

**Harvard Medical School
Curriculum Vitae**

Date Prepared: May 2023

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Place of Birth: Abington, PA

Education

1994	B.S.	Molecular Biophysics and Biochemistry	Yale University, New Haven, CT
1994	M.S.	Molecular Biophysics and Biochemistry	Yale University
2000	M.Phil.	Cell Biology	Yale University
2001	Ph.D.	Cell Biology (Ira Mellman, Ph.D.)	Yale University

2002	M.D.	Medicine	Yale School of Medicine, New Haven, CT
2017	M.A.	Honorary	Harvard University, Cambridge, MA

Postdoctoral Training

6/2002–6/2004	Intern/Resident	Internal Medicine	Brigham and Women’s Hospital (BWH), Boston, MA
7/2002–8/2007	Clinical Fellow	Internal Medicine	Harvard Medical School (HMS), Boston, MA
7/2004–7/2008	Clinical Fellow	Hematology and Oncology	Dana-Farber Cancer Institute (DFCI), Boston, MA
9/2005–12/2009	Postdoctoral Research Fellow	Immunology and Infectious Diseases (Glimcher)	Harvard T.H. Chan School of Public Health (HSPH), Boston, MA
12/2021-1/2022	Leadership Boot Camp 1.0 and 2.0		DFCI
1/2022	Facilitating Entering Mentoring Training	CIMER Facilitator Training, Level 1	CIMER, Madison, WI

Faculty Academic Appointments

2007-2011	Instructor	Medicine	HMS
2010-2014	Assistant Professor	Immunology and Infectious Diseases and Genetics and Complex Diseases	HSPH
2011-2017	Assistant Professor	Medicine	HMS
2014-2015	Associate Professor	Immunology and Infectious Diseases and Genetics and Complex Diseases	HSPH

2016	Melvin J. and Geraldine L. Glimcher Associate Professor	Immunology and Infectious Diseases	HSPH
2016-	Professor	Immunology and Infectious Diseases	HSPH
2017-2020	Associate Professor	Medicine	HMS
2020-	Irene Heinz Given Professor of Immunology and Infectious Diseases	Immunology and Infectious Diseases	HSPH
2021-	Professor	Medicine	HMS

Appointments at Hospitals/Affiliated Institutions

2008-	Physician	Medical Oncology	BWH
2010-	Physician	Medical Oncology (Gastrointestinal Malignancies)	DFCI
2010-	Member	Harvard Digestive Diseases Center (HDDC)	Boston Children's Hospital (BCH), Boston, MA
2010-	Member	GI Cancer Center	Dana-Farber/Harvard Cancer Center, Boston, MA
2010-	Associate Member	Infectious Disease and Microbiome Program	Broad Institute of MIT and Harvard, Cambridge, MA

Other Professional Positions

2013-2015	Scientific Advisory Board	Synlogic Therapeutics	
2015-2020	Scientific Advisory Board	Evelo Therapeutics	
2017-	Scientific Advisory Board	Senda Therapeutics	10 hrs/yr

2018-2021	Scientific Advisory Board	Leap Therapeutics	6 hrs/yr
2018-2019	External Advisory Board, Pathogen-Associated Malignancies Program	Fred Hutchinson Cancer Research Center, Seattle, WA	
2019-2022	Scientific Advisory Board	Tenza Inc.	10 hrs/yr
2019-	External Advisory Board, Microbiome and Endometrial Cancer Program	Lineberger Cancer Center	8 hrs/yr
2020-2022	Scientific Advisory Board	SanaRx	4 hrs/yr
2020-2022	Scientific Advisory Board	Vulcan Biotechnologies	6 hrs/yr
2020-	External Advisory Board	Program for Innovative Microbiome and Translational Research (PRIME-TR)	4 hrs/yr
2020-2022	Scientific Advisory Board	BiomX	2 hrs/yr
2021	Technical Advisory Group	The Bill and Melinda Gates Foundation, Microbiome Therapeutic Advisory Group	8 hrs/yr
2021-	Scientific Review Board	G. Harold and Leila Y. Mathers Foundation	2 hrs/yr
2022-	Scientific Advisory Board	Freya Biosciences	4 hrs/yr
2022-2023	Scientific Advisory Board	Artizan Biosciences	4 hrs/yr
2022-	Scientific Advisory Board	Scipher Medicine	4 hrs/yr

2023-	Scientific Advisory Board	Empress Therapeutics	4 hrs/yr
2023-	Scientific Advisory Board	Seres Therapeutics	4 hrs/yr

Major Administrative Leadership Positions

Local

2014-2017	Leader, Program in Immunology	Medicine	HMS
2015-	Director	Gnotobiotic Center for Mechanistic Microbiome Studies	HSPH
2016-	Associate Director, Graduate Program	Immunology and Infectious Diseases	HMS
2017-2021	Co-Director	Biobank for Microbiome Research in Massachusetts (BIOMMass) Initiative. Subsumed into Harvard Chan Microbiome in Public Health Center	HSPH
2018-	Course Co-Director, Microbial Communities and Human Microbiome (IID 209)	Immunology and Infectious Diseases	HSPH
2018-	Co-Founder and Co-Director	Harvard Chan Microbiome in Public Health Center	HSPH
2020-	Course Director, Immune and Inflammatory Disorders (IMM 202)	Medicine	HMS

Regional

2010-2011	Co-Organizer	Gut Microbiota and Immune Regulation Symposium	Cell Press / LabLinks Symposium, Boston-area
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International

2016-2018	Co-Organizer	Keystone Symposium 2018: Microbiome, Host Resistance and Disease	Keystone Symposium 2018, Banff, AB, Canada
2019-2026	Co-team Lead	CRUK Grand Challenges	CRUK Grand Challenges Team OPTIMISTICCC
2022	Co-Organizer	Symposium Session on the Microbiome and Cancer	The 2022 Early Detection of Cancer Conference: CRUK-Knight Cancer Institute-Canary Center

Committee Service**Local**

2011-	Biologic Sciences Program in Public Health	HSPH
2011-	Infectious Diseases and Immunology Equipment Committee	HSPH
2011-	Program in Immunology Graduate Student Education Committee	HMS
2012-2013	Immunology and Infectious Disease Planning Committee	HSPH Bootcamp
2012-2015	Biological Sciences in Public Health (BPH) Admissions Committee	HSPH
2012-2016	Immunology and Infectious Diseases	HSPH Seminar Committee
2012-	Executive Committee in Immunology	Harvard University and Affiliated Hospitals
2013-2015	Postdoctoral Advisory Committee	HSPH

2013-2016	Faculty Council	HSPH
2014-2021	Faculty Advisor, Microbiome Club	HSPH
2014-	Executive Committee, HDDC	BCH
2015-	Program in Immunology Graduate Admissions Committee	HMS
2017-2018	Committee for the Advancement of Women Faculty (CAWF)	HSPH
2017-2018	Tenure Committee	HSPH
2017-2019	Chair, Search Committee for Assistant/ Associate Professor	HSPH
2017-	Microbiome Platform Steering Committee	HSPH
2017-	Microbiome Platform Advancement Team, External Engagement Co-Leader	HSPH
2017-	Health Science Technology (HST) Admissions Committee	HMS
2018-2020	Search Committee for Associate/Full-Time Professor	Massachusetts General Hospital (MGH)/HMS
2018-	Zhu Family Center for Global Cancer Prevention Steering Committee	HSPH
2018-	Program in Graduate Education Committee	HMS
2019-2020	Life Sciences Ph.D. Review Committee	Harvard University
2020-2021	Committee on Microbiological Safety	HMS

2020-2022	Search Committee for Assistant/Associate Professor	HSPH
2022-	Faculty Council Member	HSPH

Regional

2012-2014	Pre-Doctorate – Thesis Committee (Katherin Witt)	Northeastern University, Boston, MA
2015-2018	Pre-Doctorate – Thesis Committee (Georgia Lagoudas)	Massachusetts Institute of Technology (MIT), Cambridge, MA
2019-2021	Pre-Doctorate – Thesis Committee (Madeleine Morisette)	Northeastern University, Boston, MA

National

2015-2018	National Scientific Advisory Committee	Crohn's and Colitis Foundation of America (CCFA)
2016-2017	Institute for Laboratory Animal Research (ILAR) Roundtable Microbiome Planning Committee	National Academy of Science
2016-2017	Chair, Abstract Review Committee	American Gastroenterological Association (AGA) Institute
2017-	Principal Investigator Team, Human Microbiome Bioactives Resource (HMBR)	University of Maryland / HSPH / Broad Institute
2019-	Intersections Science Program Mentor and Selection Committee	Based at Yale University, New Haven, CT, with mentees at UCLA, UCSF, and Rockefeller University. Intersections is a program to increase DEIB in life sciences for post-doctoral fellows. The goal is to mentor individuals through a job search and junior faculty years. Senior faculty are matched with post-doctoral fellows and mentor them for a minimum of 1yr or until they are through the

tenure process if both mutually agree.

2020	AAP/ASCI/APSA Joint Meeting Abstract Review Committee	ASCI
2021-	MD Anderson Post-doctoral Fellowship Committee for Dr. Elizabeth Park	MD Anderson Cancer Center
2021-2022	Advancement, Recruitment & Retention Of Women (ARROW), JRR Mentoring Fellowship	Mentor for an Asst. Professor, University of South Carolina

International

2019	Humans and Microbiome Program Advisory Board	CIFAR, Toronto, Ontario, Canada
2019-2020	Deputy Editor for Medicine Search Committee	eLife Sciences Publications, Ltd., Cambridge, UK
2019-	Co-Leader, Team OPTIMISTIC Bowel Cancer Microbiome Research Programme	Cancer Research, London, UK
2021	Ph.D. Thesis Advisory Committee (Alina Janney, Ph.D. Candidate)	Oxford University, Oxford, UK
2022	Viva Committee (Antonino Lo Cascio, Ph.D. Candidate)	Humanita University, Milan, Italy
2023-2025	Academic Advisory Committee (AAC) of the Genomics Research Center	Academia Sinica, Taipei, Taiwan

Professional Societies

2005-	American Association of Immunologists (AAI)	
2015-2018	Member, Clinical Immunology Committee	
2015-2016	Co-Organizer, Major Symposium B (The Microbiota in Immunity and Inflammation Annual Meeting)	

2022-	Member, Data Management and Sharing Working Group
2010-2017	Society for Microbial Ecology and Disease (SOMED)
2011-2015	Councilor
2014-	American Association for Cancer Research (AACR)
2019-	American Society for Microbiology (ASM)
2022-	Microbiome Data Prize Committee
2020-	American Society for Clinical Investigation

Grant Review Activities

2010-2011	Career Development Award Committee	CCFA, Permanent Member
2011	Basic Science Research Grants	French National Research Agency, Permanent member
2011	Center for Environmental Health Pilot Project Grant	Harvard-National Institute of Environmental Health Sciences (NIEHS), <i>Ad hoc</i> member
2011-2018	Senior Research Award Committee	CCFA, Permanent Member
2011-2012	Postdoctoral and Early Career Award Panel	CCFA, Permanent Member
2012-2018	Senior Scientist Research Award Panel	CCFA, Permanent Member
2014-2015	Basic Science Research Grants Review Committee	Israel Science Foundation, <i>Ad hoc</i> member
2014-2015	Helmsley Crohn's Disease Pilot Grant Program	Harvard Institute of Translational Immunology, <i>Ad hoc</i> reviewer

2015-2018	Senior Research Scientist Research Award Panel CCFA, Permanent Co-Director	
2020-	Basic Science Grants Review Committee	AACR, Permanent Member
2021-	G. Harold and Leila Y. Mathers Foundation	Mathers Foundation, Grant Reviewer

Editorial Activities

***Ad hoc* Reviewer**

Cell
Cell Host and Microbe
Frontiers in Cellular and Infection Microbiology
Immunity
Infection and Immunity
Journal of Biomedicine and Biotechnology
Journal of Experimental Medicine
Journal of Immunology
mBio
Nature
Nature Reviews Microbiology
Proceedings of the National Academy of Sciences
Science
Science Translational Medicine
Trends in Immunology

Other Editorial Roles

2010-2018	Faculty Member, Immunology	<i>Faculty of 1000 (F1000)</i>
2011- 2023	Editorial Board Member	<i>Cell Reports</i>
2011-2020	Editorial Board Member	<i>Journal of Clinical Microbiology</i>
2015-2016	Board of Reviewing Editors	<i>eLife</i>
2016-	Senior Editor	<i>eLife</i>

2018-2020	Editorial Board Member		<i>Nature Reviews Gastroenterology & Hepatology</i>
2022-	Associate Editor		<i>Principles and Practice of Infectious</i>

Honors and Prizes

1993	Richter Fellowship	Yale University	Research
1993	Phi Beta Kappa	Yale University	Academic
2002	MD Ph.D. Thesis Prize	Yale School of Medicine	Research
2002	Student Research Day Thesis Prize	Yale School of Medicine	Research
2002	Farr Scholar Award	Yale School of Medicine	Research and Academic Excellence
2002	Janet M. Glasgow Memorial Achievement Citation	Yale School of Medicine	Research and Academic Excellence
2002	Alpha Omega Alpha	Yale School of Medicine	Academic Excellence
2003	Dunne Award for Compassionate Clinical Care	BWH	Medicine
2004	Medical Student Housestaff Recognition Award	HMS	Clinical Teaching
2008	Career in Medical Sciences	Burroughs Wellcome Fund	Research Award
2011	Searle Scholars Award	Kinship Foundation	Research

2017	Merkin Family Foundation Fellow Award	Merkin Family Foundation and Broad Institute of Harvard & MIT	Research
2020	Fellow	American Academy of Microbiology	Research
2020	Fellow	American Society for Clinical Investigation (ASCI)	Research
2023	Marian W. Ropes, M.D., Award	ASCI	Scholarly Achievement
2023	Fellow	Association of American Physicians	Research

Report of Funded and Unfunded Projects

Funding Information

Past

2005-2006	The 2005-2006 Janock Family Fellow in Gastrointestinal Oncology Fellowship Irving Janock Fellowship PI This award supported studies of inflammation and cancer in mice.
2006-2009	Mechanisms and Modulators of T-bet and the Innate Immune System in Inflammation-associated Colon Cancer Damon Runyon Foundation Fellowship PI This award supported studies of innate immune inflammation and colon cancer.
2008	Studies of Colitis-associated Colorectal Cancer in Mouse Models DFCI GI SPORE Career Development Award PI This award supported studies of the T-bet ^{-/-} Rag2 ^{-/-} colitis-associated colorectal cancer mouse model and characterization of the tumor immune microenvironment in these mice.
2008-2011	A New Model of Spontaneous Ulcerative Colitis-Associated Colorectal Cancer (CRC) The V Foundation PI This award supported studies of inflammation-associated colorectal cancer in a mouse model and study of de-identified human tissues.

- 2008-2017 Novel Effectors and Regulators of Inflammation, Chronic Infection, and Carcinogenesis in the Colon
Burroughs Wellcome Fund
PI
The faculty years of this grant focused on identifying the molecular mechanisms by which colonic epithelial tumors re-condition myeloid cells to become tumor growth promoting cells and analyzing de-identified human patient samples from cohorts with intestinal inflammation and colorectal cancer (CRC).
- 2009-2014 Disease Initiation and the Role of Dendritic Cells (DCs) in the T-bet^{-/-} Rag2^{-/-} ulcerative colitis (TRUC) Model of Ulcerative Colitis
National Institutes of Health/National Institute of Allergy and Infectious Diseases (NIH/NIAID) K08 AI078942-01
PI
The major goal of the study was to determine the role of innate immune cells in driving colitis and the signaling pathways employed by the intestinal microflora to drive aberrant inflammatory responses.
- 2010-2014 The Role of Inflammatory Monocytes and the Gut Microbiota in Colorectal Cancer
Cancer Research Institute
PI
Using mouse models and primary cell culture systems, we investigated tumor-associated macrophages and dendritic cell phenotypes and functions.
- 2010-2014 Beneficial Microbes for Digestive Health and Mucosal Immunity
Danone Research A11493
PI
The goal of this award was to identify bioactivities of select beneficial microbiomes.
- 2011-2015 Host-bacterial Interactions in Intestinal Inflammation and Malignancy
Searle Scholars Program
PI
The Searle Scholars Program makes grants to selected academic institutions to support the independent research of individuals who have recently begun their first appointment at the assistant professor level, and whose appointment is a tenure-track position. This grant focused on broad explorations of host-microbiota interactions in intestinal inflammation and colorectal cancer preclinical models.
- 2012-2015 Autophagy Genes and the Microbiome in Crohn's Disease
NIH/National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) R01 DK092405 (Subcontract with Broad Institute of MIT and Harvard
Co-Investigator (PI: Ramnik Xavier)
My laboratory performed gnotobiotic studies in ATG16L1T300A in knock-in and control mice associated with CD patient and normal subject fecal samples.
- 2012-2015 Colorectal Cancer, Red Meat and Gut Bacteria Study
Raymond P. Laviertes Foundation Award
MPI (MPI: Curtis Huttenhower, Andrew T. Chan)

- This study examined the effect of red meat intake on the fecal microbiome in human subjects and human microbiome-associated mouse models.
- 2013-2015 *In vitro* Screening of Euroscreen GPR43/FFAR2
Euroscreen, SA A2194
PI
This study screened the effect of GPR43 agonists on regulatory T cells.
- 2012-2016 Highly Simplified Model of a Mammalian Intestinal Community
NIH/National Institute of General Medical Sciences (NIGMS) R01GM099537
(Subcontract with Iowa State University, Ames, IA
Co-Investigator (PI: Gregory Phillips)
My laboratory performed experimentation using gnotobiotic BALB/c wild type and Tbet^{-/-} Rag2^{-/-} mice.
- 2014-2016 Mining the Microbiome to Improve Cancer Immunotherapy Efficacy
F. Hoffman-LaRoche
PI
The project mined the colorectal cancer microbiome to identify and validate targets to realize cancer immunotherapy for colorectal cancer using meta'omics approaches in both human tissue samples and gnotobiotic mouse models, liquidchromatography/mass-spectrometry (LC-MS), and advanced flow cytometry methods.
- 2014-2017 Diet, the Gut Microbiome, and Colorectal Adenomas and Cancer
Starr Cancer Consortium
MPI (MPI: Curtis Huttenhower, Zsofia Stadler)
Our multidisciplinary team includes expertise in gastroenterology, oncology, epidemiology, immunology, microbiology and, bioinformatics, with the goal of surveying the gut microbiome for diet-linked molecular activities in CRC risk, validating these in an independent population, and identifying their mechanisms of action. These aims have the potential to provide concrete, validated, and actionable recommendations for personalized dietary interventions to reduce CRC risk.
- 2015-2017 The Gut Microbiome and Ethanol
NIH/National Institute on Alcohol Abuse and Alcoholism (NIAAA) R21AA023207
PI
We studied the role of the gut microbiota in ethanol metabolism with the goal to reduce the toxicities of chronic ethanol exposure.
- 2015-2018 Beneficial Microbes to Target Opportunistic Pathogens and Mucosal Immunity. Danone Research
PI
This was a renewal application of an award that started in 2011. The goal of this award was to identify bioactivities of select microbes.
- 2016-2017 Evaluation of Probiotic Candidates for Reducing Inflammation in the Gut Nutraceutix, Inc.
PI

My laboratory screened for probiotics for metabolic activities associated with reducing intestinal inflammation.

