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FREDERICK R. ADLER

Curriculum vitae

Professor

Department of Mathematics and Department of Biology

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Research interests: Mathematical ecology, mathematical epidemiology, mathematical immunology, mathematical oncology, virus dynamics, biodiversity, optimal foraging theory, evolutionary ecology, ant behavioral ecology, urban ecology, cystic fibrosis

EDUCATION

- | | |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Ph.D. | Cornell University, Applied Mathematics, August 1991
Thesis title: <i>Models of Structured Populations</i>
Thesis advisor: Simon A. Levin |
| M.S. | Cornell University, Applied Mathematics, July 1989 |
| B.A. | Harvard-Radcliffe College, Mathematics, June 1984 |

HONORS AND AWARDS

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|------------------|-----------------------------------------------------|
| 2018 | Fellow of the Ecological Society of America |
| 2017 | Fellow of the Society for Mathematical Biology |
| 2016 | Faculty Recognition Program Award, Career Services |
| 2013-2015 | President, Society for Mathematical Biology |
| 2012-2013 | University of Utah College of Science Professorship |
| 2009- | Faculty of 1000 Biology |
| 2009 | University of Utah Distinguished Mentor Award |
| 1989-1990 | Mathematical Sciences Institute Graduate Fellow |
| 1985-1987 | A.D. White Fellowship, Cornell University |
| 1984 | Phi Beta Kappa, Harvard University |

PROFESSIONAL EXPERIENCE

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|------------------|--------------------------------------------------------------------------------------------------|
| 2004- | Professor, Department of Mathematics and
Department of Biology, University of Utah |
| 2000 | Visiting Faculty Fellow, Department of Ecology and
Evolutionary Biology, Princeton University |
| 1998-2004 | Associate Professor, Department of Mathematics and
Department of Biology, University of Utah |
| 1993-1998 | Assistant Professor, Department of Mathematics and |

Department of Biology, University of Utah
1991-1992 Visiting Postdoctoral Researcher, Center for Population Biology
 University of California at Davis
 Marc Mangel, Mentor
1987-1990 Teaching Assistant, Cornell University
1984-1985 Research Assistant, National Water Alliance, Washington, D.C.

GRANTS

2019-2023 Salivary Protein Influence on Taste and Feeding
 (A-M. Torregrossa, PI, F.R. Adler co-PI on Utah subaward)
 NIH: 1R01DC016869-01A1: \$76,415

2017-2021 Combating subclonal evolution of resistant cancer phenotypes
 (A. Bild, PI, F.R. Adler co-PI on Project 1 and Computational Core)
 NIH U54 \$6,000,000

2015-2020 Explanatory models of CF survival, infection and
 intermediate clinical outcomes, NIH R01
 (T. G. Liou, PI) \$1,750,000

2012-2017 Research Training Group in Mathematical and
 Computational Biology, NSF-DMS (J. P. Keener, PI) \$2,579,183

2017 Army Research Office, \$25,260

2016 Army Research Office, meeting grant \$30,000

2013-2016 Cystic Fibrosis Foundation Clinical Research Award
 (T. G. Liou, PI) \$250,000

2011-2015 Genetic analysis of health related, polygenic
 traits using the pure-bred canine model (K. G. Lark, PI) \$1,119,220

2011-2013 Mitochondrial fitness variation in a naturally replicated
 evolutionary experiment, NSF-DEB (J. Seger, PI) \$495,000

2009-2014 Pathogen adaptation to specific host genotypes
 (W. Potts, PI), NSF-DEB \$985,000

2007-2013 The Ecology and Evolution of the Common Cold,
 James S McDonnell Foundation (F. Adler, PI) \$346,000

2006-2008 Polymicrobial disease and inflammation in cystic fibrosis, NIH
 (T. G. Liou, PI) \$411,000

2004-2008 The Effect of Anthropogenic Disturbance on the Dynamics
 of Sin Nombre, NSF (D. Dearing, PI) \$1,824,000

2004-2007 How Competition and Parasitism Control Diversity in
 Ant Communities, NSF (D. H. Feener, PI) \$420,000.00

