

Daniel Sprockett

Curriculum Vitae

PhD Candidate | Stanford University School of Medicine

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EDUCATION

Ph.D.	Microbiology & Immunology Stanford University School of Medicine, Stanford, CA, USA Advisor: David Relman Dissertation: <i>Patterns and Processes of Community Assembly in the Human Microbiome</i>	Anticipated Graduation: 2019
	National Science Foundation Graduate Research Fellowship	2014-2017
	National Institutes of Health T32 Training Grant Recipient	2013-2014
M.Sc.	Biological Sciences, Ecology & Evolutionary Biology Kent State University, Kent, OH, USA Advisors: Christopher Blackwood and Helen Piontkivska Thesis: <i>The Evolution of Fungal Pectinases in Glycosyl Hydrolase Family 28 and Their Association with Ecological Strategy</i>	2009
B.Sc.	Biological Sciences, Molecular/Cellular Biology Kent State University, Kent, OH, USA <i>Magna Cum Laude</i> , Honors College Scholar Presidential Founders Scholarship	2006 2002-2006
	University of Leicester, Leicester, UK Honors College Scholar Exchange Program	2005

Research Experience

Research Assistant, Department of Dermatology Case Western Reserve University School of Medicine, Cleveland, OH	2011 – 2013
Research Assistant, Department of Anthropology Kent State University, Kent, OH	2010 – 2011

Additional Scientific Training

anvi'o Workshop for Metagenomic Analysis Joint Genome Institute, Walnut Creek, CA	2017
Strategies and Techniques for Analyzing Microbial Population Structures (STAMPS) Marine Biological Laboratory, Woods Hole, MA	2015
Tropical Field Biology and Conservation Costa Rica	2007

PEER-REVIEWED PUBLICATIONS

Sprockett, Daniel, Natalie Fischer, Rotem Sigall Boneh, Dan Turner, Jarek Kierkus, Malgorzata Sladek, Johanna Escher, Eytan Wine, Baruch Yerushalmi, Jorge Amil Dias, Ron Shaoul, Michal Kori, Scott Snapper, Susan Holmes, Athos Bousvaros, Arie Levine, David A. Relman (2018) Treatment-Specific Composition of Gut Microbiota Is Associated with Disease Remission in a Pediatric Crohn's Disease Cohort. *Submitted*. Available on *bioRxiv*.

Sprockett, Daniel D., Tadashi Fukami, and David Relman (2018) Role of priority effects in the early-life assembly of the gut microbiota. *Nat Rev Gastroenterol Hepatol*. 15(4):197-205.

Zaidi, Asifa K., Katrina Spaunhurst, **Daniel Sprockett**, Yolandas Thomason, Margaret W. Mann, Pingfu Fu, Christine Ammons, Meg Gerstenblith, Marie S. Tuttle, and Daniel L. Popkin (2018) Characterization of the facial microbiome in twins discordant for rosacea. *Experimental Dermatology* 27(3): 295-298.

Gacura ,Matthew D., **Daniel D. Sprockett**, Bess Heidenreich, and Christopher B.Blackwood (2016) Comparison of pectin-degrading fungal communities in temperate forests using glycosyl hydrolase family 28 pectinase primers targeting Ascomycete fungi. *J Microbiol Methods* 123:108-113.

Joshua S Lichtman, Emily Alsentzer, Mia Jaffe, **Daniel Sprockett**, Evan Masutani, Elvis Ikwa, Gabriela K Fragiadakis, David Clifford, Bevan Emma Huang, Justin L Sonnenburg, Kerwyn Casey Huang, and Joshua E Elias (2015) The effect of microbial colonization on the host proteome varies by gastrointestinal location. *ISME J* 10:1170-1181.

Sprockett, Daniel D., Christine Ammons, and Marie Tuttle (2015) Chronic wound microbial bioburden dynamics correlate with wound expansion, antibiotic therapy, and healing. *Wound Repair Regen* 23(5): 765-771.

Sprockett, Daniel D., Helen Piontkivska, and Christopher B. Blackwood (2011) Evolutionary Analysis of Glycosyl Hydrolase Family 28 (GH28) Suggests Lineage-Specific Expansions in Necrotrophic Fungal Pathogens. *Gene* 479(1-2): 29-36.

Baca, Ivan, **Daniel Sprockett**, and Volodymyr Dvornyk (2010) Circadian Input Kinases and their Homologs in Cyanobacteria: Evolutionary Constraints Versus Architectural Diversification. *J Mol Evol* 70(5): 453-465.

