

Dr. Julio C. Sepúlveda

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RESEARCH INTERESTS

- Organic and stable isotope biogeochemistry
- Lipid biomarkers as tracers for microbial processes, biogeochemical cycles, and climate
- Chemical and biological oceanography
- Paleoceanography and Paleoclimatology, co-evolution of biology, environments, and climate
- Geobiology and astrobiology

EDUCATION

2008/11	Ph.D. (Dr. rer. nat.), Marine Geosciences (Magna cum Laude), International Graduate College – Proxies in Earth History (EUROPROX), University of Bremen, Germany
2005/04	M.Sc., Oceanography (with honors), University of Concepción, Chile.
2001/04	B.Sc., Marine Biology and Oceanography (with honors), University of Concepción, Chile

PROFESSIONAL EXPERIENCE

2022–present	<i>Associate Professor</i> , Department of Geological Sciences, University of Colorado Boulder
2014–present	<i>Fellow</i> , Institute of Arctic and Alpine Research (INSTAAR), University of Colorado Boulder
2014–2022	<i>Assistant Professor</i> , Department of Geological Sciences, University of Colorado Boulder
2013–2014	<i>Research Scientist</i> , Department of Earth, Atmospheric and Planetary Sciences, MIT
2009–2012	<i>Postdoctoral Associate</i> , Department of Earth, Atmospheric and Planetary Sciences, MIT. Advisor: Prof. Roger Summons
2006–2007	<i>Visiting Research Fellow</i> (6 mo.), Department of Earth, Atmospheric and Planetary Sciences, MIT. Advisor: Prof. Roger Summons
2005–2008	<i>Graduate Research Fellow</i> , Center for Marine Environmental Sciences (MARUM), University of Bremen, Germany. Advisor: Prof. Kai-Uwe Hinrichs
2002–2003	<i>Visiting Research Fellow</i> (9 mo.), Department of Marine Chemistry, Woods Hole Oceanographic Institution, USA. Advisor: Dr. Konrad Hughen
2000–2005	<i>Undergraduate and Graduate Research Fellow and Assistant</i> , Marine Organic Geochemistry Lab, Department of Oceanography, Univ. Concepción, Chile. Advisor: Prof. Silvio Pantoja
1998–2000	<i>Research Assistant</i> , FONDAP-HUMBOLDT Program, Department of Oceanography, University of Concepción, Chile. Advisor: Prof. Victor Gallardo

OTHER AFFILIATIONS

2020–present	<i>Adjunct Assistant Professor</i> , Dept. of Geology, State Univ. of New York at Buffalo
2019–present	<i>Core Faculty Member</i> , Center for Microbial Exploration, Univ. Colorado Boulder
2016–present	<i>Adjunct Scientist</i> , Millennium Institute of Oceanography, Univ. Concepción, Chile
2016–2020	<i>Core collaborator</i> , NASA Astrobiology Institute Rock-Powered Life, Univ. Colorado Boulder

LEAVES

2018–Spring	Parental Leave
2011–Fall	Sick Leave

HONORS AND AWARDS

2022–2026	Elected Co-Chair (2024) and Chair (2026), Gordon Research Conference on Organic Geochemistry, Holderness, NH, USA.
2022	Research & Innovation Office (RIO) Faculty Fellow, University of Colorado Boulder
2021–2026	NSF Faculty Early Career Development Program (CAREER) Award Recipient, Chemical Oceanography, Biological Oceanography, and Ocean Education Programs
2020	Arts and Sciences Fund for Excellence, University of Colorado Boulder
2018–2021	American Chemical Society Petroleum Research Fund - Doctoral New Investigator Award
2012	Massachusetts Institute of Technology (MIT) 2012 School of Science Infinitive Kilometer Award, for exceptional contributions to the community and mentoring of students.
2010	MARUM Research Prize–Best PhD. thesis in Marine Geosciences, University of Bremen
2005–2008	International Graduate College–Proxies in Earth History (EUROPROX) Graduate Fellowship
2004	IMAGES–SCOR Student Travel Grant, 8 th Int. Conference in Paleoceanography, France
2003	American Society of Limnology and Oceanography (ASLO) Student Travel Award, USA
2002–2003	Woods Hole Oceanographic Institution (WHOI), University of Concepción, Andes Foundation–Student Research Fellowship to perform 9 months of research at WHOI
2001–2003	Graduate School Scholarship, University of Concepción, Chile
2001	Best undergraduate thesis in Marine Biology year 2000. University of Concepción, Chile
1999	Best student presentation in Biological Oceanography, Marine Sciences Meeting, Chile

RESEARCH – COMPETITIVE FUNDING (\$6.91M to CU Boulder since 2014; ~\$10.57M total)

2023–2028	Sepúlveda, J. (PI). NSF-EAR Award 2317667, Frontier Research in Earth Sciences (FRES) (\$518,907 to CU). Collaborative Research: How did Terrestrial Ecosystems Rebuild Following the Cretaceous/Paleogene Mass Extinction? Collaborators: T. Lyson (Lead PI, Denver Museum of Nature and Science), T.R. Them (College of Charleston), S.A. Blumenthal (U. Oregon), E.D. Currano (U. Wyoming), R.S. Barclay (Smithsonian Institution), S. Chester (The Research Foundation of CUNY, Brooklyn College).
2021–2026	Sepúlveda, J. (PI). NSF CAREER Award 2047057, Chemical Oceanography, Biological Oceanography, and Ocean Education Programs (\$797,469 to CU). CAREER <u>M</u> icrobial <u>L</u> ipidomics in <u>C</u> hanging <u>O</u> eceans (MILCO).
2021–2024	Sepúlveda, J. (PI). NSF Award 2037750, Marine Geology and Geophysics & Sedimentary Geology and Paleobiology Programs (\$398,264 to CU; \$796,528 total). Collaborative Research: Did small, non-fossilizing plankton dominate primary productivity and shape the recovery of calcareous plankton after the end Cretaceous mass extinction? Collaborator: Lowery, C. (PI, U. Texas Austin).
2020–2024	Sepúlveda, J. (PI) and Lovenduski, N. (co-PI). NSF Award 2021648, Frontier Research in Earth Sciences (FRES) Program (\$795,604 to CU; \$2,443,911 total). Collaborative Research: Evaluating Climate Change and Kill Mechanisms Associated with the End-Cretaceous Mass Extinction: A Model-Data Comparison Approach. Collaborators: Tabor, C. (PI, UConn) and Bardeen, C. (co-PI, NCAR), Harrison, C. (PI, U. Texas Rio Grande Valley), MacLeod, K. (PI, U. Missouri-Columbia), Mitra, S. (PI, E. Carolina U.).

2019–2024	Miller, G.H. (PI), Sepúlveda, J. (co-PI) . NSF Award 1836981, GEO/Office of Polar Programs (OPP) (\$1,296,296 to CU Boulder). Integrating novel molecular techniques to disentangle the roles of climate, time, and human agency on the evolution of the Icelandic landscape.
2019–2024	Sepúlveda, J. (PI) , Pérez-Angel, L. (co-PI), Molnar, P. (co-PI). NSF Award 1929199, Sedimentary Geology and Paleobiology Program (\$596,870 to CU). Evolution of Pliocene-Pleistocene climate and vegetation in the Tropical Andes.
2018–2024	Jennings, A. (PI), Sepúlveda, J. (co-PI) , Marchitto, T. (co-PI), Jahn, A. (co-PI), Andrews, J. (co-PI). NSF Award 1804504, Office of Polar Programs (\$668,325 to CU Boulder). Timing and Paleoceanographic Impacts of the Onset of Arctic-Baffin Bay Throughflow.
2018–2024	Miller, G.H. (PI), Sepúlveda, J. (co-PI) , Bunce, M., (co-PI). NSF Award 1737712, Office of Polar Programs (\$1,835,485 to CU Boulder; \$2,668,601 total). Collaborative Research: Ecosystem Response to a Warming Arctic: Deciphering the Past to Inform The Future. Collaborators: Thomas, E. (PI, University of Buffalo); Walker, D. (PI, University of Alaska), Raynolds, M. (co-PI, University of Alaska)
2018–2021	Sepúlveda, J. (PI) . American Chemical Society Petroleum Research Fund (ACS-PRF) 58815-DNI2 - Doctoral New Investigator Award (\$110,000 to CU Boulder). Assessing the Role of Nitrogen Cycling on Black Shale Formation.
2018–2019	Sepúlveda, J. (PI) . Sedimentary Geology and Paleobiology – Earth Life Transitions Program (\$15,982 to CU) – Supplemental support: Research Experiences for Undergraduates (REU).
2017–2022	Eberle, J. (PI), Sepúlveda, J. (co-PI) . NSF Award 1736256, Sedimentary Geology and Paleobiology Program (\$92,221 to CU; \$454,801 total). Collaborative Research: Faunal Composition, Provinciality and Paleobiology of a Late Cretaceous Arctic Vertebrate Assemblage Revealed Through Cross-Latitudinal Comparisons. Collaborators: Druckenmiller, P. (Lead PI), Erickson, G. (PI).
2017–2020	Vargas, C. (PI), Von Dasow, P. (co-PI), Sepúlveda, J. (collaborator) , Ulloa, O. (collaborator). CONICYT-Chile Award 1170065 (\$338,684 total). CARbon Cycling and Physiological Traits in Phytoplankton Functional Groups under low pH/low OXygen conditions (CARpHOX). Note: CONICYT-Chile does not allow PI or co-PI status for researchers outside of Chile.
2017	Schneider, W. (PI), Vargas, C. (co-PI), Von Dasow, P. (co-PI), Sepúlveda, J. (co-PI) , Ulloa, O. (co-PI), Escribano, R. (co-PI). CONICYT-Chile National Competition for ship time on AGS-61 Cabo de Hornos Award ICM IC120019 (12 days of ship time in northern Chile; \$330,000 total). Assess the physical and biogeochemical properties/conditions of the Anoxic Marine Zone and the deep-water masses off central/northern Chile upon ongoing climate change.
2014–2020	Sepúlveda, J. (PI) , Follows, M. (co-PI, MIT). NSF Award 1534474, Sedimentary Geology and Paleobiology - Earth Life Transitions Program (\$160,996 to CU; \$1,015,888 total). Collaborative Research: Perturbation of the Marine Food Web and Extinction During the Oceanic Anoxic Event at the Cenomanian/Turonian. Collaborators: Bralower, T. (PI), Kump, L. (Co-PI), Arthur, M. (Co-PI) (EAR-1338316), Sageman, B. (PI; EAR- 1338312), Leckie, M. (PI; EAR-1338317).
2012–2014	Summons, R.E. (PI), Whiteside, J. (PI), Sepúlveda, J. (postdoc) . NSF Award 1147685, Sedimentary Geology and Paleobiology Program (\$126,567 to MIT; \$253,886 total). Collaborative Research: Using Molecular Fossils to Investigate Environmental Perturbations During the End-Triassic Mass Extinction: Global vs. Local Signals.
2012–2013	Sepúlveda, J. (PI) , Summons, R.E. (PI). MIT–Chile/MISTI Global Seed Fund Award (\$29,567): The biogeochemistry of the Oxygen Minimum Zone of northern Chile in a warming world: present and past evolution using novel lipid biomarkers.
2012–2013	Prieto, A. (PI), Sepúlveda, J. (co-PI) . CONICYT-Chile Innovation Fund for Competitiveness (\$170,000): Archeology of Torres del Paine National Park.

2011–2012	Sepúlveda, J. (PI) , Summons, R.E. (PI). MIT–Spain/MISTI Global Seed Fund Award (\$27,300): Developing a new post-extinction model of the Cretaceous-Paleogene Mass Extinction Event.
2005–2006	AquaSendas non-profit Organization (Sepúlveda, J., co-director). EXPLORA CONICYT-Chile Program for education and outreach ED9/04/046 (\$44,115). Lakes, bays, and fjords: Natural laboratories to investigate global change.
2003	Pantoja, S. (PI), Sepúlveda, J. (MSc. student) . CONICYT-Chile, Program for International Scientific Collaboration (\$7,000): Organic matter preservation under oxic/anoxic conditions in marine sedimentary environments off Northern Chile.
2002–2003	Pantoja, S. (PI), Hughen, K. (co-PI), Sepúlveda, J. (MSc. student) . CONA-Chile. CIMAR-FIORDO 7 (\$10,000): High-resolution records of climate change and early diagenesis in sediments of the Chilean fjord system.

RESEARCH – PENDING FUNDING

RESEARCH – MANUSCRIPTS UNDER REVIEW (*graduate and [#]undergraduate student; **postdoc, [†]staff)

4. Hoogakker, B., Davis, C., Wang, Y., Kusch, S., Nilsson-Kerr, K., Hardisty, D., Jacobel, A., Reyes Macaya, D., Glock, N., Ni, S., **Sepúlveda, J.**, Ren, A., Auderset, A., Hess, A., Meissner, K., Cardich, J., Anderson, R., Barras, C., Basak, C., Bradbury, H., Brinkmann, I., Castillo, A., Cook, M., Costa, K., Choquel, C., Diz, P., Donnenfield, J., Elling, F., Erdem, Z., Filipsson, H., Garrido, S., Gottschalk, J., Govindankutty Menon, A., Groeneveld, J., Hallman, C., Hendy, I., Henneham, R., Lu, W., Lynch-Stieglitz, J., Matos, L., Martínez-García, A., Molina, G., Muñoz, P., Moretti, S., Morford, J., Nuber, S., Radionovskaya, S., Raven, M., Somes, C., Studer, A., Tachikawa, K., Tapia, R., Tetard, M., Vollmer, T., Wu, S., Zhang, Y., Zheng, X.-Y., and Zhou, Y.: Reviews and syntheses: Review of proxies for low-oxygen paleoceanographic reconstructions. EGUsphere [preprint], <https://doi.org/10.5194/egusphere-2023-2981>, 2024.
3. *Cantarero, S.I., **Flores, E., *Allbrook, H., Aguayo, P., Vargas, C.A., Tamanaha, J.E., Scholz, B.C., Bach, L.T., Löscher, C.R., Riebesell, U., Rajagopalan, B., [†]Dildar, N., **Sepúlveda, J.** Lipid remodeling in phytoplankton exposed to multi-environmental drivers in a mesocosm experiment. EGUsphere [preprint], <https://doi.org/10.5194/egusphere-2023-3110>, 2024.
2. Kusch, S., Schubotz, F., **Sepúlveda, J.**, Bauersachs, T., Lipidome-inferred chemotaxonomy and membrane composition of a poly-extreme Atacama halite endolith community. Under Review in Frontiers in Microbiology - Extreme Microbiology.
1. **Ardenghi, N., **Harning, D.J., **Raberg, J.H., [†]Holman, B.R., Thordarson, T., Geirsdóttir, Á., Miller, G.H., **Sepúlveda, J.**, A Holocene history of climate, fire, landscape evolution, and human activity in Northeast Iceland. Clim. Past Discuss. [preprint], <https://doi.org/10.5194/cp-2023-74>.

