

- 1) Date of preparation of C. V.
July 24, 2026
- 2) Contact
Aaron P. Mitchell, PhD
Professor and Head
Department of Microbiology
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<https://mib.uga.edu/directory/people/aaron-p-mitchell>
- 3) Academic training
College: Carnegie Mellon University, Pittsburgh, PA
B. S., Biological Sciences, 1977
University: Massachusetts Institute of Technology, Cambridge, MA
Ph. D., Biology, 1984
Thesis: Regulation of Glutamine Synthetase in *Saccharomyces cerevisiae*
Sponsor: Boris Magasanik
Citation: Mitchell, A. P. 1984. Ph. D. thesis,
Massachusetts Institute of Technology, Cambridge, MA
- 4) Traineeship
Postdoctoral Fellowship: 1984-1987
Department of Biochemistry and Biophysics
University of California at San Francisco
Sponsor: Ira Herskowitz
- 5) Board qualification not applicable
- 6) Military service none
- 7) Professional organizations and societies
American Society for Microbiology
Genetics Society of America
American Association for Advancement of Science
- 8) Academic appointments
1987-94 Assistant Professor,
Department of Microbiology, Columbia University
1994-99 Associate Professor,
Department of Microbiology, Columbia University
1999-2008 Professor,

	Department of Microbiology, Columbia University
2005-2008	Acting Chair, Department of Microbiology, Columbia University
2008-2019	Professor, Department of Biological Sciences, Carnegie Mellon University
2015-2016	Acting Department Head, Department of Biological Sciences, Carnegie Mellon University
2016-2019	Department Head, Department of Biological Sciences, Carnegie Mellon University
2020-2026	Department Head, Department of Microbiology, University of Georgia

9) Hospital appointments none

10) Honors

1977	B. S. with Honors, Carnegie Mellon University
1977	Ribosome Prize, Biological Sciences, C. M. U.
1984	Sigma Xi membership, Massachusetts Institute of Technology
1984	Damon Runyon - Walter Winchell Cancer Fund Postdoctoral Fellowship
1988	Irma T. Hirschl Career Scientist Award
1989	Searle Scholar
1991	Lamport Basic Research Award, Columbia University
1992	Faculty Research Award, American Cancer Society
1997	Burroughs Wellcome Fund Mycology Scholar Award
2003	Fellow, American Academy of Microbiology
2005	Keynote Speaker, CSH Microbial Pathogenesis Meeting
2005	Fellow, American Association for the Advancement of Science
2005	Harold S. Ginsberg Professorship, Columbia University
2008	Parker Lectureship, Columbia University
2010	Keynote Speaker, Australian Society for Microbiology Conference
2015	Graduate Microbiology Teaching Award, American Society for Microbiology
2016	Dr. Frederick A. Schwertz Distinguished Professor of Life Sciences, Carnegie Mellon University
2019	Top 2% of Microbiologists, as per PLoS Biol 17(8): e3000384
2020	MVP Speaker, Marine Biological Labs summer program
2021	Shared namesake for "The Jack Edwards and Aaron Mitchell Endowed Lecture in Molecular Mycology" Marine Biological Laboratory, Woods Hole, MA
2022	MBL Council Marine Biological Laboratory, Woods Hole, MA
2024	Distinguished Research Professorship, University of Georgia
2024	Elected Fellow, American Academy of Arts and Sciences

2026 George W. Beadle Award, Genetics Society of America

11) Departmental and University Committees

(a) Columbia University

1990-92	Organizer, Microbiology Departmental Retreat
1990-92	Search Committee for Chairman of the Department of Genetics and Development
1993, 94, 96	Director of Admissions, Integrated Program in Cellular, Molecular, and Biophysical Studies
1996-98	Co-Director, Integrated Program in Cellular, Molecular, and Biophysical Studies
1996-98	Executive Committee of the Faculty Council
1996-	Advisory Committee to the Dean on Awards and Honors
1997-98	DDS-PhD Search Committee for the School of Dental and Oral Surgery
1998-99	Chair, Review Committee for the Department of Anatomy and Cell Biology
1996-2007	Ad hoc Tenure Committees
1998-2002	Organizer, Microbiology Qualifying Exam Committee
1998-99	Organizer, Microbiology Advanced Curriculum Committee
2002-05	Microbiology Graduate Program Director and PI of Microbiology Training Grant (T32 AI007161)
2007-08	Postdoctoral Program Director, Training Program in Interdisciplinary Research to Reduce Antimicrobial Resistance and Co-PI of Training Grant (T90 NR010824)

(b) Carnegie Mellon University

2008-9	Chair Search Committee, Department of Biological Sciences
2008-12	Program Director, HHMI Undergraduate Training Program
2009-10	Mathematics Course Sequence Committee
2009	NMR Center Director Search Committee (Chair; resigned)
2009-	Ad hoc Committee on Appointments and Promotions, Mellon College of Science
2010-	Biological Sciences Curriculum Committee
2010	HPP Director Search Committee
2010-12	Mellon College of Science Curriculum Review Committee
2013	HPP Director Search Committee
2013	Ad hoc Committee on Appointments and Promotions, Mellon College of Science
2013-	Faculty pool for committees of investigation under the University's Policy Against Sexual Harassment and Sexual Assault

