

J. Peter Gogarten

Board of Trustees Distinguished Professor
Department of Molecular and Cell Biology
University of Connecticut, Storrs, CT 06269-3125
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Education

Ph.D. 7/86 University of Giessen, FRG; Botany (*summa cum laude*)
Diploma 4/82 University of Tübingen, FRG; Botany, Zoology, Microbiology, Biochemistry

Appointments and Employment History

3/2010-present Board of Trustees Distinguished Professor, Molecular and Cell Biology, University of Connecticut
1/03-3/15 Co-Head of the Bioinformatics Services Facility at the University of Connecticut Institute for Systems Genomics
10/96-present Adjunct Professor of Ecology and Evolutionary Biology, University of Connecticut
9/1996-3/2010 Full Professor of Molecular and Cell Biology, University of Connecticut
Fall 2009 Visiting Professor at Tel Aviv University
Summers '99-'10 Visiting Professor at the Mannheim University of Applied Sciences
Spring 1996 Visiting Professor at the University of Salzburg, Austria
Fall 1995 Offer to chair the Plant Physiology section at the University of Jena, FRG; rejected fall 96
9/95-9/96 Associate Professor of Molecular and Cell Biology, University of Connecticut
3/93-9/98 Co-Head of the Plant Cell Culture Facility of the University of Connecticut Biotechnology Center
9/89-8/95 Assistant Professor of Molecular and Cell Biology, University of Connecticut
8/87-8/89 Postdoctoral Fellow in the Laboratory of Prof. Dr. Lincoln Taiz, U.C. Santa Cruz
5/82-5/87 Research Fellow in the Laboratory of Prof. Dr. F.-W. Bentrup, Institute for Botany, University of Giessen, FRG
6/80-2/82 Research and Teaching Assistant in Plant Physiology, University of Tübingen, FRG

Professional Activities and Honors

8/2014-present Steering Committee Member of the Institute for Systems Genomics
<http://isg.uconn.edu/>
8/2012-present Co-organizer of the Center for Microbial Systems, Ecology and Evolution
<http://cmsee.uconn.edu>
6/2012-present Chair of the MCB Microbiology Program
7/2011-present Fellow of the International Society for the Study of the Origin of Life
2/2011-present Fellow of the American Academy of Microbiology
5/2009-present Member of the Connecticut Academy of Science and Engineering
2009/2010 Fulbright and Edmond J. Safra Bioinformatics Program Fellow at Tel Aviv University
6/2008-6/2011 Member of the Executive Council of the International Society for the Study of the Origin of Life

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| 12/2007 | Member of BioMed Central's list of 'Hot100' scientists |
| 7/2007-6/2010 | Senator of the University of Connecticut Senate |
| 10/2006 | Alumni Association Distinguished Faculty Award in Research Excellence |
| 9/06-8/08 | Member Provost's Library Advisory Committee |
| 9/03-8/09 | Member of UConn's Institutional Biosafety Committee |
| 6/02-6/07 | Associate of the Canadian Institute for Advanced Research Program in Evolutionary Biology |
| 6/01-8/04 | Member of the Committee on the Origins and Evolution of Life of the National Academy of Sciences Space Studies Board |
| 9/02-12/02 | Visiting researcher at the University of Queensland with Mark Ragan |
| 7/00 | Elected chair for the Origin of Life Gordon Conference 2003 (vice-chair 2002) |
| 5/97-00 | Member of the Exobiology Discipline Working Group (NASA) |
| 1/00-12/02 | Regional Representative, International Society for the Study of the Origin of Life |
| 9/90-9/95 | Chair of the Plant Cell and Molecular Biology Program, Dept. Molecular and Cell Biology, University of Connecticut |
| 9/90-present | University of Connecticut Graduate School Faculty |
| 8/87-8/89 | Fellowship from the German Science Foundation (DFG) |
| 9/87 | Justus-Liebig-University prize for the best dissertation in the field of natural sciences during 1986 |

Editorial Appointments

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| 8/2015-present | Associate Editor of Evolutionary and Genomic Microbiology for <i>Frontiers in Microbiology</i> , <i>Frontiers in Genetics</i> and <i>Frontiers in Ecology and Evolution</i> |
| 8/2015-present | Member of the Editorial Board of the <i>International Journal of Microbiology</i> |
| 8/2011-present | Executive Editor of <i>Origins of Life and Evolution of the Biosphere</i> |
| 9/2008-present | Associate Editor of <i>BMC Bioinformatics</i> |
| 1/2008-present | Associate Editor of <i>BMC Evolutionary Biology</i> |
| 1/05-12/07 | Member of the Editorial Board of <i>BMC Evolutionary Biology</i> |
| 1/05-present | Member of the Editorial Board of <i>Biology Direct</i> |
| 1/96-8/2011 | Member of the Editorial Board of <i>Origins of Life and Evolution of the Biosphere</i> |
| 1/96-12/98 | Member of the Editorial Board of <i>Botanica Acta</i> |

Reviewer

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| <i>Agencies</i> | NSF, USDA, DOE, National Research Council, NASA, BARD, Fonds zur Förderung der wissenschaftlichen Forschung (Austria), Israel Science Foundation, European Science Foundation, German Science Foundation (DFG), Canadian MRC and NSERC, Recherches en sciences et en génie Canada (CRSNG), German Israeli Foundation for Scientific Research and Development |
| <i>Journals</i> | Biochem. Biophys. Archives, Biochemistry Journal, Biology Direct, Botanica Acta, BMC Bioinformatics, BMC Genomics, BMC Molecular Evolution, Cell Stress and Chaperones, Comparative Biochemistry, Gene, Genetics, Genome Biology, Genome Research, Geology, Journal Biological Chemistry, Journal for the Origin of Life and Evolution of the Biosphere, Journal of Molecular Biology, Journal of Molecular Evolution, Molecular Biology and Evolution, Microbial Reviews, Nature, Nature Reviews in Microbiology, Plant Cell, Plant Physiology, Proceedings of the National Academy of Sciences, Science, and Trends in |

Ecology and Evolution

Books Freeman, Simon and Schuster, Oxford University Press, John Hopkins University Press, MIT Press, and Sinauer

Meetings co-organized:

1. "The role of Horizontal Gene Transfer in Innovation" Symposium at the Astrobiology Science Conference, Atlanta GA, April 16-20, 2012
2. "6th International Symposium on Bioinformatics Research and Applications (ISBRA'10)", Program Chair, University of Connecticut, Storrs, Connecticut, USA, May 23-26, 2010.
3. "Ancient Life and Synthetic Biology: Crossroad of the Past and Future" Symposium at the Astrobiology Science Conference, League City, TX, April 26-29, 2010
4. "Horizontal Gene Transfer and the Tree/Web of Life." Symposium at the 2009 ASM General Meeting, Philadelphia, May 20, 2009
5. "Lateral Gene Transfer and the Origins of Eukaryotes", Vancouver, British Columbia, May 5-9, 2004
6. "Gordon Research Conference on the Origin of Life", Chair in Summer 2003
7. "Gordon Research Conference on the Origin of Life" Co-Chair in Spring 2002,
8. "Life: from Local Origins to Global Persistence" University of New Hampshire, Durham, June 8-10, 1998
9. Annual New England Molecular Evolutionary Biologists (NEMEB) Meeting, Storrs, November 1995