RESEARCH – MANUSCRIPTS ACCEPTED

1. **Raberg, J.H., Crump, S.E., **de Wet, G., **Harning, D.J., Miller, G.H., Geirsdóttir, Á., **Sepúlveda, J.**, BrGDGT lipids reflect summer soil temperature and seasonal soil water chemistry. Accepted in *Geochemica et Cosmochimica Acta*.

**RESEARCH – PEER-REVIEW PUBLICATIONS (*graduate and #undergraduate student; **postdoc;
†staff, ‡review article)**

Google Scholar: 1,768 citations, h-index 23, i10-index 34 (as of 01/2024)

2023

54. †Hönisch, B., Royer, D., Breecker, D., Polissar, P., Bowen, G., Henehan, M., Cui, Y., Steinhorsdottir, M., McElwain, J., Kohn, M., Pearson, A., Uno, K., Ridgwell, A., and the Consortium of the Cenozoic CO₂ Proxy Integration Project - CenCO2PIP (**Sepúlveda, J.** is one of 71 additional members of the consortium and co-authors). Towards a Cenozoic History of Atmospheric CO₂. *Science* 382, eadi5177, doi: 10.1126/science.ad5177.
53. **Harning, D.J., Sacco, S., Anamthawat-Jónsson, K., **Ardenghi, A., Thordarson, T., **Raberg, J.H., **Sepúlveda, J.**, Geirsdóttir, Á., Shapiro, B., Miller, G.H., 2023. Delayed postglacial colonization of Betula in Iceland and the circum North Atlantic. Under Review in *eLife* eLife 12:RP87749. <https://doi.org/10.7554/eLife.87749.3>.
52. Rempfert, K.R., Kraus, E.A., Nothaft, D.B., †Dildar, N., Spear, J.R., **Sepúlveda, J.**, Templeton, A.S., 2023. Intact Polar Lipidome and Membrane Adaptations of Microbial Communities Inhabiting Serpentinite-Hosted Fluids. *Frontiers in Microbiology*, 14:1198786. <https://doi.org/10.3389/fmicb.2023.1198786>.
51. **Meilijson, A., Bialik, O.M., *Boudinot, F.G., Bown, P., Benjamini, C., Waldann, Ni., **Sepúlveda, J.**, 2023. Long-term carbon sequestration in the Eocene of the Levant Basin through transport of organic carbon from nearshore to deep marine environments. *Chemical Geology* <https://doi.org/10.1016/j.chemgeo.2023.121800>
50. *Flores, E., Fernández-Urruzola, I., *Cantarero, S.I., Pizarro-Koch, M., Zabel, M., **Sepúlveda, J.**, Ulloa, O., 2023. Connecting pelagic-benthic processes in the Humboldt current system of northern Chile: new insight from the Atacama Trench. *Journal of Geophysical Research: Biogeosciences*, 128, e2023JG007401. <https://doi.org/10.1029/2023JG007401>.
49. Martínez-Sosa, P., Tierney, J., *Perez-Angel, L.C., Stefanescu, I.C., Guo, J., Kirkels, F.M.S.A., **Sepúlveda, J.**, Peterse, F., Shuman, B.N., Reyes, A., 2023. Development and application of the Branched and Isoprenoid GDGT Machine learning Classification algorithm (BIGMaC) for paleoenvironmental reconstruction. *Paleoceanography and Paleoclimatology*, 38, e2023PA004611. <https://doi.org/10.1029/2023PA004611>
48. **Harning, D.H., †Holman, B., **Woelders, L., Jennings, A.E., **Sepúlveda, J.**, 2023. Biomarker characterization of the North Water Polynya, Baffin Bay: Implications for local sea ice and temperature proxies. *Biogeosciences*, 20, 229–249. <https://doi.org/10.5194/bg-20-229-2023>.
47. Jones, H., Westerhold, T., Birch, H., Hull, P., Negra, M., Roehl, U., **Sepúlveda, J.**, Vellekoop, J., Whiteside, J., Alegret, L., Henehan, M., Robinson, L., **van Dijk, J., Bralower, T., 2023. Stratigraphy of the Cretaceous/Paleogene (K/Pg) boundary at the Global Stratotype Section and Point (GSSP) in El Kef, Tunisia: New insights from the El Kef Coring Project. *GSA Bulletin*. doi: <https://doi.org/10.1130/B36487.1>.

2022

46. *Pérez-Angel, L., **Sepúlveda, J.**, Montes, C., #Smith, J.J., Molnar, P., Gonzalez-Arango, C., Snell, K., †Dildar, N., 2022. Mixed signals from the stable isotope composition of precipitation and plant waxes in the Northern Tropical Andes. *Journal of Geophysical Research: Biogeosciences*, 127, e2022JG006932. <https://doi.org/10.1029/2022JG006932>
45. *Raberg, J.H., *Flores, E., **Crump, S.E., **de Wet, G., †Dildar, N., Miller, G.H., Geirsdóttir, Á., **Sepúlveda, J.**, 2022. Intact Polar brGDGTs in Arctic Lake Catchments: Implications for Lipid Sources and Paleoclimate Applications. *Journal of Geophysical Research: Biogeosciences*, 127, e2022JG006969. <https://doi.org/10.1029/2022JG006969>

44. Kusch, S., Wakeham, S.G., **Sepúlveda, J.**, 2022. Bacteriohopanepolyols across the Black Sea redoxcline trace diverse bacterial metabolisms. *Organic Geochemistry* 172, 104462. <https://doi.org/10.1016/j.orggeochem.2022.104462>
43. Hollister, K.V., Thomas, E.K., Raynolds, M.K., Bueltmann, H., ***Raberg, J.R.**, Miller, G.H., **Sepúlveda, J.**, 2022. Aquatic and Terrestrial Plant Contributions to Sedimentary Plant Waxes in a Modern Arctic Lake Setting. *Journal of Geophysical Research: Biogeosciences*, 127, e2022JG006903. <https://doi.org/10.1029/2022JG006903>.
42. **Sepúlveda, J.**, ***Cantarero, S.**, 2022. PERSPECTIVE. Phytoplankton response to a warming ocean: The nutritional value of marine algae will decrease in a warmer world. *Science*, Vol 376 (6600), pp. 1378-1379. <https://doi.org/10.1126/science.abo5235>
41. Miller, G.H., Axford, Y., Briner, J.P., Bueltmann, H., Crump, S.E., Francis, D., Fréchette, B., Gorbey, D., Kelly, M.A., McFarlin, J., Osterberg, E., ***Raberg, J.**, Raynolds, M., **Sepúlveda, J.**, Thomas, E., **deWet, G., Wolfe, A.P., 2022. Stratified lacustrine interglacial sediment preserved beneath Laurentide and Greenland ice sheets confirm Arctic Amplification during past episodes of peak summer insolation. *Journal of Quaternary Science* 37(5) 979–1005. DOI: 10.1002/jqs.3433.
40. ***Raberg, J.H.**, Miller, G.H., Geirsdóttir, Á., **Sepúlveda, J.**, 2022. Near-universal trends in brGDGT lipid distributions in nature. *Science Advances*, 8(20), eabm7625. DOI: 10.1126/sciadv.abm7625.
39. ***Flores, E.**, ***Cantarero, S.I.**, Ruiz-Fernández, P., [†]**Dildar, N.**, Zabel, M., Ulloa, O., **Sepúlveda, J.**, 2022. Bacterial and eukaryotic intact polar lipids point to in situ production as a key source of labile organic matter in hadal surface sediment of the Atacama Trench. *Biogeosciences*, 19, 1395–1420, <https://doi.org/10.5194/bg-19-1395-2022>.

2021

38. Gorbey, D., Thomas, E., **Crump, S.E., Hollister, K.V., Raynolds, M., ***Raberg, J.**, **deWet, G., **Sepúlveda, J.**, Miller, G.H., 2021. Southern Baffin Island mean annual precipitation isotopes modulated by summer and fall moisture source changes during the past 5,800 years, 2021. *Journal of Quaternary Science* 1-12. <https://doi.org/10.1002/jqs.3390>
37. ***Boudinot, F.G.**, Kopf, S., [†]**Dildar, N.**, **Sepúlveda, J.**, 2021. Carbon cycling during Oceanic Anoxic Event 2: Compound-specific carbon isotope evidence from the Western Interior Seaway, 2021. *Paleoceanography and Paleoclimatology*, 36, e2021PA004287. <https://doi.org/10.1029/2021PA00428736>.
36. ***Raberg, J. H.**, **Harning, D. J., **Crump, S. E., **de Wet, G., Blumm, A., Kopf, S., Geirsdóttir, Á., Miller, G. H., **Sepúlveda, J.**, 2021. Revised fractional abundances and warm-season temperatures substantially improve brGDGT calibrations in lake sediments. *Biogeosciences* 18, 3579–3603. <https://doi.org/10.5194/bg-18-3579-2021>.
35. Kusch, S., Wakeham, S., [†]**Dildar, N.**, Zhu, C., **Sepúlveda, J.**, 2021. Bacterial and archaeal lipids trace chemo(auto)trophic pathways along the redoxcline in Vancouver Island fjords. *Geobiology*. <https://doi.org/10.1111/gbi.12446>
34. **Crump, S.E., Fréchette, B., Power, M., Cutler, S., **de Wet, G., Raynolds, M.K., ***Raberg, J.**, Briner, J.P., Thomas, E.K., **Sepúlveda, J.**, Shapiro, B., Bunce, M., Miller, G.H., 2021. Ancient plant DNA reveals High Arctic greening during the Last Interglacial. *Proceedings of the National Academy of Science* 118 (13) e2019069118; <https://doi.org/10.1073/pnas.2019069118>
33. Vargas, C.A., ***Cantarero, S.**, **Sepúlveda, J.**, Galán, A., De Pol-Holz, R., Walker, B., Schneider, W., Farías, L., Cornejo, M., Walker, J., Xu, X., Salisbury, J., 2021. A source of isotopically light organic carbon in a low-pH anoxic marine zone. *Nature Communications* 12, 1604. <https://doi.org/10.1038/s41467-021-21871-4>
32. **Harning, D.J., Jennings, A.E., Köseoğlu, D., Belt, S.T., Geirsdóttir, A., **Sepúlveda, J.**, 2021. Response of biological productivity to North Atlantic marine front migration during the Holocene. *Climate of the Past* 17, 379–396. <https://doi.org/10.5194/cp-17-379-2021>

31. Kusch, S., Wakeham, S.G., **Sepúlveda, J.**, 2021. Diverse origin of “soil marker” bacteriohopanepolyols in marine oxygen deficient zones. *Organic Geochemistry* 151, 104150. <https://doi.org/10.1016/j.orggeochem.2020.104150>

2020

30. *Boudinot, F.G., Sepúlveda, J., 2020. Marine organic carbon burial increased forest fire frequency during Oceanic Anoxic Event 2. *Nature Geoscience* 13, 693–698. <https://doi.org/10.1038/s41561-020-0633-y>
29. *Cantarero, S., Henríquez-Castillo, C., †Dildar, N., Vargas, C., von Dassow, P., Cornejo-D’Ottone, M., Sepúlveda, J., 2020. Size-fractionated contribution of microbial biomass to suspended organic matter in the Eastern Tropical South Pacific oxygen minimum zone. *Frontiers in Marine Science* 7:540643. <https://doi.org/10.3389/fmars.2020.540643>
28. †Steen, A.D., Kusch, S., Abdulla, H.A., Cakić, N., Coffinet, S., Dittmar, T., Fulton, J.M., Galy, V., Hinrichs, K-U, Ingalls, A., Koch, B.P., Kujawinski, E., Kusch, S., Liu, Z., Osterholz, H., Rush, D., Seidel, M., Sepúlveda, J., Wakeham, S.G., 2020. Analytical and computational advances, opportunities, and challenges in marine organic biogeochemistry in an era of "omics". *Frontiers in Marine Science* 7:718. <https://doi.org/10.3389/fmars.2020.00718>
27. *Pérez-Ángel, L., Sepúlveda, J., Molnar, P., Montes, C., Rajagopalan, B., Snell, K., Gonzalez-Arango, C., †Dildar, N., 2020. Soil and air temperature calibrations using branched GDGTs for the Tropical Andes of Colombia: Towards a pan-tropical calibration. *Geochemistry, Geophysics, Geosystems* 21, e2020GC008941. <https://doi.org/10.1029/2020GC008941>
26. *Boudinot, F.G., †Dildar, N., Leckie, M., Parker, A., Jones, M.M., Sageman, B.B., Bralower, T.J., Sepúlveda, J., 2020. Neritic ecosystem response to Oceanic Anoxic Event 2 in the Cretaceous Western Interior Seaway, USA. *Palaeogeography, Palaeoclimatology, Palaeoecology* 546, p.109673. <https://doi.org/10.1016/j.palaeo.2020.109673>
25. *Harning, D.J., Curtin, L., Geirsdóttir, Á., D’Andrea, W.J., Miller, G.H., Sepúlveda, J., 2020. Lipid biomarkers quantify Holocene summer temperature and ice cap sensitivity in Icelandic lakes. *Geophysical Research Letters* 47, e2019GL085728. <https://doi.org/10.1029/2019GL085728>
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2019