2002-2005 Genetic Architecture of the Mammalian (Canid) Skeleton
 NIH (K. G. Lark, PI)

2004-2009 RTG, NSF (J. P. Keener, PI) \$2,579,183

2002-2007 IGERT, NSF (J. P. Keener, PI) \$2,909,952

2001-2003	Genetic architecture of soybean, USDA (K. G. Lark, PI)
1999-2000	Cystic Fibrosis Program, Margolis Foundation
1997-1999	Measuring Forager Responses to Inducible Defenses: University of Utah Research Committee
1995-1996	Special Year in Mathematical Biology (with H. Othmer and M. Lewis)
1995-1997	Brooks/Cole Publishing Company

POST-DOCTORAL SCHOLARS

2017-	Jason Griffiths
2017-	Thuy Le
2011-2012	Suma Ghosh
2010-2012	Samit Bhattacharyya
2010-2012	Nicole Lewis-Rogers
2009-2011	Subhra Bhattacharya
2008-2011	Peter Kim
2007-2010	Damon Toth
2005-2007	Jonathan Forde

GRADUATE STUDENTS: PhD

2016-	Emerson Arehart, Department of Biology
2015-	Liz Fedak, Department of Mathematics
2015-	Samantha Hill, Department of Mathematics
2014-	Rebecca Terry, Department of Mathematics
2009-2018	Laura Strube, Department of Mathematics
2011-2018	Katrina Johnson, Department of Mathematics
2012-2017	Leif Zinn-Bjorkman, Department of Mathematics
2010-2017	Benjamin Hardisty, Department of Biology
2009-2017	Joe Eason, Department of Mathematics
2009-2017	Anna Miller, Department of Mathematics
2009-2016	Andrew Basinski, Department of Mathematics
2007-2014	James Moore, Department of Mathematics
2007-2012	Chris Remien, Department of Mathematics
2007-2012	Erica Graham, Department of Mathematics
2006-2011	Sean Laverty, Department of Mathematics
2005-2010	Giao Huynh, Department of Mathematics
2004-2008	Brendan O'Fallon, Department of Biology
2002-2008	Luciano Valenzuela, Department of Biology
2003-2009	Amber Smith, Department of Mathematics
2003-2010	Courtney Davis, Department of Mathematics
2002-2007	Meagan McNulty, Department of Mathematics
2002-2007	John Zobitz, Department of Mathematics

2002-2008	Colby Tanner, Department of Biology
1999-2006	Tim Brown, Department of Biology
1996-2002	Thomas Hills, Department of Biology
1993-2000	Stephen Proulx, Department of Biology
1996-2000	Adam Kay, Department of Biology

GRADUATE STUDENTS: Masters

2015-2017	Julia Inozemtseva, Department of Mathematics
2009-2011	Charles Cox, Department of Mathematics
2006-2009	Noelle Conforti, Department of Mathematics
2005-2007	Molly Kelton, Department of Mathematics
2002-2004	William Koppelman, Department of Mathematics,
2002-2004	Edgar Diaz, Department of Mathematics
2002-2004	Michelle Parslow, (Mathematics Education)
2002-2007	Aaron McDonald, Department of Mathematics
1999-2003	Bradley Demarest, Department of Biology
1992-1994	Deborah Horton, (Biology Education)

UNDERGRADUATE STUDENTS

2018-	Cassie Buhler: Dynamical control of prostate cancer
2017-	Katelyn Queen: The phenotypic diversity of cancer
2017-2018	Hannah Waddel: The community ecology of music
2015-2016	Sawson Gholami: The community ecology of music
2014-2015	Alex Beams: Antibiotic resistance
	Hitesh Tolani: Epidemics on networks
	Ethan Petersen: Optimal foraging theory
2012-2014	Sean Quinonez: Fighting ants
	Ethan King: Dynamics of hantavirus
	Taylor Block: Genetics of Cystic Fibrosis
2012-2013	Kyle Zortman: Dynamics of human papillomavirus
	Skip Fowler: Stochastic epidemics and the Catalan numbers
1993-2012	Advised approximately 20 undergraduate researchers

