EDUCATION

1999–2003  Princeton University, Ph.D. in Applied and Computational Mathematics  
            Advisor: Simon Levin
1994–1999  Harvard University, A.B. summa cum laude in Mathematics
1997–1998  Oxford University, Visiting student in Mathematics
1988–1994  The Roxbury Latin School

SCIENTIFIC POSITIONS

2020–  Co-Director of Penn Center for Mathematical Biology, U. Penn
2019–  Walter H. and Leonore C. Annenberg Professor of the Natural Sciences, U. Penn.
2014–  Professor of Biology, Mathematics, Computer & Information Science, U. Penn.
2011–2014  Associate Professor of Biology, Computer & Information Science, U. Penn.
2009–2011  Martin Meyerson Assistant Professor of Interdisciplinary Studies, U. Penn.
2007–2011  Assistant Professor of Biology and Computer Science, University of Pennsylvania
2002–2007  Junior Fellow of the Harvard Society of Fellows
1999–2003  Member, Institute for Advanced Study, Princeton, NJ
1998–2011  Adjunct research faculty, Institute for Defense Analyses, Princeton, NJ
1997, 1998  Cryptographic research mathematician, US National Security Agency, Fort Meade, and
(summers)  Government Communications HQ, England (top-secret/SCI clearance)

AWARDS AND FELLOWSHIPS

2018  Fellow of the American Association for the Advancement of Science (AAAS)
2015  Akira Okubo Prize of the Society for Mathematical Biology and the Japanese SMB
2009–2014  David and Lucile Packard Fellowship in Science and Engineering
2009–2011  Alfred P. Sloan Foundation Research Fellowship
2005–2010  Burroughs Wellcome Fund Career Award at the Scientific Interface
2002–2007  Junior Fellow of the Harvard Society of Fellows
2002–2003  Porter Ogden Jacobus Award of Princeton University
2001–2003  Burroughs Wellcome Fund training fellowship
2001–2002  Teresa Heinz Scholarship for Environmental Research
1999–2002  National Science Foundation graduate fellowship in mathematics
1999–2002  Princeton University merit fellowship in the natural sciences and mathematics
1999  A.B. summa cum laude, Harvard University
1998  Phi Beta Kappa, Harvard University
1995–1999  John Harvard scholarship
1994  Detur Prize, Harvard University
1989–1994  Eight ACL national Latin and Greek Exam awards

EDITORIAL BOARD SERVICE

2012–2017  Board of Reviewing Editors, Science (AAAS)
2011–  Editorial Board, Cell Reports
2006–2013  Associate Editor, Journal of Molecular Evolution
MENTORSHIP

### Post-doctoral Fellows

**2022–**
Mari Kawakatsu (PhD, Princeton University, Applied Mathematics)

**2020–**
Taylor Kessinger (PhD, University of Tübingen, Computational Biology)

**2018–2022**
Colin Twomey (PhD, Princeton University, Ecology & Evolutionary Biology)
  currently Executive Director, Data Driven Discovery Initiative at U. Penn

**2020–2023**
Alex McAvoy (PhD, University of British Columbia, Mathematics)
  currently TT Assistant Professor of Data Science, UNC Chapel Hill (Fall 2023)

**2020–2023**
Daniel Cooney (PhD, Princeton University, Applied Mathematics)
  currently TT Assistant Professor of Mathematics, U. Illinois Urbana-Champaign

**2020–2023**
Hyunjoong Kim (PhD, U. Utah, Mathematics; co-advised by Y. Mori)
  currently TT Assistant Professor of Mathematics, U. Cincinnati

**2020–2022**
Qi Su (PhD, Peking University, Mechanical Systems and Control)
  currently TT Associate Professor of Automation at Shanghai Jiao Tong University

**2019–2021**
Alfredo González-Espinoza (PhD, U. Autónoma del Estado de Morelos, Physics)
  currently research data librarian at Carnegie Mellon University