Society Memberships

1. International Society for the Study of the Origin of Life
2. American Society for Microbiology
3. Society for Molecular Biology and Evolution

Research Interests

Evolution of Microorganisms, Molecular Evolution, Origin and Early Evolution of Cellular Life, Horizontal Gene Transfer, Comparative Genomics, Evolution of Proton Pumping ATPases, Role of Gene Transfer and Gene Duplications, Parasitic Genetic Elements

FUNDING HISTORY

Current Funding

- "Understanding Horizontal Gene Transfer in Bacteria and Archaea: Units of Transfer and Modes of Integration" PI: Mukul S. Bansal, CoPIs: Joerg Graf, J. Peter Gogarten, NSF, 07/01/2016 - 06/30/2019, Award Amount \$ 600,000.-
- "How Selfish Elements Impact and Reflect Speciation and Recombination in Archaea" PIs: U. Gophna (Tel Aviv University), J.P. Gogarten (University of Connecticut); CoPI: R.T. Papke (University of Connecticut), Binational Science Foundation United States Israel, 10/1/2014- 9/31/2017, Total Award Amount \$230,000.-
- "Use of horizontal gene transfer frequencies to place extinct lineages of microorganisms on the Tree of Life" PI: J. Peter Gogarten, NASA Exobiology Program, 3/8/2013 – 3/7/2017, Total Award Amount \$337,287.-
- "Integrated Research to Improve On-Farm Animal Health in Salmonid Aquaculture": PI: Joerg Graf (UConn), CoPI: J. P. Gogarten, USDA, 09/01/15 - 07/31/20, Total award Amount: \$819,000.-

Past Funding (last five years)

- “Horizontal gene transfer and between phyla relationships”, PI: J. Peter Gogarten, CoPIs: Kenneth Noll (UConn), Thane Papke (UConn), Jinling Huang (ECU), Ying Xu (UGA) NSF AToL, 1/1/2009-12/31/2013, Total award Amount: \$2,500,000.-
- “Genome-based Investigations into the Nature of the Common Ancestor of the Thermotogales” PI: Kenneth Noll, CoPI: J. P. Gogarten, NASA Exobiology Program, September 1st, 2008 – May 13th, 2013, Total Award Amount: \$597,936.-
- "Use of Horizontal Gene Transfer Frequencies to Place Extinct Lineages of Microorganisms on the Tree of Life", PI: J. Peter Gogarten, University of Connecticut Research Foundation, July 1, 2011 - June 31, 2012, \$ 25,000.-
- “Exploration of Sequence Space and the Evolution of the Genetic Code”, PI: J. Peter Gogarten, NASA Exobiology Program, approved (2007-2010), Total award Amount: \$260,507.-
- "Exploration of Novel Methods to Visualize Genome Evolution", PI: J. Peter Gogarten, CoPI: Lutz Hamel (URI), NASA AISR Program, 1/1/05-12/31/08, \$368,477.
- "Horizontal Gene Transfer Into and Among the Thermotogales: Occurrence and Functional Implications" PI: Kenneth Noll, CoPI: J. Peter Gogarten, NASA Exobiology Program, 09/01/05- 08/31/08, Total Award Amount: \$453,557.
- "Exploration of Sequence Space and the Evolution of the Genetic Code" University of Connecticut Research Foundation, 1/1/07-12/31/07; Total Award Amount: 27,000.-
- "Reassessing Microbial Evolution in Light of Horizontal Gene Transfer" NSF Microbial Genetics Program, DEB, 3/1/2003 - 2/28/2006, Total Award Amount: \$201,128.
- "REU Supplement to Reassessing Microbial Evolution in Light of Horizontal Gene Transfer" NSF Microbial Genetics Program, DEB, 03/01/04- 02/28/07, Total Award Amount: \$10,000.

PUBLICATIONS AND PRESENTATIONS

Publications in Refereed Journals

1. Dick AA, Harlow TJ, Gogarten JP (2017)
Short branches lead to systematic artifacts when BLAST searches are used as surrogate for phylogenetic reconstruction.
Mol Phylogenet **107**: 338-344. doi: 10.1016/j.ympev.2016.11.016
2. Omer S, Harlow TJ, GogartenJP (2017)
Does Sequence Conservation Provide Evidence for Biological Function?
Trends in Microbiology **25**(1):11-18, doi: 10.1016/j.tim.2016.09.010
3. Gogarten JP , Deamer D (2016)
Is LUCA a thermophilic progenote?
Nature Microbiology **1**, 16229; doi: 10.1038/nmicrobiol.2016.229
4. Gromek SM, Suria AM, Fullmer MS, Garcia JL, Gogarten JP, Nyholm SV Balunas MJ (2016)
***Leisingera* sp. JC1, a Bacterial Isolate from Hawaiian Bobtail Squid Eggs, Produces Indigoidine and Differentially Inhibits Vibrios.**
Frontiers in Microbiology **7**, 1342; doi: 10.3389/fmicb.2016.01342
<http://journal.frontiersin.org/article/10.3389/fmicb.2016.01342>
5. Naor A[#], Altman-Price N[#], Soucy SM, Green AG, Mitiagin Y, Turgeman I, Davidovich N, Gogarten JP*, Gophna U* (2016)
The impact of a homing intein on recombination frequency and organismal fitness.
PNAS 2016; published ahead of print July 26, 2016, doi:10.1073/pnas.1606416113 ;
<http://www.pnas.org/content/113/32/E4654>

