

EDUCATION

- 1993-1998 **Wake Forest University School of Medicine**
Ph.D., Molecular Genetics, May 1998
Winston-Salem, North Carolina
Dissertation: *Function of the early region 1B-55kD protein of adenovirus in promoting cell cycle-independent virus replication and mediating mRNA transport.*
Advisor: Dr. David A. Ornelles
Major Fields: Virology, Molecular Biology, Immunology
- 1988-1992 **Virginia Polytechnic Institute and State University (Virginia Tech)**
B.S., Biology, December 1992
Blacksburg, Virginia

POSTDOCTORAL

- 1999-2006 **Princeton University**
Princeton, NJ
Postdoctoral Fellow, Department of Molecular Biology
Mentor: Dr. Thomas Shenk
- 1998-1999 **Wake Forest University School of Medicine**
Winston-Salem, NC
Postdoctoral Fellow, Microbiology and Immunology
Mentor: Dr. David A. Ornelles

ACADEMIC APPOINTMENTS

- 2025-present **Professor, Geisel School of Medicine at Dartmouth**,
Department of Microbiology and Immunology
- 2019-2025 **Professor, University of Arizona**,
Department of Immunobiology, Department of Molecular and Cellular Biology, Department
of Cellular and Molecular Medicine
Professor, BIO5 Institute
- 2013-2019 **Associate Professor, University of Arizona**,
Department of Immunobiology
- 2006-2013 **Assistant Professor, University of Arizona**,
Department of Immunobiology

INSTITUTIONAL LEADERSHIP

- 2022-2025 **Associate Department Head**, Department of Immunobiology, University of Arizona

2017-2019	Co-Director , Graduate Program in Molecular Medicine, University of Arizona
2014-2016	Director , Graduate Program in Immunobiology, University of Arizona

OTHER PROFESSIONAL APPOINTMENTS

2022-2027	Joint-Editor in Chief, <i>Journal of Virology</i>
2021-2022	President, American Society of Virology
2020-2021	President-elect, American Society of Virology
2015-2021	Standing member, National Institutes of Health Virology A Study Section

HONORS and AWARDS

2000-2003	Leukemia and Lymphoma Society, Fellow
2003-2005	Leukemia and Lymphoma Society, Special Fellow
2005-2010	Howard Temin Career Development Award
2008	Junior Faculty International Conference Travel Award, University of Arizona
2008-2011	Young Investigator Award, Human Frontiers in Science
2008-2012	Pew Scholar in Biomedical Sciences
2008	Presidential Early Career Award for Scientists and Engineers (PECASE) 100 scientists/engineers chosen among nominees from 9 federal agencies
2009	Top 20 (out of 1,592) Reviewers for the <i>Journal of Virology</i>
2009	Kavli Fellow, National Academy of Sciences
2010	Priscilla A. Schaffer Lectureship, International Herpesvirus Workshop
2012	Top 25 Reviewers for the <i>Journal of Virology</i>
2012	Robert Honess Lecturer, American Society for Virology
2013	Wake Forest University Hooding and Awards Convocation, Distinguished Speaker
2014	Jamie McNew Endowed Lecturer, University of Minnesota
2018-2021	Councilor for Animal Viruses, American Society for Virology
2018	Public Voices Fellowship, Women's Foundation of Southern Arizona
2019	American Academy of Microbiology, Elected Fellow
2020-2021	President-elect, American Society for Virology
2020	National Institutes of Health MERIT Award, NIAID
2021-2022	President, American Society for Virology
2022	Edith Sayer Auslander Emerging Visionary, University of Arizona's Commission on the Status of Women
2023-2024	Executive Leadership in Academic Medicine (ELAM), fellow
2023	Woman of Impact Award, University of Arizona

PROFESSIONAL DEVELOPMENT (since 2010)

2023-2024	Executive Leadership in Academic Medicine (ELAM) Fellowship
2022	Culturally Aware Mentoring Course, National Research Mentoring Network
2022	The Art of Chalk Talks, Harvard/MIT Broad Institute Systems Virology
2021	Diversity, Equity and Inclusion workshop on considering diversity in recruitment
2021	Diversity, Equity and Inclusion workshop on intrinsic bias
2018	Public Voices Fellowship, The Op-Ed Project
2018	Made it Happen: How an Invention Goes from Lab to License Seminar
2018	Workshop on Negotiation
2017	Graduate Enrollment Management Workshop Series (7 sessions)
2017	Write Winning NIH Grant Proposals
2015	Leader of the Pack: Rethinking Leadership Styles for Faculty Leaders
2015	Making your Candidate Statement
2015	Going up for Full Workshop
2015	Publish, not Perish: How to Write Better and Faster Workshop
2013	Publish or Perish Workshop
2010-2011	Learning to Lead, College of Medicine Leadership Program

MAJOR COMMITTEE ASSIGNMENTS and SERVICE

Professional Society Memberships and Elected Offices

Member

2009-	American Society for Virology (ASV)
2009-	American Society for Microbiology (ASM)
2010-	American Academy for the Advancement of Science (AAAS)

Office

2020	President-elect, ASV
2021	President, ASV
2022	Past-president, ASV

Scientific Advisory and Organizing Committees

National/International

2009	Scientific Advisory Committee, 12 th International CMV/Betaherpesvirus Workshop
2010	Organizing Committee, 22 nd Kavli Frontiers of Science Symposium for the National Academy of Sciences
2010	Pew Scholars in Biomedical Sciences 2011 Annual Meeting Organizing Committee
2010	NIH Director's Big Think Meeting, Bethesda, MD (invitation from Dr. Francis Collins)
2011-	Trustee, Priscilla A. Schaffer Foundation
2012-2014	Board of Directors, Brendan B. McGinnis Congenital CMV Foundation
2012	Scientific Advisory Committee, 37 th International Herpesvirus Workshop, Alberta Canada
2012	Career Development Discussion Leader, ASV Annual Meeting
2013	Scientific Advisory Committee, 38 th International Herpesvirus Workshop, Michigan
2013	Co-Chair, 38 th International Herpesvirus Workshop, Session on Virus-Cell Interactions
2014	Scientific Advisory Committee, 39 th International Herpesvirus Workshop, Kobe, Japan
2015	Local Organizing Committee, 40 th International Herpesvirus Workshop, Boise, Idaho
2015	Organizing Committee, 30 th Pew Scholars Reunion
2016	Scientific Advisory Committee, 41 st International Herpesvirus Workshop, Madison, WI

2017	Scientific Advisory Committee, 42 nd International Herpesvirus Workshop, Ghent, Belgium
2018	Conference Organizer, 43rd International Herpesvirus Workshop - Vancouver
2018-2021	Councilor for Animal Virology, Council of the American Society of Virology (elected)
2018-2021	Co-Chair, ASV Cares Committee to develop framework and implement access for family and dependent care support at ASV Annual Conferences
2018-2019	Scientific Advisory Committee, 7 th International Congenital CMV Conference and 17 th International CMV Workshop, Birmingham, AL
2018-2019	Program Advisory Committee, 44 th International Herpesvirus Workshop
2019-	External Advisory Board, NIH T32 Virus-host interactions: a multiscale training program, University of California, Irvine
2019-	External Advisory Board Member, Center for viral emergence and host response, University of California, Irvine
2020-2024	Pew Scholars Alumni Review Committee, Biomedical Scholars Program
2019-2021	International Review Committee, 45 th International Herpesvirus Workshop
2020	Discussion table leader for trainees (topics: Leading a lab and scientific writing), ASV Annual Conference,
2020-2025	Scientific Advisory Board, Program Project Grant; Herpes Simplex Virus Latency (PIs: David Knipe, David Leib, Donald Coen)
2021	Organizer, American Society of Virology Satellite Session: Shaping the Infected Cell Proteome, 40 th Annual Meeting
2021	Organizer, Vaccine Townhalls, American Society of Virology
2021-	External Advisory Board, NIH T32 Immunology and Molecular Pathogenesis, Northwestern University, Chicago, IL
2021-2022	International Scientific Advisory Committee, 8 th International Congenital CMV and 18 th International CMV Workshop
2022	Co-organizer, The History and State of DNA Virus Biology Symposium, Princeton University, Long Beach Island, NJ
2022-2023	Chair, Nominations Committee, ASV
2022-2023	Member, DEI Committee, ASV
2022	Invited Speaker, NIH Listen Session: US Gov't Oversight Framework for Research Involving Enhanced Potential Pandemic Pathogens
2023-	Mentor, ASV Mentoring Program
2023-2024	Chair, Herpesviridae Family Group, Prioritization Advisory Committee, World Health Organization (WHO)-led prioritization of pathogens with pandemic threat
2023-2024	Organizing Committee Member, <i>Viruses</i> 5 th International Virology Conference
2025-2029	Scientific Advisor, NIH T32 Viral Persistence and Pathogenesis, University of Pittsburgh
2025-	Steering Committee, International Herpesvirus Workshop
2025-	Member, External Research Advisory Board for LSU Health Shreveport
<i>Study Section Grant Review Service</i>	
Nov 2012	National Institute of Health, Infectious Disease and Microbiology Fellowship study section
Mar 2013	National Institute of Health, Topics in Virology and Viral Pathogenesis, Special Emphasis Panel
Jun 2013	National Institute of Health, Virology B, Study Section (mail in)
Jan 2014	American Heart Association, Immunology/Basic Science III Reviewer
Oct 2014	National Institute of Health, Virology A, <i>Ad hoc</i> study section
2015-2021	National Institute of Health, Virology A, Standing Member