**2017–2021**
Andrew Tilman (PhD, Princeton University, Ecology & Evolutionary Biology)
  currently Research Scientist at the U.S. Forest Service

**2017–2020**
Arunas Radzvilavicius (PhD, UCL, Applied Mathematics)
  currently Associate Editor at Nature Human Behavior

**2013–2018**
Davorka Gulisija (PhD, University of Wisconsin Madison, Zoology)
  currently tenure-track Assistant Professor at University of New Mexico (Jan 2020)

**2012–2017**
Jakub Otwinowski (PhD, Emory University, Physics)

**2013–2017**
Oana Carja (PhD, Stanford, Biology)
  currently tenure-track Assistant Professor at Carnegie Mellon University

**2012–2016**
David McCandlish (PhD, Duke University, Biology)
  currently a tenure-track Assistant Professor at Cold Spring Harbor Laboratories

**2011–2015**
Premal Shah (PhD, University of Tennessee, Biology)
  currently a tenure-track Assistant Professor at Rutgers University

**2010–2015**
Alexander Stewart (PhD, University College London, Applied Mathematics)
  currently Associate Professor at University of St. Andrews

**2010–2013**
Ricky Der (PhD, University of Pennsylvania, Mathematics)

**2011–2013**
David Bostick (PhD, UNC Chapel Hill, Physics)

**2011–2013**
Etienne Rajon (PhD, University of Lyon, Ecology)
  currently tenure-track Assistant Professor at Université de Lyon

**2008–2012**
Jeremy Draghi (PhD, Yale University, Biology)
  currently tenure-track Assistant Professor at Virginia Tech

**2007–2011**
Todd Parsons (PhD, University of Toronto, Mathematics)
  currently permanent scientist of CNRS at Université Pierre et Marie Curie

**2009–2011**
Helene Morlon (PhD, University of Bordeaux, Biology)
  currently permanent scientist of CNRS at École Normale Supérieure

**2008–2010**
Gasper Tkacik (PhD, Princeton University, Applied Mathematics) joint with P. Nelson
  currently Professor at Inst. of Science and Technology, Austria

**2007–2010**
Sergey Kryazhimskiy (PhD, Princeton University, Applied Mathematics)
  currently Associate Professor at UCSD

**2007–2010**
Michael Levy (PhD, Emory University, Biology)
  currently Associate Professor at U. Pennsylvania, Dept. of Biostatistics

**2008–2010**
Anchal Vishnoi (PhD, Nehru University, Biology) joint with S. Hannenhalli
  currently Lecturer at Nehru University
2005–2007 Grzegorz Kudla (PhD, University of Warsaw, Biology) currently Senior Scientist of the MRC, at the University of Edinburgh

**Graduate Students**

2023– James Wolfe, PhD student in Applied Mathematics
2023– Guocheng Wang, visiting PhD student in Applied Mathematics from Peking University
2022– Anhzi Sheng, visiting PhD student in Applied Mathematics from Peking University
2022– Hiro Okabe, PhD student in Applied Mathematics
2012–2017 Mitchell Johnson, PhD student in Biology, currently in the Michigan Society of Fellows and Assistant Professor of Complex Systems at University of Michigan (Sep 2018)
2014–2015 Koji Noshita, Visiting PhD student from Kyushu University, Japan
2010–2015 Yang Ding, PhD student in Biology, currently at post-doc with B. Palsson (UCSD)
2007–2010 Ricky Der, PhD student in Mathematics, joint with C. Epstein
2008–2010 Serena Rezny, MA student in Applied Mathematics

**Undergraduate Students**

2012–2013 Krishna Kaliannan, undergraduate researcher
2008–2012 Alison Feder, undergraduate researcher, currently a PhD student at Stanford
2008–2010 Sebastian Akle, undergraduate researcher, currently a PhD student at Harvard
2007–2009 Daril Vilhena, undergraduate researcher, subsequently a PhD student at U. Washington
2007–2008 Bo Zhou, undergraduate researcher, subsequently a PhD student at Harvard