23. Kusch, S., Sepúlveda, J., Wakeham, S., 2019. Origin of sedimentary BHPs along a Mississippi River–Gulf of Mexico export transect: Insights from spatial and density distributions. *Frontiers in Marine Science* 6:729. <https://doi.org/10.3389/fmars.2019.00729>
22. *Crump, S.E., Miller, G.H., Power, M., Sepúlveda, J., †Dildar, N., Coghlan, M., Bunce, M., 2019. Arctic shrub colonization lagged peak postglacial summer warmth: Molecular evidence in lake sediment from Arctic Canada. *Global Change Biology* 25, 4244–4256. <https://doi.org/10.1111/gcb.14836>
21. Sepúlveda, J., Alegret, L., Haddad, E., Cao, C., Thomas, E., Summons, R.E., 2019. Stable isotope constraints on marine productivity across the Cretaceous-Paleogene mass extinction. *Paleoceanography and Paleoclimatology*, 34, 1195–1217. <https://doi.org/10.1029/2018PA003442>
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2018 and earlier

16. MacLeod, K.G., Quinton, P.C., Sepúlveda, J., Negra, M.H., 2018. Postimpact earliest Paleogene warming shown by fish debris oxygen isotopes (El Kef, Tunisia). *Science* 360, 1467–1469. <https://doi.org/10.1126/science.aap8525>
15. *Matys, E.D., Sepúlveda, J., Pantoja, S., Lange, C.B., Caniupán, M., Lamy, F., Summons, R.E., 2017. Bacteriohopanepolyols along redox gradients in the Humboldt Current System off northern Chile. *Geobiology* 15(6), 844-857. <https://doi.org/10.1111/gbi.12250>
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13. *Strain, B., Pantoja, S., Sepúlveda, J., Lange, C.B., Muñoz, P., Summons, R.E., McKay, J., Salamanca, M., 2015. Interdecadal changes in intensity of the oxygen minimum zone off Concepción, Chile (~36° S) over the last century. *Biogeosciences* 12, 6045-6058. <https://doi.org/10.5194/bg-12-6045-2015>
12. *Strain, B., Sepúlveda, J., Pantoja, S., Summons, R., R. Quinones, H.A. Levipán, 2015. Archaeal and bacterial assemblages in the Oxygen Minimum Zone of the upwelling ecosystem off Central Chile as determined by organic biomarkers. *Gayana* 79 (1), 26-44. <https://doi.org/10.4067/S0717-65382015000100005>
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9. Arreguín-Rodríguez, G. J., Alegret, L., Sepúlveda, J., *Newman, S., Summons, R. E., 2014. Enhanced terrestrial input supporting the Glomospira acme across the Paleocene-Eocene boundary in Southern Spain. *Micropaleontology* 60, 43-51. www.jstor.org/stable/24413640
8. Bertrand, S., Hughen, K., Sepúlveda, J., Pantoja, S., 2012. Geochemistry of surface sediments from the fjords of Northern Chilean Patagonia (44–47°S): Spatial variability and implications for paleoclimate reconstructions. *Geochimica et Cosmochimica Acta* 76, 125–146. <https://doi.org/10.1016/j.gca.2011.10.028>

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6. Sepúlveda, J., Wendler, J., Summons, R.E. and Hinrichs, K-U., 2009. Rapid resurgence of Marine Productivity after the Cretaceous-Paleogene Mass Extinction Event. *Science* 326, 129–132. <https://doi.org/10.1126/science.1176233>
5. Sepúlveda, J., Wendler, J., Leider, A., Kuss, H-J., Summons, R.E. and Hinrichs, K-U., 2009. Molecular isotopic evidence of environmental and ecological changes across the Cenomanian–Turonian boundary in the Levant Platform of central Jordan. *Organic Geochemistry* 40, 553–568. <https://doi.org/10.1016/j.orggeochem.2009.02.009>
4. Sepúlveda, J., Pantoja, S., Hughen, K., Bertrand, S., Figueroa, D., León, T., Drenzek, N., Lange, C., 2009. Late Holocene sea-surface temperature and precipitation variability in northern Patagonia, Chile (Jacaf Fjord, 44°S). *Quaternary Research* 72, 400–409. <https://doi.org/10.1016/j.yqres.2009.06.010>
3. Rebolledo, L., Sepúlveda, J., Lange C., Pantoja, S., Bertrand, S., Hughen, K., Figueroa, D., 2008. Late Holocene marine productivity changes in Northern Patagonia–Chile inferred from a multi-proxy analysis of Jacaf channel sediments. *Estuarine, Coastal and Shelf Science* 80, 314–322. <https://doi.org/10.1016/j.ecss.2008.08.016>
2. Sepúlveda, J., Pantoja, S., Hughen, K., Lange, C., Gonzalez, F., Muñoz, P., Rebolledo, L., Castro, R., Contreras, S., Avila, A., Rossel, P., Lorca, G., Salamanca, M. and Silva, N., 2005. Fluctuations in export productivity over the last century from sediments of a southern Chilean fjord (44°S). *Estuarine, Coastal and Shelf Science* 65, 587–600. <https://doi.org/10.1016/j.ecss.2005.07.005>
1. Pantoja, S., Sepúlveda, J., González, H. 2004. Decomposition of sinking proteinaceous material during fall in the oxygen minimum zone off northern Chile. *Deep Sea Research-I* 51, 55-70. <https://doi.org/10.1016/j.dsr.2003.09.005>

RESEARCH – BOOK CHAPTERS

1. Hackett, P., Sepúlveda, J., McCarthy, K., 2011. Improving climate change education: a geoscientific and psychological collaboration. In Y. Fisher, A. Friedman (Eds.); *New horizons for facet theory – searching for structure in content, spaces and measurement* (pp. 171–178). Israel: FTA Publications.

RESEARCH – INVITED MEETINGS AND PRESENTATIONS (*planned)

2024/Spring	<i>Invited Speaker</i> , Seminar Series, Department of Earth, Environmental and Planetary Sciences (DEEPS), Brown University, RI, USA.
2024/01	<i>Invited Speaker</i> , Gordon Research Conference on Geobiology: Past, Present and Future, Galveston, TX, USA.
2023/10	<i>Invited Speaker</i> , Geosciences Seminar Series, Department of Geosciences, Baylor University, TX, USA.
2022/09	<i>Invited Speaker</i> , 14 th International Conference on Paleoceanography, Bergen, Norway.
2022/02	<i>Invited Speaker</i> , Oceanography Seminar, University of Hawaii at Manoa, HI, USA.
2021/11	<i>Invited Speaker</i> , The Hewett Club Lectures, University of California Riverside, CA, USA.
2021/11	<i>Invited Speaker</i> , Instituto Potosino de Investigación Científica y Tecnológica, México.
2020/12	<i>Invited Speaker</i> , American Geophysical Union Session P030 - <i>Detecting Life Through Space and Time: From Geochemistry to Biology</i> . Online, USA.
2020/10	<i>Invited Speaker</i> , Geological Society of America Session 163-T82 - <i>Surf to Sea, Small to Large, Bottom to Top: Ecosystem Perspectives on the Marine Fossil Record</i> . Online, USA.

- 2020 *Invited Speaker*, Klepser Seminar Series, Dept. Earth and Planetary Sciences, University of Tennessee. (*Postponed due to COVID-19*).
- 2019 *Invited Participant*, Marine Organic Biogeochemistry Workshop, Hanse Wissenschaftskolleg (Institute for Advanced Study, HWK), Delmenhorst, Germany.
- 2017 *Invited Instructor*, International Geobiology Course, Wrigley Marine Institute, CA. (*canceled due to family emergency*).
- 2016 *Invited Speaker*, Denver Museum of Nature and Science, Denver, CO.
- 2016 *Invited Speaker*, US Geological Survey, Denver, CO.
- 2015 *Invited speaker*, Institute of Arctic and Alpine Research (INSTAAR), Boulder, CO.
- 2014 *Invited Speaker*, Gordon Research Conference Organic Geochemistry, Holderness, NH.
- 2014 *Invited speaker*, School for the Environment, Univ. of Massachusetts Boston, MA.
- 2014 *Invited speaker*, School of Earth Sciences, Univ. of Bristol, UK.
- 2014 *Invited speaker*, National Oceanography Centre, Southampton, UK.
- 2014 *Invited speaker*, Dept. Geological Sciences, Univ. of Colorado Boulder, CO.
- 2014 *Invited speaker*, Environmental Earth System Science, Stanford Univ., CA.
- 2013 *Invited speaker*, Max Planck Institute for Marine Microbiology, Bremen, Germany.
- 2013 *Invited speaker*, Dept. Earth Sciences, Univ. of Southern California, CA.
- 2013 *Invited speaker*, Dept. Earth and Planetary Sciences, Northwestern Univ., IL.
- 2012 *Invited Speaker*, Dept. Earth Sciences, Univ. of Zaragoza, Spain.
- 2012 *Invited Speaker*, Dept. Earth, Atmospheric and Planetary Sciences, MIT, MA.
- 2012 *Invited Speaker*, Dept. Oceanography, Univ. of Concepción, Chile.
- 2012 *Invited Speaker*, Dept. Marine Chemistry, Woods Hole Oceanographic Institution, MA.
- 2012 *Invited Speaker*, Institute of Marine and Coastal Sciences, Rutgers Univ., NJ.
- 2012 *Invited Speaker*, Dept. Geology, Univ. of Tunis El Manar, Tunisia.
- 2011 *Invited Speaker*, Smithsonian National Museum of Natural History, DC.
- 2010 *Invited Speaker*, Dept. Earth, Atmospheric and Planetary Sciences, MIT, MA.
- 2010 *Invited Speaker*, Dept. Geological Sciences, Brown Univ., RI.
- 2008 *Invited Speaker*, Hanse Wissenschaftskolleg, Delmenhorst, Germany.
- 2007 *Invited Speaker*, Dept. Geology and Geophysics, Woods Hole Oceanographic Institution, MA.
- 2005 *Invited Speaker*, 2nd Northern Germany Organic Geochemistry Meeting, Univ. Oldenburg, Germany.

RESEARCH – CONFERENCE ABSTRACTS (*invited; *graduate and #undergraduate student; †staff;
**postdoc)

2024

- 2024 **Sepúlveda, J.**, *Cantarero, S., **Flores, E., *Allbrook, H., Exploring the Lipid Landscape: Environmental Lipidomics at the Cutting Edge of Science. GRC Geobiology, Galveston, TX.
- 2024 **Flores, E., *Cantarero, S.I., *Allbrook, H., Xu, P., Furbo, C., Löscher, C.R., Ruiz-Fernández, P., Vargas, C.A., Aguayo, P., Bach, L.T., Richards Kittu, L., von der Esch, E., Arístegui, J., Riebesell, U., **Sepúlveda, J.**, Lipid biosignatures of marine N- cycling microorganisms and drivers of planktonic lipid richness - a mesocosm approach. GRC Geobiology, Galveston, TX.

