

CURRICULUM VITAE

BENJAMIN A. S. VAN MOOY

Interim Vice President for Science and Engineering
Chair of Department of Marine Chemistry and Geochemistry
Senior Scientist

Woods Hole Oceanographic Institution
Woods Hole, Massachusetts 02543
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EDUCATION:

B.A.: June, 1995. Chemistry and Geological Sciences (Honors). Northwestern University.
Advisors: David Hollander and Brad Sageman
Thesis: *Skeletal limestones of the Cretaceous Western Interior Seaway.*

M.S.: June, 2000. Chemical Oceanography. University of Washington.
Advisor: Richard G. Keil.
Thesis: *Impact of suboxia on the degradation of amino acids in sinking POC.*

Ph.D.: December, 2003. Chemical Oceanography. University of Washington.
Advisor: Allan H. Devol.
Thesis: *Carbon and phosphorus cycling by phylogenetically defined-groups of bacteria in the North Pacific Ocean.*

PROFESSIONAL EXPERIENCE:

Woods Hole Oceanographic Institution, Department of Marine Chemistry and Geochemistry
Interim Vice President for Science and Engineering, 2024 - present
Department Chair, 2021-present
Senior Scientist, 2016-present
Associate Scientist, 2008-2016
Assistant Scientist, 2004-2008
Postdoctoral Scholar, 2003-2004
University of Washington, School of Oceanography
Research Assistant, 1998 – 2003.
Northwestern University, Department of Geological Sciences
Research Technician, 1996-1998.
Carnegie Institution of Washington, Geophysical Laboratory
REU Scholar, 1995.
Northwestern University, Department of Geological Sciences
Laboratory Assistant, 1993-1995.

AWARDS AND RECOGNITION:

G. Evelyn Hutchinson Award, Association for the Sciences of Limnology and Oceanography, 2022

SCOPE Investigator, Simons Foundation, 2015-present.

Kavli Frontiers of Science Fellow, Kavli Foundation, 2013

Diamond Jubilee International Visiting Fellowship, Southampton University, 2013-2017.

Postdoctoral Award at Woods Hole Oceanographic Institution. Supported postdoctoral position.

Advisors: D. Repeta and K. Edwards, 2003.

National Estuarine Research Reserve Graduate Assistantship (NOAA). Funding for research of organic matter cycling in the sediments of Padilla Bay, Washington, 2000.

NSF Graduate Research Award. Honorable mention for proposal to study organic matter cycling on continental margins, 1998.

Egvedt Scholarship. Awarded to incoming graduate student at the School of Oceanography of high academic potential, 1998.

NSF REU Scholarship. Supported summer research at the Geophysical Laboratory, Carnegie Institution of Washington, 1998.

Schlanger Undergraduate Earth Sciences Award. Recognizes superior scholarship in the Department of Geological Sciences, Northwestern University, 1995.

Charles Hurd Scholarship for undergraduate research. Competitive grant for undergraduate research at Northwestern University, 1993.

PROFESSIONAL AFFILIATIONS:

Member, American Association for the Advancement of Science, 2021-present

Member, American Chemical Society, 2016-present.

Member, American Geophysical Union, 1997-present.

Member, American Society for Limnology and Oceanography, 1997-present.

Member, Geochemical Society, 2012-2017; 2022-present

Member, American Society for Mass Spectrometry, 2015-2016.

PROFESSIONAL ACTIVITIES:

WHOI (Non Education Related)

Committees:

Radiation Safety Committee. 2007-2024 (Chair 2015 to 2023)

Marine Operations Committee, 2019-2022.

Scientific Staff Executive Committee. 2014-2017 (Chair 2016 to 2017).

Search Committee for WHOI Marine Chemistry and Geochemistry Department. 2004, 2006, 2010, 2015, 2018, 2022, 2024

Search Committee for NOSAMS Director. 2021

Search Committee for Director of Office of Technology Transfer. 2013.

Search Committee for WHOI Vice President for Academic Programs and Dean. 2004-2005.

FT-MS Facility Advisory Committee. 2008 - 2012.

Office of Applied Oceanography Advisory Committee. 2009 - 2014.

Development Office “Useful Chemicals” Advisory Committee. 2008 - 2014.

