

Cedar J. Fowler

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Education / Training:

Obstetric Anesthesia Fellowship: Stanford University, Stanford, CA 1/2020- Present

Anesthesia Residency: Stanford University, Stanford, CA 7/2016-7/2019

Intern Year: Highland Medical Center: Oakland, CA 7/2015-7/2016

M.D.: Tufts University School of Medicine: Boston, MA 8/2006-5/2015

Ph.D. in Immunology: University of Cambridge: Cambridge, UK 7/2009-4/2014

MPH: Tufts University School of Medicine: Boston, MA 8/2006-5/2015

B.A. in Biochemistry: Reed College: Portland, OR 8/1998-5/2002

Employment / Research Experience:

Clinical Instructor: 7/2019- 1/2020

Department of Anesthesiology, Perioperative and Pain Medicine
 Stanford University, Stanford CA

Phase I/II Clinical Trial: Clinical Center, NIH, Bethesda, MD 5/2013- 11/2014

Title: Sildenafil in patients with pulmonary nontuberculous mycobacteria infection. Sponsor:
 NIAID/LCID. Clinical Trials Identifier NCT01853540, Principal Investigator: Dr. Steve Holland

NIH Cambridge Scholars Program: University of Cambridge / NIH 7/2009-5/2013

Dissertation title: Identification of a Ciliary Defect Associated with Pulmonary Nontuberculous Mycobacteria Disease. Research conducted in collaboration between NIH and University of Cambridge.

HHMI Research Scholar- Cloister Program: NIH, Bethesda, MD 7/2008-7/2009

Gene therapy project analysing cellular promoters (CD11/CD18) for leukocyte adhesion deficiency.
 Mentor: Dr. Dennis D. Hickstein, Head, Molecular Oncology and Gene Transfer Section, ETIB, NCI

Stohlman Research Award: Oregon Health & Sciences University, Portland, OR 6/2007-8/2007

Clinical research involving plerixafor in hematology and bone marrow transplant.
 Mentor: Dr. Richard T. Maziarz, Director, Adult Blood and Marrow Stem Cell Transplant Program

Clinical Research Coordinator: Oregon Health & Sciences University, OR 10/2004-9/2006

Coordinated inpatient and outpatient clinical trials in the Department of
 Haematological Malignancies

Research Assistant II: Oregon Health & Sciences University, OR 9/2002-10/2004

Quantitative characterization cyclic nucleotide cycling within a cell as well as the development
 of delivery systems for biological relevant compounds.

Senior Research Thesis: Reed College, Portland, OR 8/2001-8/2002

Thesis title: Synthetic modification of the N-terminus of the polypeptide antibiotic bacitracin A as

the basis for the creating novel semi-synthetic compounds. Thesis Advisor: Dr. Patrick McDougal

NIH Summer Internship Program (SIP): NIH, Hamilton, MT 5/2001-8/2001
Characterization of the molecular basis of spongiform neurodegeneration.
Mentor: Dr. John Portis, Senior Investigator- Laboratory of Persistent Viral Disease, NIAID

Lead Biology Technician: U.S. Forest Service, OR 5/1999-8/1999
Stream research on forest-stream interactions at multiple ecological sites.

Publications:

<https://orcid.org/0000-0001-8716-0266>

Fowler C.J., Wu U., Shaffer R., Smith C.C., Barnhart L., Bryant C.E., Olivier K.N., Holland S.M. The effects of sildenafil on ciliary beat frequency in patients with pulmonary non-tuberculous mycobacteria disease: phase I/II trial. *BMJ Open Respir Res.* 2020 Mar;7(1):e000574

Fowler C.J., Burbridge M.A., Jaffe R.A., Brock-Utne J.G. Performance of Litholyme™ compared to Sodasorb™ carbon dioxide absorbents in a standard clinical setting. *Br J Anaesth.* 2019 Jan;122(1):e11-12

Myles IA, Anderson ED, Earland NJ, Zarembek KA, Sastalla I, Williams KW, Gough P, Moore IN, Ganesan S, **Fowler C.J.**, Laurence A, Garofalo M. TNF overproduction impairs epithelial staphylococcal response in hyper IgE syndrome. *J Clin Invest.* 2018 Aug 1;128(8):3595-3604.

