

Ramunas Stepanauskas

CONTACT INFORMATION

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Job titles Director, Single Cell Genomics Center
Senior Research Scientist

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Languages Lithuanian – native
English – fluent
Swedish – fluent
Russian – conversational
Spanish – basic skills



EDUCATION

Postdoc	University of Georgia (Athens, GA, USA)	Oceanography, Ecology	2005
Ph.D.	Lund University (Lund, Sweden)	Limnology, Ecology	2000
M.S.	Lund University (Lund, Sweden)	Limnology	1995
B.S.	Uppsala University (Uppsala, Sweden), Vilnius University (Vilnius, Lithuania)	Biology, Limnology	1993

AWARDS

AAAS Elected Fellow	2018
Sigma Xi Elected Member	2018
Simons Scholar	2016
CIFAR Associate	2012
Lithuanian Ministry of Science and Education Award for Achievements in Science	2014
Next List, 10 People Shaping the Future of Maine's Economy	2014
Illumina MiSeq Contest Award	2012

LEADERSHIP EXPERIENCE

Senior Research Scientist

2005-present

Bigelow Laboratory for Ocean Sciences, East Boothbay, ME, USA. My research group is composed of a diverse mix of postdoctoral scientists, bioinformaticians and technicians. I am one of a small set of pioneers in microbial single cell genomics and my team performs world-class studies of microbial ecology and evolution, with the primary focus on marine environments. The results of our studies have been published in over 100 peer-reviewed publications, including *Science* and *Nature*. To perform this work, I have secured funding from US federal agencies (NSF, NASA, NOAA, NIH, DOE), states (CALFED, Sea Grant) and

private foundations (Simons Foundation, Sloan Foundation, Moore Foundation), corporations and individual philanthropists. Many of my projects involve interdisciplinary, inter-institutional and international collaborations. As part of my Senior Research Scientist responsibilities, I contribute to the governance of the Bigelow Laboratory for Ocean Sciences through service on SRS, Budget, Search, Personnel, Facilities, Biosafety, and Commercialization committees and other institutional activities.

Founding Director of the Bigelow Laboratory Single Cell Genomics Center

2009-present

Bigelow Laboratory for Ocean Sciences, East Boothbay, ME, USA. SCGC is the world's first research and technology center for microbial single cell genomics. As the founding director, I developed the center's concept and assembled a team with diverse skillsets (laboratory technicians, bioinformaticians, programmers, manager) to bring it to fruition; oversaw the development of key methods and workflows (single cell sorting, DNA amplification, sequencing, bioinformatics); secured grants for instrumentation acquisition and development; oversaw instrumentation and software setup and integration (e.g. DNA sequencers, liquid handling robotics, high-performance computers, Laboratory Information Management Systems); developed long-term business model and plans; oversaw the development of best practices for laboratory analyses, quality control, project management and customer support; developed a community of SCGC customers on five continents and over 30 countries; created a world-class advisory board.

Finalist for the position of the president of Vilnius University, Lithuania

2020

National Microbiome Initiative Announcement, White House

2016

Represented Bigelow Laboratory for Ocean Sciences.

National and International Advisory Boards and Committees:

1. U.S. Department of Energy Joint Genome Institute Advisory Committee for the Prokaryotic Super Program (since 2009; chair 2010-2011).
2. Expert panel for the NASA Mars Returned Sample Science Board (2017).
3. Advisory Board of the Hadal Science and Technology Research Center (HAST) of Shanghai Ocean University, Shanghai, China (since 2016)

Scientific Meetings and Sessions Organized:

1. Chair of the Fourth Microbial Single Cell Genomics Workshop, Boothbay Harbor ME, September 2019.
2. Meeting chair and host: Bigelow Laboratory Single Cell Genomics Center Advisory Board Annual Meeting. Boothbay Harbor ME, June 2019.
3. Session chair: "Molecular Ecology Approaches and Cyberinfrastructure for Marine Microbial Omics". Ocean Sciences Meeting; Portland, OR; February 2018.
4. Meeting chair and host: Bigelow Laboratory Single Cell Genomics Center Advisory Board Annual Meeting. Boothbay Harbor ME, October 2017.
5. Session chair: "Genomics and ecophysiology of single microbial cells". ISME16; Montreal, Canada; August 2016.
6. Meeting chair and host: Bigelow Laboratory Single Cell Genomics Center Advisory Board Annual Meeting. Boothbay Harbor ME, August 2016.
7. Meeting chair and host: Third Microbial Single Cell Genomics Workshop, Boothbay Harbor ME, June 2015.
8. Meeting chair and host: Bigelow Laboratory Single Cell Genomics Center Advisory Board Annual Meeting. Boothbay Harbor ME, June 2015.
9. Meeting steering committee: OCB scoping workshop "Improving predictive biogeochemical models through single cell-based analyses of marine plankton physiological plasticity, genetic diversity and evolutionary processes", East Boothbay ME, May 2014.

10. Meeting chair and host: Bigelow Laboratory Single Cell Genomics Center Advisory Board Annual Meeting. Boothbay Harbor ME, May 2014.
11. Session chair: "Shedding light on the dark ocean: biogeochemistry and microbial oceanography of the pelagic realm of the deep sea"; 2014 Ocean Sciences Meeting, Honolulu HI, February 2014.
12. Session chair: "Single Cell Microbiology"; ISME14; Copenhagen, Denmark; August 2012.
13. Meeting chair and host: Second Microbial Single Cell Genomics Workshop, Boothbay Harbor ME, September 2010.
14. Session chair: "Microbial Single Cell Genomics"; 109th General Meeting of the American Society for Microbiology; Philadelphia PA; May 2009.
15. Meeting chair and host: First Microbial Single Cell Genomics Workshop, Boothbay Harbor ME, September 2007.