Outside WHOI

Associate Editor:

Limnology and Oceanography 2016-2021.

Geochimica et Cosmochimica Acta. 2012-2017.

Frontiers in Aquatic Microbiology. 2012-2016.

National Committees:

Post-Cruise Assessment Report Committee. UNOLS. 2015-2021.

Scientific Steering Committee. OCB. 2015-2018.

National Panels:

Rolling Deck to Repository Advisory Panel. 2016-2018

NSF EFRI Multicellular and Inter-Kingdom Signaling Review Panel. 2011.

DoD Defense University Research Instrumentation Program. 2009.

NSF Chemical Oceanography Review Panel. 2007, 2009, 2019.

Proposal Reviewer:

NSF Chemical Oceanography, NSF Biological Oceanography, NSF OTIC, NSF Molecular Cell Biology, NSF Engineering, DoD DURIP, NOAA Sea Grant, ACS Petroleum Research Fund, Institut français de la Biodiversité, UK National Environment Research Council, US-Israel Binational Science Foundation, Croatian Science Foundation, Netherlands Organisation for Scientific Research, Schmidt Futures.

Invited Workshops:

Schmidt Futures Ocean Biogeochemistry Workshop, 2022

NSF ‘Omics-enabled Advances in Understanding Antarctic Life Workshop, 2022

NASA/NSF Alternative Chemistries Workshop, 2012

SOST DWH Workshop, 2011

OCB Scoping Workshop. A biogeochemical flux program aligned with OOI. 2011.

OCB Scoping Workshop (Planning committee). Molecular biology of biogeochemistry. 2010.

IMBER IMBIZO Meeting on Ecological Stoichiometry (Planning committee). 2010.
WHOI Dark energy: the deep oceanic biosphere. 2004.

Invited Investigator:

Centre d'Océanologie de Marseille. 2006
Photosynthesis Laboratory, Czech Academy of Sciences, 2005.

Session leader:

Convergent approaches to elucidating viral impacts on the oceanic carbon cycle. Ocean Sciences Meeting, Virtual, 2022
Geochemistry and geobiology of phosphorus. Goldschmidt Conference. Paris, France, 2017
Infochemical Signaling. ASLO Meeting. Granada, Spain, 2015.
Towards a definition of ocean biogeochemical provinces. GRC-Chemical Oceanography, Biddeford, ME, 2013.
Biogeochemistry of P-limited marine environments. Ocean Sciences Meeting. Portland, OR, 2010.
Biogeochemistry of planktonic phosphorus cycling: Genes to geochemical cycles. Ocean Sciences Meeting. Honolulu, Hawaii, 2006.
Upper ocean plankton dynamics. Ocean Sciences Meeting. Portland, Oregon, 2004.

Cruise- and project-related meetings:

GBMF-MMI Microscale Degradation Project., Woods Hole, 2018.
GBMF-MMI Infochemical Signaling Project, Woods Hole, 2011, 2013, 2015.
Pre-cruise Meeting. OUTPACE. Virtual attendee. Marseilles, France, 2014.
Pre-cruise Meeting. NA-VICE cruise. Rutgers University, 2012.
Pre-cruise Meeting. BOUM. Virtual attendee. Marseilles, France, 2007.
Post-cruise Meeting. BIOSOPE. Villefranche-sur-mer, France. 2005

Journal Reviewer:

Applied and Environmental Microbiology, Aquatic Biology, Aquatic Microbial Ecology, Deep-Sea Research I & II, Environmental Microbiology, Frontiers in Aquatic Microbiology, Frontiers in Marine Science, Geochimica et Cosmochimica Acta, ISME Journal, Limnology and Oceanography, Limnology and Oceanography Methods, Marine Drugs, Marine Ecology Progress Series, Proceedings of the National Academy of Science, Nature, Nature Geoscience, Organic Geochemistry, Science.

PARTICIPATION IN EDUCATION:

Teaching:

Instructor. MIT 12.742, Marine Chemistry (12 units). 2011.