Institutional

University of Arizona

2017	Department Chair Search Committee, Department of Molecular and Cellular Biology
2017	Postdoctoral Task Force, Led by VP Business, Affairs, & Human Resources
2017-2020	Co-organizer, Annual Arizona State University-University of Arizona joint virology symposium
2019-	University of Arizona Imaging Cores-Life Sciences North Facility, Advisory Committee Member
2020-2023, 2024	Chair, Regents Professor Nominating Committee for Dr. Janko Nikolich-Žugich
2020	Pillar Co-Leader, Collaborative for Global Adaptive Pandemic Solutions (CGAPS): Pandemic Control, Prediction and Preparedness
2021-2023	Appointed Member, Research Innovation and Impact Faculty Foresight Council

College of Medicine/Arizona Health Sciences (since 2010)

2013-2019	Committee of Ten
2015	Dean's Graduate Program Advisory Committee
2015	Faculty Forward Research Committee
2016-2017	Search Committee Member: Division Chief of Gastroenterology, Dept. of Medicine
2017	Search Committee Member: Division Chief of Pulmonary, Allergy, Critical Care and Sleep, Dept. of Medicine
2018	Pilot and Exploratory Core Co-Director for ChiiLi Center (Aging)
2023	Co-Chair, Cellular and Molecular Medicine Department Head Search

Other

2013	Chair, Five-year Review Committee for Department Head, Janko Nikolich-Žugich
2014-2015	Faculty Fellows Mentoring Program, Mentor
2016-2017	Faculty Fellows Mentoring Program, Mentor
2019	Steering Committee, Nikon Center of Excellence
2019-	Advisory Board, Bioinformatics Shared Resource
2022	UAHS Career Development Award Reviewer

University of Arizona Departments: Immunobiology (IMB) or Molecular and Cellular Biology (MCB) (since 2010)

2008-2011	Seminar Series Director (IMB)
2008-2022	Faculty Search Committee (IMB)
2011	Academic Program Review, Self-study and Faculty Committees (IMB)
2020	COVID-19 Committee for Opening Research Laboratories within the Pandemic
2022-2025	Chair, Strategic Recruitment Committee, Immunobiology

University of Arizona Graduate Programs: Biochemistry and Molecular Cell Biology (BMCB), Genetics Graduate Interdisciplinary Program (GIDP), or Arizona Biomedical and Biological Sciences (ABBS) (since 2010)

2009-2015	Executive Committee, Genetics Graduate Interdisciplinary Program
2010	Admissions Committee, ABBS
2013-2016	Executive Committee, BMCB Graduate Program

Geisel School of Medicine at Dartmouth

09/2025	SYNERGY Pilot letter of intent review panel
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External Reviewer for Promotion and Tenure

2015	Georgia State University
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2015	Louisiana State University Health Sciences Center
2015	University of Montana
2016	University of North Carolina at Chapel Hill
2017	University of Rochester
2018	Upstate Medical University
2018	Oregon Health and Science University
2019	Pennsylvania State University
2019	Oregon Health and Science University
2020	Indiana University
2020	University of Kansas
2021	Harvard Medical School
2021	University of Virginia
2021	Louisiana State University Health
2021	University of Nebraska – Lincoln, Nebraska Center for Virology
2021	University of Michigan-Ann Arbor
2021	University of Iowa
2022	University of North Carolina, Chapel Hill
2022	Barnard College
2022	University of Massachusetts, Amherst
2022	Emory University
2023	University of Tennessee
2023	University of Washington, Fred Hutchinson Cancer Research Center
2023	Pennsylvania State University
2023	University of Pennsylvania, Perelman School of Medicine
2023	Louisiana State University Health Sciences
2023	Wake Forest University
2024	University of Plymouth
2024	Mt. Sinai, Ichan School of Medicine
2024	University of North Carolina, Chapel Hill
2024	University of Virginia
2024	Duquesne University
2024	Arizona State University
2024	Emory University
2024	University of Pittsburgh
2024	University of California - Los Angeles
2025	Wistar Institute, University of Pennsylvania
2025	University of Miami
2025	Upstate University-SUNY

INSTITUTIONAL CENTER or PROGRAM AFFILIATIONS

University of Arizona

2006-2025	Member, Arizona Cancer Center
	Chaired Pew-Steward Scholar Nominee Committee, 2020 and 2022
2009-2015	Executive Committee Member, Genetics Graduate Interdisciplinary Program

EDITORIAL BOARDS

2008-2019	Editorial Board, <i>Journal of Virology</i>
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2013-2016	Editorial Board, <i>Virology</i>
2014-2019	Associate Editor, <i>Journal of Virology</i> Gems
2015-2026	Editor, <i>mSphere</i>
2016-2019	Editor, <i>Virology</i>
2019-2022	Editor, <i>Journal of Virology</i>
2022-2027	Joint-Editor in Chief , <i>Journal of Virology</i>
2020-2023	Associate Editor, <i>PLoS Pathogens</i> Pearls

JOURNAL REFEREE ACTIVITY

2015-present	<i>Nature</i> – 3 manuscript reviews in 2019, 2021, 2021 <i>Nature Communications</i> – 5 manuscript reviews in 2018, 2021, 2022, 2024, 2025 <i>Nature Microbiology</i> <i>Science</i> - 1 manuscript review 2024 <i>Cell Reports</i> - 2 manuscript reviews in 2024, 2025 <i>PLoS Pathogens</i> - >10 manuscript reviews <i>PNAS</i> - 3 manuscript reviews in 2018, 2019, 2022 <i>mBio</i> – 5 manuscript reviews in 2013, 2016, 2018, 2019, 2023 <i>Due to editorial board workload described above, I currently decline ~75% of invitations to referee</i>
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ENGAGEMENT, ADVOCACY, COMMUNITY SERVICE and COMMUNITY EDUCATION

National Outreach

2016-2018	Communications Committee Member, American Society for Virology (ASV)
09/2020	Speaker, What is Scientific Activism? Columbia University School of Medicine NY, NY Pediatric Infectious Diseases, Scientific Grand Rounds
10/2020	Speaker, What is Scientific Activism? University of North Carolina, Chapel-Hill Department of Microbiology and Immunology
07/2021	Speaker, Communications Workshop- Debunking Disinformation, ASV
10/2021	Created and co-Chaired Global Partnerships and Advocacy Committee (GPAC), ASV
05/2022	American Society for Microbiology (ASM) Advocacy Training
05/2022	ASM Advocate, Hill Day (1.5 day meeting with offices of US Senators and Representatives to advocate for scientific policy)
05/2022	Speaker, ASM Public Policy and Advocacy Townhall
2022-2023	Member, Diversity, Equity and Inclusion Committee, ASV
01/2023	This Week in Virology (TWiV) with Vincent Racinello: Crouching Virus-Hidden Triggers
03/2023	Panel member, Women's History Month
03/2023	One Health Trust-One Health, One World Podcast with Maggie Fox: The Origins of COVID-19 – What scientific research tells us
03/2023	Progress, Potential and Possibilities Podcast with Ira Pastor: Rational Virology Research for Human Health and Pandemic Prevention
07/2024	Communications Discussion Host, International Herpesvirus Workshop