2023

- 2023 **Raberg, J.H., **Harning, D.J., #Urist, A., Geirsdóttir, Á., Thordarson, T., Miller, G.H., Sepúlveda, J., BrGDGTs in the Thverá aeolian soil section provide a Holocene temperature history of southern Iceland. AGU, San Francisco, CA.
- 2023 **Sánchez-Montes, M.L., Kearns, L.E., Jones, H., #Bakar, M.H.E., Lowery, C.M., Sepúlveda, J., Reconstructing productivity export changes across the K/Pg Boundary with group-specific lipid biomarkers from Brazos (Texas). AGU, San Francisco, CA.
- 2023 *Pérez-Angel, L., *Kelleher, R., Sullivan, G., Sepúlveda, J., Ramos, J., **Sánchez-Montes, M.L., CLUE: The Climate Mystery Game, An Earth Science Outreach and Education Program for Young Generations. AGU, San Francisco, CA.
- 2023 *Pérez-Angel, L., Russell, J., Sepúlveda, J., Molnar, P., Mora-Paez, H., Parrado, A., Gonzalez-Arango, C., Snell, K., Pliocene Hydroclimate of the Northern Tropical Andes. AGU, San Francisco, CA.
- 2023 #King, G., **Kelleher, R., Fricke, H., Sepúlveda, J., Lyson, T., Levy, S., Assessing the Relationship Between Wildfires, Climate, and Floral Regimes in the Earliest Paleocene, Corral Bluffs, Colorado, USA. AGU, San Francisco, CA.
- 2023 Wheatley, R., Harrington, C., MacLeod, K., Sepúlveda, J., **Kelleher, R., Harrison, C., Mitra, S., A comparison of pyrogenic residues in sedimentary samples associated with the K-Pg impact. AGU, San Francisco, CA.
- 2023 Hoogakker, B., Davis, C., Auderset, A., Cardich, J., Glock, N., Hardisty, D., Hess, A., Jacobel, A., Kuch, S., Reyes-Macaya, D., Meissner, K., Ni, S., Nilsson-Kerr, K., Ren, H., Sepúlveda, J., Wang, Y., Review of proxies for low-oxygen paleo reconstructions. AGU, San Francisco, CA.
- 2023 Kearns, L.E., **Sánchez-Montes, M.L., Jones, H., Sepúlveda, J., Lowery, C.M., Diachronous recovery of different plankton groups following the end-Cretaceous mass extinction. GSA, Pittsburgh, PA.
- 2023 Lindberg, K.R., Thomas, E.K., Rosenheim, B.E., Miller, G.H., Sepúlveda, J., Firesinger, D.F., **de Wet, G.A., Holocene mobilization of permafrost organic carbon within a northeastern Baffin Island Lake catchment modulated by climate and postglacial soil development. GSA, Pittsburgh, PA.
- 2023 MacLeod, K., Huber, B., Tabor, C., Mitra, S., Wheatley, R., Harrison, C., Tessler, M., Bardeen, C., Sepúlveda, J., Lovenduski, N., Isotopic evidence consistent with a wildfire-induced, greenhouse warming pulse after the Chicxulub from the Brazos River Texas Cretaceous/Paleogene Boundary section. GSA, Pittsburgh, PA.
- 2023 **Raberg, J.H., **Harning, D.J., #Urist, A., Crump, S.E., **de Wet, G., Miller, G.H., Geirsdóttir, Á., Sepúlveda, J., brGDGTs reflect in situ temperature and chemistry of soil microenvironments. 2nd international GDGT workshop, Zürich, Switzerland.
- 2023 *Pérez-Angel, L.C., Sepúlveda, J., Russell, J., Snell, K.E., Mora-Paez, H., †Eaman, K., Parrado, A., Gonzalez-Arango, C., Maloney, A., Plio-Pleistocene climate and environmental reconstruction in the Bogotá basin, northern tropical Andes of Colombia. XXI INQUA, Roma, Italy.
- 2023 *Pérez-Angel, L.C., Sepúlveda, J., Russell, J., Snell, K.E., Mora-Paez, H., †Eaman, K., Parrado, A., Gonzalez-Arango, C., Maloney, A., Plio-Pleistocene climate and environmental reconstruction in the Bogotá basin, northern tropical Andes of Colombia. Goldschmidt, Lyon, France.
- 2023 Kearns, L., **Sánchez-Montes, M.L., Jones, H., Sepúlveda, J., Lowery, C., Recovery of planktic ecosystems following the end-Cretaceous mass extinction at El Kef, Tunisia. FORAMS, Perugia, Italy.

- 2023 ****Ardenghi, N.**, Miller, G.H., Geirsdóttir, Á., ****Harning, D.J.**, ****Raberg, J.H.**, Thordarson, T., **Sepúlveda, J.**, Regional precipitation variability modulates the Holocene fire history of Iceland. EGU, Vienna, Austria.
- 2022**
- 2022 **#Biener, K.**, ***Kelleher, R.**, **†Dildar, N.**, Jones, H.L., Bralower, T., Negra, M.H., **Sepúlveda, J.**, Wildfire Regime across the Cretaceous-Paleogene Boundary. AGU, Chicago, IL.
- 2022 ***Pérez-Angel, L.C.**, **Sepúlveda, J.**, Molnar, P., Mora-Paez, H., Parrado, A., **†Eaman, K.**, Rajagopalan, B., Gonzalez-Arango, C., Montes, C., Snell, K.E., **†Dildar, N.**, Disentangling mixed organic sources in sedimentary systems using biomarker proxies. AGU, Chicago, IL.
- 2022 Gorbey, D.B., Thomas, E.K., Briner, J.P., Crump, S.E., Keys, P.W., Lindberg, K.R., Raberg, J.H., Miller, G.H., Raynolds, M.K., **Sepúlveda, J.**, Laurentide Ice Sheet Configuration Influenced the Arctic Water Cycle over Multiple Interglacial Periods. AGU, Chicago, IL.
- 2022 Leckie, R.M., Parker, A., ***Boudinot, F.G.**, Bralower, T.J., Bryant, R., Fortiz, V., Jones, M.M., MacLeod, K.G., Sageman, B.B., and **Sepúlveda, J.**, A Neritic Record of Oceanic Anoxic Event 2 from Coastal Utah: New Insights into US Western Interior Seaway Paleoceanography and Foraminiferal Paleoenvironmental Reconstruction. SEPM, Houston, TX, USA.
- 2022 ****Harning, D.J.**, Sacco, S., ****Ardenghi, N.**, ****Raberg, J.H.**, Thordarson, T., **Sepúlveda, J.**, Shapiro, B., Geirsdóttir, Á., Miller, G.H., Redox state impacts the preservation and interpretation of lipid biomarker and ancient DNA proxies in high latitude lake sediments: A case study from northeast Iceland. IAL-IPA, Bariloche, Argentina.
- 2022 ****Raberg, J.H.**, Gering, S., ****Harning, D.J.**, ****Ardenghi, N.**, Thordarson, T., **Sepúlveda, J.**, Fierer, N., Geirsdóttir, Á., Miller, G.H., The hunt for brGDGT-producing bacteria: insights from genomic and lipid biomarker analyses in modern and ancient Icelandic lacustrine environments. IAL-IPA, Bariloche, Argentina.
- 2022 ***Kelleher, R.**, **#Biener, K.**, **†Dildar, N.**, **Sepúlveda, J.**, Wildfire intensity and frequency across the Cretaceous-Paleogene boundary section of El Kef, Tunisia. GSA, Denver, CO, USA.
- 2022 Kearns, L.E., ****Sánchez-Montes, M.L.**, **Sepúlveda, J.**, Lowery, C.M., Did non-fossilizing plankton rule the oceans after the End Cretaceous Mass Extinction? GSA, Denver, CO, USA.
- 2022 Lindberg, K.R., Thomas, E.K., Rosenheim, B.E., **Sepúlveda, J.**, Miller, G.H., Holocene terrestrial and lacustrine carbon cycling history of northeastern Baffin Island, Arctic Canada. GSA, Denver, CO, USA.
- 2022 **Sepúlveda, J.**, ****van Dijk, J.**, Jones, H., Bralower, T., Birch, H., Alegret, L., Vellekoop, J., Negra, H.M., Röh, U., Henehan, M., Wilkes, E.B., Hull, P., Whiteside, J., Westerhold, T., On the recovery of marine productivity across the Cretaceous-Paleogene (K/Pg) boundary. 14th International Conference on Paleoceanography, Bergen, Norway.
- 2022 **Sepúlveda, J.**, ****van Dijk, J.**, Jones, H., Bralower, T., Birch, H., Alegret, L., Vellekoop, J., Negra, H.M., Röh, U., Henehan, M., Wilkes, E.B., Hull, P., Whiteside, J., Westerhold, T., On the recovery of marine productivity across the Cretaceous-Paleogene (K/Pg) boundary. 12th International Conference on Climatic and Biotic Events of the Paleogene, Bremen, Germany.
- 2022 ****Allbrook, H.**, ****Cantarero, S.I.**, Aguayo, A., Vargas, C., Riebesell, U., **Sepúlveda, J.**, Archaeal lipid remodelling in a marine mesocosm experiment: Implications for the TEX86 paleothermometer. GRC Organic Geochemistry, Holderness, NH, USA.
- 2022 ***Kelleher, R.**, **#Biener, K.J.**, **†Dildar, N.**, Jones, H.L., Bralower, T., Negra, M.H., **Sepúlveda, J.**, Pyrogenic Polycyclic Aromatic Hydrocarbons (PAHs) suggest increased global forest fire intensity and frequency in the 40,000-year aftermath of the Cretaceous-Paleogene (K/Pg) asteroid impact. GRC Organic Geochemistry, Holderness, NH, USA.
- 2022 ***Pérez-Angel, L.**, **Sepúlveda, J.**, Molnar, P., **#Eaman, K.**, Mora-Páez, H., Parrado, A., González-Arango C., Montes, C., Snell, K. , and **†Dildar, N.**, A Pliocene-Pleistocene brGDGT-

- based temperature reconstruction from the tropical Andes of Colombia. GRC Organic Geochemistry, Holderness, NH, USA.
- 2022 ****Flores, E., **Cantarero, S.I., Ruiz-Fernández, P., †Dildar, N., Zabe, M., Ulloa, O., Sepúlveda, J.**, Intact Polar Lipids point to in-situ production as a key source of labile organic matter in hadal sediments of the Atacama Trench. GRC Organic Geochemistry, Holderness, NH, USA.
- 2022 ****Ardenghi, N., Miller, G., Geirsdóttir, Á., **Harning, D., **Raberg, J., †Dildar, N., †Holman, B., Sepúlveda, J.**, A Holocene fire history of Iceland based on pyrogenic PAHs in lacustrine sediments. EGU, Vienna, Austria.
- 2022 Lindberg, K.R., Thomas, E.K., Rosenheim, B.E., Firesinger, D.F., **Sepúlveda, J.**, Miller, G.H., Using ramped pyrolysis oxidation to assess bulk sediment radiocarbon geochronology and carbon cycling in an Arctic lake catchment. Geological Society of America (GSA) Northeastern Section Meeting. Lancaster, PE.
- 2021**
- 2021 ***Raberg, J., Miller, G.H., Geirsdóttir, Á., Sepúlveda, J.** Widespread trends in brGDGT distributions span over a dozen sample types. American Geophysical Union, New Orleans, LA.
- 2021 ***Flores, E., *Cantarero, S.I., Ruiz-Fernández, P., †Dildar, N., Zabel, M., Ulloa, O., Sepúlveda, J.** Intact polar lipids reveal that in situ microbial production is a dominant source of organic matter to Atacama Trench. American Geophysical Union, New Orleans, LA.
- 2021 ***Pérez-Angel, L.C., Sepúlveda, J., Molnar, P., Parrado, A., Mora, H., Gonzalez-Arango, C., Montes, C., Snell, K.E., †Dildar, N.** Pliocene-Pleistocene temperature reconstruction of the Northern Tropical Andes: a biomarker record from the Funza-II core. American Geophysical Union, New Orleans, LA.
- 2021 Gorbey, D.B., Thomas, E.K., Crump, S.E., Lindberg, K.R., ***Raberg, J.H., Reynolds, M.K., Sepúlveda, J.**, Miller, G.H. A Multiple-Interglacial plant wax $\delta^2\text{H}$ record from the Canadian Arctic reveals the importance of local summer moisture transport to paleo precipitation records. American Geophysical Union, New Orleans, LA.
- 2021 Martínez-Sosa, P., Tierney, J.E., ***Pérez-Angel, L.C., Stefanescu, I., Guo, J., Kirkels, F., Sepúlveda, J., Peterse, F., Shuman, B.N., Routson, C.** Improving terrestrial paleoenvironmental reconstructions through macro-scale associations between GDGTs and the environment. American Geophysical Union, New Orleans, LA.
- 2021 ***Pérez-Angel, L.C., Sepúlveda, J., Montes, C., Molnar, P., Gonzalez-Arango, C., #Smith, J., Snell, K.E., †Dildar, N.** Stable isotopes of precipitation and plant waxes in the Northern Tropical Andes: a reliable proxy for paleoaltimetry studies in Colombia? Geological Society of America (GSA) Annual Meeting, Portland, OR.
- 2021 Tabor, C., Bardeen, C., Coupe, J., Garza, V., Harrison, C., Krumhardt, K., Levy, M., Lovenduski, N., MacLeod, K.G., Mitra, S., **Sepúlveda, J.** Insights into K-Pg extinction mechanisms using an Earth system model. Geological Society of America (GSA) Annual Meeting, Portland, OR.
- 2021 ***Cantarero, S., *Flores, E., Vargas, C.A., Ruiz-Fernández, P., †Dildar, N., Zabel, M., Ulloa, O., Sepúlveda, J.**, Evidence of significant in situ microbial production in extreme marine environments. Rocky Mountain Geobiology Symposium, Golden, CO.
- 2021 ****van Dijk, J., Sepúlveda, J., Alegret, L., Birch, H., Bralower, T., Jones, H., Henehan, M., Hull, P., Negra, H., Ridgwell, A., Röhl, U., Vellekoop, J., Westerhold, T., Whiteside, J., Wilkes, E.B., Zeebe, R.**, The recovery of the biological pump across the K/Pg boundary in the GSSP of El Kef, Tunisia. Goldschmidt Conference, Online.
- 2021 ****van Dijk, J., Sepúlveda, J., Alegret, L., Hull, P., Negra, H., Röhl, U., Westerhold, T., Whiteside, J., Henehan, M., Vellekoop, J., Birch, H., Jones, H., Ridgwell, A., Zeebe, R.**,

