

Curriculum Vitae - current July, 2014

STEPHEN TOBIAS ABEDON

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Microbial Ecology and Evolutionary Ecology

Phage Evolutionary Ecology (adaptation & optimization)

Phages and Spatial Structure (plaques & biofilms)

Phage Therapy (especially pharmacology)

BiologyasPoetry.com stats: >200,000 unique visitors and >10% returning visitors over the past year
phage.org stats: >25,000 unique visitors and 15% returning visitors over the past year

Bacteriophage Ecology Group (phage.org and archaealviruses.org)
#1 & 2 Google ranking for “[bacteriophage ecology](http://bacteriophage.ecology)” & #2 & 3 for “[phage ecology](http://phage.ecology)”

Number of times cited: 1944 (July 14, 2014, according to Google Scholar)
1387 citations since 2009 (ditto)

H-Index: 26 (as calculated using Google Scholar; 22 since 2009)

i10-index: 42 (as calculated using Google Scholar; 41 since 2009)

scholar.google.com/citations?hl=en&user=ohoN070AAAAJ

tinyurl.com/abedon-amazon-author-page

archaealviruses.org/abedon/

Contents/synopsis: [Education](#), [Professional experience](#), [Honors](#),
[Monographs](#) (1), [Edited volumes](#) (4), [Peer-reviewed publications](#) (30), [Editor-reviewed articles](#) (13), [Journal articles \(not peer reviewed\)](#) (3), [Book chapters](#) (21), [Encyclopedia articles](#) (8), [Conference proceedings](#) (2), [Portions of book chapters](#) (2), [Invited talks](#) (>30), [Additional publications including online](#) (25), [Web sites and web pages](#) (≥5),
[Notable service](#), [Successful YouTube Videos](#), [Consulting](#), [Courses taught](#)

EDUCATION

- | | | |
|------|---|---|
| 1990 | <ul style="list-style-type: none">• Ph.D.• Major:• Minor:• Dissertation title:• Research advisor: | University of Arizona
Microbiology (molecular genetics conc.)
Ecology and Evolutionary Biology
<i>The Ecology of Bacteriophage T4</i>
Harris Bernstein, Ph.D. |
| 1984 | <ul style="list-style-type: none">• BS• Major: | University of Massachusetts at Amherst
Biochemistry (<i>cum laude</i> ; Phi Beta Kappa) |

PROFESSIONAL EXPERIENCE

- | | |
|--------------|--|
| 2001-present | <ul style="list-style-type: none">• Associate Professor• Department of Microbiology; The Ohio State University |
| 1995-2001 | <ul style="list-style-type: none">• Assistant Professor• Department of Microbiology; The Ohio State University |

- 1993-1995 • **NIH Post-Doctoral Trainee**
- Dept. Microbiology, U. of Pennsylvania; Lab. of Robert W. Doms
- Immunogenic characterization of HIV-1 transmembrane protein
- 1990-1993 • **Research Associate**
- Dept. Microbiol. & Immunol., U. of AZ; Lab. of Harris Bernstein
- Characterization and genetic analysis of T4 bacteriophage lysis
- 1992-1993 • **Computer Software Development**
- MicroDude Computer Software, sole proprietorship, Tucson, AZ
- Application development—Borland Turbo Pascal compiler
- 1990 • **Research Assistant**
- Dept. Microbiol. & Immunol., U. of AZ; Lab. of John Spizizen
- Plasmid curing of an industrial strain of *Bacillus thuringiensis*

HONORS—Awards, Grants, Merit-Based Support, etc.

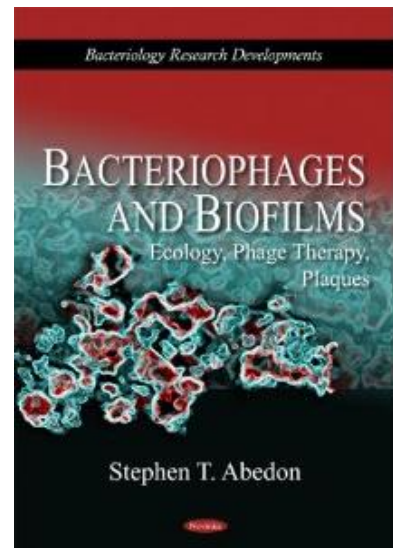
- 2010 • Quoted in *Nature Reviews Microbiology* editorial (8:610).
- 2008 • Awarded extramural grant as PI, “Analysis of the Advancements in Bacteriophage Therapies for Use in Clinical and Veterinary Applications,” by Battelle National Biodefense Institute, 9 months for \$72,658.58 (including overhead).
- 2008 • Awarded intramural grant as co-PI (Jeff LeJeune, PI), Identification of microbiological factors that suppress *E. coli* O157 in livestock bedding, two years for \$16,600 (my share).
- 2004 • \$12,000 awarded for intramural industry matching grant, jointly funded by OSU OARDC-RECGP and Infected Inc.: Sreevatsan S., Abedon, S.T. Isolation and Characterization of *Mycobacterium avium* subspecies *paratuberculosis*.
- 2003 • \$15,000 awarded for development of honors Microbial Evolution course by OSU Honors and Scholars Center (10 of 26 proposals were funded)
- 2002-2003 • Office of International Affairs (OSU) Faculty Int. Research Travel Grant (\$1,500)
- 2001 • Abedon *et al.* (2001) featured in Nov., 2001 (Vol. 67) Journal Highlights section of *ASM News*.
- 2000 • Review of website (phage.org) in 13 Oct., 2000, issue of *Science*.
- 1999-2000 • Mansfield-campus professional-development grant (\$1000)
- 1999 • Book-jacket “blurb” of Bill Summers' book *Felix d'Herelle and the Origins of Molecular Biology* for Yale University Press
- 1996-1997 • Competitive O.S.U. intramural seed grant (\$16,385)



- 1993-1995 • NIH post-doctoral training grant
- 1986-1990 • NIH pre-doctoral training grant
- 1985-1986 • Department-based pre-doctoral fellowship
- 1984-1985 • Department-based tuition-waiver
- 1984 • Graduated *cum laude*, *Phi Beta Kappa*
- 1981 • CRC inorganic chemistry award

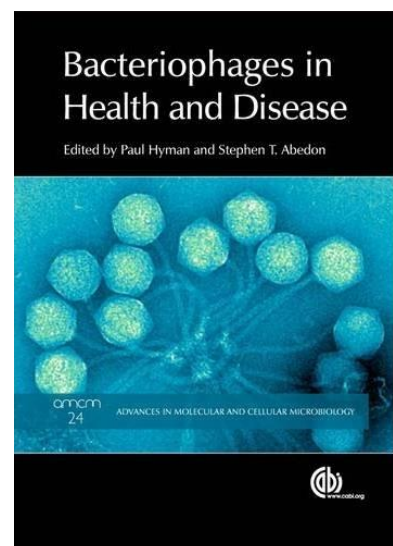
MONOGRAPHS & TEXTBOOKS (coding: **accepted/in press**, **submitted**, **in preparation**)

- 1) **Abedon, S. T.** (drafted and taught from once, Bio 1102, Human Biology). *Biology as Poetry: Human Biology*. >100,000 words with extensive YouTube video embedding. The public version can be found here: biologyaspoetry.com/textbooks/human_biology/
- 2) **Abedon, S. T.** (drafted and taught from twice, Bio 1101, non-major's introductory biology). *Biology as Poetry: Introductory Biology*. >100,000 words, plus associated lab manual.
- 3) **Abedon, S. T.** (drafted and taught from three times, Micro h669/5169). *Microbes and Evolution: An Introduction to Microbial Evolution*. >100,000 words. The public version can be found here: biologyaspoetry.com/textbooks/microbes_and_evolution/
- 4) **Abedon, S. T.** (sole author) (2011). *Bacteriophages and Biofilms: Ecology, Phage Therapy, Plaques*. Nova Science Publishers, Hauppauge, New York. (in this single-authored monograph I provide basic development of theory associated with ecology of phage interaction with biofilms and microcolonies of host bacteria) novapublishers.com/catalog/product_info.php?products_id=18072 (~20 non-self cites, 9/28/2013 calculation)