**TEACHING EXPERIENCE**

2009– Advanced Evolution (BIOL 410), University of Pennsylvania
2008– Statistics for Biologists (BIOL 446), University of Pennsylvania
2003 Biological Dynamics (APC 514) Princeton University, with E. Cox, W. Bialek

**INVITED LECTURES**

2024 École des Hautes Études en Sciences Sociales, Paris France
2024 Limits to Collective Agency, International Centre for Theoretical Physics, Trieste Italy
2024 Cooperation Colloquium, MIT, Cambridge MA
2023 Meiji University, Tokyo Japan
2023 University of Southern California, Los Angeles CA
2022 Northwestern University, Evanston IL
2021 Santa Fe Institute, Sante Fe NM
2020 Lincoln University Department of Biology, Oxford PA
2020 Weizmann Institute of Science, Rehovot, Israel
2020 Frontiers in Science Public Lecture Series, Georgia Tech, Atlanta GA
2020 Dialogues in Complexity Public Lecture Series, Arizona State University, Tempe AZ
2020 Informatics Colloquium Distinguished Speaker, Indiana University, Bloomington IN
2019 Science and Education Policy Association, Rockefeller University, New York NY
2019 Department of Ecology and Evolution, Princeton University, Princeton NJ
2018 Institute of International and Regional Studies, Princeton University, Princeton NJ
2018 Laboratory of Financial Engineering, MIT, Cambridge, MA
2018 University of Chicago, Department of Ecology and Evolutionary Biology, Chicago IL
2016 Princeton University, Department of Ecology and Evolutionary Biology, Princeton NJ
2016 Temple University, Institute for Genomics and Evolutionary Medicine, Philadelphia PA
2015 Okubo Prize Lecture, Society for Mathematical Biology, Atlanta, GA
2015 Okubo Prize Lecture, Japanese Society for Mathematical Biology, Kyoto, Japan
2015 Keynote Address, Mathematical Models in Ecology and Evolution, Paris, France
2015  Stanford University, Department of Biology, Palo Alto, CA
2015  Session Chair, Society for Molecular Biology and Evolution, Vienna, Austria
2014  University of Maryland, Computational Biology Program student-invited speaker
2013  Rockefeller University, Center for Physics and Biology
2013  Rutgers University, 110th Statistical Physics Conference
2012  American Society for Microbiology Bio-defense Conference, Washington DC
2012  Institute for Systems Biology, Seattle WA, student-invited speaker
2012  Academia Sinica, Institute of Physics, Taipei, Taiwan
2012  New York University, Department of Biology
2012  Duke University, Department of Mathematics
2012  National Institute for Mathematical and Biological Synthesis, Knoxville TN
2012  University of Pennsylvania, Friday Research Discussion
2011  California Institute of Technology, Biophysics Lecture Series
2011  Princeton University, Colloquium in Applied Mathematics
2011  Yale University, Department of Ecology & Evolutionary Biology
2011  Cold Spring Harbor Laboratories, Quantitative Biology Seminar Series
2010  Duke University, Biology and Mathematics joint colloquium
2010  Packard Fellows Annual Meeting, Monterey CA
2010  UC Berkeley, Departments of Mathematics and Integrative Biology
2010  University of Chicago, Department of Ecology and Evolution
2010  Georgia Tech, Department of Biology
2009  Science/AAAS Webinar, Washington DC
2009  33rd Penn Linguistics Colloquium, University of Pennsylvania
2008  Kavli Institute for Theoretical Physics, Santa Barbara CA
2007  Mathematics colloquium, Penn State University
2007  National Academy of Sciences USA, US-Japan Frontiers of Science, Kanagawa, Japan
2006  Keck Graduate Institute, Claremont CA
2005  NIH Twinbrook Distinguished Lecture Series, Rockville MD
2004  The Fields Institute, Toronto ON
2004  Santa Fe Institute Workshop on Diversity Scaling, Czech Natl. Acad. Sci., Prague
2004  Gordon Conference on Theoretical Biology & Biomathematics, Tilton NH
2003  Gordon Conference on Evolutionary and Ecological Genomics, New London NH
2002  First European Influenza Conference, St. Juliens, Malta
2001  Laboratoire d’Ecologie Terrestre, CNRS, Toulouse, France
2001  Polish Academy of Sciences, Stefan Banach International Mathematics Centre, Warsaw
2000  Imperial College of Science, Technology and Medicine, Silwood Park, England
2000  Smithsonian Tropical Research Institute Annual Meeting, Singapore
1998  Mathematics Institute, Oxford University, Oxford, England