- 2016-2020 Interplay of Androgens, Microbiota and Immunoregulation in Lupus
NIH/NIAID R01 5R01AR067188 (Subcontract with University of Kentucky,
Louisville, KY)
Co-Investigator (PI: Michele Kosiewicz)
The proposed project will fill the gaps in our knowledge about the role of the androgen-gut microbiota relationship in immunoregulation and lupus and will lead to the development of novel therapeutic strategies using the microbiota and/or its metabolites for the treatment of lupus and other autoimmune diseases. My laboratory will analyze metabolomics data and consult on microbiome analyses in this study.
- 2016-2021 Dietary Sulfur, the Gut Microbiome and Colorectal Cancer NIH/NCI
1R01 CA202704
MPI (MPI: Curtis Huttenhower, Andrew T. Chan) (\$835,200)
My laboratory will analyze data on dietary sulfur, sulfur reducing bacteria (SRB), host response, and the microbiota in mice.
- 2016-2021 Transformative Research Award: Designer Probiotics for Treatment of Intestinal
Infection and Inflammation
NIH/NIDDK R01DK113599
MPI (MPI: Cammie Lesser, John Leong) (\$594,471)
My laboratory will perform *in vivo* experiments to test the efficacy of and potential mechanism behind designer probiotic therapies in multiple pre-clinical mouse models of IBD and will assist in isolation of intestinal cell subsets and their analysis as well as bacterial cell localization experiments.
- 2017-2020 Nicotinamide Riboside, the Gut Microbiota, and Health
Elysium Health, Inc. PI
My laboratory determined the contribution of the gut microbiota to systemic and GI lumen levels of NAD and investigated if nicotinamide riboside affected high-fat diet induced gut microbiota dysbiosis.
- 2019-2022 Designer Probiotics for the Targeted Delivery of IL-10 and IL-10 Mimetics to the
Intestinal Lumen
Rainin Foundation (Subcontract with MGH)
Co-Investigator (PI: Cammie Lesser)
My laboratory will test novel probiotic modulators of cytokines relevant to IBD pathogenesis.

Current

- 2011-2027 Gut Microbiota and Inflammatory Monocytes in Colorectal Cancer (retitled as of 2017:
Colorectal carcinogenesis and *Fusobacterium nucleatum*; oncomicrobe,
oncometabolites and oncoimmunology)
NIH/NCI R01 2CA154426-11
PI (\$1,125,000)

This project has examined the roles of bacteria and immune cells in colon cancer and now focuses on *F. nucleatum* as an oncomicrobe, its oncometabolites and oncoimmunology.

- 2017-2023 A Comprehensive Platform for Novel Therapy Development from the Microbiome
NIH/NIDDK R24DK110499 (Subcontract with Broad Institute, Boston, MA)
Co-Investigator (PI: Curtis Huttenhower)
My laboratory will determine the contribution of the gut microbiota to systemic and GI lumen levels of NAD and investigate if nicotinamide riboside affects high-fat diet induced gut microbiota dysbiosis.
- 2019-2025 OPTIMISTICC: Opportunity to Investigate the Microbiome's Impact on Science and Treatment in Colorectal Cancer
Cancer Research UK Grand Challenge
Co-PI (Co-PI: Matthew Meyerson) (£20,000,000)
I am the co-Director of this multi-PI award. My laboratory will carry out conventional and gnotobiotic mouse experiments to identify microbial communities, microbial strains, and features that promote colon cancer, alter the tumor microenvironment, and enhance or exacerbate cancer therapeutic efficacy and toxicity.
- 2020-2023 The Oncomicrobe-stromal-immune Cell Axis: A Novel Therapeutic Target for Colorectal Cancer
G. Harold and Leila Y. Mathers Foundation
PI (\$626,095)
We will use mouse models of colon cancer, advanced bacterial genetics techniques, single-cell sequencing and immunology approaches to study how the CRC-associated bacterium *Fusobacterium nucleatum* shapes stromal cells and their immune-signaling functions to identify new immunotherapy targets that work for CRC.
- 2020-2023 The Role of the Microbiome and Host Immunity in Young-onset CRC
DFCI/Colorectal Cancer Alliance
Co-Investigator (PI: Kimmie Ng)
Experimental design of all aspects of mouse work with a special focus on the gnotobiotic mouse work including Aim 2 mouse experiments and data interpretation. I will collaborate closely with Drs. Chan, Yilmaz, Hull and Song in data analysis and experimental design across all Aims.
- 2020-2025 Prebiotic Effect of Eicosapentaenoic Acid Treatment for Colorectal Cancer
NIH/NCI R01 CA243454 (Subcontract with MGH)
MPI (MPI: Andrew Chan, Mark Hull) (\$1,532,168)
Using mouse models, my lab will test causality and characterize the mechanisms by which EPA influences the host - microbial interactions to potentiate antitumor immunity and suppress the progression of CRCLM.
- 2021-2026 Understanding the Mechanism of a Gut Microbial Genotoxin Involved in Colorectal Carcinogenesis
NIH RO1
Co-Investigator (PI: Emily Baskus)

- Assist with animal experiments to enable testing in vivo efficacy of small molecule inhibitors of colibactin biosynthesis and examine the effects of colibactin exposure on the early stages of colorectal cancer development
- 2021-2023 Mechanistic Understanding of the Role of Gut Microbiome in Anti-PD-1 Therapy in Gnotobiotic Mice
Merck & Co
PI
To apply gnotobiotic mouse models for mechanistic understanding of interaction between human gut microbiome and immune system and response to anti-PD1 therapy.
- 2021-2023 Eosinophils- Key Innate Immune Cells in SARS-CoV2 Infection
Lemann Brazil Research Fund
PI
The goal of this project is to elucidate the functional roles of eosinophils in the human response to SARS-CoV-2 with a focus on cytokine secretion and release of extracellular vesicles and DNA traps to reduce viral replication.
- 2022-2025 Diet-microbiota-host interactions mediating anti-tumor immune responses in CRC.
AICR
PI
The goal if this award is to unravel the contributions of sulfur amino acids in colon cancer and anti-tumor immunity
- 2022-2025 **MIGHTTY: Microbial-metagenomics Immuno-oncology Gene(s) and Hot-Cold Taxonomic Target Yield**
Astellas
PI (1,500,000)
The goal is to identify microbes and their metabolic pathways correlate with poor IO response, thereby presenting new therapeutic targets for both depletion by targeted phage therapy and targeting of metabolic pathways.
- 2022-2025 **APPL-PI: Analyzing Probiotics or Phages Linked to Phenotypes of Interest**
Astellas
Co-Investigator (PI: Curtis Huttenhower) (1,500,000)
The goal of this project is to identify genetic markers of gut microbial strains implicated in causing or sustaining gastrointestinal inflammation during inflammatory bowel disease. We will screen the microbiomes from which these strains are derived for viral components, particularly phage that might be able to natively target (and thus deplete) causal bacteria during inflammation.
- 2022-2023 The spatial structure of host-microbe interactions at developing colorectal tumors Dana Farber Cancer Institute (\$95,000)
PI
The goal of this project is to adapt a recently developed technology called HiPR-FISH (High-Phylogenetic-Resolution microbiome mapping by Fluorescence In Situ Hybridization) for joint identification of individual microbial and host cells to explore their physical relationships in colorectal cancer.

- 2022-2024 Designer EcN for treatment of solid tumors
NIH R21CA249995
Co-Investigator (PI: Cammie Lesser) (\$250,000)
My lab will assist in the experimental design, experimentation and analysis of the mouse model studies aimed at assessing tumor regression and anti-tumor immunity in response to the administration of the therapeutic bacterial strains.
- 2023-2025 Leveraging Novel Randomized Clinical Trials of Vitamin D Supplementation in Patients with Colorectal Cancer: Impact on Survival and Anti-Tumor Immunity
NIH RO1 CA154426-11
PI: Kimmie Ng
My lab will assist with mouse model experiments of colorectal cancer liver metastasis, immune checkpoint therapy, and Vitamin D supplementation.

Projects Submitted for Funding-

Submitted Pioneer Award: Defining The Gut-Renal Axis to Reconstruct Kidney Function
8/2022 PI NIH

Training Grants and Mentored Trainee Grants

- 2011-2012 Studying Bacterial Immune Cell Interaction in a Mouse Model of Inflammatory Bowel Disease (IBD)
CCFA Sponsored Undergraduate Student Fellowship
Mentor of Kayla Putnam
Undergraduate study of bacteria & immune cells in mouse model of colitis
- 2012-2013 Unraveling the Interactions between T Regulatory Cells and the Gut Microbiota in Health and Disease
NIH/National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) F32 DK095506
Mentor of Patrick Smith, Ph.D.
To study the interactions between T regulatory cells and the gut microbiota in health and disease.
- 2013 Gut Microbiota Architecture in IBD
CCFA Sponsored Undergraduate Student Fellowship
Mentor of Jason Kim, Microscopy studies of bacteria in IBD.
- 2013-2015 Chemosensory Tuft Cells and Intestinal Homeostasis
NIH/NIDDK F32 DK098826
Mentor of Michael Howitt, Ph.D.
To study the tuft cells in intestinal homeostasis.
- 2014-2015 Immunology and Infectious Diseases

- NIH/NIAID Institutional Training Grant T32 AI007638
Mentor of Michelle Rooks, Ph.D.
To study the anti-virulence therapeutics in IBD.
- 2014-2018 Mechanisms Underlying *Fusobacterium nucleatum*-driven Colorectal Cancer.
Damon Runyon Cancer Research Foundation
Mentor of Caitlin Brennan, Ph.D.
To study the mechanisms underlying *Fusobacterium nucleatum*-driven colorectal cancer.
- 2015-2018 The Effect of Autophagy on the Generation and Function of Gut Regulatory T Cells
NIH/NIDDK F31 DK105653
Mentor of Sydney Lavoie, B.S.
To study the effect of autophagy on the generation and function of gut regulatory T cells.
- 2016-2018 Identifying Novel Effectors of the Gut Microbiota that Modulate Cancer Cells Killing by
CD8+ T Cells using Functional Metagenomics
Cancer Research Institute
Mentor of Lior Lobel, Ph.D.
To study the novel effectors of the gut microbiota that modulate cancer cells killing by
CD8+ T cells using functional metagenomics.
- 2016-2020 Ethanol, Inflammation, and the Gut Microbiota
Human Frontiers Science Program Fellowship Mentor
of Diogo Fonseca-Pereira, Ph.D.
The goal of this study is to study metabolic flux of ethanol in the microbiome and
assess the effects of ethanol-associated microbiota changes on intestinal inflammation.
- 2017-2022 Chemosensory Tuft Cells and Intestinal Homeostasis
NIH/NIDDK K01 DK113041-01
Mentor of Michael Howitt, Ph.D.
To study the tuft cells in intestinal homeostasis.
- 2018 The Microbiome and Gut Eosinophils
Microbial Sciences Initiate Summer Fellowship
Mentor of Jannely Villareal
Undergraduate summer studies of the microbiome and gut eosinophils.
- 2018-2019 *Fusobacterium nucleatum* and Immune Checkpoints Cancer
Immunology Training Grant, NCI T32 DFCI Mentor of
Caitlin Brennan, Ph.D.
To study how *Fusobacterium nucleatum* affects immune checkpoint expression and
ICI response in preclinical models.
- 2019 The Microbiome and Gut Eosinophils
Harvard College Research Program for Summer Research
Mentor of Jannely Villareal
Undergraduate summer studies of the microbiome and gut eosinophils.

2019-2022	Microbiota Regulation of Intestinal Eosinophils NIH/NIDDK F31 DK121375 Mentor of Yiyun Cao, B.S. To study the microbiota regulation of intestinal eosinophils.
2019-2022	Designer Probiotics for the Treatment of Inflammatory Bowel Disease CCFA Postdoctoral Research Fellowship Co-mentor with Cammie Lesser of Jason Lynch, Ph.D. To engineer nanobody secreting bacteria armed with IBD therapeutics.
2019-2024	Mediterranean Diet, Polyphenol-rich Foods, Gut Microbiota and Type 2 Diabetes NIH/NIDDK K99 DK119412 Co-mentor with Eric Rimm of Dong 'Daniel' Wang, Ph.D. This research will test whether the gut microbiota modifies the beneficial effects of the Mediterranean diet and polyphenol-rich foods for the prevention of type 2 diabetes in a cohort study in Hispanic population and a randomized controlled trial in Israel.
2020-2022	Identify <i>Fusobacterium nucleatum</i> -derived Bioactives that Enhance Anti-tumor Responses in CRC Cancer Immunology Training Grant, NCI T32 DFCI Mentor of Slater Clay, Ph.D. To identify how <i>Fusobacterium nucleatum</i> -derived bioactives that enhance anti-tumor responses in CRC.
2021-2022	AAI Intersect Fellowship for Computational Scientists and Immunologists Co-mentor with Curtis Huttenhower of Geicho Daniel Nakatsu, Ph.D. To study branched chain amino acids and microbial metabolites for their effects on gut CD4+ T cells.
2022-2024	European Molecular Biology Organization Postdoctoral Fellowship Mentor of Geniver El Tekle, Ph.D. To study fusobacteria-stromal cells-immune cells interactions in the colon cancer tumor microenvironment

Report of Local Teaching and Training

Teaching of Students in Courses

HMS/HSDM/DMS Courses

2010-2021	Immunology Seminar Discussion Course (IMM 301) 1 st yr Immunology graduate students	HMS One to two 2-hr sessions/semester
2010-	Program in Immunology Undergraduate Summer Program Lecture Series Immunology undergraduate students	HMS 2-hr session/summer

2011-2022	Critical Reading for Immunology (IMM 204) Immunology graduate students	HMS 3-hour session, Spring semester
2012, 2015	The Microbiome in Health and Disease (Nanocourse CB 399) Harvard graduate students	HMS Two 4-hr sessions, Nanocourse organizer and lecturer. Fall 2 (2012); Spring 2 (2015)
2012	Advanced Principles of Immunology (IMM 202) Immunology graduate students	HMS 2-hr session, Spring semester
2015	Metabolism, Immunity and Infectious Diseases (Nanocourse CB 299) Lecture topics: Overview, microbial metabolism and immune development lecture, project practicum session Immunology graduate students	HMS Two 4-hr sessions, Spring 1
2016	Modern Day Discovery: From Principles to Patients (Course Director: Tim Mitchison) (BCMP 236) HMS Immunology graduate students	HMS 90-min lecture on pharmacology and the microbiome
2016, 2020	Models of Disease (MoD) Boot Camp Post-graduate MD/Ph.D. fellows	HMS 60-min research lecture
2017, 2018	Molecular Biology of Human Disease (ME 728.0) 1 st year medical students	HMS 2-hr lecture and discussion on microbiome
2018	Microbiology and Infectious Disease (AISC 6120) 1 st and 2 nd year graduate students	HMS 1-hr lecture on the microbiome
2020-	Immune and Inflammatory Disorders (IMM202) 1 st year Immunology graduate students	HMS Two 1-hr sessions/wk

Other Harvard University Courses

2010-	Biological Sciences Seminars (BPH 301) Microbiome & graduate students	HSPH 2-hr session/yr
2012	Immunology of Infectious Diseases (BPH 216) Graduate Students	HSPH 2-hr session
2013-2015	Where Immunology and Public Health Meet Head On: An Online Course (Vaccines 101) MPH & graduate students	HSPH 10 hrs/yr
2016	Parasites: Expert Cell Biologists and Immunologists (IID 205) Graduate students, 1 st -4 th yr, BPH Program	HSPH Twelve 1.5-hr sessions/program
2016-2022	Microbial Sciences: Chemistry, Ecology, Evolution (OEB 290) (Course Director: Michael Gilmore) Graduate students and undergraduate students in organismal and evolutionary	Harvard University, Faculty of Arts and Sciences 2-hr session
2018, 2019	Microbial Communities and Human Microbiome (IID 209) Lecture topics: Microbiome and Immunology Overview, Microbial Communities History and Background, More Immunology, Gut Microbiome, Gnotobiotics & Model Systems, Inflammatory Bowel Disease, Cancer Ph.D. (G1-G3); MPH students	HSPH Fourteen 2-hr sessions/yr

Clinical Supervisory and Training Responsibilities

2009-2013	Attending Physician, Solid Tumor Oncology Service, Medical Oncology Hematology/Oncology fellows, Internal Medicine residents	BWH 2 wks/academic yr
2013-	Attending Physician, Solid Tumor Oncology Service, Medical Oncology Assistants	BWH 2 wks/academic yr Physician

Laboratory and Other Research Supervisory and Training Responsibilities

2005-2015	Research supervision Rotating graduate students	HSPH Daily mentorship during the academic calendar year for Ph.D. and MD/Ph.D. per semester: teaching and training of lab techniques and protocols
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2006-2007	Research supervision Medical students	HSPH Daily mentorship during the summer and mentorship during the academic calendar year: teaching and training of lab techniques and protocols
2006-2008	Research supervision Technicians	HSPH Daily mentorship for three years: teaching and training of lab techniques and protocols
2010-	Research supervision Graduate thesis students	HSPH Daily mentorship: teaching and training of lab techniques and protocols, experimental design, data interpretation, literature interrogation, written and oral communication skill training
2010-	Research supervision Technicians, undergraduate students, graduate students, post-doctoral fellows, and research associates	HSPH Daily mentorship in experimental design, data interpretation, literature interrogation, written and oral communication skill training, lab and professional development, additional training in lab techniques and protocols as needed; weekly lab meeting, 2 hrs/wk.