2013-14	Search Committee, Host-Microbe Interaction (chair)
2013	Promotion case organizer for Veronica Hinman
2014	Stupakoff Award Committee (chair)
2014	Promotion case organizer for Veronica Hinman
2014	Reappointment case organizer for N. Luisa Hiller
2014	MCS Core Education Director Search Committee
2014	CIT-MCS Seed Grant evaluation panel
2015	Fulbright Fellowship interview committee
2015	Goldwater Fellowship interview committee
2016	Promotion case organizer for Jason D'Antonio
2016-17	Chair, Systems Neuroscience Search Committee
2017-18	Science@CMU Working Group
2017-18	Chair, Synthetic Biology Search Committee

(c) University of Georgia

2020	DeLTA Leadership Team
2021	Franklin Works Advisory Committee, chair
2021-22	Cellular Biology Department Head Search, chair

12) Teaching responsibilities

(a) Columbia University

Courses:

- a. 1988-
Microbial Molecular Genetics
45-65 students
responsibilities - lecturer (12-24 hrs/yr)
and course codirector (1990-98)
- b. 1993-99
Advanced Microbiology
3-10 students
responsibilities – lecturer (8 hrs)
- c. 1988-99
Advanced Topics in Microbiology
5-15 students
responsibilities – lecturer (9 hrs)
- d. 1996-98
Ethics Discussion (CMBS Program)
5-10 students
responsibilities – course director
- e. 1988-92
Genetic Approaches to Biological Problems
10-20 students
responsibilities – lecturer (9-12 hrs)

- f. 2000-2008
Microbial Pathogenesis
16 students
responsibilities – lecturer (40 hr) and course codirector

Thesis sponsorships, past:

Sophia S. Y. Su, Integrated Program
Katherine Bowdish, Integrated Program
Peter Covitz, Microbiology
Harold Smith, Microbiology
Susana Vidan, Integrated Program
Weishi Li, Microbiology
Rey A. L. Sia, Microbiology
Maria Soushko, Microbiology
Yang Xiao, Microbiology
Wenjie Xu, Integrated Program
Vincent Bruno, Integrated Program
Clarissa Nobile, Biological Sciences
Jacob Boysen, Integrated Program
Carmelle Norice, Integrated Program/MSTP

Thesis examination committees:

Marc Gwadz, Microbiology
Jiangling Tu, Integrated Program
Michelle Larsen, Microbiology
Ming Covitz, Integrated Program
Minghui Chi, Microbiology
Gonzalo Merino, Integrated Program
David Vannier, Microbiology
Lori Sussell, Microbiology
Claire Shean, Integrated Program
Laura Vallier, Genetics and Development
Catherine Yan, Biology
Wenjie Song, Genetics and Development
Yi Lin, Microbiology
Maureen Barr, Genetics and Development
Tom Guadagno, Integrated Program
Jane Hubbard, Genetics and Development
Roger Johnson, Microbiology
Heike Laman, Microbiology
Shuang Wu, Genetics and Development
Kevin Merrill, Integrated Program
Michelle Treitel, Genetics and Development
Valeri Thomson, Microbiology
Xiaolu Yan, Genetics and Development

Ghia Euskirchen, Biology
Tarik Soliman, Microbiology
Michael G. Smith, Anatomy and Cell Biology
Husam Ansari, Integrated Program
Siska Brutsaert, Integrated Program
Gary Fortin, Microbiology
Valmik Vyas, Integrated Program
Steven Kauder, Microbiology
Jennifer Schwartz, Integrated Program
Amy Rosenfeld, Microbiology
Nadim Shohdy, Microbiology
Brian Loomis, Biochemistry and Biophysics
Cindy Fung, Integrated Program
Ryan Martin, Microbiology
Sarah Clock, Microbiology
Karim Suwwan, Integrated Program
Steven Marks, Biological Sciences
Neal Padte, Integrated Program
Galadriel Hovel-Miner, Microbiology
Christina Mott, Microbiology
Roshni Basu, Integrated Program
Allison Fay, Microbiology
Pamela Peralta Yahya, Chemistry

(b) Carnegie Mellon University

Courses:

- a. 2008-2014
Genetics 03-330 (2 sections)
60-110 students
responsibilities – lecturer (~20 hrs/section)
annual overall teaching evaluation -
4.00, 4.19, 4.20, 4.13, 4.53, 3.59, 4.26 on a 1-5 scale
- b. 2009-10, 2012-present
Advanced Genetics 03-730
16-23 students
responsibilities – lecturer (12 hrs)
and discussant (12 hrs)
annual overall teaching evaluation -
4.33, 4.20, 4.33, 4.43, 4.56, 4.71, 4.8 on a 1-5 scale
- c. 2011-16
Microbiology 03-391
8-21 students

responsibilities – lecturer (21 hrs)
 annual overall teaching evaluation -
 4.50, 4.62, 5.00, 4.62, 4.62, 4.64 on a 1-5 scale

- d. 2011
 Special Topics 03-410 (fall and spring)
 6 students
 responsibilities – lecturer (24 hrs fall, 12 hrs spring)
 and discussant (12 hrs spring)
 annual overall teaching evaluation -
 5.00 on a 1-5 scale
- e. 2014-present
 Advanced Microbiology 03-791
 2-21 students
 responsibilities – co-lecturer/ discussant (24 hrs)
 annual overall teaching evaluation -
 5.00, 4.89, 4.75 on a 1-5 scale
- f. 2016, 2017
 Genome Editing Biotechnology (minicourse) 03-410/756
 10-21 students
 responsibilities – lecturer (18 hrs), course conceptualizer/developer
 annual overall teaching evaluation - 4.57 on a 1-5 scale

