

November 15, 2019

CURRICULUM VITAE

Amber M. Smith

<https://www.ambersmithlab.com>

EDUCATION

Postdoc	St. Jude Children's Research Hospital, Memphis, TN USA Infectious Diseases (2012-2014)	2014
Postdoc	Los Alamos National Laboratory, Los Alamos, NM USA Theoretical Biology and Biophysics (2009-2012)	2012
Ph.D.	University of Utah, Salt Lake City, UT USA Applied Mathematics (2005-2009)	2009
M.S.	University of Utah, Salt Lake City, UT USA Applied Mathematics (2003-2005)	2005
B.S.	Colorado School of Mines, Golden, CO USA Mathematical and Computer Sciences (1999-2003)	2003

NON-DEGREE EDUCATION

K25 Coursework	University of Tennessee Health Science Center, Memphis, TN USA Cellular Biology, Molecular Biology, Inflammation & Immunity	2012-2013
AAI Short Course	The American Association of Immunologists, Minneapolis, MN USA Advanced Immunology	2011
Graduate Summer Course	IAS/Park City Mathematics Institute, Park City, UT Mathematical Biology	2005
Undergrad Summer Course	Institute for Advanced Study, Princeton, NJ USA Mathematical Biology	2003

HONORS AND AWARDS

Professional

- Elected to Society for Mathematical Biology (SMB) Board of Directors 2016-present
- Selected to NIH Early Career Reviewer Program 2016-present
- SMB Social Media Award, Best Tweets 2015
- Travel Awards
 - Utah Mathematical Biology Alumni Meeting, Salt Lake City, UT USA 2017

Graduate

- Nominated and Selected for the Early Career Scientists Symposium 2011
University of Michigan, Ann Arbor, MI USA
- Selected to Forward to Professorship 2011
Arizona State University, Tempe, AZ USA

- Awarded NSF Research Training Group (RTG) Fellowship 2006-2009
- Selected for the NIH National Graduate Student Research Festival 2008
National Institutes of Health, Bethesda, MD USA
- Awarded NSF Integrative Graduate Education & Research Traineeship (IGERT) 2003-2005
- Travel Awards:
 - Utah Mathematical Biology Alumni Conference, Salt Lake City, UT 2017
 - Co-Infection Meeting, Sagamore Resort, Bolton Landing, NY 2012
 - Orthomyxovirus Research Conference, Montreal, Canada 2012
 - Cell Symposia - Influenza: Translating Basic Insights, Washington D.C. 2010
 - SIAM Conference on the Life Sciences, Pittsburgh, PA 2010
 - Co-Infection Meeting, SJCRH, Memphis, TN 2009
 - Landahl Award - SMB Annual Meeting, Toronto Canada 2008
 - Orthomyxovirus Research Conference, Woods Hole, MA 2007

Undergraduate

- Graduated with High Scholastic Honors 2003
- Professor Everett Mathematics Award, Outstanding Graduating Senior 2003
- Edays Engineer, Outstanding Senior in Mathematical and Computer Sciences 2003
- Dean's List 2000-2003
- Peer Mentor of the Year Award 2002
- CSM Research Experience for Undergraduates (REU) Fellowship 2002
- Leo Borasio Outstanding Junior Award, McBride Honors Program 2002
- Scholarships
 - NSF Computer Science, Engineering, and Mathematics Scholarship (CSEMS) 2002-2003
 - CSM Alumni Association Scholarship 2001
 - McBride Honors Program Scholarship 2000-2003
 - Rosalyn Temple Endowed Scholarship 2000-2001
 - CSM Presidential Scholarship 1999-2003

SOCIETY MEMBERSHIPS

Current

- Society for Mathematical Biology (SMB)
- American Association of Immunologists (AAI)
- American Mathematical Society (AMS)
- International Society for Influenza and Other Respiratory Diseases (ISIRV)

Past

- Society for Industrial and Applied Mathematics (SIAM)
- Association for Women in Mathematics (AWM)
- National Postdoctoral Association (NPA)
- Kappa Mu Epsilon (KME)
- Society for Women Engineers (SWE)
- Blue Key National Honor Society