Formally Mentored Harvard Medical, Dental and Graduate Students

2010	Kutay Karatepe, HSPH BPH Graduating Class of 2016 Conducted research on the role of proteinase 3 in bone marrow hematopoiesis and neutrophil function. Currently a postdoctoral associate in Cell Biology at Yale School of Medicine.
2010-2011	Anthony Covarrubias, HSPH BPH Graduating Class of 2016 Conducted research on the role of nutrient sensing in macrophage polarization. Currently a Postdoctoral Fellow at the Gladstone Institute of Virology and Immunology, Buck Institute for Research on Aging of UCSF.

- 2010-2015 Leslie Wardwell-Scott, HMS BBS Graduating Class of 2016
Ph.D. thesis studies, Harvard BBS Program. National Science Foundation Pre-doctoral Fellowship awardee. Three publications; 1 first-author. Currently Director, Business Development, Evelo Biosciences.
- 2010-2016 Michelle Rooks, BS, MS, MPH, HSPH BPH Graduating Class of 2016
Ph.D. thesis studies. Daily mentorship: teaching and training of lab techniques and protocols, experimental design, data interpretation, literature interrogation, written and oral communication skill training. Four first-author publications. Current position: Principal Scientist, Pfizer, Inc.
- 2011 Leah Hogdal, HMS BBS Admitted Class of 2010 (rotation student)
Daily mentorship for two months: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow in my laboratory. Current position: Clinical Markers Lead, AbbVie
- 2011-2013 Aleksandar Kostic, HMS BBS Graduating Class of 2013
Daily mentorship for two years: teaching and training of lab techniques and protocols, experimental design, data interpretation, literature interrogation, written and oral communication skill training. Ph.D. thesis, co-mentored with Matthew Meyerson: ‘Deep Sequencing and Functional Analyses Identify a Role of Fusobacteria species on Colorectal Cancer’; 9 publications, four as first-author. Current position: Assistant Professor of Medicine, HMS
- 2012 Eric Bent, HMS MD/Ph.D. Program, Health Sciences and Technology (HST) Class of 2017 (rotation student)
Daily mentorship for two months: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Pat Smith) Current position: Harvard Radiation Oncology Residency Program
- 2012 Rachel Becker, BS, HMS Program in Immunology Admitted Class of 2012 (rotation student)
Daily mentorship for two months: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Eunyoung Chun). Current position: science writer, did not complete her Ph.D.
- 2012 Lauren Robertson, HSPH BPH Graduating Class of 2018 (BPH program rotation student)
Daily mentorship for two months: teaching and training of basic biology, lab techniques and protocols. Current position: Medical Science Liaison, BMS
- 2012-2014 Grace O’Neale, BA, MD, Harvard College Class of 2014
Mentorship during the academic year and one summer; Undergraduate junior and senior research and senior research thesis. MSI undergraduate summer fellow. Teaching and training of bacteriology. Co-mentorship by graduate student (Leslie Wardwell). Current position: Resident, Physical Medicine and Rehabilitation Medicine Physician, University of Pittsburgh
- 2012-2019 Sydney Lavoie, Ph.D., HMS Program in Immunology, Graduating Class of 2019

- Daily mentorship for four years: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Michael Howitt). Current position: Postdoctoral Fellow, Pfizer, Inc.
- 2013 David Gootenberg, BS, HMS Class of 2020
Daily mentorship for three months: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Pat Smith). Current position: Harvard MD/Ph.D. Program (HST), D. Kwon Lab
- 2013-2014 Jason H. Kim, BS; Harvard Graduate School of Design. M. Arch. CCFA Summer Fellow 2013 Graduate Master's thesis studies.
Daily mentorship for 1 year: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellows (Sonia Ballal and Patrick Veiga). Current position: HGA Architects and Engineers
- 2013-2015 Koji Yasuda, BA, DVM, Ph.D. HSPH BPH Program Graduating Class of 2017, Co-mentored graduate student with Dr. Curtis Huttenhower. Training in wet lab techniques and mouse model experimental design, data generation and data analysis. Current position: Associate Director, Pfizer.
- 2014 Alexander Mann, HMS DMS Program in Immunology, Admitted Class of 2014
Daily mentorship for two months: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Michael Howitt). Current position: Graduate student, D. Mathis-C. Benoist Lab, HMS. Postdoctoral Fellow: Ruth Franklin Lab.
- 2015 Maeva Metz, Harvard Summer Program in Immunology
Daily mentorship for summer: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Caitlin Brennan). Current position: Graduate student, Weill Cornell Medical College. Post-doctoral fellow: Emily Balskus Lab, Harvard University.
- 2016-2017 Joanna Krawczyk, BPH Programs, HSPH. Admitted Class of 2016
Daily mentorship for summer: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Kathrin Fenn). Graduate Student: Prof. Sudha Biddinger's laboratory Boston Children's Hospital.
- 2016-2018 Sahitya Raja, MS, Harvard Division of Medical Sciences, Masters Program in Immunology Master's Thesis on Lactic acid bacteria and epithelial function
Daily mentorship for nine months: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Kathrin Fenn). Current position: Medical student at Rush Medical College
- 2016-2022 Yiyun Grace Cao, HMS DMS Program in Immunology Admitted Class of 2016.
Scientist Janssen Pharmaceuticals, Spring House, PA.
Daily mentorship: teaching and training of basic biology lab techniques and protocols. Four publications (two first author, two second author).

2017-2020	Jannely Villareal, Harvard College Class of 2020 Daily mentorship for summer and during the sophomore-senior academic years: senior thesis research, teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Yiyun Grace Cao).
2018	Haitong Mao, HMS Program in Immunology, Admitted Class of 2017 Daily mentorship for summer: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Lior Lobel). Current position: HMS Graduate student, Vijay Kuchroo Lab
2018	Nicholas Lue, BS, Chemical Biology, Admitted Class of 2017 (rotation student) Daily mentorship for summer: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Lior Lobel). Current position: Graduate student, Brian Liao, Ph.D. Lab
2020	Jordan Jensen, BPH Program, HSPH, Admitted Class of 2020 (rotation student) Daily mentorship: teaching and training of basic biology lab techniques and protocols. Daily co-mentorship by post-doctoral fellow (Caitlin Brennan). Graduate student: Prof. Curtis Huttenhower.
2021	Jacyln Kline, Program in Immunology, DMS, Admitted Class of 2020 (rotation student) Daily mentorship: teaching and training of basic biology lab techniques and protocols. Daily co-mentorship by graduate student (Grace Cao). Graduate Student: Prof. Lydia Lynch
2021-	Natasha Andreeva, Program in Immunology, DMS, Admitted Class of 2021 Daily mentorship: teaching and training of lab techniques and experimental design. Co-mentored Ph.D. student with Prof. Omer Yilmaz.
2022	Alyssa Granado, SHURP Program, Summer Undergraduate Student. 8wks.
2022	Cathleen Krabak, DMS Program in Immunology Summer Undergraduate Student Program, 10 wks of mentorship
2022	Tien Nguyen, Harvard MCO Graduate Rotation Student, 6wks.

Other Mentored Trainees and Faculty

2005-2008	Shivesh Punit, Ph.D. / Senior Research Specialist, Division of Gastroenterology and Nutrition, Saban Institute, Children's Hospital Los Angeles, Los Angeles, CA <i>Career stage:</i> Technician // <i>Mentoring role:</i> Mentor <i>Accomplishments:</i> Obtained Ph.D.; contributing author on 4 publications.
2010-2013	Nicolai Panikov, Ph.D. / Principal Investigator and Consultant, Flagship Biotech, Pvt. Ltd. <i>Career stage:</i> Visiting Senior scientist, HSPH // <i>Mentoring role:</i> Research advisor <i>Accomplishments:</i> Two publications

- 2010-2015 Sonia A. Ballal, MD / Pediatric Gastroenterologist, BCH, Instructor in Medicine, HMS
Career stage: Instructor in Medicine // *Mentoring role:* Research advisor
Accomplishments: Dr. Ballal authored four publications, two as first-author.
- 2010-2015 Carey Gallini Comeau / Director, Wet Lab Operations, Greentown Labs, Somerville, MA
Career stage: Research Assistant // *Mentoring role:* Mentor
Accomplishments: Contributing author on 15 publications.
- 2010-2018 Patrick Veiga, Ph.D. / Group Leader, INRA. Visiting Scientist Immunology and Infectious Diseases, HSPH.
Career stage: Senior scientist // *Mentoring role:* Research advisor
Accomplishments: Five publications, two as first author, one as senior author.
- 2010-2021 Eunyoung Chun, Ph.D. / Assistant Professor, Cha Medical School, Seoul, Korea
Career stage: Research Scientist // *Mentoring role:* Research advisor
Accomplishments: Dr. Chun has authored nine publications to date, four as first-author.
- 2010- Monia Michaud, Research Assistant IV/Research Technical Specialist
Career stage: Research assistant // *Mentoring role:* Mentor
Accomplishments: Contributing author on 19 publications.
- 2011-2013 Patrick Smith, Ph.D. / Group Leader, Bayer Pharmaceutical, Germany
Career stage: Postdoctoral fellow // *Mentoring role:* Research advisor
Accomplishments: NIH/NIDDK F32 grant award recipient. Five publications, both as first author.
- 2011-2018 Michael Howitt, Ph.D. / Assistant Professor, Stanford University
Career stage: Assistant Professor // *Mentoring role:* Research advisor
Accomplishments: NIH/NIDDK F32 and K01 grant award recipient. Six publications, three as first-author.
- 2013-2021 Caitlin Brennan, Ph.D. / Postdoctoral Fellow, Immunology and Infectious Diseases, HSPH
Career stage: Postdoctoral fellow // *Mentoring role:* Research advisor
Accomplishments: Damon Runyon Research Fellowship and CITG fellowship award recipient. Eight publications to date, two as first-author.
- 2014-2018 Georgina Hold, Ph.D. / Professor, University of New South Wales, Australia and Fulbright Scholar
Career stage: Senior Research Scientist // *Mentoring role:* Research advisor
Accomplishments: Visiting Scholar, Garrett Lab; three publications, one first-author, one senior author.
- 2014-2020 Kathrin Fenn, Ph.D. / Senior Research Scientist, Seres
Career stage: Senior Research Scientist // *Mentoring role:* Research advisor
Accomplishments: Co-first author of a paper in PNAS. Two publications, one as first co-author.

- 2015- 2022 Lior Lobel, Ph.D. / Assistant Professor, Bar Ilan University
Career stage: Postdoctoral fellow // *Mentoring role:* Research advisor
Accomplishments: Cancer Research Institute Fellowship award recipient. DFCI GI SPORE Career Development Awards. Three publications to date, three first author (addition first author in-review).
- 2015- Diogo Fonseca-Pereira, Ph.D. / Postdoctoral Fellow, Immunology and Infectious Diseases, HSPH
Career stage: Postdoctoral fellow // *Mentoring role:* Research advisor
Accomplishments: Human Frontiers Fellowship Award recipient. Two publications to date.
- 2016-2021 Jessica Lang / Senior Research Specialist, Immunology and Infectious Diseases, HSPH
Career stage: Research specialist // *Mentoring role:* Mentor
Accomplishments: Contributing author on 4 publications.
- 2017-2021 Kathryn Rosinski / Research Assistant I, Immunology and Infectious Diseases, HSPH
Career stage: Research assistant // *Mentoring role:* Mentor
Accomplishments: Publication in preparation on cancer, gnotobiotics and the microbiome.
- 2018 Joshua Eibelman, Cornell College Class of 2020
 Cornell University Undergraduate Student. Daily mentorship for summer: teaching and training of basic biology, lab techniques and protocols. Daily co-mentorship by postdoctoral fellow (Lior Lobel). Current position: Biomedical science writer
- 2018- Sena Bae, Ph.D. / Postdoctoral Fellow, Immunology and Infectious Diseases, HSPH
Career stage: Postdoctoral fellow // *Mentoring role:* Research advisor
Accomplishments: Six publications. One manuscript in review.
- 2019- Geicho (Daniel) Nakatsu, Ph.D. / Postdoctoral Fellow, Immunology and Infectious Diseases, HSPH
Career stage: Postdoctoral fellow // *Mentoring role:* Research advisor
Accomplishments: AAI Intersections Fellowship. Research in microbial metabolism and cancer biology.
- 2019- Slater Clay, Ph.D. / Postdoctoral Fellow, Immunology and Infectious Diseases, HSPH
Career stage: Postdoctoral fellow // *Mentoring role:* Research advisor
Accomplishments: Cancer Immunology Training Grant Fellowship Slot Recipient. Microbial Metabolites and Tumor Immunology.
- 2021- Geniver El Tekle, Ph.D./ Postdoctoral Fellow, Immunology and Infectious Diseases, HSPH.
Career stage: Postdoctoral fellow // *Mentor role:* Research advisor
Accomplishments: EMBO fellowship

Membership on Preliminary Qualifying Examination (PQE) Committees, last updated 12/2020

• *Ph.D. Program in Immunology (14 Students)*

2012	Member (Alexandra Huynh)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2014	Chair (Kailyn Stefan)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2014	Member (Angela Burroughs)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2015	Member (Guadalupe Jasso)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2015	Member (Jennifer Heibel)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2015	Member (Yu Hui)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2016	Member (Charles Evavold)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2016	Member (Jacob Turner)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2017	Chair (Kenta Mosallanejad)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2017	Member (Alexandra Schnell)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2018	Member (Sarah Weiss)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2018	Member (Zhouwei Zhang)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2020	Chair (Emily Goering)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)
2021	Chair (Kelly McGovern)	Harvard Medical School Program in Immunology, Graduate Student Preliminary Qualifying Exams (PQEs)

• *School of Engineering and Applied Sciences (2 Students)*

2015	Member (Pichet Praveschotinunt)	Harvard School of Engineering and Applied Sciences, Graduate Student Preliminary Qualifying Exam (PQE)
2018	Member (Ilia Gelfat)	Harvard School of Engineering and Applied Sciences Graduate Student Preliminary Qualifying Exam (PQE)

- *Ph.D. Program in Chemical Biology (4 Students)*

2015	Member (Yolanda Yue Huang)	Harvard Program in Chemical Biology, Graduate Student Preliminary Qualifying Exams (PQEs)
2015	Member (Marina Orman)	Harvard Program in Chemical Biology, Graduate Student Preliminary Qualifying Exams (PQEs)
2016	Member (Ethan Winter)	Harvard Program in Chemical Biology, Graduate Student Preliminary Qualifying Exams (PQEs)
2019	Member (Megan McCurry)	Harvard Program in Chemical Biology, Graduate Student Preliminary Qualifying Exams (PQEs)

- *Ph.D. Program in Biological Sciences in Public Health (3 Students)*

2012	Member (Kutay Karatepe)	BPH, Graduate Student Preliminary Qualifying Exams (PQEs)
2018	Member (Zhouwei Zhang)	BPH, Graduate Student Preliminary Qualifying Exams (PQEs)
2018	Member (Edward Irvine)	BPH, Graduate Student Preliminary Qualifying Exams (PQEs)

- *Biological and Biomedical Sciences Program (1 Student)*

2015	Member (Nicole Lai)	BBS, Graduate Student Preliminary Qualifying Exams (PQEs)
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Membership on Dissertation Advisory Committees

- *Ph.D. Program in Immunology (11 Students)*

2013-2015	Chair (Alexandra Huynh)	Pre-Doctorate – Thesis Committee / Harvard Medical School
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2013-2016	Member (Tze Guan Tan)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2014-2018	Chair (Jon Chang)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2014-2019	Member (Ximei Sun)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2015-2019	Member (Guadalupe Jasso)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2015-2019	Member (Martin LeFleur)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2015-2020	Member (Carlos Donado)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2016-2019	Member (Kailyn Stefan)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2016-2022	Chair (Kenta Mosallanejad)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2020-	Member (John Mindur)	Pre-Doctorate – Thesis Committee / Harvard Medical School
2021-	Chair (Emily Goering)	Pre-Doctorate – Thesis Committee / Harvard Medical School

- *HMS Honors Theses (2 Students)*

2016	Member (Raaj Mehta)	M.D. – Honors Thesis Exam Committee / Harvard Medical School
2018	Member (Jesús Luevano)	M.D. – Honors Thesis Exam Committee / Harvard Medical School

- *Ph.D. Program in Chemical Biology (3 Students)*

2016-2018	Member (Yolanda Yue Huang)	Harvard Medical School Program in Chemical Biology
2016-2019	Member (Marina Orman)	Harvard Medical School Program in Chemical Biology

2019-	Member (Megan McCurry)	Harvard Program in Chemical Biology, Graduate Student
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• *Ph.D. Program in Virology (1 Student)*

2018-	Member (Hemely Rivas)	Harvard Medical School Program in Virology
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• *Biological and Biomedical Sciences Program (4 Students)*

2016-2019	Member (Nicole Lai)	Harvard Medical School Program in Biological and Biomedical Sciences
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2020-	Member (Daniela Barraza)	Harvard Medical School Program in Biological and Biomedical Sciences
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2021-	Member (Valentina Lagomarsino)	Harvard Medical School Program in Biological and Biomedical Sciences
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2021-	Member (Lyuba Bolkhovitinov)	Harvard Medical School Program in Biological and Biomedical Sciences
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• *Ph.D. Program in Biological Sciences in Public Health (2 Students)*

2011-2016	Member (Kutay Karatepe)	Program in Biological Sciences in Public Health / Harvard T.H. Chan School of Public Health
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2013-2017	Chair (Koji Yasuda)	Program in Biological Sciences in Public Health / Harvard T.H. Chan School of Public Health
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Membership on Thesis Defense Committees

• *Biological and Biomedical Sciences Program (1 Student)*

2011	Member (Hachung Chun)	Harvard Medical School Program in Biological and Biomedical Sciences
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• *HMS (6 Students)*

2015	Member (Melis Anhatar)	Harvard Medical School Program in Immunology
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2015	Member (Alexandra Huynh)	Harvard Medical School Program in Immunology
2017	Chair (Tze Guan Tan)	Harvard Medical School Program in Immunology
2018	Chair (Jonathan Chang)	Harvard Medical School Program in Immunology
2022	Member (Pat Lenehan)	Harvard Medical School Program in Immunology
2022	Chair (Kenta Mosallanejad)	Harvard Medical School Program in Immunology

• *Ph.D. Program in Biological Sciences in Public Health (3 Students)*

2013	Member (Rachel Liao)	Program in Biological Sciences in Public Health / Harvard T.H. Chan School of Public Health
2017	Chair (Koji Yasuda)	Program in Biological Sciences in Public Health / Harvard T.H. Chan School of Public Health
2019	Member (Ryan Alexander)	Program in Biological Sciences in Public Health / Harvard T.H. Chan School of Public Health

• *School of Engineering and Applied Sciences (1 Student)*

2019	Member (Pichet Praveschotinunt)	Program in Harvard John A. Paulson School of Engineering and Applied Sciences
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Formal Teaching of Peers (e.g., CME and other continuing education courses)

No presentations below were sponsored by outside entities.