6. Soucy SM, Huang J, Gogarten JP (2015):
Horizontal gene transfer: building the web of life.
Nature Reviews in Genetics **16**, 472–482. doi: 10.1038/nrg3962
7. Fullmer, M.S., Soucy, S.M., Gogarten, J.P. (2015):
The pan-genome as a shared genomic resource: mutual cheating, cooperation and the black queen hypothesis.
Frontiers in Microbiology **6**, 728. doi: 10.3389/fmicb.2015.00728
8. Fournier G, Andam CP, Gogarten JP (2015)
Ancient horizontal gene transfer and the last common ancestors.
BMC Evolutionary Biology **15**(1) p. 70 doi: 10.1186/s12862-015-0350-0
9. Collins AJ, Fullmer MS, Gogarten JP, Nyholm SV (2015):
Comparative genomics of Roseobacter clade bacteria isolated from the accessory nidamental gland of Euprymna scolopes.
Frontiers in Microbiology 2015, **6**.
10. Colston SM, Fullmer MS, Beka L, Lamy B, Gogarten JP, Graf J. (2014):
Bioinformatic genome comparisons for taxonomic and phylogenetic assignments using *Aeromonas* as a test case.
MBio **5**(6):e02136. doi: 10.1128/mBio.02136-14.
11. Soucy SM, Fullmer MS, Papke RT, and Gogarten JP (2014):
Inteins as Indicators of Gene Flow in the Halobacteria.
Frontiers in Microbiology, 2014, **5**:299 doi: 10.3389/fmicb.2014.00299
12. Zhou C, Mao F, Yin Y, Huang J, Gogarten JP, Xu Y (2014):
AST: an automated sequence-sampling method for improving the taxonomic diversity of gene phylogenetic trees.
PLoS One **9**(6): e98844. doi: 10.1371/journal.pone.0098844
13. Fullmer MS, Soucy SM, Swithers KS, Makkay AM, Wheeler R, Ventosa A, Gogarten JP, Papke RT:
Population and genomic analysis of the genus *Halorubrum*.
Frontiers in Microbiology 2014, **5**:140. doi: 10.3389/fmicb.2014.00140
14. Ram Mohan N, Fullmer MS, Makkay AM, Wheeler RW, Ventosa A, Naor A, Gogarten JP, Papke RT:
Evidence from phylogenetic and genome fingerprinting analyses suggests rapidly changing variation in *Halorubrum* and *Haloarcula* populations.
Frontiers in Microbiology 2014, **5**:143. doi: 10.3389/fmicb.2014.00143
15. Butzin NC, Lapierre P, Green AG, Swithers KS, Gogarten JP, Noll KM (2013)
Reconstructed ancestral Myo-inositol-3-phosphate synthases indicate that ancestors of the Thermococcales and Thermotoga species were more thermophilic than their descendants.
PLoS One **8**(12):e84300. doi: 10.1371/journal.pone.0084300
16. Swithers KS, Soucy SM, Lasek-Nesselquist E, Lapierre P, Gogarten JP (2013)
Distribution and Evolution of the Mobile *vma-1b* Intein.
Molecular Biology and Evolution **30** (12): 2676-2687 doi: 10.1093/molbev/mst164
17. Butzin N, Secinaro M, Swithers KS, Gogarten JP, Noll K (2013)
***Thermotoga lettingae* can salvage cobinamide to synthesize vitamin B12**
Applied and Environmental Microbiology **79** (22) 7006-7012 doi: 10.1128/AEM.01800-13

18. Green AG, Swithers KS, Gogarten JF, Gogarten JP (2013)
Reconstruction of Ancestral 16S rRNA Reveals Mutation Bias in the Evolution of Optimal Growth Temperature in the Thermotogae Phylum.
Molecular Biology and Evolution **30** (11): 2463-2474 doi:10.1093/molbev/mst145
19. Lasek-Nesselquist E, Gogarten, JP (2013)
The effects of model choice and mitigating bias on the ribosomal tree of life.
Molecular Phylogenetics and Evolution **69** (1) 17–38 doi:10.1016/j.ympev.2013.05.006
20. Bansal MS, Banay, G, Harlow TJ, Gogarten JP, Shamir R (2013)
Systematic Inference of Highways of Horizontal Gene Transfer in Prokaryotes.
Bioinformatics **29** (5): 571-579 doi:10.1093/bioinformatics/btt021
21. Williams D, Gogarten JP, Papke RT (2012)
Quantifying homologous replacement of loci between haloarchaeal species.
Genome Biology and Evolution **4** (12) 1223-1244 doi:10.1093/gbe/evs098
22. Lapierre P, Lasek-Nesselquist E, and Gogarten JP (2014)
The impact of HGT on phylogenomic reconstruction methods.
Briefings in Bioinformatics **15** (1) 79-90 [first published online August 20, 2012]
doi:10.1093/bib/bbs050
23. Swithers KS, Petrus AK, Secinaro MA, Nesbø CL, Gogarten JP, Noll KM, Butzin NC (2012).
Vitamin B12 synthesis and salvage pathways were acquired by horizontal gene transfer to the Thermotogales.
Genome Biology and Evolution **4** (8) 842-851, doi:10.1093/gbe/evs057
24. Swithers KS, Soucy SM, Gogarten JP (2012)
The Role of Reticulate Evolution in Creating Innovation and Complexity.
Int Journal of Evolutionary Biology **2012**, ID 418964, 10 pages, doi:10.1155/2012/418964
25. Petrus AK, Swithers KS, Ranjit C, Wu S, Brewer HM, Gogarten JP, Pasa-Tolic L, Noll KM (2012)
Genes for the Major Structural Components of Thermotogales Species' Togas Revealed by Proteomic and Evolutionary Analyses of OmpA and OmpB Homologs.
PLoS One **7**(6):e40236, doi:10.1371/journal.pone.0040236
26. Mao F, Williams D, Zhaxybayeva O, Poptsova M, Lapierre P, Gogarten JP, Xu Y (2012)
Quartet decomposition server: a platform for analyzing phylogenetic trees
BMC Bioinformatics **13**:123, doi:10.1186/1471-2105-13-123
27. Andam CP, Harlow TJ, Papke RT, Gogarten JP (2012)
Ancient origin of the divergent forms of leucyl-tRNA synthetases in the Halobacteriales.
BMC Evolutionary Biology **12**:85, doi:10.1186/1471-2148-12-85
28. Papke RT, Gogarten JP (2012)
How Bacterial Lineages Emerge.
Science **336**: 45-46 doi:10.1126/science.1219241
29. Fournier GP, Andam CP, Alm EJ, Gogarten JP (2011)
Molecular Evolution of Aminoacyl tRNA Synthetase Proteins in the Early History of Life.
Origins of Life and Evolution of Biospheres **41**:621–632 doi: 10.1007/s11084-011-9261-2
30. Barzel A, Obolski U, Gogarten JP, Kupiec M, Hadany L (2011)
Home and Away- The Evolutionary Dynamics of Homing Endonucleases.
BMC Evolutionary Biology **11**:324 doi:10.1186/1471-2148-11-324

