References

1. **Abedon, S. T.** 1989. Selection for bacteriophage latent period length by bacterial density: a theoretical examination. Microbiol.Ecol. **18**:79-88.

2. **Abedon, S. T.** 1994. Lysis and the interaction between free phages and infected cells, p. 397-405. *In* J. D. Karam, J. W. Drake, K. N. Kreuzer, G. Mosig, D. H. Hall, F. A. Eiserling, L. W. Black, E. K. Spicer, E. Kutter, K. Carlson, and E. S. Miller (eds.), Molecular biology of bacteriophage T4. American Society for Microbiology, Washington D.C.

3. **Adhin, M. R., A. Avots, V. Berzin, G. P. Overbeek, and J. van Duin**. 1990. Complete nucleotide sequence of a group I RNA bacteriophage fr. Biochim.Biophys.Acta **1050**:104-109.

4. **Altieri, M., J. L. Suit, M.-L. Fan, and S. E. Luria**. 1986. Expression of the cloned ColE1 *kil* gene in normal and *kil*-R *Escherichia coli*. Proc.Natl.Acad.Sci.USA **168**:648-654.

5. **Atkins, J. F., J. A. Steitz, C. W. Anderson, and P. Model**. 1979. Binding of mammalian ribosomes to MS2 phage RNA reveals an overlapping gene encoding a lysis function. Cell **18**:247-256.

6. **Barenboim, M., C.-Y. Chang, F. dib Hajj, and R. Young**. 1999. Characterization of the dual start motif of a class II holin gene. Mol.Microbiol. **32**:715-727.

7. **Benjamin, R. C., W. P. Fitzmaurice, P. C. Huang, and J. J. Scocca**. 1984. Nucleotide

sequence of cloned DNA segments of the *Haemophilus influenzae* bacteriophage HP1c1. Gene **31**:173-185.

8. **Beremand, M. N. and T. Blumenthal**. 1979. Overlapping genes in RNA phage: a new protein implicated in lysis. Cell **18**:257-266.

9. **Berkhout, B., M. H. de Smit, R. A. Spanjaard, T. Blom, and J. van Duin**. 1985. The amino terminal half of the MS2-coded lysis protein is dispensable for function: implications for our understanding of coding region overlaps. EMBO J. **4**:3315-3320.

10. **Bernhardt, T. G., W. D. Roof, and R. Young**. 2000. Genetic evidence that the bacteriophage ϕX174 lysis protein inhibits cell wall synthesis. Proc.Natl.Acad.Sci.USA **97**:4297-4302.

11. **Bernhardt, T. G., W. D. Roof, and R. Young**. 2002. The *Escherichia coli* FKBP-type PPIase SlyD is required for the stabilization of the E lysis protein of bacteriophage ϕX174. Mol.Microbiol. **45**:99-108.

12. **Bernhardt, T. G., D. K. Struck, and R. Young**. 2001. The lysis protein E of ϕX174 is a specific inhibitor of the MraY-catalyzed step in peptidoglycan synthesis. J.Biol.Chem. **276**:6093-6097.

13. **Bernhardt, T. G., I. N. Wang, D. K. Struck, and R. Young**. 2001. A protein antibiotic in the phage Qβ virion: diversity in lysis targets. Science **292**:2326-2329.

14. **Bernhardt, T. G., I.-N. Wang, D. K. Struck, and R. Young**. 2002. Breaking free: "protein antibiotics" and phage lysis. Res.Microbiol. **153**:493-501.

15. **Bienkowska-Szewczyk, K., B. Lipinska, and A. Taylor**. 1981. The *R* gene product of bacteriophage λ is the murein transglycosylase. Mol.Gen.Genet. **184**:111-114.

16. **Blasband, A. J., W. R. Marcotte, Jr., and C. A. Schnaitman**. 1986. Structure of the *lc* and *nmpC* outer membrane porin protein genes of lambdoid bacteriophage. J.Biol.Chem. **261**:12723-12732.