ORAL PRESENTATIONS

Sprockett, Daniel (2017) Host-Microbiota Associations in Very Early Onset Inflammatory Bowel Disease. California Microbiome Initiative. University of California, San Diego, San Diego, CA, USA.

Sprockett, Daniel (2017) Hot Papers Journal Club: Natural history of the infant gut microbiome and impact of antibiotic treatment on bacterial strain diversity and stability. American Society of Microbe (ASM) Microbe. New Orleans, LA, USA.

Sprockett, Daniel (2016) Microbiome Maturation in Tsimané Infants. California Microbiome Initiative. University of California, San Diego. San Diego, CA, USA.

Sprockett, Daniel (2015) The Gut Microbiome in VEO-IBD Patients. Annual VEO-IBD Consortium Meeting. Prien am Chiemsee, Germany.

Sprockett, Daniel (2014) The Gut Microbiome as a Tool to Study VEO-IBD. Annual VEO-IBD Consortium Meeting. Toronto, Canada.

Tuttle, Marie, Christine Ammons, **Daniel Sprockett**, Pooja Mude, Kurt Lu (2014) Wounds with skin iron overload have increased susceptibility to and persistence of bacterial invasion. Society for Investigative Dermatology Annual Meeting. Albuquerque, MN, USA.

Sprockett, Daniel (2013) Microbial Biogeography of Chronic Wounds Revealed Through Detailed Longitudinal Sampling. i3 Institute, University of Technology Sydney. Sydney, Australia.

Sprockett, Daniel (2012) The Wound Microbiome: Why Genetic Diagnostic Techniques Should Guide the Management of Chronic Infection. Case Western Reserve University, Department of Epidemiology and Biostatistics. Cleveland, OH, USA.

Sprockett, Daniel, Alana Muhlberger, Mary Ann Raghanti, Marilyn Norconk, Chi-hua Chiu (2012) An Integrative Approach to Understanding Primate Mating Systems: Oxytocin and New World monkeys. 81st Annual Meeting of the American Association of Physical Anthropologists. Portland, OR, USA.

Sprockett, Daniel, Volodymyr Dvornyk (2007) Circadian Input Kinase Evolution. Midwest Ecology and Evolution Conference. Kent State University. Kent, OH, USA.

POSTER PRESENTATIONS

Sprockett, Daniel, Melanie Martin, Elizabeth Costello, Michael Gurven, and David Relman (2016) Microbiome Maturation in Tsimané Infants. 1st Annual Bioinformatics For Microbiome Symposium. Stanford University. Stanford, CA, USA.

Sprockett, Daniel, Melanie Martin, Elizabeth Costello, Michael Gurven, and David Relman (2015) Cultural Practices Influence Tsimané Gut Microbiome Maturation. 5th International Human Microbiome Congress. Luxembourg City, Luxembourg.

Sprockett, Daniel, Marie S. Tuttle (2013) Longitudinal Sampling of the Wound Microbiome Reveals Increased Bacterial Diversity with Healing. 6th Annual Translational to Clinical (T2C) Regenerative Medicine Wound Care Conference. The Ohio State University. Columbus, OH, USA.

Tuttle, Marie, **Daniel Sprockett**, Kurt Q. Lu (2013) Hyper-inflammatory macrophage response delays wound healing and recovery of baseline skin microbiome. International Investigative Dermatology Meeting. Edinburgh, Scotland.

Sprockett, Daniel, Helen Piontkivska, and Christopher Blackwood (2009) Effects of Gene Birth-and-Death in Fungal Glycosyl Hydrolases on Life History Strategy. American Society for Microbiology Annual Meeting. Philadelphia, PA, USA.

Sprockett, Daniel, Christopher Blackwood, Helen Piontkivska (2009) Glycoside Hydrolase Family 28: A Birth-and-Death Evolutionary Model in Fungi. Midwest Ecology and Evolution Annual Conference. University of Nebraska – Lincoln. Lincoln, NE, USA.

Sprockett, Daniel, Christopher Blackwood, Helen Piontkivska (2008) Glycoside Hydrolase Family 28: Functional Evolutionary Analysis. Society for the Study of Evolution Annual Meeting. University of Minnesota. Minneapolis, MN, USA.