Co-Instructor. MIT 12.742, Marine Chemistry (12 units). With S. Wankel 2024.
Co-Instructor. MIT 12.742, Marine Chemistry (12 units). With E. Kujawinski and A. Babbin 2020.
Co-Instructor. MIT 12.742, Marine Chemistry (12 units). With E. Kujawinski 2017-2019.
Co-Instructor. MIT 12.742, Marine Chemistry (12 units). With S. Doney. 2007-2010, 2012-2015.
Co-Instructor. MIT 12.759, Marine Chemistry Seminar (6 units). With D. Repeta. 2006.
Instructor. Short-course on oceanography for BP scientists. 2011 & 2012.
Organizer. Marine Chemistry and Geochemistry Seminar Series. 2009.
Guest Lecturer, Introduction to Marine Geochemistry, University of Southampton. 2013, 2014
Guest lecturer, Marine Organic Geochemistry, MIT/WHOI Joint Program. 2005, 2007, 2013.
Guest lecturer, Phytoplankton Seminar, MIT/WHOI Joint Program. 2007.

Advising:

MIT/WHOI Joint Program Students

Zephyr Girard 2023-present
Daniel Lowenstein 2021-present
Shavonn Bent 2019-present
Henry Holm 2018-2023
Marc Foster 2021-2022
Max Jahns 2019-2021
James Collins 2011-2017
Bethanie Edwards 2010-2016
Kimberly Pependorf 2007-2012
Laura Hmelo 2005-2010

WHOI Postdoctoral Scholars

Kevin Becker 2015-2019
Patrick Martin 2011-2013
Suni Shah 2010-2014
Timothy Shanahan 2006-2008

WHOI Postdoctoral Investigators

Jon Hunter 2016-2018
Alina Ebling 2017-2019
Andreas Krupke 2014-2015
James Fulton 2011-2013

WHOI Summer Student Fellows and Guest Students

Sarah Roberts (Smith) 2023
Hannah Goldberg (Amherst) 2022
Lisa Coe (Pittsburgh) 2019
Gabriel Liguori (Yale) 2015
Laura Sofen (Carleton) 2010

Lauren Yum (KAUST) 2009
Rose Kantor (Carleton) 2009
Nick Ward (Washington) 2007
Kim Pependorf (Caltech) 2006

WHOI Guest Investigators

Nora-Charlotte Pauli 2023
Jozef Nissimov 2014
Assaf Vardi 2008

Southampton/WHOI Exchange Students

Jon Hunter 2013
Patrick Martin 2009

Czech Microbiology Laboratory Graduate Students

Eva Žiškova 2010
Jan Pilný 2010

Thesis Committees

Katy Abbott (MIT/WHOI) 2022 - present
Marianne Acker (MIT/WHOI) 2018-2021
Noelle Held (MIT/WHOI) 2016-2019
Winn Johnson (MIT/WHOI) 2014-2017
Patricia Tcaciuc (MIT/WHOI, Defense Chair) 2015
Erin Bertrand (MIT/WHOI) 2009-2011
Jesse Kneeland (MIT/WHOI) 2009-2011
Hunter Oates (MIT/WHOI) 2007-2008
Jennifer Culbertson (Boston University) 2005-2007
Peter Smyntek (SUNY ESF) 2007

High School Science Fair Students

Oliver Newman Regional Finalist 2010-2011
Pippa Ryan Commonwealth Finalist 2009-2010

MIT/WHOI Joint Program Incoming Classes 2005 2015

NON-EDUCATION SUPERVISION AT WHOI:

Current:

Helen Fredricks, Research Specialist. 2004-present.
Christina Rorres, Research Assistant. 2023-present.

Past:

Maya Kamireddi, Part-time Laboratory Assistant II. 2024
Noa Shevchuk, Part-time Laboratory Assistant II. 2022-2023
Mackenzie Curtice, Research Assistant II. 2022-2023.

Justin Ossolinski, Senior Research Assistant. 2007-2017; 2020-2022
Daniel Lowenstein, Research Assistant II. 2018-2021.
Kelsey Perry, Part-time Laboratory Assistant II. 2017-2020.
Marissa Small, Part-time Laboratory Assistant II. 2018-2019
Fiona Hopewell, Part-time Laboratory Assistant I. 2015-2017.
Henry Holm, Research Assistant I, 2017-2018.
Jenn Linton, Casual Research Assistant. 2016.
Jeremy Tagliaferre, Research Assistant I, 2013-2014.
Krista Longnecker, Research Associate III. 2009-2011.
Byron Pedler, Research Assistant II. 2006-2007
Katie Barott, Research Assistant II. 2006-2007
Oliver Newman. Part-time helper, 2012, 2014.
Olivia Kurz. Part-time helper. 2006.
Pia Hugus. Part-time helper. 2004.
Suzanne Crabtree. Volunteer. 2005.