DEPARTMENT SERVICE

2016-2019	Graduate Admissions Committee (Mathematics)
2015-2019	USER Committee chair (Biology)
2010-2011	Executive Committee (Mathematics)
2008-2013	Communications Committee (Biology)
2009-2010	Hiring Committee (Mathematics)
2010	MCTP resubmission PI (Mathematics)
2009	IGERT resubmission PI (Mathematics)
2009	MCTP submission PI (Mathematics)
2008	IGERT resubmission PI (Mathematics)

2008-2009	Hiring Committee (Mathematics)
2006	Chair, Department Retreat Follow-Up Committee (Biology)
2005-2007	VIGRE Committee (Math)
2005-2007	Chair, BioURP Steering Committee (Biology)
2005-2006	Graduate Admissions Committee (Biology)
2004-2005	Executive Committee (Math)
2004-2005	Graduate Admissions Committee (Biology)
2003-2004	Vision Committee (Math)
2003-2005	Executive Committee (Biology)
2003-2007	Graduate Committee (Mathematics)
2002-2007	Math Education Committee (Mathematics)
2001-2002	Graduate Admissions Committee (Biology)
1995-1996	Communications committee (Biology)
1995-1996	Instructional computing committee (Math)
1994-1995	Ecology search committee (Biology)
1994-1995	Undergraduate mathematics initiative committee (Math)
1993-1995	Graduate admissions committee (Biology)
1995-	Theory Lunch (Biology)

UNIVERSITY SERVICE

2018	Chair Internal Review Committee, Oncological Sciences
2015-2016	University Writing Committee
2013-2014	Search Committee, College of Science Dean
2002-	Utah Symposium on Science and Literature Co-chair
2012-	Director, Center for Quantitative Biology
2011-2013	Undergraduate Council
2011-2012	Humanities Area Committee
2011	Search Committee, Global Change and Ecosystems Center
2008-2012	Acting Director, Center for Quantitative Biology
2005-2007	Interdisciplinary Advisory Committee
2002-2010	Quantitative Intensive Committee
2002-2004	Academic Policy and Advisory Committee
2002-2005	Science Area Committee
2001-2002	Faculty Leadership Seminar
1997-1999	Tanner Lecture Committee

COURSES TAUGHT

Mathematical Models of Cancer, Math 6770 (2018)
 The Role of Mathematics in Medicine, Math 3600/Biol 3400 (2013,2015)
 Urban Ecology, Biol 5440 (5 times)
 Mathematics for Life Scientists, Math 1170-1180 (over 10 times)

Decision-Making: Advanced Mathematical Biology, Math 6780 (2014)
 The Mathematics of Disease, Math 4800 (2012)
 Advanced Statistics in R, Biol 6500 (2010, 2012, 2016, 2018)
 Mathematical Models in Biology, Biol 5910 (8 times, 1997-2017)
 Mathematical Biology I, Math 5110 (7 times)
 Mathematical Biology II, Math 5120 (4 times)
 Summer REU in Mathematical Biology (2010)
 Mathematical Biology II, Math 6780 (4 times)
 Science and Literature (with K. Coles) Math 5750 (2009)
 Science and Literature (with K. Coles), Biol 5960-5 (2007)
 Ecology and Evolution (Biol 3410, with J. Seger) (2005)
 Core Seminar in Ecology and Evolution, Biol 7406 (2002)
 Perspectives in Mathematics, Math 1080 (2001)
 Statistics for Biologists, Biol 687 (1998)
 Core Seminar in Ecology and Evolution, Biol 788 (1997)

EDITORIAL BOARDS

1998-2002	Ecology, Ecological Applications, Ecological Monographs
2007-2012	PLoS ONE
2008-2014	The American Naturalist
2015-2017	Frontiers in Ecology and Evolution
2009-	Ecology Letters

PANELS

2016 Executive Advisory Committee, CMCI, University of Idaho
2015 NSF workshop: G2P
2008 NSF panel: Advancing Theory in Biology