RESEARCH PROJECT & GRANT HISTORY

Title	Role	Agency	Period	Budget
Sorting out active vs. inactive microbes in subsurface oceanic crust Icy World analogues	Co-I	NASA	2019-2020	\$299,452
RII Track-2 FEC: Single cell genome-to-phenome: Integrating genome and phenome analyses of individual microbial cells in complex microbiomes	PI	NSF	2018-2022	\$5,989,591
Development and validation of an imaging cell sorter for integrated single cell genome and morphology analyses	PI	NSF	2018 - 2021	\$1,396,269
Single cell enzymatic discovery and antibiotic targeting	Co-I	NIH	2017-2020	\$212,073
Large-scale study of the genomic building blocks of marine bacterioplankton	PI	Simons Foundation	2016-2020	\$2,682,203
From genome to mechanism: understanding microbial iron metabolism in situ	Co-I	NASA	2015-2020	\$739,448
CSP: Expanding the dark matter reference catalog by targeting taxonomic blind spots	PI	DOE	2016-2020	DNA sequencing award
Untangling the Deep Genealogy of Microbial Dark Matter	PI	NSF	2014-2019	\$1,836,781
MRI: Acquisition of genome sequencers for Bigelow Laboratory for Ocean Sciences	PI	NSF	2013-2016	\$535,212
Ocean's dark energy: Global inventory of chemoautotrophs in the aphotic realm	PI	NSF	2012-2016	\$900,000
FSML: Bigelow Laboratory Marine Biological and Oceanographic Computational Resources	co-I	NSF	2012-2015	\$349,347
An Integrated Study of Energy Metabolism, Carbon Fixation, and Colonization Mechanisms in Chemosynthetic Microbial Communities at Deep-Sea Vents	co-I	NSF	2011-2017	\$411,652

CSP: Microbial Dark Matter project phase II - stepping deeper into unknown territory	PI	DOE	2014-2017	DNA sequencing
CSP: Enigmatic life underneath us: genomic analysis of deep subsurface microorganisms	PI	DOE	2013-2016	DNA sequencing
Learning how to breathe: what can we learn about antiquity, biological iron oxidation, and respiration on oxygen from modern Fe-oxidizing bacteria	co-I	NASA	2010-2013	\$724,798
Exploratory application of single-molecule real time (SMRT) DNA sequencing in microbial ecology research	co-I	NSF	2011-2013	\$98,918
Deep Life I: Microbial Carbon Transformations in Rock-Hosted Deep Subsurface Habitats	co-I	Sloan Foundation	2012-2014	\$148,960
CSP: Dark ocean microbial single cell genomics	PI	DOE	2012-2015	DNA sequencing
Diversity of marine protists: single cell genomics and imaging for Tara Oceans	co-I	NSF	2010-2012	\$331,603
Decoding Virus Leviathans	co-I	NSF	2009-2012	\$338,950
Identification of photoheterotrophic microorganisms in temperate freshwater lakes	PI	NSF	2009-2012	\$650,000
MRI: Acquisition of equipment for microbial single cell genomics research	PI	NSF	2008-2011	\$494,045
Single cell genome sequencing of uncultured prokaryotes from the South Atlantic mesopelagic	PI	NSF	2008-2011	\$976,747
CSP: Generating reference genomes for marine ecosystem research: Single cell sequencing of ubiquitous, uncultured bacterioplankton clades	PI	DOE	2010-2013	DNA sequencing
Functional genomics of phosphate acquisition during virus infection of <i>Emiliana huxleyi</i>	co-I	NSF	2008-2010	\$808,750
CSP: Shotgun sequencing of single amplified genomes of proteorhodopsin-containing uncultured marine Flavobacteria	PI	DOE	2006-2009	DNA sequencing
Bacterial dormancy, bacterivory, and bacterioplankton diversity in the ocean	PI	NSF	2006-2010	\$659,835
SGER: Single-cell genomics of marine bacterioplankton	PI	NSF	2006-2007	\$147,412
The role of metal contamination in the proliferation of antibiotic resistance	PI	NOAA	2005-2008	\$534,000

Improving Delta drinking water quality: managing sources of disinfection byproduct-forming material in the State Water Project	co-I	CALFED	2002-2006	\$1,369,000
Multiple grants for studies of nitrogen biogeochemistry in freshwater and coastal environments	co-I	multiple Swedish agencies	1993-2000	\$275,000

TEACHING EXPERIENCE

Mentored 12 postdoctoral scientists, 2 Ph.D. students, 2 M.S. students and 10 undergraduate students.	1998-present
Research Faculty. <i>Colby College, Waterville, ME, USA.</i>	2009-present
External Graduate Faculty Member. <i>University of Maine, Orono, ME, USA.</i>	2016
Lecturer, professional course, <i>Introduction to Aquatic Flow Cytometry. Bigelow Laboratory for Ocean Sciences, ME, USA.</i>	2016-present
Lecturer, Workshop on Genomics. <i>Cesky Krumlov, Czech Republic.</i>	2017
Lecturer, Short Course in Limnology. <i>Vilnius University, Lithuania</i>	2015