Feriani L., Juenet M., **Fowler C.J.**, Bruot N., Chioccioli M., Holland S.M., Bryant C.E., Cicuta P. Assessing the Collective Dynamics of Motile Cilia in Cultures of Human Airway Cells by Multiscale DDM. *Biophysical journal.* 2017, 13 (1): 109-119.

Fowler C.J., Ching, H. Closed-Loop Anesthesia: Wave of the Future or No Future?. In: Scher, C.S.; Clebone, A.; Miller, S.M., Roccafort, J.D.; Capan, L. M. *You're Wrong, I'm Right: Dueling Authors Reexamine Classic Teachings in Anesthesia.* Switzerland: Springer International Publishing; 2017: 19-20.

Szymanski E.P., Leung J.M., **Fowler C.J.**, Haney C., Hsu A.P., Chen F., Duggal P., Oler A.J., McCormack R., Podack E., Drummon R.A., Lionakis M.S., Browne S.K., Prevots D.R., Knowles M., Cutting G., Liu X., Devine S.E., Fraser C. M., Tettelin H., Olivier K.N., Holland S.M., Pulmonary Nontuberculous Mycobacterial Infection. A Multisystem Multigenic Disease. *Am J Respir Crit Care Med.* 2015, Sep 1;192(5):618-28.

Leung J.M., **Fowler C.**, Smith C., Adjemian J., Frein C., Claypool R.J., Holland S.M., Prevots R.D., Olivier K. A familial syndrome of pulmonary nontuberculous mycobacteria infections. *Am J Respir Crit Care Med.* 2013, 188(11):1373-76.

Fowler C.J., Olivier K.N., Leung J.M., Smith C.C., Huth A.G., Root H., Kuhns D.B., Logun C., Zelazny A., Frein C.A., Daub J., Haney C., Shelhamer J.H., Bryant C.E., Holland S.M. Abnormal nasal nitric oxide production, ciliary beat frequency and TLR response in pulmonary NTM disease epithelium. *Am J Respir Crit Care Med.* 2013, 187(12):1374-81.

Gaidamakova E.K., Myles I.A., McDaniel D.P., **Fowler C.J.**, Valdez P.A., Gayen M., Gupta P., Sharma A., Glass P.J., Maheshwari R.K., Datta S.K., Daly M.J. Preserving immunogenicity of lethally irradiated viral and bacterial vaccine epitopes using a radio-protective Mn²⁺ -peptide complex from *Deinococcus*. *Cell Host Microbe* 2012, 12(1):117-24.

Chen A.I, Bains T., Muray S., Knight R., Shoop K., Bubalo J., **Fowler C.**, Slater S., Maziarz R.T. Clinical experience with a simple algorithm for plerixafor utilization in autologous stem cell mobilization. *Bone Marrow Transplant* 2012, 1-4.

Hunter M.J., Tuschong L.M., **Fowler C.J.**, Bauer T.R. Jr, Burkholder T.H., Hickstein D.D. Gene therapy of canine leukocyte adhesion deficiency using lentiviral vectors with human CD11b and CD18 promoters driving canine cd18 expression. *Molecular Therapy* 2011, 19(1), 113-21.

Fowler C.J., Maziarz R.T. Clinical use of plerixafor in combination with granulocyte-colony stimulating factor in hematopoietic stem cell transplantation. *Transplant Research and Risk Management* 2010, 2, 47-58.

Fowler C.J., Dunlap J., Troyer D., Stenxel P., Epner E., Maziarz R.T. Life-threatening adenovirus infections in the setting of the immunocompromised allogeneic stem cell transplant patients. *Advances in Hematology* 2010, 2010, 601548.

Fowler C.J., Dunn A., Hansen K., Hansen L., Lanier K., Hayes-Lattin B., Kovacsovics T., Leis J., Calandra G., Maziarz R.T. Rescue from failed growth factor and / or chemotherapy HSC mobilization with G-CSF and plerixafor (AMD3100): an institutional experience. *Bone Marrow Transplant* 2009, 43(12), 909-17.

Brady J.D., Rich T.C., Le X., Stafford K., **Fowler C.J.**, Lynch L., Karpen J.W., Brown R.L., Martens J.R. Functional role of lipid raft microdomains in cyclic nucleotide-gated channel activation. *Molecular Pharmacology* 2004, 65, 503-11.

Dimcheff D.E., Askovic S., Baker A.H., **Johnson-Fowler C.**, Portis J.L. Endoplasmic reticulum stress is a determinant of retrovirus-induced spongiform neurodegeneration. *Journal of Virology* 2003, 77, 12617-29.