- Bralower, T., The recovery of the biological pump in the neritic zone across the K/Pg boundary. European Geosciences Union General Assembly, Online.
- 2021**
- ***Raberg, J.**, **Blum, A.**, ****Harning, D.H.**, ****Crump, S.E.**, ****de Wet, G.**, **Dildar, N.**, Kopf, S., Geirsdóttir, Á., Miller, G.H., **Sepúlveda, J.**, Revised brGDGT fractional abundances and warm-season temperatures strengthen relationships between brGDGTs and environmental variables. European Geosciences Union General Assembly, Online.
- 2021**
- ***Cantarero, S.**, Aguayo, P., Vargas, C.A., Tamahana, J.E. Jr., Scholz, B.C., Bach, L.T., Löscher, C.R., Riebesell, U., Rajagopalan, B., **Dildar, N.**, **Sepúlveda, J.**, Evidence for intact polar lipid remodeling among phytoplankton communities in response to multi- environmental stressors in mesocosm experiments. 2nd International Aquatic Mesocosm Research Symposium, Online.
- 2021**
- ***Raberg, J.**, ****Harning, D.H.**, ****Crump, S.E.**, ****de Wet, G.**, **Blumm, A.**, Kopf, S., Geirsdóttir, Á., Miller, G.H., **Sepúlveda, J.**, Extending brGDGT-based paleoclimate proxies to high latitudes. Arctic Workshop, Online.
- 2021**
- ****Harning, D.J.**, **Holman, B.**, ****Woelders, L.**, Jennings, A., **Sepúlveda, J.**, Biomarker characterization of the North Water Polynya, Baffin Bay: Implications for local sea ice and temperature proxies. International Arctic Workshop, Online.
- 2021**
- ****Ardenghi, N.**, ****Harning, D.J.**, ***Raberg, J.**, **Sepúlveda, J.**, Geirsdóttir, Á., Miller, G.H., Pórðarson, Þ., Disentangling the evolution of Holocene climate, soil erosion and human impact in Iceland. International Arctic Workshop, Online.
- 2021**
- Hollister, K.V., Thomas, E.K., ***Raberg, J.**, Raynolds, M.K., Gorbey, D.B., ****Crump, S.E.**, Miller, G.H., **Sepúlveda, J.**, Quantifying Holocene plant contributions to sedimentary leaf waxes in an Arctic lake setting. International Arctic Workshop, Online.
- 2020**
- [†]**Sepúlveda, J.**, Observational and experimental approaches in lipid biomarker research: towards a more holistic interpretation of biosignatures in the geologic record on Earth and beyond. American Geophysical Union, Online.
- 2020**
- ***Pérez-Angel, L.C.**, **Sepúlveda, J.**, Molnar, P., Montes, C., Rajagopalan, B., Snell, K., Gonzalez-Arango, C., Dildar, N., Soil and air temperature calibrations using branched GDGTs for the Tropical Andes of Colombia: Towards a pan-tropical calibration. American Geophysical Union, Online.
- 2020**
- ***Raberg, J.**, Blumm, A., ****Harning, D.**, ****Crump, S.E.**, ****de Wet, G.**, Geirsdóttir, A., Miller, G.H., **Sepúlveda, J.**, Improving the brGDGT Paleotemperature Proxy: New Insights from High-Latitude Lake Sediments. American Geophysical Union, Online.
- 2020**
- ****Crump, S.E.**, Fréchette, B., Power, M., Cutler, S., ****de Wet, G.**, Raynolds, M.K., ***Raberg, J.**, Briner, J.P., Thomas, E.K., **Sepúlveda, J.**, Shapiro, B., Bunce, M., Miller, G.H., Ancient DNA in lake sediment reveals High Arctic greening during the Last Interglacial. American Geophysical Union, Online.
- 2020**
- Gorbey, D.B., Thomas, E.K., ****Crump, S.E.**, ****de Wet, G.**, Miller, G.H., **Sepúlveda, J.**, A 200,000-Year Plant Wax δ₂H Record from the Canadian Arctic Reveals Summer Moisture Source and Aridity Change in Step with Temperature and Plant Community Shifts Across Multiple Interglacials. American Geophysical Union, Online.
- 2020**
- Hollister, K., Thomas, E.K., ***Raberg, J.**, Raynolds, M.K., Gorbey, D.B., ****Crump, S.E.**, Miller, G.H., **Sepúlveda, J.**, Aquatic and terrestrial plant contributions to sedimentary leaf waxes in a modern Arctic lake setting: Improving interpretations of Holocene climate change on Baffin Island. American Geophysical Union, Online.
- 2020**
- Jennings, A.E., Brooks, N., Kelleher, R., Feng, S., Andrews, J.T., Jahn, A., Marchitto, T., **Sepúlveda, J.**, Lecavalier, B., Timing and Paleoceanographic Impacts of Deglaciation of the

- Arctic Island Channels between the Arctic Ocean and Baffin Bay during the Holocene. American Geophysical Union, Online.
- 2020**
- [†]**Sepúlveda, J.**, Phytoplankton Resilience to Global Change: Biomarker Lessons from the Geologic Record. Geological Society of America, online.
- 2020**
- Jones, H.L., Whiteside, J., Röhl, U., Westerhold, T., Hull, P.M., Birch, H., Robinson, L., Alegret, L., Henehan, M. J., Lowery, C.M., Negra, M.H., **Sepúlveda, J.**, ^{**}**van Dijk, J.**, Vellekoop, J., Patzkowsky, M.E. and Bralower, T.J., The role of the marine biological pump in driving ecosystem recovery following the Cretaceous-Paleogene (K-Pg) mass extinction event. Geological Society of America, online.
- 2019**
- Sepúlveda, J.**, ^{*}**Boudinot, F.G.**, Forest fires as a positive feedback on marine anoxia: Evidence from the Cretaceous Oceanic Anoxic Event 2. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2019**
- ^{*}**Raberg, J.**, ^{**}**Crump, S.**, ^{**}**de Wet, G.**, Dildar, N., Miller, G., **Sepúlveda, J.**, Distinguishing the Sources of brGDGTs at Lake Qaupat, Baffin Island Using Intact Polar Lipids. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2019**
- ^{*}Yager, J.A., ^{**}**van Dijk, J.**, West, A.J., Corsetti, F.A., **Sepúlveda, J.**, Biomarker evidence for ecological and environmental stress across the Triassic-Jurassic boundary at the Levanto section in Northern Peru. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2019**
- ^{**}**van Dijk, J.**, **Sepúlveda, J.**, Alegret, L., Bralower, T., Hull, P., Negra, M.H., Röhl, U., Westerhold, T., Whiteside, J., and the El Kef Coring Program Science Team, Revival of the microbial neritic ecosystems and carbon cycling at the Cretaceous/Paleogene boundary: A compound-specific isotope study from El Kef, Tunisia. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2019**
- ^{**}**de Wet, G.**, ^{*}**Raberg, J.**, Thomas, E., Miller, G., **Sepúlveda, J.**, The influence of anoxia on downcore brGDGT paleotemperature reconstructions – evidence over the Holocene from Baffin Island lake sediment records. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2019**
- ^{**}**Crump, S.E.**, Fréchette, B., Miller, G.H., Power, M., ^{**}**de Wet, G.**, Thomas, E.K., **Sepúlveda, J.**, Briner, J.P., Bounce, M.A., Vegetation response to climate warming across multiple interglacials inferred from High Arctic lake sediment. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2019**
- ^{**}**Colwyn, D.A.**, Snell, K.E., Benowitz, J.A., Porter, T.J., **Sepúlveda, J.**, A preliminary Cenozoic record of terrestrial polar amplification in south-central Alaska. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2019**
- Gorbey, D.B., Thomas, ^{**}**Crump, S.**, ^{**}**de Wet, G.**, ^{E.}, ^{*}**Raberg, J.**, Miller, G., **Sepúlveda, J.**, Assessing Change in Summer Arctic Moisture Source and Aridity over the Past 7,000 Years Using Leaf Wax $\delta^2\text{H}$ in Baffin Island Lake Sediment. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2019**
- ^{**}**Meijison, A.**, Finkelman, E., Ashkenazi-Polivoda, S., Boudinot, F.G., Bialik, O.M., Coletti, G., Steinberg, J., Karcz, K., Waldmann, N.D., **Sepúlveda, J.**, Makovsky, Y., Petroleum potential of Cretaceous source rocks in the Levant Basin. 2nd Conference of the Arabian Journal of Geosciences, Sousse, Tunisia.
- 2019**
- ^{*}**Boudinot, F.G.**, **Sepúlveda, J.**, Evidence for increased forest fires in response to organic carbon burial during OAE2 as a positive feedback on marine productivity. Goldschmidt Conference, Barcelona, Spain.
- 2019**
- ^{*}**Pérez-Angel, L.**, **Sepúlveda, J.**, Molnar, P., Montes, C., Rajagopalan, B., Snell, K., Dildar, N., González-Arango, C., An improved regional branched GDGT-based soil temperature calibration for the Tropical Andes of Colombia. Goldschmidt Conference, Barcelona, Spain.

- 2019 ***Rempfert, K.R.**, Kraus, E.A., Nothaft, D.B., Spear, J.R., **Sepúlveda, J.**, Templeton, A.S., Characterization of Intact Polar Lipid Biomarkers from a Site of Active, Low-Temperature Serpentinitization. Goldschmidt Conference, Barcelona, Spain.
- 2019 ***Harning, D.J.**, Curtin, L., Geirsdóttir, Á., Miller, G.H., D'Andrea, W.J., Thordarson, T., **Sepúlveda, J.**, Lipid biomarkers quantify Holocene temperature in Icelandic lakes and soils. 20th International Union for Quaternary Research (INQUA) Meeting, Dublin, Ireland.
- 2019 ***Crump, S.**, Gorbey, D., ***Raberg, J.**, Power, M., **de Wet, G., Florian, C.R., Thomas, E., Miller, G., **Sepúlveda, J.**, Bunce, M., Deciphering dynamic vegetation histories by integrating bulk geochemistry, leaf wax compounds, and ancient DNA in lake sediment from Arctic Canada. 20th International Union for Quaternary Research (INQUA) Meeting, Dublin, Ireland.
- 2019 ***Rempfert, K.R.**, #**Marquez, J.**, Zeigler, S.K.D., Ellison, E.E., **Sepúlveda, J.**, Templeton, A.S., Utilization of contamination controls in the identification of endogenous lipid biomarkers from subsurface serpentinites in the Samail Ophiolite, Oman. Astrobiology Science Conference (AbSciCon), Seattle, WA.
- 2019 Leckie, R.M., Parker, A., Jones, M., Sageman, B., ***Boudinot, F.G.**, Bralower, T., Fortiz, V., Oakes, R., **Sepúlveda, J.**, Forams of coastal Utah: A record of Oceanic Anoxic Event 2 (~94-93 Ma) along the western edge of the US Western Interior Sea. 11th North American Paleontological Convention (NAPC), Riverside, CA.
- 2019 ***Boudinot, F.G.**, Dildar, N., Jones, M.M., Sageman, B.B., **Sepúlveda, J.**, An organic geochemical record of microbial community changes during Oceanic Anoxic Event 2 (~94Ma) in the Western Interior Seaway. Front Range Microbiome Symposium, Fort Collins, CO
- 2019 ***Raberg, J.H.**, ***Crump, S.**, **de Wet, G., Dildar, N., Miller, G.H., **Sepúlveda, J.**, Intact Polar brGDGTs at Lake Qaupat, Baffin Island: Implications for Sources of the Paleotemperature Proxy. 49th International Arctic Workshop, Stockholm, Sweden.
- 2019 ***Harning, D.J.**, Curtin, L., Geirsdóttir, Á., Miller, G.H., D'Andrea, W.J., Thordarson, T., Gunnarsdóttir, S., **Sepúlveda, J.**, Lipid biomarkers quantify Holocene temperature in Icelandic lakes and soils. 49th International Arctic Workshop, Stockholm, Sweden.
- 2019 Jennings, A.E., Andrews, J.T., **Woelders, L., Jahn, A., Marchitto, T., **Sepúlveda, J.**, Lecavalier, B., St. Onge, G., Timing and paleoceanographic impacts of the onset of Arctic-Baffin Bay throughflow during the Holocene. 49th International Arctic Workshop, Stockholm, Sweden.
- 2018 ***van Oosten, J.**, ***Boudinot, F.G.**, Davidheiser-Kroll, B., Snell, K., **Sepúlveda, J.**, Nitrogen cycle dynamics during the Cretaceous Oceanic Anoxic Event 2 in the Western Interior Seaway. American Geophysical Union Fall Meeting, Washington DC, DC.
- 2018 **de Wet, G., ***Crump, S.**, ***Raberg, J.**, Gorbey, D.B., Bunce, M., Thomas, E., Miller, G., **Sepúlveda, J.**, Pairing lipid biomarkers and sedimentary ancient DNA to reconstruct paleoenvironmental change in the Arctic – preliminary results from the PACEMAP Project on Baffin Island. American Geophysical Union Fall Meeting, Washington DC, DC.
- 2018 ***Harning, D.J.**, Curtin, L., Geirsdóttir, Á., Miller, G.H., D'Andrea, W.J., **Sepúlveda, J.**, Paired brGDGT and alkenone records quantify Holocene summer temperature in Icelandic lakes. American Geophysical Union Fall Meeting, Washington DC, DC.
- 2018 **Sepúlveda, J.**, ***Boudinot, F.**, Dildar, N., Kopf, S., Jones, M., Sageman, B.B., Bralower, T., Leckie, M., A high-resolution record of marine productivity and carbon cycling across Oceanic Anoxic Event 2 in the western interior seaway. Geological Society of America Annual Meeting, Indianapolis, IN.
- 2018 Sageman, B.B., Jones, M., Arthur, M.A., **Sepúlveda, J.**, ***Boudinot, F.**, Colder or drier? The late Cenomanian Plenus event in North America. Geological Society of America Annual Meeting, Indianapolis, IN.