2018-	Cancer and the Microbiome Executive Education in Microbiome Studies	HMS Two to four 1-1.5-hr sessions
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Local Invited Presentations, last updated May 2021

No presentations below were sponsored by outside entities.

2010	IBD and the Microbiota / Invited speaker
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Department of Genetics and Complex Diseases Seminar Series, HSPH

- 2010 Microbiota and Metabolism Lecture / Invited speaker
Department of Genetics and Complex Diseases Department Retreat, HSPH
- 2010 Microbiota & Colitis Lecture Seminar Series / Invited speaker
Center for the Study of Inflammatory Bowel Disease (CSIBD) Seminar Series, Beth Israel-Deaconess Medical Center (BIDMC)/Massachusetts General Hospital (MGH), Boston, MA
- 2010 Microbiota & Colitis Lecture / Invited speaker
Scientific Advisory Board Meeting, HDDC
- 2010 Inflammation: Shared Mechanism of Disease / Seminar
(Department unknown), BWH, Boston, MA
- 2010 Microbiota & IBD / Invited speaker
CSIBD Meeting, Boston, MA
- 2010 Microbiota & Colitis / Invited speaker
Program in Immunology Retreat, HMS
- 2010 Women in Science / Invited speaker
Harvard Graduate Women in Science and Engineering (HGWISE) Lecture, Cambridge, MA
- 2011, 2013 Microbiota & Colitis / Seminar
Program in Immunology Recruitment Scientific Session, HMS
- 2011 Microbiota & Colitis / Seminar
Department of Immunology and Infectious Diseases Retreat, HSPH
- 2011 Microbiota & Cancer / Lecture
Infectious Diseases Initiative Seminar Series, Broad Institute, Cambridge, MA
- 2011 Microbiota & Colitis / Lecture
Summer Evening Lecture Series, Broad Institute, Cambridge, MA
- 2011 Lecture on the Microbiome and IBD / Invited speaker
Microbiome Research in the Boston Area (MiRiBA), Broad Institute
- 2011 Microbiota & Colitis / Lecture
Cancer Program Weekly Seminar Series, Broad Institute, Cambridge, MA
- 2012 Microbiota & Cancer / Invited speaker
Division of Gastroenterology Seminar Series, BIDMC, Boston, MA
- 2012 Microbiota & Cancer / Lecture
Immunology Symposium: Breaching the Borders, HMS

2013 Microbiota & Cancer / Invited speaker
CSIBD Seminar Series, MGH

2014 Microbiota & Colitis / Invited speaker
Center for Systems Biology (CSB) Science Seminar Series, MGH

2014 Microbiota & Cancer / Grand Rounds
Division of Gastroenterology, Hepatology and Nutrition, BCH

2014 Microbiome Research / Invited Speaker
Rheumatology Retreat, BWH

2014 Microbiota & Colitis / Invited Speaker
Immunology Seminar Series, MGH, Charlestown, MA

2014 Microbiota & Colitis / Invited Speaker
Harvard Chan Student Microbiome Consortium, HSPH

2015 Microbiota & Cancer / Invited Speaker
Vaccine Lecture Series, BIDMC

2016 Microbiome and Cancer Immunotherapy / Invited Speaker
Gastrointestinal (GI) Cancer Center Noon Research Conference, DFCI, Boston, MA

2016 Microbiota & Colitis / Invited Speaker
Microbiome and Cancer Immunotherapy Workshop Seminar Series, Evergrande Center, BWH

2016 Microbiota in Health and Disease / Invited Speaker
Faculty Luncheon, HSPH

2016 Tuft Cells, Microbial Metabolites and the Microbiome / Invited Speaker
Fourth Annual Broad-Israel Cell Circuits Symposium, Broad Institute

2017 Microbiome and Cancer / Keynote speaker
U54 Partnership University of Massachusetts-DF/HCC Cancer Symposium, Boston, MA

2018 Microbiome and Cancer / Invited speaker
Seminars in Oncology Lecture Series, DFCI

2019 Unraveling How the Gut Microbiota Influence Health and Disease / Medical Grand Rounds
Physician-Scientist Day 2, Department of Medicine, BWH

2019 Fusobacteria and Cancer/ Invited Speaker
Immune Modulation at the Host-microbe Interface, 2nd Annual Forsyth Symposium, Cambridge, MA

2020	Microbiome, Immune Checkpoint Therapy and Cancer / Invited speaker Breast Immuno-Oncology Working Group Seminar, DFCI
2020	Mechanisms of Action of Resident Bacteria and Probiotics that Mediate Health and Mucosal Homeostasis / Moderator and speaker Harvard Microbiome and Probiotics Symposim
2020	Q&A with Dr. Wendy Garrett / Invited speaker Meet the Investigator Seminar, Harvard-MIT MD/Ph.D. Program, HMS
2021	Microbial Metabolites: The Cause and the Cure / Invited speaker Evergrande Center for Immunologic Diseases Symposium, HMS/BWH
2021	The Microbiome and Barrier Immunity / Invited speaker Gober Family Uncommon Fare, Harvard College, Cambridge, MA (virtual)
2022	Cancer Immunology Faculty Meeting, Invited Speaker, Dana-Farber Cancer Institute, Boston, MA (virtual)
2022	Meet the Professor-Research Scholar Initiative, Invited Speaker, Massachusetts General Hospital, Department of Internal Medicine, Boston, MA (virtual).

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

Those presentations below sponsored by outside entities are so noted and the sponsor(s) has/have been identified.

2011	Microbiome & Mucosal Immunology / Invited Speaker MD/Ph.D. Retreat, Yale University School of Medicine, New Haven, CT
2011	Gut Microbiota and Immune Regulation / Lecture LabLinks, Boston, MA
2011	Translational Human Immunology / Invited speaker New England Immunology Conference, Woods Hole, MA
2012	Microbiota & Colitis / Lecture Department of Microbiology and Immunology Seminar Series, Tufts University School of Medicine, Boston, MA
2012	Microbiota & Colitis / Department of Biology Seminar Series Williams College, Providence, RI
2013	The Gut Microbiome in Inflammatory Bowel Disease / Invited speaker

Biology Department Seminar, Boston College, Boston, MA

- 2013 Microbiome & Mucosal Immunology / Lecture
Department of Microbiology and Physiological Systems Seminar Series, University of Massachusetts Medical School (UMMS), Worcester, MA
- 2013 Microbiome & Mucosal Immunology / Invited Speaker
Immunobiology Graduate Student Retreat, Yale University, New Haven, CT
- 2013 Therapeutic Potential of the Microbiome / Invited Speaker
Nature Publishing Group SciCafé, Cambridge, MA
(NPG is a for-profit company, but I received no honorarium or any other funds for speaking at this event.)
- 2013 Regulatory T Cells and Fatty Acids / Invited Speaker
Therapeutic Potential of the Microbiome, Nature Publishing Group (NPG) SciCafé, Cambridge, MA
(NPG is a for-profit company, but I received no honorarium or any other funds for speaking at this event.)
- 2014 The Gut Microbiota, Cancer and IBD / Invited Speaker
Department of Pathology Seminar Series, Boston University School of Medicine, Boston, MA
- 2015 Mechanistic Gut Microbiome Studies in Health and Disease / Invited speaker
Center for Microbiome Informatics and Therapeutics, MIT, Cambridge, MA
- 2016 Microbiome in Health and Disease / Invited speaker
Folker's Lecture, Yale University School of Medicine, New CT
- 2016 The Gut Microbiome / Invited Speaker
Department of Chemical and Biological Engineering, Tufts University, Medford, MA
- 2017 Inflammation and Disease / Invited lecturer
Chronic Inflammation and the Microbiome Course, Tufts University School of Medicine, Boston, MA
- 2017 Computational Metabolomics of Cancer and the Microbiome / Invited speaker
Biostatistics and Computational Biology Lunch Workshop, DF/HCC
- 2017 Microbiome and Disease / Invited speaker (declined)
Microbial Adhesion and Signal Transduction, Gordon Research Seminar, Newport, RI (GRS)
- 2017 Chronic Inflammation / Invited course speaker
Tufts University School of Medicine
- 2018 Microbiome Studies in Health and Disease (Focus on Cancer) / Keynote speaker
Keville-DePalma Founders Lecture, Darwin Festival, Salem State University, Salem, MA

- 2019 Aurum ex Stercore: Mechanistic Microbiome Studies in Health & Disease / Invited speaker
Department of Pathology Seminar Series, Boston University School of Medicine
- 2019 Mechanistic Gut Microbiome Studies in Health and Disease / Invited speaker
Immunology Program Retreat, Sackler Graduate School of Biomedical Sciences, Tufts University, Broad Institute, Cambridge, MA
- 2020 Exploring Mechanisms Driving IBD Pathogenesis / Invited speaker
Pfizer Inflammation and Immunology IBD Symposium, Cambridge, MA (*This symposium was canceled due to a COVID-19 meeting ban.*)
- 2021 Sulfur amino acids, Microbial Metabolism, Chronic Kidney Disease, and Colon Cancer/Invited Speaker Tufts University Graduate Program Molecular Microbiology, Boston, MA (virtual)
- 2022 Yale University School of Medicine, Dean's Workshop, Keynote Speaker on the Microbiome, New Haven, CT (hybrid)

National

- 2010 Microbiome & Mucosal Immunology / Invited speaker
Microbiome Workshop, Juvenile Diabetes Research Fund, Boston, MA
- 2010 Microbiome & Mucosal Immunology / Invited Speaker
American Academy of Asthma, Allergy and Immunology (AAAAI)-CCFA Satellite Symposium, Federation of Clinical Immunology Societies (FOCIS) Annual Meeting, Boston, MA
- 2011 Microbiome & Mucosal Immunology / Invited Speaker
AAI Meeting, San Francisco, CA
- 2011 Microbiome & Mucosal Immunology / Invited Speaker
Digestive Disease Week (DDW) Annual Meeting, Chicago, IL
- 2011 Microbiome & Mucosal Immunology / Invited Speaker
National Cancer Institute (NCI), Bethesda, MD
- 2011 Enterobacteriaceae and the Microbiota-Induced Colitis / Invited Speaker
Plenary Session: Microbial Interactions with the Immune System, 111th General Meeting, American Society for Microbiology, New Orleans, LA
- 2011 Inflammation and Cancer / Invited Speaker
Lucille Castori Center for Microbes, Memorial Sloan-Kettering Cancer Center, New York, NY
- 2011 Microbiome & Mucosal Immunology / Invited Speaker

Infectious Disease Society of America, Arlington, VA

- 2011 Microbes – Invisible Partners in Health / Lecture
Carnegie Institute Annual Symposium, Baltimore, MD
- 2011 Microbiome & Mucosal Immunology / Lecture
Department of Microbiology and Immunology Seminar Series, University of Louisville
School of Medicine, Louisville, KY
- 2012 Disease-Associated and Beneficial Gut Microbiota in Colitis and Colorectal Cancer /
Invited Speaker
Keystone Symposia: Innate Immunity and the Microbiome, Keystone, CO
- 2012 Microbiome & Mucosal Immunology / Invited Speaker
Searle Scholars Meeting, Chicago, IL
- 2012 Microbiome & Mucosal Immunology / Invited Speaker
American Society for Investigative Pathology, San Diego, CA
- 2012 Microbiome & Mucosal Immunology / Invited Speaker
Department of Microbiology, Iowa State University, Ames, IA
- 2012 Microbiome & Mucosal Immunology / Keynote Speaker
University of California Los Angeles (UCLA) MD/Ph.D. Retreat, Los Angeles, CA
- 2012 Microbiome & Mucosal Immunology / Seminar
Biological Science Graduate Program Annual Meeting, University of Virginia,
Charlottesville, VA
- 2012 Microbiome & Mucosal Immunology / Invited Speaker
American Society of Hematology Annual Meeting, Atlanta, GA
- 2013 Microbiome & Mucosal Immunology / Lecture
Department of Pathology Seminar Series, New York University School of Medicine,
New York, NY
- 2013 Microbial Metabolites and Mucosal Adaptive Immunity / Invited Speaker
Gordon Research Conference - Mucosal Health and Disease. Session: The Mucosal-
Microbiome Interface, Stonehill College, Easton, MA
- 2013 Human Microbiome Science: Vision for the Future / Invited Speaker
NIH, Bethesda, MD
- 2013 Microbiome & Mucosal Immunology / Invited Speaker
University of Nebraska-Lincoln, Lincoln, NE
- 2013 Fusobacteria and Colon Cancer / Invited Speaker
Cancer Research Institute's (CRI) Immunotherapy 2013 Symposium: Dynamics of

Host Tumor Interaction, New York, NY

- 2013 Microbiome & Mucosal Immunology / Invited Speaker
Immunobiology Retreat, Washington University, St. Louis, MO
- 2013 Microbiome & Mucosal Immunology / Invited Speaker, Cancer Center Grand Rounds
Ocala Royal Dames Endowed Lecture, University of Florida at Gainesville, FL
- 2013 Microbiome & Mucosal Immunology / Invited Speaker
Division of Gastroenterology and Hepatology Seminar Series, Johns Hopkins
University School of Medicine, Baltimore, MD
- 2014 Microbiome & Mucosal Immunology / Invited Speaker
Immunology Seminar Series, Children's Hospital of Philadelphia, Philadelphia, PA
- 2014 Microbiome & Mucosal Immunology / Keynote Speaker
The Center for Molecular and Clinical Epidemiology of Infectious Diseases
Symposium (MAC-EPID), University of Michigan School of Public Health, Ann
Arbor, MI
- 2014 Microbiome & Mucosal Immunology / Invited Speaker
Immunology Seminar Series, Scripps Institute, La Jolla, CA
- 2014 Gut Microbiome, Cancer and Colitis / Invited Speaker
Institute for Genome Science Seminar Series, University of Maryland School of
Medicine, Baltimore, MD
- 2014 Host-Microbiota Interactions and GI Cancer/State-of-the-Art Lecture
Session: Gastrointestinal Cancer and the Gut Microbiome, DDW/American
Gastroenterology Association (AGA) Meeting, Chicago, IL
- 2014 Host-Microbiota Interactions and GI Cancer/State-of-the-Art Lecture
Session: Microbes in Inflammatory Disease Pathogenesis, DDW/AGA Meeting,
Chicago, IL
- 2014 Mucosal Immunology, Gut Microbiota, Colon Cancer and IBD / Invited Speaker
Immunology Seminar Series, Mount Sinai School of Medicine, New York, NY
- 2014 Case Study 2: Microbiota and Tregs / Invited Speaker
Host-Microbiota Interactions: How Host Physiology and Disease Pathophysiology Are
Affected by the Gut Microbiota, National Institute of Diabetes and Digestive and Kidney
Diseases (NIDDK), Bethesda, MD
- 2014 How Host Physiology and Disease Pathophysiology are Affected by the Gut Microbiota
/ Invited Panelist
Host-Microbiota Interactions Workshop, NIDDK, Bethesda, MD
- 2014 Microbiome and Colorectal Cancer / Invited Speaker

Immunogenomics Microbiome Meeting, Huntsville, AL

- 2014 The Gut Microbiome in Colorectal Cancer and Colitis / Invited Speaker
Microbiome and Human Health, Sanford-Burnham Medical Research Institute 36th
Annual Symposium, La Jolla, CA
- 2014 Fusobacteria and Colon Cancer / Invited Speaker
Tumor Immunology and Immunotherapy: A New Chapter, AACR, Orlando, FL
- 2014 What is the Role of Microbial Metabolism in Homeostasis and IBD? / Invited Speaker
2014 Advances in Inflammatory Bowel Diseases, Crohn's and Colitis Foundation of
America Clinical and Research Conference, Orlando, FL
- 2014 Ecology of the Microbiota / Session Chair
ANAEROBE 2014: Joint Meeting of the Society for Microbial Ecology and Disease and
Anaerobe Society of America, Chicago, IL
- 2015 Gut Microbiota and IBD / Invited Speaker
Department of Gastroenterology, University of Washington, Seattle, WA
- 2015 Microbiome & Mucosal Immunology / Invited Speaker
Department of Immunology Seminar Series, Duke University, Durham, NC
- 2015 Microbiome & Mucosal Immunology / Invited Speaker
Department of Immunology Seminar Series, University of California, San Francisco, CA
- 2015 Microbiome in Health and Disease / Invited speaker
META Center Symposium on Host-Microbe Systems Biology, University of Oregon,
Eugene, OR
- 2015 Gut Microbiota Modulation of Host Physiology: The Search for Mechanism / Session
Chair
Keystone Symposium, Keystone, CO
- 2016 A Workshop on the Impact of the Microbiome on Animals and Animal Models:
Improving Translational Research in Health and Disease / Co-organizer and speaker
Institute of Laboratory Animal Research, National Academy of Science, Washington,
DC and Virtual
- 2016 MicroFlora Virome Stories / Invited speaker
FOCIS Annual Meeting, Boston, MA
- 2016 Inflammation and the Microbiome / Invited speaker
ICIS Annual Meeting, San Francisco, CA
- 2016 Microbes and Microbial Metabolites in Inflammatory Bowel Diseases and Colon Cancer
/ Invited speaker
Department of Genetics Seminar Series, Stanford University School of Medicine, Palo