Thesis sponsorships, past:

Shantanu Ganguly, Biological Sciences
 Jigar Desai, Biological Sciences (joint sponsorship)
 Katherine Lagree, Biological Sciences
 Manning Huang, Biological Sciences

Thesis examination committees:

Jason Talkish, Biological Sciences
 Alys Cheatle, Biological Sciences
 Andrew Bishop (Duquesne University)
 Nydiaris Hernandez-Santos (University of Pittsburgh)
 Nicole Robbins (University of Toronto)
 Lina Gonzalez, Mechanical Engineering
 Anagha Kadam, Biological Sciences
 Tanaporn Wangsanut (Georgetown University)
 Surya Aggarwal, Biological Sciences
 Rolando Cuevas, Biological Sciences
 Eric McGivney, Civil and Environmental Engineering
 Scott Keith, Biological Sciences

Jinglin L. Xie (University of Toronto)
Samantha Arras (University of Queensland)
Michael Payne (University of Melbourne)

(c) University of Georgia

Courses:

- a. 2020-2023
Genome Editing
9-15 students; co-taught with Jan Mrazek
responsibilities – lecturer (24 hrs), course conceptualizer/developer
- b. 2024
MIBO 4600L/6600L Project Lab
13 students
Responsibilities – course design and implementation
- c. 2025
MIBO 2500L Introductory Microbiology
180 students; co-taught with Julie Grainsy
Responsibilities – lectures and exams on Metabolism
and Molecular Genetics (50% of course material)

Thesis sponsorships, current:

None

Thesis sponsorships, past:

Max Cravener, Department of Microbiology
Minju Kim, Department of Microbiology
Amelia White, Department of Microbiology
Liping Xiong, Department of Microbiology
Katharina Goerlich, Department of Microbiology

Thesis committees, current:

Ran Shi, Department of Microbiology
Yong Gyu Lee, Department of Microbiology
Lindsay Berardi, Department of Microbiology
Anuja Warriar, Department of Microbiology
A.G.M.Sofi Uddin Mahamud, Department of Microbiology

Thesis committees, past:

Sydney McCall, Institute of Bioinformatics
Michael Kobina Mills, Department of Microbiology
Charles Puerner, Centre de Biochimie, Université Côte d'Azur
Sarah (Werner) Lass, Carnegie Mellon University
Justina Stanislaw, Department of Plant Biology

Matthew Russo, Department of Microbiology
 Quanita Choudhury, Department of Microbiology
 Will King, Duquesne University
 Karina Mueller Brown, Carnegie Mellon University
 Tuyetnhu Pham, Department of Plant Biology
 Conor Pittman, Department of Microbiology
 Nicola Case, University of Toronto
 Sharey Cheng, Carnegie Mellon University
 Aidan Kane, University of Sydney

13) Other professional activities

Editorial:

1996-2026	Associate Editor, GENETICS
1996-2009	Editorial Board, MOLECULAR AND CELLULAR BIOLOGY
2001-2010	Editor, EUKARYOTIC CELL
2008-2009	Associate Editor, PLOS PATHOGENS
2009-2026	Section Editor, PLOS PATHOGENS
2010-2015	Editor in Chief, EUKARYOTIC CELL
2012-2026	Editorial Board, PLOS BIOLOGY
2014-2018	Faculty Member, FACULTY OF 1000
2014-2025	Senior Editor, mSPHERE
2016-	Editorial Board, CURRENT OPINION IN MICROBIOLOGY
2021-	Editorial Board, JOURNAL OF FUNGI
2022-2026	Associate Editor, PLOS GENETICS

Consultative:

1995-98	Molecular and Cellular Biology of Cancer Study Section, American Cancer Society
1996-99	Microbial Physiology and Genetics-1 Study Section, National Institutes of Health
1998	Organizing Committee, Yeast Genetics and Molecular Biology Meeting
2000	Antifungal Group Consultant, Schering Plough Research Institute
2000-3	Bacteriology and Mycology-2 Study Section, National Institutes of Health
2000-	Ad hoc reviewer, Special Emphasis Panels, National Institutes of Health
2003-7	Postdoctoral Fellowship Review Panel, Damon Runyon Cancer Research Foundation
2004-9	Ad hoc reviewer, Pathogenic Eukaryotes Study Section,

2009-15	National Institutes of Health Pathogenic Eukaryotes Study Section, Standing member, National Institutes of Health
2014-15	ASM Futures Task Force, American Society for Microbiology
2015	Biological Sciences Departmental Review Committee Duquesne University
2015	Reviewer, Mycology Centre Review Panel, Medical Research Council, UK
2016	Ad hoc reviewer, R13 Review Panel, National Institutes of Health
2016	Ad hoc reviewer, AIDS Opportunistic Infections Panel, National Institutes of Health
2016	Reviewer, Integrated Microbial Biodiversity Program, Canadian Institute For Advanced Research
2016-	External Advisory Committee, Eukaryotic Pathogens Innovation Center, Clemson University
2017	Ad hoc reviewer, Antimicrobial Resistant Microbes Panel, National Institutes of Health
2018	Reviewer, Genomic Applications Partnership Program, Genome Canada
2018	Biological Sciences Departmental Review Committee Notre Dame University
2020	Reviewer, Exeter Mycology Centre Review Panel, Medical Research Council, UK
2021	Reviewer, Coccidioidomycosis Collaborative Research Centers (U1) SEP, National Institutes of Health
2022	Reviewer, Department of Microbiology & Immunology, University of Nevada Reno
2022	Reviewer, Biological Sciences Program University of Arkansas at Fayetteville
2022-25	MBL Council Member Marine Biological Laboratory, Woods Hole, MA
2023	Reviewer, Department of Biology Georgetown University
Other:	
1991-95	Instructor, Yeast Genetics Summer Course, Cold Spring Harbor Laboratories, NY
1997-2010	Course Director, Molecular Mycology Course, Woods Hole Marine Biological Labs, MA
2004	Co-Chair, Gordon Conference on Cellular and Molecular Fungal Biology, 2006
2005-8	Executive Committee, 8 th -9 th ASM Conferences on Candida and Candidiasis, 2006 & 2008