MENTORING

Year	Trainee	Level	Role	Affiliation
2019-present	Jacob Munson-McGee	Postdoctoral	advisor	Bigelow Laboratory
2018-present	Jacob Beam	Postdoctoral	advisor	Bigelow Laboratory
2018-present	Oliver Bezuidt	Postdoctoral	advisor	Bigelow Laboratory
2019	Kayla Clark	Undergraduate	co-advisor	U. Mississippi
2017-2018	Michael Chen	Undergraduate	co-advisor	Williams College
2016	Charlotte Royer	Ph.D.	co-advisor	University of Maine
2016	Johanna Holman	Undergraduate	co-advisor	Husson U.
2015-2017	Jarrold Scott	Postdoctoral	co-advisor	Bigelow Laboratory
2015-2018	Maria Pachiadaki	Postdoctoral	advisor	Bigelow Laboratory
2015-2018	Eric Becraft	Postdoctoral	advisor	Bigelow Laboratory
2012-2016	Jessica Labonté	Postdoctoral	advisor	Bigelow Laboratory
2011-2014	Erin Field	Postdoctoral	advisor	Bigelow Laboratory
2009-2014	Brandon Swan	Postdoctoral	advisor	Bigelow Laboratory
2009-2011	Manuel G. Martinez	Postdoctoral	advisor	Bigelow Laboratory
2007-2009	Jane L. Heywood	Postdoctoral	advisor	Bigelow Laboratory
2014	Cody Funkhouser	Undergraduate	co-advisor	Colby College
2013	Mary Mathyer	Undergraduate	co-advisor	Kalamazoo College
2011	Mark Chaffin	Undergraduate	co-advisor	Colby College

2009, 2010	David Brazel	Undergraduate	co-advisor	Colby College
2007	Casey Doucette	Undergraduate	co-advisor	U. New Hampshire
2005-2008	Craig Baker-Austin	Postdoctoral	co-advisor	SREL
2003-2007	Meredith Wright	Ph.D.	co-advisor	SREL
2003	Janet Hart	Undergraduate	co-advisor	SREL
2003	William Drayton	Undergraduate	co-advisor	SREL
1998-1999	Per Bengtsson	M.S.	co-advisor	Lund U.
1998-2000	Benny Brämberg	M.S.	co-advisor	Lund U.

PROFESSIONAL SERVICE

Proposal Reviewer History: NSF, NIH, DOE, Harvard University's Office of Research Strategy and Development, CALFED, US-Israel Binational Science Foundation, National Geographic, Lithuanian National Research Program (Lithuania), Velux Foundation (Denmark), Knut and Alice Wallenbergs Foundation (Sweden), NWO (Netherlands), NERC (UK), Austrian Science Foundation (Austria),

Manuscript Reviewer History: Applied and Environmental Microbiology; Aquatic Microbial Ecology; Aquatic Sciences; Archives of Environmental Contamination and Toxicology; Archiv für Hydrobiologie; Bioinformatics; Biotechniques, ISME Journal; Environmental Microbiology; Estuaries, Estuarine, Coastal and Shelf Science; Hydrobiologia; Limnology and Oceanography; Marine Drugs; Microbial Ecology; Microbiome; Nature, Nature Microbiology; Nature Biotechnology; Nature Communications; Nucleic Acids Research; Oikos; PLoS ONE; PNAS; Water Research, Science, Frontiers in Microbiology

Professional Societies: American Association for the Advancement of Science; International Society for Microbial Ecology; American Society of Microbiology; American Society of Limnology and Oceanography; Society for Industrial Microbiology & Biotechnology; Lithuanians Abroad Science Forum.

SCIENTIFIC PUBLICATIONS

1. Beam JP, Becraft ED, Brown JM, Schulz F, Jarett JK, Bezuidt O, Poulton NJ, Clark K, Dunfield PF, Ravin NV, Spear JR, Hedlund BP, Kormas KA, Sievert SM, Elshahed MS, Barton HA, Stott MB, Eisen JA, Moser DP, Onstott TC, Woyke T, **Stepanauskas R**. 2020. Ancestral absence of electron transport chains in Patescibacteria and DPANN. *Frontiers in Microbiology*, *in press*.
2. Nayfach S, Roux A, Seshadri R, Udvary D, Varghese N, Schulz F, Wu D, Paez-Espino D, Chen I-M, Huntemann M, Palaniappan K, Ladau J, Mukherjee S, Reddy TBK., Nielsen T, Kirton E, Faria EP, Edirisinghe JN, Henry CS, Jungbluth SP, Chivian D, Dehal P, Wood-Charlson EM, Arkin AP, Tringe S, Visel A, **IMG/M Data Consortium**, Woyke T, Mouncey NJ, Ivanova NN, Kyrpides NC, Elloe-Fadrosh EA (2020) A Genomic Catalogue of Earth's Microbiomes. *Nature Biotechnology*, *in press*.
1. Jarett JK, Džunková M, Schulz F, Roux S, Paez-Espino D, Elloe-Fadrosh E, Jungbluth SP, Ivanova N, Spear JR, Carr SA, Trivedi CB, Corsetti FA, Johnson HA, Becraft E, Kyrpides N, **Stepanauskas R**, Woyke T (2020) Insights into the dynamics between viruses and their hosts in a hot spring microbial mat. *ISME Journal*, *advance online publication*.
2. Chen ML, Becraft ED, Pachiadaki M, Brown JM, Jarett JK, Gasol JM, Ravin NV, Moser DP, Nunoura T, Herndl GJ, Woyke T, **Stepanauskas R** (2020) Hiding in Plain Sight: The Globally Distributed Bacterial Candidate Phylum PAUC34f. *Frontiers in Microbiology* 11:376.
3. Saw JHW, Nunoura T, Hirai M, Takaki Y, Parsons R, Michelsen M, Longnecker K, Kujawinski EB, **Stepanauskas R**, Landry Z, Carlson CA, Giovannoni SJ (2020) Pangenomics Analysis Reveals Diversification of Enzyme Families and Niche Specialization in Globally Abundant SAR202 Bacteria. *mBio* 11:e02975-19.

