

SIMON LAX

Ph.D. Candidate, The University of Chicago
Department of Ecology and Evolution
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Education

The University of Chicago

Ph.D., Ecology and Evolution

Advisors: Dr. Jack A. Gilbert & Dr. Catherine Pfister

Chicago, IL

2012 - 2017 (*Expected*)

Columbia University

B.A., Environmental Biology

Advisor: Dr. Gregory O'Mullan

Thesis: *Proteobacteria Dominate the Bacterial Diversity in the Deep Subseafloor Sediments of the Cascadia Margin*

New York, NY

2005 - 2009

Professional Experience

Institute for Genomics and Systems Biology, Argonne National Laboratory

Resident Associate

Argonne, IL

2012 - Present

Research Foundation of CUNY

Research Assistant

New York, NY

2010 - 2012

Institute for Cancer Genetics, Columbia University

Research Assistant

New York, NY

2009 - 2010

Lamont-Doherty Earth Observatory: Biology Division

Research Assistant

Palisades, NY

2008

Lamont-Doherty Earth Observatory: Geochemistry Division

Research Assistant

Palisades, NY

2007

Teaching Experience

University of Chicago (Teaching Assistant)

BIOS 20196: Ecology and Conservation

BIOS 15123: The Microbiome in Human and Environmental Health

Chicago, IL

Fall 2016

Spring 2015

CUNY Queens College (Adjunct Faculty)

ENSCI 100: Our Planet in the 21st Century

New York, NY

4 Sections (2010 - 2011)

Guest Lectures

Public and Environmental Health (Northwestern University)

The Microbiome in Human and Environmental Health (University of Chicago)

Feb. 2016, Feb. 2017

April 2016

Invited Talks

Department of Biology, The University of Alaska “Our Microbial Interaction with Built Environments”	Fairbanks, AK <i>February 2017</i>
Yale-NUS Conference on Infectious Disease Transmission in Built Environments “Bacterial Transmission in the Hospital Environment”	Singapore <i>January 2017</i>
American Society for Microbiology/Society for Applied Microbiology “Effects of Biocides on the Hospital Microbiome”	Boston, MA <i>June 2016</i>
The Society for Healthcare Epidemiology of America “The Microbiome of the Built Hospital Environment”	Atlanta, GA <i>May 2016</i>
Department of Microbiology, The University of Wisconsin “Our Microbial Interaction with Built Environments”	La Crosse, WI <i>March 2016</i>
VIZBI 2015 (Visualization of Biological Data Conference) “Visualizing Large Datasets in Microbial Ecology”	Cambridge, MA <i>March 2015</i>
Chinese Academy of Soil Sciences “Microbial Interaction between Humans and the Built Environment”	Nanjing, CN <i>February 2015</i>

Contributed Talks

American Academy of Forensic Sciences “Inferring Patterns of Occupancy from Human Microbial Signatures”	Las Vegas, NV <i>February 2016</i>
Sloan Conference on the Microbiology of the Built Environment “Colonization and Succession of Hospital-Associated Microbial Communities”	Boulder, CO <i>July 2015</i>
Environmental Design Research Association “Our Microbial Interaction with the Built Environment”	Los Angeles, CA <i>May 2015</i>
Geological Society of America Northeastern Meeting “Ammonia-Oxidizing Microbial Communities along the Salinity Gradient of the Cape Fear Estuary”	Hartford, CT <i>March 2012</i>

Research Grants

UChicago/Marine Biological Laboratory Research Award, \$10,000 (*Declined*) *2014*

Publications

For an up to date list of publications, please see simonlax.com/publications or [Google Scholar](https://scholar.google.com/citations?user=...)

[15] Colonization and Succession of Hospital-Associated Bacteria

Simon Lax, Naseer Sangwan, Daniel Smith, Peter Larsen, Kim M. Handley, Miles Richardson, Kristina Guyton, Monika Krezalek, Benjamin D. Shogan, Jennifer Defazio, Irma Flemming, Baddr Shakhsheer, Stephen Weber, Emily Landon, Sylvia Garcia-Houchins, Jeffrey Siegel, John Alverdy, Rob Knight, Brent Stephens, Jack A. Gilbert
Accepted, *Science Translational Medicine*

[14] Microbial community assembly and metabolic function during mammalian corpse decomposition

Jessica L. Metcalf, Zhenjiang Zech Xu, Sophie Weiss, **Simon Lax**, Will Van Treuren, Embriette R. Hyde, Se Jin Song, Amnon Amir, Peter Larsen, Naseer Sangwan, Daniel Haarmann, Greg C. Humphrey, Gail Ackermann, Luke R. Thompson, Christian Lauber, Alexander Bibat, Catherine Nicholas, Matthew J. Gebert, Joseph F. Petrosino, Sasha C. Reed, Jack A. Gilbert, Aaron M. Lynne, Sibyl R. Bucheli, David O. Carter, Rob Knight

Science 351(6269), 158-162, **2016**

DOI:10.1126/science.aad2646

[13] The influence of age and gender on skin-associated microbial communities in urban and rural human populations

Shi Ying, Dan-Ning Zeng, Liang Chi, Yuan Tan, Carlos Galzote, Cesar Cardona, **Simon Lax**, Jack Gilbert, Zhe-Xue Quan

PLoS One 10 (10) e0141842, **2015**

DOI:10.1371/journal.pone.0141842

[12] Athletic equipment microbiota are shaped by interactions with human skin

Mariah Wood, Sean M. Gibbons, **Simon Lax**, Tifani W. Eshoo-Anton, Sarah M. Owens, Suzanne Kennedy, Jack A. Gilbert, Jarrad T. Hampton-Marcell