Alto, CA

- 2016 *Fusobacterium* and Cancer/ Invited speaker
Department of Microbiology and Immunology Seminar Series, University of Rochester, Rochester, NY
- 2017 Microbiome and Health and Disease / Invited speaker
Department of Microbiology Seminar Series, University of Pennsylvania, Philadelphia, PA
- 2017 Microbiome, Host Immunity, and Cancer / Invited speaker
Carter Immunology Center Seminar Series, University of Virginia, Charlottesville, VA
- 2017 Microbiome and Cancer / Invited speaker
Cancer, Inflammation and Immunity Cell Symposium 2017, San Diego, CA
- 2017 *Fusobacterium nucleatum* and Colon Cancer / Invited speaker
Tumor Immunology and Immunotherapy Special Conference: The Microbiome in Cancer Immunity, AACR, Boston, MA
- 2017 Microbiome Frenemies in Inflammatory Bowel Diseases and Colon Cancer / Invited speaker
Molecular Microbiology-Immunology and Veterinary Pathobiology Seminar Series, University of Missouri-Columbia, Columbia, MO
- 2018 Colorectal Cancer, the Microbiome and Host Immunity / Invited speaker
Cancer Microbiome Symposium, University of Pennsylvania, Philadelphia, PA
- 2018 Microbiome and Cancer / Invited speaker
Center for Inflammation and Cancer (CIC) and the Department of Immunology, University of Texas MD Anderson Cancer Center, Houston, TX
- 2018 *Fusobacterium nucleatum* and colorectal cancer / Invited Speaker
Department of Molecular Microbiology Seminar Series, Washington University in St. Louis, St. Louis, MO
- 2018 Harnessing the Human Microbiome as a Tool for Prevention and Treatment of Disease / Invited speaker
AAAS Annual Meeting, Austin, TX
- 2018 Microbiome and Host Immunity / Invited speaker
Department of Immunology Seminar Series, University of Alabama at Birmingham, Birmingham, AL
- 2018 Microbiome and Cancer / Invited speaker
Department of Immunology Seminar Series, University of Chicago, Chicago, IL
- 2018 Host-commensal-microbiota interactions / Invited speaker

Department of Immunology and Molecular Biology, University of Pennsylvania,
Philadelphia, PA

- 2018 Bowels to Behavior: The Gut-Brain Axis / Invited speaker
ASM Microbe Meeting, Atlanta, GA
- 2018 Microbes and Immune Cells that Potentiate Carcinogenesis / Invited speaker
Pathogen-Associated Malignancies Spring Symposium, Fred Hutch Cancer Research
Center, Seattle, WA
- 2018 Cancer, Microbes, and Inflammation / Invited speaker
Inflammatory Disease Interest Group Seminar Series, NIH, Bethesda, MD
- 2019 Reimagine Health: Is my Fate in my Genes / Invited speaker
The University of Arizona College of Medicine-Phoenix Research Symposium,
Phoenix, AZ
- 2019 Lessons Learned from the Microbiome about Engineering Health and Disease / Keynote
speaker
2nd International Conference on Microbiome Engineering, American Institute of
Chemical Engineers, Boston, MA
- 2019 Host-Microbe Interactions / Invited Speaker
American Association for the Study of Liver Diseases (AASLD), Clinical Research
Workshop, Boston, MA
- 2019 Microbial Metabolites and IBD / Invited speaker
Keystone Symposia on Host and the Environment in IBD: Scientific Advances Leading to
New Therapeutics, Taos, New Mexico
- 2019 Microbiome and Cancer / Invited speaker
Fox Chase Cancer Center Seminar Series, Philadelphia, PA
- 2019 Microbiome and Cancer / Invited speaker
Annual Scientific Forum, McKesson/US Oncology Research Team, Denver, CO
- 2019 The Impact of the Microbiome on Cancer Progression and Therapy / Invited speaker
6th Annual Microbiome Symposium, University of Pennsylvania, Philadelphia, PA
- 2019 Impact of host and microbe metabolism on immunity / Invited speaker
AAI Annual Meeting, San Diego, CA
- 2019 The Microbiology of Human Spaceflight / Invited speaker
NASA and Nature Research Conference, Houston, TX
- 2019 The Gastrointestinal Tract XVIII: Integrated Biology of the GI Super-Organ / Invited
speaker
FASEB Science Research Conferences, Steamboat Springs, CO

- 2019 Microbiome and GI Tract / Invited speaker
Digestive Disease Research Center Seminar Series, Vanderbilt University School of Medicine, Nashville, TN
- 2020 How the Microbiome Impacts Cancer, Immunity, and Response to Therapy / Invited
Keynote speaker
ASCO Gastrointestinal (GI) Cancer Symposium, San Francisco, CA
- 2020 From A to Z: Mechanistic Microbiome Studies in CKD, CRC and IBD / Invited Speaker
Cell and Molecular Biology Seminar Series, University of Texas San Antonio, San Antonio, TX (*This meeting was scheduled, but canceled due to a COVID-19 meeting/travel ban*)
- 2020 The Microbiome from Taxa to Metabolites in Inflammatory Bowel Diseases to Colorectal Cancer / Invited speaker
Distinguished Scientist Seminar Series, Immunology and Molecular Pathogenesis (IMP) Graduate Program at Emory University, Atlanta, GA (*This meeting was scheduled, but canceled due to a COVID-19 meeting/travel ban*)
- 2020 *Fusobacterium nucleatum*: Igniting the Fuse in Colorectal Cancer / Keynote speaker
Annual meeting of the Oral Immunology/Microbiology Research Group, Mark Wilson Conference, San Juan, PR
- 2020 Colon Cancer and the Gut Microbiota / Keynote Address
15th Biennial Congress of the Anaerobe Society of the Americas, Seattle, WA (virtual)
- 2020 Microbial Metabolites and Inflammatory Bowel Diseases / Invited speaker
Rainin Foundation Innovations Symposium, San Francisco, MA (*This meeting was scheduled, but canceled due to a COVID-19 meeting/travel ban*)
- 2020 Transdisciplinary Cancer Interception: Leveraging Biology to Improve Prevention and Detection / Invited Speaker
Nature Conferences Program, Salt Lake City, UT (*This meeting was scheduled, but canceled due to a COVID-19 meeting/travel ban*)
- 2020 Effects of Microbial Metabolites on the Gastrointestinal Immune System in Inflammatory Bowel Disease and Colorectal Cancer / Invited speaker
The Significance of Microbial Metabolomics in Human Health and Disease, New York Academy of Sciences, New York, NY (virtual)
- 2021 Taxa or Microbial Metabolites: The Microbiome is Up to the Task in Inflammatory Bowel and Chronic Kidney Disease / Invited speaker
Harnessing the Microbiome for Disease Prevention and Therapy, Keystone Symposium, Keystone, CO (virtual)
- 2021 Microbial Metabolites and Inflammatory Bowel Diseases / Invited speaker
Rainin Foundation Innovations Symposium, San Francisco, CA (virtual)

- 2021 Microbial Metabolism and Metabolites for Inflammatory Bowel and Kidney Disease and Cancer / Invited speaker
Metabolic Decisions in Development and Disease, Keystone Symposium, Keystone, CO (virtual)
- 2021 Mechanistic Roles of the Gut Microbiota in Health and Disease / Invited speaker
Department of Biology Seminar Series, Norte Dame University, Notre Dame, IN (virtual)
- 2021 Mechanistic Roles of the Gut Microbiota Focus on CRC and CKD / Invited speaker
Microbiome Forum Seminar Series, Johns Hopkins Medical Institute, Baltimore, MD (virtual)
- 2021 Microbial Metabolism, Chronic Kidney Disease, and Colorectal Cancer/Invited Speaker Integrative Microbiology Seminar Series, University of California San Francisco, San Francisco, CA (virtual)
- 2021 Sulfur amino acids, Microbial Metabolism, Chronic Kidney Disease, and Colon Cancer/Invited Speaker University Texas Southwestern School of Medicine Graduate Program in Molecular Microbiology, Dallas, TX (virtual)
- 2021 SCFAs and Sulfur Amino Acids health halos & horn effects: IBD and Chronic Kidney Diseases. Kenneth Rainin Foundation's Virtual Innovations Symposium, Invited Speaker and Panelist, San Francisco, CA (virtual)
- 2022 The Gut Microbiota in Chronic Kidney Disease and Colorectal Cancer / Keynote speaker
The Vanderbilt Institute for Infection, Immunology and Inflammation (VI4) Symposium, Vanderbilt University, Nashville, TN (virtual)
- 2022 The Gut Microbiota in Colon Cancer & Kidney Disease / Invited speaker
Department of Medicine, GI Research Conference Seminar Series, University of Chicago, Chicago, IL (virtual)
- 2022 The Gut Microbiota in Health and Disease / Invited Keynote speaker
Microscopy and Microanalysis 2022. Keynote Address. Portland, OR.
- 2022 The Gut Microbiota & Colon Cancer: The More ‘Omics the Better / Invited speaker
Immunogenomics Symposium, Cornell University, Ithaca, NY.
- 2022 The Microbiome, Oncomicrobes and Colorectal Cancer / Invited speaker
Microbiology Graduate Program Seminar Series, Yale University, New Haven, CT (virtual)
- 2023 The Gut Microbiota, Immunity, Cancer, and Three Bacteria That Have Knocked on Our Door / Invited speaker
Program in Immunology Seminar Series, University of California San Diego, San Diego, CA (virtual)

- 2023 AACR Annual Meeting, Session Chair and Invited Speaker, The Gut Microbiota and Colon Cancer, Orlando, FL.
- 2023 Rutgers University Microbiome Program Seminar Series. Invited Speaker. The Gut Microbiota, Immunity, and Colon Cancer (virtual)

International

- 2010 Microbiome & Mucosal Immunology / Invited speaker
XXXIII International Congress for the Society for Microbial Ecology in Health and Disease, various locations, Greece
- 2011 Microbiome & Mucosal Immunology / Lecture
International Scientific Conference on Probiotics and Prebiotics Annual Meeting, Berkeley, CA
- 2011 Microbiome-Wide Association Studies: Lessons from a Mouse Model of Ulcerative Colitis / Invited speaker
Third North American Congress of Epidemiology, Montreal, Canada
- 2011 Interplay between the Immune System and the Gut Microbiota / Invited speaker
Keystone Symposium, Malnutrition, Gut-Microbial Interactions and Mucosal Immunity to Vaccines, New Delhi, India
- 2011 Danger, Microbiota and Immunity in Cancer / Invited speaker Université Pierre et Marie Curie, Paris, France
- 2012 Colitogenic: Enterobacteria / Invited speaker
Innate Immunity in Gastrointestinal Disorders: Basic Therapeutic Concepts, Falk Symposium, Munich, Germany
- 2012 Beneficial Microbes – The Link between Diet and Cancer Risk? / Invited speaker
Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek (TNO; Netherlands Organization for Applied Scientific Research) Beneficial Microbes Conference, Bilthoven, The Netherlands
- 2012 Immunobiology of Microbial Host Interactions / Invited speaker
14th Biennial Armenise-Harvard Foundation Symposium, Siena, Italy
- 2014 Inflammation, Infection and Cancer / Invited speaker and session chair
Keystone Symposium, Whistler, British Columbia
- 2014 Gut Microbiota, Colorectal Cancer and Dendritic Cells / Invited speaker
DC2014, 13th International Symposium on Dendritic Cells, Tours, France
- 2014 Microbial Metabolites and Gut Homeostasis / Invited speaker

Herrenhausen Symposium, Immune Homeostasis and Inflammatory Disease, Hannover, Germany (Volkswagen Foundation and *Nature Medicine*; my travel costs were reimbursed.)

- 2015 Gut Microbiota, Metabolites, Colitis, and Colorectal Cancer / Invited speaker
Department of Immunology Seminar Series, University of Toronto, Toronto, Ontario, Canada
- 2015 Novel Animal Models in Gastroenterology / Invited speaker
The 101st General Meeting of the Japanese Society of Gastroenterology, Sendai, Japan
- 2017 Microbiota and the Immune System - Symbiosis or Dysbiosis / Invited speaker
British Society for Immunology (BSI) Congress, Brighton, UK
- 2017 Omics for All, Metagenomics / Invited speaker
Twelfth International Conference on Genomics (ICG), Shenzhen, China,
- 2017 Microbiome and Inflammation / Invited speaker
Nature Conference on Inflammatory Diseases, Beijing, China
- 2017 Microbiota and Inflammation / Invited speaker
Federation of the Israeli Societies for Experimental Biology (FISEB), Eilat, Israel
- 2017 Immune Cells, Inflammation and the Microbiota / Invited speaker
32nd Annual 'Genes & Cancer' Meeting, Cambridge, UK
- 2018 Bowel Cancer and the Microbiota / Invited speaker
Weatherall Institute of Molecular Medicine Seminar Series, University of Oxford, Oxford, UK
- 2018 Microbiome and Cancer / Invited speaker
Josephine Nefkens Oncology Lecture (JNIOL), Erasmus University Medical Center, Rotterdam, The Netherlands
- 2018 Metabolites, Immunity, and Inflammation / Invited speaker
International Ph.D. Program in Immunology, Cell Biology and Biochemistry lecture series of the Institute for Research in Biomedicine (IRB), Bellinzona, Switzerland
- 2018 The Oral and Gut Microbiota and Colorectal Cancer / Invited speaker
AACR Translational Cancer Medicine Conference (being held in cooperation with the Latin American Cooperative Oncology Group (LACOG), São Paulo, Brazil
- 2018 Influence of Gut Microbiota on Intestinal Immunity and Homeostasis / Invited speaker
Argentinean Society of Immunology Annual Meeting, Mar del Plata, Argentina
- 2018 Microbial metabolites: A pot of gold at the end of the rainbow / Invited speaker
7th International Human Microbiome Congress, Killarney, Ireland

- 2018 Microbial Metabolites, Inflammatory Bowel Diseases and Colorectal Cancer / Invited speaker
Aegean Conferences, Precision Nutrition in Public Health and Medicine, Crete, Greece
- 2018 The Microbiome and its modulation in colorectal cancer / Invited speaker
Bowel Cancer UK's Inaugural Colorectal Cancer Research Conference, London, UK
- 2018 Deciphering the Complexity of Cancer Microenvironment and the Microbiome / Invited speaker
37th Sapporo International Cancer Symposium, Sapporo, Japan
- 2018 Tumor Stroma Interaction: Regeneration versus Carcinogenesis / Invited speaker
Hinterzartener Kreis Cadenabbia, Italy
- 2018 Intestinal Immunity and Gut Microbiota / Invited Keynote speaker
British Society of Immunology Group in West Midlands, University of Birmingham, Birmingham, UK
- 2019 The Impact of Bacterial Infections on Human Cancer / Invited speaker
EMBO Workshop, Berlin, Germany
- 2019 Breaking Through Emergent Immunotherapy and Immune Targets in Cancer / Invited speaker
Microbiome and Bacteriotherapy in Cancer, Intratumor Bacterial and Cancer Therapeutics, FLS-Science, Barcelona, Spain
- 2019 Short-chain Fatty Acids, Immunity, and Inflammation / Keynote speaker
International Conference of the Metabolomics Society, The Hague, The Netherlands
- 2019 Gut Microbial Metabolites, Inflammatory Bowel Diseases, and Colorectal Cancer / Invited speaker
Metabolism 2019, Lunenfeld-Tanenbaum Research Institute (LTRI), Toronto, Canada
- 2019 Fusobacteria, Colorectal Cancer, and Microbiome Therapeutics / Invited speaker
Nature Conference, Grand Challenges in Immunology: Immunotherapy for Cancer and Beyond, Qingdao, China
- 2019 Microbial Metabolites and Immunity / Invited speaker
Keystone Symposia on Cancer Metastasis: The Role of Metabolism, Immunity and the Microenvironment, Florence, Italy
- 2020 Microbiome in Human Health / Invited speaker
The Avison Symposium, Yonsei University College of Medicine, Seoul, South Korea
(*This meeting was scheduled, but canceled due to a COVID-19 meeting/travel ban.*)
- 2020 Tumor Heterogeneity, Plasticity and Therapy / Invited speaker
Flanders Institute of Biotechnology (VIB), Leuven, Belgium (*This meeting was scheduled but canceled due to a COVID-19 meeting/travel ban.*)

- 2020 Fusobacteria and Colorectal Cancer / Invited speaker
International Symposium on Immune Responses in Cancer and Infection (IRCI), Lyon, France (*This meeting was scheduled but canceled due to a COVID-19 meeting/travel ban.*)
- 2020 Gastrointestinal Immune System and the Gut Microbiota in Colorectal Cancer / Invited speaker
Keystone Symposia on Inflammation, Microbiota and Cancer, Microbiota and Cancer, Taipei, Taiwan (*This meeting was scheduled but canceled due to a COVID-19 meeting/travel ban.*)
- 2020 The Microbiota, Inflammatory Bowel Diseases, and Chronic Kidney Disease / Invited speaker
Keystone Symposia on Host-Microbiome Interactions: Symbiosis, Competition and Holobiont Systems, Nanyang Technological University, Singapore (*This meeting was scheduled but canceled due to a COVID-19 meeting/travel ban.*)
- 2020 Diet and Microbial Metabolism in Health & Disease / Invited speaker
APC Microbiome Ireland, University College, Cork, Cork, Ireland
- 2021 Aurum ex Stercore: Microbial Taxa and Metabolites in Health & Disease / Invited Speaker
Humanitas University Seminar Series, Milan, Italy (virtual)
- 2021 The Cause and the Cure: Microbiome in Chronic Kidney Disease and Cancer / Invited speaker
International Drug Discovery Science & Technology (IDDST) Annual Meeting, Amsterdam, The Netherlands (virtual)
- 2021 Diet and Microbial Metabolism in Kidney Disease and Colon Cancer / Invited speaker
Harnessing the Microbiome for Disease Prevention and Therapy, Keystone Symposium, Silverthorne, CO (virtual)
- 2021 Interactions of Phage and Pathogens with the Microbiota / Session Chair
Harnessing the Microbiome for Disease Prevention and Therapy, Keystone Symposium, Silverthorne, CO (virtual)
- 2021 OPTIMISTICCC Team Update / Invited speaker
Cancer Research UK Grand Challenge Summit, London, England (virtual)
- 2021 Metabolic Crosstalk between the Gut and its Microbiota / Invited speaker
Metabolic Decisions in Development and Disease, Keystone Symposium, Silverthorne, CO (virtual)
- 2021 National Cancer Research Institute (UK) In Conversation with Wendy Garrett Colon Cancer and the Microbiome/Invited Speaker, London, England (virtual)