UNIVERSITY APPOINTMENTS

Assistant Professor , Department of Pediatrics Institute for the Study of Host Pathogen Systems Microbiology, Immunology, and Biochemistry University of Tennessee Health Science Center, Memphis, TN	2017-present
Faculty Research Affiliate , Theoretical Biology and Biophysics Los Alamos National Laboratory, Los Alamos, NM	2012-present
Research Associate , Department of Infectious Diseases Graduate School Faculty Member St. Jude Children's Research Hospital, Memphis, TN	2014-2017 2016-2017
Postdoctoral Fellow , Department of Infectious Diseases St. Jude Children's Research Hospital, Memphis, TN	2012-2014
Postdoctoral Fellow , Theoretical Biology and Biophysics Los Alamos National Laboratory, Los Alamos, NM	2009-2012
RTG Research Fellow , Department of Mathematics University of Utah, Salt Lake City, UT	2006-2009
Instructor , Department of Mathematics University of Utah, Salt Lake City, UT	2005-2006
IGERT Fellow , Department of Mathematics University of Utah, Salt Lake City, UT	2003-2005

ACADEMIC AFFILIATIONS

Los Alamos National Laboratory, Los Alamos, NM USA Theoretical Biology and Biophysics (T-6), Theoretical Division (T-DO)	2006-present
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TEACHING EXPERIENCE

University of Tennessee Health Science Center	2018
<i>Adhoc Instructor</i>	
MSCI 930 Microbial Pathogenesis (3 credits; 2 students)	
University of Utah, Department of Mathematics	2005-2009
<i>RTG Fellow/Teaching Assistant</i>	
Biol 5910 Mathematical Models in Biology (3 credits; 15 students)	
REU Circadian Rhythms (3 credits; 4 students)	
Math 5120/6780 Mathematical Biology II (3 credits; 20 students)	
Math 5110/6830 Mathematical Biology I (3 credits; 20 students)	
<i>Instructor</i>	
Math 1100 Business Calculus (3 credits; 50 students)	
Math 1090 College Algebra for Business and Social Sciences (3 credits; 50 students)	

Park City Mathematics Institute/Institute for Advanced Study

2005

*Teaching Assistant***Undergraduate Summer School** Course: Dynamics, Disease and Diversity (30 students)**Colorado School of Mines**

2001-2003

Academic Excellence Workshop FacilitatorSubject: Differential Equations**CSM 101** Peer Mentor/Academic Advisor (1 credit; 30 students)**Tutor** Subjects: Calculus I, II, III, Differential Equations, Probability and Statistics, C++, Data Structures, Software Engineering, Linear Algebra, and Algebraic Structures

INVITED LECTURES*Total: 37*

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|---|----------|
| 1. SIAM Life Sciences , Garden Grove, CA
- TBA | Jun 2020 |
| 2. Fred Hutchinson Cancer Research Center , Seattle, WA
- TBA | Mar 2020 |
| 3. 4th International Workshop on Viral Dynamics , Paris, France
- <i>Modeling Disease Progression During Influenza</i> | Oct 2019 |
| 4. SMB Annual Meeting , Montreal, Canada
- <i>Modeling Disease Progression During Influenza</i> | Jul 2019 |
| 5. 2nd Intl Conf. on Applications of Math. to Nonlinear Sciences , Pokhara, Nepal
- <i>Modeling Disease Progression During Influenza</i> | Jun 2019 |
| 6. [Plenary] Center for Infectious Disease Dynamics (CIDDD) , State College, PA
- <i>Modeling Immune Response to Virus Infection</i> | Apr 2019 |
| 7. SJCRH Global Pediatric Medicine , Memphis, TN
- <i>Pharmacokinetics and Pharmacodynamics in Infectious Disease Therapy</i> | Feb 2019 |
| 8. 4th Intl Conf. on Mathematical & Computational Medicine , Cancun, Mexico
- <i>Modeling Disease Progression During Influenza</i> | Dec 2018 |
| 9. SMB Annual Meeting , Sydney, Australia
- <i>Flu ACHOO! Modeling the Immune Response to Influenza-Bacterial Coinfection</i> | Jul 2018 |
| 10. Artificial Intelligence for Predictive Medicine , UTHSC, Memphis, TN
- <i>Modeling Influenza Virus Infection and Bacterial Coinfection</i> | Jun 2018 |
| 11. Canadian Applied and Industrial Mathematics Society (CAIMS) Annual Meeting , Toronto, Canada
- <i>Modeling T cell Mediated Control During Influenza Infection and Bacterial Coinfection</i> | Jun 2018 |
| 12. SJCRH Global Pediatric Medicine , Memphis, TN
- <i>Pharmacokinetics and Pharmacodynamics in Infectious Disease Therapy</i> | Feb 2018 |
| 13. Host-Pathogen Dynamics , Mathematical Biosciences Institute, Columbus, OH
- <i>Validating Models of Influenza-Bacterial Coinfection</i> | Feb 2018 |
| 14. University of Tennessee Health Science Center , Memphis, TN
- <i>Uncovering Mechanisms of Respiratory Infections with Predictive Models</i> | Aug 2017 |
| 15. SMB Annual Meeting , Salt Lake City, UT | Jul 2017 |