Regional Outreach

02/2011	Science Fair Judge, Sam Hughes School, Tucson Unified School District
05/2011	"What is a scientist", Sam Hughes School, Tucson Unified School District
01/2012	Scientific Inquiry, Girl Scouts of America, Troop 172
06/2012	Laboratory tour for Jennifer Darlund, Sponsor of Quality Jobs and Education Bill
02/2013	Science Fair Judge, Sam Hughes School, Tucson Unified School District
12/2013	Career Day, St. Michael's Middle School, Tucson, AZ
02/2015	Science Fair Judge, St. Michael's Middle School, Tucson, AZ
03/2015	Science City, Tucson Festival of Books
04/2015	Women in STEM Night at Desert View High School, Tucson, AZ
03/2016	Festival of Books, Immunobiology Booth, Tucson, AZ
11/2016	Spoke with students attending American Indian Youth Conference about research
03/2017	Science Café Speaker at Tucson Festival of Books, Tucson, AZ
04/2017	Panelist, Careers in Translational Research, Southern Arizona Biomedical Research Symposia
06/2017	Hosted research tour and discussion in BIO5 for minority high school students, AmeriSchool-College Prep Academy
11/2019	Arizona Science- Arizona Public Media interview: Trying to understand a virus that infects most of us
06/2020-08/2022	Advisory Committee for re-opening school during COVID-19 pandemic, St. Michaels Day School (30 hours/year)
06/2020-08/2022	Advisory Committee for re-opening school during COVID-19 pandemic, Second Street Children's School (3-4 hours/year)
03/2020	Arizona Daily Star interview: Warmer weather could slow coronavirus, but don't count on it
03/2020	Arizona Daily Star interview: Hundreds of bridge players may have been exposed to coronavirus
03/2020	Arizona 360 interview, Arizona Public Media: Coronavirus in Southern Arizona
03/2020	COVID-19 PPE Drive: UAHS Connect
03/2020	Arizona Department of Health, Creative Think Tank for the University, County and State COVID-19 Responses
04/2020	Arizona Science-Arizona Public Media Interview: How do we emerge from COVID-19 lockdown?
04/2020	Arizona Public Media Public Service Announcements for COVID-19 Handwashing Who is at risk?
04/2020	Arizona Public Media interview: ICE Data: Nearly half of detainees tested are positive for COVID-19
05/2020	Arizona 360 Interview, Arizona Public Media: Slowing the spread, businesses reopen, pandemic's economic impact
09/2020	Arizona 360 Interview, Arizona Public Media: Learning about COVID-19: Science, false positives and vigilance
03/2020	COVID-19 Interview for <i>Reveal</i> (Public Media): Is 14 days enough?
06/2020	<i>The Atlantic</i> interview: A devastating new stage of the pandemic
07/2020	<i>USA Today</i> Interview: COVID-19 impacts scientific research
01/2021	The Buzz Interview, Arizona Public Media: Pima County Expands COVID-19 Vaccine Rollout
02/2021	Vaccine Information Program, Community Food Bank of Southern Arizona
03/2021	The Science Behind Vaccines , Pew Charitable Trusts
03/2021, 9/2021	American Society for Virology, COVID-19 Vaccine Education Town Halls
03/2021	Vaccine Q & A townhall, Tucson Electric Power

03/2021 The Buzz Interview, Arizona Public Media: [Reflecting on Arizona's pandemic one year in](#)

03/2021 Arizona 360 Interview, Arizona Public Media: [Understanding COVID-19 Variants](#)

12/2021 KOLD Podcast: Conquering COVID-19, [Episode 7-Figuring Out Omicron](#)

03/2022 Catalina Foothills School District, student project mentoring

05/2022 Phoenix NPR KJZZ Interview: [What can the few who don't get COVID-19 teach us?](#)

05/2022 Arizona Republic Interview; USA Today: [There is a good change you have a virus called CMV. It might seem to have no effect- or it might be life-changing.](#)

03/2023 Arizona Daily Star Interview: [Evidence does not support COVID lab leak fervor](#)

09/2023 KOLD interview: [Are masks making a comeback, Tucson health officials weigh in on possible new CDC guidelines](#)

09/2023 Nature interview: [First global survey reveals who is doing 'gain of function' research on pathogens and why](#)

Institutional - University of Arizona (since 2010)

2010 Career Panelist, Expanding Your Horizons, Women in Science and Engineering (WISE) Program Conference

2017 Speaker at Program for the Advancement of Women Scientists, Department Chemistry and Biochemistry

2017 Postdoctoral Task Force, Led by VP Business, Affairs, & Human Resources

2020 Organizer, Predicting and Responding to Emerging Viruses and Pandemics Symposium

2021 University of Arizona Health Sciences, UA global, COVID-19 Response

2021 **Science Talks Podcast, [Episode5](#)**

2021 Panelist, UA Women in Cancer Research Panel, Cancer Research: Present and Future

2023 Panel Member, Inspiring Women in STEM symposium

2023 Research Day, Women in Medicine and Science Panel with Dr. Holly Ingraham

SPONSORED RESEARCH ACTIVITY

Federal Grants

Active

R37 AI079059 MERIT (PI: Goodrum)	07/01/2008 – 06/30/2029	2.88 calendar
NIH/NIAID		\$250,000/yr dc
Mechanisms of Human Cytomegalovirus Latency in Primary Human Hematopoietic Cells		
The goals of this grant are to characterize the UL133-UL138 latency/reactivation determinants and define the mechanisms by which they define states of infection.		
R01 AI169728 (PI: Goodrum)	02/07/2022-01/31/2027	1.8 calendar
NIH/NIAID		\$250,000/yr dc
Virus-host interactions regulating innate signaling for human cytomegalovirus latency		
The goal of this grant is to define the role of viral determinants important in the establishment of latency in regulating innate responses for latency.		
R01 AI177392 (MPI: Goodrum, Bosco)	06/16/2023 – 05/31/2028	2.0 calendar
NIH/NIAID		\$502,861/yr dc
Host DNA Repair Pathways in Human Cytomegalovirus Replication		

Define the mechanisms by which HCMV recruits and modulates specialized host polymerases for viral genome stability in replicative infection and in latency and reactivation.

R01 DK137411 (MPI: Wilson, Goodrum, Thorne, Paek) 04/01/2024 – 03/31/2028 1.2 calendar
NIH/NIDDK \$400,000/yr dc
Modulation of colonocyte barrier function and signaling by cytomegalovirus
Define the impact of CMV infection on colonic tight junctions, Erk and YAP signaling, proliferation/differentiation using colonic organoids to better understand the contribution of CMV to gut pathologies, including colitis.

P01 AI127335 (PIs: Nelson, Yurochko, Sub PI: Goodrum) 09/01/2017-08/31/2027 1.8 calendar
NIH/NIAID \$175,280/yr dc
Human Cytomegalovirus Dysregulation of Host Hematopoietic Progenitor Cell Signaling Pathways to Modulate Latency, Reactivation and Hematopoiesis During Transplantation
Define host signaling pathways modulated in CD34+ HPCs during infection and determine how these impact viral latency and hematopoiesis.

Pending

R01 GM163050 (MPI: Goodrum, Bosco) 07/01/2026 – 06/30/2031 2.0 calendar
NIH/NIGMS \$480,721/yr dc
Mechanisms of Break Induced Replication in Human Cells
We will define mechanisms of break induced replication in human cells using human cytomegalovirus

Past

T32 AG058503 (MPIs: Nikolich-Zugich and Goodrum) 04/01/2019 - 03/31/2028 1 calendar
Infection and Immunity as Drivers of Aging \$250,000/yr dc
To train Ph.D. students in the disciplines of infection and immunity to understand mechanisms by which infection and immunity impact the biology of aging

R01 AI131598 (PIs: Goodrum, Sub: Wilson) 03/01/2018 – 03/31/2023 3 calendar
CMV Control of Host Membrane Trafficking \$250,000/yr dc
Define host factors and membrane compartments associated with pUL135 and pUL136 while also identifying the mechanisms by which pUL135 and pUL136 control MVB biogenesis, host trafficking and virus replication

R01 AI143191 (MPIs: Goodrum, Moorman, and Kamil) 09/01/2018 – 08/31/2023 2 calendar
Molecular Switch Regulating Human Cytomegalovirus Replicative and Latent States \$454,674
To investigate the role of novel promoters in re-initiating immediate early gene expression during reactivation.