17. **Bläsi, U., C.-Y. Chang, M. T. Zagotta, K. Nam, and R. Young**. 1990. The lethal λ *S* gene encodes its own inhibitor. EMBO J. **9**:981-989.

18. **Bläsi, U., P. Fraisl, C.-Y. Chang, N. Zhang, and R. Young**. 1999. The C-terminal sequence of the lambda holin constitutes a cytoplasmic regulatory domain. J.Bacteriol. **181**:2922-2929.

19. **Bläsi, U., G. Halfmann, and W. Lubitz**. 1984. Induction of autolysis of *Escherichia coli* by ϕX174 gene *E* product, p. 213-218. *In* C. Nombela (ed.), Microbial Cell Wall Synthesis and Autolysis. Elsevier Science Publishers, New York.

20. **Bläsi, U. and W. Lubitz**. 1985. Influence of C-terminal modifications of ϕX174 lysis gene *E* on its lysis-inducing properties. J.Gen.Virol. **66**:1209-1213.

21. **Bläsi, U., K. Nam, D. Hartz, L. Gold, and R. Young**. 1989. Dual translational initiation

sites control function of the λ *S* gene. EMBO J. **8**:3501-3510.

22. **Bonovich, M. T. and R. Young**. 1991. Dual start motif in two lambdoid *S* genes unrelated to λ *S*. J.Bacteriol. **173**:2897-2905.

23. **Bradley, D. E.** 1976. Adsorption of the R-specific bacteriophage PR4 to pili determined by a drug resistance plasmid of the W compatibility group. J.Gen.Microbiol. **95**:181-185.

24. **Bradley, D. E., C. A. Dewar, and D. Robertson**. 1969. Structural changes in *Escherichia coli* infected with a ϕX174 type bacteriophage. J.Gen.Virol. **5**:113-121.

25. **Brentlinger, K. L., S. Hafenstein, C. R. Novak, B. A. Fane, R. Borgon, R. McKenna, and M. Agbandje-McKenna**. 2002. Microviridae, a family divided: Isolation, characterization, and genome sequence of ϕMH2K, a bacteriophage of the obligate intracellular parasitic bacterium *Bdellovibrio bacteriovorus*. Journal of Bacteriology **184**:1089-1094.

26. **Buckley, K. J. and M. Hayashi**. 1986. Lytic activity localized to membrane-spanning region of ϕX174 E protein. Mol.Gen.Genet. **204**:120-125.

27. **Calamita, H. G. and R. J. Doyle**. 2002. Regulation of autolysins in teichuronic acid-containing *Bacillus subtilis* cells. Mol.Microbiol. **44**:601-606.

28. **Calamita, H. G., W. D. Ehringer, A. L. Koch, and R. J. Doyle**. 2001. Evidence that the cell wall of *Bacillus subtilis* is protonated during respiration. Proc.Natl.Acad.Sci.U.S.A **98**:15260-15263.

29. **Cao, G. and R. E. Dalbey**. 1994. Translocation of N-terminal tails across the plasma membrane. EMBO J. **13**:4662-4669.

30. **Casjens, S. R., K. Eppler, R. Parr, and A. R. Poteete**. 1989. Nucleotide sequence of the bacteriophage P22 gene *19* to *3* region: Identification of a new gene required for lysis. Virol. **171(2)**:588-598.

31. **Chang, C.-Y.** 1994. Texas A&M University. Synthesis, function and regulation of the lambda holin.

32. **Chang, C.-Y., K. Nam, U. Bläsi, and R. Young**. 1993. Synthesis of two bacteriophage λ S proteins in an *in vivo* system. Gene **133**:9-16.

33. **Chang, C.-Y., K. Nam, and R. Young**. 1995. *S* gene expression and the timing of lysis by bacteriophage λ. J.Bacteriol. **177**:3283-3294.

34. **Cheng, X., X. Zhang, J. W. Pflugrath, and F. W. Studier**. 1994. The structure of bacteriophage T7 lysozyme, a zinc amidase and an inhibitor of T7 RNA polymerase. Proc.Natl.Acad.Sci.USA **91**:4034-4038.