31. Andam CP, Gogarten JP (2011)
Biased gene transfer and its implications for the concept of lineage. (Research)
Biology Direct **6**:47 doi:10.1186/1745-6150-6-47
32. Williams D, Fournier GP, Lapierre P, Swithers KS, Green AG, Andam CP and Gogarten JP (2011)
A Rooted Net of Life. (Review) (Highly Accessed)
Biology Direct **6**:45 doi:10.1186/1745-6150-6-45
33. Andam CP, Gogarten JP (2011)
Biased gene transfer in microbial evolution. (Analysis)
Nature Reviews Microbiology **9**(7): 543-555, doi:10.1038/nrmicro2593
34. Swithers KS, Dipippo JL, Bruce DC, Detter C, Tapia R, Han S, Goodwin LA, Han J, Woyke T, Pitluck S, Pennacchio L, Nolan M, Mikhailova N, Land ML, Nesbø CL, Gogarten JP, Noll KM (2011)
Genome sequence of *Kosmotoga olearia* strain TBF 19.5.1, a thermophilic bacterium with a wide growth temperature range, isolated from the Troll B oil platform in the North Sea.
J Bacteriol **193**(19):5566-7
35. Swithers KS, Fournier GP, Green AG, Gogarten JP, Lapierre P.
Reassessment of the lineage fusion hypothesis for the origin of double membrane bacteria.
PLoS One. 2011; **6**(8):e23774. doi:10.1371/journal.pone.0023774
36. Bansal MS, Banay G, Gogarten JP, Shamir R (2011)
Detecting highways of horizontal gene transfer.
J Comput Biol **18**(9): 1087-1114.
37. Andam CP, Fournier GP, Gogarten JP (2011)
Multi-level populations and the evolution of antibiotic resistance through horizontal gene transfer.
FEMS Microbiol Rev **35**(5): 756-767 doi: 10.1111/j.1574-6976.2011.00274.x.
38. Silver AC, Williams D, Faucher J, Horneman AJ, Gogarten JP, Graf J (2011)
Complex Evolutionary History of the *Aeromonas veronii* Group Revealed by Host Interaction and DNA Sequence Data.
PlosOne **6**(2): e16751.
doi:10.1371/journal.pone.0016751
39. Fournier GP, Dick AA, Williams D, Gogarten JP (2011)
Evolution of the Archaea: Emerging views on origins and phylogeny.
Research in Microbiology **162**(1):92-8. [Epub 2010 Oct 27] doi:10.1016/j.resmic.2010.09.016
40. Andam CP, Williams D, Gogarten JP (2010)
Biased gene transfer mimics patterns created through shared ancestry.
Proc Nat Acad Sci USA **107**(23):10679-84 [Epub 2010 May 21] doi:10.1073/pnas.1001418107
Reviewed by Yuri Wolf as a "Must Read" on Faculty of 1000.
41. Fournier GP, Gogarten JP (2010)
Rooting the Ribosomal Tree of Life.
Molecular Biology and Evolution **27**(8):1792-1801 doi:10.1093/molbev/msq057
42. Poptsova MS, Gogarten JP (2010)
Using comparative genome analysis to identify problems in annotated microbial genomes.
Microbiology **156**:1909-17; [Epub 2010 Apr 29] doi:10.1099/mic.0.033811-0

43. Fournier GP, Neumann JE, Gogarten JP (2010)
Inferring the ancient history of the translation machinery and genetic code via recapitulation of ribosomal subunit assembly orders.
PLoS ONE **5**(3): e9437. doi:10.1371/journal.pone.0009437
44. Andam CP, Williams D, Gogarten JP (2010)
Natural taxonomy in light of horizontal gene transfer.
Biology and Philosophy **25** (4): 589-602, doi: 10.1007/s10539-010-9212-8
45. Williams D, Gogarten JP*, Lapierre P (2010)
Filling the gaps in the genomic landscape
Genome Biology **11**:103
46. Swithers KS, Senejani AG, Fournier GP, Gogarten JP (2009)
Conservation of intron and intein insertion sites: Implications for life histories of parasitic genetic elements.
BMC Evolutionary Biology 2009, **9**:303
47. Olendzenski L, Gogarten JP (2009)
Evolution of Genes and Organisms: The Tree/Web of Life in Light of Horizontal Gene Transfer.
Annals of the New York Academy of Sciences **1178**: 137-145
48. Bickhart DM, Gogarten JP, Lapierre P, Tisa LS, Normand P, Benson DR (2009)
Insertion sequence content reflects genome plasticity in strains of the root nodule actinobacterium *Frankia*.
BMC Genomics **10**(1):468
49. Baptiste E, O'Malley MA, Beiko RG, Ereshefsky M, Gogarten JP, Franklin-Hall L, Lapointe FJ, Dupré J, Dagan T, Boucher Y, Martin W (2009)
Prokaryotic evolution and the tree of life are two different things.
Biology Direct **4**: 34.
50. Zhaxybayeva O, Doolittle WF, Papke RT, Gogarten JP (2009)
Intertwined Evolutionary Histories of Marine *Synechococcus* and *Prochlorococcus marinus*.
Genome Biology and Evolution **1**: 325–339
51. Swithers KS, Gogarten JP, Fournier GP (2009) **Trees in the Web of Life.**
Journal of Biology **8**: 54 doi:10.1186/jbiol160
52. Fournier GP, Huang JL, Gogarten JP (2009) **Horizontal gene transfer from extinct and extant lineages: biological innovation and the coral of life.**
Philos Trans R Soc Lond B Biol Sci 364(1527): 2229-39.
53. Zhaxybayeva O, Swithers KS, Lapierre P, Fournier GP, Bickhart DM, DeBoy RT, Nelson KE, Nesbø CL, Doolittle WF, Gogarten JP, Noll KM (2009)
On the chimeric nature, thermophilic origin and phylogenetic placement of the Thermotogales.
Proc Nat Acad Sci USA 106(14):5865-70
54. Huang J, Gogarten JP (2009)
Ancient gene transfer as a tool in phylogenetic reconstruction.
Methods Mol Biol. **532**: 127-39.
55. Olendzenski L, Gogarten JP (2009) **Gene transfer: who benefits?**
Methods Mol Biol. **532**: 3-9.

56. Lapierre P, Gogarten JP (2009) **Estimating the size of the bacterial pan-genome**
Trends in Genetics, **25**(3): 107-1
57. Huang J, Gogarten JP (2008)
Concerted gene recruitment in early plant evolution.
Genome Biology **9**(7): R109
58. Fournier GP, Gogarten JP (2008)
Evolution of acetoclastic methanogenesis in Methanosarcina via horizontal gene transfer from cellulolytic Clostridia.
J. Bacteriol. **190**(3):1124-7
59. Hamel L, Nahar N, Popstova MS, Zhaxybayeva O, Gogarten JP (2008)
Unsupervised learning in detection of gene transfer.
J Biomed Biotech **2008**, doi: 10.1155/2008/472719
60. Noll KM, Lapierre P, Gogarten JP and Nanavati DM (2008)
Evolution of mal ABC transporter operons in the Thermococcales and Thermotogales.
BMC Evolutionary Biology **8**:7
61. Fournier G, Gogarten JP (2007):
Signature of a primitive genetic code in ancient protein lineages.
Journal of Molecular Evolution **65**(4), 425-436
62. Zhaxybayeva O, Gogarten JP, Doolittle WF (2007)
A hyperconserved protein in Prochlorococcus and marine Synechococcus.
FEMS Microbiol Lett. **274** (1): 30-4.
63. Huang J, Gogarten JP (2007)
Did an ancient chlamydial endosymbiosis facilitate the establishment of primary plastids?
Genome Biology **8**(6): R99
64. Martin W, Dagan T, Koonin EV, Dipippo JL, Gogarten JP, Lake JA (2007)
The Evolution of Eukaryotes, Letter on "Genomics and the irreducible nature of eukaryotic cells".
Science **316**, 542-543
65. Poptsova MS, Gogarten JP (2007)
BranchClust: A phylogenetic algorithm for selecting gene families.
BMC Bioinformatics **8**:120
66. Gogarten JP, Fournier G, Zhaxybayeva O (2008)
Gene transfer and the reconstruction of life's early history from the molecular record",
Space Science Reviews **135**: 115-131
67. Poptsova MS, Gogarten JP (2007)
The power of phylogenetic approaches to detect horizontally transferred genes.
BMC Evolutionary Biology **7**:45
68. Senejani AG, Gogarten JP (2007)
Structural stability and endonuclease activity of a PI-SceI GFP-fusion protein.
Int J Biol Sci **3**:205-211