- 2018 Jones, H., Bralower, T., Roehl, U., Westerhold, T., **Sepúlveda, J.**, Whiteside, J., Alegret, L., Negra, H., Vellekoop, J., Henehan, M., Hull, P., The Significance of calcareous nannoplankton “boom-bust” successions following the K-Pg mass extinction event: new insights from El Kef, Tunisia. Geological Society of America Annual Meeting, Indianapolis, IN.
- 2018 **Sepúlveda, J.**, Caniupán, M., Martínez-Méndez, G., *Matys, E., Lamy, F., Hebbeln, D., Lange, C.B., Pantoja, S., Summons, R.E., Nitrogen removal across glacial terminations in the Eastern Tropical South Pacific. Ocean Deoxygenation: Drivers and Consequences, Past, Present, Future. University of Kiel, Kiel, Germany.
- 2018 *Cantarero, S., Dildar, N., Vargas, C., von Dassow, P., **Sepúlveda, J.**, Lipidomics of microbial communities associated with the oxygen minimum zone of northern Chile. Ocean Deoxygenation: Drivers and Consequences, Past, Present, Future. University of Kiel, Kiel, Germany.
- 2018 *Boudinot, F., Dildar, N., Jones, M.M., Sageman, B.B., Kopf, S., **Sepúlveda, J.**, High-resolution compound-specific carbon isotope record of OAE2 traces global carbon cycling in oceanic and atmospheric reservoirs. Gordon Research Conference in Organic Geochemistry, Holderness, NH, USA.
- 2018 *Crump, S.E., Power, M., Miller, G.H., **Sepúlveda, J.**, Dildar, N., Coglan, M., and Bunce, M., Arctic shrub colonization lagged postglacial climatic optimum: Molecular evidence in lake sediment from Baffin Island, Arctic Canada: International Paleolimnology Association–International Association of Limnogeologists Joint Meeting, Stockholm, Sweden.
- 2018 **Meijison, A., Boudinot, G., Makovsky, Y., Steinberg, J., Hilgen, F., **Sepúlveda, J.**, Life in a pinch of salt: organic proxies for the ecology and oceanographic environment of the deep Mediterranean Messinian salinity crisis. 2nd Rocky Mountain Geobiology Symposium, Golden, CO.
- 2018 *Harning, D.J., Sepúlveda, J., Andrews, J.T., Cabedo-Sanz, P., Belt, S.T., Geirsdóttir, A., Miller, G.H., Subsurface Temperature Variability Of The North Iceland Shelf Over The Last Millennium. 48th International Arctic Workshop, Boulder, CO
- 2018 *Raberg, J.H., Gifford G.H., Sepúlveda, J., *Crump, S.E., **De Wet, G., Walker, D.A., Raynolds, M.K., Thomas, E.K., Predicting Arctic Change Through Ecosystem Molecular Proxies (PACEMAP). 48th International Arctic Workshop, Boulder, CO
- 2018 *Crump, S.E., Power, M., Miller, G.H., Sepúlveda, J., Coglan, M., Bunce, M., The Paleoecological Potential of Ancient DNA in Lake Sediment: Preliminary Results From Baffin Island. 48th International Arctic Workshop, Boulder, CO.
- 2017
- 2017 *Crump, S.E., Sepúlveda, J., Bunce, M., Miller, G.H., Molecules in the mud: Combining ancient DNA and lipid biomarkers to reconstruct vegetation response to climate variability during the Last Interglacial and Holocene on Baffin Island, Arctic Canada. American Geophysical Union Fall Meeting, New Orleans, LA
- 2017 *Harning, D.J., Sepúlveda, J., Andrews, J.T., Cabedo-Sanz, P., Belt, S.T., Marchitto, T.M., Ólafsdóttir, S., Geirsdóttir, A., Miller, G.H., A lipid biomarker perspective on oceanic variability of the North Iceland Shelf over the last millennium. American Geophysical Union Fall Meeting, New Orleans, LA
- 2017 #Moran, S., Boudinot, F.G., Dildar, N., Sepúlveda, J., Tracing Carbon Cycling in the Atmosphere and Oceans in the Middle Cretaceous. American Geophysical Union Fall Meeting, New Orleans, LA
- 2017 Crump, S.E., Sepúlveda, J., Bunce, M., **de Wet, G.A., Walker, D., Thomas, E., Raynolds, M., *Raberg, J., Miller, G.H., 2017, The PACEMAP project – Predicting Arctic Change through Ecosystem Molecular Proxies: Arctic Change Meeting, Quebec City, Canada

- 2017 Fox, C.P., Whiteside, J.H., Olsen, P.E., **Sepúlveda, J.**, Summons, R.E., Grice, K., Alternative explanations for the initial organic carbon isotope excursion in the UK during the end-Triassic mass extinction. 28th International Meeting in Organic Geochemistry, Florence, Italy
- 2017 **Sepúlveda, J.**, Summons, R.E., Bralower, T., Röhl, U., Negra, H., *Baroumi, M., Westerhold, T., Hull, C., Whiteside, J., Alegret, L., El Kef Coring Program Science Team. The molecular signature of the Cretaceous/Paleogene (K/Pg) mass extinction event: the El Kef Coring Program. Climatic and Biotic Events of the Paleogene Conference, Snowbird, UT
- 2017 **Sepúlveda, J.**, Summons, R.E., Negra, H., *Baroumi, M., Bralower, T., El Kef Coring Project Science Team. Organic geochemistry of a high-resolution record across the Cretaceous-Paleogene (K/Pg) mass extinction event: The El Kef Coring Program. Rocky Mountain Geobiology Symposium, Golden, CO.
- 2017 *Boudinot, F.G., Sepúlveda, J., Jones, M., Sageman, B., Leckie, M., Response of a Marine Ecosystem to Global Change. Rocky Mountain Geobiology Symposium, Golden, CO
- 2017 *Pérez-Ángel, L., Sepúlveda, J., Molnar, P., Snell, K., Montes, C., Gonzalez, C. Environmental evolution of the Tropical Andes during the Pliocene-Pleistocene transition. Rocky Mountain Geobiology Symposium, Golden, CO.
- 2017 #Gross, M., Sepúlveda, J., Dildar, N., Boudinot, G., El Kef Coring Project Science Team. A dialogue of Paleo-wildfires in the Cretaceous-Paleogene (K-Pg) boundary at El Kef, Tunisia. Rocky Mountain Geobiology Symposium, Golden, CO.
- 2016
- 2016 *Boudinot, F.G., Sepúlveda, J., Jones, M., Sageman, B., Bralower, T., Oakes, R., Arthur, M., Leckie, M., Parker, A. Organic Geochemical Constraints on Environmental Change and Black Shale Formation: A High-Resolution Study of OAE2 in the US Western Interior Seaway. Society of Sedimentary Geology Research Conference: Oceanic Anoxic Events (OAEs), Austin, TX.
- 2016 *Boudinot, F.G., Sepúlveda, J., Jones, M., Sageman, B., Bralower, T., Oakes, R., Arthur, M., Leckie, M., Parker, A., A High-Resolution Organic Geochemical Study of OAE-2 in the U.S. Western Interior Seaway. Geological Society of America Annual Meeting, Denver, CO.
- 2016 #Gross, M., Sepúlveda, J., Alegret, L., Summons, R.E., An investigation of Paleo-wildfires during the Cretaceous-Paleogene (K-Pg) boundary at El Kef. Geological Society of America Annual Meeting, Denver, CO.
- 2016 Fox, C., Grice, K., Whiteside, J., Sepúlveda, J., Summons, R.E., An alternative explanation to the initial carbon isotope excursion at St. Audrie's Bay during the end-Triassic mass extinction as indicated by biomarker analysis. Geological Society of America Annual Meeting, Denver, CO.
- 2016 Macleod, K.G., Quinton, P.C., Sepúlveda, J., Negra, H., Temperature change across the Cretaceous/Paleogene boundary inferred from oxygen isotopic ratios in fish debris from El Kef, Tunisia. Geological Society of America Annual Meeting, Denver, CO.
- 2016 Sepúlveda, J., Caniupán, Martínez-Méndez, G., Lamy, F., Hebbeln, D., Lange, C.B., Pantoja, S., Summons, R.E., Decoupling of anammox and denitrification in the Eastern Tropical South Pacific during glacial terminations. 12th International Conference in Paleoceanography, Utrecht, The Netherlands.
- 2016 Sepúlveda, J., Summons, R., Negra, H., *Baroumi, M., A new high-resolution organic geochemical record of the Cretaceous-Paleogene Mass extinction event. Gordon Research Conference in Organic Geochemistry, Holderness, NH, USA
- 2016 Sepúlveda, J., Caniupán, M., Martínez-Méndez, G., Lamy, F., *Matys, E., #Yoder, M., Summons, R., Hebbeln, D., Lange, C., Pantoja, S., Anammox vs. denitrification in the Eastern Tropical South Pacific during glacial terminations. Chilean Ocean Sciences Meeting, Concepción, Chile.

- 2016** **Sepúlveda, J.**, Caniupán, M., Martínez-Méndez, G., Lamy, F., *Matys, E., #Yoder, M., Summons, R., Hebbeln, D., Lange, C., Pantoja, S., Anammox vs. denitrification in the Eastern Tropical South Pacific during glacial terminations. Gordon Research Conference in Geobiology, Galveston, TX, USA.
- 2015**
- 2015** Jones, M., Sageman, B., Selby, D., Oakes, R., Bralower, T., Parker, A., Leckie, M., **Sepúlveda, J.**, Combining local lithofacies and global geochemical signals to test the acidification hypothesis for the onset of Oceanic Anoxic Event 2 in the U.S. Western Interior Basin. American Geophysical Union Fall Meeting, San Francisco, CA
- 2015** MacLeod et al., Quinton, P.C., Negra, H., **Sepúlveda, J.**, Temperature change across the Cretaceous/Paleogene boundary inferred from oxygen isotopic ratios in fish debris from El Kef, Tunisia. Midwest Geobiology Symposium. Bloomington, IN
- 2015** Whiteside, J., **Sepúlveda, J.**, Schaller, M., Blum, P., Summons, R.E., Record of Oceanic Anoxic Event 2 from the Central North Atlantic: The Meaning of TEX86-Derived Temperatures during Mesozoic OAEs. Goldschmidt Conference, Prague, Czech Republic.
- 2015** Whiteside, J., **Sepúlveda, J.**, Schaller, M., Blum, P., Summons, R.E., A New Record of Oceanic Anoxic Event 2 from the Central North Atlantic: The Meaning of TEX86-Derived Temperatures during Mesozoic OAEs. Conference “Climates of the past – lessons for the future”, Ascona, Switzerland.
- 2014**
- 2014** Whiteside et al., Insights into the mechanisms of end-triassic mass extinction and environmental change: an integrated paleontologic, biomarker and isotopic approach. GSA, Canada
- 2014** [†]**Sepúlveda, J.**, *Matys, E., Schubotz, F., Summons, R.E., Pantoja, S., Lange, C., Caniupán, M., Lamy, F., Zakem, E., Follows, M., Holding your breath: How biomarkers link modern, past and future ocean deoxygenation. Gordon Research Conference in Organic Geochemistry, Holderness, NH, USA
- 2013 and earlier**
- 2013** **Sepúlveda, J.**, et al., Vertical and spatial distribution of intact and core archaeal lipids in response to oxygenation gradients. 26th International Meeting in Organic Geochemistry, Spain
- 2013** *Matys, E., et al., Bacteriohopanepolyols in ocean waters subject to oxygenation gradients. 26th International Meeting in Organic Geochemistry, Spain
- 2012** **Sepúlveda, J.**, et al., Ecosystem resilience to ocean deoxygenation and acidification: lessons from contrasting mass extinction events. American Geophysical Union Fall Meeting, USA
- 2012** *Giron M., et al., Constraining mass accumulation rates across the Cretaceous-Paleogene boundary clay layer using extraterrestrial helium-3. American Geophysical Union Fall Meeting, USA
- 2012** **Sepúlveda, J.**, et al., Ecosystem resilience to ocean deoxygenation and acidification: lessons from mass extinction events. Gordon Research Conference in Organic Geochemistry, USA
- 2011** *Kasprak, A., et al., Anoxia precedes the end-Triassic mass extinction: evidence from the Kennecott Point Formation, British Columbia. American Geophysical Union Fall Meeting, USA
- 2011** **Sepúlveda, J.**, et al., Integrating biomarker and microfossil records across the Cretaceous-Paleogene mass extinction event. 25th International Meeting in Organic Geochemistry, Switzerland
- 2011** **Sepúlveda, J.**, et al., Carbon cycling in a fading greenhouse world: a molecular and multi-isotopic study of OAE-3 in the Equatorial Atlantic (ODP Site 1259). Climate and ocean dynamics of the Cretaceous greenhouse world, The Netherlands

- 2010 **Sepúlveda, J.**, et al. Reassessing the recovery of marine primary production after the Cretaceous-Paleogene Mass Extinction. American Geophysical Union Fall Meeting, USA
- 2010 **Sepúlveda, J.**, et al., Reassessing the molecular signature of the Cretaceous-Paleogene mass extinction. Gordon Research Conference in Organic Geochemistry, USA
- 2009 **Sepúlveda, J.**, et al., Oceanographic-climatic variability in the Late Cretaceous Equatorial Atlantic (ODP-1259). 24th International Meeting in Organic Geochemistry, Germany
- 2007 **Sepúlveda, J.**, et al., Molecular-isotopic proxies for ecosystem changes and carbon cycle perturbations during extreme climates. 97th Geologische Vereinigung, Germany
- 2007 **Sepúlveda, J.**, et al., Changes in marine productivity across the Mid-Late Cretaceous (Cenomanian-Turonian Boundary) in west-central Jordan. 23rd International Meeting in Organic Geochemistry, UK
- 2006 **Sepúlveda, J.**, et al., Environmental and ecological changes at the Levant platform during the Cenomanian-Turonian boundary. Gordon Research Conference in Organic Geochemistry, USA
- 2004 **Sepúlveda, J.**, et al., Late Holocene changes in riverine runoff in a Chilean fjord (~ 44°S) related to changes in the intensity of the Westerlies. VIII International Conference in Paleoceanography, France
- 2004 **Sepúlveda, J.**, et al., Exported productivity over the last century and early diagenesis in sediments of Puyuhuapi fjord, Chile (~44°S). XXIV Marine Sciences Meeting, Chile
- 2003 **Sepúlveda, J.**, et al., Decomposition of sinking proteinaceous material in the oxygen minimum zone (OMZ) off Northern Chile. ASLO Meeting, USA
- 2002 **Sepúlveda, J.**, et al., Vertical fluxes of proteinaceous material under different oxygenation conditions in the northern zone of the Humboldt current. XXII Marine Sciences Meeting, Chile
- 2001 **Sepúlveda J.**, et al., Fluxes and composition of amino acids in the water column within the oxygen minimum zone of northern Chile. XXI Marine Sciences Meeting, Chile