2006	Organizing Committee, Yeast Genetics and Molecular Biology Meeting
2009	Chair, Nominations Committee, Genetics Society of America
2010-	Faculty in Residence, Molecular Mycology Course, Woods Hole Marine Biological Labs, MA
2012-18	Advisory Board, Burroughs Wellcome Fund Scholars in Pathogenesis Awards
2013-15	Division F Chair-elect/Chair/Councilor, American Society for Microbiology

14) Fellowship and grant support

Active

5R01AI073289 (PI: Andes) 06/15/2018 – 5/31/2028
 1.0 Calendar Month
 NIH/NIAID \$100,000 direct cost per year
 Biofilm Induced Extracellular Vesicle Pathogenesis
 The goals of this project are to define *C. albicans* biofilm extracellular vesicle cargo that mediates matrix drug resistance and cell dispersion, and to elucidate the genetic pathways that orchestrate extracellular vesicle formation during biofilm pathogenesis.

Pending

None.

Previous

5R01AI146103 (PI: Mitchell) 07/01/2019 – 06/30/2025
 2.0 Academic Months
 NIH/NIAID \$426,423 CY direct cost
 Functional Analysis of Natural Variation in the Pathogen *Candida albicans*
 The goal of this project is to define gene function using a multi-strain analysis platform. Regulatory impact and its effect on virulence will be assessed; causal mutations will be cloned and the affected genes characterized.

R21AI185250 (PI: Mitchell) 06/11/2024 – 04/30/2026
 0.76 Academic Months
 NIH/NIAID \$221,231 total direct costs
 Roles of *C. albicans* white-opaque regulators in biofilm and virulence
 The goal of this project is to define *WOR* gene function in *C. albicans* biofilm formation, host interaction, and virulence. We will use overexpression-rescue and synthetic defect assays, expression profiling to identify candidate *WOR* gene targets, and mutant analysis to test target gene function.

No proposal number (PI: Cornish) 01/01/2024 – 06/30/2026

0.5 Academic Months

DARPA

\$199,979 total direct costs

MEBES: Modular engineered biosensors for environmental sensing

The goal of this project is to create biosensors using yeast and bacterial systems to detect environmental signals, such as chemicals and radiation.

1R21AI157341-01 (PI: Krysan)

09/01/2020 – 08/31/2022

0.5 Calendar Month

NIH/NIAID

\$36,000 CY direct costs

Systematic in vitro and in vivo genetic analysis of *C. albicans* protein kinases

The goal of this project is to make a panel of bar-coded *C. albicans* mutants in protein kinase-encoding genes and to characterize their basic phenotypic properties.

5R01AI124566-04 (PI: Filler, Mitchell)

06/15/2016 – 05/31/2021

1.51 Academic Month

NIH/NIAID

\$101,500 CY direct cost

Endothelial invasion by yeast-phase *Candida*

Proposed studies use genetic, biochemical, and cell biological methods to characterize the interactions of *Candida glabrata* with endothelial cells. The Mitchell lab (subcontractor) is responsible for molecular genetics.

5R01DE026600-04 (PI: Filler, Mitchell)

04/01/2017- 03/31/2022

0.5 Academic Month

NIH/NIAID

\$53,126 CY direct cost

C. albicans invasion and proliferation during oral infection

The goal of this project is to identify and functionally dissect the receptors of pathogen and host that mediate oropharyngeal candidiasis.

1R01AI33409-01A1 (PI: Krysan)

12/01/2017 - 11/30/2022

0.5 Academic Month

NIH/NIAID

\$56,291 CY direct cost

Complex haploinsufficiency-based genetic analysis of *Candida albicans* pathogenesis

The goals of this project are to characterize the transcriptional networks required for oropharyngeal candidiasis and hyphae formation in vivo.

5R21AI144390-02 (PI: Clancy)

04/01/2019 - 01/31/2021

0.45 Academic Month

NIH

\$9,827 CY direct cost

Candida albicans regulatory pathways contributing to intra-abdominal candidiasis

The goal of this project is to use transcriptional profiling and mutant analysis to define key *C. albicans* determinants of intra-abdominal candidiasis, using a newly developed mouse infection model.

7R21AI144878 - 02 (PI: Mitchell)

04/01/2019 - 01/31/2021

0.75 Academic Month

NIH/NIAID \$141,969 CY direct cost
Carbon Regulation of Virulence in Oropharyngeal Candidiasis
The goal of this project is to identify carbon metabolic regulatory genes and their roles in oral candidiasis.