PUBLICATIONS (google scholar)

1. Kawakatsu M, Kessinger T, Plotkin JB.
   A mechanistic model of gossip, reputations, and cooperation.
   Proceedings of the National Academy of Sciences USA 121: 2400689121 (2024)

2. Kim H, Mori Y, Plotkin JB.
   Finite population size effects on optimal communication for social foragers.
   SIAM Journal on Applied Mathematics 84: 915-939 (2024)

3. Morsky B, Plotkin JB, Akçay E.
   Indirect reciprocity with Bayesian reasoning and biases.
   PLOS Computational Biology 20: 1011979 (2024)
4. Sheng A, Su Q, Wang L, Plotkin JB. Strategy evolution on higher-order networks. *Nature Computational Science* 4: 274–284 (2024)

5. Okabe H, Plotkin JB. Can institutions foster cooperation by wealth redistribution? *J. Royal Society Interface* 21: 20230698 (2024)

6. Kawakatsu M, Michel-Mata S, Kessinger T, Tarnita T, Plotkin JB. When do stereotypes undermine indirect reciprocity? *PLOS Computational Biology* 20: 1011862 (2024)

7. Twomey C, Brainard D, Plotkin JB. Historical constraints on the evolution of efficient color naming. *Proceedings of the National Academy of Sciences USA* 121: 2313603121 (2024)

8. Stewart A, Arechar A, Rand D, Plotkin JB. Why engagement does not reveal consumer preferences for misinformation. *Proceedings of the National Academy of Sciences USA* 21: 2315195121 (2024)

9. Tilman A, Vasconcelos V, Akcay E, Plotkin JB. The evolution of forecasting for decision making in dynamic environments. *Collective Intelligence* 2 (2023)

10. Sheng A, Su Q, Li A, Wang L, Plotkin JB. Constructing temporal networks with bursty activity patterns. *Nature Communications* 14: 7311 (2023)

11. Kessinger T, Tarnita C, Plotkin JB. Evolution of norms for judging social behavior. *Proceedings of the National Academy of Sciences USA* 120: 2219480120 (2023)

12. Cooney D, Levin SA, Mori Y, Plotkin JB. Evolutionary dynamics within and among competing groups. *Proceedings of the National Academy of Sciences USA* 120: 2216186120 (2023)

13. Wang G, Su Q, Wang L, Plotkin JB. Reproductive variance can drive behavioral dynamics. *Proceedings of the National Academy of Sciences USA* 120: 2216218120 (2023)

14. Su Q, McAvoy A, Plotkin JB. Strategy evolution on dynamic networks. *Nature Computational Science* 3: 763-777 (2023)

15. Kim H, Mori Y, Plotkin JB. Optimality of intercellular signaling: direct transport versus diffusion. *Physical Review E* 106: 054411 (2022)

16. McAvoy A, Mori Y, Plotkin JB. Selfish optimization and collective learning in populations. *Physica D* 439: 133426 (2022)

17. Ventura R, Plotkin JB, Roberts G. Drift and selection in an artificial language. *Cognitive Science* 46: 13197 (2022)
18. Newberry M, Plotkin JB.
   Measuring frequency dependent selection in culture.
   *Nature Human Behaviour* 6: 1048–1055 (2022)

19. Su Q, McAvoy A, Plotkin JB.
   Evolution of cooperation with contextualized behavior.
   *Science Advances* 8:6066 (2022)