35. **Cohen, L. W., M. R. Showers, and W. D. Andrus**. 1971. Delayed lysis in *Salmonella* phage P22: the continued division of mutant-infected cells actively producing phage. Virol. **54**:848-852.

36. **Cohen, S. S.** 1968. Virus-induced enzymes. Columbia University Press, New York.

37. **Croux, C. and J. L. Garcia**. 1991. Sequence of the *lyc* gene encoding the autolytic lysozyme of *Clostridium acetobutylicum* ATCC824: comparison with other lytic enzymes. Gene **104**:25-31..

38. **Deaton, J., J. Sun, A. Holzenburg, D. K. Struck, J. Berry, and R. Young**. 2004. Functional bacteriorhodopsin is efficiently solubilized and delivered to membranes by the chaperonin GroEL. Proc.Natl.Acad.Sci.U.S.A **101**:2281-2286.

39. **Denhardt, D. T., Dressler, D., and Ray, D. S.** 1978. The Single-stranded DNA Phages. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

40. **Diaz, E., R. Lopez, and J. L. Garcia**. 1990. Chimeric phage-bacterial enzymes - a clue to the modular evolution of genes. Proc.Natl.Acad.Sci.U.S.A **87**:8125-8129.

41. **Diaz, E., R. Lopez, and J. L. Garcia**. 1991. Chimeric pneumococcal cell-wall lytic enzymes reveal important physiological and evolutionary traits. J.Biol.Chem. **266**:5464-5471.

42. **Dressman, H. K. and J. W. Drake**. 1999. Lysis and lysis inhibition in bacteriophage T4: *rV* mutations reside in the holin *t* gene. J.Bacteriol. **181**:4391-4396.

43. **Evrard, C., J. Fastrez, and J. P. Declercq**. 1998. Crystal structure of the lysozyme from bacteriophage lambda and its relationship with V and C-type lysozymes. J.Mol.Biol. **276**:151-164.

44. **Field, C. B., M. J. Behrenfeld, J. T. Randerson, and P. Falkowski**. 1998. Primary

production of the biosphere: integrating terrestrial and oceanic components. Science **281**:237-240.

45. **Fuhrman, J. A.** 1999. Marine viruses and their biogeochemical and ecological effects. Nature **399**:541-548.

46. **Fung, D. C. and H. C. Berg**. 1995. Powering the flagellar motor of *Escherichia coli* with an external voltage source. Nature **375**:809-812.

47. **Godson, G. N., J. C. Fiddes, B. G. Barrell, and F. Sanger**. 1978. Comparative DNA sequence analysis of the G4 and ϕX174 genomes., p. 51-86. *In* D. T. Denhardt, D. Dressler, and D. S. Ray (eds.), The Single-stranded DNA Phages. Cold Spring Harbor Laboratory, Cold Spring Harbor.

48. **Goessens, W. H. F., A. J. M. Driessen, J. Wilschut, and J. van Duin**. 1988. A synthetic peptide corresponding to the C-terminal 25 residues of phage MS2-coded lysis protein dissipates the proton-motive force in *Escherichia coli* membrane vesicles by generating hydrophilic pores. EMBO J. **7**:867-873.

49. **Goldberg, A. R. and M. Howe**. 1969. New mutations in the *S* cistron of bacteriophage lambda affecting host cell lysis. Virol. **38**:200-202.

50. **Graschopf, A. and U. Bläsi**. 1999. Functional assembly of the lambda S holin requires periplasmic localization of its N-terminus. Arch.Microbiol. **172**:31-39.

51. **Graschopf, A. and U. Bläsi**. 1999. Molecular function of the dual-start motif in the λ S holin. Mol.Microbiol. **33**:569-582.

52. **Gründling, A., U. Bläsi, and R. Young**. 2000. Biochemical and genetic evidence for three transmembrane domains in the class I holin, λ S. J.Biol.Chem. **275**:769-776.

53. **Gründling, A., U. Bläsi, and R. Young**. 2000. Genetic and biochemical analysis of dimer and oligomer interactions of the λ S holin. J.Bacteriol **182**:6082-6090.