CRUISE PARTICIPATION (* Chief Scientist):

* Sargasso Sea, North Atlantic, 2023. R/V *Atlantic Explorer*.
*Oregon Coast, North Pacific, 2023, R/V *Sally Ride*
West Antarctic Peninsula, 2023, *Palmer Station*
*Buzzards Bay, North Atlantic. 2022. R/V *Tioga*.
*Gulf of Maine, 2021, R/V *Endeavor*
*West Antarctic Peninsula, 2018, R/V *Laurence M. Gould*
*West Antarctic Peninsula, 2017, R/V *Laurence M. Gould* and *Palmer Station*
*Western North Atlantic, 2017, R/V *Neil Armstrong*
North Pacific subtropical gyre, 2016, R/V *Kilo Moana*
Clayquot Sound, 2014, R/V *Clifford Barnes*
* Western tropical North Atlantic, 2014, R/V *Atlantic Explorer*
Great Salt Lake, 2013, R/V *Bonneville*
Western North and South Atlantic, 2013 R/V *Knorr*
* Western North Atlantic, 2012, R/V *Knorr*.
* Sargasso Sea, North Atlantic, 2011. R/V *Atlantic Explorer*.
*North Pacific subtropical gyre, 2010. R/V *Kilo Moana*.
Gulf of Mexico, 2010. R/V *Endeavor*.
*Clayquot Sound, North Pacific, 2009. R/V *Clifford Barnes*.
Atlantis Deep, Red Sea. 2008. R/V *Oceanus*.
*Nova Scotia to Bermuda, North Atlantic. 2008. R/V *Oceanus*.
Bermuda to Puerto Rico, North Atlantic. 2007. R/V *Atlantic Explorer*.
Sargasso Sea, North Atlantic. 2007. R/V *Atlantic Explorer*.

* Vineyard Sound, North Atlantic. 2005. R/V *Tioga*.
Easter Island to Concepcion, Chile; South Pacific. 2004. R/V *L'Atalante*
Hawaiian Ocean Time-Series cruise #161; North Pacific. 2004. R/V *Kilo Moana*.
Hawaiian Ocean Time-Series cruise #157; North Pacific. 2004. R/V *Kaimikai-o-Kanaloa*
Hawaiian Ocean Time-Series cruise #150; North Pacific. 2003. R/V *Kaimikai-o-Kanaloa*
Hawaiian Ocean Time-Series cruise #140; North Pacific. 2002. R/V *Kaimikai-o-Kanaloa*
Orca Basin; Gulf of Mexico. 2002. R/V *Suncoaster*.
* Carr Inlet, Puget Sound Washington, 2002. R/V *Clifford Barnes*.
Washington coast; North Pacific. 2001. R/V *Thomas Thompson*.
*Saanich Inlet, B.C.; Strait of Georgia. 2001. R/V *Clifford Barnes*.
*Saanich Inlet, B.C.; Strait of Georgia . 2000. R/V *Clifford Barnes*.
*Carr Inlet, Washington; Puget Sound. 2000. R/V *Clifford Barnes*.
Eastern tropical North Pacific; 2000. R/V *New Horizon*.
Lake Michigan. 1996. R/V *Neeskay*
Orca Basin; Gulf of Mexico. 1997. R/V *Longhorn*.
Lake Michigan. 1996. R/V *Neeskay*
Sargasso Sea; North Atlantic. 1995. R/V *Cape Hatteras*

PAPERS IN REFEREED JOURNALS (*Member of Van Mooy Lab Group; †Guest Investigator or Engineer in the Van Mooy Lab)

Google Scholar statistics as of 09/16/2024: Total citations = 11,028; h-index = 54.