69. Normand P, Lapierre P, Tisa LS, Gogarten JP, Alloisio N, Bagnarol E, Bassi CA, Berry AM, Bickhart DM, Choisne N, Couloux A, Cournoyer B, Cruveiller S, Daubin V, Demange N, Francino MP, Goltsman E, Huang Y, Kopp OR, Labarre L, Lapidus A, Lavire C, Marechal J, Martinez M, Mastronunzio JE, Mullin BC, Niemann J, Pujic P, Rawnsley T, Rouy Z, Schenowitz C, Sellstedt A, Tavares F, Tomkins JP, Vallenet D, Valverde C, Wall LG, Wang Y, Medigue C, Benson DR. (2007) **Genome characteristics of facultatively symbiotic *Frankia* sp. strains reflect host range and host plant biogeography.**
Genome Research **17**:7-15
70. Gogarten JP, Hilario E (2006) **Inteins, introns, and homing endonucleases: Recent revelations about the life cycle of parasitic genetic elements.**
BMC Evolutionary Biology, 6:94
71. Zhaxybayeva O, Gogarten JP, Charlebois RL, Doolittle WF, Papke RT (2006) **Phylogenetic analyses of cyanobacterial genomes: Quantification of horizontal gene transfer events.**
Genome Research **16**(9):1099-108.
72. Huang J, Gogarten JP (2006)
Ancient horizontal gene transfer can benefit phylogenetic reconstruction.
Trends in Genetics **22** (7):361-6.
73. Lapierre P, Shial R, Gogarten JP (2006) **Distribution of F- and A/V- type ATPases in *Thermus scotoductus* and Other Closely Related Species.**
Systematic and Applied Microbiology **29**(1):15-23
74. Zhaxybayeva O, Lapierre P, Gogarten JP (2006)
Ancient gene duplications and the root(s) of the tree of life.
Protoplasma **227**(1):53-64
75. Gogarten JP, Townsend JP (2005)
Horizontal Gene Transfer, Genome Innovation, and Evolution.
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Invited Recent Seminars and Presentations (of at least 100 since Fall 1991)

1. "Horizontal Gene Transfer, Antibiotic Resistance, Pan-genomes, and within Population Diversity", Invited lecture at the ASM Microbe 2016 meeting in Boston
2. "Horizontal Gene Transfer: The Pan-Genome as shared genetic resource of a lineage", Invited plenary lecture at the meeting "Molecules as Documents of Evolutionary History", held in Roscoff (Brittany), France, May 9th to 13th, 2016
3. "Molecular evolution before the domain ancestors: Indications for dramatic planetary changes during life's early evolution", Invited plenary lecture at the meeting "From star and planet formation to early life" held in Vilnius, Lithuania, April 25th – 28th, 2016
4. "The Role of Horizontal Gene Transfer in Microbial Evolution", Invited seminar in the Frontiers in Genomics series at the National University of México (UNAM), Campus Morelos, April 14th, 2016
5. "Inteins: Co-evolution between selfish genes and genomes", Presentation to students in the Genomics program at National University of México (UNAM), Campus Morelos, April 14th, 2016
6. "The role of horizontal gene transfer in microbial evolution", Invited seminar at the Instituto Politécnico Nacional, Mexico City, March 12th, 2016
7. "Gene transfer and antibiotic resistance in *Aeromonas*", Presentation at the Collegio National, Mexico, as part of a conversation on "Genes ambulantes, Una conversación sobre transporte horizontal y resistencia a antibióticos." March 4th, 2016
8. "Inteins: Co-evolution between selfish genes and genomes", Seminar at the Universidad Nacional Autónoma de México February 22nd, 2016
9. "The role of horizontal gene transfer in microbial evolution", Invited departmental Seminar at the Instituto de Fisiología Celular Universidad Nacional Autónoma de México, February 5th, 2016
10. "The roles of shared ancestry and shared genes in niche adaptation in *Aeromonas*", SMBE 2015 annual meeting, Vienna, July 12th to the 16th, 2015
11. "Molecular evolution before the domain ancestors: Indications for dramatic planetary changes during life's early evolution", invited lecture at the IAP Lecture Series: The Origin of Life at MIT, Jan 28th, 2015
12. "Molecular evolution before the ancestors of the bacterial and archaeal domains and before the Last Universal Common Ancestor", invited plenary lecture at the ISSOL Meeting, Origins 2014, Nara, Japan, July 6-11, 2014
13. "Tracing evolution in *Aeromonas*: the role of shared ancestry and shared genes in niche adaptation", International Symposium on *Aeromonas* and *Plesiomonas* in Montpellier, France. (June 26, 2014).
14. "Inteins as Indicators of Gene Flow in the Halobacteria", Annual SMBE Meeting. (June 8, 2014 - June 12, 2014).
15. "Molecular evolution before the ancestors of the bacterial and archaeal domains", Annual SMBE Meeting. (June 8, 2014 - June 12, 2014).
16. "Phylogenomics, Horizontal Gene Transfer, and Darwin's 'Coral-of-Life'", Invited Lecture at the University of Northern Texas, April 4th, 2014
17. "Microbial Evolution and Phylogenomics in Light of Horizontal Gene Transfer" Invited lecture at the 48th Annual ASM Region I Meeting, University of Connecticut, Storrs, CT, October 25th-26th, 2013
18. "Phylogenomics and Darwin's 'Coral-of-Life' in light of horizontal gene transfer", invited seminar at the Kunming Institute of Botany, Kunming, China, August 7th, 2013
19. "Insights from the Study of Molecular Evolution: Types of Selection and Inferring Life's Early History", Invited Lecture at Ben Gurion University, June 10th, 2013
20. "Darwin's Coral of Life, Gene Transfer, and Inferring Properties of the Early Biosphere", invited lecture in the NASA Astrobiology Institute Director's Seminar Series, April 29th, 2013
21. "Phylogenomics and Darwin's 'Coral-of-Life' in light of horizontal gene transfer", invited lecture at