HONORS & AWARDS

ASM Travel Award Recipient American Society for Microbiology (ASM) Microbe in New Orleans, LA, USA.	2017
Office of Graduate Education Travel Award Recipient 5 th International Human Microbiome Congress in Luxembourg City, Luxembourg.	2015
Kent State University Graduate Student Senate Travel Award Recipient Society for the Study of Evolution Annual Meeting in Minneapolis, MN, USA.	2008
J. Bixenstein Memorial Scholarship for Outstanding Biology Student	2005 – 2006
Honors Scholarship for Excellence, Kent State University	2002 – 2006

TEACHING EXPERIENCE

Gut Microbiota in Health and Disease	2016
Advanced Pathogenesis of Bacteria, Viruses, and Eukaryotic Parasites	2016
Honors Biological Foundations	2009
Biological Foundations	2008
General Ecology	2008
Ecology, Evolution, & Society	2008
Tropical Field Biology and Conservation Course in Costa Rica	2008
Elements of Genetics	2007
Organic Evolution	2006

MENTORSIHP

Melinda Wolboldt, Undergraduate at Case Western Reserve University, Cleveland, OH Project Title: <i>The Inflammatory Profile of In Vitro Human Macrophages in Response to Fenton Chemistry and Microbial Antigen Stimulation</i>	2012
Allison Machnicki, Undergraduate at Kent State University, Kent, OH Project Title: <i>Genetic Polymorphism in Primate Hox D11</i>	2011
Caitlin Sheesley, Undergraduate at Kent State University, Kent, OH Project Title: <i>Detecting Polymorphism in the AvprV1a Gene of Hylobates lar.</i>	2010 – 2011

Bess Heidenreich, Undergraduate at Kent State University, Kent, OH 2009
Project Title: *PCR Primers Designed to Amplify Glycosyl Hydrolase Family 28 Genes in Phylogenetic Clade F*

Stanton Middle School Honors Science Course, Kent, OH 2008
Project Title: *Microbes in our World*

LEADERSHIP & ACADEMIC SERVICE

Organizer, Topic Lead: Microbial Community Assembly 2016 – 2019
Interdisciplinary Microbiome Perspectives Reading Group, Stanford University

Founding Member & Organizer 2018
Stanford Science Policy Group, Stanford University

Organizing Committee & Session Co-Chair 2017
Stanford Microbiome Summit, Stanford University

Graduate Admissions Committee 2017
Department of Microbiology & Immunology, Stanford University

Graduate Student Co-Organizer 2017
19th Annual Edwin Schultz Memorial Lecture, Stanford University

New Graduate Student Orientation Chair 2014 – 2015
Stanford Biosciences Student Association, Stanford University

Graduate Student Recruitment Week Chair 2014 – 2015
Stanford Biosciences Student Association, Stanford University

Organizing Committee Chairperson 2009
Darwin Day Celebration, Kent State University

President 2007 – 2009
Biology Graduate Student Council, Kent State University

Graduate Representative 2007 – 2009
Graduate Studies and Admissions Committee, Kent State University

Organizing Committee & Program Chair 2007
27th Annual Midwest Ecology & Evolution Conference

SCIENTIFIC OUTREACH

Graduate Student Mentor 2016
Science Pen Pals, Stanford University

Weekly Science Columnist 2013
Ideas at the Sydney Opera House Website, Sydney, Australia
Available at medium.com/gut-check

Weekly Science Columnist <i>Daily Kent Stater</i> , Kent, OH Available at kentwired.com	2011
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Public Lectures

“From Molecules to Morality: The Evolution of Altruism” Darwin Day. Kent State University. Kent, OH.	2010
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“Evolution Toolbox: Countering Creationist Claims” Celebrating 150 Years of <i>On the Origin of Species</i> . Kent State University. Kent, OH.	2009
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“Epidemics & Viral Evolution: Is Ohio At Risk?” Skepticamp Ohio. The Ohio State University. Columbus, OH.	2009
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K-12 Education

Science Fair Judge, Grades 6-12 Synopsys Championship Science and Technology Fair, San Jose, CA	2014
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“Biodiversity & the Microbes that Call our Body Home” American School of Paris, Saint-Cloud, France.	2012
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Science Fair Judge The Agnon School, Beachwood, OH	2011
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“How Critical Thinking Can Improve Children’s Understanding of the Natural World” Center of Science and Industry (COSI) Museum, Columbus, OH.	2010
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“Human Genetics & Disease” Theodore Roosevelt High School. Kent, OH.	2010
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Science Fair Judge Davey Elementary School, Kent, OH	2009
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