RESEARCH – FIELDWORK AND SAMPLING

- 2023 SO296-2 (MAPUCHE) Cruise, RV Sonne, Talcahuano-Punta Arenas-Talcahuano, Chile
- 2020 GEOMAR-Kiel Off-Shore Mesocosms for Oceanographic Studies (KOSMOS), Callao, Perú
- 2019 Geological Field trip, Iceland.
- 2017 GEOMAR-Kiel Off-Shore Mesocosms for Oceanographic Studies (KOSMOS), Callao, Perú
- 2015 Geological field trip, Sabana de Bogotá, Colombia.
- 2015 NSF-ELT Coring Project science and sampling party, Northwestern Univ., Evanston, IL
- 2014 El Kef Coring Project science and sampling party, IODP Repository, Bremen, Germany
- 2013 Geobiology field trip, Torres del Paine National Park, Southern Patagonia, Chile
- 2012 Geological field trip, Zumaia, Spain.
- 2012 Geological field trip, northwestern Tunisia.
- 2009 MOOMZ–2 Cruise, Iquique, Chile. AGOR Vidal Gormaz
- 2006 Geological field trip, Stevens Klint, Denmark.
- 2005 RB-04-13 Cruise, Valparaíso–P. Arenas, Chile. R/V Ronald Brown (USA). *Chief Scientist*
- 2004 FONDAP–COPAS Cruise, Iquique, Chile. R/V Carlos Porter
- 2003 Blue Earth Global Expedition (BEAGLE), Valparaiso–São Paulo. R/V Mirai (Japan)
- 2002 FLUMO-II Cruise, Mejillones, Chile. Fondecyt Project 1000366, R/V Purihaala
- 2001 CIMAR Fiordo–7 Cruise, Northern Patagonia, Chile. AGOR Vidal Gormaz.
- 2001 FLUMO Cruise, Antofagasta, Chile. Fondecyt Project 1000366, R/V Abate Molina
- 2000 FONDAP–COPAS MinOx Cruise, Iquique, Chile. AGOR Vidal Gormaz

1998–2000 Multiple FONDAP–COPAS cruises off Concepción, Chile. R/V Kay–Kay

TEACHING – INSTRUCTOR, UNIVERSITY OF COLORADO BOULDER

2024/Spring	GEOL 4611/5611: Organic Geochemistry, 3 credit hours
2023/Fall	GEOL 1060: Global Change: An Earth Science Perspective, 3 credit hours
2022/Spring	GEOL 4611/5611: Organic Geochemistry, 3 credit hours
2021/Fall	GEOL 3040: Global Change: the recent geologic record, 3 credit hours
2021/Spring	GEOL 1060: Global Change: An Earth Science Perspective, 3 credit hours
2020/Fall	GEOL 5612: Techniques in Organic Geochemistry, 3 credit hours
2020/Fall	GEOL 3040: Global Change: the recent geologic record, 3 credit hours
2020/Spring	GEOL 4611/5611: Organic Geochemistry, 3 credit hours
2019/Fall	GEOL 3040: Global Change: the recent geologic record, 3 credit hours
2019/Spring	GEOL 1060: Global Change: An Earth Science Perspective, 3 credit hours
2019/Spring	GEOL 5700/4700-005: Organic Geochemistry, 3 credit hours
2018/Fall	GEOL 3040: Global Change: the recent geologic record, 3 credit hours
2018/Spring	Parental Leave – No Teaching
2017/Fall	GEOL 3040: Global Change: the recent geologic record, 3 credit hours
2017/Fall	GEOL 5700/4700-009: Techniques in Organic Geochemistry, 3 credit hours
2017/Spring	GEOL 5700/4700-008: Organic Geochemistry, 3 credit hours
2016/Fall	GEOL 3040: Global Change: the recent geologic record, 3 credit hours
2016/Spring	GEOL 5700-030: Lipid Biomarkers in the Geosciences, 3 credit hours
2015/Fall	GEOL 3040: Global Change: the recent geologic record, 3 credit hours
2015/Fall	GEOL 5700-001: Parade of Professors, 1 credit hours
2015/Spring	GEOL 5700/4700-044: Organic Geochemistry, 3 credit hours
2014/Fall	Research Semester – No Teaching

TEACHING – INVITED LECTURER, MASSACHUSETTS INSTITUTE OF TECHNOLOGY

2013/Fall	EAPS 12.707: graduate Pre-Pleistocene Paleoclimatology & Paleoceanography
2012/Fall	EAPS 12.021: undergraduate Earth Science, Energy, and the Environment
2012–2013	EAPS 12.471: graduate Fundamentals of Geobiology
2010/Fall	EAPS 12.080: Undergraduate Seminar
2009–2013	EAPS 12.458: graduate Molecular Biogeochemistry
2009–2014	EAPS 12.007: undergraduate Geobiology: History of Life on Earth

TEACHING – TEACHING ASSISTANT, UNIVERSITY OF CONCEPCIÓN, CHILE

1999–2003	Philosophy of Science, International Courses in Oceanography, Environmental Ecotoxicology, Environmental Impact Assessment, Chemical and Biological Oceanography, Benthic and Demersal Systems
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TEACHING – MENTORING EXPERIENCE, UNIVERSITY OF COLORADO BOULDER

Graduate Students

2021–present	GEOL PhD. student Harry Allbrook
2021–present	GEOL PhD. student Robert Kelleher

- 2019–2023 PhD. student Edgart Flores, University of Concepción, Chile (co-advised with O. Ulloa). Dissertation: “*Characterization of the particulate organic matter from the Atacama Trench through intact polar lipids and stable isotopes.*”
- 2017–2022 GEOL PhD. student Sebastian Cantarero. Dissertation: “*Microbial Communities and the Biogeochemistry of the Eastern Tropical South Pacific; a Lipidomic Approach in Natural Environments and Mesocosm Experiments.*”
- 2017–2022 GEOL PhD. student Jonathan Raberg (co-advised with G. Miller & Á. Geirsdóttir). Dissertation: “*Lipids at high latitudes: investigation of sources, environmental controls, and new potential applications of brGDGT-based paleoclimate proxies.*” Now postdoc at CU Boulder
- 2016–2022 GEOL PhD. student Lina Ángel-Pérez (co-advised with P. Molnar). Dissertation: “*A refinement of biomarker-based tools to study the Pliocene-Pleistocene climate evolution of the northern Tropical Andes.*”
- 2015–2020 GEOL PhD. student F. Garrett Boudinot. Dissertation: “*Black Dirt Live Again: Black Shale Organic and Stable Isotope Geochemistry Reveals Ecosystem Responses to Global Environmental Change.*” Now Research Scientist at Cornell University

Visiting Students

- 2023/Fall Olivia Graham, PhD student at the University of Bristol, UK. Elsevier Research Scholarship.
- 2023/Summer Grace King, senior at Colorado College. Summer Fellow.
- 2022/Summer Amanda Urist, sophomore at Penn State University. CU SMART Program summer fellow.
- 2022/Summer Kira Biener, junior at the University of Michigan. UNAVCO-RESESS Program summer fellow.
- 2021/Fall Hanaa Baniowda, An-Najah National University, Nablus, Palestine. Boulder-Nablus Sister City Project (BNSCP) Travel Fellowship
- 2019/Summer PhD. student Joyce Yager, U. Southern California, USA. European Association of Organic Geochemists, Elsevier Research Scholarship.
- 2018/Summer Jamila Smith, sophomore at the State University of New York at Fredonia. CU SMART Program summer student.
- 2017/Summer Steven Moran, sophomore at Wichita State University. UNAVCO-RESESS Program summer fellow.
- 2016/Summer MSc. student Raman Umamaheswaran, U. Delhi, India (co-advised with K. Chin). S.N. Bose Scholars Program
- 2014–2015 PhD. student Marwa Baroumi, University of Tunis, Tunisia. European Association of Organic Geochemists, Elsevier Research Scholarship.

Graduate Thesis Committees (#collaborator/research mentor; †committee chair)

- 2023–present GEOL PhD. student Amy Vodopyanov (Advisor: S. Rahman)
- 2023–present GEOL PhD. student Haley Brumberger (Advisors: K. Snell & K. Chin)
- 2022–present GEOL PhD. student Harp Battner (Advisors: S. Kopf & A. Templeton)
- 2021–present [†]GEOL PhD. student Tristan Caro (Advisors: A. Templeton & S. Kopf)
- 2021–present [#]GEOL PhD. student Kurt Lindberg – SUNY Buffalo (Advisor: E. Thomas)
- 2021–2022 GEOL PhD. student Toby Halamka (Advisor: S. Kopf)
- 2020–2021 GEOL MSc. student Emily Roeder (Advisor: T. Marchitto)
- 2020–2023 [#]GEOL PhD. student Devon Gorbey – SUNY Buffalo (Advisor: E. Thomas)
- 2020–2020 EBIO PhD. student Patrick Morrison (Advisor: S. Mojzsis)
- 2018–2023 GEOL PhD. student Ciara Asamoto (Advisor: S. Kopf)

2016–2021	#GEOL PhD. student Katie Rempfert (Advisor: A. Templeton). Dissertation: “ <i>Influence of Geology and Geochemistry on Microbial Dynamics and Associated Lipid Biosignatures in a Subsurface, Serpentinite-Hosted Ecosystem.</i> ” Now Research Scientist at Lawrence Berkeley National Laboratory
2015–2020	GEOL PhD. student Brigitta Romgstad (Advisor: T. Marchitto)
2015–2020	GEOL PhD. student Rebekah Simon (Advisor: D. Budd)
2016–2019	#GEOL PhD. student David Harning (Advisor: G. Miller). Dissertation: “ <i>Refining the Climate, Glacier, and Volcanic History of Iceland During the Holocene.</i> ” Now postdoctoral Associate at CU Boulder
2016–2018	ATOC PhD. student Kristen Krumhardt (Advisor: N. Lovenduski)
2015–2019	GEOL PhD. student Victoria Crystal (Advisors: K. Snell and J. Eberle)
2015–2019	#GEOL PhD. student Sarah Crump (Advisor: G. Miller). Dissertation: “ <i>Deconvolving Climatic and Non-Climatic Controls on Holocene Glacier and Ecological Change on Baffin Island, Arctic Canada.</i> ” Now postdoctoral Associate at UC Santa Cruz
2015–2016	GEOL PhD. student Chris Florian (Advisor: G. Miller)

Undergraduate Students

2012/2023	<i>Research advisor</i> , GEOL major Haikal
2020–2021	<i>Honors thesis advisor</i> , EBIO major Christopher Mulligan. Thesis: “ <i>Harmful Algal Blooms as a Possible Cause of Late Cretaceous Vertebrate Mortality Events in Northwestern Madagascar.</i> ” Now PhD student at UC Davis
2020–2021	<i>Honors thesis co-advisor</i> , GEOL major Josie Marquez. Thesis: “ <i>Exploring Lipid Biomarker Profiles of Sulfate Reducing Bacteria in Low-Temperature Serpentinizing Systems Utilizing Batch Cultures.</i> ” Now Research Assistant, US Geological Survey, Golden, CO
2020–2020	<i>UROP advisor</i> , ENVS major Caitlin Germana
2019–2020	<i>Geology Mentorship advisor</i> , GEOL major Brooke Holman
2019/Summer	<i>Research advisor</i> , GEOL major Spencer Levy (Colorado College)
2019–2020	<i>Honors thesis advisor</i> , ENVS major and GEOL minor Katelyn Eaman. Honors Thesis: “ <i>Implications for the branched tetraether membrane lipid temperature proxy in Arctic paleoclimate reconstruction—Evidence over the Holocene from Baffin Island lacustrine sediment.</i> ” Now Professional Research Assistant at CU Boulder
2018–2019	<i>Honors thesis advisor</i> , GEOL major Jonn van Oosten. Honors Thesis: “ <i>Nitrogen cycle dynamics during the Cretaceous Oceanic Anoxic Event 2 (OAE2; ~94 Ma) in the Western Interior Seaway.</i> ” Now Maintenance Technician, Hammersmith Management
2018–2019	<i>Honors thesis advisor</i> , ENVS major Lucy Camuti. Honors Thesis: “ <i>Bacterial Lipids in Holocene Sediments from Baffin Island: Insights into temperature reconstructions in Arctic Environments.</i> ” Now Marketing Technologist, Socium Media
2018–2019	<i>Geology Mentorship advisor</i> , GEOL major Katie Quinn
2018–2018	<i>Geology Mentorship advisor</i> , GEOL major Olabambo Oladipo
2017/Summer	<i>UROP advisor</i> , GEOL major Nina Kentwortz
2016–2017	<i>Research advisor</i> , BIOCHEM major Christine Schlarbaum
2015–2017	<i>UROP and Honors thesis advisor</i> , GEOL/CHEM major Michael Gross. Honors Thesis: “ <i>An Investigation of Paleo-Wildfires During the Cretaceous-Paleogene (K/Pg) Boundary at El Kef, Tunisia.</i> ” Now MSc Student, Hebrew University of Jerusalem, Israel

Postdoctoral Researchers

2022–present	Dr. Maria Luisa (Marisa) Sanchez-Montes
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<i>2022–present</i>	Dr. Jonathan Raberg (co-advised with G. Miller and Á. Geirsdóttir)
<i>2019–present</i>	Dr. David Harning (co-advised with G. Miller and Á. Geirsdóttir)
<i>2020–2022</i>	Dr. Nicolò Ardenghi (co-advised with G. Miller and Á. Geirsdóttir)
<i>2019–2021</i>	Dr. Jamie McFarlin (collaborator; main advisor S. Kopf)
<i>2019–2020</i>	Dr. Sarah Crump (collaborator; main advisor G. Miller). Now postdoc at UC Santa Cruz
<i>2019–2020</i>	Dr. Joep van Dijk. Now Research Associate at Utrecht University, The Netherlands
<i>2018–2020</i>	Dr. Gregory de Wet (co-advised with G. Miller). Now Assist. Prof. at Smith College
<i>2018–2019</i>	Dr. Lineke Woelders (co-advised with T. Marchitto and A. Jennings). Now Research Scientist at CU Boulder
<i>2016–2018</i>	Dr. Aaron Meilijson. Now Research Scientist at University of Haifa, Israel