4. Pachiadaki MG, Brown JM, Brown J, Bezuidt O, Berube PM, Biller SJ, Poulton NJ, Burkart MD, La Clair JJ, Chisholm SW, **Stepanauskas R**. 2019. Charting the complexity of the marine microbiome through single cell genomics. *Cell* 179:1623–1635.
5. Ren M, Feng X, Huang Y, Wang H, Hu Z, Clingenpeel S, Swan BK, Fonseca MM, Posada D, **Stepanauskas R**, Hollibaugh JT, Foster PG, Woyke T, Luo H (2019) Phylogenomics suggests oxygen availability as a driving force in Thaumarchaeota evolution. *ISME Journal* 13:2150-2161.
6. Labonté JM, Pachiadaki M, Fergusson E, McNichol J, Grosche A, Gulmann LK, Vetriani C, Sievert SM, **Stepanauskas R** (2019) Single cell genomics-based analysis of gene content and expression of prophages in a diffuse-flow deep-sea hydrothermal system. *Frontiers in Microbiology* 10:1262.
7. Sackett JD, Kruger BR, Becraft ED, Jarett JK, **Stepanauskas R**, Woyke T, Moser DP (2019) Four draft single-cell genome sequences of novel, nearly identical Kiritimatiellaeota strains isolated from the continental deep subsurface. *Microbiology Resource Announcements* 8:e01249-18.
8. Sieracki ME, Poulton NJ, Jaillon O, Wincker P, de Vargas C, Rubinat-Ripoll L, **Stepanauskas R**, Logares R, Massana R (2019) Single cell genomics yields a wide diversity of small planktonic protists across major ocean ecosystems. *Scientific reports* 9:6025.
9. Youssef NH, Farag IF, Hahn CR, Jarett J, Becraft E, Eloë-Fadrosch E, Lightfoot J, Bourgeois A, Cole T, Ferrante S, Truelock M, Marsh W, Jamaledine M, Ricketts S, Simpson R, McFadden A, Hoff W, Ravin NV, Sievert S, **Stepanauskas R**, Woyke T, Elshahed M (2019) Genomic characterization of candidate division LCP-89 reveals an atypical cell wall structure, microcompartment production, and dual respiratory and fermentative capacities. *Applied and Environmental Microbiology* 85:e00110-19.
10. Berube PM, Rasmussen A, Braakman R, **Stepanauskas R**, Chisholm SW (2019) Emergence of trait variability through the lens of nitrogen assimilation in *Prochlorococcus*. *eLife* 8: e41043.
11. Carr SA, Jungbluth SP, Eloë-Fadrosch EA, **Stepanauskas R**, Woyke T, Rappé MS, Orcutt BN (2019) Carboxydrotrophy potential of uncultivated Hydrothermarchaeota from the seafloor crustal biosphere. *ISME Journal* 13:1457-1468.
12. Matheus Carnevali PB, Schulz F, Castelle CJ, Kantor RS, Shih PM, Sharon I, Santini JM, Olm MR, Amano Y, Thomas BC, Anantharaman K, Burstein D, Becraft ED, **Stepanauskas R**, Woyke T, Banfield JF (2019) Hydrogen-based metabolism as an ancestral trait in lineages sibling to the Cyanobacteria. *Nat Commun* 10:463.
13. Wang Y, Huang JM, Cui GJ, Nunoura T, Takaki Y, Li WL, Li J, Gao ZM, Takai K, Zhang AQ, **Stepanauskas R** (2019) Genomics insights into ecotype formation of ammonia-oxidizing archaea in the deep ocean. *Environmental Microbiology* 21:716-729
14. Berube PM, Biller SJ, Hackl T, Hogle SL, Satinsky BM, Becker JW, Braakman R, Collins SB, Kelly L, Berta-Thompson J, Coe A, Bergauer K, Bouman HA, Browning TJ, De Corte D, Hassler C, Hulata Y, Jacquot JE, Maas EW, Reinthaler T, Sintès E, Yokokawa T, Lindell D, **Stepanauskas R**, Chisholm SW. 2018. Data descriptor: Single cell genomes of *Prochlorococcus*, *Synechococcus*, and sympatric microbes from diverse marine environments. *Scientific Data* 5:180154.
15. Jarett JK, Nayfach S, Podar M, Inskeep W, Ivanova NN, Munson-Mcgee J, Schulz F, Young M, Jay ZJ, Beam JP, Kyrpides NC, Malmstrom RR, **Stepanauskas R**, Woyke T. 2018. Single-cell genomics of co-sorted Nanoarchaeota suggests novel putative host associations and diversification of proteins involved in symbiosis 06 Biological Sciences 0604 Genetics. *Microbiome* 6:161.
16. Seeleuthner Y, Mondy S, Lombard V, Carradec Q, Pelletier E, Wessner M, Leconte J, Mangot JF, Poulain J, Labadie K, Logares R, Sunagawa S, De Berardinis V, Salanoubat M, Dimier C, Kandels-Lewis S, Picheral M, Searson S, Acinas SG, Boss E, Follows M, Gorsky G, Grimsley N, Karp-Boss L, Krzic U, Not F, Ogata H, Raes J, Reynaud EG, Sardet C, Speich S, Stemmann L, Velayoudon D, Weissenbach J, Pesant S, Poulton N, **Stepanauskas R**, Bork P, Bowler C, Hingamp P, Sullivan MB, Iudicone D, Massana R, Aury JM, Henrissat B, Karsenti E, Jaillon O, Sieracki M, De Vargas C, Wincker P. 2018. Single-cell genomics of multiple uncultured stramenopiles reveals underestimated functional diversity across oceans. *Nat Commun* 9:310.