- *Experimentally Validating Model Predictions to Define Mechanisms of Respiratory Infections*
- 16. **University of Texas - Medical Branch**, Galveston, TX Jun 2017
 - *Uncovering Mechanisms of Influenza-Pneumococcal Coinfection with Predictive Models*
- 17. **Immunology and Evolution of Influenza**, Emory University, Atlanta, GA May 2017
 - *Validating Immune Response Models of Influenza Virus Infection and Bacterial Coinfection*
- 18. **Keystone Symposia - Modeling Viral Infections and Immunity**, Estes Park, CO May 2017
 - *Modeling the Lethal Synergism of Influenza-Pneumococcal Coinfection*
- 19. **Biomedical Research Forum Seminar**, SJCRH, Memphis, TN Mar 2017
 - *Bacterial Coinfection During Influenza: Insights from Computational Modeling*
- 20. **Microbiology Department Seminar**, University of Tennessee, Knoxville, TN Feb 2017
 - *Host-Pathogen Dynamics During Influenza-Pneumococcal Coinfection*
- 21. **Joint Mathematics Meeting**, Atlanta, GA Jan 2017
 - *Modeling Host-Pathogen Interactions During Influenza-Pneumococcal Coinfection*
- 22. **American Mathematical Society Sectional Meeting**, Raleigh, NC Nov 2016
 - *Modeling Host-Pathogen Interactions During Influenza-Pneumococcal Coinfection*
- 23. **Biology Department Seminar**, University of Memphis, Memphis, TN Nov 2016
 - *Integrative Analysis of the Immune Resp. to Influenza-Pneumococcal Coinfection*
- 24. **Center for Modeling Complex Interactions**, University of Idaho, Moscow, ID Sep 2016
 - *Integrative Analysis of the Immune Response to Influenza-Pneumococcal Coinfection*
- 25. **Mathematical Biology Seminar**, Colorado School of Mines, Golden, CO Sep 2016
 - *Integrative Analysis of Host-Pathogen Interactions During Influenza-Pneumococcal Coinfection*
- 26. **Mathematical Biology Seminar**, University of Colorado, Boulder, CO Sep 2016
 - *Integrative Analysis of Host-Pathogen Interactions During Influenza-Pneumococcal Coinfection*
- 27. **SIAM Conference on the Life Sciences**, Boston, MA Jul 2016
 - *Parameter Estimation in Modeling Influenza Infection: When & Why Parameter Values Don't Matter*
- 28. **Integrated Mathematical Oncology Seminar**, Moffitt Cancer Center, Tampa, FL Mar 2016
 - *Identifying Immune Mechanisms of Influenza-Pneumococcal Coinfection with Model Driven Experiments*
- 29. **Memphis Mathematical Biology Seminar**, SJCRH, Memphis, TN Dec 2015
 - *Modeling Influenza: Estimating and Interpreting Parameters*
- 30. **Mathematics Department Seminar**, Virginia Tech, Blacksburg, VA Nov 2015
 - *Identifying Mechanisms of Influenza-Pneumococcal Coinfection Through Mathematical Modeling*
- 31. **Biomathematics and Ecology: Education and Research**, Claremont, CA Oct 2014