"Genetic manipulation of diverse *C. albicans* isolates"
PI: Mitchell
Source: NIH/NIAID; Type: R21 (AI135178) Period 12/22/2017 - 11/30/2019
Direct costs (current year): \$125,000

"*C. albicans* Hyphal Cell Wall Stress Response"
Source: NIH/NIAID; Type: R21 (AI137464) Period 01/13/2018- 12/31/2019
Direct costs (current year): \$125,000

"Gene expression and function in Aspergillosis"
PI: Mitchell, Filler
Source: NIH/NIAID; Type: R56 (AI111836) Period 08/15/14-07/31/16
Direct costs (current year, less subcontract): \$200,000

"Knowing What Students Know: Using Educational Data Mining to Predict Robust STEM Learning"
PI: McLaren
Source: NSF (1420609) Period 09/01/2014-08/31/2017
Direct costs (current year, Mitchell portion): \$15,516

"Function And Genetic Control of Matrix Carbohydrates in Candida Biofilms"
PI: Andes, Mitchell
Source: NIH/NIAID; Type: R01 (AI073289) Period 06/15/08 – 05/31/17
Direct costs (current year, subcontract) \$50,000

"Genetic Control of *C. albicans* Biofilm Formation"
PI: Mitchell
Source: NIH/NIAID; Type: R01 (AI067703) Period 01/01/06-01/31/16 (NCE)
Direct costs (current year, less subcontract): \$200,000

"Development of anti-biofilm surface coatings based on long-wavelength photosensitizers"
PI: Lanni, Hiller, Mitchell
Source: Highmark; Type: Private (SPEX 140040) Period 6/29/2013 – 8/30/2015
Direct costs (current year): \$98,562

"*C. albicans*-Epithelial Interactions & Oropharyngeal Disease"
PI: Filler
Source: NIH/NIDCR; Type: R01 (DE017088) Period 08/01/05-05/31/15
Direct costs (current year): \$65,000

"Candida Gene Expression during Oropharyngeal Infection"

PI: Mitchell

Source: NIH/NIDCR; Type: R21 (DE023311) Period 4/01/13 – 3/31/15

Direct costs (current year, less subcontract): \$95,000

“Functional Analysis of Essential *C. albicans* Genes”

PI: Mitchell

Source: NIH/NIAID; Type: R21 (AI10027) Period 03/01/12-02/28/14

Direct costs (current year): \$150,000

“*Candida* Invasion of Endothelium and Virulence”

PI: Filler

Source: NIH/NIAID; Type: R01 (AI54928) Period 3/1/04-12/31/13

Direct costs (current year): \$92,822

Undergraduate Education Grant

PI: Mitchell (through 8/31/12)

Source: Howard Hughes Medical Institute (grant number 52006917) Period 9/1/10-8/31/14

Direct costs (current year): \$250,000

“Genetic Control of Entry into Meiosis in Yeast”

PI: Mitchell

Source: NIH/NIGMS; Type: R01 (previously GM39531, now AI070272)

Period: 5/1/06-4/30/11

Direct costs (average per year): \$250,000

“Empirical Research: Emerging Research: Robust and Efficient Learning: Modeling and Remediating Students' Domain Knowledge”

PI: Corbett

Source: NSF; Type: REESE (DRL-0910188) Period 7/1/09-6/30/13

Direct costs (average per year) \$355,367

“Promoting Robust Understanding of Genetics with a Cognitive Tutor that Integrates Conceptual Learning with Problem Solving”

PI: Corbett

Source: DOED/IES; Type: Research (R305A090549) Period 7/1/09-8/31/13

Direct costs (average per year) \$465,964

“The *Candida albicans* cell wall regulatory network and pathogenesis”

PI: Clancy

Source: NIH/NIDCR; Type: 1R56DE020831-01 R01 (AI057804) Period 9/1/10-8/31/11

Direct costs (one year): \$80,000

“Protein-protein interaction test in *Candida albicans*”

PI: Mitchell

Source: NIH/NIAID; Type: R21 (AI081209) Period 6/19/09-5/31/11

Direct costs (average per year) \$137,500

“Large-scale analysis of *Candida albicans* gene function”

PI: Mitchell

Source: NIH/NIAID; Type: R01 (AI057804) Period 3/1/04-2/28/11

Direct costs (average per year): \$340,556

“*C. albicans* Regulatory Pathways in Oral Candidiasis”

PI: Mitchell

Source: NIH/NIAID; Type: R01 (AI050931) Period: 6/1/01-4/30/07

Direct costs (average per year, less subcontract): \$125,000

“Identification of *C. albicans* Fluconazole Resistance Genes”

PI: Mitchell

Source: NIH/NIAID; Type R21 (AI055823) Period: 4/15/03 – 3/31/06

Direct costs (average per year): \$137,500

“*Candida*: Protective Immunity Mycology Research Unit”

PI: Edwards

Source: NIH/NIAID; Type: P01 (AI037194) Period: 4/15/99 – 3/31/04

Direct costs (average per year, Mitchell subproject): \$98,000

“Mechanism of Repression at a Distance by Yeast Rme1p”

PI: Mitchell

Source: Human Frontier Science Program

Type: Research grant (RG0379/1997-M) Period: 4/1/97-3/31/00

Direct costs (average per year): \$49,000

“Analysis of the *Candida* CaRIM pathway”

PI: Mitchell

Source: Burroughs Wellcome Fund

Type: Research grant (Mycology Scholar Award BWC 0652) Period: 7/1/97-6/30/02

Direct costs (average per year): \$80,000

“Role of the IME2 Protein Kinase in Meiosis I Division”

PI: Mitchell

Source: March of Dimes

Type: Research grant (FY95-1026) Period: 7/1/92-6/30/98

Direct costs (average per year): \$51,000

“Mechanisms of Meiotic Gene Regulation in Yeast”