EDITED VOLUMES

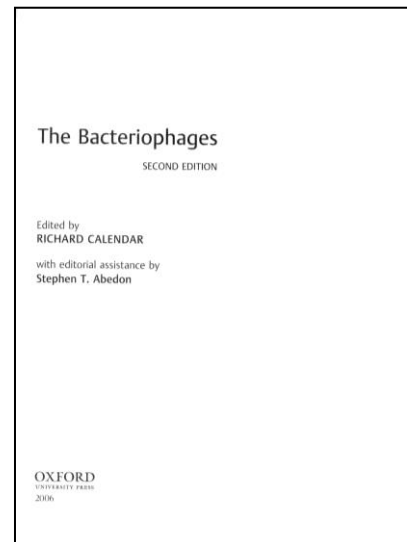
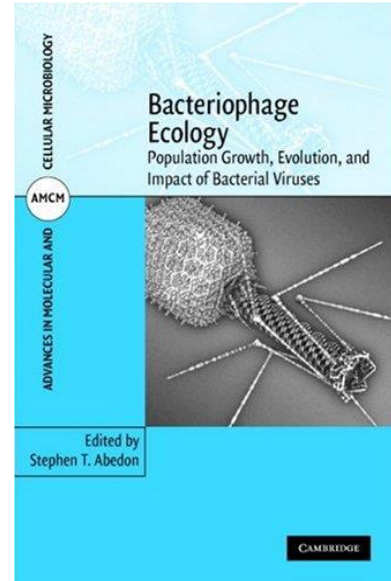
- 1) Harper, D., **Abedon, S. T.**, Burrows, B., McConville, M. (editors) (finalizing table of contents). *Bacteriophages: Biology, Technology, Therapy*. Springer. bacteriophages.net
- 2) Hyman, P., **Abedon, S. T.** (editors) (Currently receiving chapters). *Viruses of Microorganisms: Diversity and Applications*, Caister Academic Press, Norwich, UK.
- 3) Allen, H. K., **Abedon, S. T.** (editors) (currently receiving articles). *Viral Ecology and Disturbances: Impact of Environmental Disruption on the Viruses of Microorganisms*, in *Frontiers in Microbiology*.
- 4) Hyman, P., **Abedon, S. T.** (editors) (2012).



Bacteriophages in Health and Disease, CABI Press.
Wallingford, Oxfordshire, UK

books.google.com/books?id=WofsugAACAAJ

- 5) **Abedon, S. T.** (editor) (2010). Special topics issue on “The ‘Nuts and Bolts’ of Phage Therapy” *Current Pharmaceutical Biotechnology* 11(1) (6-article review of phage therapy edited as the equivalent to a monograph on the subject of phage therapy; follow links: bentham.org/cpb/contabs/cpb11-1.htm)
- 6) **Abedon, S. T.** (editor) (2008). *Bacteriophage Ecology: Population Growth, Evolution, and Impact of Bacterial Viruses*. Cambridge University Press. (see tinyurl.com/yuld7y for publisher’s page) books.google.com/books?id=gtPZsPXBBqIC (~40 non-self cites, 4/30/2014 calculation)
- 7) Calendar, R. (editor), **Abedon, S. T.** (acknowledged on title page as “with editorial assistance by”) (2006). *The Bacteriophages*, 2nd edition. Oxford University Press. (review of all of phagology; see thebacteriophages.org for chapters and list of contributors) (see publisher’s page via tinyurl.com/236epn, or go to thebacteriophages.org) books.google.com/books?id=nozn1K8tcRsC



PUBLICATIONS—Peer-Reviewed

- 0) **Summary:** 30 peer-reviewed articles, *sensu stricto*, including 23 sole, first, or corresponding authorships; together these peer-reviewed publications have been cited by others (non-self cites) >500 times (and ~650 times if Broder *et al.*, 1994, is included). In subsequent sections are presented 14 editor-reviewed articles, for 13 of which I am first, sole, or corresponding author; ~30 “other” including chapters (21), non-peer-reviewed articles (3), and encyclopedia articles (8, one of which was published twice), for all but five of which I am first, sole, or corresponding author; 1 single-authored monograph; and 4 edited volumes. See also ncbi.nlm.nih.gov/pubmed/?term=abedon as well as [ncbi.nlm.nih.gov/pubmed/?term="Abedon ST"\[Author\]](https://ncbi.nlm.nih.gov/pubmed/?term="Abedon ST"[Author]) (which contains 37 entries) and [ncbi.nlm.nih.gov/pubmed/?term="Abedon S"\[Author\]](https://ncbi.nlm.nih.gov/pubmed/?term="Abedon S"[Author]) (which contains 1 additional publication that is mine). (explanations of prominent contributions of theoretical, synthesis, conceptual, and whole-organismal studies are presented parenthetically in gray)
- 1) **Chan, B. K., Abedon, S. T.*** (2014, this was accepted in February but I’m still awaiting proofs!). *Bacteriophages and Their Enzymes in Biocontrol*. *Current Pharmaceutical Design* (this was an invited review) (I used this review to further subject to peer review the somewhat novel ideas on the ecology of phage interactions with biofilms as I had previously published in my 2011, *Bacteriophages and Biofilms* monograph)
- 2) **Abedon, S. T.** (2014). Phage Therapy: Eco-Physiological Pharmacology. *Scientifica* (this was an invited review) (this article represents an >15,000-word exploration of the interface existing between ecology, physiology, and pharmacology as these perspectives collectively

apply to the use of phages as antibacterial agents in phage therapy) hindawi.com/journals/scientifica/2014/581639/

- 3) Allen, H. K. *, **Abedon, S. T.** (2013). That's Disturbing! An Exploration of the Bacteriophage Biology of Change. *Frontiers in Microbiology* 4:295 (2 pages; I conceived and drafted this editorial plus contributed about half to the figure so contributed about 50% of the effort) frontiersin.org/evolutionary_and_genomic_microbiology/10.3389/fmicb.2013.00295/full
- 4) Chan, B. K., **Abedon, S. T.**, Loc-Carrillo, C. * (2013). Phage Cocktails and the Future of Phage Therapy. *Future Microbiology* 8:769-783. (I was approached by the journal, gathered up the co-authors, suggested author order and roles, and contributed about 40% of the writing)† ncbi.nlm.nih.gov/pubmed/23701332 (~10 non-self cites, 4/30/2014 calculation)
- 5) **Abedon, S. T.** *, Murray, K. L. (2013). Archaeal Viruses, not Archaeal Phages: An Archaeological Dig. *Archaea* 2013:251245. (Kelly is a student working under my supervision) hindawi.com/journals/arch/2013/251245
- 6) **Abedon, S. T.** (2012). Thinking About Microcolonies as Phage Targets. *Bacteriophage* 2:200-204. (synthesis of ideas mostly as published in 2011 *Biofilms* monograph and 2012 *Viruses* article) (slight extension of theory of the ecology of phage exploitation of bacterial microcolonies beyond that of the two overviewed articles is provided; otherwise this represents a peer reviewing of this aspect of the theory developed in the 2011 Abedon single-authored monograph) ncbi.nlm.nih.gov/pubmed/23275871
- 7) Hyman, P., **Abedon, S. T.** * (2012). Smaller Fleas: Viruses of Microorganisms. *Scientifica* 2012:734023. (synthesis of new approach towards classifying viruses; my contributions were ~50%) (the idea of the concept of viruses of microorganism is developed in detail here) scientifica.com/aip/734023
- 8) Hyman, P. *, **Abedon, S. T.** (2012). High-affinity and -specificity, bacteriophage-based technologies: beyond phage therapy. *CAB Reviews* 7:1-3. (invited mini review loosely based on book submitted to same publisher; my contributions were ~20%)
- 9) **Abedon, S. T.** (2012). Spatial Vulnerability: Bacterial Arrangements, Microcolonies, and Biofilms as Responses to Low rather than High Phage Densities. *Viruses* 4(5):663-687. (theoretical analysis) (in this article I develop the theory associated with the ecology of phage exploitation of bacterial clonal arrangements and microcolonies that suggests that bacteria should be more vulnerable by entering into such arrangements rather than less, and therefore that such clonal group living should be prominent predominantly when phage-mediated predation pressure is relatively low) ncbi.nlm.nih.gov/pubmed/22754643 (3 non-self cites***, 5/30/2014 calculation)
- 10) **Abedon, S. T.** (2012). Bacterial 'Immunity' against Bacteriophages. *Bacteriophage* 2(1):50-54. (attempt at synthesis of bacterial anti-phage biology and the science of immunology) (for the sake of developing a more unified immunology, one which includes prokaryotic defenses as well, here I consider how especially bacterial defenses against phages can be viewed as analogs to specific especially animal immune system components) ncbi.nlm.nih.gov/pubmed/22666656 (~10 non-self cites, 4/30/2014 calculation)
- 11) Curtright, A. J., **Abedon, S. T.** * (2011). Phage Therapy: Emergent Property Pharmacology. *Journal of Bioanalysis & Biomedicine*. S6:002 (synthesis; Andrew, an OSU undergraduate