CONFERENCES ORGANIZED

2017 Society for Mathematical Biology Annual Meeting
2016 Centralized vs Decentralized Control in the Regulation of Populations
 Santa Fe Institute
2015 Data-Driven Discovery: Preparing Researchers for the Quantitative
 Biology of the Future, AAAS
2013 Ignite: Urban Ecology: From Biophysics to Society,
 Ecological Society of America
2013 Ideas of March: Joint CQB/RTG workshop, Salt Lake City
2010 Organized Oral Session on Plant Signaling
 Ecological Society of America
2009 Quantitative Biology Workshop
 Utah Symposium on Science and Literature: Mathematics,
 Language and Imagination

- 2008** RTG Workshop: Mathematical Perspective on Cancer Immunology
Utah Symposium on Science and Literature: Measuring Scale
- 2005** Utah Symposium on Science and Literature: Some Re-Assembly Required
- 2003** Session Chair, Gordon Conference on Theoretical Ecology
- 2003** VIGRE Minicourse on Biological Invasions
- 1995** Fall Quarter of Special Year in Mathematical Biology
Organized Mathematics 675 with visiting lecturers
Minisymposium on Territoriality with 6 invited speakers

INVITED TALKS

- 2019** Ostrom Lecture, Washington State University
Department of Mathematics, Utah State University
Department of Mathematics, Brigham Young University
- 2018** Quantitative Life Sciences, McGill University
SACNAS Annual Meeting
- 2017** National Socio-Environmental Synthesis Center (SESYNC)
University of Idaho, IBEST
- 2016** Britton Lectures, McMaster University
St. Jude's Childrens Hospital
Department of Mathematics, Utah State University
- 2015** Society for Integrative and Comparative Biology
Department of Microbiology & Molecular Biology,
Brigham Young University
- 2014** Center for Infectious Disease Dynamics, Penn State
Biomathematics and Ecology: Education and Research
University of Rochester
University of Central Oklahoma
Department of Biomedical Informatics, University of Utah
- 2013** University of Nevada at Las Vegas
North American Cystic Fibrosis Conference, Salt Lake City
Mountain West Cystic Fibrosis Consortium, Salt Lake City
- 2012** University of Michigan
EEID, University of Michigan
University of Texas at Arlington
- 2011** University of Tennessee
University of California at Santa Barbara
- 2010** University of California at Santa Cruz, Applied Mathematics
University of New Mexico, PIBBS
University of California at Irvine
University of Wyoming
SIAM Life Sciences

- 2009** American Institute of Mathematics, Palo Alto
- 2008** Science at Breakfast, College of Science, University of Utah
Colorado College, Department of Mathematics
- 2007** Colorado State University, Biology
Colorado State University, PRIMES program
Smithsonian Tropical Research Institute, Panama
Mathematical Modeling and Analysis of Populations in Biological Systems
University of Arizona
- 2006** Princeton University, Ecology and Evolutionary Biology
University of Alabama Birmingham, Mathematics
- 2005** Undergraduate Lecturer, Park City Math Institute
SWARMS, Army Research Office, Napa, California
- 2004** Ecology Center, Utah State University
- 2003** Banff Institute, Banff
University of Idaho, Department of Mathematics
University of Idaho, Department of Biology
University of Georgia, Institute of Ecology
Mountain West Cystic Fibrosis Consortium
- 2002** University of Illinois at Chicago
Mathematical Association of America, Rocky Mountain Section
- 2000** Winterschool on Population Dynamics, Woudschoten
Dutch Theoretical Ecology meeting, Texel
University of Utrecht, Applied Mathematics
University of Munich, Zoology
Princeton University, Ecology and Evolutionary Biology
- 1999** Summer School for Mathematical Biology, UBC
Institute for Theoretical Dynamics, UC Davis
- 1998** Gordon Conference on Theoretical Biology
Research and Teaching in Mathematics and Biology, UAM-Iztapalapa Mexico
- 1997** Oregon State University, Dept of Biology
Oregon State University, Dept of Mathematics
- 1996** National Center for Environmental Analysis and Synthesis, Santa Barbara
Mathematical Association of America, Rocky Mountain Section
Oberwolfach Mathematisches Forshungsinstitut
Imperial College at Silwood Park
University of Edinburgh
Cambridge University
University of Bristol
University College London
University of Amsterdam
- 1995** Utah State University

