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Academic Positions

- 2013 – Assistant Professor and Tier 2 Canada Research Chair in Protist Ecology
Departments of Botany and Zoology, University of British Columbia, Vancouver
- 2011 – 2013 Postdoctoral Research Associate
Biofrontiers Institute, University of Colorado at Boulder

Affiliations

- 2013 – Associate, CIFAR Integrated Microbial Diversity Program
2013 – Biodiversity Research Centre, University of British Columbia
2013 – Centre for Microbial Diversity and Evolution

Education

- 2005 – 2011 Ph.D. Organismic and Evolutionary Biology, University of Massachusetts-Amherst
(advised by Laura A Katz)
Dissertation: Diversity of eukaryotes and their genomes
- 2001 – 2004 B.S. Biology, *summa cum laude*, State University of New York at Albany
(advised by Samuel Bowser and Jeffrey Travis)
Undergraduate thesis: Molecular evolution of tubulins in Foraminifera

Selected Publications

#Undergraduate Co-author, *Graduate Co-author, §Postdoc co-author

- 39 **Parfrey LW**, Moreau CS, Russell JA. 2018. The Host-Associated Microbiome: Pattern, Process, and Function. *Molecular Ecology*. 27 (8), 1749-1765
- 38 Jirků Pomajbíková K, Jirků M, Levá J, Sobotková K, Morien E, **Parfrey LW**. 2018. The benign helminth *Hymenolepis diminuta* ameliorates chemically induced colitis in a rat model system. *Parasitology*.
- 37 Nieves-Ramírez M, Partida-Rodríguez O, Laforest-Lapointe I, Reynolds L, Brown E, Valdez-Salazar A, Morán-Silva P, Rojas L, Morien E, **Parfrey LW**, Minglian J, Walter J, Torres J, Arrieta MC, Ximénez-García C, Finlay BB. 2018. Asymptomatic intestinal colonization with protist *Blastocystis* is strongly associated with distinct microbiome ecological patterns. *mSystems*.
- 36 §Lemay MA, Martone PT, Keeling PJ, Burt J, Krumhansl K, Smith R, **Parfrey LW**. 2018. Sympatric kelp species share a large portion of their surface bacterial communities. *Environmental Microbiology*. 20:658-670
- 35 *Chen MY and **Parfrey LW**. 2018. Incubation with macroalgae induces large shifts in water column microbiota, but minor changes to the epibiota of co-occurring macroalgae. *Molecular Ecology*. 27(8):1966-1979