54. **Gründling, A., M. D. Manson, and R. Young**. 2001. Holins kill without warning. Proc.Natl.Acad.Sci.U.S.A **98**:9348-9352.

55. **Gründling, A., D. L. Smith, U. Bläsi, and R. Young**. 2000. Dimerization between the holin and holin inhibitor of phage lambda. J.Bacteriol. **182**:6075-6081.

56. **Hanych, B., S. Kedzierska, B. Walderich, B. Uznanski, and A. Taylor**. 1993. Expression of the *Rz* gene and the overlapping *Rz1* reading frame present at the right end of the bacteriophage lambda genome. Gene **129**:1-8.

57. **Harris, A. W., D. W. A. Mount, C. R. Fuerst, and L. Siminovitch**. 1967. Mutations in bacteriophage lambda affecting host cell lysis. Virol. **32**:553-569.

58. **Hershey, A. D.** 1946. Mutation of bacteriophage with respect to type of plaque. Genetics **31**:620-640.

59. **Höltje, J.-V., W. Fiedler, H. Rotering, B. Walderich, and J. van Duin**. 1988. Lysis

induction of *Escherichia coli* by the cloned lysis protein of the phage MS2 depends on the presence of osmoregulatory membrane-derived oligosaccharides. J.Biol.Chem. **263**:3539-3541.

60. **Hutchison, C. A., III and R. L. Sinsheimer**. 1966. The process of infection with bacteriophage ϕX174. X. Mutations in a ϕX lysis gene. J.Mol.Biol. **18**:429-447.

61. **Inokuchi, Y., R. Takahashi, T. Hirose, S. Inayama, A. B. Jacobson, and A. Hirashima**. 1986. The complete nucleotide sequence of the group II RNA coliphage GA. J.Biochem.(Tokyo) **99**:1169-1180.

62. **Isenbarger, T. A. and M. P. Krebs**. 1999. Role of helix-helix interactions in assembly of the bacteriorhodopsin lattice. Biochem. **38**:9023-9030.

63. **Isenbarger, T. A. and M. P. Krebs**. 2001. Thermodynamic stability of the bacteriorhodopsin lattice as measured by lipid dilution. Biochem. **40**:11923-11931.

64. **Isono, F., M. Inukai, S. Takahashi, T. Haneishi, T. Kinoshita, and T. Kuwano**. 1989. Mureidomycins A-D, novel peptidylnucleoside antibiotics with shperoplast forming activity III. Biological properties. J.Antibiot. **42**:674-679.

65. **Johnson-Boaz, R., C.-Y. Chang, and R. Young**. 1994. A dominant mutation in the bacteriophage lambda *S* gene causes premature lysis and an absolute defective plating phenotype. Mol.Microbiol. **13**:495-504.

66. **Joliffe, L. K., R. J. Doyle, and U. N. Streips**. 1981. The energized membrane and

cellular autolysis in *Bacillus subtilis*. Cell **25**:753-763.

67. **Josslin, R.** 1970. The lysis mechanism of phage T4: Mutants affecting lysis. Virology **40**:719-726.

68. **Kedzierska, S., A. Wawrzynow, and A. Taylor**. 1996. The *Rz1* gene product of bacteriophage lambda is a lipoprotein localized in the outer membrane of *Escherichia coli*. Gene **168**:1-8.

69. **Klovins, J., G. P. Overbeek, S. H. van den Worm, H. W. Ackermann, and J. van Duin**. 2002. Nucleotide sequence of a ssRNA phage from *Acinetobacter*: kinship to coliphages. J.Gen.Virol. **83**:1523-1533.

70. **Klovins, J., N. A. Tsareva, M. H. de Smit, V. Berzins, and J. van Duin**. 1997. Rapid evolution of translational control mechanisms in RNA genomes. J.Mol.Biol. **265**:372-384.