- *Modeling Host-Pathogen Interactions of Influenza and S. pneumoniae During Coinfection*
- 32. **Co-Infection Meeting**, Sagamore Resort, Bolton Landing, NY Apr 2012
 - *Kinetics of Coinfection with Influenza and Streptococcus pneumoniae*
- 33. **Mathematical Biology Seminar**, University of Utah, Salt Lake City, UT Mar 2012
 - *Modeling Influenza A Virus Infection Kinetics*
- 34. **Mathematical Biology Seminar**, University of Pittsburgh, Pittsburgh, PA Mar 2012
 - *Influenza PB1-F2 Expression: Kinetics of Primary and Secondary Infections*
- 35. **Early Career Scientists Symposium**, University of Michigan, Ann Arbor, MI Apr 2011
 - *Bacterial Coinfections with Influenza: Quantitative Data and Modeling*
- 36. **Viral Dynamics Workshop**, Santa Fe Institute, Santa Fe, NM Aug 2010
 - *Effect of 1918 PB1-F2 Expression on Influenza A Virus Infection Kinetics*
- 37. **Co-Infection Meeting**, SJCRH, Memphis, TN May 2009
 - *Mathematical Modeling of Secondary Bacterial Infections Following Influenza*

COMMITTEES AND OFFICES HELD

Elected Offices

- Board of Directors Society for Mathematical Biology 2016-present

International Extramural Service

- Organiz. Committee Society for Mathematical Biology Annual Meeting 2020
- Session Chair 4th International Workshop on Viral Dynamics 2019
- Social Media Chair Society for Mathematical Biology 2016-present
- Mentor Society for Mathematical Biology 2015-present
- Poster Judge Society for Mathematical Biology Annual Meeting 2017-2018
- Minisym. Organizer Society for Mathematical Biology Annual Meeting 2017-2019
- Session Chair Society for Mathematical Biology Annual Meeting 2015-2019
- Session Chair International Symposia on Pneumococci and Pneumococcal Disease (ISPPD) 2018
- Thesis Referee Department of Mathematics and Statistics 2017
University of Melbourne, Melbourne, Australia
- Grant Referee Medical Research Council, United Kingdom 2016

National Extramural Service

- Fellowship Referee AAI 2019-present
- Grant Referee NIH CSR 2017-present
- Advisory Board Southern New Hampshire University 2016-present
- Mentor Association for Women in Mathematics (AWM) 2016-present
- Poster Judge Le Bonheur Pediatric Research Day 2017
- Session Chair Co-Infection Meeting 2012
- Session Chair Options for the Control of Influenza VIII 2013
- Organizer Utah Mathematical Biology IGERT Student Workshop 2006

Intramural Service

- Grant Referee Le Bonheur 2019
- Chair Faculty Search Committee 2018

- Founder/Organizer Memphis Mathematical Biology 2015-present
- Organizer SJCRH Infectious Disease Journal Club 2013-2015
- Founder/Organizer LANL Mathematical Virology Group 2009-2012
- Founder/Organizer Utah Ecosystems Group 2005-2009
- Member Women in Science, Mathematics and Engineering Group 2008-2009
- Member at Large University of Utah College of Science 2007-2008
- Council Member University of Utah College of Science 2007-2008
- Chair Utah Graduate Student Advisory Committee (GSAC) 2007-2008
- Recruitment Chair Utah Graduate Student Advisory Committee (GSAC) 2004-2005

Grant Review Service

- AAI Intersect Fellowship for Computational Scientists & Immunologists 2019
- Le Bonheur Junior Faculty Grant 2019
- NIH CSR Infect., Reproductive, Asthma & Pulmonary Conditions (IRAP) 2018-2019
- NIH CSR Cardiovascular and Respiratory AREA (ZRG1 CVRS-L) 2018
- NIH CSR Modeling and Analysis of Biological Systems (MABS) 2017
- MRC Ad Hoc Reviewer 2016

Journal Editorial Board

Mathematical Biosciences and Engineering (MBE) 2018-present

Journal Referee

2009-present

- Acta Mathematica Scientia
- American Journal of Epidemiology
- BMC Infectious Diseases
- BMC Public Health
- Bulletin of Mathematical Biology
- Current Opinion in Systems Biology
- Epidemiology and Infection
- Journal of Theoretical Biology
- Journal of Immunology
- Journal of Virology
- Journal of Virological Methods
- Journal of the Royal Society Interface
- Mathematical Medicine and Biology
- mSphere
- Mucosal Immunology
- Nature
- Pathogens and Disease
- Physical Biology
- PLoS Computational Biology
- PLoS One
- PLoS Pathogens
- PRIMAS
- Proceedings of the American Mathematical Society
- Proceedings of the Royal Society B
- Risk Analysis
- Scientific Reports
- Virology
- Viruses