* Corresponding author

† Chan et al. was featured here www.mdlinx.com/infectious-disease/news-article.cfm/4655716

working under my supervision, came up with the general theme, generated the outline, and contributed substantially to the writing). (here we take on the question of the seeming contradiction that phages can be both more complicated than small-molecule drugs and, at the same time, display a comparatively simplified pharmacology, particularly in terms of secondary pharmacodynamics, that is, the emergence of side effects) omicsonline.org/1948-593X/JBABM-S6-002.php?aid=2333

- 12) **Abedon, S. T.**, Kuhl, S., Blasdel, R., Kutter, E. M. * (2011). Phage Treatment of Human Infections. *Bacteriophage* 1(2): 66-85. (invited review; responsible for writing ~50%)[‡] ncbi.nlm.nih.gov/pubmed/22334863 (~55 non-self cites, 4/30/2013 calculation)
- 13) **Abedon, S. T.** (2011). Size Does Matter – Distinguishing Bacteriophages by Genome Length (and ‘Breadth’). *Microbiology Australia* 32(2):90-91. (synthesis and analysis) (the data underlying the claim that phages can be categorized into three more or less distinct genome size categories is both further developed and illustrated; this is also seen and further developed in the Hyman and Abedon, 2012, *Scientifica* article and extends claims made in the Abedon, 2009, *Advances in Applied Microbiology* chapter) journals.cambridge.org.au/UserDir/CambridgeJournal/Articles/12%20abedon248.pdf
- 14) Loc-Carrillo, C., **Abedon, S. T.** * (2011). Pros and Cons of Phage Therapy. *Bacteriophage* 1(2):111-114. (commentary; conception, initial drafting, and >50% of writing is mine)[§] ncbi.nlm.nih.gov/pubmed/22334867 (~30 non-self cites, 4/30/2014 calculation)
- 15) **Abedon, S. T.** (2011). Lysis from Without. *Bacteriophage* 1(1):46-49. (commentary) ncbi.nlm.nih.gov/pubmed/21687534 (~15 non-self cites, 9/28/2013 calculation)
- 16) **Abedon, S. T.** (2009). Kinetics of Phage-Mediated Biocontrol of Bacteria. *Foodborne Pathogens and Disease* 6:807-815. (synthesis and theoretical analysis) (in this article I show mathematically the equivalence of Michaelis-Menton saturation kinetics with regard to enzymes to specific strategies towards the modeling of phage population growth) ncbi.nlm.nih.gov/pubmed/19459758 (~30 non-self cites***, 4/30/2014 calculation)
- 17) Goodridge, L., **Abedon, S. T.** * (2008). Bacteriophage Biocontrol: The Technology Matures. *Microbiology Australia* 29(March):48-49. (invited review; ~15% of effort is mine) asm.asnevents.com.au/assets/Uploads/MAMar08.pdf#page=48
- 18) **Abedon, S. T.** *, Culler, R.R. (2007). Bacteriophage Evolution Given Spatial Constraint. *Journal of Theoretical Biology* 248:111-119. (*in silico* study; Ms. Culler is an OSU-Mansfield undergraduate who worked under my supervision) (this study explores the implications of various approaches of modeling phage plaque development towards better understanding phage selection that could be occurring under different circumstances; this analysis explicitly gave rise to the second article by the same authors published in the same year) ncbi.nlm.nih.gov/pubmed/17561124 (~20 non-self cites***, 9/28/2013 calculation)
- 19) Dennehy, J., **Abedon, S. T.**, Turner, P. E. * (2007). Host Density Impacts Relative Fitness of Bacteriophage ϕ 6 Genotypes in Structured Habitats. *Evolution* 61:2516-2527 (experimental study; ~10% of effort is mine, especially the microcolony physiology post-hoc explanation) ncbi.nlm.nih.gov/pubmed/17725627 (~10 non-self cites***, 9/28/2013 calculation)
- 20) **Abedon, S. T.** *, Culler, R. R. (2007). Optimizing Bacteriophage Plaque Fecundity. *Journal of Theoretical Biology* 249:582-592. (theoretical study; Ms. Culler worked under my supervision) (here we develop theory underlying a claim that a tradeoff can exist

[‡] **Abedon et al.** is the all-time most downloaded for the journal *Bacteriophage* (as calculated July, 2013)

[§] Loc-Carrillo and **Abedon** is the 2nd most downloaded for the journal *Bacteriophage* (as calculated July, 2013)

between phage maximization of plaque size versus phage maximization of plaque productivity in terms of numbers of phage particles produced; though not explicitly developed as such, this work represents an early step towards consideration of the ecology of phage exploitation of bacterial microcolonies) ncbi.nlm.nih.gov/pubmed/17919662 (~15 non-self cites***, 9/28/2013 calculation)

- 21) **Abedon, S. T.**^{*} and LeJeune, J. T. (2005). Why Bacteriophage Encode Toxins and other Virulence Factors. *Evolutionary Bioinformatics* 1:97-110. (synthesis; ~90% of effort is mine) (in this article we develop the logic underlying the hypothesis that prophage encoding of bacterial virulence factors can, at least in certain circumstances, represent means by which phages may enhance not just lysogen fitness but phage fitness as well during subsequent production infections as well) ncbi.nlm.nih.gov/pubmed/19325857 (~10 non-self cites, 9/28/2013 calculation)
- 22) LeJeune, J. T.^{*}, **Abedon, S. T.**, Takemura, K., Christie, N. P. Sreevatsan, S. (2004). Human *Escherichia coli* O157:H7 Genetic Marker in Isolates of Bovine Origin. *Emerging Infectious Diseases* 10(8):1482-1485. (molecular study; ~15% of effort is mine, consisting entirely of intellectual support) ncbi.nlm.nih.gov/pubmed/15496255 (~50 non-self cites***, 4/30/2014 calculation)
- 23) **Abedon, S. T.**^{*}, Hyman, P., Thomas, C. (2003). Experimental Examination of Latent-Period Evolution as a Response to Bacterial Availability. *Applied and Environmental Microbiology* 69(12):7499-7506. (whole-organismal experimentation with ecological analysis; ~90% of effort was mine; Ms. Thomas worked under my supervision)** (in this study we provide experiments supporting the tradeoff hypothesis with regard to the evolution of phage latent period timing) ncbi.nlm.nih.gov/pubmed/14660403 (~50 non-self cites***, 4/30/2013 calculation)
- 24) **Abedon, S. T.**^{*}, Herschler, T. D., Stopar, D. (2001). Bacteriophage Latent-Period Evolution as a Response to Resource Availability. *Applied and Environmental Microbiology* 67(9):4233-4241. (*in silico* study with some experimental corroboration; ~75% of effort was mine; Mr. Herschler worked under my supervision)^{††} (here we employ experiments to distinguish among different approaches toward modeling phage population growth and show how different modeling approaches can modify estimations of latent period optima) ncbi.nlm.nih.gov/pubmed/11526028 (~80 non-self cites***, 4/30/2014 calculation)
- 25) **Abedon, S. T.** (1999). Bacteriophage T4 Resistance to Lysis-Inhibition Collapse. *Genetical Research*. 74:1-11. (whole-organismal genetic analysis) (the roles played by different phage genes along with the phenomenon of resistance to lysis from without in delaying lysis during lysis inhibition are explored) ncbi.nlm.nih.gov/pubmed/10505404 (~15 non-self cites***, 9/28/2013 calculation)
- 26) Paddison, P., **Abedon, S. T.**, Dressman, H., Gailbreath, K., Mosser, E., Neitzel, J., Guttman, B., Kutter, E.^{*} (1998). The Roles of the Bacteriophage T4 *r* Genes in Lysis