71. **Lubitz, W., G. Halfmann, and R. Plapp**. 1984. Lysis of *Escherichia coli* after infection with ϕX174 depends on the regulation of the cellular autolytic system. J.Gen.Microbiol. **130**:1079-1087.

72. **Lubitz, W., R. E. Harkness, and E. E. Ishiguro**. 1984. Requirement for a functional host cell autolytic enzyme system for lysis of *Escherichia coli* by bacteriophage ϕX174. J.Bacteriol. **159**:385-387.

73. **Maratea, D., K. Young, and R. Young**. 1985. Deletion and fusion analysis of

the ϕX174 lysis gene *E*. Gene **40**:39-46.

74. **Markov,D.; G. Christie, B. Sauer, R. Calendar, T. Park,T.; R. Young, and K. Severinov.** P2 growth restriction on an *rpoC* mutant is suppressed by alleles of the *Rz1* homolog *lysC.* J. Bacteriol., in the press.

75. **Moffatt, B. A. and F. W. Studier**. 1987. T7 lysozyme inhibits transcription by T7 RNA polymerase. Cell **49**:221-227.

76. **Nam, K.** 1991. Texas A&M University. Translational regulation of the *S* gene of bacteriophage lambda.

77. **Nam, K., U. Bläsi, M. T. Zagotta, and R. Young**. 1990. Conservation of a dual-start motif in P22 lysis gene regulation. J.Bacteriol. **72**:204-211.

78. **Nanninga, N.** 1998. Morphogenesis of Escherichia coli. Microbiol.Mol.Biol.Rev. **62**:110-129.

79. **Navarre, W. W., H. Ton-That, K. F. Faull, and O. Schneewind**. 1999. Multiple enzymatic activities of the murein hydrolase from staphylococcal phage ϕ11. Identification of a D-alanyl-glycine endopeptidase activity. J.Biol.Chem. **274**:15847-15856.

80. **Nelson, D., L. Loomis, and V. A. Fischetti**. 2001. Prevention and elimination of upper respiratory colonization of mice by group A streptococci by using a bacteriophage lytic enzyme. Proc.Natl.Acad.Sci.U.S.A **98**:4107-4112.

81. **Owen, J. E., D. W. Schultz, A. Taylor, and G. R. Smith**. 1983. Nucleotide sequence of the lysozyme gene of bacteriophage T4. Analysis of mutations involving repeated sequences. J.Mol.Biol. **165**:229-248.

82. **Ozaki, K. and R. C. Valentine**. 1973. Inhibition of bacterial cell wall mucopeptide synthesis: a new function of RNA bacteriophage Qβ. Biochim.Biophys.Acta **304**:707-714.

83. **Paddison, P., S. T. Abedon, H. K. Dressman, K. Gailbreath, J. Tracy, E. Mosser, J. Neitzel, B. Guttman, and E. Kutter**. 1998. The roles of the bacteriophage T4 *r* genes in lysis inhibition and fine- structure genetics: a new perspective. Genetics **148**:1539-1550.

84. **Palmer, M.** 2001. The family of thiol-activated, cholesterol-binding cytolysins. Toxicon **39**:1681-1689.

85. **Parreira, R., C. Sao-Jose, A. Isidro, S. Domingues, G. Vieira, and M. A. Santos**. 1999. Gene organization in a central DNA fragment of *Oenococcus oeni* bacteriophage fOg44 encoding lytic, integrative and non-essential functions. Gene **226**:83-93.

86. **Plunkett, G., III, D. J. Rose, T. J. Durfee, and F. R. Blattner**. 1999. Sequence of Shiga toxin 2 phage 933W from *Escherichia coli* O157:H7: Shiga toxin as a phage late-gene product. J.Bacteriol. **181**:1767-1778.

87. **Poteete, A. R. and L. W. Hardy** . 1994. Genetic analysis of bacteriophage T4 lysozyme structure and function. J.Bacteriol. **176**:6783-6788.

88. **Raab, R., G. Neal, C. Sohaskey, J. Smith, and R. Young**. 1988. Dominance in lambda *S* mutations and evidence for translational control. J.Mol.Biol. **199**:95-105.