OTHER PROFESSIONAL ACTIVITIES

Community Outreach

- Career Success KIPP Memphis Collegiate High School 2014

TRAINEES

Postdoctoral Fellows

Mathematics

- Rosemary Aogo, Ph.D. 2020-present
- Lubna Pinky, Ph.D. 2018-present
- Veronika Bernhauerova, Ph.D. 2015-2017

Biology

- Kimbra Turner, Ph.D. 2016-2017

Research Staff

- Sydney Busch, B.S. 2019-present
- Amanda Smith, M.S. 2014-present
- Maggie Myers, B.S. 2018-2019
- Lindey Lane, B.S. 2016-2019
- Gabrielle Hochu, B.S. 2017-2018

Medical Students

- David Moquin (University of Tennessee Health Science Center) 2014-2016

Graduate Students

Mathematics

- Lubna Pinky (Visiting Student, TCU) 2017
- Joseph DeAguero (University of Idaho)
 - M.S. in Bioinformatics and Computational Biology (Role: Co-Mentor) 2017-2019
 - *Thesis: How Viral Interactions in Coinfection Shape Viral Kinetics*
 - Visiting Student 2017
- Robert Torrence (Virginia Tech) 2016-2017
 - M.S. in Mathematics (Role: Committee Member)
 - *Thesis: Bayesian Parameter Estimation on Three Models of Influenza*

Biomedical Engineering

- Madi Shabanian (Rotating Student, UTHSC/U. Memphis) 2018

Pharmacology

- Lindey Lane
 - M.S. in Pharmacology (Role: Mentor) 2017-2018

Biology

- Taylor Plunkett (Rotating Student, UTHSC) 2019
- Evan Williams (UTHSC)
 - Ph.D. in Biomedical Sciences (Role: Committee Member) 2018-present
- Ruixue Wang (UTHSC)
 - Ph.D. in Biomedical Sciences (Role: Committee Member) 2018-present
- Luciana Tavares (Visiting Student, Universidade Federal de Minas Gerais) 2015
- Miranda Jarrett (Rotating Student, UTHSC) 2014

Undergraduate Students

Mathematics

- Sydney Busch (Summer Student, Augsburg College) 2018
- Maggie Myers (Rhodes-SJ Summer Plus Program, Rhodes College) 2016-2018
- Tyler Bardsley (REU, University of Utah) 2008

- William Carlquist (REU, University of Utah) 2008
- Parker Childs (REU, University of Utah) 2008
- Yasmeen Hussain (REU, University of Utah) 2008

Bioengineering

- Gabrielle Hochu (St. Jude POE Summer Program, NC State) 2015-2016
- Amy Mirro (St. Jude POE Summer Program, Washington Univ. in St. Louis) 2015-2016

Biology

- Emily Weatherman (Visiting Student, U. Tennessee-Knoxville) 2017-2018
- Lindey Lane (Summer Student, Mississippi State) 2015
- Hayley Arceneaux (St. Jude POE Summer Program, SE Louisiana University) 2013

GRANT SUPPORT

Total: \$2,948,817

2018-2023 Role: PI	NIH NIAID R01 – Research Project Grant <i>Predictive Modeling of Influenza-Pneumococcal Coinfection</i>	\$1,900,000
2017-2019 Role: PI	NIH NIAID U01- Administrative Supplement Award <i>Kinetic Modeling of Age-Specific Host Responses During Influenza Infection and Bacterial Coinfection</i>	\$170,000
2016-2019 Role: PI	NIH NIAID R56 High Priority Project Award <i>Quantifying and Validating Immune Response Dynamics for Influenza and Viral-Bacterial Pneumonias</i>	\$453,747
2012-2018 Role: PI	NIH NIAID K25 Career Development Award <i>Bacterial Virulence Factors Contributing to Virus-Associated Pneumonia</i>	\$425,070

BOOK CHAPTERS

*senior author

1. **Smith, AM***, Ribeiro, RM, and Perelson, AS*. (2018). *Population Dynamics of Host and Pathogens*. In: *Systems Immunology: An Introduction to Modeling Methods for Scientists*. CRC Press
2. **Smith AM***, McCullers JA. (2014) *Secondary Bacterial Infections in Influenza Virus Pathogenesis*. In: *Current Topics in Microbiology and Immunology: Influenza pathogenesis and Control – Volume 1*, Compans RW and Oldstone M, Eds., Springer, Heidelberg, 327-56. doi:10.1007/82 2014 394.