** Recommended, Faculty of 1000 Biology, www.f1000biology.com/article/id/1007193/evaluation

†† featured in Nov., 2001 (Vol. 67) Journal Highlights section of *ASM News*

- Inhibition and Fine-Structure Genetics: A New Perspective. *Genetics* 148:1539-1550. (molecular and whole-organismal genetic analysis; ~25% of effort was mine; I contributed intellectually plus contributed half of the figures) ncbi.nlm.nih.gov/pubmed/9560373 (~40 non-self cites***, 4/30/2014 calculation)
- 27) Broder, C.C., Earl, P. L., Long, D., **Abedon, S. T.**, Moss, B. *, Doms, R. W. (1994). Antigenic implications of human immunodeficiency virus type 1 envelope quaternary structure: oligomer-specific and -sensitive monoclonal antibodies. *Proceedings of the National Academy of Science USA* 91:11699-11703. (molecular study; perhaps 5% of effort is mine; I contributed one figure) ncbi.nlm.nih.gov/pubmed/7972127 (~130 non-self cites, 9/28/2013 calculation)
- 28) **Abedon, S. T.** (1992). Lysis of Lysis-Inhibited Bacteriophage T4 Infected Cells. *Journal of Bacteriology* 174:8073-8080. (whole-organismal study) (the concept of lysis inhibition collapse and at least one of its causes is developed experimentally) ncbi.nlm.nih.gov/pubmed/1459956 (~20 non-self cites***, 4/30/2014 calculation)
- 29) **Abedon, S. T.** (1990). Selection for Lysis Inhibition in Bacteriophage. *Journal of Theoretical Biology* 146:501-511. (theory paper) (the adaptive role of lysis inhibition in phage life cycles is elucidated) ncbi.nlm.nih.gov/pubmed/2273898 (~20 non-self cites***, 4/30/2014 calculation)
- 30) **Abedon, S. T.** (1989). Selection for Bacteriophage Latent Period Length by Bacterial Density: A Theoretical Examination. *Microbial Ecology* 18:79-88. (*in silico* study) (basic theory underlying the tradeoff hypothesis with regard to phage latent period evolution is developed) springerlink.com/content/13gt5263142p4645 (~50 non-self cites***, 4/30/2014 calculation)

PUBLICATIONS—Editor-Reviewed Articles

- 31) **Abedon, S. T.** (2013). Are Archaeons Incapable of Being Parasites or Have We Simply Failed to Notice? *BioEssays* 35:501. (short, invited piece) ncbi.nlm.nih.gov/pubmed/23575903
- 32) Chan, B. K., **Abedon, S. T.*** (2012). Phage Therapy Pharmacology: Phage Cocktails. *Advances in Applied Microbiology* 78:1-23. (overview and synthesis; Dr. Chan contributed about 50% of the effort) (development in particular of the issues contributing to what we describe as “Limitations on cocktail utility”) ncbi.nlm.nih.gov/pubmed/22305091 (~20 non-self cites, 4/30/2014 calculation)
- 33) **Abedon, S.**^{‡‡} (2011). Phage Therapy Pharmacology: Calculating Phage Dosing. *Advances in Applied Microbiology*. 77:1-40. (overview, synthesis, and original theory) (in addition to review of what phage therapy primary pharmacodynamic predictive models exist, further development as well as comparison of those models is provided, plus an appendix provides a novel analysis) ncbi.nlm.nih.gov/pubmed/22050820 (~5 non-self cites***, 9/28/2013 calculation)
- 34) **Abedon, S. T.** (2011). Envisaging Bacteria as Phage Targets. *Bacteriophage* 1(4): 228-230. (overview and synthesis) (alternative means of visualizing the mass action constraints on phage-bacterial interactions are provided towards improved development of phage therapy treatment protocols) landesbioscience.com/journals/bacteriophage/article/17281/
- 35) **Abedon, S. T.** (2011). Facilitation of CRISPR Adaptation. *Bacteriophage* 1(3):179-181. (overview and synthesis) (basic, especially ecological theory of the issue of CRISPR adaptation is developed) ncbi.nlm.nih.gov/pubmed/22164352 (~5 non-self cites, 9/28/2013 calculation)

^{‡‡} The middle initial is missing in this publication

- 36) **Abedon, S. T.**^{*}, Thomas-Abedon, C., Thomas, A., Mazure, H. (2011). Bacteriophage Prehistory: Is or is not Hankin, 1896, a Phage Reference? *Bacteriophage* 1(3): 174-178. (historical analysis; this was about 75% my writing effort with the other 25% mostly associated with translation of the Hankin article) (provided is to our knowledge an original quantitative analysis of the Hankin experiments assuming that bacterial elimination is a phage-associated phenomenon) ncbi.nlm.nih.gov/pubmed/22164351
- 37) **Abedon, S. T.** (2011). Communication among Phages, Bacteria, and Soil Environments. *Soil Biology* 23:37-65. (a.k.a., *Biocommunication of Soil Microorganisms*, G. Witzany, ed, Springer-Verlag, Heidelberg) (synthesis and review) (in part, provides development of the concept of phage-mediated lysis as a continuation of the primary microorganism-mediated ecological process, that of mineralization) springer.com/life+sciences/ecology/book/978-3-642-14511-7
- 38) Hyman, P.^{*}, **Abedon, S. T.** (2010). Bacteriophage Host Range and Bacterial Resistance. *Advances in Applied Microbiology* 70:217-248. (synthesis and review; STA was invited but PH took care of submission) (development of idea that phage host range can be considered in terms of more than just plaque or spot formation as well as the concept of reduced infection vigor as a distinct endpoint of bacterial phage-resistance mechanisms) ncbi.nlm.nih.gov/pubmed/20359459 (~80 non-self cites, 4/30/2014 calculation)
- 39) **Abedon, S. T.**^{*}, Yin, J. (2009). Bacteriophage Plaques: Theory and Analysis. *Methods in Molecular Biology* 501:161-174. [also: In: *Bacteriophages: Methods and Protocols*, Clokie M., Kropinski, A. (eds), Humana Press, USA] (invited chapter—this is a review of techniques for studying phage growth within spatially structured environments; ~60% of effort is mine) ncbi.nlm.nih.gov/pubmed/19066821 (~20 non-self cites, 9/28/2013 calculation)
- 40) Hyman, P., **Abedon, S. T.**^{*} (2009). Practical Methods for Determining Phage Growth Parameters. *Methods in Molecular Biology* 501:175-202. [also: In: *Bacteriophages: Methods and Protocols*, Clokie M., Kropinski, A. (eds), Humana Press, USA] (invited article—this essentially is a review of techniques of phage organismal characterization; ~50% of effort is mine) ncbi.nlm.nih.gov/pubmed/19066822 (~20 non-self cites, 9/28/2013 calculation)
- 41) **Abedon, S. T.** (2009). Phage Evolution and Ecology. *Advances in Applied Microbiology* 67:1-45. (invited review) ncbi.nlm.nih.gov/pubmed/19245935 (~35 non-self cites, 4/30/2014 calculation)
- 42) Gill, J., **Abedon, S. T.**^{*} (2003). Bacteriophage Ecology and Plants. *APSnet Feature*, November 2003, apsnet.org/publications/apsnetfeatures/Pages/BacteriophageEcology.aspx (invited review; ~50% effort was mine) (~20 non-self cites, 9/28/2013 calculation)
- 43) Goodridge, L., **Abedon, S. T.**^{*} (2003). Bacteriophage Biocontrol and Bioprocessing: Application of Phage Therapy to Industry. *SIM News (Society for Industrial Microbiology News)* 53(6):254-262. (invited review; ~50% of effort is mine) cienciaviva.pt/rede/oceanos/2desafio/16.pdf (~30 non-self cites, 4/30/2014 calculation)
- 44) **Abedon, S. T.** (2000). The Murky Origin of Snow White and Her T-even Dwarfs. *Genetics* 155:481-486. (historical perspective) ncbi.nlm.nih.gov/pubmed/10835374 (~15 non-self cites, 9/28/2013 calculation)