2021	Diet, the Microbiota and Chronic Kidney disease, Invited Speaker European Atherosclerosis Society Annual Meeting, Session on Diet and the Gut Microbiome, Helsinki, Finland (virtual)
2021	Uremic toxins and the gut microbiome, Invited Speaker Japanese Society of Nephrology, 64th Annual Meeting of the Japanese Society of Nephrology, Yokohama, Japan (hybrid)
2021	GlobalMicrobiome Network - GloMiNe – Symposium for Africa, Invited Speaker, Organized by Instituto Gulbenkian de Ciência, Portugal (virtual)
2021	29 International Symposium of Advances in the Treatment of Gastrointestinal Tumours, Invited Speaker The Spanish Cooperative Group for the Treatment of Digestive Tumors (TTD), Madrid Spain (hybrid)
2022	2 nd GloMiNe Symposium, Global Microbiome Symposium, Invited Speaker, Mozambique and Portugal Time Zone Sessions (virtual)
2022	World Congress of Nephrology 2022, Invited Speaker, Kuala Lumpur, Malaysia (hybrid)
2022	Microbiome Virtual International Forum, Europe and Asia Pacific Rim Time Zone (Two Sessions/Talks), Invited Speaker, (virtual).
2022	EMBO EMBL Symposium: Microbial infections and human, Invited Speaker, Heidelberg, Germany (hybrid)
2022	ERA 2022, Invited Speaker of 59th Hybrid Congress of the European Renal Association, Paris, France (hybrid)
2022	EACR 2022, Invited Speaker European Association for Cancer Research, Innovative Cancer Science: Translating Biology to Medicine, Seville, Spain (hybrid)
2022	International Congress of Mucosal Immunology (ICMI) 2022, Invited Speaker Plenary Session, Society for Mucosal Immunology. Annual Meeting. Seattle, WA.
2022	SHINE Connect Symposium, Invited Plenary Speaker, Shine Cancer Support, UK (virtual)
2023	MicrobiotaMI 2023, Invited Plenary Speaker, University of Milano-Bicocca, Milan, IT (hybrid)
2023	University of Guelph, MCB Seminar Series, Invited Speaker, Guelph, Canada (virtual)

Report of Clinical Activities and Innovations

Current Licensure and Certification

2005	Massachusetts Medical License
2005	Certification, Internal Medicine, American Board of Internal Medicine (ABIM)
2007, 2017	Certification, Medical Oncology, ABIM

Practice Activities

2009-2013	Attending Physician	Medical Oncology (Solid Tumor Service)	Two wks/academic year
2013-	Attending Physician	Medical Oncology (Solid Tumor Oncology PA Service)	Two wks/academic year

Report of Technological and Other Scientific Innovations

Method for reducing gastro-intestinal inflammation using <i>Bifidobacterium animalis</i> bacteria or a fermented dairy product comprising such bacteria	U.S. patent application 20120308523, filed December 6, 2012.
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Method for reducing gastrointestinal inflammation using bacteria or a fermented dairy product comprising such bacteria	U.S. patent application 8685388, filed April 1, 2014. The present invention relates to a method for the prevention, treatment and reduction of gastro-intestinal inflammation in a subject by administering a specific <i>Bifidobacterium</i> strain, in particular a fermented dairy product comprising said specific <i>Bifidobacterium</i> strain for the prevention, treatment and reduction of gastrointestinal inflammation, in particular for the prevention and treatment of inflammatory bowel disease (IBD), ulcerative colitis (UC) and/or Crohn's Disease (CD).
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Leveraging oxidative stress pathways in lactic acid bacteria to promote gut homeostasis	U.S. patent application 2015023268, filed February 19, 2015. US Patent 10,383,921 B2, issued August 20, 2019. Disclosed herein are compositions and methods for providing an antioxidant effect to a subject, e.g., modulating or otherwise improving oxidative stress pathways and/or neutralizing or reducing damaging reactive oxygen species (ROS).
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Modulation of regulatory T cells via G-coupled protein receptor 43	U.S. patent 10,105,329 B2, published October 23, 2018. Disclosed herein are compositions and methods that are useful for inducing the development of regulatory T cells (T.sub.reg). Such compositions and methods are useful for treating inflammatory conditions and in particular inflammatory conditions affecting the gastrointestinal tract of a subject. In certain embodiments, the present inventions generally relate to short chain fatty acids and the discovery that such short chain fatty acids may be used to treat and/or prevent inflammatory conditions by enhancing the size and immune function of a subject's endogenous T.sub.reg population.
Methods of treating inflammatory bowel disease and parasite infection	U.S. Patent Application No.: US 16/074,934, filed February 3, 2017 (updated July 30, 2021) and published February 7, 2019 (updated February 24, 2022). Publication number: 20220054591. Described herein are methods for the induction of a TH2 immune response and for the treatment and/or prevention of diseases associated with pathological immune responses and parasitic infection.
Methods and compositions related to targeting FFAR2 and ILC populations for the treatment of a gastrointestinal disease	U.S. Provisional Application No.: 62/767,847, filed November 15, 2018 and published May 22, 2020. International Publication No. WO 2020/102472. Described herein are methods for the treatment gastrointestinal diseases related to targeting innate lymphoid cells via free fatty acid receptors.
Methods and compositions for the treatment of renal disease	U.S. Patent Application No.: 62/979,638, filed February 21, 2020 and published August 26, 2021. Publication number: 20210260009. Described herein are methods for the treatment of a renal disease involving sulfur amino acids.

Report of Education of Patients and Service to the Community

2021	Microbiome in Health and Disease / Invited speaker Reverse Science Fair and Career Panel, Women in Science, Technology, Engineering and Mathematics (WiSTEM), Brookline High School, Brookline, MA (virtual)
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Report of Scholarship

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* = denotes equal contribution
† = corresponding author(s)

Peer-reviewed publications in print or other media

Research Article and Reviews are listed separately

Research investigations

1. Tumas-Brundage KM, **Garrett WS**, Blank K, Prystowsky MB. Murine leukemia virus infects early bone marrow progenitors in immunocompetent mice. *Virology*. 1996;224(2): 573-5. PMID: 8874521
2. Turley SJ, Inaba K, **Garrett WS**, Ebersold M, Unternaehrer J, Steinman RM, Mellman I. Transport of peptide-MHC class II complexes in developing dendritic cells. *Science*. 2000;288(5465):522-7. PMID: 10775112
3. **Garrett WS**, Chen LM, Kroschewski R, Ebersold M, Turley SJ, Trombetta ES, Galan JE, Mellman I. The developmental control of endocytosis in dendritic cells by Cdc42. *Cell*. 2000;102:325-34. PMID: 10975523
4. Maric M, Balasubramanian A, Phan UT, Dong C, **Garrett WS**, Cannon KS, Alfonso C, Karlsson L, Flavell RA, Cresswell P. Defective antigen processing in GILT-free mice. *Science*. 2001;294:1361-5. PMID: 11701933
5. Nagata Y, Ono S, Matsuo M, Gnjatich S, Valmori D, Ritter G, **Garrett WS**, Old LJ, Mellman I. Differential presentation of a soluble exogenous tumor antigen, NY-ESO-1, by distinct human dendritic cell populations. *Proc Natl Acad Sci USA*. 2002;99(16):10629-34. PMID: 12138174; PMCID: PMC124995
6. Chow A, Toomre D, **Garrett WS**, Mellman I. Dendritic cell maturation triggers retrograde transport of MHC class II molecules from lysosomes to the plasma membrane. *Nature*. 2002;418(6901):988-94. PMID: 12198549

Comment in: Yewdell JW, Tschärke DC. Inside the professionals. *Nature*. 2002;418(6901):923-4. PMID: 12198526
7. Trombetta ES, Ebersold M, **Garrett WS**, Pypaert M, Mellman I. Activation of lysosomal function during dendritic cell maturation. *Science*. 2003;299(5611):1400-3. PMID: 12610307
8. **Garrett WS***, Lord GM*, Punit S, Lugo-Villarino G, Mazmanian SK, Ito S, Glickman JN, Glimcher LH. Communicable ulcerative colitis induced by T-bet deficiency in the innate immune system. *Cell*. 2007;131(1):33-45. PMID: 17923086; PMCID: PMC2169385

Comment in: Ma A. Loss of T-bet sends host-microbe mutualism awry. *Cell*. 2007;131(1):15-7. PMID: 17923080
9. **Garrett WS**, Punit S, Gallini CA, Michaud M, Zhang D, Sigrist K, Lord GM, Glickman JN, Glimcher LH. Colitis-associated colorectal cancer driven by T-bet deficiency in dendritic cells. *Cancer Cell*. 2009;16(3):208-19. PMID: 19732721; PMCID: PMC2740755

10. **Garrett WS**, Gallini CA, Yatsunenko T, Michaud M, DuBois A, Delaney ML, Punit S, Karlsson M, Bry L, Glickman JN, Gordon JI, Onderdonk AB, Glimcher LH. Enterobacteriaceae act in concert with the gut microbiota to induce spontaneous and maternally transmitted colitis. *Cell Host Microbe*. 2010;8(3):292-300. PMID: 20833380; PMCID: PMC2952357
11. Veiga P, Gallini CA, Beal C, Michaud M, Delaney ML, DuBois A, Khlebnikov A, van Hylckama Vlieg JE, Punit S, Glickman JN, Onderdonk A, Glimcher LH, **Garrett WS**. *Bifidobacterium animalis* subsp. lactis fermented milk product reduces inflammation by altering a niche for colitogenic microbes. *Proc Natl Acad Sci USA*. 2010;107(42):18132-7. PMID: 20921388; PMCID: PMC2964251. Erratum in: *Proc Natl Acad Sci USA*. 2010;107(50):21943. PMCID: PMC3003051 [The authors note that the affiliation for Laurie H. Glimcher appeared incorrectly. This has been corrected.]
12. Segata N, Izard J, Waldron L, Gevers D, Miropolsky L, **Garrett WS**, Huttenhower C. Metagenomic biomarker discovery and explanation. *Genome Biol*. 2011;12(6):R60. PMID: 21702898; PMCID: PMC3218848
13. Ermann J, **Garrett WS**, Kuchroo J, Rourida K, Glickman JN, Bleich A, Glimcher LH. Severity of innate immune-mediated colitis is controlled by the cytokine deficiency-induced colitis susceptibility-1 (Cdcs1) locus. *Proc Natl Acad Sci*. 2011;108(17):7137-41. PMID: 21482794; PMCID: PMC3084042.
14. Shanmugam NK, Ellenbogen S, Trebicka E, Wang L, Mukhopadhyay S, Lacy-Hulbert A, Gallini CA, **Garrett WS**, Cherayil BJ. Tumor necrosis factor α inhibits expression of the iron regulating hormone hepcidin in murine models of innate colitis. *PloS ONE*. 2012;7(5):e38136. PMID: 22675442; PMCID: PMC3365004.
15. Kostic AD, Gevers D, Pedomallu CS, Michaud M, Duke F, Earl AM, Ojesina AI, Jung J, Bass AJ, Tabernero J, Baselga J, Liu C, Shivdasani RA, Ogino S, Birren BW, Huttenhower C, **Garrett WS**, Meyerson M. Genomic analysis identifies association of *Fusobacterium* with colorectal carcinoma. *Genome Res*. 2012;22(2):292-8. PMID: 22009990; PMCID: PMC3266036.

Comment in: Ray K. Colorectal cancer: *Fusobacterium nucleatum* found in colon cancer tissue—could an infection cause colorectal cancer? *Nat Rev Gastroenterol Hepatol*. 2011;8(12):662. PMID: 22083120

16. Cywes-Bentley C, Skurnik D, Zaidi T, Roux D, Deoliveira RB, **Garrett WS**, Lu X, O'Malley J, Kinzel K, Zaidi T, Rey A, Perrin C, Fichorova RN, Kayatani AK, Maira-Litràn T, Gening ML, Tsvetkov YE, Nifantiev NE, Bakaletz LO, Pelton SI, Golenbock DT, Pier GB. Antibody to a conserved antigenic target is protective against diverse prokaryotic and eukaryotic pathogens. *Proc Natl Acad Sci USA*. 2013;110(24):E2209-18. PMID: 23716675; PMCID: PMC3683766.

Comment in: Cassone A. Simple polysaccharides and global responses in the era of vaccinomics. *Pathog Glob Health*. 2013;107(6):283-4. PMID: 24188238; PMCID: PMC4001606

17. Smith PM, Howitt MR, Panikov N, Michaud M, Gallini CA, Bohlooly-Y M, Glickman JN, **Garrett WS**. The Microbial Metabolites, Short-Chain Fatty Acids, Regulate Colonic Treg Cell Homeostasis. *Science*. 2013;341(6145):569-73. PMID: 23828891; PMC3807819

Comment in: Bollrath J, Powrie F. Immunology. Feed your Tregs more fiber. *Science*. 2013;341(6145):463-4. PMID: 23908210

Comment in: Geuking MB, McCoy KD, Macpherson AJ. Metabolites from intestinal microbes shape Treg. *Cell Res*. 2013;23(12):1339-40. PMID: 24018374; PMCID: PMC3847568

Comment in: Papatriantafyllou M. Regulatory T cells: distilling regulatory T cell inducers. *Nat Rev Immunol*. 2013;13(8):546. PMID: 24046840
18. Bhatt AS, Freeman SS, Herrera AF, Pedamallu CS, Gevers D, Duke S, Jung J, Michaud M, Walker BJ, Young S, Earl AM, Kostic AD, Ojesina AI, Hasserjian R, Ballen KK, Chen Y, Soriano G, Antin JH, Soiffer RJ, Baden LR, **Garrett WS**, Hornick JS, Marty FM, Meyerson M. Sequence-based discovery of *Bradyrhizobium enterica* in Cord Colitis Syndrome. *N Engl J Med*. 2013;369(6):517-28. PMID: 23924002; PMCID: PMC3889161.

Comment in: Pamer EG. Cuffed and exposed—perp-walking bradyrhizobium. *N Engl J Med*. 2013;369(6):572-4. PMID: 23924009

Comment in: Bhatt AS, Marty FM, Meyerson M. *Bradyrhizobium enterica* in cord colitis syndrome. *N Engl J Med*. 2013;369(19):1867. PMID: 24195568

Comment in: Gorkiewicz G, Trajanoski S, Högenauer C. *Bradyrhizobium enterica* in cord colitis syndrome. *N Engl J Med*. 2013;369(19):1866-7. PMID: 24195569
19. Kostic AD, Chun E, Robertson L, Glickman JN, Gallini CA, Michaud M, Clancy TE, Chung DC, Lochhead P, Hold GL, El-Omar EN, Brenner D, Fuchs CS, Meyerson M†, **Garrett WS**†. *Fusobacterium nucleatum* potentiates intestinal tumorigenesis and modulates the tumor immune microenvironment. *Cell Host Microbe*. 2013;14(2):207-15. PMID: 23954159; PMCID: PMC3772512.

Comment in: Keku T, McCoy AN, Azcarate-Peril AM. *Fusobacterium* spp. and colorectal cancer: cause or consequence? *Trends Microbiol*. 2013;21(10):506-8. PMID: 24029382; PMCID: PMC3836616
20. Rooks MG, Veiga P, Wardwell-Scott L, Tickle T, Segata N, Michaud M, Gallini C, Beal C, van Hylckama-Vlieg JET, Ballal SA, Morgan XC, Glickman JN, Gevers D, Huttenhower C, **Garrett WS**. Gut microbiome composition and function in experimental colitis during active disease and treatment-induced remission. *ISME J*. 2014;8(7):1403-17. PMID: 24500617; PMCID: PMC4069400
21. Franzosa EA, Morgan XC, Segata N, Waldron L, Reyes J, Earl AM, Giannoukos G, Boylan M, Ciulla D, Gevers D, Izard J, **Garrett WS**, Chan AT, Huttenhower C. Relating the

metatranscriptome and metagenome of the human gut. *Proc Natl Acad Sci USA*. 2014;111(22):E2329-38. PMID: 24843156; PMCID: PMC4050606

22. Panikov NS, Mandalakis M, Dai S, Mulcahy LR, Fowle W, **Garrett WS**, Karger BL. Near-zero growth kinetics of *Pseudomonas putida* deduced from proteomic analysis. *Environ Microbiol*. 2014;17(1):215-28. PMID: 25088710
23. Gur C, Ibrahim Y, Isaacson B, Yamin R, Abed J, Gamliel M, Enk J, Bar-On Y, StanietstkyKaynan N, Copenhagen-Glazer S, Shussman N, Almogy G, Cuapio A, Hofer E, Mevorach D, Tabib A, Ortenberg R, Markel G, Miklic K, Jonjic S, Brennan C, **Garrett WS**, Bachrach G, Mandelboim O. Binding of the Fap2 protein of *Fusobacterium nucleatum* to human inhibitory receptor TIGIT protects tumors from immune cell attack. *Immunity*. 2015;42(2):344-55. PMID: 25680274; PMCID: PMC4361732

Comment in: Colucci F. An oral commensal associates with disease: chicken, egg, or red herring? *Immunity*. 2015;42(2):208-10. PMID: 25692696

24. Boernigen D, Moon YS, Rahnavard G, Waldron L, McIver L, Shafquat A, Franzosa E, Miropolsky, L, Sweeney C, Morgan XC, **Garrett WS**, Huttenhower C. A reproducible approach to high-throughput biological data acquisition and integration. *PeerJ*. 2015;3:e791. PMID: 26157642; PMCID: PMC4493686
25. Mima K*, Sukawa Y*, Nishihara R*, Qian ZR*, Yamauchi M, Inamura K, Kim SA, Masuda A, Nowak JA, Nosho K, Kostic AD, Giannakis M, Watanabe H, Bullman S, Milner DA, Harris CC, Giovannucci E, Garraway LA, Freeman GJ, Dranoff G, Chan AT*, **Garrett WS***, Huttenhower C*, Fuchs CS*, Ogino S*†. *Fusobacterium nucleatum* and T-cells in colorectal carcinoma. *JAMA Oncol*. 2015;1(5):653-61. PMID: 26181352; PMCID: 4537376
26. Erny D, Hrabe de Agenlis AL, Jaitin D, Wieghofer P, Staszewski O, David E, Keren-Shaul H, Mhlakoiv T, Jakobshagen K, Buch T, Schwierzeck V, Utermohlen O, Chun E, **Garrett WS**, McCoy KD, Diefenbach A, Staeheli P, Stecher B, Amit I, Prinz M. Host microbiota constantly control maturation and function of microglia in the CNS. *Nat Neurosci*. 2015;18(7):965-77. PMID: 26030851; PMCID: PMC5528863

Comment in: Mosher KI, Wyss-Coray T. Go with your gut: microbiota meet microglia. *Nat Neurosci*. 2015;18(7):930-1. PMID: 26108718; PMCID: PMC4867548

Comment in: Cryan JF, Dinan TG. Gut microbiota: Microbiota and neuroimmune signaling-Metchnikoff to microglia. *Nat Rev Gastroenterol Hepatol*. 2015;12(9):494-6. PMID: 26215386

27. Ballal SA*, Veiga P*, Fenn K*, Michaud M, Kim JH, Gallini C, Glickman JN, Quéré G, Garault P, Béal C, Derrien M, Courtin P, Kulakauskas S, Chapot-Chartier MP, van Hylckama Vlieg JET, **Garrett WS**. Host lysozyme-mediated lysis of *Lactococcus lactis* facilitates delivery of colitisattenuating superoxide dismutase to inflamed colons. *Proc Natl Acad Sci USA*. 2015;112(25):7803-8. PMID: 26056274; PMCID: PMC4485081.