20. Princepe D, de Aguiar M, Plotkin JB.
    A mito-nuclear trade-off between species ecological dominance and evolutionary lifespan.
    *Nature Ecology and Evolution* 6:1992–2002 (2022)

21. Su Q, McAvoy A, Mori Y, Plotkin JB.
    Evolution of prosocial behavior in multilayer populations.
    *Nature Human Behavior* (2022)

22. Su Q, Allen B, Plotkin JB.
    Evolution of cooperation with asymmetric social interactions.
    *Proceedings of the National Academy of Sciences USA* 119:2113468118 (2021)

23. Inequality, identity, and partisanship: how redistribution can stem the tide of mass polarization.
    Stewart A, Plotkin JB, McCarty N.
    *Proceedings of the National Academy of Sciences USA* 118:2102140118 (2021)

24. Twomey C, Roberts G, Brainard D, Plotkin JB.
    What we talk about when we talk about colors.
    *Proceedings of the National Academy of Sciences USA* 118:2109237118 (2021)

25. Hirshleifer D, Plotkin JB.
    Moonshots, investment booms, and selection bias in the transmission of cultural traits.
    *Proceedings of the National Academy of Sciences USA* 118:2015571118 (2021)

26. Radzvilavicius A, Kessinger T, Plotkin JB*.
    Adherence to public institutions that foster cooperation.
    *Nature Communications* 12: 3567 (2021)

27. Stewart A*, Plotkin JB*.
    The natural selection of good science.
    *Nature Human Behavior* 5: 1510-1518 (2021)

28. Morris D, Rossine F, Plotkin JB, Levin SA.
    Optimal, near-optimal, and robust epidemic control.
    *Communications Physics* 4: 78 (2021)

29. Sridhar A, Yağan O, Eletreby R, Levin SA, Plotkin JB, Poor HV.
    Leveraging a multiple-strain model with mutations in analyzing the spread of COVID-19
    IEEE International Conference on Acoustics, Speech and Signal Processing 8163-8167 (2021)

30. Tilman A, Plotkin JB, Akcay E.
    Evolutionary games with environmental feedbacks.
    *Nature Communications* 11: 15 (2020)

31. Yagan O, Sridhar A, Eletreby R, Levin SA, Plotkin JB, Poor HV.
    Modeling and analysis of the spread of COVID-19 in a multiple-strain model with mutations.
    *Harvard Data Science Review* 10.1162/99608f92.a11bf693 (2020)
32. Mosleh M, Stewart A, Plotkin JB, Rand D.
Prosociality in the economic Dictator Game is associated with less parochialism and greater willingness to vote for intergroup compromise.
*Judgement and Decision Making* 15: 1-6 (2020)

33. Stewart A, Mosleh M, Diakonova M, Arechar A, Rand D, Plotkin JB.
Information gerrymandering and undemocratic decisions.
*Nature* 583: 117-121 (2019)

34. Plotkin JB.
Ancel (2000) on the Baldwin effect.
*Theoretical Population Biology* 133:35 (2019)

35. Radzvilavicius A, Stewart A, Plotkin JB∗.
Evolution of empathetic moral evaluation.
*eLife* 8:44269 (2019)

36. Carja O, Plotkin JB.
Phenotypic plasticity can facilitate evolutionary rescue.
*Genetics* 211: 977-988 (2019)

37. Plotkin JB.
Ancel (2000) on the Baldwin effects.
*Theoretical Population Biology* 10.1016/j.tpb.2019.09.003 (2019)

38. Otwinowski J, McCandlish D, Plotkin JB.
Inferring the shape of global epistasis.
*Proceedings of the National Academy of Sciences USA* 115: 7550-7558 (2018)

39. Mittal P, Brindle J, Stephen J, Plotkin JB, Kudla G.
Codon usage influences fitness through RNA toxicity.
*Proceedings of the National Academy of Sciences USA* 115: 8639-8644 (2018)

40. Posfai A, Zhou J, Plotkin JB, Kinney JB, McCandlish DM.
Selection for protein stability enriches for epistatic interactions.
*Genes* 9: 423 (2018)