1994 Utah State University
 Weber State University
 1992 Stanford University
 University of California, Davis
 Ecological Society of America
 Theory/Empirical Workshop, University of Wisconsin

References

- [1] F. R. ADLER, C. STOCKMANN, K. AMPOFO, A. T. PAVIA, AND C. L. BYINGTON, Transmission of rhinovirus in the Utah BIG-LoVE families: Consequences of age and household structure, *PLoS One*, 2018.
- [2] F. R. ADLER, S. QUINONEZ, N. PLOWES, AND E. S. ADAMS, A mechanistic model of ant battles and its consequences for territory scaling, *American Naturalist*, 2018.
- [3] R. S. SORENSON, M. J. DESHOTEL, K. JOHNSON, F. R. ADLER, AND L. E. SIEBURTH, *Arabidopsis mRNA decay landscape arises from specialized RNA decay substrates, decapping-mediated feedback, and redundancy*, Proceedings of the National Academy of Sciences, (2018), p. 201712312.
- [4] A. M. GRANCHELLI, F. R. ADLER, R. H. KEOGH, C. KARTSONAKI, D. R. COX, AND T. G. LIU, Microbial interactions in the cystic fibrosis airway, *Journal of Clinical Microbiology*, 2018.
- [5] J. J. HORNS, F. R. ADLER, AND C. H. SEKERCIOGLU, Using opportunistic citizen science data to estimate avian population trends, *Biological Conservation* 221:151–159, 2018.
- [6] L. ZINN-BJÖRKMAN AND F. R. ADLER, Modeling factors that regulate cell cooperativity in the zebrafish posterior lateral line primordium, *J. Theor. Biol.* 65:1282–1288, 2018.
- [7] A. K. MILLER, K. MUNGER, AND F. R. ADLER. A Mathematical Model of Cell Cycle Dysregulation Due to Human Papillomavirus Infection, *Bull. Math. Biol.*, 79:1564–1585, 2017.
- [8] J. LEE, F. R. ADLER, AND P. S. KIM, A mathematical model for the macrophage response to respiratory viral infection in normal and asthmatic conditions, *Bull. Math. Biol.*, 79:1979–1998, 2017.

- [9] N. Lewis-Rogers, J. Seger, and F. R. Adler, Human rhinovirus diversity and evolution: How strange the change from major to minor, *J. Virol.*, 91:e01659-16, 2017.
- [10] A. T. Tredennick, P. B. Adler, and F. R. Adler, The relationship between species richness and ecosystem variability is shaped by the mechanism of co-existence, *Ecol. Lett.*, 20:958–968, 2017
- [11] K. A. Brown, N. Daneman, M. Jones, K. Nechodom, V. Stevens, F. R. Adler, M. B. Goetz, J. Mayer, and M. Samore, The drivers of acute and long-term care *Clostridium difficile* infection rates: A retrospective multilevel cohort study of 251 facilities, *Clinical Infectious Diseases*, 65:1282–1288, 2017
- [12] J. L. Jensen, C. R. Jones, C. Kartsonaki, K. A. Packer, F. R. Adler, and T. G. Liou, Sleep phase delay in cystic fibrosis: A potential new manifestation of cystic fibrosis transmembrane regulator dysfunction, *Chest*, 152:386–393, 2017
- [13] D. D. Smith, J. S. Sperry, and F. R. Adler, Convergence in leaf size versus twig leaf area scaling: do plants optimize leaf area partitioning? *Annals of Botany*, 119:447–456, 2016.
- [14] A. B. Beams, D. J. A. Toth, K. Khader, and F. R. Adler, Harnessing intra-host strain competition to limit antibiotic resistance: Mathematical model results, *Bull. Math. Biol.*, 78:1828-1846, 2016
- [15] F. R. Adler and T. G. Liou, The dynamics of disease progression in cystic fibrosis, *PLoS ONE* 11:e0156752, 2016
- [16] K. A. Brown, M. Jones, N. Daneman, F. R. Adler, V. Stevens, K. E. Nechodom, M. B. Goetz, M. H. Samore, and J. Mayer, Importation, Antibiotics, and *Clostridium difficile* Infection in Veteran Long-Term Care: A Multilevel Case–Control Study, *Annals of Internal Medicine*, 164:787–794, 2016
- [17] J. R. Moore and F. R. Adler, A mathematical model of T1D acceleration and delay by viral infection, *Bull. Math. Biol.*, 78:500–530, 2016
- [18] S. Bhattacharyya and P. H. Gesteland and K. Korgenski and O. N. Bjornstad and Adler, F. R., Cross-immunity between strains explains the dynamical pattern of paramyxoviruses, *Proc. Nat. Acad. Sci.* 112:13396-13400, 2015.
- [19] C. L. Byington, K. Ampofo, C. Stockmann, F. R. Adler, A. Herbener, T. Miller, X. Sheng, A. J. Blaschke, R. Crisp, and A. T. Pavia, Community surveillance of respiratory viruses among families in the Utah Better Identification of Germs-Longitudinal Viral Epidemiology (BIG-LoVE) study, *Clinical Infectious Diseases*, 61: 1217-1224, 2015.