- the Massachusetts Institute of Technology, February 27th, 2013
22. "Coalescence, gene transfer, and the study of pre-LUCA molecular evolution" lecture at the Origin of Life Conference, Princeton, January 23rd, 2013
 23. "Phylogenomics and Darwin's "Coral-of-Life" in light of horizontal gene transfer", invited lecture at the Graduate Program in Organismic and Evolutionary Biology, UMass & five college System, Amherst, November 9th, 2012
 24. "Phylogenomics, Horizontal Gene Transfer, and Darwin's 'Coral of Life'", invited keynote lecture at Recomb Comparative Genomics, Niteroi. Brazil, October 17-19, 2012
 25. "Horizontal Gene Transfer (HGT), Homeoalleles, NISEs, and the Formation and Maintenance of Higher Taxonomic Units in Bacteria and Archaea", oral presentation at the SMBE 2012 Annual Meeting, Dublin, June 23rd -26th, 2012
 26. "The rooted Net of Life and molecular evolution before LUCA" Invited lecture at the 2012 Astrobiology Sciences Conference, Atlanta GA, April 16th, 2012
 27. "Phylogenomics and Darwin's Coral-of-Life in Light of Horizontal Gene Transfer." Invited lecture at the MBL in Woods Hole, March 16th, 2012
 28. "Darwin's Coral-of-Life, Horizontal Gene Transfer, and the Evolution of the Genetic Code." Invited lecture at the 8th Georgia Tech, Emory and the Oak Ridge National Lab. International Conference: "From Genomics to Synthetic Biology", Nov. 10—12, 2011
 29. "Biased Gene Transfer and Phylogenomics." Invited lecture at the Society for General Microbiology Autumn meeting, York, GB, September 5-7, 2011
 30. "Phylogeny and Darwin's coral of life in light of horizontal gene transfer." Lecture at the Institute Pasteur, Paris, France, June 9th, 2011
 31. "Molecular evolution before LUCA and the rooted Net of Life" Gogarten, J. Peter, Fournier, Gregory P., Andam, Cheryl P.; lecture by JPG at the 2011 ISSOL and Bioastronomy Joint International Conference, Montpellier, France, July 3rd- 8th, 2011
 32. "Impact of HGT on Phylogenomic Reconstruction", Presentation at the workshop "Challenges for large scale phylogeny and alignment estimation", National Evolutionary Synthesis Center (NESCent), Durham, NC, April 1st, 2011
 33. "Phylogenomics and Darwin's "Coral-of-Life" in Light of Horizontal Gene Transfer." Keynote Address at the 5th Biology New England South (BioNES) 2010 meeting, Roger Williams University, December 3rd, 2010
 34. "Phylogenomics and Darwin's "Coral-of-Life" in Light of Horizontal Gene Transfer." Presentation at *Bates College*, Biology Department, November 30th, 2010
 35. "Phylogenomics and Darwin's "Coral-of-Life" in Light of Horizontal Gene Transfer." Presentation at the University of Rhode Island, Biology Department, November 22nd, 2010.
 36. "Phylogenomics and Darwin's "Coral-of-Life" in Light of Horizontal Gene Transfer." Presentation at the Research Highlights at Noon Series, Tuesday, Homer Babbidge Library, University of Connecticut, November 9th, 2010.
 37. "Horizontal Gene Transfer as a Tool in Reconstructing the Net of Life", Tree of Life Workshop, London, UK July 10th and 11th, 2010
 38. "Horizontal Gene Transfer as a Tool to Reconstruct the Net of Life", invited lecture at the Annual Meeting of the Society for Molecular Biology and Evolution (SMBE) in Lyon, France, July 4th-8th, 2010
 39. "The Tree/Web of Life in Light of Horizontal gene transfer." Invited lecture at UNAM Cuernavaca, Mexico, May 17 2010
 40. "Horizontal Gene Transfer, Organismal Evolution, and Darwin's "Coral of Life." Invited seminar at the Undergraduate Program on Genomic Sciences at the Center for Genomic Sciences and the Biotechnology Institute in the city of Cuernavaca, Mexico, May 17 201
 41. "Phylogenomics and Darwin's "Coral-of-Life" in Light of Horizontal Gene Transfer." Biology Departmental Seminar, Haifa University, January 10th, 2010
 42. "Phylogenomics and Darwin's "Coral-of-Life" in Light of Horizontal Gene Transfer." Invited

Seminar at the Weizman Institute, BigRoc Seminar series (see <http://bioinfo.weizmann.ac.il/BigRoc/>), December 28th, 2009

43. "Rooting the ribosomal tree of life using the early expansion of the genetic code", Presentation at the 23rd annual meeting of the ILASOL society (see <http://www.ilasol.org.il/>), Weizmann Institute of Science, December 13th, 2009
44. "Darwin's "Coral of Life" in Light of Horizontal Gene Transfer." Invited lecture at the Department of Life Sciences, Ben-Gurion University of the Negev, Israel, November 30th, 2009
45. "Intertwined evolutionary histories of marine *Synechococcus* and *Prochlorococcus*" Seminar in Safir Bioinformatics program at Tel Aviv University November 11th, 2009
46. "Horizontal Gene Transfer, Organismal Evolution, and Darwin's "Coral of Life." Invited lecture at the Biochemistry Department, Tel Aviv University, October 20th, 2009
47. "ATP synthases and Inteins: A Personal History." Seminar for Biotechnology group at Tel Aviv University, September 8th, 2009
48. "Population Genetics and the Evolution of higher taxonomic units" invited lecture at the Halifax Workshop on "Perspectives on the Tree of Life", July 30th to August 1st, 2009
49. "The tree-of-life in light of horizontal gene transfer", invited lecture at the "Archaea and the Tree of Life meeting at the Les Treilles Foundation, France, May 11-15, 2009
50. "Phylogenetics in Light of Horizontal Gene Transfer", invited seminar at the University of Georgia, Athens, April 10th, 2009
51. "Phylogenetics in Light of Horizontal Gene Transfer", invited seminar at the School of Biology Georgia Institute of Technology, Atlanta, April 9th, 2009
52. "Phylogenetics in Light of Horizontal Gene Transfer", invited seminar at the University of Vermont, Burlington, March 26. 2009

Other Presentations at Recent Meetings (of at least 100 since Fall 1991)