17. Munson-McGee JH, Peng S, Dewerff S, **Stepanauskas R**, Whitaker RJ, Weitz JS, Young MJ. 2018. A virus or more in (nearly) every cell: ubiquitous networks of virus–host interactions in extreme environments. *ISME Journal* 12:1706–1714.
18. Garcia SL, Stevens SLR, Crary B, Martinez-Garcia M, **Stepanauskas R**, Woyke T, Tringe SG, Andersson SGE, Bertilsson S, Malmstrom RR, McMahon KD. 2018. Contrasting patterns of genome-level diversity across distinct co-occurring bacterial populations. *ISME Journal* 12:742-755.
19. Bergauer K, Fernandez-Guerra A, Garcia JAL, Sprenger RR, **Stepanauskas R**, Pachiadaki MG, Jensen ON, Herndl GJ. 2018. Organic matter processing by microbial communities throughout the Atlantic water column as revealed by metaproteomics. *Proceedings of the National Academy of Sciences of the United States of America* 115:E400-E408.
20. Wilson WH, Gilg IC, Moniruzzaman M, Field EK, Koren S, Leclair GR, Martínez Martínez J, Poulton NJ, Swan BK, **Stepanauskas R**, Wilhelm SW. 2017. Genomic exploration of individual giant ocean viruses. *ISME Journal* 11:1736-1745.
21. **Stepanauskas R**, Fergusson EA, Brown J, Poulton NJ, Tupper B, Labonté JM, Becraft ED, Brown JM, Pachiadaki MG, Povilaitis T, Thompson BP, Mascena CJ, Bellows WK, Lubys A. 2017. Improved genome recovery and integrated cell-size analyses of individual uncultured microbial cells and viral particles. *Nat Commun* 8:84.
22. Royo-Llonch M, Ferrera I, Cornejo-Castillo FM, Sánchez P, Salazar G, **Stepanauskas R**, González JM, Sieracki ME, Speich S, Stemmann L, Pedrós-Alió C, Acinas SG. 2017. Exploring microdiversity in novel *Kordia* sp. (Bacteroidetes) with proteorhodopsin from the tropical Indian Ocean via Single Amplified Genomes. *Frontiers in Microbiology* 8.
23. Pachiadaki MG, Sintés E, Bergauer K, Brown JM, Record NR, Swan BK, Mathyer ME, Hallam SJ, Lopez-Garcia P, Takaki Y, Nunoura T, Woyke T, Herndl GJ, **Stepanauskas R**. 2017. Major role of nitrite-oxidizing bacteria in dark ocean carbon fixation. *Science* 358:1046-1051.
24. Luo H, Huang Y, **Stepanauskas R**, Tang J. 2017. Excess of non-conservative amino acid changes in marine bacterioplankton lineages with reduced genomes. *Nature Microbiology* 2.
25. Landry Z, Swa BK, Herndl GJ, **Stepanauskas R**, Giovannoni SJ. 2017. SAR202 genomes from the dark ocean predict pathways for the oxidation of recalcitrant dissolved organic matter. *mBio* 8.
26. Kashtan N, Roggensack SE, Berta-Thompson JW, Grinberg M, **Stepanauskas R**, Chisholm SW. 2017. Fundamental differences in diversity and genomic population structure between Atlantic and Pacific *Prochlorococcus*. *ISME Journal* 11:1997-2011.
27. Jungbluth SP, del Rio TG, Tringe SG, **Stepanauskas R**, Rappé MS. 2017. Genomic comparisons of a bacterial lineage that inhabits both marine and terrestrial deep subsurface systems. *PeerJ* 2017.
28. Hawley AK, Nobu MK, Wright JJ, Durno WE, Morgan-Lang C, Sage B, Schwientek P, Swan BK, Rinke C, Torres-Beltrán M, Mewis K, Liu WT, **Stepanauskas R**, Woyke T, Hallam SJ. 2017. Diverse Marinimicrobia bacteria may mediate coupled biogeochemical cycles along eco-thermodynamic gradients. *Nat Commun* 8:1507.
29. Collingro A, Köstlbacher S, Mussmann M, **Stepanauskas R**, Hallam SJ, Horn M. 2017. Unexpected genomic features in widespread intracellular bacteria: Evidence for motility of marine chlamydiae. *ISME Journal* 11:2334-2344.
30. Choi J, Yang F, **Stepanauskas R**, Cardenas E, Garoutte A, Williams R, Flater J, Tiedje JM, Hofmockel KS, Gelder B, Howe A. 2017. Strategies to improve reference databases for soil microbiomes. *ISME Journal* 11:829-834.
31. Ceccarelli D, Garriss G, Choi SY, Hasan NA, **Stepanauskas R**, Pop M, Huq A, Colwell RR. 2017. Characterization of two cryptic plasmids isolated in Haiti from clinical *Vibrio cholerae* non-O1/non-O139. *Frontiers in Microbiology* 8.
32. Bowers RM, Kyrpidis NC, **Stepanauskas R**, Harmon-Smith M, Doud D, Reddy TBK, Schulz F, Jarett J, Rivers AR, Eloë-Fadrosh EA, Tringe SG, Ivanova NN, Copeland A, Clum A, Becraft ED, Malmstrom RR, Birren B, Podar M, Bork P, Weinstock GM, Garrity GM, Dodsworth JA, Yooseph S, Sutton G, Glöckner FO, Gilbert JA, Nelson WC, Hallam SJ, Jungbluth SP, Ettema TJG, Tighe S, Konstantinidis KT, Liu WT, Baker BJ, Rattai T, Eisen JA, Hedlund B, McMahon KD, Fierer N, Knight R, Finn R,