- [20] K. A. Brown, M. Jones, F. R. Adler, M. Leecaster, K. Nechodom, V. Stevens, M. Samore, and J. Mayer, The determinants of *C. difficile* infection in long-term care facilities: a portrait of patient-and facility-level factors across 90 care regions in the veterans affairs health care system, *Antimicrobial Resistance and Infection Control*, 4:O36, 2015.
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- [23] C. Wilson, A. V. Sastre, M. Hoffmeyer, V. J. Rowntree, S. Fire, N. H. Santinelli, S. Díaz Ovejero, V. D’Agostino, C. F. Marón, G. J. Doucette, M. H. Broadwater, Z. Wang, N. Montoya, J. Seger, F. R. Adler, M. Sironi, and M. M. Uhart, Southern right whale *Eubalaena australis* calf mortality at Península Valdés, Argentina: are harmful algal blooms to blame?, *Marine Mammal Science*, 32:423–451, 2015.
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- [25] S. M. Countryman, M. C. Stumpe, S. P. Crow, F. R. Adler, M. J. Greene, M. Vonshak and D. M. Gordon, Collective search by ants in microgravity, *Frontiers in Ecology and Evolution* 3:A25, 2015.
- [26] J. Kubinak, D. Cornwall, F. R. Adler, and W. K. Potts, Serial infection of diverse host (*Mus*) genotypes rapidly impedes pathogen fitness and virulence, *Proc. Roy. Soc. B*, 282:20141568, 2015.
- [27] C. J. Tanner, F. R. Adler, N. B. Grimm, P. M. Groffman, S. A. Levin, J. Munshi-South, D. E. Pataki, M. Pavao-Zuckerman, and W. G. Wilson, Urban ecology: advancing science and society, *Frontiers in Ecology and the Environment*, 12:574-581, 2014.
- [28] S. Ghosh, J. L. Waite, D. H. Clayton, and F. R. Adler. Can antibodies against flies alter malaria transmission in birds by changing vector behavior? *J. Theor. Biol.*, 358:93-101, 2014.
- [29] S. Bewick, K. L Stuble, J.-P. Lessard, R. R. Dunn, F. R. Adler, and N. J. Sanders. Predicting future coexistence in a North American ant community. *Ecology and Evolution*, 4:1804-1819, 2014.