41. Newberry MG, Ahern C, Clark R, Plotkin JB∗.
Evolutionary forces in language change.
*Nature* 551: 223-226 (2017)

42. Gulisića D, Plotkin JB.
Phenotypic plasticity promotes recombination and gene clustering in periodic environments.
*Nature Communications* 8: 2041 (2017)

43. Plotkin JB.
No escape from the tangled bank.
*Nature* 551: 42-43 (2017)

44. Carja O, Xing T, Wallace EW, Plotkin JB, Shah P.
riboviz: analysis and visualization of ribosome profiling datasets.
*BMC Bioinformatics* 10.1186/s12859-017-1873-8 (2017)

45. Carja O, Plotkin JB.
The evolutionary advantage of heritable phenotypic heterogeneity.
*Scientific Reports* 7: 5090 (2017)
46. **Stewart A, Parsons T, Plotkin JB.**
Evolutionary consequences of behavioral diversity.
*Proceedings of the National Academy of Sciences USA* 113: 7003-7009 (2016)

47. **Newberry M, McCandlish D, Plotkin JB.**
Assortative mating can impede or facilitate fixation of underdominant alleles.
*Theoretical Population Biology* 112: 14-21 (2016)

48. **Nourmohammad A, Otwinowski J, Plotkin JB.**
Host-pathogen co-evolution and the emergence of broadly neutralizing antibodies in chronic infections.
*PLOS Genetics* 12: 1006171 (2016)

49. **Stewart A, Plotkin JB.**
Small groups and long memories promote cooperation.
*Scientific Reports* 6: 26899 (2016)

50. **McCandlish D, Shah P, Plotkin JB.**
Epistasis and the dynamics of reversion in molecular evolution.
*Genetics* 203: 1335-1351 (2016)

51. **Gulisija D, Kim Y, Plotkin JB.**
Phenotypic plasticity promotes balanced polymorphism in periodic environments by a genomic storage effect.
*Genetics* 202: 1437-1448 (2016)

52. **McCandlish D, Plotkin JB**.
Transcriptional errors and the drift barrier.
*Proceedings of the National Academy of Sciences USA* 113: 3136-3138 (2016)

53. Weinberg DE#, Shah P#, Eichhorn SW, Hussmann JA, **Plotkin JB**, Bartel DP.
Improved ribosome-footprint and mRNA measurements provide insights into dynamics and regulation of yeast translation.
*Cell Reports* 14:1-13 (2016)

54. **McCandlish M, Otwinowski J, Plotkin JB.**
Detecting epistasis from an ensemble of adapting populations.
*Evolution* 69: 2359-2380 (2015)

55. Neverov AD, Kryazhimskiy S, **Plotkin JB**, Bazykin GA.
Coordinated evolution of Influenza A surface proteins.
*PLoS Genetics* 11: 1005404 (2015)

56. **Stewart A, Plotkin JB.**
The evolvability of cooperation under local and non-local mutations.
*Games* 6:231-250 (2015)

57. **McCandlish D, Epstein C, Plotkin JB.**
Formal properties of the probability of fixation: identities, inequalities and approximations.
*Theoretical Population Biology* 99:98-113 (2015)

58. Schulte MB, **Draghi JA, Plotkin JB**, Andino R.
Experimentally guided models reveal replication principles that shape the mutation distribution of RNA viruses.
*eLife* 4:3753 (2015)
59. Kumar S, Plotkin JB, Hannenhalli S.
Regulated CRISPR modules exploit a dual defense strategy of restriction and abortive infection in a model of prokaryote-phage coevolution.
PLoS Computational Biology 11: 1004603 (2015)

60. Shah P, McCandlish M, Plotkin JB*
Contingency and entrenchment in protein evolution under purifying selection.
Proceedings of the National Academy of Sciences USA 112:3226–3235 (2015)