1. Gosselin, S., Fullmer, M.S., Gogarten, J.P. "A Distance-Based ANI Approach for Constructing Phylogenetic Trees and Species Delimitation" Poster presented by SG at 20th Annual Frontiers in Undergraduate Research Poster Exhibition, Storrs, CT on April 7-8, 2017
2. Gosselin, S., Fullmer, M.S., Gogarten, J.P. "ANI as a Tool to Understand Phylogenetic Relationships" Poster presented by SG at Pioneer Valley Microbiology Symposium at UMass-Amherst, Amherst, MA on January 14, 2017 Received PVMS Best Poster Award
3. Fullmer, M.S., Ouellette, M., Papke, R.T., Gogarten, J.P. "Distribution of Restriction Modification Systems in natural populations of *Halorubrum*", Poster presented by MsF at Pioneer Valley Microbiology Symposium at UMass Amherst, Amherst, MA on January 14, 2017
4. Soucy SM, Fullmer MS, Gogarten JP. "Inteins to Illuminate Threads in the Web of Life", Poster presented by SMS at Society for Molecular Biology and Evolution satellite meeting on Reticulated Microbial Evolution in Kiel, Germany on 27-30 April 2014
5. Beka, L., Fullmer M.S., Colston, S., Nelson, M.C., Ford, B., Walker, P., Lamy, B., Gogarten, J.P., Graf, J. "An Analysis of Antibiotic Resistance in the *Aeromonas* population of the Medicinal Leech" Poster presented by LB at 11th International Symposium on *Aeromonas* and *Plesiomonas* in Montpellier, France on 25-27 June, 2014
Received Biovac best poster award.
Also, poster presented by LB at 3rd Annual Connecticut Symbiosis Conference in New Haven, CT on 25 April, 2014.
Also, poster presented at American Society of Microbiologists General Meeting in Boston, MA on 18-20 May, 2014
6. Skydel, J.J., Soucy, S.M., and Gogarten, J.P. "Factors promoting the long-term survival on inteins within populations", poster presentation delivered by JJS at the "Pioneer Valley Microbiology Symposium", University of Massachusetts Amherst (USA), January 14, 2017
7. Englander, R.P., Fullmer, M.S., and Gogarten J.P. "Searching for Niche-Adaptive Genes in *Aeromonas*", poster presentation delivered by RPE at the "Northeastern Microbiologists:

- Physiology, Ecology, and Taxonomy" conference, Blue Mountain Lake (New York State), June 26-28, 2015
8. Englander, R.P., Fullmer, M.S., and Gogarten J.P. "How Cheating Leads to Interdependence: The Black Queen Hypothesis Tested in *Aeromonas*", poster presentation delivered by RPE at the "Pioneer Valley Microbiology Symposium" conference, University of Massachusetts-Amherst (Massachusetts), January 14, 2017
 9. Omer, S., Harlow, J. T., and Gogarten J.P. "Bacterial genes not expressed for function nevertheless experience purifying selection", oral and poster presentations delivered by SO at the "EMBO Viruses of Microbes III" conference, Zurich (Switzerland), July 14-18, 2014
 10. Soucy, S., Wegrzyn, J.L., Gogarten, J. P. "Intein Distributions Illuminate the Threads of the Web of Life" poster presented by JPG at the ISSOL Meeting, Origins 2014, Nara, Japan, July 6-11, 2014
 11. Soucy, S., Swithers, K. S., Williams, D., Papke, T. R., Gogarten, J. P., "Towards using Halophilic Inteins as a Model of Symbiotic Gene Associations", Halophiles 2013 Conference (University of Connecticut, June 23, 2013 - June 27, 2013).
 12. Williams, D., Gogarten, J. P., Papke, T. R., "Haloarchaeal evolution: gaining diversity by sharing experiences", Halophiles 2013 Conference (University of Connecticut, June 23, 2013 - June 27, 2013).
 13. Omer, S., Gogarten, J. P., "(dN/dS<1) = Selection for Function – Myth or Reality?", General Meeting of American Association for Microbiology, Denver (CO). (May 18, 2013 - May 21, 2013).
 14. Green, A., Gogarten, J. P., "Evolution of low temperature tolerance in a thermophilic bacterium", UConn Biology Undergraduate Research Colloquium. (April 12, 2013 - April 13, 2013).
 15. O'Brien, J., Papke, T. R., A. D., Ram-Mohan, N., Lasek-Nesselquist, E., Gogarten, J. P., "Examining Phylogroups through Reconstruction of the Evolutionary History of Bacteriorhodopsin Genes", UConn Frontiers in Undergraduate Research. (April 12, 2013 - April 13, 2013).
 16. Green, A., Swithers, K. S., Noll, K. M., Gogarten, J. P., "Horizontal Gene Transfer and the evolution of a thermophilic bacterium", UConn Frontiers in Undergraduate Research. (April 12, 2013 - April 13, 2013)
 17. Soucy, S., Gogarten, J. P., "Symbiosis between Genes", 2nd Annual CT Symbiosis symposium. (March 22, 2013). (Oral presentation by SS)
 18. Omer, S., Gogarten, J. P., "(dN/dS<1) = Selection for Function – Myth or Reality?", Mechanisms of Protein Evolution II (SMBE satellite meeting) in Denver CO. (February 7, 2013 - February 11, 2013).
 19. Dick, A., Gogarten, J. P., "Short Branch Attraction: an Artifact in BLAST Searches", Pacific Symposium for Biocomputing. (January 3, 2013 - January 7, 2013).
 20. Dick, A., Gogarten, J. P., "Histones and what they can tell us about Eukaryogenesis", AbGradCon (Astrobiology Graduate Conference) CalTech, Pasadena CA. (October 24, 2012 - October 30, 2012).
 21. Kristen Swithers, J. Peter Gogarten: "*The Chimera Hypothesis for the Thermotogae Phylum*", Poster presented by KS at the 2012 SMBE meeting in Dublin, 6/23-6/36/2012
 22. J. Peter Gogarten, Shannon M. Soucy, Kristen S. Swithers, Pascal Lapierre, David Williams: "*Interdomain transfer of an intein residing within the archaeal-type ATP synthase catalytic subunit.*" Poster presented by JPG at the 2012 SMBE meeting in Dublin, 6/23-6/36/2012
 23. Kristen Swithers, Nicholas Butzin, Amanda K. Petrus, Camilla L. Nesbø, Kenneth M. Noll and J. Peter Gogarten. "*Ancestral states and origins of Vitamin B12 synthesis and Cobinamide Salvaging in the Thermotogae phylum*" Oral presentation by Kristen Swithers at Astrobiology Science Conference 2012. April 16-20, 2012
 24. Kristen Swithers and J. Peter Gogarten. *The Chimera: When did the Acquisition of Archaeal and Clostridial genes occur in the Ancient Thermophilic Thermotogae phylum?* Poster presented by KS at the Thermophiles meeting, Sept 11-16, 2011.
 25. Kristen S. Swithers, Nicholas Butzin, Amanda K. Petrus, Camilla L. Nesbø, Kenneth M. Noll and J. Peter Gogarten. *Comparative analyses of cobalamin (Vitamin B12) synthesis and usage among the ancient thermophilic Thermotogae phylum reveals novel biosyntheses pathways.* Poster presented by Kristen Swithers at the Applied and Environmental Gordon Research Conference at Mount Holyoke