R01 AI021640 (PI: Nelson/ Sub PI: Goodrum) 02/01/2013 - 01/31/2023 0.12 calendar
OHSU/sub-NIH \$50,000/yr dc
Molecular Aspects of Cytomegalovirus Latency
Analyzing 5 recombinant viruses or shRNAs in the CD34+ hematopoietic progenitor cell models of human cytomegalovirus latency to determine the roles in virus-host interactions identified by parent institution.

R01 AG048021 (PIs: Nikolich-Zugich, Goodrum) 07/15/2014 – 04/30/2019 1.3 calendar
NIH/NAI \$62,400/yr dc
Impact of CMV upon T-cell Aging and Immune Defense
Seek to define the cost of persistent CMV on host immune function (and lifespan) in aging and begin to define ways to intervene against the negative effects of CMV in aging.

U19 AI128949 (PIs: Farber, Sub PI: Goodrum) 12/01/2016 – 11/30/2021 0.96 calendar

NIH/NIAID		\$125,000/yr dc
Control of Anti-viral Immunity in Lymphoid and Mucosal Tissues		
Define the state of CMV infection in donor tissues and provide primary human cells infected with CMV to parent institution.		
R01 AI083281 (PI: Terhune, Sub PI: Goodrum)	07/01/2017 - 06/30/2021	0.60 calendar
NIH/NIAID		\$31,785/yr dc
Impact of HCMV proteins on viral replication and cellular signaling pathways		
To investigate the importance of UL27 and UL97 in licensing DNA replication during latency and reactivation.		
R56 AI105062 (PI: Goodrum)	08/20/13-07/31/15	1.6 calendar
NIH/NIAID		\$262,454
Antagonistic Viral Determinants Regulating the Outcome of Infection		
To prove that pUL135 functions to overcome pUL138-mediated suppression of viral replications; to define the requirement of UL135 in infection and to determine the mechanisms by which it promotes viral replication and reactivation from latency.		
K01 CA343111 (PI: Goodrum)	07/01/05 – 06/30/10	3.0 calendar
NIH/NCI		\$763,018
Human Cytomegalovirus Latency in Hematopoietic Cells		
To define viral determinants of latency		
R01AI079059 (ARRA Supplement, PI:Goodrum)	2010 - 2011	(total dc+idc) \$336,454
NIH/NIAID		
Mechanisms of Human Cytomegalovirus Latency in Primary Human Hematopoietic Cells		
To investigate virus infection and persistence in primary human endothelial cells.		

Private/International Foundation Grants

Past

Pew Innovation Award (PIs: Goodrum and tenOever)	12/01/2017-11/28/2019	1 calendar
Pew Program in the Biomedical Sciences		\$50,000/yr dc
Building a herpesvirus gene function atlas through cell-specific miRNA targeting		
To use miRNA technology and BAC recombineering to knockdown essential viral genes in a cell type specific manner.		
LIY0172/2008 (PIs: F. Goodrum, M. Nevels and E. Segal)	2008-2012	1.0 calendar
Human Frontiers Science Program Award for Young Investigators		\$1,050,000
Epigenetic program of Human Cytomegalovirus Pathogenesis		
Collaborative project with Dr. Michael Nevels (University of Regensburg, Germany) and Dr. Eran Segal (Weizmann Institute, Israel)		
Pew Scholar in Biomedical Sciences (PI: Goodrum)	2008-2012	1.0 calendar
Viral latency and Hematopoietic Cell Function <i>in vivo</i>		\$240,000
To develop a humanized mouse model of human cytomegalovirus latency to test viral determinants of latency.		
Flinn Foundation (PIs: Knox, Sullivan, Goodrum)	09/01/13 – 08/30/15	0.06 calendar
Defining the Pulmonary Virome and the Impact of CMV Persistence		\$100,000
Acquiring and cataloguing clinical BAL samples stratified by infection and clinical status to sequence the background virome using methods developed for ocean viruses.		

Intramural Grants

Past

American Cancer Society-Institutional Research Grant (PI: Goodrum)	2007 - 2008
Characterization of a Human Cytomegalovirus Determinant for Viral Latency	\$20,000

Biology of Aging Pilot Grant, Arizona Center on Aging (PIs: G. Bosco, K. Knox, F. Goodrum)	2009-2010
Nuclear Dysorganization and Viral Persistence as Coordinated Drivers of Aging in Humans	\$20,000

PROGRAM DEVELOPMENT

Graduate Program in Molecular Medicine (GPMM): In an initiative to increase critical mass and meet Arizona Board of Regent's matriculation metrics for University of Arizona graduate programs, I designed a program merger between the Graduate Program in Immunobiology and the Graduate Program in Cellular and Molecular Medicine. This required speaking to department and graduate program stakeholders and communicating the need for and benefits associated with the merger, while also acknowledging the challenges and potential pitfalls and designing workable solutions to these. I worked with stakeholders to design a unified curriculum. The Program merger was approved by the Governing Board of Graduate Studies in 2017 and I co-directed this program for two years. I stepped down in 2019 to lead the submission and then direct the T32 training grant discussed below.

Infection and Inflammation as Drivers of Aging (IIDA): The University of Arizona had very few T32 NIH training grants. I developed the IIDA training program and pitched it to multiple program officers at NIH to determine the institute that would be the best fit - we chose to apply to the National Institute for Aging. I then wrote the application, which was successful and co-directed the IIDA program with the department chair of Immunobiology and an expert in aging, Dr. Janko Nikolich. We renewed the training grant in 2023.

Global Partnerships and Advocacy Committee (GPAC) of the American Society for Virology (ASV). I served as ASV President from 2021-2022. One of my initiatives was to develop GPAC with the goal to strengthen the international network of virologists, to empower and support virologists from low-to-middle income countries and to support scientific advocacy, particularly virology. I wrote and was awarded a grant from the Bill and Melinda Gates foundation that supported the travel for 25 virologists from low-middle income countries to attend the annual ASV conference. This is now in its 5th year. We also wrote OpEds for the public, as well as position pieces for scientists, published in Journal of Virology, mBio and/or mSphere. These were largely focused on the COVID-19 pandemic, vaccine safety and hesitancy, and the threats to science.

ENTREPRENEURIAL ACTIVITIES

US 11,617,788 B2 Viral Promoters and Compositions and Methods of Use Thereof
Inventors: F. Goodrum, Nathaniel Moorman, Jeremy Kamil

BIBLIOGRAPHY

ORCID: <https://orcid.org/0000-0002-6646-7290>

NCBI: <https://www.ncbi.nlm.nih.gov/myncbi/felicia%20d.goodrum.1/bibliography/public/>

Peer-reviewed Journal Articles

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Commentary

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Scholarly Book Chapter

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4. **Goodrum, F.**[†] 2022. The complex biology of human cytomegalovirus latency and reactivation. In *Adv.Virus Res.* v112. Aug 1. [PMID:35840181](#)

5. **Goodrum, F.[†]**, W. Britt, and E. Mocarski. Cytomegaloviruses. In D. M. Knipe, P. M. Howley eds. *Fields Virology*, 7th Ed. Wolters Kluwer, 2022. Chp 12: 389-444.
6. **Goodrum, F.[†]**, K. Frueh, S.R. Permar. Cytomegaloviruses. In D. M. Knipe, P. M. Howley eds. *Fields Virology*, 8th Ed. Wolters Kluwer, 2025. Chp 72: *in press*.