PI: Mitchell

Source: American Cancer Society (FRA-412) Period: 7/1/92-6/31/97

Direct costs (average per year): \$40,000

“Control of Meiosis in Yeast”

PI: Mitchell

Source: Irma T. Hirschl Trust (89-G-117) Period: 1/1/88-12/31/92

Direct costs (average per year): \$20,000

“Molecular Analysis of Transcriptional Regulators that Govern Meiosis in Yeast”

PI: Mitchell

Source: Searle Scholars Program Period: 7/1/89-6/30/92

Direct costs (average per year): \$54,000

15) Publications

A. Original, peer-reviewed articles

1. Zubenko, G.S., Mitchell, A.P., and Jones, E.W. (1979). Septum formation, cell division, and sporulation in mutants of yeast deficient in proteinase B. *Proc Natl Acad Sci U S A* 76, 2395-2399.
2. Zubenko, G.S., Mitchell, A.P., and Jones, E.W. (1980). Mapping of the proteinase b structural gene PRB1, in *Saccharomyces cerevisiae* and identification of nonsense alleles within the locus. *Genetics* 96, 137-146.
3. Mitchell, A.P., and Magasanik, B. (1983). Purification and properties of glutamine synthetase from *Saccharomyces cerevisiae*. *J Biol Chem* 258, 119-124.
4. Mitchell, A.P., and Ludmerer, S.W. (1984). Identification of a glutaminyl-tRNA synthetase mutation *Saccharomyces cerevisiae*. *J Bacteriol* 158, 530-534.
5. Mitchell, A.P., and Magasanik, B. (1984). Biochemical and physiological aspects of glutamine synthetase inactivation in *Saccharomyces cerevisiae*. *J Biol Chem* 259, 12054-12062.
6. Mitchell, A.P., and Magasanik, B. (1984). Regulation of glutamine-repressible gene products by the GLN3 function in *Saccharomyces cerevisiae*. *Mol Cell Biol* 4, 2758-2766.
7. Mitchell, A.P., and Magasanik, B. (1984). Three regulatory systems control production of glutamine synthetase in *Saccharomyces cerevisiae*. *Mol Cell Biol* 4, 2767-2773.
8. Mitchell, A.P. (1985). The GLN1 locus of *Saccharomyces cerevisiae* encodes glutamine synthetase. *Genetics* 111, 243-258.
9. Mitchell, A.P., and Herskowitz, I. (1986). Activation of meiosis and sporulation by repression of the RME1 product in yeast. *Nature* 319, 738-742.
10. Benjamin, P.M., Wu, J.I., Mitchell, A.P., and Magasanik, B. (1989). Three regulatory systems control expression of glutamine synthetase in *Saccharomyces cerevisiae* at the level of transcription. *Mol Gen Genet* 217, 370-377.
11. Smith, H.E., and Mitchell, A.P. (1989). A transcriptional cascade governs entry into meiosis in *Saccharomyces cerevisiae*. *Mol Cell Biol* 9, 2142-2152.
12. Mitchell, A.P., Driscoll, S.E., and Smith, H.E. (1990). Positive control of sporulation-specific genes by the IME1 and IME2 products in *Saccharomyces cerevisiae*. *Mol Cell Biol* 10, 2104-2110.
13. Smith, H.E., Su, S.S., Neigeborn, L., Driscoll, S.E., and Mitchell, A.P. (1990). Role of IME1 expression in regulation of meiosis in *Saccharomyces cerevisiae*. *Mol Cell Biol* 10, 6103-6113.

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B. Case reports none

C. Reviews, chapters, and editorials

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 11. Mitchell, A.P. (2005). Fungal CO₂ sensing: a breath of fresh air. *Curr Biol* 15, R934-936.
 12. Blankenship, J.R., and Mitchell, A.P. (2006). How to build a biofilm: a fungal perspective. *Curr Opin Microbiol* 9, 588-594.
 13. Heitman, J., Filler, S.G., Edwards, J.E., Jr, and Mitchell, A.P. (2006). *Molecular Principles of Fungal Pathogenesis* (Washington, DC: ASM Press).
 14. Mitchell, A.P. (2006). Cryptococcal virulence: beyond the usual suspects. *J Clin Invest* 116, 1481-1483.
 15. Mitchell, A.P. (2006). Host-microbe interactions: fungi. *Curr Opin Microbiol* 9, 331-332.
 16. Nobile, C.J., and Mitchell, A.P. (2006). Genetics and genomics of *Candida albicans* biofilm formation. *Cell Microbiol* 8, 1382-1391.
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 19. Blankenship, J.R., and Mitchell, A.P. (2007). The fungal frontier. *Genome Biol* 8, 305-308.