Staff

<i>2023–present</i>	Dr. Lennart van Maldegem, Professional Research Associate (Lab Manager)
<i>2021–2023</i>	Brooke Holman, Professional Research Assistant
<i>2021–2022</i>	Katelyn Eaman, Professional Research Assistant
<i>2016–2022</i>	Dr. Nadia Dildar, Research Associate (Lab Manager)

TEACHING – MENTORING EXPERIENCE, MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Graduate Students (Research Mentor)

<i>2012–2014</i>	PhD. students Emily Matys, Sharon Newman, and Marwa Baroumi (Univ. Tunis, Tunisia)
<i>2012/Summer</i>	Visiting PhD. student Amy Chen (Macquarie Univ., Australia)
<i>2011–2012</i>	MSc. students Marie Giron and Alex Kasprak (Brown Univ.)
<i>2010–2014</i>	Ph.D. student Benjamin Strain (Univ. Concepción, Chile)

Undergraduate students

<i>2014</i>	UROP student Madonna Yoder
<i>2001</i>	UROP student Kelden Pehr
<i>2010–2012</i>	Undergraduate research assistants Emily Wooton and Sharon Newman

TEACHING – MENTORING EXPERIENCE, UNIVERSITY OF BREMEN, GERMANY

Graduate Students (Research Mentor)

<i>2006–2007</i>	MSc. student Arne Leider
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Undergraduate Students (Research Mentor)

<i>2006</i>	Summer student Jeff Salacup (U-MASS, USA)
<i>2005</i>	Undergraduate student Arne Leider

TEACHING – TRAINING (FTEP = Faculty Teaching Excellence Program; LEAP = Leadership Education for Advancement and Promotion)

<i>2020</i>	FTEP Early Career Natural Sciences group – Tenure and Promotion
<i>2019</i>	FTEP Early Career Natural Sciences group – Grant Funding
<i>2018</i>	FTEP Early Career Natural Sciences group – Undergraduate Teaching
<i>2016</i>	FTEP workshop Writing for Publication: Expressing Reasoning in Writing
<i>2016</i>	FTEP Early Career Natural Sciences group – Early career grants
<i>2016</i>	FTEP Early Career Natural Sciences group
<i>2016</i>	FTEP Early Career Natural Sciences group – Tenure and Promotion

- 2016 FTEP Early Career Natural Sciences group – Work/Life balance
- 2016 FTEP Early Career Natural Sciences group – Undergraduate Teaching
- 2016 FTEP workshop Leading Class Discussions: Increasing Student Engagement
- 2015 FTEP Early Career Faculty Lunch – Funding in the natural sciences
- 2015 FTEP Doing It All: The First Seven Years
- 2015 NSF-Funded Early Career Geoscience Faculty Workshop: Teaching, Research and Managing your Career. College of William and Mary, Williamsburg, VA
- 2015 LEAP Introductory Leadership Workshop
- 2015 FTEP Work Life Balance
- 2015 FTEP Early Career Faculty Lunch – Undergraduate teaching and mentoring
- 2015 FTEP Early Career Faculty – Natural Sciences group – Funding
- 2014 FTEP Early Career Faculty – Natural Sciences group – Graduate Advising and mentoring
- 2014 FTEP Early Career Faculty – Building (and Accidentally Spoiling) Relationships With Students That Foster Learning
- 2014 FTEP Early Career Faculty – Natural Sciences group – Funding
- 2014 FTEP Early Career Faculty – Mid-semester clickers intensive
- 2014 FTEP Early Career Faculty – Planning for Spring: Designing courses and syllabi
- 2014 FTEP Early Career Faculty – Teaching in a Nutshell (part 2)
- 2014 FTEP Early Career Faculty – Teaching in a Nutshell (part 1)
- 2014 FTEP Early Career Faculty – Leading Class Discussions: Increasing Student Engagement
- 2014 FTEP Early Career Faculty – The scholarship of teaching and learning

SERVICE – GEOLOGICAL SCIENCES & INSTAAR – CU BOULDER

- 2024–present *Academic Mentor*, Assistant Professor Kathryn Materna
- 2023–present *Chair*, INSTAAR’s Justice, Equity, Diversity, and Inclusion (JEDI) Task Force.
- 2023–present *GEOL Point person*, coordination, planning, and implementation of a strategic recruitment plan for the NSF Planning Award: *Connecting Our Unit through Relationships and Allyships in Geoscience (COURAGE)*. NSF Cultural Transformation in the Geoscience Community (CTGC) Program.
- 20203 *Committee member*, GEOL reappointment committee for Assistant Professor Carolyn Crow
- 2021–2022 *Co-lead*, INSTAAR JEDI task force Leadership team, educational component
- 2021–2022 *Committee member*, INSTAAR JEDI Junior Scientist Mentoring Program (JSMP)
- 2021–2022 *Panelist*, INSTAAR Townhall: Mentoring Undergraduate Students in Summer Programs to Increase Diversity and Inclusion in STEM
- 2021 *Committee member*, INSTAAR JEDI Peer Mentoring Group
- 2021–01 *Nomination letter writer*, Boulder Faculty Assembly 2021 Excellence in Leadership and Service for Prof. Holly Barnard (winner)
- 2020/Summer *Volunteer*, INSTAAR’s Mission Statement Task
- 2020–present *Task Force Volunteer*, advancing Justice, Equity, Diversity, and Inclusion (JEDI) at INSTAAR
- 2019–2021 *Committee member*, INSTAAR Executive Committee
- 2017–2022 *GEOL Department Representative*, Boulder Faculty Assembly
- 2017–2018 *Organizer (1 yr)*, INSTAAR Noon Seminar Series
- 2017/Fall *Department Representative*, Inclusive Excellence
- 2015–2017 *Committee member (2 yrs)*, Graduate Admissions Committee, Geological Sciences

2015–2016	<i>Committee member (1 yr)</i> , Geobiology Search Committee, Geological Sciences
2014–2015	<i>Committee member (1 yr)</i> , Space and Facilities Committee, Geological Sciences
2014/Fall	<i>Committee member</i> , Ad hoc Committee for potential spousal hire, Geological Sciences

SERVICE – LEADERSHIP – CU BOULDER

2021–2022	<i>Committee member</i> , Museum of Natural History Director Search Committee
2018–2022	<i>Committee member</i> , Boulder Faculty Assembly Diversity Committee
2017–2022	<i>GEOL Department Representative</i> , Boulder Faculty Assembly
2017/Spring	<i>Consultant</i> , Standing Committee on Research Misconduct, Research and Innovation Office
2016/Spring	<i>Invited Speaker</i> , New Assistant Professor Program (NAPP) workshop, Faculty Teaching Excellence Program (FTEP)

SERVICE – LEADERSHIP FOR SCIENTIFIC COMMUNITY AND AFFILIATIONS

2022–2026	<i>Elected Co-Chair (2014) and Chair (2016)</i> , Gordon Research Conference on Organic Geochemistry, Holderness, NH, USA..
2021–2022	<i>Theme Chair</i> , Theme 14 “Global Cycles: Linking the Earth, Ocean, Atmosphere and Climate.” 2022 Goldschmidt Conference, Honolulu, Hawaii.
2021	<i>Primary Session Convener</i> , Session 10g “Integrative approaches to explore the molecular ecology and biogeochemistry of aquatic environments”. Goldschmidt Conference, Lyon, France
2019	<i>Panelist</i> , NASA Exobiology Program – Transitions in Life Review Panel. Paradise Point Resort, San Diego, CA.
2019	<i>Invited participant</i> , Frontiers in Marine Organic Biogeochemistry workshop, Hanse-Wissenschaftskolleg, Delmenhorst, Germany.
2018	<i>Early career participant</i> , NSF dedicated Research Coordination Network (RCN): Cenozoic pCO ₂ Workshop. Lake Arrowhead Conference Center, San Bernardino Mountains, CA.
2017–2019	<i>Committee Member</i> , Geochemical Society – Organic Geochemistry Division, Organic Geochemistry Best Paper Award
2017	<i>Session Convener</i> , Session 20c “Biogeochemical processes: microbes, genomes, lipids and evolution”. Goldschmidt Conference, Paris, France
2017	<i>Early career participant</i> , NSF dedicated Research Coordination Network (RCN): Cenozoic pCO ₂ Workshop. Lamont-Doherty Earth Observatory, Palisades, NY.
2016	<i>Session Convener</i> , Session T131 "Marine and terrestrial records of extreme climates and extinction: making sense of similarities and differences". Geological Society of America Annual Meeting, Denver, CO
2014	<i>Convener</i> , MIT-MISTI-Chile workshop " The biogeochemistry of the Oxygen Minimum Zone of northern Chile in a warming world: present and past evolution using novel lipid biomarkers ". MIT, Cambridge MA, USA
2013	<i>Early career participant</i> , "Exploring the Cretaceous Greenhouse through Scientific Drilling Workshop", University College London, London, UK
2012	<i>Session Convener</i> , AGU Fall Meeting 2012 session PP14, Extreme Climates and Extinction: Ancient Clues for Ocean Deoxygenation and Acidification. San Francisco, CA, USA
2012	<i>Convener</i> , MIT-MISTI-Spain workshop "Ecological Resilience to Extreme Climates across the Cretaceous-Paleogene". Zarautz, Spain
2011	<i>Convener</i> , MIT-MISTI-Spain workshop " Developing a new post-extinction model of the K-Pg Mass Extinction Event". MIT, Cambridge, MA, USA

<i>Journals</i>	Reviewer for Astrobiology, Biogeosciences, Climate of the Past, Continental Shelf Research, Earth and Planetary Science Letters, Geobiology, Geochimica et Cosmochimica Acta, Geobiology, Geological Magazine, Geology, Geosciences Journal, The Geological Society of America Bulletin, Geosciences Journal, Global and Planetary Change, Holocene, International Journal of Earth Sciences, Nature, Nature Communications, Nature Communications Earth & Environment, Nature Geoscience, Organic Geochemistry, Palaeogeography Palaeoclimatology Palaeoecology, Paleoceanography and Paleoclimatology, Proceedings of the National Academy of Science, Science, Science Advances, Scientific Reports
<i>Agencies</i>	Reviewer for the American Chemical Society Petroleum Research Fund (ACS-PRF), NASA Exobiology Program, National Science foundation (NSF), National Committee for Scientific and Technological Development (CONICYT, Chile), National Geographic Society, National Oceanographic Committee (CONA, Chile)
<i>Affiliations</i>	American Geophysical Union (AGU), European Association of Organic Geochemists (EAOG), Geological Society of America (GSA), National Association of Geoscience Teachers (NAGT)

SERVICE – PUBLIC OUTREACH AND VOLUNTEER ACTIVITIES

2023	<i>Panelist</i> , Chile: 50 years after the coup, Latin American and Latinx Studies Center, CU Boulder, CO.
2023	<i>Panelist</i> , Biennial of the Americas, Americas Summit Santiago, Chile Delegation. Denver, CO
2023	<i>Speaker</i> , Somerville High School, MA, “Life as an Earth Scientist” (online).
2023	<i>Speaker</i> , My Second Home Bilingual Nursery and Preschool, “El Océano y Chile.”
2022	<i>Speaker</i> , “The Secret Story of Ocean Microbes,” Faculty Fellows TED-Style Talks: Innovation for the Future of Humanity, CU Boulder’s Research and Innovation Week. Boulder, CO
2021	<i>Invited speaker</i> , “La Pola Geológica,” Geólogas charlando de Ciencias de la Tierra, Atmosféricas y Planetarias (GeoLchat). Science in Spanish program (online).
2020	<i>Invited speaker</i> , CIRES/NOAA Science@Home Program (online).
2019	<i>Mentor</i> , Earth Explorers Program
2018	<i>Mentor</i> , CU Boulder Summer Multicultural Access to Research Training (SMART) Program
2018	<i>Participant</i> , INSTAAR Open House
2017	<i>Mentor</i> , UNAVCO RESESS Program
2017	<i>Mentor</i> , Junior Alexander Weber, East High School-Denver, Denver Public Schools’ CareerConnect Program Summer Intern
2016	<i>Invited speaker</i> , Denver Museum of Science and Nature
2015	<i>Participant</i> , NSF Early Career Geoscience Faculty Workshop
2013–2014	<i>Team member</i> , FashionDescience Project, Team Gaia
2013	<i>Invited speaker</i> , “There is a scientist in my classroom” workshop. MIT, MA
2012–2014	<i>Tour guide</i> , “Geological Timeline” at MIT, Cambridge Science Festival
2012	<i>Reviewer</i> for MIT-K12 videos
2012	<i>Research advisor</i> for Alexandra Bryan (sophomore at Commonwealth School, Boston)
2011	<i>Invited speaker</i> , Scientist-Teacher-Classroom Partnerships workshop. MIT, MA
2011–2014	<i>Invited speaker</i> , Visiting Scientist Day, Ralph B. O’Maley Middle School, Gloucester, MA
2011	<i>Participant</i> , Engaging Early Career Scientists in Future Scientific Ocean Drilling workshop. College Station, TX
2011	<i>Participant</i> , “Telling your story” workshop. Harvard University, MA
2009	<i>Interviewed</i> for The New York Times, Astrobiology Magazine, MIT news

2004–2006 Founding and board member, nonprofit organization AquaSendas Cultural Center, Concepción, Chile