Opinion Editorials

1. **Goodrum Sterling, F.** 2018. [Science education must reflect reality: we have only 12 years to stop climate change](#). *The Hill*. Nov 10.
2. Carney, M., **F. Goodrum Sterling**, and R. Gonzalez. 2018. [Challenges to health equality go beyond having insurance](#). *Arizona Daily Star*. Dec 16.
3. **Goodrum Sterling, F.** and H. L. Pottinger. 2019. [Everyone has a part to play in ending vaccine hesitancy](#). *The Health Care Blog*. Feb 12.
4. Pottinger H.L. and **F. Goodrum Sterling[†]**. 2019. [Vaccines exemptions create problems for states](#). *The Hill*. Mar 22.
5. **Goodrum Sterling, F.** 2019. [Pressure on high-achieving students can lead to failure](#). *Arizona Daily Star*. May 12.
6. McCoy, A. and **F. Goodrum Sterling[†]**. 2019. [Climate crisis can't break through noise of trade war and Mueller probe](#). *The Hill*. May 17.
7. **Goodrum Sterling, F.** 2019. [How to create great adults? Childhood](#). *Arizona Daily Star*. July 31.
8. **Goodrum Sterling, F.** 2019. [How do we know what we know?](#) *Scientific American Blogs*. Nov 24.
9. **Goodrum Sterling, F.[†]** and J. Alwine. 2020. [The novel threat of COVID-19](#). *Arizona Daily Star*. March 13. Editor's Pick.
10. Alwine, J. and **F. Goodrum Sterling[†]**. 2020. [We the people confront COVID-19](#). *The Hill*. March 15.
11. Alwine, J. and **F. Goodrum Sterling[†]**. 2020. [The COVID-19 surge is coming to Arizona-unless we take steps now](#). *Arizona Capitol Times*. March 19.
12. Alwine, J. and **F. Goodrum Sterling[†]**. 2020. [Only swift isolation, testing can stem COVID-19 boom in Arizona](#). *Arizona Daily Star*. March 20.
13. **Goodrum Sterling, F.[†]** and J. Alwine. 2020. [How will we exit the COVID-19 lockdown?](#) *The Hill*. April 14.
14. **Goodrum Sterling, F.[†]** and J. Alwine. 2020. [Learning from COVID-19 for the coming pandemics](#). *The Hill*. April 27.
15. **Goodrum Sterling, F.[†]** and J. Alwine. 2020. [Ducey's stay-home order is working against COVID-19, and rushing to lift it is dangerous](#). *Arizona Daily Star*. April 30.

16. Alwine, J. and **F. Goodrum Sterling**. 2020. [Manipulation of pandemic numbers for politics risks lives](#). *The Hill*. May 26.
17. Alwine, J. and **F. Goodrum Sterling**. 2020. [The potential dangers of a warp speed vaccine](#). *Medium*. June 12.
18. Alwine, J. and **F. Goodrum Sterling**. 2020. [Turn Back the Pandemic](#). *The Hill*. June 29.
19. Alwine, J. and **F. Goodrum Sterling**. 2020. [‘Live with it’ is the new GOP response to COVID- but no, we can’t do that](#). *The Hill*. July 12.
20. Goodin, M. and **F. Goodrum Sterling**. 2020. [COVID-19: Focus on the science and facts to save many lives](#). *The Hill*. Sept 1.
21. Alwine, J. and **F. Goodrum Sterling**. 2020. [The race to a COVID-19 vaccine requires a pledge for safety and efficacy](#). *The Hill*. Sept 8.
22. **Goodrum Sterling, F.** and J. Alwine. 2020. [Forget politics and take COVID-19 seriously](#). *The Hill*. Oct 5.
23. Alwine, J. and **F. Goodrum Sterling**. 2020. [Trump was saved by science he dismisses](#). *The Hill*. Oct 14.
24. **Goodrum Sterling, F.** and J. Alwine. 2020. [Science seeks truth, Trump denies it](#). *The Hill*. Oct 24.
25. **Goodrum Sterling, F.** and J. Alwine. 2020. [Pfizer COVID-19 announcement: Early victories in a race not yet won](#). *The Hill*. Nov 9.
26. Alwine, J. and **F. Goodrum Sterling**. 2020. [With COVID-19 surging, freedom comes with responsibility](#). *Arizona Daily Star*. Nov 22. Editor’s Pick.
27. Alwine, J. and **F. Goodrum Sterling**. 2020. [Personal Freedoms Should Not Trump Public Health During a Pandemic](#). *The Hill*. Dec 7.
28. Alwine, J., L. Enquist, and **F. Goodrum Sterling**. 2021. [Science—restoring the pride of America](#). *The Hill*. Jan 6.
29. Alwine, J. and **F. Goodrum Sterling**. 2021. [Arizonans must be vigilant until vaccines can make a difference](#). *Arizona Daily Star*. Jan 10.
30. **Goodrum Sterling, F.** and J. Alwine. 2021. [The knowns and unknowns of COVID-19 vaccines](#). *The Hill*. Jan 27.
31. Alwine, J. and **F. Goodrum Sterling**. 2021. [Slow vaccine rollout, COVID-19 variants call for increased mitigation measures](#). *Arizona Daily Star*. Feb 2. Editor’s pick.
32. Alwine, J. and **F. Goodrum Sterling**. 2021. [The vaccine leads the march to ending the COVID-19 pandemic](#). *The Hill*. Feb 26.
33. Alwine, J. and **F. Goodrum Sterling**. 2021. [How many deaths will it take to rekindle our humanity?](#) *The Hill*. May 3.

34. Alwine, J. and **F. Goodrum Sterling**. 2021. [The danger of the COVID-19 delta surge beginning in Arizona](#). *Arizona Daily Star*. Jul 27. Editor's pick.
35. Alwine, J., L. Enquist, and **F. Goodrum Sterling**. 2021. [To boost or not to boost-not a simple question](#). *The Hill*. Sept 7.
36. Alwine, J. and **F. Goodrum Sterling**. 2021. [A functional society would protect the most vulnerable from COVID-19](#). *The Hill*. Sept 16.
37. Alwine, J. and **F. Goodrum Sterling**. 2022. [An endemic COVID doesn't mean we stop fighting](#). *The Hill*. Feb 11.
38. Alwine, J. and **F. Goodrum Sterling**. 2022. [The viruses are winning: There's still time to fight back](#). *The Hill*. Aug 23.
39. Alwine, J. and **F. Goodrum Sterling**. 2023. [Virology is part of the golden age of science: Don't dismantle it](#). *The Hill*. Jan 29.
40. Alwine, J. and **F. Goodrum Sterling**. 2023. [Halting US virus research would endanger the world](#). *The Hill*. Aug 15

Published Images

Sam A, **Goodrum F**, Ricciotti R, Knox KS, Sobonya R. Medical image of the week: [CMV cytopathic effect](#). *Southwest J Pulm Crit Care*. 2014;9(6):341-2.

* Indicates work performed as a graduate student or postdoctoral trainee

† Indicates corresponding author is F. Goodrum

§ Indicates mentee/trainee of F. Goodrum

INVITED PRESENTATIONS

International Conferences: Invited/Selected Oral Presentations

07/2008	International Herpesvirus Workshop, Estoril, Portugal (selected talk)
05/2011	Gordon Research Conference on Viruses and Cells (invited lecture) Il Ciocco, Italy
03/2013	4 th International Workshop on CMV & Immunosenescence (invited speaker) Parma, Italy
05/2017	Gordon Research Conference on Viruses and Cells (invited lecture) Il Ciocco, Italy
07/2017	42 nd International Herpesvirus Workshop (Keynote Speaker) Ghent, Belgium
06/2022	Gene Expression and Host Response Programming in DNA Virus Infection (Invited speaker), Dubrovnik, Croatia
02/2024	Viruses 5 th International Virology Conference (Invited Speaker) Barcelona, Spain
09/2024	Tsinghua-American Society of Microbiology Symposium, Microbes in Human Health (Invited Speaker) Tsinghua University; Beijing, China