- Cochrane G, Karsch-Mizrachi I, Tyson GW, Rinke C, Lapidus A, Meyer F, Yilmaz P, Parks DH, Eren AM, Schriml L, Banfield JF, Hugenholtz P, Woyke T. 2017. Minimum information about a single amplified genome (MISAG) and a metagenome-assembled genome (MIMAG) of bacteria and archaea. *Nature Biotechnology* 35:725-731.
33. Becraft ED, Woyke T, Jarett J, Ivanova N, Godoy-Vitorino F, Poulton N, Brown JM, Brown J, Lau M, Onstott T, Eisen JA, Moser D, **Stepanauskas R**. 2017. Rokubacteria: Genomic giants among the uncultured bacterial phyla. *Frontiers in Microbiology* 8:2264.
 34. Becraft ED, Dodsworth JA, Murugapiran SK, Thomas SC, Ohlsson JI, **Stepanauskas R**, Hedlund BP, Swingley WD. 2017. Genomic comparison of two family-level groups of the uncultivated NAG1 archaeal lineage from chemically and geographically disparate hot springs. *Frontiers in Microbiology* 8:2082.
 35. Alberti A, Poulain J, Engelen S, Labadie K, Romac S, Ferrera I, Albin G, Aury JM, Belser C, Bertrand A, Cruaud C, Da Silva C, Dossat C, Gavory F, Gas S, Guy J, Haquelle M, Jacoby E, Jaillon O, Lemainque A, Pelletier E, Samson G, Wessner M, Acinas SG, Royo-Llonch M, Cornejo-Castillo FM, Logares R, Fernández-Gómez B, Bowler C, Cochrane G, Amid C, Hoopen PT, De Vargas C, Grimsley N, Desgranges E, Kandels-Lewis S, Ogata H, Poulton N, Sieracki ME, **Stepanauskas R**, Sullivan MB, Brum JR, Duhaime MB, Poulos BT, Hurwitz BL, Pesant S, Karsenti E, Wincker P, Bazire P, Beluche O, Bertrand L, Besnard-Gonnet M, Bordelais I, Boutard M, Dubois M, Dumont C, Etedgui E, Fernandez P, Garcia E, Aiach NG, Guerin T, Hamon C, Brun E, Lebled S, Lenoble P, Louesse C, Mahieu E, Mairey B, Martins N, Megret C, Milani C, Muanga J, Orvain C, Payen E, Perroud P, Petit E, Robert D, Ronsin M, Vacherie B, Bork P, Boss E, Follows M, Gorsky G, Hingamp P, Iudicone D, Karp-Boss L, Not F, Raes J, Sardet C, Speich S, Stemmann L, Sunagawa S. 2017. Viral to metazoan marine plankton nucleotide sequences from the Tara Oceans expedition. *Scientific Data* 4.
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SCIENTIFIC PRESENTATIONS (SINCE 2007)

1. Seminar, Bigelow Laboratory for Ocean Sciences, East Boothbay, ME, July 2020.
2. Bigelow Science Symposium, East Boothbay, ME, October 2019.
3. Fourth Microbial Single Cell Genomics Workshop, Boothbay Harbor, Maine, September 2019.
4. Café Scientifique presentation, East Boothbay, ME, July 2019.
5. Annual meeting presentation to the Bigelow Laboratory Single Cell Genomics Center Advisory Board, East Boothbay, ME, June 2019.

6. Invited presentation, The Crafoord Prize Symposium in Biosciences, Lund, Sweden, May 2019.
7. Seminar, Thermo Fisher Scientific Baltics Corporation, Vilnius, Lithuania, May 2019.
8. Seminar, Vilnius University, Vilnius, Lithuania, May 2019.
9. Webinar, Dupont Corporation, March 2019.
10. Seminar, University of Maryland, College Park, MD, February 2019.
11. Seminar, CosmosID, Rockville, MD, February 2019.
12. Seminar, Department of Energy, Germantown, MD, January 2019.
13. Seminar, Genoscope, Paris, France, December 2018.
14. Invited presentation, Single Cell Ecology Discussion Meeting, The Royal Society, London, UK, December 2018.
15. Invited presentation, SIMB 2018 RAMC and Microbiome Meeting, Clearwater Beach, FL, November 2018.
16. Invited presentation, EPSCoR RII Track-2 2018 Kickoff Meeting, National Science Foundation, Alexandria, VA, November 2018.
17. Invited presentation, Gloucester Marine Genomics Institute Science Forum, Gloucester, MA, October 2018.
18. Seminar, University of Wisconsin, Madison, WI, October 2018.
19. Invited presentation, workshop “The New Age of Ocean Discovery: Opportunities from Tara Oceans”, Harvard University, Cambridge, MA, October 2018.
20. Lecture, Introduction to Aquatic Cytometry Course, Bigelow Laboratory for Ocean Sciences, East Boothbay, Maine, September 2018.
21. Contributing presentation, ISME17, Leipzig, Germany, August 2018.
22. Contributing presentation, GRC Marine Microbes meeting, Lucca, Italy, July 2018
23. Seminar, Spencer Fund Showcase, Bigelow Laboratory for Ocean Sciences, East Boothbay, Maine, March 2018.
24. Seminar, Second Genome Corporation, South San Francisco, CA, March 2018.
25. Seminar, Chan Zuckerberg Biohub, San Francisco, CA, March 2018.
26. Contributed presentation, Aquatic Sciences Meeting, Portland, OR, February 2018.
27. Seminar, Pacific Northwest National Laboratory, Richland, WA, February 2018.
28. Seminar, Simons Foundation Flatiron Institute, New York, NY, December 2017.
29. Seminar, Rutgers University, New Brunswick, NJ, December 2017.
30. Bigelow Laboratory Annual Meeting, East Boothbay, ME, October 2017.
31. Bigelow Science Symposium, East Boothbay, ME, September 2017.
32. Lecture, Introduction to Aquatic Cytometry Course, Bigelow Laboratory for Ocean Sciences, East Boothbay, Maine, September 2017.
33. Invited presentation, Gordon Research Conference in Microbial Population Biology, Proctor Academy, Andover, NH, July 2017.
34. Invited presentation, Radcliffe Exploratory Seminar “Advancing Genomic Biology Through Novel Method Development”, Harvard University, Cambridge, MA, June 2017.
35. Seminar, Bigelow Laboratory for Ocean Sciences, East Boothbay, ME, May 2017.
36. Invited presentation Bio-Rad Corporation, Pleasanton, CA, May 2017.
37. Seminar, University of Southern California, Los Angeles, CA, April 2017.
38. Invited presentation, Jet Propulsion Laboratory, Pasadena, CA, April 2017.
39. Invited presentation, NeLLi 2017: From new lineages of life to new functions, Walnut Creek, CA, April 2017.
40. Invited lecturer, 2017 Workshop on Genomics, Cesky Krumlov, Czech Republic, January 2017.
41. Seminar, Thermo Fisher Scientific Baltics Corporation, Vilnius, Lithuania, January 2017.
42. Seminar, Vilnius University, Vilnius, Lithuania, January 2017.
43. Invited presentation, Changing Microbiomes for Health Symposium, San Diego, CA, December 2016.
44. Seminar, Jet Propulsion Laboratory, Pasadena, CA, December 2016.
45. Seminar, Illumina Corporation, San Diego, CA, December 2016.

