

Henry Cameron Holm - CURRICULUM VITAE

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EDUCATION

Doctoral Candidate, Chemical Oceanography June 2018 to present
MIT-WHOI Joint Program in Oceanography
Advisor: Benjamin A. S. Van Mooy

Bachelor of Arts, Molecular and Cellular Biology May 2016
Colorado College, Colorado Springs, CO

PROFESSIONAL EXPERIENCE

Graduate Student June, 2018
Benjamin Van Mooy's Lab at Woods Hole Oceanographic Institute

- Participant in multiple scientific collaborations including NASA EXPORTS mission and research at Palmer Station LTER.
- Analyzed and published a global survey of ocean lipidomes spanning Bermuda to Antarctica.

Guest Investigator May, 2017
Benjamin Van Mooy's Lab at Woods Hole Oceanographic Institute

- Contributed to projects related to phosphorus cycling and lipidomics of the surface ocean.
- Continued software and lab protocol development.

Guest Investigator
Amy Apprill's Lab at Woods Hole Oceanographic Institute Oct, 2016

- Worked on multiple projects investigating the microbiome of corals and whales.

Lab Research Intern July, 2016
Lumio Health, Inc.

- Ran lab experiments to optimize and develop a new diagnostic technology.
- Helped gather and identify relevant literature to inform research directions.

PAPERS IN REFEREED JOURNALS

4. **H. C. Holm**, H. F. Fredricks, S. M. Bent, D. P. Lowenstein, J. E. Ossolinski, K. W. Becker, W. M. Johnson, K. Schrage, B. A. S. V. Mooy, *Global ocean lipidomes show a universal relationship between temperature and lipid unsaturation*. *Science*. 376, 1487–1491 (2022).

3. A. Apprill, **H. Holm**, A. Santoro, C. Becker, M. Neave, K. Huguen, A. Richards Donà, G. Aeby, T. Work, L. Weber, S. McNally, *Microbial ecology of coral-dominated reefs in the Federated States of Micronesia*. *Aquat. Microb. Ecol.* 86, 115–136 (2021).
2. R. A. Glabonjat, G. Raber, **H. C. Holm**, B. A. S. Van Mooy, K. A. Francesconi, *Arsenolipids in Plankton from High- and Low-Nutrient Oceanic Waters Along a Transect in the North Atlantic*. *Environ. Sci. Technol.* 55, 5515–5524 (2021)
1. C. A. Miller, **H. C. Holm**, L. Horstmann, J. C. George, H. F. Fredricks, B. A. S. Van Mooy, A. Apprill, *Coordinated transformation of the gut microbiome and lipidome of bowhead whales provides novel insights into digestion*. *ISME J.* 14, 688–701 (2020)

CRUISE AND FIELD WORK PARTICIPATION

EN667 - Gulf of Maine; North Atlantic. 2021. R/V *Endeavor*
 SG2105 - North Atlantic. 2021. R/V *Sarmiento de Gamboa*
 LMG1810 - West Antarctic Peninsula; Southern Ocean. 2018. R/V *Laurence M. Gould*
 AR30-3 - Irminger Sea; North Atlantic. 2018. R/V *Neil Armstrong*
 AE1812 - Sargasso Sea; North Atlantic. 2018. R/V *Atlantic Explorer*

INVITED LECTURES

Holm, Henry C. (2022) Global ocean lipidome reveals compositional controls of temperature, depth, and inorganic nutrients. *Gordon Research Conference - Organic Geochemistry*. Holderness, NH.

Holm, Henry C. (2022) The effects of temperature and depth on ocean planktonic glycerolipids. *International Symposium of Plant Lipids*. Grenoble, France.

OTHER LECTURES AND MEETING PRESENTATIONS

H. Holm (2022) Glycerolipid diversity and dynamics in the global ocean. *Department of Marine Chemistry and Geochemistry, WHOI*. Woods Hole, MA.

H. Holm, H.F. Fredricks, S.M. Bent, D.P. Lowenstein, J.E. Ossolinski, K.W. Becker, W.M. Johnson, K. Schrage, B.A.S. Van Mooy. (2022) Global ocean lipidome reveals a universal relationship between temperature and lipid unsaturation. *ASLO Ocean Science Meeting*. Virtual Meeting.

B.A.S. Van Mooy and **H. Holm**. (2019) Lipidomics of suspended and sinking POC during EXPORTS. *EXPORTS PI Meeting*. Williamsburg, VA.

PROFESSIONAL ACTIVITIES

Participant - OCB Scoping Workshop 2021: "Laying the foundation for a potential future Bio-GeoSCAPES program."

MEMBERSHIPS

Association for the Sciences of Limnology and Oceanography - Since 2022

American Association for the Advancement of Science - Since 2022

PROGRAMMING

- Maintainer for **LOBSTAHS** package with Van Mooy Lab.
- Highly experienced in **R language** including development of packages and **R shiny** apps.
- Highly experienced with MS specific programming including **XCMS** and **CAMERA**.
- Some experience with **Matlab**, **Python**, **HTML**, and **LaTeX**.

MENTORING and SUPERVISION

- Joint Program Student Mentor for Sabrina Elkassas.
- Provided mentorship via the JP-ASK program for multiple applicants, 2021-2022.
- Informal but extensive mentorship and training of Van Mooy lab interns including Kelsey Perry, Merissa Small, Noa Shevchuk, and Mackenzie Curtice.