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26. Fanning, S., and Mitchell, A.P. (2012). Fungal biofilms. *PLoS Pathog* 8, e1002585.
27. Ganguly, S., and Mitchell, A.P. (2012). Mini-blastar-mediated targeted gene disruption and marker complementation in *Candida albicans*. *Methods Mol Biol* 845, 19-39.
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33. Fanning, S., and Mitchell, A.P. (2017). Infection-Associated Gene Expression—The Pathogen Perspective. In *Candida albicans: Cellular and Molecular Biology*, R. Prasad, ed. (Cham, Switzerland: Springer International Publishing).
34. Lagree, K., and Mitchell, A.P. (2017). Fungal Biofilms: Inside Out. *Microbiol Spectr* 5. doi: 10.1128/microbiolspec.FUNK-0024-2016.
35. Mitchell, A.P. (2017). Location, location, location: Use of CRISPR-Cas9 for genome editing in human pathogenic fungi. *PLoS Pathog* 13, e1006209.
36. Case, N.T., Berman, J., Blehert, D.S., Cramer, R.A., Cuomo, C., Currie, C.R., Ene, I.V., Fisher, M.C., Fritz-Laylin, L.K., Gerstein, A.C., et al. (2022). The future of fungi: threats and opportunities. *G3 (Bethesda)* 12.
37. Mitchell AP, Imperiale MJ. Full Circle: How ideas unfold. *mSphere*. 2023;8(6):e0048523. Epub 20231018. doi: 10.1128/msphere.00485-23.

Seminars and invited presentations (recent):

2005

Cold Spring Harbor Laboratory (Yeast Genetics Course)
Cold Spring Harbor Laboratory (Microbial Pathogenesis Meeting)
University of California at San Francisco
University of California at Berkeley

2006

ASM Candida and Candidiasis Meeting
MD Anderson Cancer Center
NIH/NICHHD, Laboratory of Gene Regulation and Development
Lehman College
Syracuse University
University of Wisconsin
University of Nebraska
Montana State University

2007

Drexel University
University of Vermont
Asilomar Fungal Genetics Meeting
Carnegie Mellon University
Duke University
Carlsberg Research Labs
Université de Nice
Harbor-UCLA Medical Center
Tufts University
University of Minnesota
University of Michigan
University of Iowa
Ohio State University

2008

NIH/NIAID, Laboratory of Clinical Infectious Diseases
University of Pittsburgh
University of Buffalo
University of Texas at San Antonio

2009

FEBS Practical Course in Candida-host interaction, Madrid
CIB Centro de Investigaciones Biológicas, Madrid
University College Cork, Ireland
Karolinska Institute, Stockholm
FEBS Advanced Lecture Course on Human Fungal Pathogens, Nice
Microbiological Society of Korea International Symposium, Jeju Island
Yongsei University, Seoul
Seoul National University, Seoul
Brown University

Duquesne University

2010

Texas A&M University
American Society for Microbiology General Meeting
University of Sydney, Sydney, Australia
Monash University, Melbourne, Australia
University of Melbourne, Melbourne, Australia
Australian Society of Microbiology Conference
Worcester Polytechnic Institute
Novartis Institute for Biomedical Research
University of Pittsburgh

2011

Mid-Atlantic Pathogenesis Meeting, Keynote Speaker, Wintergreen, Virginia
University of Rochester, Rochester, NY
University of Chicago, Chicago, IL
PHRI, New Jersey Medical School, Newark, NJ
Regeneron Pharmaceuticals, Inc., Tarrytown, NY
Friday Evening Lecture, Marine Biological Labs, Woods Hole, MA
West Virginia University HSC, Morgantown, WV
2nd International Fungal Cell Wall Meeting, Giens, France
Candida Infection Biology Conference, Keynote Speaker, Acquafredda di
Maratea, Italy
Montana State University, Bozeman, MT

2012

Keystone Meeting on Fungal Pathogens: From Basic Biology to Drug Discovery,
Santa Fe, NM; invited speaker
Harbor-UCLA Medical Center, Los Angeles, CA
Boston University, Boston, MA
ASM Candida and Candidiasis Conference, San Francisco, CA; session chair
Duke University, Durham, NC
Gordon Conference on Cellular & Molecular Fungal Biology, Holderness, NH;
invited speaker
Molecular Mycology Course, Woods Hole, MA; invited speaker
Medical University of South Carolina, Charleston, SC
University of Illinois, Urbana-Champaign, IL
ARECES Symposium: The biology of fungal pathogens as a path to drug
discovery: the Candida paradigm, Badajoz, Spain; invited speaker and
introductory lecturer
Washington University School of Medicine, St. Louis, MO
University of Toronto, Toronto, Canada

2013

SPARK Biofilm Retreat, Nemaquin, PA, 1/9/13, organizer and speaker

LABiomed Medical Center, Torrance, CA, 2/22/13
Biomedical Engineering Department, CMU, 3/19/13
University of Massachusetts, Amherst, MA, 4/4/13
University of Wisconsin, Madison, WI, 4/26/13
Division X Lecture, American Society for Microbiology General Meeting,
Denver, CO, 5/21/13
FASEB Microbial Pathogenesis Conference, Snowmass, CO, 7/25/13, invited
speaker
MBL Molecular Mycology Summer Course, Woods Hole, MA, 8/8/13, invited
speaker
Midwest Neglected Infectious Diseases Conference, Notre Dame, IN, 8/24/14,
keynote speaker
Nobel Biofilm Conference, Karolinska Institute, Stockholm, Sweden, 8/29/13,
invited speaker
Biofilms Webinar, Cell Press, 9/24/13
Link: [http://mail.cell-
press.com/go.asp?bECE001/mRDN7A5F/u8ZEDG4F/xS7IQA5F](http://mail.cell-press.com/go.asp?bECE001/mRDN7A5F/u8ZEDG4F/xS7IQA5F)
Case Western Reserve University, Cleveland, OH, 10/10/13
University of Würzburg, Würzburg, Germany, 10/15/13
Exciting Biologies: Boundaries Conference, Savudrija, Croatia, 10/18/13, invited
speaker