PUBLICATIONS—Journal Articles, but not peer or editor reviewed

- 45) **Abedon, S. T.** (2010). The ‘Nuts and Bolts’ of Phage Therapy. *Current Pharmaceutical Biotechnology* 11(1):1. (editorial for special topic issue) ncbi.nlm.nih.gov/pubmed/20214603
- 46) **Abedon, S. T.***, Thomas-Abedon, C. (2010). Phage Therapy Pharmacology. *Current Pharmaceutical Biotechnology* 11(1):28-47. (synthesis and review; Thomas-Abedon contributed while working under my supervision) (substantial as well as original integration of basic concepts of pharmacokinetics and especially pharmacodynamics with that of phage therapy as an antibacterial strategy is provided, including introduction of the concept of effective burst size, providing an original as well as microbiologically legitimate simplification to a calculation of what is known as “Proliferation thresholds” – see particularly equation 8 – and original development of the idea that phage-bacterial interactions during plaque development is similar to that of phage-bacterial interactions within biofilms, including especially in terms of phage-microcolony interactions) ncbi.nlm.nih.gov/pubmed/20214606 (~30 non-self cites, 4/30/2014 calculation)
- 47) **Kutter, E.***, De Vos, D., Gvasalia, G., Alavidze, Z., Gogokhia, L., Kuhl, S., Abedon, S. T. (2010). Phage Therapy in Clinical Practice: Treatment of Human Infections. *Current Pharmaceutical Biotechnology* 11(1)69-86. (review) ncbi.nlm.nih.gov/pubmed/20214609 (~80 non-self cites, 4/30/2014 calculation)

PUBLICATIONS—Book Chapters

- 48) **Abedon, S. T.** (2014). Bacteriophages as Drugs: The Pharmacology of Phage Therapy. In: *Phage Therapy: Current Research and Applications*. Borysowski, J., Międzybrodzki, R., Górski, A. (eds), Caister Academic Press, Norfolk, UK, pp. 69-100. (review; ~17,500 words excluding refs)
- 49) **Abedon, S. T.** (2012). Salutary Contributions of Viruses to Medicine and Public Health. In: *Viruses: Essential Agents of Life*. Witzany, G. (ed), Springer-Verlag, Heidelberg, pp. 389-405. link.springer.com/book/10.1007/978-94-007-4899-6/page/1
- 50) **Abedon, S. T.** (2012). Phages. In: *Bacteriophages in Health and Disease*. Hyman, P., Abedon, S. T. (eds), CABI Press, Wallingford, Oxfordshire, UK, pp. 1-5. books.google.com/books?id=zpcfuP6jTd4C
- 51) Kuhl, S. *, **Abedon, S. T.**, Hyman, P. (2012). Diseases Caused by Phages. In: *Bacteriophages in Health and Disease*. Hyman, P., Abedon, S. T. (eds), CABI Press, Wallingford, Oxfordshire, UK, pp. 21-32. (helped to finish the chapter; 25% effort at best) books.google.com/books?id=zpcfuP6jTd4C
- 52) Clark, J., **Abedon, S. T.**, Hyman, P. * (2012). Phages as Therapeutic Delivery Vehicles. In: *Bacteriophages in Health and Disease*. Hyman, P., Abedon, S. T. (eds), CABI Press, Wallingford, Oxfordshire, UK, pp. 86-100. (drafted original version but otherwise did not substantially contribute other than in terms of editing; 25% effort at best) books.google.com/books?id=zpcfuP6jTd4C
- 53) **Abedon, S.T.** (2012). Phage Therapy Best Practices. In: *Bacteriophages in Health and Disease*. Hyman, P., Abedon, S. T. (eds), CABI Press, Wallingford, Oxfordshire, UK, pp. 256-272. books.google.com/books?id=zpcfuP6jTd4C
- 54) Chan, B. K., **Abedon, S. T.*** (2012). Bacteriophage Adaptation, with Particular Attention to Issues of Phage Host Range. In: *Bacteriophages in Dairy Processing*. Quiberoni, A., Reinheimer, J. (eds), Nova Science Publishers, Hauppauge, New York, pp. 25-52.

- (synthesis and review) (further development of concept of phage effective burst size as well the role that phage host range along with other factors can play in its modification) novapublishers.com/catalog/product_info.php?products_id=24227
- 55) **Abedon, S. T.** (2010). Bacteriophages and Biofilms. In: *Biofilms: Formation, Development and Properties*. Bailey, W. C. (ed), Nova Science Publishers, Hauppauge, New York, 1-58 (conceptual piece; peer reviewed) novapublishers.com/catalog/product_info.php?products_id=21940
 - 56) **Abedon, S. T.** (2009). Bacteriophage Intraspecific Cooperation and Defection. In: *Contemporary Trends in Bacteriophage Research*. Adams, H. T. (ed), Nova Science Publishers, Hauppauge, New York, pp. 191-215. (conceptual piece; peer reviewed) (the evolutionary ecology of lysis inhibition and lysis timing is explored here, in some depth, including in terms of otherwise unpublished experiments) books.google.com/books?id=wdZPPQAACAAJ
 - 57) **Abedon, S. T.** (2009). Impact of Phage Properties on Bacterial Survival. In: *Contemporary Trends in Bacteriophage Research*. Adams, H. T. (ed), Nova Science Publishers, Hauppauge, New York, pp. 217-235. (conceptual piece; peer reviewed) books.google.com/books?id=wdZPPQAACAAJ
 - 58) **Abedon, S. T.** (2009). Deconstructing Chemostats Towards Greater Phage-Modeling Precision. In: *Contemporary Trends in Bacteriophage Research*. Adams, H. T. (ed), Nova Science Publishers, Hauppauge, New York, pp. 249-283. (theoretical and *in silico* study; peer reviewed) (extensive exploration of how to model phage-bacterial population dynamics in chemostats is provided, including original observation that phage decay in these systems often may be substantially greater than models generally have assumed) books.google.com/books?id=wdZPPQAACAAJ
 - 59) **Abedon, S. T.** (2009). Disambiguating Bacteriophage Pseudolysogeny: An Historical Analysis of Lysogeny, Pseudolysogeny, and the Phage Carrier State. In: *Contemporary Trends in Bacteriophage Research*. Adams, H. T. (ed), Nova Science Publishers, Hauppauge, New York, 285-307 (conceptual piece; peer reviewed) books.google.com/books?id=wdZPPQAACAAJ (~5 non-self cites, 9/28/2013 calculation)
 - 60) **Abedon, S. T.** (2008). Phages, Ecology, Evolution. In: *Bacteriophage Ecology*, Abedon, S. T. (ed), Cambridge University Press, Cambridge, pp. 1-28. (self-invited chapter) books.google.com/books?id=gtPZsPXBBqIC (~5 non-self cites, 9/28/2013 calculation)
 - 61) **Abedon, S. T.** (2008). Phage Population Growth: Constraints, Games, Adaptations In: *Bacteriophage Ecology*, Abedon, S. T. (ed), Cambridge University Press, Cambridge. pp, 64-93. (self-invited chapter) books.google.com/books?id=gtPZsPXBBqIC
 - 62) **Abedon, S. T.**^{*}, Yin, J. (2008). Impact of Spatial Structure on Phage Population Growth. In: *Bacteriophage Ecology*, Abedon, S. T. (ed), Cambridge University Press, Cambridge, pp. 94-113. (self-invited chapter; ~60% of effort is mine) books.google.com/books?id=gtPZsPXBBqIC (~10 non-self cites, 9/28/2013 calculation)
 - 63) Hyman, P.^{*}, **Abedon, S. T.** (2008). Phage Ecology of Bacterial Pathogenesis. In: *Bacteriophage Ecology*, Abedon, S. T. (ed), Cambridge University Press, Cambridge, pp. 353-385. (self-invited chapter; ~40% of effort is mine) books.google.com/books?id=gtPZsPXBBqIC
 - 64) Stopar, D., **Abedon, S. T.**^{*} (2008). Modeling Phage Population Growth. In: *Bacteriophage Ecology*, Abedon, S. T. (ed), Cambridge University Press, Cambridge, pp. 389-414. (self-invited chapter; ~50% of effort is mine) books.google.com/books?id=gtPZsPXBBqIC