89. **Ramanculov, E. R. and R. Young** . 2001. Functional analysis of the T4 *t* holin in a lambda context. Mol.Genet.Genomics **265**:345-353.

90. **Redfield, R. J. and A. M. Campbell**. 1987. Structure of cryptic lambda prophages. J.Mol.Biol. **198**:393-404.

91. **Rietsch, A. and U. Blasi**. 1993. Non-specific hole formation in the *Escherichia coli* inner membrane by lambda S proteins in independent of cellular *secY* and *secA* functions and of the proportion of membrane acidic phospholipids. FEMS Microbiol.Lett. **107**:101-105.

92. **Roof, W. D., H. Q. Fang, K. D. Young, J. Sun, and R. Young**. 1997. Mutational analysis of *slyD*, an *Escherichia coli* gene encoding a protein of the FKBP immunophilin family. Mol.Microbiol. **25**:1031-1046.

93. **Roof, W. D., S. M. Horne, K. D. Young, and R. Young**. 1994. *slyD*, a host gene required for ϕX174 lysis, is related to the FK506-binding protein family of peptidyl-prolyl *cis-trans*-isomerases. J.Biol.Chem. **269**:2902-2910.

94. **Roof, W. D. and R. Young**. 1995. ΦX174 lysis requires *slyD*, a host gene which is related to the FKBP family of peptidyl-prolyl *cis-trans* isomerases. FEMS Microbiol.Rev. **17**:213-216.

95. **São-José, C., R. Parreira, G. Vieira, and M. A. Santos**. 2000. The N-terminal region of the *Oenococcus oeni* bacteriophage fOg44 lysin behaves as a bona fide signal peptide in *Escherichia coli* and as a cis- inhibitory element, preventing lytic activity on *Oenococcal* cells. J.Bacteriol. **182**:5823-5831.

96. **Schmidt, C., M. Velleman, and W. Arber**. 1996. Three functions of bacteriophage P1 involved in cell lysis. J.Bacteriol. **178**:1099-1104.

97. **Sekiya, K., R. Satoh, H. Danbara, and Y. Futaesaku**. 1993. A ring-shaped structure with a crown formed by streptolysin O on the erythrocyte membrane. J.Bacteriol. **175**:5953-5961.

98. **Sheehan, M. M., J. L. Garcia, R. Lopez, and P. Garcia**. 1997. The lytic enzyme of the pneumococcal phage Dp-1: a chimeric lysin of intergeneric origin. Mol.Microbiol. **25**:717-725.

99. **Smith, D. L., D. K. Struck, J. M. Scholtz, and R. Young**. 1998. Purification and biochemical characterization of the lambda holin. J.Bacteriol. **180**:2531-2540.

100. **Smith, D. L. and R. Young**. 1998. Oligohistidine tag mutagenesis of the lambda holin gene. J.Bacteriol. **180**:4199-4211.

101. **Steiner, M. and U. Bläsi**. 1993. Charged amino-terminal amino acids affect the lethal capacity of lambda lysis proteins S107 and S105. Mol.Microbiol. **8**:525-533.

102. **Steiner, M., W. Lubitz, and U. Bläsi**. 1993. The missing link in phage lysis of gram-

positive bacteria: Gene *14* of *Bacillus subtilis* phage ϕ29 encodes the functional homolog of lambda S protein. J.Bacteriol. **175**:1038-1042.

103. **Storey, C. C., M. Lusher, and S. J. Richmond**. 1989. Analysis of the complete nucleotide sequence of Chp1, a phage which infects avian *Chlamydia psittaci*. J.Gen.Virol. **70**:3381-3390.

104. **Taylor, A., S. Kedzierska, and A. Wawrzynów**. 1996. Bacteriophage λ lysis gene product modified and inserted into *Escherichia coli* outer membrane: Rz1 lipoprotein. Microbial Drug Resistance **2**:147-153.

105. **van Duin, J.** 1988. Single-stranded RNA bacteriophages, p. 117-167. *In* R. Calendar (ed.), The Bacteriophages. Plenum Press, New York.