108. Behrendt, L., Alcolombri, U., *Hunter, J.E., Smriga, S., Mincer, T., *Lowenstein, D.P., Yawata, Y., Peaudecerf, F.J., Fernandez, V.I., *Fredricks, H.F., Almblad, H., Harrison, J.J., Stocker, R., Van Mooy, B.A.S., 2024. Microbial dietary preference and interactions affect the export of lipids to the deep ocean. *Science* 385, eaab2661.
107. *Bent, S.M., Muratore, D., *Becker, K.W., Barone, B., Clemente, T., *Fredricks, H.F., *Holm, H.C., Karl, D.M., Van Mooy, B.A.S., 2024. Lipid biochemical diversity and dynamics reveal phytoplankton nutrient-stress responses and carbon export mechanisms in mesoscale eddies in the North Pacific Subtropical Gyre. *Front. Mar. Sci.* 11.
106. Schofield, O., Cimino, M., Doney, S., Friedlaender, A., Meredith, M., Moffat, C., Stammerjohn, S., Van Mooy, B., Steinberg, D., 2024. Antarctic pelagic ecosystems on a warming planet. *Trends Ecol. Evol.*
105. *Edwards, B.R., Thamatrakoln, K., Fredricks, H.F., Bidle, K.D., Van Mooy, B.A.S., 2024. Viral Infection Leads to a Unique Suite of Allelopathic Chemical Signals in Three Diatom Host–Virus Pairs. *Marine Drugs* 22, 228.
104. Karthäuser, C., Fucile, P.D., Maas, A.E., Blanco-Bercial, L., Gossner, H., *Lowenstein, D.P., Niimi, Y.J., Van Mooy, B.A.S., Bernhard, J.M., Buesseler, K.O., Sievert, S.M., 2024.

- RotoBOD—Quantifying Oxygen Consumption by Suspended Particles and Organisms. *Environ. Sci. Technol.* 58, 8760-8770.
103. Koblížek, M., Ferrera, I., Kolářová, E., Duhamel, S., *Popendorf, K.J., Gasol, J.M., Van Mooy, B.A.S. 2024 Growth and mortality of aerobic anoxygenic phototrophs in the North Pacific Subtropical Gyre. *Appl. Environ. Microbiol.* 90, e00032-24.
 102. *Holm, H.C., *Fredricks, H.F., *Bent, S.M., *Lowenstein, D.P., *Schrage, K.R., Van Mooy, B.A.S. 2024. Lipid composition, caloric content, and novel oxidation products from microbial communities within seasonal pack ice cores. *Geochim. Cosmochim. Acta* 368, 12-23.
 101. Cox, D.D., Parson, R.J., Van Mooy, B.A.S., Valentine, D.L. 2023. Methylphosphonate is Utilized by Commensal Microbiota of Macroalgae in the Oligotrophic Sargasso Sea. *J. Geophys. Res. Oceans.* 128, e2023JC020315.
 100. *Holm, H.C., *Fredricks, H.F., *Bent, S.M., *Lowenstein, D.P., *Ossolinski, J.E., *Becker, K.W., Johnson, W.M., *Schrage, K., Van Mooy, B.A.S., 2022. Global ocean lipidomes show a universal relationship between temperature and lipid unsaturation. *Science* 376, 1487-1491.
 99. Muratore, D., Boysen, A.K., Harke, M.J., *Becker, K.W., Casey, J.R., Coesel, S.N., Mende, D.R., Wilson, S.T., Aylward, F.O., Eppley, J.M., Vislova, A., Peng, S.Y., Rodriguez-Gonzalez, R.A., Beckett, S.J., Armbrust, E.V., DeLong, E.F., Karl, D.M., White, A.E., Zehr, J.P., Van Mooy, B.A.S., Dyhrman, S.T., Ingalls, A.E., Weitz, J.S., 2022. Complex marine microbial communities partition metabolism of scarce resources over the diel cycle. *Nature Ecol. Evol.* 6, 218
 98. Biller, S.J., Lundeen, R.A., Hmelo, L.R., *Becker, K.W., Arellano, A.A., Dooley, K., Heal, K.R., Carlson, L.T., Van Mooy, B.A.S., Ingalls, A.E., Chisholm, S.W., 2022. Prochlorococcus extracellular vesicles: molecular composition and adsorption to diverse microbes. *Environ. Microbiol.* 24, 420-435.
 97. Diaz, B.P., Knowles, B., Johns, C.T., Laber, C.P., Bondoc, K.G.V., Haramaty, L., Natale, F., Harvey, E.L., Kramer, S.J., Bolaños, L.M., *Lowenstein, D.P., *Fredricks, H.F., Graff, J., Westberry, T.K., Mojica, K.D.A., Haëntjens, N., Baetge, N., Gaube, P., Boss, E., Carlson, C.A., Behrenfeld, M.J., Van Mooy, B.A.S., Bidle, K.D., 2021. Seasonal mixed layer depth shapes phytoplankton physiology, viral production, and accumulation in the North Atlantic. *Nature Comm.* 12, 6634.
 96. Hawco, N.J., Barone, B., Church, M.J., Babcock-Adams, L., Repeta, D.J., Wear, E.K., Foreman, R.K., Björkman, K.M., *Bent, S., *Van Mooy, B.A.S., Sheyn, U., DeLong, E.F., Acker, M., Kelly, R.L., Nelson, A., Ranieri, J., Clemente, T.M., Karl, D.M., John, S.G., 2021. Iron Depletion in the Deep Chlorophyll Maximum: Mesoscale Eddies as Natural Iron Fertilization Experiments. *Global Biogeochem. Cycles* 35, e2021GB007112.
 95. *Hunter, J.E., *Fredricks, H.F., Behrendt, L., Alcolombri, U., *Bent, S.M., Stocker, R., Van Mooy, B.A.S., 2021. Using High-Sensitivity Lipidomics To Assess Microscale Heterogeneity in Oceanic Sinking Particles and Single Phytoplankton Cells. *Environ. Sci. Technol.* 55, 15456-15465.