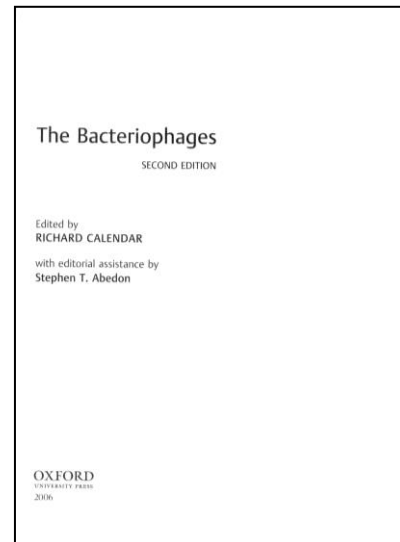
- 65) Krone, S. M.^{*}, **Abedon, S. T.** (2008). Modeling Phage Plaque Growth. In: *Bacteriophage Ecology*, Abedon, S. T. (ed), Cambridge University Press, Cambridge, pp. 415-438. (self-invited chapter; ~50% of effort is mine) books.google.com/books?id=gtPZsPXBBqIC
- 66) **Abedon, S. T.** (2006). Phage Ecology. In: *The Bacteriophages*. Second Edition. Calendar, R., Abedon, S. T. (eds), Oxford University Press, Oxford, pp. 37-46. (invited chapter) books.google.com/books?id=nozn1K8tcRsC (~10 non-self cites, 9/28/2013 calculation)
- 67) Brietbart, M., Rohwer, F., **Abedon, S. T.**^{*} (2005). Phage Ecology and Bacterial Pathogenesis. In: *Phages: Their Role in Bacterial Pathogenesis and Biotechnology*. Waldor, M., Friedman, D., Ahdya, S. (eds), ASM Press, Washington, DC, pp. 66-91. (invited chapter; ~50% of effort is mine) (development of original theory of the probability of pathogen development based on prophage providing of virulence factor genes is provided) google.com/books?id=meYX9h99VwC (~10 non-self cites, 9/28/2013 calculation)
- 68) **Abedon, S. T.** (1994). Lysis and the Interaction Between Free Phages and Infected Cells. In: *The Molecular Biology of Bacteriophage T4*. Karam, J. D., Drake, J. W., Kreuzer, K. N., Mosig, G., Hall, D., Eiserling, F. A., Black, L. W., Kutter, E., Carlson, K., Miller, E. S., Spicer, E. (eds), ASM Press, Washington, DC, pp. 397-405. (invited chapter) (~40 non-self cites, 4/30/2014 calculation)

PUBLICATIONS—Encyclopedia Articles

- 69) Hyman, P., **Abedon, S. T.**^{*} (submitted). Bacteriophage (Overview). *Reference Module in Biomedical Sciences*. Caplan, M. J. (ed). Elsevier, Oxford (invited updating of 2009 published *Encyclopedia of Microbiology* article of the same title; ~50% of effort is mine)
- 70) **Abedon, S. T.**, Bartom, E.^{*} (2013). Multiplicity of Infection. *Brenner's Encyclopedia of Genetics*. Maloy, S., Hughes, K. (eds). Academic Press, pp. 509-510. (I wrote the majority of this entry)
- 71) **Abedon, S. T.**, Bartom, E.^{*} (2013). Plaques. *Brenner's Encyclopedia of Genetics*. Maloy, S., Hughes, K. (eds). Academic Press, pp. 357-357. (I wrote the majority of this entry)
- 72) Blasdel, B. G., **Abedon, S. T.**^{*} (2013). Superinfection immunity. *Brenner's Encyclopedia of Genetics*. Maloy, S., Hughes, K. (eds). Academic Press, pp. 384-386 (Bob Blasdel drafted this and contributed to its writing while working under my supervision)
- 73) Hyman, P., **Abedon, S. T.**^{*} (2009). Bacteriophage (Overview). *Encyclopedia of Microbiology*. Schaechter, M. (ed). Elsevier, Oxford, pp. 322-338. (invited entry; ~50% of effort is mine)
- 74) **Abedon, S. T.**, Duffy, S., Turner, P. E.^{*} (2009). Bacteriophage Ecology. *Encyclopedia of Microbiology*. Schaechter, M. (ed), Elsevier, Oxford, pp. 42-57. (invited entry; ~10,500 words; 60% of effort is mine, i.e., I was the primary writer)
- 75) **Abedon, S. T.** (2008). Ecology of Viruses Infecting Bacteria. In: *Encyclopedia of Virology*, Mahy, B., van Regenmortel, M. (eds). Elsevier, Oxford, pp. 71-77. (invited entry). elsevier.com/wps/find/bookdescription.cws_home/714029/description#description
- 76) **Abedon, S. T.**^{*}, Breitenberger, C. A., Williams, J. B., Roden, E. E. (2008). Ecological Processes: Respiration. *Encyclopedia of Ecology*. Jørgensen, S. E., Fath, B. D. (eds). Elsevier, Oxford, pp. 3010-3020. (invited entry; ~40% of effort is mine) elsevierdirect.com/brochures/ecology/index.html

PUBLICATIONS—Re-Published Publications

- 77) **Abedon, S. T.** (as informed). **Spatial Vulnerability: Bacterial Arrangements, Microcolonies, and Biofilms as Responses to Low rather than High Phage Densities.** [to be published as a chapter in the book form of the special issue it was originally published in]. (theoretical analysis) (in this article I develop the theory associated with the ecology of phage exploitation of bacterial clonal arrangements and microcolonies that suggests that bacteria should be more vulnerable by entering into such arrangements rather than less, and therefore that such clonal group living should be prominent predominantly when phage-mediated predation pressure is relatively low) ncbi.nlm.nih.gov/pubmed/22754643



- 78) Hyman, P. *, **Abedon, S. T.** (2013). High-affinity and -specificity, bacteriophage-based technologies: beyond phage therapy. In: *Animal Science Reviews*. Hemming, D. (ed), CABI Press, Oxfordshire, UK (reprinting of invited mini review loosely based on book submitted to same publisher; my contributions were ~20%)
- 79) Hyman, P., **Abedon, S. T.** * (2009). Bacteriophage (Overview). *Desk Encyclopedia of Microbiology*. Schaechter, M. (ed). Elsevier, Oxford, pp. 166-182. (this is a republishing of Hyman and Abedon, 2009, *Encyclopedia of Microbiology*) elsevier.com/wps/find/bookdescription.cws_home/719291/description#description

PUBLICATIONS—Conference Proceedings

- 80) Doms, R. W. *, **Abedon, S. T.**, Richardson, T. M. (1995). Viral Membrane Proteins as Tools to Study Protein Folding, Assembly, and Transport. *Trafficking of Intracellular Membranes: Molecular Sorting to Membrane Fusion*. M.C. Pedroso de Lima, N. Düzgüneş, D. Hoestra (eds). NATO-ASI Series, Subseries H, Springer Verlag Vol. 91, p. 171-186.

