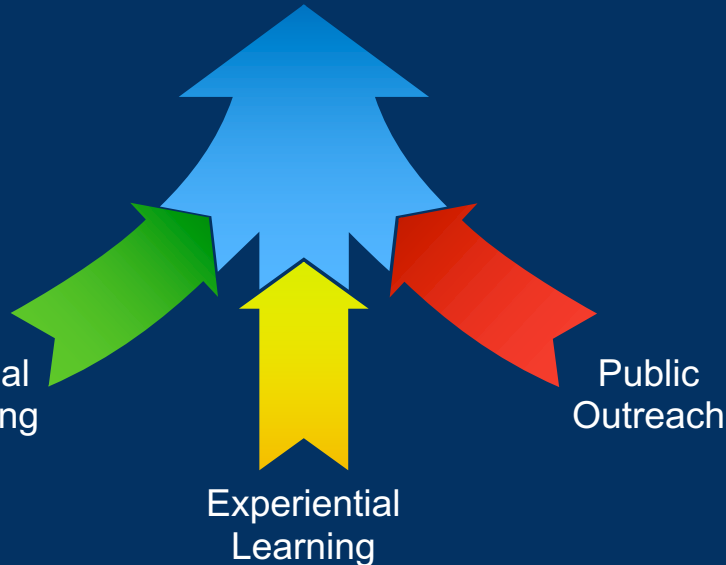




# ARI Workforce Development Projects in Development



Increasing Workforce  
Capacity of Maine's  
Aquaculture Industry



- Certificate in Applied Sustainable Aquaculture
  - Hands-on courses
  - For degree and non-degree seeking people
- Industry Partnered Internship Program
  - 2019 funded by SEANET
- Hands on activities targeted to high school students/educators at the Aquaculture Research Center (ARC)
- Public interpretation center at the Aquaculture Research Center



# Certificate in Applied Sustainable Aquaculture



- Four module program ending with paid industry internship (12 total credits)
  - Increasing the aquaculture minor
  - Increasing courses available to non-credit seeking people
- Goal to make a certificate that is valuable to the industry
- Use of multiple facilities within the University of Maine system





# ARI Industry Internship Program 2019







Sophie Garbuz (left) and Jess Moore (right), worked with on measuring Atlantic salmon feeding rates for a pharmacokinetic study



Emma Christman (left) and Tessa Houston (right) examined biofouling and effects of ocean acidification on oysters

## Sea Fellows Symposium 2019

Hallie Arno studied pH buffering capacity of kelp in scallop aquaculture



Selah Smith worked on alternative therapies for Atlantic salmon parasites



Grace Robie worked on a phytotoxin monitoring program



Kenny Lamm (left) and Callie Stout (right), worked on value added produces in eel culture and recirculating systems operations.



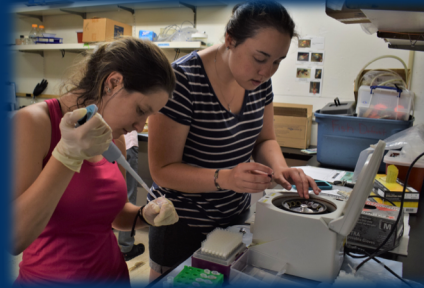
Emily Tarr worked in the ARI office to create outreach content about aquaculture in Maine.



# Increasing Capacity for Industry Needed Research

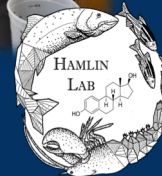
ARI had 13 paid interns for 2019:

- 5 of the interns are continuing work with paid research positions
- Working to increase these opportunities for students and industry partners with the undergraduate capstone program
- Aiming to conduct research for industry that may not be possible otherwise



Sea lice bioassay and behavior studies

Aquatic Animal Health Research





# ARI Industry Internship Program 2019

## Industry/Intern Application Info at ARI Table



We are currently  
looking for more  
industry partners  
interested in  
hosting a paid  
intern