94. *Lowenstein, D.P., †Mayers, K., *Fredricks, H.F., *Van Mooy, B.A.S., 2021. Targeted and untargeted lipidomic analysis of haptophyte cultures reveals novel and divergent nutrient-stress adaptations. *Org. Geochem.* 161, 104315.
93. Siegel, D.A., Cetinić, I., Graff, J.R., Lee, C.M., Nelson, N., Perry, M.J., Ramos, I.S., Steinberg, D.K., Buesseler, K., Hamme, R., Fassbender, A.J., Nicholson, D., Omand, M.M., Robert, M., Thompson, A., Amaral, V., Behrenfeld, M., Benitez-Nelson, C., Bisson, K., Boss, E., Boyd, P.W., Brzezinski, M., Buck, K., Burd, A., Burns, S., Caprara, S., Carlson, C., Cassar, N., Close, H., D'Asaro, E., Durkin, C., Erickson, Z., Estapa, M.L., Fields, E., Fox, J., Freeman, S., Gifford, S., Gong, W., Gray, D., Guidi, L., Haëntjens, N., Halsey, K., Huot, Y., Hansell, D., Jenkins, B., Karp-Boss, L., Kramer, S., Lam, P., Lee, J.-M., Maas, A., Marchal, O., Marchetti, A., McDonnell, A., McNair, H., Menden-Deuer, S., Morison, F., Niebergall, A.K., Passow, U., Popp, B., Potvin, G., Resplandy, L., Roca-Martí, M., Roesler, C., Rynearson, T., Traylor, S., Santoro, A., Seraphin, K.D., Sosik, H.M., Stamieszkin, K., Stephens, B., Tang, W., Van Mooy, B., Xiong, Y., Zhang, X., 2021. An operational overview of the EXport Processes in the Ocean from RemoTe Sensing (EXPORTS) Northeast Pacific field deployment. *Elementa: Science of the Anthropocene* 9.
92. Bowman, J.S., Van Mooy, B.A., *Lowenstein, D.P., *Fredricks, H.F., Hansel, C.M., Gast, R., *Collins, J.R., Couto, N., Ducklow, H.W., 2021. Whole Community Metatranscriptomes and Lipidomes Reveal Diverse Responses Among Antarctic Phytoplankton to Changing Ice Conditions. *Front. Mar. Sci.* 8, 119.
91. Gosselin, K.M., Nelson, R.K., Spivak, A.C., Sylva, S.P., Van Mooy, B.A., Aeppli, C., Sharpless, C.M., O'Neil, G.W., Arrington, E.C., Reddy, C.M., 2021. Production of Two Highly Abundant 2-Methyl-Branched Fatty Acids by Blooms of the Globally Significant Marine Cyanobacteria *Trichodesmium erythraeum*. *ACS Omega*.
90. Love, C.R., Arrington, E.C., Gosselin, K.M., Reddy, C.M., Van Mooy, B.A., Nelson, R.K., Valentine, D.L., 2021. Microbial production and consumption of hydrocarbons in the global ocean. *Nat. Microbiol.*, 1-10.
89. *Becker, K.W., Harke, M.J., Mende, D.R., Muratore, D., Weitz, J.S., DeLong, E.F., Dyhrman, S.T., Van Mooy, B.A., 2021. Combined pigment and metatranscriptomic analysis reveals highly synchronized diel patterns of phenotypic light response across domains in the open oligotrophic ocean. *ISME J.* 15, 520-533.
88. Glabonjat, R.A., Raber, G., *Holm, H.C., Van Mooy, B.A., Francesconi, K.A., 2021. Arsenolipids in Plankton from High-and Low-Nutrient Oceanic Waters Along a Transect in the North Atlantic. *Environ. Sci. Technol.* 55: 5515-5524.
87. Kharbush, J.J., Close, H.G., Van Mooy, B.A.S., Arnosti, C., Smittenburg, R.H., Le Moigne, F.A.C., Mollenhauer, G., Scholz-Böttcher, B., Obrecht, I., Koch, B.P., Becker, K.,