61. Stewart A, Plotkin JB*
The collapse of cooperation in evolving games.
Proceedings of the National Academy of Sciences 111: 17558-17563 (2014)

62. Otwinowski J, Plotkin JB*
Inferring fitness landscapes by regression produces biased estimates of epistasis.
Proceedings of the National Academy of Sciences USA 111:2301-2309 (2014)

63. Der R, Plotkin JB.
The equilibrium allele frequency distribution for a population with reproductive skew.
Genetics 196: 1199-1216 (2014)

64. McCandlish D, Epstein C, Plotkin JB.
The inevitability of unconditionally deleterious substitutions during adaptation.
Evolution 68:1351-1365 (2014)

65. Stewart A, Plotkin JB*
From extortion to generosity, evolution in the Iterated Prisoner’s Dilemma.
Proceedings of the National Academy of Sciences USA 110: 15348-15353 (2013)

66. Shah P, Ding Y, Niemczyk M, Kudla G, Plotkin JB*
Rate-limiting steps in yeast protein translation.
Cell 153: 1589-1601 (2013)

67. McCandlish D, Rajon E, Shah P, Ding Y, Plotkin JB*
The role of epistasis in protein evolution.
Nature 497: E1-E2 (2013)

68. Feder A, Kryazhimskiy S, Plotkin JB*
Identifying signatures of selection in genetic time series.
Genetics 196: 509-522 (2013)

69. Draghi J, Plotkin JB*
Selection biases the prevalence and type of epistasis along adaptive trajectories.
Evolution 67: 3120–3131 (2013)

70. Lipsitch M, Fisman D, Plotkin JB, Simonsen L.
Ferret H7N9 flu model questioned.
Nature 501: 33 (2013)

71. Li Y, Bostick D, Sullivan C, Myers J, Griesemer S, St. George K, Plotkin JB*, Hensley S*
Single Hemagglutinin mutations that alter both antigenicity and receptor-binding avidity.
Journal of Virology 87: 9904-9910 (2013)

72. Li Y, Myers J, Bostick D, Sullivan C, Madara J, Linderman S, Liu Q, Carter D, Wranmert J, Esposito S, Principi N, Plotkin JB, Ross T, Ahmed R, Wilson P, Hensley S.
Immune history shapes specificity of pandemic H1N1 Influenza antibody responses.
Journal of Experimental Medicine 210: 1493-1500 (2013)
73. **Stewart A, Plotkin JB*.**
   The evolution of complex gene regulation by low-specificity binding sites.
   *Proceedings of The Royal Society B* 280: 20131313 (2013)

74. **Rajon E, Plotkin JB.**
   The evolution of genetic architectures underlying quantitative traits.
   *Proceedings of The Royal Society B* 280: 20131552 (2013)

75. Harrison RD, Tan S, **Plotkin JB**, Slik F, Detto M, Brenes T, Itoh A, Davis SJ.
   Consequences of defaunation for a tropical tree community.
   *Ecology Letters* 16: 687–694 (2013).

76. **Stewart A, Hannenhalli S, Plotkin JB*.**
   Why transcription factor binding sites are ten nucleotides long.
   *Genetics* 192: 973-985 (2012)

77. **Stewart A, Seymour R, Pomiankowski A*, Plotkin JB*.**
   The population genetics of cooperative gene regulation.
   *BMC Evolutionary Biology* 12: 173 (2012)

78. **Ding Y, Shah P, Plotkin JB*.**
   Weak 5’ mRNA structure in short eukaryotic genes.
   *Genome Biology and Evolution* 4: 1046-1053 (2012)

79. **Stewart A, Plotkin JB*.**
   Extortion and cooperation in the Prisoner's Dilemma.
   *Proceedings of the National Academy of Sciences USA* 109: 10134-10135 (2012)

80. Lipsitch M, **Plotkin JB**, Simonsen L, Bloom B.
   Evolution, safety, and highly pathogenic Influenza viruses.
   *Science* 336: 1529-1531 (2012)