# Courses Piloting in 2020

Aquaculture Systems  
(SMS 449) Spring

Center for Coop.  
Aq. Research



Commercial Scale RAS



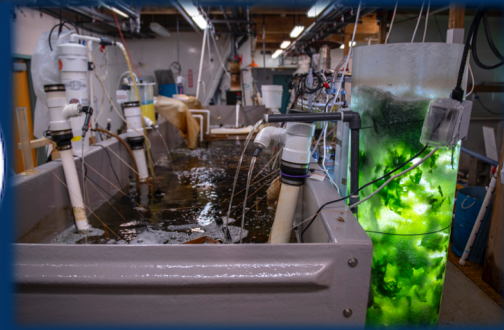
Bivalve Culture  
(SMS 209) Summer



Emerging Species  
in RAS



Ornamentals in RAS





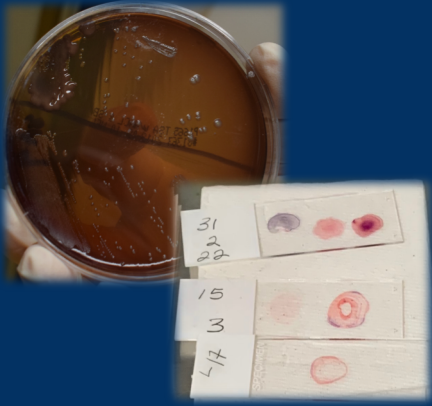
# Course Development in 2020

## Aquatic Animal Health and Diagnostics

### Laboratory Assays



### Bacteriology



### Biosecurity Techniques



## Aquatic Animal Husbandry



# Hands-on Activities for High School and Up

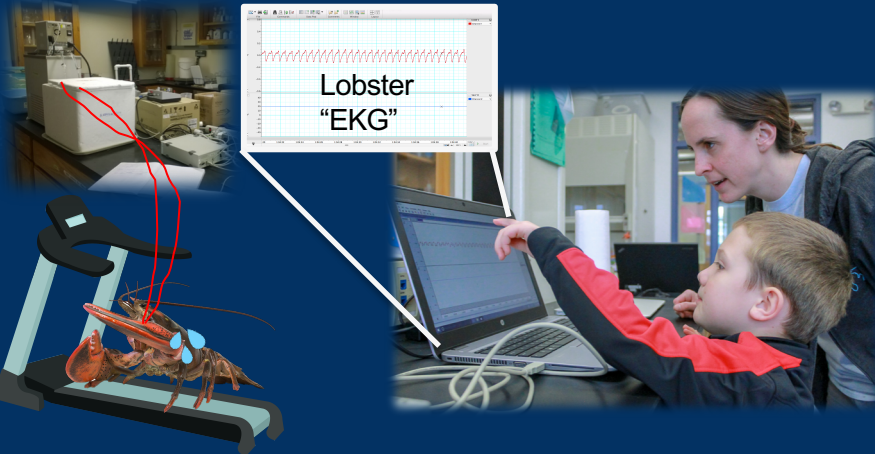
## Expanding Your Horizons



## Exposing youth to:

- Use of scientific method and equipment
- The diversity of science applied within the aquaculture industry
- Outreach training for undergraduate students
- Potential of creating educator opportunities

\* Meeting in January 24th bringing K-12 educators and scientists together

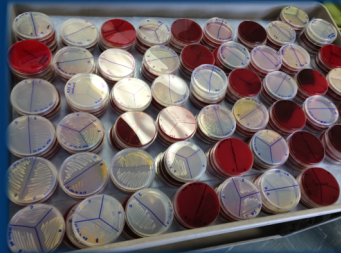
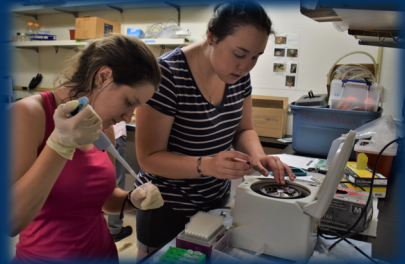
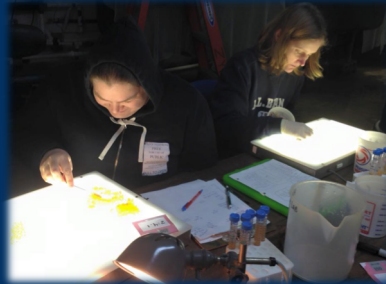


# Hands-on Activities for High School and Up

Hands on activities:

- Fish dissection
- Ocean acidification
- Water quality
- Basics of recirculating aquaculture systems
- Salmon biology
- Aquatic animal health
- Aquatic animal behavior

\*Open to covering other topics\*





# Thank You and Questions?