National Conferences

07/2006	International Herpesvirus Workshop, Seattle WA (selected talk)
07/2007	International Herpesvirus Workshop, Asheville, NC (selected talk)
05/2009	12 th International CMV/Betaherpesvirus Workshop, Boston, MA (invited talk)
11/2009	21 st Annual Kavli Frontiers of Science Symposium, Irvine, CA National Academy of Sciences (by invitation only)
06/2010	39 th Annual Meeting of the American Aging Association, Portland, OR Inflammation and Aging-Causes and Consequences (invited talk)
07/2010	29 th Annual Meeting of the American Society of Virology Bozeman, MT (selected talk)
07/2010	Inaugural Priscilla A. Schaffer Lectureship (Plenary lecture) International Herpesvirus Workshop, Salt Lake City, UT
11/2010	22 nd Annual Kavli Frontiers of Science Symposium, Irvine, CA National Academy of Sciences (by invitation only)
10/2011	American Society of Microbiology, 2 nd Manipulation of Nuclear Processes by DNA Viruses (invited lecture), Santa Fe, NM
07/2012	American Society of Virology, Madison, Wisconsin The Robert Honess Lecturer (Plenary)
11/2012	14 th International CMV/BetaHerpesvirus Workshop (Invited talk/panel) San Francisco, CA
11/2012	14 th International CMV/BetaHerpesvirus Workshop (selected talk) San Francisco, CA
07/2013	38 th International Herpesvirus Workshop (selected talk) Grand Rapids, MI
10/2014	14 th Annual Symposium in Virology (invited speaker) Nebraska Center for Virology, University of Nebraska, Lincoln
10/2014	3 rd Annual ASM Conference on Viral Manipulation of Nuclear Processes Washington, DC
07/2015	FASEB Microbial Pathogenesis: Mechanisms of Infectious Disease (invited speaker) Keystone, CO
06/2016	American Society of Virology (selected talk) Blacksburg, VA
07/2016	41 st International Herpesvirus Workshop (selected talk) Madison, WI
11/2016	6 th International Workshop on CMV and Immunosenescence (invited lecture and panel discussion leader) Tucson, AZ
09/2018	Cytomegalovirus Infection: Advancing Strategies for Prevention and Treatment (invited speaker) National Institutes of Health, Rockville, MD
04/2019	7th International Congenital CMV Conference & 17 th International CMV Workshop (Keynote Speaker) CMV Latency and Persistence
04/2020	Minisymposium on Pathogenic Human Viruses (invited speaker) Duke Center for Virology, Duke University
04/2021	Pathogenic Human Viruses, Duke University (Keynote Speaker)
07/2021	Shaping the Infected Cell Proteome, Satellite Session American Society of Virology Annual Meeting, Virtual
07/2021	45 th International Herpesvirus Workshop (selected talk), Virtual meeting

10/2022 NSF Physics of Living Systems Program, Cancer Convergence Education Network
Conference (Invited speaker), University of Vermont Cancer Center, Burlington

06/2023 American Society of Virology (Invited Symposium Speaker)
University of Georgia, Athens

07/2023 International Herpesvirus Workshop (Keynote Speaker)
University of Montana, Missoula

Invited Seminars from Outside Institutions

08/2007 Oregon Health and Science University, Portland, OR
Vaccine and Gene Therapy Institute

11/2007 University of Nevada, Reno
Department of Cell and Molecular Biology

02/2008 Medical College of Wisconsin, Milwaukee
Department of Microbiology and Molecular Genetics

02/2009 University of California, Irvine (Graduate student invited speaker)
Department of Microbiology and Molecular Genetics

12/2009 Mt. Sinai School of Medicine, New York, NY
Department of Microbiology

09/2010 Southern Illinois University School of Medicine
Medical Microbiology, Immunology and Cell Biology

03/2012 Cleveland Clinic
Department of Molecular Biology

04/2012 Wake Forest University School of Medicine
Department of Microbiology and Immunology

12/2012 Louisiana State University Health Sciences Center, Shreveport
Department of Microbiology and Immunology

02/2013 Washington University in St. Louis, School of Medicine, MO
Department of Pathology and Immunobiology

04/2013 University of North Carolina, Chapel Hill (Post-doctoral Association invited speaker)
Department of Microbiology and Immunology

03/2014 Jamie McNew Endowed Lectureship, University of Minnesota
Amplatz Children's Hospital

05/2014 SUNY Upstate Medical University, Department of Microbiology and Immunology
Graduate student invited speaker

02/2015 University of California, Irvine
Department of Microbiology and Molecular Genetics

04/2015 University of Michigan, Ann Arbor
Department of Microbiology and Immunology

12/2015 Vanderbilt University, Nashville, TN
Pediatric Infectious Disease Research Conference

01/2016 Harvard University, Boston, MA
Harvard, Medical School, Department of Microbiology and Immunology

06/2016 Dartmouth College, Hanover, NH
Geisel School of Medicine, Department of Microbiology and Immunology

07/2016 Northwestern University, Chicago, IL
P01 symposium, M. Abecassis

09/2016 University of Pennsylvania, Perelman School of Medicine
Department of Microbiology

04/2017 University of Illinois at Chicago, College of Medicine
Department of Microbiology and Immunology

04/2017 Pennsylvania State University, College of Medicine

11/2017	Department of Microbiology and Immunology University of California-Irvine, Department of Microbiology and Molecular Genetics Center for Virus Research
12/2017	Northwestern University Feinberg School of Medicine, Chicago, IL Dept. Microbiology and Immunology
03/2018	Wake Forest University School of Medicine, Winston-Salem, NC Dept. Microbiology and Immunology
04/2018	University of Virginia, Charlottesville, VA Department of Microbiology, Immunology and Cancer
10/2018	Temple University School of Medicine, Philadelphia, PA Fels Institute for Cancer Research
11/2018	University of Nevada-Reno Molecular Biosciences Graduate Student Invited Seminar
11/2018	Wayne State University School of Medicine, Detroit, MI Department of Biochemistry, Microbiology, and Immunology
12/2018	Arizona State University BioDesign Institute
02/2019	University of California, Irvine Department of Microbiology and Molecular Genetics
05/2019	University of Maryland-Baltimore, Baltimore, MD Virology Student-Invited Seminar
09/2019	University of Florida Department of Molecular Genetics and Microbiology
07/2020	Hannover Medical School, Germany Institute of Virology
12/2020	University of Pennsylvania Department of Microbiology, Penn Center for AIDS Research, Penn Genomics Institute, and Penn CHOP Microbiome Program
04/2021	Arizona State University, BioDesign Institute Viroholics Seminar Series
04/2021	University of St Andrews, Scotland Biomedical Sciences Research Complex
05/2021	University of Southern California Herman Ostrow School of Dentistry
06/2021	University of Chicago, IL Microbiology Seminar Series
09/2021	Mt Sinai, Ichan School of Medicine, NY Microbiology and Infectious Disease, Biomedical Sciences
11/2021	Indiana University Biology Department
03/2022	University of Virginia Department of Microbiology, Immunology, and Cancer Biology
04/2022	Tulane University Tulane School of Medicine
06/2022	University of Pittsburgh Department of Pediatrics
09/2022	University of Washington Department of Microbiology
04/2023	University of Pittsburgh Center for Vaccine Research
09/2023	National Institutes of Health, Virology Interest Group

11/2023 Northwestern University Feinberg School of Medicine, Chicago, IL
Dept. Microbiology and Immunology

03/2024 University of North Carolina, Chapel Hill
Dept. Microbiology and Immunology

05/2024 Tufts University School of Medicine
Dept. of Molecular Biology and Microbiology

06/2024 Dartmouth College, Geisel School of Medicine at Dartmouth
Molecular and Systems Biology Department

09/2024 The Ohio State University
OSU Infectious Disease Institute, Department of Microbial Infection and Immunity

11/2024 Dartmouth College, Geisel School of Medicine at Dartmouth
Dept. of Microbiology and Immunology

02/2025 Washington University, Department of Molecular Microbiology
St. Louis, MO

04/2025 Auburn University, Department of Biological Sciences
Auburn, AL

04/2025 Baruch S. Blumberg Institute, Evrys Bio
Doylestown, PA

02/2026 University of California – Davis
Martin Privalsky Memorial Lecture
Department of Microbiology and Molecular Genetics
Davis, CA

03/2026 Johns Hopkins Bloomberg School of Public Health
W. Harry Feinstone Dept. of Molecular Microbiology & Immunology
Baltimore, MD

05/2026 Brown University
Aging Colloquium
Providence, RI

Seminars - University of Arizona

08/2006 Biomedical Engineering Program, UA

09/2006 Department of Immunobiology Seminar Series, UA

10/2006 Department of Veterinary Sciences and Microbiology Seminar Series, UA

11/2006 Department of Molecular and Cellular Biology Seminar Series, UA

10/2007 Cancer Biology Interdisciplinary Graduate Program, AZCC, UA

06/2008 Department of Pediatrics, UA

07/2008 Minority Health Disparities Program, UA

03/2009 MicroLunch, Cross Campus Microbiology Focus Group, UA

04/2009 Graduate Interdisciplinary Program in Genetics, UA

03/2010 MicroLunch, Cross Campus Microbiology Focus Group, UA

08/2010 Cellular & Molecular Medicine/ Molecular & Cellular Biology Joint Seminar Series