46. Invited presentation, Single-Cell Sequencing Expert Panel 2016 (by Illumina Corporation), Boston, MA, October 2016.
47. Invited presentation, 2nd Annual USA Congress in Next Generation Sequencing & Single Cell Analysis (by Oxford Global Marketing), Boston, MA, October 2016.
48. Lecture, Introduction to Aquatic Cytometry Course, Bigelow Laboratory for Ocean Sciences, East Boothbay, Maine, September 2016.
49. Seminar, Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil, September 2016.
50. Invited presentation, XV International Symposium on Marine Natural Products, Cumbuco Beach, Brazil, September 2016.
51. Invited presentation and session chair, ISME16, Montreal, Canada, August 2016.
52. Keynote presentation, The First International Summit on Hadal Zone Exploration: Opportunities and Challenges, Shanghai, China, June 2016.
53. Invited presentation, ASM Conference on The Individual Microbe: Single-cell Analysis and Agent-based Modeling, Washington, DC, March 2016.
54. Invited presentation, US-UK Microbiome Workshop, La Jolla, CA, March 2016.
55. Seminar, Scripps Institution of Oceanography, La Jolla, CA, March 2016.
56. Invited presentation, Ocean Sciences Meeting, New Orleans, LA, February 2016.
57. Seminar, WaferGen Corporation, Fremont, CA, December 2015.
58. Seminar, Radiant Genomics Corporation, Berkeley, CA, December 2015.
59. Seminar, Fluidigm Corporation, South San Francisco, CA, December 2015.
60. Invited presentation, AGU Fall Meeting, San Francisco, CA, December 2015.
61. Seminar, School of Marine Sciences, Orono, ME, November 2015.
62. Seminar, Department of Microbiology and Molecular Genetics, East Lansing, MI, October 2015.
63. Invited presentation, 7th Annual Argonne Soil Metagenomics Meeting; Chicago, IL; October 2015.
64. Seminar, Bigelow Laboratory for Ocean Sciences, East Boothbay, ME, September 2015.
65. Café Scientifique presentation, Boothbay Harbor, ME, August 2015.
66. Contributing presentation, Annual Meeting of the Society for Industrial Microbiology and Biotechnology, Philadelphia, PA, August 2015.
67. Invited presentation, Third Microbial Single Cell Genomics Workshop, Boothbay Harbor, ME, June 2015.
68. Contributing presentation, 10th Annual DOE Joint Genome Institute Meeting, Walnut Creek, CA, March 2015.
69. Seminar, Thermal Biology Institute, Montana State University, Bozeman, MT, February 2015
70. Invited presentation, 2015 Aquatic Sciences Meeting, Granada, Spain, February 2015.
71. Seminar, Institute of Ecology and Evolutionary Biology, University of Oregon, Eugene, Oregon, December 2014
72. Seminar, Institute of Microbiology, Swiss Federal Institute of Technology, Zurich, Switzerland, November 2014
73. Invited Presentation, Symposium Diversity of Microbial Symbiosis: From Genomes to Molecules, Lausanne, Switzerland, November 2014
74. Invited, national awardee presentation, Institute of Botany, Vilnius, Lithuania, November 2014
75. Invited presentation, Boston Illumina User Group Meeting, Cambridge, MA, September 2014
76. Invited presentation, Gordon Marine Microbes Conference, Waltham, MA, June 2014
77. Steering Committee, OCB scoping workshop “Improving predictive biogeochemical models through single cell-based analyses of marine plankton physiological plasticity, genetic diversity and evolutionary processes”, East Boothbay, ME, May 2014
78. Seminar, Stazione Zoologica Anton Dohrn, Naples, Italy, April 2014
79. Seminar, University of British Columbia, Vancouver, BC, Canada, March 2014
80. Contributing presentation, 2014 Ocean Sciences Meeting, Honolulu, HI, February 2014
81. Seminar, JC Venter Institute, Rockville, MD, February 2014
82. Keynote speaker, conference Vita Scientia, Vilnius, Lithuania, January 2014