- 34 §Louca S, Doebeli M, **Parfrey LW**. 2018. Correcting for 16S rRNA gene copy numbers
in microbiome surveys remains a lost battle. *Microbiome*. **6**:41
- 33 §Louca S, Polz MF, §Mazel F, Albright MBN, Huber JA, O'Connor MI, Ackermann M,
Hahn AS, Crowe SA, Srivastava D, Doebeli M, **Parfrey LW**. 2018. Function and
functional redundancy in microbial systems. *Nature Ecology and Evolution*
doi.org/10.1038/s41559-018-0519-1
- 33 Arrieta MC, Arévalo A, Stiemsma L, Dimitriu P, Chico ME, Loor S, Vaca M, Boutin
RCT, Jin M, Turvey S, Walter J, **Parfrey LW**, Cooper P, and Finlay BB. In Press.
Associations between infant fungal and bacterial dysbiosis and childhood atopy and
wheeze in a developing country. *Journal of Allergy and Clinical Immunology*.
doi.org/10.1016/j.jaci.2017.08.041
- 32 Louca S, Jacques S, Pires A, Leal J, Srivastava D, **Parfrey LW**, Farjalla V, and
Doebeli M. 2017. High taxonomic variability despite stable functional structure across
microbial communities. *Nature Ecology and Evolution*. 1: article 0015
- 31 Louca S, **Parfrey LW**, Doebeli M. 2016. Decoupling function and taxonomy in the
global ocean microbiome. *Science*. 353(6305): 1272-1277.
- 30 Loudon AH, Venkataraman A, Van Treuren W, Woodhams DC, **Parfrey LW**,
McKenzie VJ, Knight R, Schmidt TM, and Harris RN. 2016. Vertebrate Hosts as
Islands: Dynamics of Selection, Immigration, Loss, Persistence, and Potential Function
of Bacteria on Salamander Skin. *Frontiers in Microbiology*. 7(333): 1-11.
- 29 Lukes J, Stensvold CR, Jirků-Pomajbíková K, **Parfrey LW**. 2015. Are human intestinal
eukaryotes beneficial, or commensals? *PLoS Pathogens*. 11(8): e1005039.
- 28 **Parfrey LW**. 2015. Mock communities highlight the diversity of host-associated
eukaryotes. *Molecular Ecology*. 24: 4337-4339.
- 26 **Parfrey LW**, Walters WA, Lauber CL, Clemente JC, Berg-Lyons D, Teiling C, Kodira
CD, Mohiuddin M, Brunelle J, Driscoll M, Fierer N, Gilbert JA, Knight R. 2014.
Communities of microbial eukaryotes in the mammalian gut within the context of
environmental eukaryotic diversity. *Frontiers in Microbiology*. 5(298) 1-13.
- 25 Yilmaz P, **Parfrey LW**, Yarza P, Gerken J, Prüsse E, Quast C, Schweer T, Peplies J,
Ludwig W, Glöckner FO. 2014. The SILVA and “The All Species Living Tree (LTP)”
Taxonomic Frameworks. *Nucleic Acids Research*. 42 (D1): D643-D648
- 24 Loudon AH, Woodhams DC, **Parfrey LW**, Archer H, Knight, R, McKenzie, VJ, Harris,
RN. 2014. Microbial community dynamics and effect of environmental microbial
reservoirs on red-backed salamanders (*Plethodon cinereus*). *ISME Journal*. 8(4):830-
840.
- 23 Kueneman J, **Parfrey LW**, Woodhams DC, Archer H, Knight R, McKenzie VJ. 2014.
The amphibian skin-associated microbiome across species, space and life history
stages. *Molecular Ecology*. 23(6): 1238-1250.
- 22 Delsuc F, Metcalf JL, **Parfrey LW**, Song SJ, Gonzalez A, Knight R. 2014.
Convergence of gut microbiomes in myrmecophagous mammals: *Molecular Ecology*.
23(6): 1301-1317.
- 21 Metcalf JL, **Parfrey LW**, Gonzalez A, Lauber CL, Knights D, Ackermann G, Humphrey
GC, Gebert MJ, Van Treuren W, Berg-Lyons D, Keepers K, Guo Y, Fierer N, Carter
DO, Knight R. 2013. A microbial clock provides an accurate estimate of the
postmortem interval in a mouse model system. *eLife*. 2:e01104
- 20 **Parfrey LW** and Lahr DJG. 2013. Multicellularity arose several times in the evolution of
eukaryotes. *BioEssays*. 35(4):339-47

