

C. PROFESSIONAL PUBLICATIONS

Oil and Gas System Microbiology and Metagenomics, MIC, Corrosion

- 1) Fichter J, Janes C, Summer EJ (2018) Identification of Microbiocides that Mitigate a Broad Spectrum of Problematic Microorganisms. NACE 2018 Paper No. 11484
- 2) Fichter J, Janes C, Mills A, Hamblen G, Summer EJ. (2017) Use of a methodological panel to identify the source of problematic microbial contamination in an oil shale field. NACE CORROSION 2017. Paper No. 9019
- 3) Fichter J and Summer EJ (2017) The Use of Multiple Microbial Population Analysis Techniques to Diagnose Microbially Influenced Corrosion Potential in Oil and Gas Systems. Chapter 22 in Skovhus, T. (Ed.), Enning, D. (Ed.), Lee, J. S. (Ed.). (2017). Microbiologically Influenced Corrosion in the Upstream Oil and Gas Industry. Boca Raton: CRC Press. **BOOK CHAPTER**
- 4) Wang L, Pierce CC, Reynolds D, Summer E (2017) DNA Based Diversity Analysis of Microorganisms in Industrial Cooling Towers. NACE Corrosion 2017. Paper No. 9483.
- 5) Fichter, J, C. Janes, G. Hamblin, E.J. Summer “Direct comparison of microbial population analysis using ATP quantification, culture based enumeration in bug bottles, epifluorescence microscopy and shotgun population analysis by sequencing 16S amplicons”. NACE CORROSION 2015, Paper No. 5555.
- 6) Wrangham JB, and Summer EJ. Planktonic Microbial Population Profiles Do Not Accurately Represent Same Location Sessile Population Profiles (2015) in "Introduction to Managing Microbiologically Influenced Corrosion" CorrCompilations: 2015, NACE International. **BOOK CHAPTER**
- 7) E.J. Summer, S. Duggleby, C. Janes, M.Liu (2015) “Microbial Populations in the O&G: Application of this Knowledge” in "Introduction to Managing Microbiologically Influenced Corrosion" CorrCompilations: 2015, NACE International. ISBN 979-1-57590-285-2. **BOOK CHAPTER**
- 8) Summer EJ, S. Duggleby, C. Janes, M.Liu, “Microbial Populations in the O&G: Application of this Knowledge” NACE CORROSION 2014, 2014. Paper No. 4376
- 9) Wrangham JB, E.J. Summer. “Planktonic Microbial Population Profiles Do Not Accurately Represent Same Location Sessile Population Profiles” NACE CORROSION 2013, 2013. Paper No. 2780.
- 10) Fichter, J.; Wunch, K.; Moore, R.; Summer, E.; Braman, S.; Holmes, P. “How Hot is Too Hot For Bacteria? A Technical Study Assessing Bacterial Establishment In Downhole Drilling Fracturing And Stimulation Operations”. NACE CORROSION 2012, 2012. Paper No. 0001310.
- 11) Summer EJ, M. Liu, N.S. Summer, J.J. Gill, C. Janes, R. Young “Phage of Sulfate Reducing Bacteria Isolated From High Saline Environment” NACE CORROSION 2011, 2011. Paper No. 11222.
- 12) Summer NS, Summer EJ, J.J. Gill, R. Young, "Phage Remediation of Microbe-Induced Corrosion" NACE CORROSION 2008, Los Vegas, NV. Paper No. 3343