Microbiome 3(25), **2015**

DOI: 10.1186/s40168-015-0088-3

[11] Forensic analysis of the microbiome of phones and shoes

Simon Lax, Jarrad Hampton-Marcell, Sean M. Gibbons, Geórgia Barguil Colares, Daniel Smith, Jonathan Eisen, Jack A. Gilbert

Microbiome 3(21), **2015**

DOI: 10.1186/s40168-015-0082-9

[10] Hospital-associated microbiota and implications for nosocomial infections

Simon Lax & Jack A. Gilbert

Trends in Molecular Medicine 21(7), 427-432, **2015**

DOI:10.1016/j.molmed.2015.03.005

[9] Collagen degradation and MMP9 activation by *Enterococcus faecalis* contribute to intestinal anastomotic leak

Benjamin D. Shogan, Natalia Belogortseva, Preston M. Luong, Alexander Zaborin, **Simon Lax**, Cindy Bethel, Marc Ward, Joseph P. Muldoon, Mark Singer, Gary An, Konstantin Umanskiy, Vani Konda, Baddr Shakhsheer, James Luo, Robin Klabbers, Lynn E. Hancock, Jack A. Glibert, Olga Zaborina, John C. Alverdy

Science Translational Medicine 7(286), 286ra68, **2015**

DOI: 10.1126/scitranslmed.3010658

[8] The soil microbiome influences grapevine-associated microbiota

Iratxe Zarraonaindia, Sarah M. Owens, Pamela Weisenhorn, Kristin West, Jarrad Hampton-Marcell, **Simon Lax**, Nicholas A. Bokulich, David A. Mills, Gilles Martin, Safiyh Taghavi, Daniel van der Lelie, Jack A. Gilbert

mBio 6(2), e02527-14, **2015**

DOI:10.1128/mBio.02527-14

[7] Our interface with the built environment: immunity and the indoor microbiota

Simon Lax, Cathryn R Nagler, Jack A Gilbert

Trends in Immunology 36(3), 121-123, **2015**

DOI:10.1016/j.it.2015.01.001

[6] Longitudinal analysis of microbial interaction between humans and the indoor environment

Simon Lax, Daniel P Smith, Jarrad Hampton-Marcell, Sarah M Owens, Kim M Handley, Nicole M Scott, Sean M Gibbons, Peter Larsen, Benjamin D Shogan, Sophie Weiss, Jessica L Metcalf, Luke K Ursell, Yoshiki Vázquez-Baeza, Will Van Treuren, Nur A Hasan, Molly K Gibson, Rita Colwell, Gautam Dantas, Rob Knight, Jack A Gilbert

Science 345(6200), 1048-1052, **2014**

DOI: 10.1126/science.1254529

[5] The gut of geographically disparate *Ciona intestinalis* harbors a core microbiota

Larry J Dishaw*, Jaime Flores-Torres*, **Simon Lax***, Kristina Gemayel, Brittany Leigh, Daniela Melillo, M Gail Mueller, Lenina Natale, Ivana Zucchetti, Rosaria De Santis, Maria Rosaria Pinto, Gary W Litman, Jack A Gilbert

*Shared first authorship

PLoS One 9(4), e93386, **2014**

DOI: 10.1371/journal.pone.0093386

[4] Reconstructing an ancestral genotype of two hexachlorocyclohexane-degrading *Sphingobium* species using metagenomic sequence data

Naseer Sangwan, Helianthous Verma, Roshan Kumar, Vivek Negi, **Simon Lax**, Paramjit Khurana, Jitendra P Khurana, Jack A Gilbert, Rup Lal

The ISME Journal 8, 398-408, **2013**

DOI:10.1038/ismej.2013.153

[3] Comparative anatomy of chromosomal domains with imprinted and non-imprinted allele-specific DNA methylation

Anupam Paliwal, Alexis M Temkin, Kristi Kerkel, Alexander Yale, Iveta Yotova, Natalia Drost, **Simon Lax**, Chia-Ling Nhan-Chang, Charles Powell, Alain Borczuk, Abraham Aviv, Ronald Wapner, Xiaowei Chen, Peter L Nagy, Nicholas Schork, Catherine Do, Ali Torkamani, Benjamin Tycko

PLoS Genetics 9(8), e1003622, **2013**

DOI: 10.1371/journal.pgen.1003622

[2] Variants in CYP17 and CYP19 cytochrome P450 genes are associated with onset of Alzheimer's disease in women with Down syndrome

Constance Chace, Deborah Pang, Catherine Weng, Alexis Temkin, **Simon Lax**, Wayne Silverman, Warren Zigman, Michel Ferin, Joseph H Lee, Benjamin Tycko, Nicole Schupf

Journal of Alzheimer's Disease 28(3), 601-612, **2012**

DOI: 10.3233/JAD-2011-110860

[1] Can glacial erosion limit the extent of glaciation?

Michael R Kaplan, Andrew S Hein, Alun Hubbard, **Simon Lax**

Geomorphology 103(2), 172-179, **2009**

DOI:10.1016/j.geomorph.2008.04.020

Book Chapters

[1] Forensic Microbiology in Built Environments

Simon Lax & Jack A Gilbert

Forensic Microbiology, Chapter 13, *John Wiley & Sons*, In press

Service

Peer reviewer for: PNAS, The ISME Journal, Scientific Reports, Applied and Environmental Microbiology, Biology Letters, PLoS One, Microbial Ecology, Environmental Microbiology, Applied Microbiology and Biotechnology, Marine Genomics, BMC Infectious Diseases, PeerJ

Mentorship

Undergraduate Research Supervised

Miles Richardson, University of Chicago

2015 - Present