- Iversen, M.H., Mohr, W. 2020. Particulate organic carbon deconstructed: Molecular and chemical composition of particulate organic carbon in the ocean. *Front. Mar. Sci.* 7: 518.
86. Johnson, M.D., *Edwards, B.R., Beaudoin, D.J., Van Mooy, B.A.S. and Vardi, A. 2020, Nitric oxide mediates oxylipin production and grazing defense in diatoms. *Environ Microbiol*, 22: 629-645.
85. *Pependorf, K.J, Koblížek, M., and Van Mooy, B.A.S. 2020. Phospholipid turnover rates suggest that bacterial community growth rates in the open ocean are systematically underestimated. *Limnol. Oceanogr.* 65: 1876-1890.
84. Miller, C.A., *Holm, H.C., Hortsman, L., George, J.C., *Fredricks, H.F., Van Mooy, B.A.S., Apprill, A. 2020. Coordinate transformation of the gut microbiome and lipidome of bowhead whale provides novel insights into digestion. *ISME J.* 14(3): 688-701
83. Johnson, W.M., Longnecker, K., Kido Soule, M.C., Arnold, W.A., Bhatia, M.P., Hallam, S.J., Van Mooy, B.A., Kujawinski, E.B., 2020. Metabolite composition of sinking particles differs from surface suspended particles across a latitudinal transect in the South Atlantic. *Limnol. Oceanogr.* 65:111-127.
82. Kranzler, C.F., Krause, J.W., Brzezinski, M.A., *Edwards, B.R., Biggs, W.P., Maniscalco, M., McCrow, J.P., *Van Mooy, B.A.S., Bidle, K.D., Allen, A.E., Thamatrakoln, K., 2019. Silicon limitation facilitates virus infection and mortality of marine diatoms. *Nat. Microbiol.* 4: 1790-1797.
81. Mackey, K.R.M., Van Mooy, B.A.S., Cade-Menun, B.J., Paytan, A., 2019. Phosphorus dynamics in the environment., in: Schmidt, T. (Ed.), Encyclopedia of Microbiology, 4th ed.
80. †Nissimov, J.I., Talmy, D., Haramaty, L., *Fredricks, H.F., Zelzion, E., Knowles, B., Eren, A.M., Vandzura, R., Laber, C.P., Schieler, B.M., Johns, C.T., More, K.D., Coolen, M.J.L., Follows, M.J., Bhattacharya, D., Van Mooy, B.A.S., Bidle, K.D., 2019. Biochemical diversity of glycosphingolipid biosynthesis as a driver of Coccolithovirus competitive ecology. *Environ. Microbiol.* 21, 2182-2197.
79. Van Mooy, B.A.S., 2019. Synthesis of high molar activity ³³P-labeled phosphorous acid. *J. Radioanal. Nucl. Chem.* 320, 885-888.
78. Johns, C.T., Grubb, A., †Nissimov, J.I., Natale, F., Knapp, V., Mui, A., *Fredricks, H., Van Mooy, B.A.S., Bidle, K.D., 2019. The mutual interplay between calcification and coccolithovirus infection. *Environ. Microbiol.* 21, 1896-1915.
77. Farnelid, H., Turk-Kubo, K., Ploug, H., *Ossolinski, J.E., *Collins, J.R., Van Mooy, B.A.S., Zehr, J.P., 2019. Diverse diazotrophs are present on sinking particles in the North Pacific Subtropical Gyre. *ISME J.* 13, 170-182.