College on July 10-15, 2011

26. Kristen Swithers, David Williams, Kenneth Noll and J. Peter Gogarten: "*Gene Flow into and among the Thermotogae Phylum.*" Poster presented at the 2011 Boston Bacterial Meeting (BBM), Boston, Massachusetts, June 16-17, 2011.
27. Cheryl Andam, J. Peter Gogarten: "*Biased gene transfer and the pre-LUCA origins of rare aminoacyl-tRNA synthetases in Archaea.*" Selected oral presentation in the session on "*Sex in Microbes*" at the 111th General Meeting of the American Society for Microbiology, New Orleans LA, May 21-24, 2011
28. A. G. Green, K. S. Swithers, O. Zhaxybayeva, K. M. Noll, J. P. Gogarten: *Genomic Signals for Thermophily in the Thermotogales.* Poster presented by Anna Green in the session on "Patterns and Processes of Microbial and Molecular Evolution" at the 111th General Meeting of the American Society for Microbiology, New Orleans LA, May 21-24, 2011
29. Kristen Swithers, David Williams, Nicholas Butzin, Kenneth Noll and J. Peter Gogarten. *Gene Flow into and among the Thermotogae Phylum.* Poster presented by Kristen Swithers at the 111th American Society for Microbiology General Meeting, New Orleans, Louisiana May 21-24, 2011.
30. Cheryl Andam, J. Peter Gogarten: *Biased gene transfer and the pre-LUCA origins of rare aminoacyl-tRNA synthetases in Archaea.* Selected oral presentation by Cheryl Andam in the session on "*Sex in Microbes*" at the 111th General Meeting of the American Society for Microbiology, New Orleans LA, May 21-24, 2011
31. Chan Zhou, Fenglou Mao, Yanbin Yin, Jinling Huang, Johann Peter Gogarten, and Ying Xu: *Automated sequence sampling approach over taxa generates informative phylogenetic trees.* Poster presented by CZ at the workshop "Challenges for large scale phylogeny and alignment estimation", National Evolutionary Synthesis Center, Durham, NC, March 31st, 2011
32. Kristen Swithers, David Williams, Olga Zhaxybayeva and J. Peter Gogarten: *Quartet Decomposition and Its Application to Study Evolutionary Histories of Genes in Genomes.* Poster presented by JPG at the workshop "Challenges for large scale phylogeny and alignment estimation", National Evolutionary Synthesis Center, Durham, NC, March 31st, 2011
33. Kristen Swithers, David Williams and J. Peter Gogarten: *Quartet Decomposition as a Means to Visualize Intergenous Recombination.* Poster presented by JPG at the 5th Biology New England South (BioNES) 2010 meeting, Roger Williams University, December 3rd, 2010
34. Anna G. Green, K. S. Swithers, O. Zhaxybayeva, K. M. Noll, J. P. Gogarten: Signals for thermophilic adaptation and phylogeny in the genome of Thermotogales. Poster presented by AG at the Annual Meeting of the Society for Molecular Biology and Evolution (SMBE) in Lyon, France, July 4th-8th, 2010
35. Fenglou Mao, Maria Poptsova, David Williams, Olga Zhaxybayeva, Peter Gogarten and Ying Xu: *Quartet Decomposition Server: A Platform for Analyzing Phylogenetic Trees.* Proceedings ISBRA 2010, May 23-26, 2010, poster presented by FM
36. Olga Zhaxybayeva, David Williams, Kristen Swithers and J. Peter Gogarten: *Quartet decomposition and its applications to study evolutionary histories of genes in genomes.* Proceedings ISBRA 2010, May 23-26, 2010, oral presentation given by OZ
37. Fournier G. P., Gogarten J. P.: *Inferring the Early Evolution of Translation: Ancestral Reconstruction, Compositional Analysis, and Functional Specificity.* Proceedings of the Astrobiology Science Conference April 26-29, 2010 League City, Texas, oral presentation given by GPF
38. Kristen S. Swithers Gregory P. Fournier and J. Peter Gogarten: *Evolutionary Conservation of Intein and Intron Insertion Sites.* 2nd ASM Conference on Mobile DNA April 24 - 28, 2010, Montreal, Canada (invited talk by KSS)
39. Kristen Swithers, Maria Poptsova, Pascal Lapierre, Kenneth Noll, J. Peter Gogarten: *Evolutionary study of gene gains and losses in the Thermotogales genome.* ASM General Meeting, San Diego, May 2010. (Poster by KS)

40. Andam, C. P., Williams, D., Gogarten, J. P.: *Phylogenetic analysis of tyrosyl tRNA synthetases: Biased gene transfer mimics patterns created through shared ancestry*. ASM General Meeting, San Diego, May 2010 (poster by DW)
41. Pascal Lapierre and J. Peter Gogarten: *Mapping the prokaryotic world using random protein samplings of genomes*. ASM General Meeting, San Diego, May 2010 (Poster by PL)
42. Nicholas C. Butzin, Danielle M. Bradnan, J. Peter Gogarten, and Kenneth M. Noll: A genome sequence-directed investigation of D-tagatose utilization by *Kosmotoga olearia*. Astrobiology Science Conference April 26-29, 2010 League City, Texas (Poster presented by NB).
43. Amanda Dick, David Williams, J. Peter Gogarten: *Woese's Trinity, Eukaryogenesis, and the Tubulin/FtsZ family*. Origin of Life GRC, January 10-15, 2010, Galveston, TX (Poster presented by AD).
44. M.Poptsova, K. Swithers, D. Williams, P. Lapierre, K. Noll, J.P. Gogarten. "*Detection and Analysis of Horizontal Gene Transfer in Thermotogales*" Poster presented by MP at the "Genome Informatics" meeting at Cold Spring Harbor, October 27-30, 2009
45. Greg Fournier, J.Peter Gogarten: "*Protein evolution before the MRCA: Ancestral Reconstruction, Compositional Analysis, and Functional Specificity*", Origin of Life GRC, January 10-15, 2010, Galveston, TX (invited talk presented by GF)
46. P. Lapierre, J. P. Gogarten: *Gene Transfer as a Problem for Phylogenomic Reconstruction*. Poster presented by PL at the American Society for Microbiology 109th General Meeting, Philadelphia, PA, May 17-21, 2009
47. Greg Fournier, J.Peter Gogarten: "*Horizontal Gene Transfer and the Evolution of Methanogenesis*". Lecture Presented by Greg Fournier at the American Society for Microbiology 109th General Meeting, Philadelphia, PA, May 17-21, 2009
48. Greg Fournier, J.Peter Gogarten: "*Rooting the Ribosomal Tree of Life*". Poster presented by GF at the American Society for Microbiology 109th General Meeting, Philadelphia, PA, May 17-21, 2009
49. Cheryl Andam, David Williams, J. Peter Gogarten: *Horizontal gene transfer shapes microbial taxonomy*. Poster presented by CA at the 74th Cold Spring harbor Symposium on Quantitative Biology, *Evolution: The molecular landscape*, Cold Spring Harbor, NY, May 27 – June 1, 2009
50. Kristen Swithers, Derek Bickhart, Pascal Lapierre, Kenneth Noll, J. Peter Gogarten: *Mobile Genetic Elements and their Role in the Evolution of Genome Structure across the Thermotogales Order*. Poster presented by KS at the American Society for Microbiology General 109th Meeting, Philadelphia PA , May 17-21, 2009."
51. C. P. Andam, J. P. Gogarten: "*Horizontal Gene Transfer Shapes Microbial Taxonomy*" Poster presented by CPA at the American Society for Microbiology General 109th Meeting, Philadelphia, PA, May 17-21, 2009