PUBLICATIONS—Portions of Book Chapters

- 81) **Abedon, S. T.** (2008). Rate of adsorption is function of phage density (appendix to chapter by L. D. Goodridge: Phages, bacteria, and food). In: *Bacteriophage Ecology*, Abedon, S. T. (ed), Cambridge University Press, Cambridge. pp. 321-324 (of 302-331)
- 82) **Abedon, S. T.** (1997). Addendum (re: “The Cult of the Golden Ratio”). In: *Weird Water & Fuzzy Logic: More Notes of a Fringe Watcher*. Gardner, M. (author), Prometheus Books, pp. 96-97. (reprinted letter)

INVITED TALKS

- | | |
|------|--|
| 2014 | • New Stages of Phage Biocontrol of Plant Diseases, Hiroshima, Japan (Sept.) |
| 2014 | • Viruses of Microbes III, Zurich, Switzerland (for July) |
| 2013 | • William and Mary College (invited speaker for their “Phage Phest”) |
| 2012 | • Bowling Green State University, Bowling Green, OH |
| 2012 | • Viruses of Microbes II, Brussels, Belgium youtube.com/watch?v=0FdKJqLuKIA |
| 2011 | • Miami University, Oxford, OH |

- 2011 • Evergreen International Phage Meeting, Olympia, WA
- 2010 • Arizona State University, Tempe, AZ
- 2009 • Evergreen International Phage Meeting, Olympia, WA
- 2008 • Omnilytics, Salt Lake City, UT
- 2008 • Ashland University, Ashland, OH
- 2008 • Int. Symp. Biological Control Bacterial Plant Diseases, Orlando, FL
- 2008 • University of South Florida, Tampa, FL
- 2008 • University of Leicester, Leicester, England
- 2008 • Institute of Biochemistry and Biophysics, Warsaw, Poland
- 2008 • Catholic University of Leuven, Leuven, Belgium
- 2008 • Pasteur Institute, Paris, France
- 2008 • Teagasc Moorepark Biotechnology Centre, (near) Cork, Ireland
- 2008 • Yale University, New Haven, CT
- 2007 • Soc. for Gen. Microbiol. meeting, Edinburgh (opening talk of symposium)
- 2007 • Bowling Green State University, Bowling Green, OH
- 2007 • Evergreen International Phage Meeting, Olympia, WA
- 2007 • Foundation Les Treilles meeting, (near) Nice, France
- 2007 • Cleveland Natural History Museum, Cleveland, OH
- 2005 • International conference on phage therapy, Tbilisi, Georgia
- 2005 • Evergreen International Phage Meeting, Olympia, WA
- 2004 • Eliava Institute, Tbilisi, Georgia
- 2003 • Evergreen International Phage Meeting, Olympia, WA (opening talk)
- 2001 • Ohio Medical College, Toledo, OH
- 2001 • Evergreen International Phage Meeting, Olympia, WA
- 2000 • University of Ljubljana, Ljubljana, Slovenia
- 2000 • Millennial Phage Meeting, Montreal, CA
- 2000 • Ben Gurion University of the Negev, Beersheba, Israel
- 1999 • Evergreen International Phage Meeting, Olympia, WA
- 1997 • Evergreen International Phage Meeting, Olympia, WA
- 1995 • Evergreen International Phage Meeting, Olympia, WA
- 1995 • The Ohio State University, Columbus, OH

PUBLICATIONS—Other (including online) [SERVICE]

- 1) **Abedon, S.T.** (2009). Bacteriophages (phages). (has been updated and moved to phage-therapy.org/writings/bacteriophages.html)
- 2) **Abedon, S.T.** (2007). Phage Meetings. *BEG News* 26. (editorial)
- 3) Duffy, S.* , **Abedon, S.T.** (2007). The Development of Plaques and the Mechanism of Phage Action in Solidified Agar. Translation (from German) of Mayr-Harting, A. (1958). Die Entwicklung von Phagenloechern und der mechanismus der Phagenwirkung in festen

- Naehrboeden. *Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene. I. Abt., Originale* 171:380-392. *BEG News* 26.
- 4) Hyman, P. *, **Abedon, S.T.** (2007). W.W.C. Topley and the “Missing” Phage Reference. *BEG News* 26.
 - 5) **Abedon, S.T.** (2006). Phage Ecology on Wikipedia. *BEG News* 25. (editorial)
 - 6) **Abedon, S.T.** (2005). Phage Books — Phage T-Shirt. *BEG News* 23. (editorial/bibliography)
 - 7) **Abedon, S.T.** (2005). *BEG News*, the Final Quarterly Issue. *BEG News* 24. (editorial)
 - 8) **Abedon, S.T.** (2004). ASM Conference on the New Phage Biology. *BEG News* 19. (editorial)
 - 9) **Abedon, S.T.** (2004). Early (pre-1950) Phage References. *BEG News* 19. (bibliography)
 - 10) **Abedon, S.T.** (2004). The Bacteriophage Literome – Part I. *BEG News* 22. (editorial)
 - 11) **Abedon, S.T.** (2004). The Cyanophage Literome. *BEG News* 22. (bibliography)
 - 12) **Abedon, S.T.** (2003). Some Recent Phage and Phage-Related Patents. *BEG News* 17. (bibliography)
 - 13) **Abedon, S.T.** (2002). Mathematics for Microbiologists. *BEG News* 11. (editorial)
 - 14) **Abedon, S.T.** (2002). Calling a Phage a “Phage”. *BEG News* 13. (editorial)
 - 15) **Abedon, S.T.** (2001). How Big is 10^{30} ? *BEG News* 7. (essay)
 - 16) **Abedon, S.T.** (2001). The Bacteriophage Rise. *BEG News* 10. (editorial)
 - 17) **Abedon, S.T.** (2000). Bacteriophages as Model Systems. *BEG News* 3. (editorial)
 - 18) **Abedon, S.T.** (2000). Lytic, Lysogenic, Temperate, Chronic, Virulent, Quoi? *BEG News* 5. (editorial)
 - 19) **Abedon, S.T.** (2000). Which Ecology are You? *BEG News* 6. (editorial)
 - 20) **Abedon, S.T.** (1999). BEG: What are We, Where are We, and Where We’re Going. *BEG News* 1. (editorial)
 - 21) **Abedon, S.T.** (1999). When Grown *In Vitro*, do Parasites of Multicellular Organisms (MOPs) become Unicellular Organism Parasites (UOPs)? *BEG News* 2. (editorial)
 - 22) Scott, E.C., Matzke, N.J., Branch, G., **Abedon, S.T.**, *et al.* (2004). The Morphology of Steve. *Annals of Improbable Research* 10(4)24-29. (my contribution: <1%)
 - 23) **Abedon, S.T.** (1993). The isolation of T-even phages (feces -?-> P.C./PC --> gamma -> T2; Sewage -?-> T4/T6). *T4 News (February 7)*.
 - 24) **Abedon, S.T.** (1992). What is an ORF? *T4 News* 6(1).
 - 25) **Abedon, S.T.** (1992). Bottle lysate T4 stock preparation: What if your cultures won't clear? *T4 News* 6(1).