76. Schieler, B.M., Soni, M.V., Brown, C.M., Coolen, M.J.L., *Fredricks, H.F., Van Mooy, B.A.S., Hirsh, D.J., Bidle, K.D., 2019. Nitric oxide production and antioxidant function during viral infection of the coccolithophore *Emiliania huxleyi*. *ISME J* 13, 1019-1031.
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INVITED LECTURES AND PAPERS PRESENTED AT MEETINGS († Keynote, *Tutorial):

†Van Mooy, B.A.S. (2022) Acceptance of the G. Evelyn Hutchinson Award. *Ocean Science Meeting*, Virtual.

Van Mooy, B.A.S. (2019) Quorum sensing on marine particles and its impact on ocean biogeochemistry. *Marine Particles and Phycospheres Conference* Ascona, Switzerland

Van Mooy, B.A.S. (2019) Quorum sensing on marine particles and its impact on ocean biogeochemistry. *Biogeochemistry Workshop - Hanse-Wissenschaftskolleg Institute for Advanced Study*. Bremen, Germany.

Van Mooy, B.A.S. (2018) Microbial phosphorus reduction in the modern ocean: rapid rates of thermodynamically unexpected pathways. *Northwestern University – Department of Geosciences*. Evanston, IL.

Van Mooy, B.A.S. (2018) Marine lipidomics at rapid temporal scales and small spatial scales. *Gordon Research Conference – Organic Geochemistry*, Holderness, NH.

Van Mooy, B.A.S. (2018) The *Trichodesmium* microbiome and its role in the marine nitrogen and phosphorus cycles. *Harvard Geobiology Seminar*. Cambridge, MA.

Van Mooy, B.A.S. (2018) The *Trichodesmium* microbiome and its role in the marine nitrogen and phosphorus cycles. *WHOI Geodynamics Seminar*. Woods Hole, MA.

†Van Mooy, B.A.S. (2017) The challenges of quantifying the impact of microbial interactions on upper ocean nutrient cycling. *Goldschmidt Conference*. Paris, France.

†Van Mooy, B.A.S. (2017) The challenges of quantifying the impact of microbial communication on biogeochemical fluxes. *CIFAR-GBMF Workshop – Message in a Bottle*. Eilat, Israel.

*Van Mooy, B.A.S. (2017) The influence of microbial interactions on biogeochemical processes in the ocean. *ASLO Meeting*, Honolulu, HI.

Van Mooy, B.A.S. (2016) The potential for chemically-mediated microbial interactions to affect the strength of the ocean's biological carbon pump. *Gordon Research Conference – Marine Microbes*. Girona, Spain.

Van Mooy, B.A.S. (2016) New insights on the chemical forms and microbial cycling of phosphorus in the upper ocean. *Biology Department Seminar, Bowling Green State University*. Bowling Green, OH.

Van Mooy, B.A.S. (2015) An intersection between infochemicals, microbial interactions, and the ocean's biological pump. *National Oceanography Centre* Southampton, UK.

Van Mooy, B.A.S. (2015) Phosphorus redox cycling in the upper ocean. *Chemical Oceanography Gordon Research Conference*, Holderness, NH.

Van Mooy, B.A.S. (2015) New insights on the chemical forms and cycling of phosphorus in oligotrophic ocean environments. *Monterey Bay Aquarium Research Institute*, Monterey, CA.

Van Mooy, B.A.S. (2015) Plankton booms and busts: biomolecules and their potential applications. *Sippican Philosophical Society*, Carver, MA.

Van Mooy, B.A.S. (2015) Field observations of intersections between infochemicals, microbial interactions, and the ocean's biological pump. *Microscale Ocean Biophysics Conference*, Aspen.

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