- [30] C. H. Remien, F. R. Adler, L. A. Chesson, L. O. Valenzuela, J. R. Ehleringer, and T. E. Cerling. Deconvolution of isotope signals from bundles of multiple hairs. *Oecologia*, 175:781-789, 2014.
- [31] E. J. Graham and F. R. Adler. Long-term models of oxidative stress and mitochondrial damage in insulin resistance progression. *Journal of Theoretical Biology*, 340:238-250, 2014.
- [32] Remien, C.H., Sussman, N.L. and Adler, F.R. Mathematical modelling of chronic acetaminophen metabolism and liver injury *Mathematical Medicine and Biology*, 301:302-317, 2014
- [33] V. J. Rowntree, M. M. Uhart, M. Sironi, A. Chirife, M. Di Martino, L. La Sala, L. Musmeci, N. Mohamed, J. Andrejuk, D. McAloose, J. E. Sala, A. Carribero, H. Rally, M. Franco, F. R. Adler, R. L. Brownell Jr., J. Seger, and T. Rowles. Unexplained recurring high mortality of southern right whale *Eubalaena australis* calves at Península Valdés, Argentina. *Marine Ecology Progress Series*, 493:275-289, 2013.
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- [36] F.R. Adler and C. J. Tanner. *Urban Ecosystems: Ecological Principles for the Built Environment* Cambridge University Press, 2013.
- [37] C. L. Davis and F. R. Adler. Mathematical models of memory CD8+ T-cell repertoire dynamics in response to viral infections. *Bulletin of Mathematical Biology*, 75:491-522, 2013.
- [38] F. R. Adler and P. S. Kim. Models of contrasting strategies of rhinovirus immune manipulation. *Journal of Theoretical Biology*, 327:1-10, 2013.
- [39] A. Smith, F. R. Adler, R. M. Ribeiro, R. N. Gutenkunst, J. L. McAuley, J. A. McCullers and A. S. Perelson. Kinetics of coinfection with influenza A virus and *Streptococcus pneumoniae*. *PLoS Pathogens*, 9:491-522, 2013.
- [40] F.R. Adler. *Modeling the Dynamics of Life: Calculus and Probability for Life Scientists: Third edition*. Brooks/Cole, Pacific Grove, 2012.

- [41] S. Bhattacharya and F. R. Adler. A time since recovery model with varying rates of loss of immunity. *Bulletin of Mathematical Biology*, 84:2810-2819, 2012.
- [42] T. G. Liou, F. R. Adler, R. H. Keogh, Y. Li, J.L. Jensen, W. Walsh, K. Packer, T. Clark, H. Carveth, J. Chen, S. L. Rogers, C. Lane, J. Moore, A. Sturrock, R. Paine III, D. R. Cox, and J. R. Hoidal. Sputum biomarkers and the prediction of clinical outcomes in patients with cystic fibrosis. *PLoS ONE*, 7:e42748, 2012.
- [43] J. Waite, A. Henry, F. R. Adler, and D. Clayton. Sex-specific effects of an avian malaria parasite on an insect vector: support for the resource limitation hypothesis. *Ecology*, 93:2448-2455, 2012.
- [44] Remien, C.H. and Adler, F.R. and Waddoups, L. and Box, T.D. and Sussman, N.L. Mathematical modeling of liver injury and dysfunction after acetaminophen overdose: Early discrimination between survival and death. *Hepatology*, 56:727-734, 2012
- [45] J.M.C. Pearce-Duvet, M. Moyano, F.R. Adler, and D.H. Feener. Fast food in ant communities: how competing species find resources. *Oecologia*, 167: 229-240, 2011.
- [46] G.T. Huynh and F.R. Adler. Alternating Host Cell Tropism Shapes the Persistence, Evolution and Coexistence of Epstein-Barr Virus Infections in Human. *Bulletin of Mathematical Biology*, 73:1754-1773, 2011.
- [47] G.T. Huynh and F.R. Adler. Mathematical modeling the age dependence of Epstein-Barr virus associated infectious mononucleosis. *Mathematical Medicine and Biology*, 29:245-261, 2011.
- [48] F. R. Adler. Plant signalling: the opportunities and dangers of chemical communication *Biology Letters*, 7:161-162, 2011.
- [49] F. R. Adler. The effects of intraspecific density dependence on species richness and species abundance distributions. *Theoretical Ecology*, 4:153-162, 2011.
- [50] A.M. Smith, J.A. McCullers, and F.R. Adler. Mathematical model of a three-stage innate immune response to a pneumococcal lung infection. *Journal of Theoretical Biology*, 276:106-116, 2011.
- [51] A.M. Smith, F.R. Adler, J. L. McAuley, R. N. Gutenkunst, R. M. Ribeiro, J. A. McCullers, and A. S. Perelson. Effect of 1918 PB1-F2 expression on influenza A virus infection kinetics. *PLoS Computational Biology*, 7:e1001081, 2011.

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