Comment in: Weber C. IBD: *Lactococcus lactis* alleviates oxidative stress and colitis. Nat Rev Gastroenterol Hepatol. 2015;12(8):429. PMID: 26100371

28. Chun E, Lavoie S, Michaud M, Kim JH, Gallini C, Soucy G, Odze R, Glickman JN, **Garrett WS**. CCL2 promotes colorectal carcinogenesis by enhancing polymorphonuclear myeloid-derived suppressor cell population and function. Cell Rep. 2015;12(2):244-57. PMID: 26146082; PMCID: PMC4620029
29. Mima K, Nishihara R, Qian ZR, Cao Y, Sukawa Y, Nowak JA, Yang J, Dou R, Masugi Y, Song M, Kostic AD, Giannakis M, Bullman S, Milner DA, Baba H, Giocannucci EL, Garraway LA, Freeman GJ, Dranoff G, **Garrett WS**, Huttenhower C, Meyerson M, Meyerhardt JA, Chan AT, Fuchs CS, Ogino S. *Fusobacterium nucleatum* in Colorectal Carcinoma Tissue, and Patient Prognosis. Gut. 2015;65:1973-80. PMID: 26311717; PMCID: PMC4769120
30. Howitt MR, Lavoie SL, Michaud M, Blum AM, Tran SV, Weinstock JV, Redding K, Margolskee RM, Osborne LC, Artis D, **Garrett WS**. Tuft cells, taste-chemosensory cells, orchestrate parasite type 2 immunity in the gut. Science. 2016;351(6279):1329-33. PMID: 26847546; PMCID: PMC5528851.

Comment in: Harris N. IMMUNOLOGY. The enigmatic tuft cell in immunity. Science. 2016;351(6279):1264-5. PMID: 26989236

Comment in: Grencis RK, Worthington JJ. Tuft Cells: A New Flavor in Innate Epithelial Immunity. PMID: 27161767

31. Song M*, Nishihara R*, Cao Y*, Chun E*, Qian ZR, Mima K, Inamura K, Masugi Y, Nowak JA, Noshio K, Wu K, Wang M, Giovannucci E, **Garrett WS***, Fuchs CS*, Ogino S*†, Chan AT*†. Marine ω -3 polyunsaturated fatty acid intake and risk of colorectal cancer according to tumor-infiltrating T cells. JAMA Oncol. 2016;2(9):1197-206. PMID: 27148825; PMCID: PMC5016204. Erratum in: [No authors listed] Incomplete conflict of interest disclosures. 2019;5(4):579. PMID: 30844032
32. Zhang C, Derrien M, Levenez F, Brazeilles R, Ballal SA, Kim J, Degivry M-C, Quéré G, Garault P, van Hylckama Vlieg JET, **Garrett WS**, Doré J, Veiga P. Ecological robustness of the gut microbiota in response to ingestion of transient food-borne microbes. ISME J. 2016;10(9):2235-45. PMCID: PMC4989305.
33. Segata N, Baldini F, Pompon J, Neafsey DE, **Garrett WS**, Dabiré RK, Diabaté A, Levashina EA, Catteruccia F. The reproductive tracts of two malaria vectors are populated by a core microbiome and by gender- and swarm-enriched microbial biomarkers. Sci Rep. 2016;6:24207. PMID: 27086581; PMCID: PMC4834568.
34. Abed J*, Emgård JEM*, Zamir, Faroja M, Almog G, Grenov A, Sol A, Naor R, Pikarsky E, Atlan KA, Mellul A, Chaushu S, Manson AL, Earl AM, Ou N, Brennan CA, **Garrett WS***†, Bachrach G*†. Fap2 mediates *Fusobacterium nucleatum* colorectal adenocarcinoma enrichment through binding to tumor-expressed Gal-GalNAc. Cell Host Microbe. 2016;20(2):215-25. PMID: 27512904; PMCID: PMC5465824

35. Cao Y, Nishihara R, Qian ZR, Song M, Mima K, Inamura K, Nowak JA, Drew DA, Lochhead P, Noshō K, Morikawa T, Zhang X, Wu K, Wang M, **Garrett WS**, Giovannucci EL, Fuchs CS, Chan AT, Ogino SS. Regular Aspirin Use Associates with Lower Risk of Colorectal Cancers with Low Numbers of Tumor-infiltrating Lymphocytes. *Gastroenterology*. 2016;151(5):87992.e4. PMID: 27475305; PMCID: PMC5159194.
36. Rooks MG, Veiga P, Reeves AZ, Lavoie S, Yasuda K, Asano Y, Yoshihara K, Michaud M, Wardwell-Scott L, Gallini CA, Glickman JN, Sudo N, Huttenhower C, Lesser CF, **Garrett WS**. QseC inhibition as an antivirulence approach for colitis-associated bacteria. *Proc Natl Acad Sci USA*. 2017;114(1):142-7. PMID: 27980034; PMCID: PMC5224399
37. Kosumi K, Masugi Y, Yang J, Qian ZR, Kim SA, Li W, Shi Y, da Silva A, Hamada T, Liu L, Gu M, Twombly TS, Cao Y, Barbie DA, Noshō K, Baba H, **Garrett WS**, Meyerhardt JA, Giovannucci EL, Chan AT, Fuchs CS, Ogino S, Nishihara R. Tumor SQSTM1 (p62) expression and T cells in colorectal cancer. *Oncoimmunology*. 2017;6(3):e1284720. PMID: 28405513; PMCID: PMC5384412.
38. Haber AL, Biton M, Rogel N, Herbst RH, Shekhar K, Smillie C, Burgin G, Delorey TM, Howitt MR, Katz Y, Tirosh I, Beyaz S, Dionne D, Zhang M, Raychowdhury R, **Garrett WS**, Rozenblatt-Rosen O, Shi HN, Yilmaz O, Xavier RJ, Regev A. A single-cell survey of the small intestinal epithelium. *Nature*. 2017;551:333-9. PMID: 29144463; PMCID: PMC6022292
39. Mehta RS, Nishihara R, Cao Y, Song M, Mima K, Qian ZR, Nowak JA, Kosumi K, Hamada T, Masugi Y, Bullman S, Drew DA, Kostic AD, Fung TT, **Garrett WS**, Huttenhower C, Wu K, Meyerhardt JA, Zhang X, Willett WC, Giovannucci EL, Fuchs CS, Chan AT, Ogino S. Association of Dietary Patterns with Risk of Colorectal Cancer Subtypes Classified by *Fusobacterium nucleatum* in Tumor Tissue. *JAMA Oncol*. 2017;3(7):921-7. PMID: 28125762; PMCID: PMC5502000. Erratum in: *JAMA Oncol*. 2019;5(4):579. [Incomplete conflict of interest disclosures.] PMID: 30844032
40. Yasuda K, Hsu T, Gallini CA, McIver LJ, Schwager E, Shi A, DuLong CR, Schwager RN, AbuAli GS, Franzosa EA, **Garrett WS**, Huttenhower C, Morgan XC. Fluoride Depletes Acidogenic Taxa in Oral but Not Gut Microbial Communities in Mice. *mSystems*. 2017;2(4):e00047-17. PMID: 28808691; PMCID: PMC5547758.
41. Geller LT, Barzily-Rokni M, Danino T, Jonas OH, Shental N, Nejman D, Gavert N, Zwang Y, Cooper ZA, Shee K, Thaïs CA, Reuben A, Livny J, Avraham R, Frederick DT, Ligorio M, Chatman K, Johnston SE, Mosher CM, Brandis A, Fuks G, Gurbatri C, Gopalakrishnan V, Kim M, Hurd MW, Katz M, Fleming J, Maitra A, Smith DA, Skalak M, Bu J, Michaud M, Trauger SA, Barshack I, Golan T, Sandbank J, Flaherty KT, Mandinova A, **Garrett WS**, Thayer SP, Ferrone CR, Huttenhower C, Bhatia SN, Gevers D, Wargo JA, Golub TR, Straussman R. Potential role of intratumor bacteria in mediating tumor resistance to the chemotherapeutic drug gemcitabine. *Science*. 2017;357(6356):1156-60. PMID: 28912244; PMCID: PMC5727343.

Comment in: Thomas H. Pancreatic cancer: Intra-tumour bacteria promote gemcitabine resistance in pancreatic adenocarcinoma. *Nat Rev Gastroenterol Hepatol*. 2017;14(11):632. PMID: 29018273

Comment in: Jobin C. Cancer treatment: Bacterial snack attack deactivates a drug. Nature. 2017;550(7676):337-9. PMID: 29052621

42. Liu L, Nishihara R, Qian ZR, Tabung FK, Nevo D, Zhang X, Song M, Cao Y, Mima K, Masugi Y, Shi Y, da Silva A, Twombly T, Gu M, Li W, Hamada T, Kosumi K, Inamura K, Nowak JA, Drew DA, Lochhead P, Nosho K, Wu K, Wang M, **Garrett WS**, Chan AT, Fuchs CS, Giovannucci EL, Ogino S. Association Between Inflammatory Diet Pattern and Risk of Colorectal Carcinoma Subtypes Classified by Immune Responses to Tumor. Gastroenterology. 2017;153:1517-30.e14. PMID: 28865736; PMCID: PMC5705461.
43. Cao Y, Wu K, Mehta R, Drew DA, Song M, Lochhead P, Nguyen LH, Izard J, Fuchs CS, **Garrett WS**, Huttenhower C, Ogino S, Giovannucci EL, Chan AT. Long-term use of antibiotics and risk of colorectal adenoma. Gut. 2018;67:672-8. PMID: 28377387; PMCID: PMC5628103.
44. Liu L, Tabung FK, Zhang X, Nowak JA, Qian ZR, Hamada T, Nevo D, Bullman S, Mima K, Kosumi K, da Silva A, Song M, Cao Y, Twombly TS, Shi Y, Liu H, Gu M, Koh H, Li W, Du C, Chen Y, Li C, Li W, Mehta RS, Wu K, Wang M, Kostic AD, Giannakis M, **Garrett WS**, Huttenhower C, Chan AT, Fuchs CS, Nishihara R, Ogino S, Giovannucci EL. Diets that promote colon inflammation associate with risk of colorectal carcinomas that contain *Fusobacterium nucleatum*. Clin Gastroenterol Hepatol. 2018;16(10):1622-31. PMID: 29702299; PMCID: PMC6151288.
45. Hamada T, Zhang X, Mima K, Bullman S, Sukawa Y, Nowak J, Kosumi K, Masugi Y, Twombly T, Cao Y, Song M, Liu L, da Silva A, Shi Y, Gu M, Li W, Koh H, Nosho K, Inamura K, Keum N, Wu K, Meyerhardt J, Kostic A, Huttenhower C, **Garrett WS**, Meyerson M, Giovannucci E, Chan A, Fuchs C, Nishihara R, Giannakis M, Ogino S. *Fusobacterium nucleatum* in Colorectal Cancer Relates to Immune Response Differentially by Tumor Microsatellite Instability Status. Cancer Immunol Res. 2018;6(11):1327-36. PMID: 30228205; PMCID: PMC6215508.

Comment in: Atreya CE, Venook AP. Of Microbes and Microsatellites. Cancer Immunol Res. 2018;6(11):1290-1. PMID: 30389718

46. Kosumi K, Hamada T, Koh H, Borowsky J, Bullman S, Twombly TS, Nevo D, Masugi Y, Liu L, da Silva A, Chen Y, Du C, Gu M, Li C, Li W, Liu H, Shi Y, Mima K, Song M, Nosho K, Nowak JA, Nishihara R, Baba H, Zhang X, Wu K, Wang M, Huttenhower C, **Garrett WS**, Meyerson ML, Lennerz JK, Giannakis M, Chan AT, Meyerhardt JA, Fuchs CS, Ogino S. The Amount of Bifidobacterium Genus in Colorectal Carcinoma Tissue in Relation to Tumor Characteristics and Clinical Outcome. Am J Path. 2018;188:2839-52. PMID: 30243655; PMCID: PMC6284552.
47. Lavoie S, Conway KL, Lassen KG, Jijon HB, Pan H, Chun E, Michaud M, Lang JK, Gallini Comeau CA, Dreyfuss JM, Glickman JN, Vlamakis H, Ananthakrishnan A, Kostic A*†, **Garrett WS***†, Xavier RJ*†. The Crohn's disease polymorphism, ATG16L1 T300A, alters the gut microbiota and enhances the local Th1/Th17 response. Elife. 2019. 8: e39982. PMC6342529

48. Yang W, Liu L, Keum N, Qian ZR, Nowak JA, Hamada T, Song M, Cao Y, Noshio K, SmithWarner SA, Zhang S, Masugi Y, Ng K, Kosumi K, Ma Y, **Garrett WS**, Wang M, Nan H, Giannakis M, Meyerhardt JA, Chan AT, Fuchs CS, Nishihara R, Wu K, Giovannucci EL, Ogino S, Zhang X. Calcium intake and rise of colorectal cancer according to tumor infiltrating T cells. *Cancer Prev Res.* 2019;12:283-94. PMC7081141.
49. Wilson MR, Jiang Y, Villata PW, Stornetta A, Boudreau PD, Carrá A, Brennan CA, Chun E, Ngo L, Samson LD, Engelward BP, **Garrett WS**, Balbo S, Balskus EP. The human gut bacterial genotoxin colibactin alkylates DNA. *Science.* 2019;363:eaar7785. PMC6407708.
50. Hsu T, Gemmell MR, Franzosa EA, Berry S, Mukhopadhyay I, Hansen R, Michaud M, Nielsen H, Miller WG, Nielsen H, Bajaj-Elliott M, Huttenhower C, **Garrett WS**, Hold GL. Comparative genomics and genomic biology of *Campylobacter showae*. *Emerg Microbes Infect.* 2019;8(1):827-40. PMID: 31169073; PMCID: PMC6567213
51. Chun E, Lavoie S, Fonseca-Pereira D, Bae S, Michaud M, Hoveyda HR, Fraser GL, Gallini Comeau CA, Glickman JN, Fuller MH, Layden BT, **Garrett WS**. Metabolite-Sensing Receptor Ffar2 Regulates Colonic Group 3 Innate Lymphoid Cells and Gut Immunity. *Immunity.* 2019;51(5):871-84.e6. PMID: 31628054; PMCID: PMC6901086.
52. Haruki K, Kosumi K, Hamada T, Twombly TS, Väyrynen JP, Kim SA, Masugi Y, Qian ZR, Mima K, Baba Y, da Silva A, Borowsky J, Arima K, Fujiyoshi K, Lau MC, Li P, Guo C, Chen Y, Song M, Nowak JA, Nishihara R, Yanaga K, Zhang X, Wu K, Bullman S, **Garrett WS**, Huttenhower C, Meyerhardt JA, Giannakis M, Chan AT, Fuchs CS, Ogino S. Association of autophagy status with amount of *Fusobacterium nucleatum* in colorectal cancer. *J Pathol.* 2020;250:397-408. PMID: 31880318; PMCID: PMC7282529.
53. Lavoie S, Chun E, Bae S, Brennan CA, Gallini Comeau CA, Lang JK, Michaud M, Hoveyda HR, Fraser GL, Fuller MH, Layden BT, Glickman JN, **Garrett WS**. Expression of Free Fatty Acid Receptor 2 by Dendritic Cells Prevents Their Expression of Interleukin 27 and is Required for Maintenance of Mucosal Barrier and Immune Response Against Colorectal Tumors in Mice. *Gastroenterology.* 2020;158:1359-72. PMID: 31917258; PMCID: PMC7291292.
54. Nguyen LH, Ma W, Wang DD, Cao Y, Mallick H, Gerbaba TK, Lloyd-Price J, Abu-Ali G, Hall AB, Sikavi D, Drew DA, Mehta RS, Arze C, Joshi AD, Yan Y, Branck T, DuLong C, Ivey KL, Ogino S, Rimm EB, Song M, **Garrett WS**, Izard J, Huttenhower C, Chan AT. Association Between Sulfur-Metabolizing Bacterial Communities in Stool and Risk of Distal Colorectal Cancer in Men. *Gastroenterology.* 2020;158:1313-25. PMID: 31972239; PMCID: PMC7384232 (available on 2021-04-01)
55. Howitt MR, Cao YG, Gologorsky MN, Li JA, Haber AL, Biton M, Lang J, Michaud M, Regev A, **Garrett WS**. The Taste Receptor TAS1R3 Regulates Small Intestinal Tuft Cell Homeostasis. *Immunohorizons.* 2020;4:23-32. PMID: 31980480; PMID: PMC7197368
56. Yan Y, Drew DA, Markowitz A, Lloyd-Price J, Abu-Ali G, Nguyen LH, Tran C, Chung DC, Gilpin KK, Meixell D, Parziale M, Schuck M, Patel Z, Richter JM, Kelsey PB, **Garrett WS**, Chan AT†, Stadler ZC†, Huttenhower C†. Structure of the mucosal and stool microbiome in Lynch syndrome. *Cell Host Microbe.* 2020;27:585-600. PMID: 32240601; PMCID:

57. Knudsen NH, Stanya KJ, Hyde AL, Chalom MM, Alexander RK, Liou YH, Starost KA, Gangl MR, Jacobi D, Liu S, Sopariwala DH, Fonseca-Pereira D, Li J, Hu FB, **Garrett WS**, Narkar VA, Ortlund EA, Kim JH, Paton CM, Cooper JA, Lee CH. Interleukin-13 drives metabolic conditioning of muscle to endurance exercise. *Science*. 2020;368(6490):eaat3987. PMID: 32355002; PMCID: PMC7549736
58. Abed J, Maalouf N, Manson AL, Earl AM, Parhi L, Emgård JEM, Klutstein M, Tayeb S, Almogy G, Atlan KA, Chaushu S, Israeli E, Mandelboim O, **Garrett WS***†, Bachrach G*†. Colon cancer-associated *Fusobacterium nucleatum* may originate from the oral cavity and reach colon tumors via the circulatory system. *Front Cell Infect Microbiol*. 2020;10:400. PMID: 32850497; PMCID: PMC7426652.
59. Lobel L, Cao YG, Fenn K, Glickman JN, **Garrett WS**. Diet posttranslationally modifies the mouse gut microbial proteome to modulate renal function. *Science*. 2020;369(6510):1518-24. PMID: 32943527
- Comment in: Pluznick JL. The gut microbiota in kidney disease. *Science*. 2020 Sep 18;369(6510):1426-1427. PMID: 32943509.
60. Borowsky J, Haruki K, Lau MC, Dias Costa A, Vayrynen JP, Ugai T, Arima K, da Silva A, Felt KD, Zhao M, Gurjao C, Twombly TS, Fujiyoshi K, Vayrynen SA, Hamada T, Mima K, Bullman S, Harrison TA, Phipps AI, Peters U, Ng K, Meyerhardt JA, Song M, Giovannucci EL, Wu K, Zhang X, Freeman GJ, Huttenhower C, **Garrett WS**, Chan AT, Leggett BA, Whitehall VL, Walker N, Brown I, Bettington M, Nishihara R, Fuchs CS, Lennerz JK, Giannakis M, Nowak JA, Ogino S. Association of *Fusobacterium nucleatum* with specific T cell subsets in the colorectal carcinoma microenvironment. *Clin Cancer Res*. 2021. February 25. Online Ahead of Print.
61. Wilkinson JE*, Franzosa EA*, Everett C, Li C, HCMPH researchers and trainees, HCMPH investigators, Hu FB, Wirth DF, Song M, Chan AT, Rim E, **Garrett WS***†, Huttenhower C*†. A framework for microbiome science in public health. *Nat Med*. 2021. 27(5): 766-774. PMID: 33820996
62. Brennan CA, Nakatsu G, Gallini Comeau CA, Drew DA, Glickman JN, Schoen RE, Chan AT, **Garrett WS**. Aspirin Modulation of the Colorectal Cancer-Associated Microbe *Fusobacterium nucleatum*. *mBio*. 2021. 12(2):e00547-21. PMID: 33824205.
63. Everett C* Li C* Wilkinson JE*, Nguyen LH, McIver LJ, Ivey K, Izard J, Palacios NA, Eliassen H, Willett WC, Ascherio A, Sun Q, Tworoger SS, Chan AT*†, **Garrett WS***†, Huttenhower C*†, Rimm EB*†, Song M*†. Overview of the Microbiome among Nurses study (Micro-N) as an example of prospective characterization of the microbiome within cohort studies. *Nat Protoc*. 2021. 16(6):2724-2731. PMID: 33883746.
64. Nguyen LH, Cao Y, Hur J, Mehta RS, Sikavi DR, Wang Y, Ma W, Wu K, Song M, Giovannucci

- EL, Rimm EB, Willett WC, **Garrett WS**, Izard J, Huttenhower C, Chan AT. The Sulfur Microbial Diet Is Associated With Increased Risk of Early-Onset Colorectal Cancer Precursors. *Gastroenterology*. 2021. 161(5): 1423-1432. PMID: 34273347.
65. Sikavi DR, Nguyen LH, Haruki K, Ugai T, Ma W, Wang DD, Thompson KN, Yan Y, Branck T, Wilkinson JE, Akimoto N, Zhong R, Lau MC, Mima K, Kosumi K, Morikawa T, Rimm EB, **Garrett WS**, Izard J, Cao Y, Song M, Huttenhower C, Ogino S, Chan AT. The Sulfur Microbial Diet and Risk of Colorectal Cancer by Molecular Subtypes and Intratumoral Microbial Specific. *Clin Transl Gastroenterology*. 2021. 12(8): e00338. PMID: 34333506.
 66. Brennan CA, Clay SL, Lavoie SL, Bae S, Lang JK, Fonseca-Pereira D, Rosinski KG, Ou N, Glickman JN, **Garrett WS**. *Fusobacterium nucleatum* drives a pro-inflammatory intestinal microenvironment through metabolite receptor-dependent modulation of IL-17 expression. *Gut Microbes*. 2021. 13(1). 1987780. PMID: 34781821
 67. Spencer CN, McQuade JL, Gopalakrishnan V, McCulloch JA, Vetizou M...Futreal PA, **Garrett WS**, Huttenhower C, Sharma P, Watowich SS, Allison JP, Cohen L, Trinchieri G, Daniel CR, and Wargo JA. Dietary fiber and probiotics influence the gut microbiome and melanoma immunotherapy. *Science*. 2021. 374(6575). 1632-1640. PMID: 34941392.
 68. Zhang Y, Bhosle A, Bae S, McIver LJ, Pishchany G...**Garrett WS**, Krueger A, Huttenhower C, and Franzosa EA. Discovery of bioactive microbial gene products in inflammatory bowel disease. *Nature*. 2022. 606(7915). 754-760. PMID: 35614211
 69. Arima K, Zhong R, Ugai T, Zhao M, Haruki K, Akimoto N, Lau MC, Okadome K, Mehta RS, Väyrynen JP, Kishikawa J, Twombly TS, Shi S, Fujiyoshi K, Kosumi K, Ogata Y, Baba H, Wang F, Wu K, Song M, Zhang X, Fuchs CS, Sears CL, Willett WC, Giovannucci EL, Meyerhardt JA, **Garrett WS**, Huttenhower C, Chan AT, Nowak JA, Giannakis M, Ogino S. Western-style Diet, pks Island-Carrying *Escherichia coli*, and Colorectal Cancer: Analyses from Two Large Prospective Cohort Studies. *Gastroenterology*. 2022 Oct;163(4): 862-874. PMID: 35760086.
 70. Cao YG, Bae S, Villarreal J, Moy M, Chun E, Michaud M, Lang JK, Glickman JN, Lobel L, and **Garrett WS**. Faecalibaculum rodentium Remodels Retinoic Acid Signaling to Govern Eosinophil-Dependent Intestinal Epithelial Homeostasis. *Cell Host & Microbe*. 2022. 30(9): 1295-1310. PMID: 35985335. PMC9481734.
 71. Lynch JP, González-Prieto C, Reeves AZ, Bae S, Powale U, Godbole NP, Tremblay JM, Schmidt FI, Ploegh HL, Kansra V, Glickman JN, Leong JM, Shoemaker CB, **Garrett WS**, Lesser CF. Engineered *Escherichia coli* for the in situ secretion of therapeutic nanobodies in the gut. *Cell Host & Microbe* 2023. 31(4) 534-649. PMID 37003258.
 72. Wang K, Mehta RS, Ma W, Nguyen LH, Wang DD, Ghazi AR, Yan Y, Al-Shaar L, Wang Y, Hang D, Fu BC, Ogino S, Rimm EB, Hu FB, Carmody RN, **Garrett WS**, Sun Q, Chan AT, Huttenhower C, Song M. *Microbiome*. 2023. 11(1): 121. doi:10.1186/s40168-023-01542-PMID: 37254152.

Other peer-reviewed publications

1. Shahabi S, Nathan LM, Chanana C, **Garrett WS**, Zheng W, Rutherford TJ. Liver metastasis in a case of adenoid cystic carcinoma of the Bartholin's gland: a rare presentation. Arch Gynecol Obstet. 2009;279(5):747-50. PMID: 18800221
2. **Garrett WS**, Glimcher LH. *T-bet^{-/-} Rag2^{-/-}* Ulcerative Colitis: the role of T-bet as a peacekeeper of host-commensal relationships. Cytokine. 2009;48(1-2):144-7. PMID: 19666239; PMCID: PMC2836906.
3. **Garrett WS**, Gordon JI, Glimcher LH. Homeostasis and inflammation in the intestine. Cell. 2010;140(6):859-70. PMID: 20303876; PMCID: PMC2845719.
4. Smith PM, **Garrett WS**. The gut microbiota and mucosal T cells. Front Microbiol. 2011;2:111. PMID: 21833339; PMCID: PMC3153059.
5. Rooks MG, **Garrett WS**. Bacteria, food, and cancer. F1000 Biol Rep. 2011;3:12. PMID: 21876723; PMCID: PMC3155156
6. Wardwell LH, Huttenhower C, **Garrett WS**. Current concepts of the intestinal microbiota and the pathogenesis of infection. Curr Infect Dis Rep. 2011;13(1):28-34. PMID: 21308452; PMCID: PMC3077078.
7. Ballal SA, Gallini CA, Segata N, Huttenhower C, **Garrett WS**. Host and gut microbiota symbiotic factors: lessons from inflammatory bowel disease and successful symbionts. Cell Microbiol. 2011; 13(4):508-17. PMID: 21314883
8. Howitt MR, **Garrett WS**. A complex microworld in the gut: gut microbiota and cardiovascular disease connectivity. Nat Med. 2012;18(8):1188-9. PMID: 22869188
9. Segata N, Boernigen D, Tickle TL, Morgan XC, **Garrett WS**, Huttenhower C. Computational meta'omics for microbial community studies. Mol Syst Biol. 2013;9:666. PMID: 23670539; PMCID: PMC4039370.
10. Kostic AD, Howitt MR, **Garrett WS**. Exploring host-microbiota interactions in animal models and humans. Genes Dev. 2013;27(7):701-18. PMID: 23592793 PMCID: PMC3639412.
11. **Garrett WS**. Kwashiorkor and the gut microbiota. N Engl J Med. 2013;368(18):1746-7. PMID: 2363056
12. Bornigen D, Morgan XC, Franzosa E, Ren B, Rammik RJ, **Garrett WS**, Huttenhower C. Functional profiling of the gut microbiome in disease-associate inflammation. Gen Med. 2013;5(7):65. PMID: 23906180; PMCID: PMC3978847.

13. Kostic AD, Chun E, Meyerson M, **Garrett WS**. Microbes and Inflammation in Cancer. *Cancer Immunol Res*. 2013;1(3):150-7. PMID: 24777677
14. Sears CL, **Garrett WS**. Microbes, Microbiota, and Colon Cancer. *Cell Host Microbe*. 2014;15(3):317-28. PMID: 24629338; PMCID: PMC4003880
15. **Garrett WS**. The Microbiota and Cancer. *Science*. 2015;348(6230):80-6. PMID: 25838377; PMCID: PMC5535753.
16. Song M, **Garrett WS**, Chan AT. Nutrients, Food, and Colorectal Cancer Prevention. *Gastroenterology*. 2015;148(6):1244-60.e16. PID: 25575572; PMCID: PMC4409470.
17. Hold GL, **Garrett WS**. Gut microbiota. Microbiota organization-- a key to understanding CRC development. *Nat Rev Gastroenterol Hepatol*. 2015;12(3): 128-9. PMID: 25688055
18. Rooks MG, **Garrett WS**. Gut microbiota, metabolites, and host immunity. *Nat Rev Immunol*. 2016;16(6):341-52. PMID: 27231050; PMCID: PMC5541232.
19. Lobel L, **Garrett WS**. Take DAT, Flu! Immunity. 2017;47(3):400-2. PMID: 28930655.
20. Lavoie S, **Garrett WS**. Fighting Fire with Fiber: Preventing T Cell Infiltration in Diabetes. *Cell Metab*. 2017;26(1):8-10. PMID 28683297.
21. Lavoie S **Garrett WS**. The Unfolding Story of ATF6, Microbial Dysbiosis, and Colorectal Cancer. *Gastroenterology*. 2018;155(5):1309-11. PMID: 30300614.
22. Ogino S, Nowak JA, Hamada T, Phipps AI, Peters U, Milner DA, Giovannucci EL, Nishihara R*, Giannakis M*, **Garrett WS***, Song M*. Integrative analysis of exogenous, endogenous, tumour, and immune factors for precision medicine. *Gut*. 2018;67:1168-80. PMID: 29437869; PMCID: PMC29437869.
23. Brennan CA, **Garrett WS**. *Fusobacterium nucleatum* - symbiont, opportunist and oncobacterium. *Nat Rev Microbiol*. 2019;17(3):156-66. PMID: 30546113; PMCID: PMC6589823.
24. Lobel L, **Garrett WS**. Butyrate Makes Macrophages "Go Nuclear" against Bacterial Pathogens. *Immunity*. 2019;50(2):275-78. PMID: 30784572
25. Pizarro TT, Stappenbeck TS, Rieder F, Rosen MJ, Colombel JF, Donowitz M, Towne J, Mazmanian SK, Faith JJ, Hodin RA, **Garrett WS**, Fichera A, Poritz LS, Cortes CJ, Shtraizent N, Honig G, Snapper SB, Hurtado-Lorenzo A, Salzman NH, Chang EB. Challenges in IBD Research: Preclinical Human IBD Mechanisms. *Inflamm Bowel Dis*. 2019;25 (Suppl_2): S5S12. PMID: 31095705
26. **Garrett WS**. The gut microbiota and colon cancer. *Science*. 2019;364(6446):1133-5. PMID: 31221845
27. **Garrett WS**. Immune recognition of microbial metabolites. *Nat Rev Immunol*. 2020;20: (2):91-

2. PMID: 31768024
28. **Garrett WS.** Enterococcus in Graft-versus-Host Disease. *N Engl J Med.* 2020;382(11):1064-66. PMID: 32160669
29. **Garrett WS.** Microbial Nourishment for Undernutrition. *N Engl J Med.* 2021;384(16):1566-67. PMID: 33826813
30. Cable J, Pourquié O, Wellen KE, Finley LWS, Aulehla A, Gould AP, Teleman A, Tu WB, **Garrett WS**, Miguel-Aliaga I, Perrimon N, Hooper LV, Walhout AJM, Wei W, Alexandrov T, Erez A, Ralser M, Rabinowitz JD, Hemalatha A, Gutiérrez-Pérez P, Chandel NS, Rutter J, Locasale JW, Landoni JC, Christofk H. Metabolic Decisions in Development and Disease- a Keystone Symposia Support. 2021. *Ann NY Acad Science.* PMID: 34414571.
31. Clay SL, Fonseca Pereira D, and **Garrett WS.** Colorectal Cancer: The Facts in the Cases of the Microbiota. 2022. *Journal of Clinical Investigation.* 132(4):e115101. PMID:35166235.
32. Kennedy KM, de Goffau MC, Perez-Muñoz ME, Arrieta MC, Bäckhed F, Bork P, Braun T, Bushman FD, Dore J, de Vos WM, Earl AM, Eisen JA, Elovitz MA, Ganai-Vonarburg SC, Gänzle MG, **Garrett WS**, Hall LJ, Hornef MW, Huttenhower C, Konnikova L, Lebeer S, Macpherson AJ, Massey RC, McHardy AC, Koren O, Lawley TD, Ley RE, O'Mahony L, O'Toole PW, Pamer EG, Parkhill J, Raes J, Rattei T, Salonen A, Segal E, Segata N, Shanahan F, Sloboda DM, Smith GCS, Sokol H, Spector TD, Surette MG, Tannock GW, Walker AW, Yassour M, Walter J. Questioning the fetal microbiome illustrates pitfalls of low-biomass microbial studies. 2023. *Nature.* 613(7945):639-649. PMID: 36697862.
33. Porter LD, Goodman KA, Mailman J, **Garrett WS.** 2023 *Am Soc Clin Oncol Educ Book.* Patient Advocated and Researchers as Partners in Cancer Research: A Winning Combination. e100035. doi: 10.1200/EDBK_100035. PMID: 37167582
34. El Tekle G and **Garrett WS.** 2023. *Nature Reviews Cancer.* Bacteria in cancer initiation, promotion, and progression. *Accepted.*

Non-peer reviewed scientific or medical publications/materials in print or other media

Reviews, chapters, monographs and editorials

1. **Garrett WS**, Mellman I. Studies of endocytosis. In: Lotze MT, Thomson AW, editors. *Dendritic Cells: Biology and Clinical Applications.* San Diego: Academic Press; 1999. p. 693-708. Second edition, 2001, p. 213-29.
2. Albert ML, Bhardwaj N, Steinman RM, Turley S, **Garrett WS**, Mellman I and Inaba K. Uptake and presentation of phagocytosed antigens by dendritic cells. In: Tartakoff AM, Gordon S, editors. *Phagocytosis: The Host*, volume 5. Stamford: Jai Press, Inc.; 1999. p. 363-78.
3. **Garrett WS**, Onderdonk AB. *Bacteroides*, *Prevotella*, *Porphyromonas*, and *Fusobacterium* Species (and Other Medically Important Anaerobic Gram-Negative Bacilli). In: Mandell GE, Bennett JE, Dolin R, editors. *Mandell's Principles and Practices of Infectious Disease*, 7th

edition. Philadelphia: Churchill Livingstone; 2009. p. 3111-19. 8th edition. Vol. 2. Philadelphia, Elsevier/Saunders; 2015. p. 2773-80. 9th edition. Vol. 2. Philadelphia, Elsevier/Saunders; 2019. 247; 2969-76.

4. **Garrett WS**, Onderdonk AB. Gas Gangrene and Other Clostridium-Associated Diseases. In: Mandell GE, Bennett JE, Dolin R, editors. Mandell's Principles and Practices of Infectious Disease, Medically Important Gram Negative Anaerobic Rods, 7th ed. Philadelphia: Churchill Livingstone; 2009. p. 3103-09. 8th edition. Philadelphia, Elsevier/Saunders; 2015. p. 2768-72.
5. Smith PM, **Garrett WS**. Mucosal Immunology, The Mucosal Microbiota in the Induction and Regulation of Adaptive Immunity, 4th Edition. In: Mestecky J, Strober W, Russell MW, Cheroutre H, Lambrecht BN, Kelsall BL, editors. Waltham, MA, Elsevier, Inc.; 2015. p. 849-52.
6. Elianav E, **Garrett WS**, Trinchieri G, Wargo J. The cancer microbiome. Nat Rev Cancer. 2019. 19(7): 371-76.
7. **Garrett WS**, Onderdonk AB. Diseases Caused by Clostridium. In: Bennett JE, Dolin R, Blaser MJ, editors. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, 9th edition. Philadelphia, Elsevier/Saunders; 2019. 246; 2960-8.

Professional educational materials or reports, in print or other media

1. Rooks MG, **Garrett WS**. Sharing the Bounty. 2011. The Scientist, August 2011.
2. **Garrett WS**. From Cell Biology to the Microbiome: An Intentional Infinite Loop. 2015. J Cell Biol. 2015;210:7-8. PMC4494008.

Thesis

Garrett WS. The regulation of endocytosis in developing dendritic cells [dissertation]. New Haven (CT): Yale School of Medicine; 2001.

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