JOURNAL ARTICLES

*senior author

1. Ward CE, Kimura, D, Saini, A, **Smith, AM**, West, AN, Goedecke, T, Tolley, EA, Cormier, SA, DeVincenzo, JP. *Longitudinal Viral Kinetics and Lung Disease Measurements Within Respiratory Syncytial Virus-Infected Infants*. (submitted)
2. Smith, AP, Lane, LC, Moquin, DJ, van Opijnen, T, Woolard, S, Carter, R, Iverson, A, Burnham, C, Vogel, P, Roeber, D, Arceneaux, H, Hochu, G, Johnson, MDL, McCullers, JA, Rosch, JR*, **Smith, AM*** (2019). *Dynamic Pneumococcal Genetic Adaptations Support Bacterial Growth During Coinfection with Influenza*. (in revision) bioRxiv Preprint doi: 10.1101/659557

3. Myers, MA Smith, AP, Lane, LC, Moquin, DJ, Vogel, P, Woolard, S, **Smith, AM*** (2019). *The Nonlinear Relations that Predict Influenza Viral Dynamics, CD8⁺ T cell-Mediated Clearance, Lung Pathology, and Disease Severity (in revision)* bioRxiv Preprint doi: 10.1101/555276
4. Gaur, AH, McCarthy, JS, Panetta JC, Dallas, R., Woodford, J, Tang, Li, **Smith, AM**, Stewart, TB, Branum, KC, Freeman III, BB, Patel, ND, John, E, Chalon, S, Ost, S, Heine, RN, Richardson, JL, Christensen, R, Flynn, PM, Van Gessel, Y, Mitasev, B, Möhrle, JJ, Gusovsky, F, Bebrevska, L, Guy, RK (2019). *Safety, Tolerability, Pharmacokinetics, and Antimalarial Efficacy of a Novel Plasmodium falciparum ATP4 Inhibitor (SJ733): A First-in-Human and Induced Blood Stage Malaria Phase 1a/1b Study*. Lancet Infectious Diseases (in press)
5. Chung, M*, Binois, M, Gramacy, RB, Moquin, DJ, Smith, AP and **Smith, AM*** (2019). *Parameter and Uncertainty Estimation for Dynamical Systems Using Surrogate Stochastic Processes*. SIAM Journal of Scientific Computing 41(4), A2212–A2238.
6. Rodriguez, A, McCullers, JA, **Smith, AM**, Kanneganti, T, Lupfer, CR* (2019). *Enhanced IL-1 β production is mediated by a TLR2-MYD88-NLRP3 signaling axis during coinfection with influenza A virus and Streptococcus pneumoniae*. PLoS One 14(2): e0212236. doi: 10.1371/journal.pone.0212236
7. **Smith AM*** (2018). *Validated Models of Immune Response to Virus Infections*. Current Opinion in Systems Biology 12:46-52. doi: 10.1016/j.coisb.2018.10.005
8. **Smith AM*** (2018). *Host-Pathogen Kinetics During Influenza Infection and Coinfection: Insights from Predictive Modeling*. Immunol. Rev. 285:97–112. doi: 10.1111/imr.12692
9. Smith AP, Moquin DJ, Bernhauerova V and **Smith AM*** (2018) *Influenza Virus Infection Model with Density Dependence Supports Biphasic Viral Decay*. Front. Microbiol. 9:1554. doi: 10.3389/fmicb.2018.01554
10. **Smith, AM*** and Huber, V* (2017). *The Unexpected Impact of Vaccines on Secondary Bacterial Infections Following Influenza*. Viral Immunology. doi: 10.1089/vim.2017.0138
11. **Smith, AM*** (2017). *Quantifying the Therapeutic Requirements and Potential for Combination Therapy to Prevent Bacterial Coinfection During Influenza*. J Pharmacokinetic Pharm. doi:10.1007/s10928-016-9494-9.
12. **Smith, AM*** and Smith, AP (2016). *A Critical, Nonlinear Threshold Dictates Bacterial Invasion and Initial Kinetics During Influenza*. Sci Rep, 6:38703. doi: 10.1038/srep38703.
13. **Smith, AM**, and McCullers, JA* (2013). *Molecular Signatures of Virulence in the PB1-F2 Proteins of H5N1 Influenza Viruses*. Virus Res 178 (1):146-150. doi:10.1016/J.virusres.2013.02.012.
14. **Smith, AM***, Adler, FR, Ribeiro, RM, Gutenkunst, RN, McAuley, JL, McCullers, JA and Perelson, AS (2013). *Kinetics of Coinfection with Influenza A Virus and Streptococcus pneumoniae*. PLoS Pathog 9(3): e1003238. doi:10.1371/journal.ppat.1003238.
15. **Smith, AM***, McCullers, JA and Adler, FR (2011). *Mathematical Model of a Three-Stage Innate Immune Response to a Pneumococcal Lung Infection*. J Theor Biol 276(1):106-116.
16. **Smith, AM***, Adler, FR, McAuley, JL, Gutenkunst, RN, Ribeiro, RM, McCullers, JA and Perelson, AS* (2011). *Effect of 1918 PB1-F2 Expression on Influenza A Virus Infection Kinetics*. PLoS Comput Biol 7(2): e1001081. doi:10.1371/journal.pcbi.1001081.