106. **Walderich, B. and J.-V. Höltje**. 1989. Specific localization of the lysis protein of bacteriophage MS2 in membrane adhesion sites of *Escherichia coli*. J.Bacteriol. **171**:3331-3336.

107. **Walderich, B., A. Ursinus-Wöosner, J. van Duin, and J.-V. Höltje**. 1988. Induction of the autolytic system of *Escherichia coli* by specific insertion of bacteriophage MS2 lysis protein into the bacterial cell envelope. J.Bacteriol. **170**:5027-5033.

108. **Walker, J. T. and D. H. Walker, Jr.** 1980. Mutations in coliphage P1 affecting host cell lysis. J.Virol. **35**:519-530.

109. **Wang, I.-N., J.F.Deaton, and R.Young**. 2003. Sizing the holin lesion with an

endolysin- galactosidase fusion. J. Bacteriol. **185**:779-787.

110. **Wang, I.-N., D. E. Dykhuizen, and L. B. Slobodkin**. 1996. The evolution of phage lysis timing. Evol.Ecol. **10**:545-558.

111. **Wang, I.-N., D. L. Smith, and R. Young**. 2000. Holins: the protein clocks of bacteriophage infections. Annu.Rev.Microbiol. **54**:799-825.

112. **Watson, J. D., N. H. Hopkins, J. W. Roberts, J. A. Steitz, and A. M. Weiner** 1987. Molecular Biology of the Gene, p. 507. Benjamin/Cummings Publishing Co., Inc., Menlow Park, CA.

113. **Wilhelm, S. W. and C. A. Suttle**. 1999. Viruses and nutrient cycles in the sea. BioScience **49**:781-783.

114. **Winter, R. B. and L. Gold**. 1983. Overproduction of bacteriophage Qβ maturation (A_2) protein leads to cell lysis. Cell **33**:877-885.

115. **Witte, A., E. Brand, P. Mayrhofer, F. Narandja, and W. Lubitz**. 1998. Mutations in cell division proteins FtsZ and FtsA inhibit ϕX174 protein-E-mediated lysis of *Escherichia coli*. Arch.Microbiol. **170**:259-268.

116. **Witte, A., G. Schrot, P. Schon, and W. Lubitz**. 1997. Proline 21, a residue within the alpha helical domain of ϕX174 lysis protein E, is required for its function in *Escherichia coli*. Mol.Microbiol. **26**:337-346.

117. **Witte, A., G. Wanner, U. Bläsi, G. Halfmann, M. Szostak, and W. Lubitz**. 1990. Endogenous transmembrane tunnel formation mediated by ϕX174 lysis protein E. J.Bacteriol. **172**:4109-4114.

118. **Witte, A., G. Wanner, M. Sulzner, and W. Lubitz**. 1992. Dynamics of ϕX174 protein E-mediated lysis of *Escherichia coli*. Arch.Microbiol. **157**:381-388.

119. **Young, R.** 1992. Bacteriophage lysis: mechanism and regulation. Microbiol.Rev. **56**:430-481.

120. **Young, R.** 2002. Bacteriophage holins: deadly diversity. J.Mol.Microbiol.Biotechnol. **4**:21-36.

121. **Young, R., I.-N. Wang, and W. D. Roof**. 2000. Phages will out: strategies of host cell lysis. Trends Microbiol. **8**:120-128.

122. **Young, R., S. Way, J. Yin, and M. Syvanen**. 1979. Transposition mutagenesis of bacteriophage lambda: a new gene affecting cell lysis. J.Mol.Biol. **132**:307-322.

123. **Zhang, N. and R. Young**. 1999. Complementation and characterization of the nested *Rz* and *Rz1* reading frames in the genome of bacteriophage lambda. Mol.Gen.Genet. **262**:659-667.

124. **Ziermann, R., B. Bartlett, R. Calendar, and G. E. Christie**. 1994. Functions involved in bacteriophage P2-induced host cell lysis and identification of a new tail gene. J.Bacteriol. **176**:4974-4984.