81. **Der R, Epstein C, Plotkin JB*.**
   The dynamics of neutral and selected alleles when the offspring distribution is skewed.
   *Genetics* 191:1331-1344 (2012)

82. **Stewart A, Parsons T, Plotkin JB*.**
   Environmental robustness and the adaptability of populations.
   *Evolution* 66: 1598-1612 (2012)

83. **Toll-Riera M, Bostick D, Alba M*, Plotkin JB*.**
   Structure and age jointly influence rates of protein evolution
   *PLoS Computational Biology* 8:1002542 (2012)

84. **Morlon H, Kemps B, Plotkin JB, Brisson D.**
   Explosive radiation of a bacterial species group.
   *Evolution* 66: 2577–2586 (2012)

85. Walczak AM, Nicolaisen LE, **Plotkin JB, Desai MM.**
   The structure of genealogies in the presence of purifying selection: a fitness-class coalescent.
   *Genetics* 190: 753–779 (2012)

86. Desai MM, Nicolaisen LE, Walczak AM, **Plotkin JB*.**
   The structure of allelic diversity in the presence of purifying selection.
   *Theoretical Population Biology* 8: 144-157 (2012)
87. Draghi J, Plotkin JB.
A network of paths towards innovation.
*BioEssays* 34: 518–520 (2012)

88. Kryazhimskiy S, Draghi J, Plotkin JB*.
In evolution, the sum is less than its parts.
*Science* 332: 1160-1161 (2011)

89. Draghi J, Plotkin JB*.
Hidden diversity sparks adaptation.
*Nature* 474: 45-46 (2011)

90. Der R, Epstein C, Plotkin JB.
Generalized population models and the nature of genetic drift.
*Theoretical Population Biology* 80: 80-99 (2011)

91. Plotkin JB.
The lives of proteins.
*Science* 331: 683-684 (2011)

92. Vishnoi A, Sethupathy P, Simola D, Plotkin JB*, Hannenhalli S*.
Genome-wide survey of natural selection on functional, structural, and network properties of polymorphic sites in *Saccharomyces paradoxus*.
*Molecular Biology and Evolution* 28: 2615-2627 (2011)

93. Levy M, Small D, Vilhena D, Bowman N, Kawai V, Carpio J, Codova E, Gilman R, Plotkin JB.
Retracing micro-epidemics of Chagas disease using epicenter regression.
*PLoS Computational Biology* 7: 1002146 (2011)

94. Draghi J, Parsons T, Plotkin JB.
Epistasis increases the rate of conditionally neutral substitution in an adapting population.
*Genetics* 187: 1139–1152 (2011)

95. Morlon H, Parsons T, Plotkin JB.
Reconciling molecular phylogenies with the fossil record.
*Proceedings of the National Academy of Sciences USA* 108: 16327-332 (2011)

96. Plotkin JB*, Kudla G.
Synonymous but not the same: the causes and consequences of codon bias.
*Nature Reviews Genetics* 12: 32-42 (2011)

97. Kryazhimskiy S, Dushoff J, Bazykin G, Plotkin JB*.
Prevalence of epistasis in the evolution of Influenza A surface proteins.
*PLoS Genetics* 7: 1001301 (2011)

98. Draghi J, Parsons T, Wagner G, Plotkin JB*.
Mutational robustness can facilitate adaptation.
*Nature* 426: 353-355 (2010)

99. Morlon H*, Potts M, Plotkin JB*.
Inferring the dynamics of diversification: a coalescent approach.
*PLoS Biology* 8: 1000493 (2010)

100. Vishnoi A, Kryazhimskiy S, Bazykin G, Hannenhalli S*, Plotkin JB*.
Young proteins experience more variable selection pressures than old proteins.
*Genome Research* 20: 1574-1581 (2010)
101. Cao K, Chen-Plotkin AS, Plotkin JB, Wang LS.
    Age-correlated gene expression in normal and neurodegenerative human brain tissues.
    *PLoS One* 5: 13098 (2010)

102. Toole J, Eagle N, Plotkin JB.
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