Bacteriophage: Phage Therapy, Genomics, Applications, Phage Lysis

- 13) Liu M, JJ Gill, R Young, EJ Summer EJ. (2015) Bacteriophages of wastewater foaming-associated filamentous *Gordonia* reduce host levels in raw activated sludge. *Sci Rep*;5:13754. **Ecolyse SBIR Project**
- 14) Liu M, Bischoff KM, Gill JJ, Mire-Criscione MD, Berry JD, Young R, Summer EJ. (2015) Bacteriophage application restores ethanol fermentation characteristics disrupted by *Lactobacillus fermentum* *Biotechnol Biofuels*. Sep 4;8:132 **Ecolyse SBIR Project**
- 15) Catalyzing Commercialization - Turning a Problem into a Cure for Increased Ethanol Yield. *CEP Magazine*. January 2014 pg 5 **Ecolyse SBIR Project**
- 16) Gill JJ, Summer EJ, Russell WK, Cologna SM, Carlile TM, Fuller AC, Kitsopoulos K, Mebane LM, Parkinson BN, Sullivan D, Carmody LA, Gonzalez CF, Lipuma JJ, Young R. (2011) Genomes and Characterization of Phages Bcep22 and BcepIL02, Founders of a Novel Phage Type in *Burkholderia cenocepacia*. *J Bacteriol*. 193(19):5300-13. **Phage Genomics**
- 17) Summer EJ, Liu M, Gill JJ, Grant M, Chan-Cortes TN, Ferguson L, Janes C, Lange K, Bertoli M, Moore C, Orchard RC, Cohen ND, Young R. (2011) Genomic and functional analyses of *Rhodococcus equi* phages ReqiPepy6, ReqiPoco6, ReqiPine5, and ReqiDocB7. *Appl Environ Microbiol*. 77(2):669-83. **Phage Therapy, Genomics**
- 18) Carmody LA, Gill JJ, Summer EJ, Sajjan US, Gonzalez CF, Young RF, LiPuma JJ. (2010) Efficacy of bacteriophage therapy in a model of *Burkholderia cenocepacia* pulmonary infection. *J Infect Dis*. 15;201(2):264-71. **Phage Therapy**
- 19) Kutty GF, Xu M, Struck DK, Summer EJ, Young R. (2010) Regulation of a phage endolysin by disulfide caging. *J Bacteriol*. 192(21):5682-7. **Phage Lysis**
- 20) Summer EJ, Enderle CJ, Ahern SJ, Gill JJ, Torres CP, Appel DN, Black MC, Young R, Gonzalez CF. (2010) Genomic and biological analysis of phage Xfas53 and related prophages of *Xylella fastidiosa*. *J Bacteriol*. 192(1):179-90. **Phage Therapy, Genomics**
- 21) Lavigne R, Darius P, Summer EJ, Seto D, Mahadevan P, Nilsson AS, Ackermann HW, Kropinski AM. (2009) Classification of Myoviridae bacteriophages using protein sequence similarity. *BMC Microbiol*. 26;9:224. **Phage Genomics**
- 22) Summer E.J. (2009) Preparation of a Phage DNA Fragment Library for Whole Genome Shotgun Sequencing. In: Clokie M.R., Kropinski A.M. (eds) *Bacteriophages. Methods in Molecular Biology™*, vol 502. Humana Press. **BOOK CHAPTER**
- 23) Berry J, Summer EJ, Struck DK, Young R. (2008) The final step in the phage infection cycle: the Rz and Rz1 lysis proteins link the inner and outer membranes. *Mol Microbiol*. 70(2):341-51. **Phage Lysis**
- 24) Summer EJ, Gill JJ, Upton C, Gonzalez CF, Young R. (2007) Role of phages in the pathogenesis of *Burkholderia*, or 'Where are the toxin genes in *Burkholderia* phages?'. *Curr Opin Microbiol*. 10(4):410-7. **Phage Genomics**
- 25) Summer EJ, Berry J, Tran TA, Niu L, Struck DK, Young R. (2007) Rz/Rz1 lysis gene equivalents in phages of Gram-negative hosts. *J Mol Biol*. 9;373(5):1098-112. **Phage Lysis, Phage Genomics**
- 26) Summer EJ, Gonzalez CF, Bomer M, Carlile T, Embry A, Kucherka AM, Lee J, Mebane L, Morrison WC, Mark L, King MD, LiPuma JJ, Vidaver AK, Young R. (2006) Divergence and mosaicism among virulent soil phages of the *Burkholderia cepacia* complex. *J Bacteriol*. 188(1):255-68. **Phage Genomics**

- 27) Summer EJ, Gonzalez CF, Carlisle T, Mebane LM, Cass AM, Savva CG, LiPuma J, Young R. (2004) Burkholderia cenocepacia phage BcepMu and a family of Mu-like phages encoding potential pathogenesis factors. *J Mol Biol.* 25;340(1):49-65. **Phage Genomics**
- 28) Bachman EJ, Scott SW, Xin G, Vance VB. (1994) The complete nucleotide sequence of prune dwarf ilarvirus RNA 3: implications for coat protein activation of genome replication in ilarviruses. *Virology.* 15;201(1):127-31. **Viral Genomics**