09/2012 Department of Immunobiology, Seminar Series, UA

02/2013 MicroLunch, Cross Campus Microbiology Focus Group, UA

09/2013 MicroLunch, Cross Campus Microbiology Focus Group, UA

10/2013 Department of Pharmacology and Toxicology

01/2014 College of Medicine-Phoenix, Biomedical Sciences

05/2014 MicroLunch, Cross Campus Microbiology Focus Group, UA

02/2015 MicroLunch, Cross Campus Microbiology Focus Group, UA

04/2016 Cellular & Molecular Medicine/ Molecular & Cellular Biology Joint Seminar Series, UA

10/2018 School of Animal and Comparative Biomedical Science, UA

01/2020 Infectious Disease Grand Rounds, UA

03/2020	Department of Molecular and Cellular Biology, UA
11/2020	Department of Molecular and Cellular Biology, UA
09/2024	Genetics Graduate Interdisciplinary Program, UA
01/2025	Department of Molecular and Cellular Biology, UA
02/2025	Department of Immunobiology, UA

Seminars – Dartmouth College

01/2026	Institute for Biomolecular Targeting (BioMT)
03/2026	Dartmouth Cystic Fibrosis Research Center (DartCF)

Symposia and Colloquia - University of Arizona

01/2007	Frontiers in Medical Research, Data Blitz, UA
04/2007	Frontiers in Immunobiology and Immunopathogenesis Symposium, UA
02/2008	Know Your Neighbor, University of Arizona, BIO5 Institute
03/2008	Genomics Data Blitz, UA ADVANCE
03/2012	Frontiers in Immunobiology and Immunopathogenesis Symposium, UA
05/2016	MD/PhD Colloquium, UA
03/2021	16 th Annual Frontiers in Immunobiology and Immunopathogenesis Symposium, UA
05/2021	College of Medicine-Tucson Research Day, UA
02/2022	Cancer Biology Colloquium, UA
03/2023	Research Day, UA

TEACHING

Courses

MED 822	Infection and Immunity Case Base Instruction, AzMed Curriculum, 5-8 students 2007, Facilitator, 51 hours 2008, Facilitator, 51 hours 2010, Facilitator, 2 hours
CBA 596B	Seminar in Protein Trafficking 2007 Spring/Fall; ~10 students; 15 hrs/semester 2008 Spring/Fall; ~10 students; 15 hrs/semester 2009 Spring/Fall; ~10 students; 15 hrs/semester 2010 Spring/Fall; ~10 students; 15 hrs/semester 2011 Spring/Fall; ~10 students; 15 hrs/semester 2012 Spring/Fall; ~10 students; 15 hrs/semester 2013 Spring/Fall; ~10 students; 15 hrs/semester 2014 Spring/Fall; ~10 students; 15 hrs/semester 2015 Spring/Fall; ~10 students; 15 hrs/semester 2016 Spring/Fall; ~10 students; 15 hrs/semester 2017 Spring/Fall; ~10 students; 15 hrs/semester 2018 Spring/Fall; ~10 students; 15 hrs/semester 2019 Spring/Fall; ~10 students; 15 hrs/semester
IMB 696A/B	Research Seminar Series, Course Director 2008 Fall/Spring 2009 Fall/Spring 2010 Fall/Spring

MCB 181	Honors Biology ~25 students 2007 Spring; one 50-minute lecture 2007 Fall; one 50-minute lecture 2013 Fall; one 50-minute lecture
ECOL 409	Evolution of Infectious Disease ~30 students 2008 Fall; 75-minute lecture 2010 Fall; 75-minute lecture
IMB 580	Molecular Virology; Co-director ~8-10 students 2009 Fall; sixteen 90-minute lectures 2011 Spring; sixteen 90-minute lectures
GENE 670	Recent Advances in Genetics 2010 Spring; one 90-minute lecture 2011 Fall; one 45-minute lecture 2014 Spring; one 45-minute lecture
MIC 333	Virology 2012 Spring; 1 90-minute lecture 2014 Spring; 1 90-minute lecture
IMB 502	Microbes and Immunity, Co-director 2011 Fall; 14 60-minute lectures and student evaluation 2012 Spring; 9 60-minute lectures and student evaluation 2013 Spring; 7 60-minute lectures and student evaluation
IMB 521	Scientific Writing, Course Director ~8-22 students 2013 Fall; 16 120-minute classes 2014 Fall; 16 120-minute classes 2015 Fall; 16 120-minute classes 2016 Fall; 16 120-minute classes 2018 Spring; 16 120-minute classes 2019 Spring; 16 120-minute classes
IMB 564	Advanced Topics: Function, Regulation and Dysregulation Immune System 2010 Spring, 2 90-minute lectures/discussions 2011 Spring, 2 90-minute lectures/discussions 2014 Fall; 2 90-minute lectures/discussions
IMB 565	Principles and Molecular Mechanisms of Microbe-Host Interactions 2014 Spring, 1 45-minute lecture

Scholarly Activity Supporting Teaching

2006-Present	<i>Graduate Education and Curriculum Committee, Department of Immunobiology</i> Primary Author of <i>Graduate Student Handbook for the Doctorate of Philosophy in Immunobiology</i> . In writing this handbook, the Immunobiology Graduate curriculum was rebuilt such that students had a clear outline of required core and elective courses, existing courses with significant overlap were combined and course
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offerings were restructured to better meet student needs. Further, new required courses were added including a Scientific Writing and Ethics Course to align our Department with NIH recommendations and an Advanced Topics course to help students to integrate diverse concepts within Immunobiology and Infectious Disease Disciplines. Clear guidelines and expectations for Comprehensive/Qualifying Examination and Doctoral Dissertation were developed and outlined. Document attached.

- 2009-2012 *Molecular Virology IMB580, Co-Director (3 units)*
I designed and implemented a thematic approach to teaching molecular virology. Virology is historically taught as in the approach of a virus-a-day focusing in taxonomy and details of individual virus families. In this approach, the course focused around large concepts regarding common strategies viruses use to achieve the objective of viral replication, unique or novel attributes of key viruses, and the virus-host interactions that result in pathogenesis. Key primary literature was used to emphasize relevant and current topics in virological research and to bolster students understanding of how questions are approached scientifically.
- 2010 *Life Science Research Integrity Workshop, Faculty Advisor*
Small Grants in Research Integrity Program sponsored grant written with my graduate student, Lora Grainger
- 2011- *Microbes and Immunity IMB 502, Co-Director (3 units)*
I worked with Drs. Jeff Frelinger and Magdalene So to introduce students to the disciplines of immunology and bacterial and viral pathogenesis. Lectures were given to provide a foundation for discussing key principles and scientific questions that span the fields of immunology, bacteriology and virology, which are more in depth explored using primary literature.
- 2012 *Science Writing Saturdays (3 Saturdays, 9 hours total)*
I developed and taught a writing workshop for student and postdocs that was held over three Saturdays in Fall 2012 to help students develop critical skills for developing specific aims and grant proposals. 25 students attended each of the three Saturday workshops.
- 2013-present *Scientific Grant Writing, Director (2 units)*
Developed and directed a course to teach graduate students and medical residents the craft and skills of scientific grant writing. The initial course had 9 students (6 graduate students for multiple departments and 3 medical fellows)
- 2014, 2015 *Professionalism in Science: a workshop for graduate students (3 hours)*
Developed and conducted a workshop to introduce graduate students in IMB, CMM and Genetics to aspects of professionalism in a variety of science and medicine careers. Topics included: developing a CV, Goal setting, professional conduct and presentation, job applications and interviews, and fellowship search engines.