Oral Presentations:

Fowler C.J. et al. "Surprising Results: Sobasorb performs better than LithoLyme in a standard clinical setting". Presented at the 55th annual Western Anesthesia Residents Conference (WARC) 2017. April 2017. Portland, OR.

Fowler C.J. "Identification And Characterization Of An Ex Vivo Phenotype In Pulmonary Nontuberculous Mycobacterial Disease (A3795)", American Thoracic Society (ATS), C16 Nontuberculous Mycobacteria Disease: Bench and Bedside, May 2013. Philadelphia, PA

Fowler C.J. "Exploring Ciliary Function Using Primary Respiratory Epithelial Cultures", 26th Annual MD/PhD Student Conference, July 2011. Keystone, CO

Fowler C.J. "Exploring PRR and ciliary function utilizing primary respiratory epithelial cell cultures", Keystone Symposia, Innate Immunity at Mucosal Surfaces: The Players (Joint X5/X6), February 2011. Vancouver, BC

Fowler C.J. "Exploring TLRs and CBF utilizing respiratory epithelial cultures", Invited presentation at the laboratory of Dr. Alice Prince, Columbia University, April 2011. NYC, NY

Fowler C.J. "Lentiviral vectors with leukocyte integrin CD11b promoter leads to efficient transduction of canine leukocyte adhesion deficiency CD34+ cells", HHMI Meeting of Medical Fellows, Research Scholars, and Physician-Scientist Early Career Awardees, May 2009. Bethesda, MD

Fowler C.J. "Rescue From Failed Growth Factor and / or Chemotherapy HSC Mobilization With G-CSF and Plerixafor (AMD3100): an Institutional Experience", New England Science Symposium, April 2008. Boston, MA

Non Research Publications:

Fowler C.J. "Medical Student Perspectives: Preparing for IM 2011" *ACP Impact* 3/2011.

Fowler C.J. "Medical Student Perspectives: Welcome Medical Student Members" *ACP Impact* 8/2010.

Fowler C.J. "Medical Student Perspectives: Taking time off in medical school for research or pursuing an alternative research pathway" *ACP Impact*, 10/2009.

Honors / Awards:

IDSA Medical Student Scholarship Infectious Disease Society of America (IDSA) - Medical Scholars Program	5/2013-5/2014
NIH Outstanding Graduate Research Award Recognizing outstanding graduate research at the National Institutes of Health (NIH)	1/2014
Melvin Denis Travel Award 26 th annual MD/PhD student conference, Keystone, CO	7/2011
Panton Trust Fund: Cambridge, UK	4/2011
Keystone Symposia Scholarship: Vancouver, BC Immunity in the Respiratory Tract: Challenges for the Lung Environment (X6)	2/2011
American Society of Hematology Travel Award: Orlando, FL 52 nd ASH Annual Meeting and Exposition	12/2010
March of Dimes Scholarship: Bar Harbor, ME 51 st Annual Short Course on Medical and Experimental Mammalian Genetics	7/2010
NIAID Intramural Research Organization (INRO) Scholar NIH, MD / Cambridge, UK	7/2009-7/2011
HHMI Research Scholars Program- Cloisters Program: NIH, MD	7/2008-7/2009
Frederick and Bernadette Stohlman Research Award	5/2007-8/2007

Professional and Volunteer Service:

American College of Physicians (ACP):	
-Massachusetts ACP Governing Council: Student Representative	2013-2015
-ACP National Council of Student Members: Chair	2010-2011
-ACP National Council of Student Members: New England Representative	2009-2010
-ACP/Internal Medicine Interest Group: Co-president	2006-2008
University of Cambridge:	
-MD/PhD representative to the University of Cambridge Student Council	2010-2013
National Institutes of Health (NIH):	
-NIH-OxCam Executive Committee: MD/PhD student representative	2010-2013
-NIH Graduate Student Council: Cambridge Representative:	2009-2011
Tufts University School of Medicine:	
-Tufts University School of Medicine Student Council: Class Representative	2007-2008
SCUBA Instructor:	
-Instructor and Program Director for the SCUBA program at Reed College.	1999-2006
SARGAM Foundation- Board of Directors	2013-Present
-501c3 status not for profit charitable organization directed at assisting young needy musicians in India and the United States.	