- 19 Adl SM, Simpson AGB, Lane CE, Lukeš J, Bass D, Bowser SS, Brown MW, Burki F, Dunthorn M, Hampl V, Heiss A, Hoppenrath M, Lara E, le Gall L, Lynn DH, McManus H, Mitchell EAD, Mozley-Stanridge SE, **Parfrey LW**, Pawlowski J, Rueckert S, Shadwick L, Schoch CL, Smirnov A, Spiegel FW. 2012. The revised classification of eukaryotes. *J Euk Microbiol.* 59:429-514.
- 18 **Parfrey LW** and Knight R. 2012. Spatial and temporal variability in the human microbiota. *Clin Microbiol Infec.* 18(Suppl. 4): 5–7
- 17 **Parfrey LW**, Grant J, Katz LA. 2012. Ribosomal DNA is differentially amplified across life cycle stages in the foraminifer *Allogromia laticollaris* strain CSH. *J Foram Res.* 42:151-155
- 16 Katz LA, Grant J, **Parfrey LW**, Burleigh JG. 2012. Turning the Crown Upside Down: Gene Tree Parsimony Roots the Eukaryotic Tree of Life. *Syst Biol.* 61(4):653-60
- 15 Clemente JC, Ursell LK, **Parfrey LW**, Knight R. 2012. The impact of the microbiome on human health: An integrative view. *Cell.* 148(6):1258-70
- 14 Knights D, **Parfrey LW**, Zaneveld JRR, Lozupone CA, Knight, R. 2011. Human-associated microbial signatures: examining their predictive value. *Cell Host Microbe.* 10(4):292-6.
- 13 Zaneveld JR, **Parfrey LW**, Van Treuren W, Lozupone C, Clemente JC, Knights D, Stombaugh J, Kuczynski J, Knight R. 2011. Combined phylogenetic and genomic approaches for the high-throughput study of microbial habitat adaptation. *Trends Microbiol.* 19(10):472-82.
- 12 **Parfrey LW**, Walters WA, Knight R. 2011. Microbial eukaryotes in the human microbiome: ecology, evolution, and future directions. *Frontiers Cell Infection Microbiol.* 2:153.
- 11 **Parfrey LW**, Lahr DJG, Knoll AH, Katz LA. 2011. Estimating the timing of early eukaryotic diversification with multigene molecular clocks. *Proc Nat Acad Sci USA.* 108(33):13624-13629.
- 10 Katz LA, Grant J, **Parfrey LW**, Gant AL, O'Kelly CJ, Anderson OR, Molestina RE, Nerad T. 2011. *Subulatomonas tetraspora* nov. gen. nov. sp. is a member of a previously unrecognized major clade of eukaryotes. *Protist.* 162:762–773.
- 9 Lahr DJG, **Parfrey LW**, Mitchell E, Katz LA, Lara E. 2011. The chastity of amoebae: re-evaluating evidence for sex in amoeboid organisms. *Proc Roy Soc B.* 278:2081-2090.
- 8 **Parfrey LW** and Katz LA. 2010. Genome dynamics are influenced by food source in *Allogromia laticollaris* strain CSH (Foraminifera). *Genome Bio. Evol.* 2:678-685.
- 7 **Parfrey LW**, Grant J, Tekle YI, Lasek-Nesselquist E, Morrison H, Sogin ML, Patterson DJ, Katz LA. 2010. Broadly sampled multigene analyses yield a well-resolved eukaryotic tree of life. *Syst Biol.* 59(5):518-533.
- 6 Tekle YI, **Parfrey LW**, Katz LA. 2009. Molecular data are transforming hypotheses on the origin and diversification of eukaryotes. *BioScience* 59:471–481.
- 5 **Parfrey LW**, Lahr DJG, Katz LA. 2008. The dynamic nature of eukaryotic genomes. *Mol Biol Evol.* 25(4): 787-794.
- 4 Yarragudi A, **Parfrey LW**, Morse RH. 2007. Genome-wide analysis of transcriptional dependence and probable target sites for Abf1 and Rap1 in *Saccharomyces cerevisiae*. *Nucleic Acids Res.* 35(1):193-202

- 3 **Parfrey LW**, Barbero E, Lasser E, Dunthorn MS, Patterson DJ, Bhattacharya D, Katz LA. 2006. Evaluating support for the current classification of eukaryotic diversity. *PLoS Genetics* 2: 2062-2073
- 2 Habura A, Goldstein ST, **Parfrey LW**, Bowser SS. 2006. Phylogeny and ultrastructure of *Miliammina fusca*: Evidence for secondary loss of calcification in a miliolid foraminifer. *J. of Euk. Microbiol.* 53(3) :204-10.
- 1 Habura A, **Wegener L**, Travis JL, Bowser SS. 2005. Structural and functional implications of an unusual foraminiferal beta-tubulin. *Mol Biol Evol.* 22(10):2000-2009.