WEB SITES & WEB PAGES [SERVICE]

- 1) **Abedon, S.T.** (2012). biologyaspoetry.com/osum_trees/ (a project with which I am collaborating with my daughter and which was done in part towards development of a lab for the introductory biology classes I teach).
- 2) **Abedon, S.T.** (2011). ISVM.org (a.k.a., phagesociety.org). This is the web site for the International Society for the Viruses of Microorganisms.

- 3) **Abedon, S.T.** (2006-2008). Wikipedia projects:
 - en.wikipedia.org/wiki/Human_microbiome_project (100% initiated by me)
 - en.wikipedia.org/wiki/Microbial_population_biology (100% initiated by me)
 - en.wikipedia.org/wiki/Phage_ecology (~99% my effort)
 - en.wikipedia.org/wiki/Phage_meetings (100% my effort—no longer exists)
 - en.wikipedia.org/wiki/Phage_monographs (~100% initiated by me; >90% my effort)
 - en.wikipedia.org/wiki/Category:Bacteriophage (50% my effort—no longer exists)
 - en.wikipedia.org/wiki/Category:Microbial_population_biology (100% initiated by me)
 - en.wikipedia.org/wiki/Category:Microbiology (contributed to)
 - en.wikipedia.org/wiki/Category:Phage_workers (75% my effort)
- 4) **Abedon, S.T.** (2004). TheBacteriophages.org, in support of the text, *The Bacteriophages*, 2nd edition (thebacteriophages.org).
- 5) **Bacteriophage Ecology Group** (phage.org):
 - **Abedon, S.T.** (2011-present). Bacteriophage Terms (archaealviruses.org/terms/), a glossary of phage terms. Nearly 100 terms entered. Intention is to eventually convert to a phage.org-based URL.
 - **Abedon, S.T.** (1996-present). The Bacteriophage Ecology Group (phage.org); often is the Google.com “I’m Feeling Lucky” search for “Phage ecology” and “Bacteriophage ecology”.
 - **Abedon, S.T.** (1999-2007). *Bacteriophage Ecology Group News*, on-line newsletter with 26 issues published (phage.org/beg_news.htm).
 - Ackermann, H.-W., **Abedon, S.T.** (2001). Bacteriophage names 2000, a list of over 5,000 phage names and associated hosts (phage.org/names.htm).
- 6) **Academic Service:**
 - **Abedon, S.T.** (2011-present). Biology as Poetry (www.biologyaspoetry.com), a glossary of biological terms that I use in teaching introductory biology for non-majors and in teaching introductory microbiology. As of May, 2012, there were approximately 1800 terms entered with over 80 BiologyasPoetry-specific figures and over 200 links to external resources (videos, podcasts, and websites).
 - **Abedon, S.T.** (1998-2005). Microbiology and Immunology at the Ohio State University (phage.org/osumicro.htm), a guide to microbiology and immunology research performed on the various Ohio State University campuses.
 - **Abedon, S.T.** (1996-2005). *BioPort*. Introductory biology on-line lecture notes, index, and WWW portal (phage.org/biology.htm).
 - **Abedon, S.T.** (1996-2004). *MicroPort*. Introductory microbiology on-line lecture notes, index, and WWW portal (phage.org/microbiology.htm).

NOTABLE SERVICE [SERVICE]

- | | |
|-----------|---|
| 2013-2014 | • Member of organizing committee, Viruses on Microbes III Meeting, 2014 |
| 2011-on | • Appointed and now serving as Officer/Executive Board member, “International Society for Viruses of Microorganisms” (isvm.org) |
| 2010-on | • Associate editor, <i>Bacteriophages</i> , a journal to published starting in January, 2011 (landesbioscience.com/journals/bacteriophage) |

- 2010-2011 • Appointed and now serving as Trustee/Scientific Advisory Volunteer, “International Society for Viruses of Microorganisms”
- 2010 • Served as phone-in reviewer on NIH study panel
- 2009-2010 • Contributing to the development of “International Society for Viruses of Microbes” (one of a core group of five individuals particularly involved in initial society development)
- 2008 • Participated in NIH Roadmap Human Microbiome Project workshop, Bethesda, MD, March 27, Lu Wang & Jane Peterson, chairs
- 2007 • Invited and gave opening talk for a two-day symposium on phage ecology at 161st Society for General Microbiology meeting
- 2007 • Chaired opening session, International Bacteriophage Biology Meeting (Olympia, WA)
- 2007 • Chaired session, Foundation Les Treilles meeting, in France
- 2007 • Invited talk, Teacher’s Symposium 2007, Change Through Time, Cleveland Museum of Natural History
- 2006 • Served on two-day CIHR Grant Peer Review Panel
- 2006- • Reviewed grants for NSF
- 2006 • OSU-Mansfield Secretary of Faculty Assembly (elected position)
- 2005- • Reviewed grants for NIH
- 2003 • OSU-Mansfield President of Faculty Assembly (elected position)
- 2002 • OSU-Mansfield President of Faculty Assembly (elected position)
- 2002 • OSU-Mansfield Chairman of Curriculum Committee (elected position)
- 2000 • Chaired session, The 2000 Millennial Phage Meeting (Montreal)
- 1998 • Chaired session, Int. Bacteriophage Biol. Meeting (Olympia, WA)
- 1996 • Founded the Bacteriophage Ecology Group (www.phage.org)
- 1991 • Chaired session, Int. Bacteriophage T4 Meeting (Olympia, WA)

CONSULTING [SERVICE]

- 2011 • Local company, on phage-related issues
- 2010 • Advanced Biodetection Technologies Laboratory (Colorado School of Mines): advisory board
- 2009-present • BigDNA: advisory panel, bigdna.com
- 2009 • PhageVax: *Ad hoc* advising, phagevax.com
- 2003 • Omnilytics, Utah: prepared report titled, “What makes bacteriophages safe?”, omnilytics.com (for full text of this document, see: cienciaviva.pt/rede/oceanos/2desafio/243.pdf)
- 2000-present • Phage Biotech: advisory panel, phage-biotech.com

COURSES TAUGHT [TEACHING]

- Bio 101/1101 • Intro biology for non-majors; ’11, ’12 (two times)
- Bio 1101 • Intro biology for non-majors (online hybrid); ’12, ’14 (two times)

Bio 102	• Human biology for non-majors; '97, '03 (two times)
Bio 1102	• Human biology for non-majors (online hybrid); '14 (one time)
Bio 113	• Intro biology for majors, freshman; '96...'08 (>10 times)
Bio 114/1114	• 2nd intro biology for majors, freshman; '96...'07, '13 (>10 times)
Biochem 511	• Intro biochemistry for non-majors, junior through grad.; '01 (once)
EEOB 232	• Introductory physiology; '11, '12 (twice)
Micro 509/4000	• Intro microbiol. for non-majors, junior-grad.; '95...'13 (>20 times)
Micro 4000	• Intro microbiol. for non-majors, junior-grad. (online hybrid); '14 (one time)
Micro h669	• Honors microbial evolution; '05, '07, '09, '10, '11 (five times)
Micro 5169	• Microbial evolution (online hybrid); '13 (once)

SUCCESSFUL YOUTUBE VIDEOS [TEACHING] (as of July 14, 2014)

youtu.be/BjTamY0MAhc	~2400 views	Substrate-Level Phosphorylation
youtu.be/_wufqehNQoI	~620 views	Chemostat
youtu.be/LpBostP5uvw	~550 views	Secondary Endosymbiosis
youtu.be/L4hDr3Hpwss	~520 views	Down a Concentration Gradient
youtu.be/XxMrHrMIqRM	~450 views	Muller's Ratchet
youtu.be/TjJeu0nwq-Q	~350 views	Phenotypic Plasticity
youtu.be/Ga7OUYyTH8M	~280 views	Antagonistic Pleiotropy
youtu.be/zdK_v6NG7Mk	~230 views	Proton Motive Force
youtu.be/LyPYvL3FJaQ	~210 views	Serial Endosymbiosis
Total (since Aug, 2013)	>15,000 views	This includes traffic due to my students but mostly is not my students