Organelle Protein Targeting, Photosystem Biochemistry, Plant Physiology

- 29) Rumpho ME, Pochareddy S, Worful JM, Summer EJ, Bhattacharya D, Pelletreau KN, Tyler MS, Lee J, Manhart JR, Soule KM. (2009) Molecular characterization of the Calvin cycle enzyme phosphoribulokinase in the stramenopile alga *Vaucheria litorea* and the plastid hosting mollusc *Elysia chlorotica*. *Mol Plant.* 2(6):1384-96.
- 30) Salzman RA, Brady JA, Finlayson SA, Buchanan CD, Summer EJ, Sun F, Klein PE, Klein RR, Pratt LH, Cordonnier-Pratt MM, Mullet JE. (2005) Transcriptional profiling of sorghum induced by methyl jasmonate, salicylic acid, and aminocyclopropane carboxylic acid reveals cooperative regulation and novel gene responses. *Plant Physiol.* 138(1):352-68.
- 31) Rumpho ME, Summer EJ, Green BJ, Fox TC, Manhart JR. (2001) Mollusc/algal chloroplast symbiosis: how can isolated chloroplasts continue to function for months in the cytosol of a sea slug in the absence of an algal nucleus? *Zoology (Jena).* 104(3-4):303-12.
- 32) Mori H, Summer EJ, Cline K. (2001) Chloroplast TatC plays a direct role in thylakoid (Delta)pH-dependent protein transport. *FEBS Lett.* 13;501(1):65-8.
- 33) Rumpho ME, Summer EJ, Manhart JR. (2000) Solar-powered sea slugs. Mollusc/algal chloroplast symbiosis. *Plant Physiol.* 123(1):29-38.
- 34) Green BJ, Li WY, Manhart JR, Fox TC, Summer EJ, Kennedy RA, Pierce SK, Rumpho ME. Mollusc-algal chloroplast endosymbiosis. Photosynthesis, thylakoid protein maintenance, and chloroplast gene expression continue for many months in the absence of the algal nucleus. *Plant Physiol.* 2000 Sep;124(1):331-42.
- 35) Summer EJ, Mori H, Settles AM, Cline K. (2000) The thylakoid delta pH-dependent pathway machinery facilitates RR-independent N-tail protein integration. *J Biol Chem.* 4;275(31):23483-90.
- 36) Summer EJ, Cline K. (1999) Red bell pepper chromoplasts exhibit in vitro import competency and membrane targeting of passenger proteins from the thylakoidal sec and DeltapH pathways but not the chloroplast signal recognition particle pathway. *Plant Physiol.* 119(2):575-84.
- 37) Mori H, Summer EJ, Ma X, Cline K. (1999) Component specificity for the thylakoidal Sec and Delta pH-dependent protein transport pathways. *J Cell Biol.* J12;146(1):45-56.
- 38) Summer EJ, Schmid VH, Bruns BU, Schmidt GW. (1997) Requirement for the H phosphoprotein in photosystem II of *Chlamydomonas reinhardtii*. *Plant Physiol.* 113(4):1359-68.

D. BACTERIOPHAGE COMPLETE GENOME GENBANK ENTRIES

Full genome entries can be accessed here: <https://www.ncbi.nlm.nih.gov/nuccore/>

Phage	Bacterial Host	Genebank Accession Number
Gsput1	Gordonia phage	KP790011.1
GordTnk2	Gordonia phage	NC_029074.1
Gmala1	Gordonia phage	NC_028972.1
GordDuk1	Gordonia phage	NC_029060.1
LfeSau	LAB phage	NC_029068
LfeInf	LAB phage	NC_029058.1
P954	Staphylococcus phage	NC_013195.1
BcepF1	Burkholderia ambifaria phage	EF153632.1
Bcep1	Burkholderia cenocepacia phage	AY369265.2
BcepMu	Burkholderia cenocepacia phage	AY539836.1
BcepB1A	Burkholderia cenocepacia phage	AY616033.2
BcepC6B	Burkholderia cepacia complex phage	AY605181.1
Bcep781	Burkholderia cepacia phage	AF543311.2
Bcep22	Burkholderia cepacia phage	AY349011.3
BcepNazgul	Burkholderia cepacia phage	AY357582.2
Bcep43	Burkholderia cepacia phage	AY368235.2
Bcep176	Burkholderia cepacia phage	DQ203855.1
BcepMigl	Burkholderia phage	JX104231.1
BcepGomr	Burkholderia phage	NC_009447.1
BcepNY3	Burkholderia phage	NC_009604.1
BcepIL02	Burkholderia phage	NC_012743.2
Era103	Erwinia amylovora phage	EF160123.1
ReqiDocB7	Rhodococcus phage	GU580940.1
ReqiPepy6	Rhodococcus phage	GU580941.1
ReqiPoco6	Rhodococcus phage	GU580942.1
ReqiPine5	Rhodococcus phage	GU580943.1
Xfas53	Xylella phage	NC_013599.1

E. SYNERGISTIC ACTIVITIES

- Advisor for the HHMI Science Education Alliance (SEA) program for undergraduate education- 2008

- Development and Direction of an NSF funded Program in Genomics for Undergraduates at Texas A&M University, instruction in phage genomics of over 100 junior and senior students 2002 – 2009

This program was featured in "Making the Grade" Texas A&M Lifescapes magazine, Summer 2003 pg 24 - 26 by Helen White.