Honors, Awards, Fellowships

- 2013 Early Career Scientists Symposium Speaker, University of Michigan
 2011-2013 NSF FIRST IV Postdoctoral Fellow
 2010 NESCent Postdoctoral Fellowship (declined)
 2009 American Society of Microbiology student travel grant, \$500
 2008 University of Massachusetts Graduate School Fellowship, \$13,500
 2006 Holz-Conner Travel Award, ISOP, \$1000
 2007 Outstanding student presentation, ISOP, \$200
 2004 Glenn Bumpus Award for Biological Research, SUNY Albany, \$600
 2003 Presidential Award for Undergraduate Research, SUNY Albany, \$100

Grant Support

- 2015 – 2018 Human Frontiers in Science Program, “Interplay between of eukaryotic symbionts with gut microbiome and influence on immune-mediated disorders” PI Jirku-Pomajbikova, Co-PI Parfrey. (UBC share \$375,000)
 2015 - 2018 Hakai Institute, “Microbes to Macrophytes” PI Parfrey, Co-PIs Martone, O’Connor, Keeling, Harley. (\$125,750)
 2015 National Science Foundation, “EukRef: 18S rRNA Collaborative Annotation Initiative Workshop” PI Brown, Co-PIs Parfrey and del Campo. (\$16,074)
 2015 Gordon and Betty Moore Foundation, “EukRef: 18S rRNA Collaborative Annotation Initiative Workshop” Co-PIs Parfrey and del Campo. (\$29,500)
 2015 International Society of Protistology “EukRef: 18S rRNA Collaborative Annotation Initiative Workshop” Co-PIs Parfrey, Brown, and del Campo. (\$9,750)
 2014 – 2017 Canadian Foundation for Innovation, “Facility for integrative protist ecology” PI Parfrey (\$312,500).
 2014 – 2019 NSERC Discovery Grant, “Elucidating patterns and processes structuring protist biodiversity across salinity gradients” PI Parfrey (\$160,000)
 2008 Sigma Xi grant in aid of research, \$765
 2007 Joseph A. Cushman student research award, Cushman Foundation, \$660
 2007 MiniPEET grant, Taxonomy and life cycles of Clade L allogromiid Foraminifera, Society of Systematic Biologists, \$1900

Advising

Postdoctoral Researchers: Matthew Lemay (2014 - 2017), Stilianos Louca (2017 - 2019), Florent Mazel (2017 -), Bianca Segovia (2017 -), Allison Mann (2018 -)

Graduate students: Melissa Chen (MSc 2015 - 2017), Ferdous Nawar (MSc 2014 - 2016), Andrew Loudon (PhD 2014 -), Katy Davis (PhD 2017-), Vincent Billy (PhD 2017 -), Emily Adamczyk (PhD, co-supervised with O'Connor from 2017 -), Jungsoo Park (PhD 2018 -), Evgenia (Jane) Yangel (MsC 2018 -)

Undergraduates mentored at UBC: Kendrix Kek, Allison Pritchard (Honours), Kevin Chan (USRA), Rachelle Loo (USRA), Tracy Wang, Luca Hoffecker, Megan Gray, Maryam Osman, Kathleen Lau, Melissa Chen (Honours), Meagan Gauthier, Karina Grigore, Jordan Lin, Stephanie Ong, Cole Larsen (Honours), Bobby Chan.

Undergraduates mentored previously: Pelmo Tazka, Maggie McCaffery, Jennifer Fill, Crista Burke, Jian Hua Lin, Yvanka DeSoysa, Susannah Parsons, Dominique Barbeau, Anastasia Gant, Charlene Gemora, Matthew Gebert, Catherine Nicholas

Service

- 2015 – 2018 Executive committee at Large, International Society of Protistologists
 - 2014 – 2016 North American Councilor, International Society of Evolutionary Protistology
 - 2014, 2012 Chair of Nominating committee, International Society of Protistologists
 - 2013 – Ad hoc proposal reviewer: Natural Sciences and Engineering Research Council - Canada, Austrian National Science Foundation
 - 2008 – Ad hoc manuscript reviewer: PLoS ONE, Journal of Foraminiferal Research, Marine Micropaleontology, Acta Protozoologica, Heredity, ISME J, Diversity, Current Biology, PNAS, and Molecular Ecology
 - 2008 – 2010 OEB outreach coordinator
 - 2007 – 2010 Student Representative, International Society of Protistologists
 - 2007 – 2008 President of OEB student organization, UMass-Amherst
- Professional society member: International Society of Protistologists, Society of Systematic Biologists, Sigma Xi