83. Invited presentation, C-DEBI "Activity" Theme Team 2013 Workshop, East Boothbay, ME, September 2013
84. Seminar, Bigelow Laboratory for Ocean Sciences, East Boothbay, ME, August 2013
85. Seminar, Oregon State University, Corvallis, OR, May 2013
86. Seminar, Bigelow Laboratory for Ocean Sciences, East Boothbay, ME, May 2013
87. Seminar, Warp Drive Bio LLC, Cambridge, MA, May 2013
88. Seminar, Boston College, Chestnut Hill, MA, April 2013
89. Seminar, Proctor & Gamble, Cincinnati, OH, April 2013
90. Seminar, Vienna University, Vienna, Austria, March 2013
91. Invited presentation, Annual Conference of the Association for General and Applied Microbiology (VAAM), Bremen, Germany, March 2013.
92. Contributing presentation, Deep Carbon Observatory International Science Meeting, D.C., March 2013.
93. Invited presentation, AGU fall meeting, San Francisco, CA, December 2012.
94. Seminar, Massachusetts Institute of Technology, Cambridge, MA, November 2012
95. Invited presentation and session chair, ISME14, Copenhagen, Denmark, August 2012.
96. Invited presentation, American Society for Microbiology 112th General Meeting, San Francisco, CA, June 2012.
97. Invited presentation, Canadian Institute for Advanced Research Integrated Biodiversity Program Meeting, Quebec City, Quebec, May 2012.
98. Seminar, National Institute of Standards and Technology, Gaithersburg, MD, April 2012
99. Seminar, Jackson Laboratory, Bar Harbor, ME, March 2012
100. Invited presentation, Department of Energy Joint Genome Institute Annual User Meeting, Walnut Creek, CA, March 2012
101. Invited presentation, NASA Life Detection Workshop, San Diego, CA, February 2012
102. Invited presentation, Department of Energy Joint Genome Institute Metagenomics Informatics Challenge, Walnut Creek, CA, October 2011
103. Invited presentation, 12th Symposium on Aquatic Microbial Ecology, Warnemunde, Germany, October 2011
104. Contributing presentation, Gordon Applied and Environmental Microbiology Conference, South Hadley, MA, July 2011
105. Seminar, Sigma-Aldrich, St Louis, MO, June 2011
106. Seminar, Nestle, St Louis, MO, June 2011
107. Seminar, Woods Hole Oceanographic Institution, Woods Hole, MA, June 2011
108. Invited presentation, Sequencing, Finishing and Analysis in the Future Meeting, Santa Fe, NM, June 2011
109. Seminar, Geophysical Laboratory, Carnegie Institution of Washington, Washington, DC, May 2011
110. Seminar, University of Maryland, College Park, MD, May 2011
111. Seminar, National Aeronautics and Space Administration, Washington, DC, May 2011
112. Seminar, Department of Energy, Rockville, MD, May 2011
113. Seminar, National Science Foundation, Washington, DC, May 2011
114. Contributing presentation, CYTO 2011, Baltimore, MD, May 2011
115. Invited presentation, Workshop: New Horizons for International Investigations into Carbon Cycling in the Deep Crustal Biosphere, Bloemfontein, South Africa, January 2011
116. Seminar, Marine Biological Laboratory, Woods Hole, MA, November 2010
117. Seminar, Vilnius University, Vilnius, Lithuania, October 2010
118. Invited presentation, Workshop: Comparative Genomics and Metagenomics, Impacts on Health and Environment, Granada, Spain, October 2010
119. Workshop organizer and oral presentation, Workshop: Redefining Microbial Genomics: The Power of Sequencing Individual Cells, Boothbay Harbor, ME, September 2010
120. Contributing presentation, ISME Meeting, Seattle, WA, August 2010
121. Café Scientifique presentation, Boothbay Harbor, ME, July 2010

122. Contributing presentation, Gordon Marine Microbes Conference, Tilton, NH, July 2010
123. Invited presentation, Southeast Flow Cytometry Interest Group Conference, Athens, GA, June 2010
124. Seminar, University of Tennessee, Knoxville, TN, April 2010
125. Contributing presentation, Department of Energy Joint Genome Institute User Meeting, Walnut Creek, CA, March 2010
126. Seminar, Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, ME, February 2010
127. Seminar, Yale University, New Haven, CT, February 2010
128. Seminar, Broad Institute, Cambridge, MA, December 2009
129. Seminar, Oak Ridge National Laboratory, Oak Ridge, TN, November 2009
130. Seminar, University of Georgia, Athens, GA, November 2009
131. Seminar, Joint Genome Institute, Walnut Creek, CA, October 2009
132. Seminar, Colby College, Waterville, ME, October 2009
133. Contributing presentation, Workshop on DUSEL science and development, Lead, SD, October 2009
134. Contributing presentation, Maine Microtechnology in Biology and Medicine Workshop, August 2009
135. Seminar at the Marine Biological Laboratory, Woods Hole, MA, June 2009
136. Invited presentation, BAGECO Meeting, Uppsala, Sweden, June 2009
137. Invited presentation and session chair, Annual ASM Meeting, Philadelphia, PA, May 2009
138. Invited presentation, AAAS Annual meeting, Chicago, IL, February 2009
139. Seminar, University of Southern Maine, Portland, ME, January 2009
140. Seminar, JC Venter Institute, San Diego, CA, January 2009
141. Contributing presentation, Plant and Animal Genome Conference, San Diego, CA, January 2009
142. Contributing presentation, Microbial Expert Group for Gulf of Maine Area Census of Marine Life, Portland, ME, December 2008
143. Seminar, Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, ME, October 2008
144. Invited presentation, US-EC Task Force on Biotechnology Research conference, Monaco, October 2008
145. Poster, ISME annual meeting, Cairns, Australia, August 2008
146. Café Scientifique presentation, Boothbay Harbor, ME, July 2008
147. Invited presentation, Finishing in the Future meeting, Santa Fe, NM, May 2008
148. Invited presentation, advanced course Diversity and Function of Microorganisms in Nature, Uppsala, Sweden, 2008
149. Contributing presentation, American Society for Limnology and Oceanography Meeting, Santa Fe, NM, February 2008
150. Seminar, Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, ME, October 2007
151. Invited presentation, Oceans and Human Health Principal Investigator Meeting, Muskegon, MI, October 2007
152. Workshop organizer and oral presentation, Workshop: Single Cell Alternatives to Metagenomics in Environmental Microbiology, Boothbay Harbor, ME, September 2007
153. Contributing presentation, Metagenomics 2007 workshop, San Diego, CA, July 2007
154. Seminar, University of Massachusetts, Lowell, MA, April 2007
155. Contributing presentation, Department of Energy Joint Genome Institute Annual User Meeting, Walnut Creek, CA, March 2007
156. Contributing presentation, American Society for Limnology and Oceanography Meeting, Santa Fe, NM, February 2007
157. Seminar, Los Alamos National Laboratory, Los Alamos, NM, February 2007