2014

ASM Candida and Candidiasis Conference, New Orleans, LA, 3/30/14, session
chair and speaker
University of Pittsburgh, Pittsburgh, PA, 5/13/14
Scientific Symposium for Boris Magasanik, Cambridge, MA, 6/1/14, speaker
MBL Molecular Mycology Summer Course, Woods Hole, MA, 6/24/14, invited
speaker
International Union of Microbiological Societies, Montreal Canada, 7/31/14,
session chair and speaker
XII International Meeting on Paracoccidioidomycosis, Brasilia, Brazil, 9/24/14,
invited speaker
Science 2014, University of Pittsburgh, Pittsburgh PA, 10/2/14, invited speaker
Microbiology and Infection 2014 Conference, Dresden Germany, invited speaker,
scheduled for 10/7/14 but I was unable to attend due to an emergency
Georgetown University, Washington DC, 10/30/14
University of Texas, San Antonio TX, 11/21/14
South Central Medical Mycology Conference, San Antonio TX, 11/22/14, invited
speaker

2015

Institut Pasteur, Paris, France 3/19/15
ASM Michigan Branch Meeting, Ann Arbor, MI, 4/11/15, keynote speaker
MBL Molecular Mycology Summer Course, Woods Hole, MA, 6/20/15, invited
speaker

Cold Spring Harbor Microbial Pathogenesis Meeting, 9/10/15, invited speaker
University of Buffalo, 9/24/15
ASM Biofilms Conference, 10/26/15, invited speaker

2016

University of Georgia, Athens, GA, 1/28/16
Johns Hopkins University, Baltimore, MD 3/22/16
University of Iowa, Iowa City, IA, 3/29/16
ASM Candida and Candidiasis Conference, Seattle, WA, 4/15/16, session chair
International Meeting of the Microbiological Society of Korea, Gwangju, Korea, 4/21/16, Plenary lecturer
Yonsei University, Seoul, Korea, 4/22/16
NIH, Bethesda, MD, 5/16/16
MBL Molecular Mycology Summer Course, Woods Hole, MA, 6/22/16, invited speaker
University of Toronto, Toronto, Canada, 10/20/16

2017

Asilomar Fungal Genetics Conference, Pacific Grove, CA, 3/16/17
UMDNJ, Newark, NJ, 5/2/17
MBL Molecular Mycology Summer Course, Woods Hole, MA, 7/30/17, invited speaker
Duquesne Biological Sciences Retreat, Pymatuning Laboratory, PA, 8/18/17, keynote speaker
Association for Molecular Pathology 2017 Annual Meeting, Salt Lake City, UT, 11/17/17, invited speaker (declined)

2018

Eukaryotic Pathogenesis Investigators Colloquium, Duke University, Durham, NC, 5/18/18 (declined due to conflict)
MBL Molecular Mycology Summer Course, Woods Hole, MA, 8/2/18, invited speaker
Department of Microbiology, University of Texas, Houston, TX, 11/12/18

2019

University of Georgia, Athens, GA, 1/16/19
Asilomar Fungal Genetics Conference, Pacific Grove, CA, 3/14/19, session chair
Stony Brook University, Stony Brook, NY, 5/13/19
FEBS Fungal Pathogens Course, Nice, France, 5/20/19, invited speaker
MBL Molecular Mycology Summer Course, Woods Hole, MA, 8/1/19, invited speaker
Yeast Research: Origins, Insights & Breakthroughs, Cold Spring Harbor Laboratory, NY, 10/23/19, invited speaker

2020

The Ohio State University, Columbus, OH, 3/4/2020

MBL Molecular Mycology Summer Course, Woods Hole, MA, 7/16/20, invited
“MVP” speaker for online presentation
International Union of Microbiological Societies, Daejon, Korea, 11/16-20,
invited speaker for online presentation and session organizer

2021

Department of Infectious Diseases, University of Georgia, 2/1/21 (Remote)
Keynote speaker, Candida and Candidiasis Meeting, 3/21/21 (Remote)
MBL Molecular Mycology Summer Course, Woods Hole, MA, 8/23/21 (Remote)
Keynote speaker, MOMY Reunion, MBL, Woods Hole, MA, 11/8/21
Department of Biochemistry, Emory University, Atlanta, GA, 12/9/21 (Remote)

2022

MBL Molecular Mycology Summer Course, Woods Hole, MA, 8/27/22
Department of Biochemistry, Purdue University, West Lafayette, IN, 11/15/2022

2023

Biology Department, UNC Charlotte, Charlotte, NC, 2/10/23
College of Pharmacy, University of Tennessee, Memphis, TN, 3/16/23
Eukaryotic Pathogens Innovation Center, Clemson University, Clemson, SC
5/8/23, Keynote speaker
MBL Molecular Mycology Summer Course, Woods Hole, MA, 7/30/23
Tri-Institutional Molecular Mycology and Pathogenesis Symposium, Duke
University, Durham, NC, 8/18/23
Asian Mycology Congress 2023, Busan, Korea, 10/11/23
Yonsei University, Seoul, Korea, 10/13/23

2024

MBL Molecular Mycology Summer Course, Woods Hole, MA, 7/29/24

2025

Department of Biological Sciences, Notre Dame University, 3/18/2025
Department of Pulmonary Medicine, University of Florida 4/10/25
MBL Molecular Mycology Summer Course, Woods Hole, MA, 8/1/25

2026

Beadle Award Acceptance, Genetics Society of America, 7/2/26
MBL Molecular Mycology Summer Course, Woods Hole, MA, 8/1/26 (invited)