17. **Smith, AM**, and Perelson, AS* (2011). *Influenza A Virus Infection Kinetics: Quantitative Data and Models*. WIREs Syst Biol Med doi: 10.1002/wsbm.129.
18. **Smith, AM**, and Ribeiro, RM* (2010). *Modeling the Viral Dynamics of Influenza A Virus Infection*. Crit Rev Immunol 30(3):291-298.
19. **Smith, AM***, Adler, FR and Perelson, AS (2010). *An Accurate Two-Phase Approximate Solution to an Acute Viral Infection Model*. J Math Biol 60(5):711-726.
20. McAuley, JL, Hornung, F, Boyd, KL, **Smith, AM**, McKeon, R, Bennink, J, Yewdell, JW and McCullers, JA* (2007). *Expression of the 1918 Influenza A Virus PB1-F2 Enhances the Pathogenesis of Viral and Secondary Bacterial Pneumonia*. Cell Host & Microbe, 2(4):240-249.

OTHER PUBLICATIONS

Editorials

1. *Simultaneous Infection*, International Innovation: The End of Epidemics (2015) Issue 176, <http://www.internationalinnovation.com/simultaneous-infection/>
2. *Influenza Virus and Pneumococcus: A Deadly Combination*, Translating Science Into Survival, St. Jude Scientific Reports (2014) http://www.stjude.org/SJFile/070914_WEB.pdf

Press Articles

1. Fite, E: "Soddy-Daisy Woman Survived Spanish Flu Pandemic of 1918", Chattanooga Times Free Press 18 February 2018 <http://www.timesfreepress.com/news/local/story/2018/feb/18/soddy-daisy-wom-survived-spanish-flu-pandemic/463996/>
2. Grenfell B and Arinaminpathy N: F1000Prime Recommendation of [Smith AM et al., PLoS Comput Biol 2011, 7(2):e1001081]. In F1000Prime, 06 Mar 2011; DOI: 10.3410/f.8733956.9247056. <http://F1000Prime.com/8733956#eval9247056>
3. Cell Press. "Avian Flu – 1918 and Today – Protein Enhances Lethality of Virus", ScienceDaily. 11 October 2007. <http://www.sciencedaily.com/releases/2007/10/071010120543>
4. Publication Highlight for McAuley et al. (2007) *Cell Host and Microbe* Nature Reviews Microbiology 5, 908 (December 2007) | doi:10.1038/nrmicro1811 <http://www.nature.com/nrmicro/journal/v5/n12/full/nrmicro1811.html>

Educational Media

1. *Knocking Infections Off the Catwalk with Models*, Science Soundbites (2015) <https://www.cure4kids.org/ums/sites/teachers/plugins/page.php?id=19>

Tutorials

1. **Smith, AM**. (2007) *Presentations Using LaTeX: The Beamer class*. <http://www.math.utah.edu/~smith/Beamer>