PRIMARY RESEARCH ADVISING

Undergraduates- University of Arizona (1h weekly one-on-one contact with each undergraduate)

2008	Jason Persichetti, Minority Health Disparities Summer Research Program
2008-2010	Joseph DiVita; Undergraduate Biology Research Program (UBRP)
2008-2011	Louis Cicchini, Molecular and Cellular Biology
2008-2012	Rona Zhou; Molecular and Cellular Biology, UBRP
2010-2012	Sarika Srivastava, Molecular and Cellular Biology, UBRP, Honors Program
2010-2012	Ellen Ouellette, Ecology and Evolutionary Biology, UBRP
2013-2014	Sarah Grimes, Neuroscience
2013-2014	Megan McGuckin, Molecular and Cellular Biology
2014-2015	Benjamin Van Maren, Molecular and Cellular Biology
2015	Breanna Eder, Public Health
2016	Ethan Carpenter, Macalister University summer student
2016	Jacob Cabrejas, Molecular and Cellular Biology
2018-2021	David Tafoya, Microbiology
2018-2019	Shobitha Jillella, Microbiology (Honors Thesis)
2018-2019	Liz Ortega Alolod, Microbiology
2020-2023	Meivan Yang, Biochemistry and Bioinformatics, UBRP
2021-2023	Allison Steedman, Biochemistry
2022-2025	Emily Jamboretz, Molecular and Cellular Biology
2024	Nico Putnam, Undergraduate Research Opportunities Consortium-Minimizing Disparities Program (10-week summer research project)

Graduate Students (2-3 hours weekly contact with each MS or PhD student)

2006-2010	Lora Grainger Ph.D. in Immunobiology, June 2010 Systems Engineer Project Leader Senior, Sandia National Laboratories, International Biological and Chemical Threat Reduction
2006-2011	Alex Petrucelli Ph.D. in Immunobiology, May 2011 Postdoctoral Fellow, University of North Carolina, Chapel Hill in the laboratory of Jenny Ting BioRad, Account Manager
2011-2013	Patricia Zagallo M.S. in Immunobiology, January 2014 Entered Ph.D. program in Science Education University of Washington, STEM Instructor, Office of Minority Affairs and Diversity
2011-2015	Katie Caviness Ph.D. in Genetics, April 2015 ORISE Postdoctoral Fellow, Genomics Institute at USAMRIID in the laboratory of Dr. Gustavo Palacios Associate Principal Investigator, National Biodefense and Countermeasures Center Head of Genomics, National Biodefense and Countermeasures Center, National Bioforensic Analysis Center
2014-2018	Sebastian Zeltzer Ph.D. in Cellular and Molecular Medicine, May 2018 Postdoc, Goodrum Lab Parental break
2012-2018	Michael Rak Ph.D. in Cellular and Molecular Medicine, June 2018 Postdoc, Boston College in the lab of Dr. Emrah Altindis Scientist, Renascent Biosciences

2018-2021	Senior Scientist, Carbon Biosciences
2018-2022	Belen Molina, M.S., Graduate Program in Molecular Medicine
	Melissa Moy
	Ph.D. in Cancer Biology,
	Scientist, Imanis Life Sciences
2019-2023	Kristen Zarrella, Graduate Program in Molecular Medicine, Ph.D.
	Postdoctoral Fellow, University of Colorado School of Medicine, lab of Dr. Tem Morrison
2020-2024	Pierce Longmire
	Ph.D. Graduate Program in Molecular Medicine, April 2024
	Postdoc, University of Arizona, Goodrum lab
	Postdoc, University of Pennsylvania, lab of Dr. Matthew Weitzman
2023-present	Emily Cianflone Vaslow, Graduate Program in Molecular Medicine, Ph.D.
	Guarini School of Graduate and Advanced Studies, Dartmouth

ADVISING and MENTORING

Service on Dissertation Committees, other than as major advisor

Doctorate of Philosophy

University of Arizona

2006-2010	Maurice Jabbour, Department of Immunobiology
2007-2009	James Cherwa, Department of Veterinary Sciences and Microbiology
2009-2011	Maureen Peterson, Genetics Graduate Interdisciplinary Program
2009-2012	Diana Hernandez, Department of Immunobiology
2009-2013	Kristin Renkema, Department of Immunobiology
2011-2013	Andrew Stewart, Genetics Graduate Interdisciplinary Program
2011-2015	Neha Deshpande, Department of Immunobiology
2012-2013	Huy Nguyen, Department of Cellular and Molecular Medicine
2012-2016	Tracey Beyer, Department of Molecular and Cellular Biology
2012-2016	Justyna Gozdz, Department of Cellular and Molecular Medicine
2012-2013	Peyman Aryanpur, Department of Cellular and Molecular Medicine
2013-2015	Ann Gregory, Department of Soil, Water and Environmental Science
2013-2018	Avery DeVries, Department of Cellular and Molecular Medicine
2014-2018	Shraddha Tuladhar, Department of Immunobiology
2014-2016	Matthew Bronniman, Department of Immunobiology
2017-2020	Brittany Forte Ulhorn, Graduate Interdisciplinary Program in Cancer Biology
2017-2023	Emily Merritt, Department of Immunobiology
2018-2021	Yuecheng Xi, Graduate Program in Molecular Medicine
2018-2021	Benjamin Atwell, Graduate Program in Molecular and Cellular Biology
2018-2023	Aaron Byrd, Department of Molecular and Cellular Biology
2019-2023	Christopher Coplen, Graduate Program in Molecular Medicine
2020-2024	Ian Kline, Graduate Program in Molecular Medicine
2021-2024	Samina Momtaz, Graduate Program in Molecular Medicine
2022-2025	Isabelle Toby, Graduate Interdisciplinary Program in Cancer Biology
2025-present	Briana Guzman, Graduate Program in Molecular Medicine

Dartmouth College, Geisel School of Medicine

2025	Paige Canova, Molecular and Cell Biology (external examiner) (6 h)
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2025- Rachel Dansereau, Molecular and Cell Biology (12h)
 2025- Dana Joseph, Molecular and Cell Biology (3h)

Masters of Science

2006-2007 Savitha Swaminathan, Department of Immunobiology
 2006-2009 Vuna Fa, Department of Immunobiology
 2016-2017 Kenia Lucey, Pre-medical Admissions Pathway
 2018-2019 Elizabeth Dahlmann, Graduate Program in Molecular Medicine
 2019-2020 Samina Momtaz, Graduate Program in Molecular Medicine
 2023-2024 Joel Thompson, Genetics GIDP

External Reviewer

2012 Donna Collins-McMillen, Doctoral candidate
 Louisiana State University Health Sciences Center
 Department of Microbiology and Immunology
 2025 Paige Canova, Doctoral student
 Geisel School of Medicine, Dartmouth College
 Department of Microbiology and Immunology

NIH F31 Fellowship Mentor

2020-2025 Jessica Packard, Duquesne University (5h)

Postdoctoral Fellow Mentor

2009-2014 Mahadevaiah Umashankar, Ph.D.
 2013-2019 Jason Buehler, Ph.D.
 2016-2024 Donna Collins-McMillen, Ph.D.
 2018-2019 Megan Peppenelli, Ph.D.
 2018-2021 Sebastian Zeltzer, Ph.D.
 2017-2023 Luwanika Mlera, Ph.D.
 2023- Timothy White, Ph.D.
 2024-2025 Piece Longmire, Ph.D.
 2024- David McKinzey, Ph.D.
 2024- Mamata Savanagoudar, Ph.D.

Faculty Mentor

2009-2012 Dr. Lonnie Lybarger, Cellular and Molecular Medicine, University of Arizona (~5h/yr)
 2011-2018 Dr. Sam Campos, Immunobiology, University of Arizona (~5h/yr)
 2013-2018 Dr. Joyce Wu, Immunobiology, University of Arizona (~5h/yr)
 2014-2015 Faculty Fellows Mentoring Program, Mentor (~10h/yr)
 2016-2017 Faculty Fellows Mentoring Program, Mentor (~10h/yr)
 2016-2022 Dr. John Purdy, Immunobiology, University of Arizona (~10h/yr)
 2017-2022 Dr. Michael Johnson, Immunobiology, University of Arizona (~5h/yr)
 2018-2024 Dr. Koenraad Van Doorslaer, Immunobiology, University of Arizona (~5h/yr)
 2020-2025 Dr. Justin Wilson, Immunobiology, University of Arizona (~5h/yr)
 2023-2025 Dr. Kelvin Pond, Cellular and Molecular Medicine, University of Arizona (~3h/yr)
 2025- Dr. Sladjana Skopelja-Gardener, Microbiology and Immunology, Dartmouth (~10h/yr)
 2025- Dr. Caitlin Kowalski, Microbiology and Immunology, Dartmouth (~10h/yr)
 2025- Dr. Jarrod Smith, Microbiology and Immunology, Dartmouth (~10h/yr)