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## References

1. **Adams, H.** 2002. Protein export in Escherichia coli; involvement of the signal sequence and Psp proteins. PhD. thesis. Utrecht University, Utrecht, The Netherlands.
2. **Armstrong, J., R. N. Perham, and J. E. Walker.** 1981. Domain-structure of bacteriophage fd adsorption protein. *Febs Letters* **135**:167-172.
3. **Barbas, C. F., 3rd, A. S. Kang, R. A. Lerner, and S. J. Benkovic.** 1991. Assembly of combinatorial antibody libraries on phage surfaces: the gene III site. *Proceedings of the National Academy of Sciences of the United States of America* **88**:7978-82.
4. **Barbas III, C. F., D. R. Burton, J. K. Scott, and G. J. Silverman.** 2001. Phage Display: a laboratory manual. Cold Spring Harbor Laboratory Press, Cold Spring Harbor.
5. **Bauer, M., and G. P. Smith.** 1988. Filamentous phage morphogenetic signal sequence and orientation of DNA in the virion and gene V protein complex. *Virology* **167**:166-175.
6. **Bedford, E., S. Tabor, and C. C. Richardson.** 1997. The thioredoxin binding domain of bacteriophage T7 DNA polymerase confers processivity on Escherichia coli DNA polymerase I. *Proceedings of the National Academy of Sciences of the United States of America* **94**:479-84.
7. **Blumer, K. J., M. R. Ivey, and D. A. Steege.** 1987. Translational control of phage f1 gene expression by differential activities of the gene V, VII, IX and VIII initiation sites. *Journal of Molecular Biology* **197**:439-451.
8. **Blumer, K. J., and D. A. Steege.** 1989. Recognition and cleavage signals for messenger-RNA processing lie within local domains of the phage f1 RNA precursors. *J. Biol. Chem.* **264**:20770-20777.

9. **Boeke, J. D., P. Model, and N. D. Zinder.** 1982. Effects of bacteriophage f1 gene III protein on the host cell membrane. *Mol. Genl. Genet.* **186**:185-192.
10. **Boyd, E. F., K. E. Moyer, L. Shi, and M. K. Waldor.** 2000. Infectious CTXPhi and the *vibrio* pathogenicity island prophage in *Vibrio mimicus*: evidence for recent horizontal transfer between *V. mimicus* and *V. cholerae*. *Infect Immun.* **68**:1507-1513.
11. **Bradley, D. E., and J. Whelan.** 1989. Escherichia coli tolQ mutants are resistant to filamentous bacteriophages that adsorb to the tips, not the shafts, of conjugative pili. *J Gen Microbiol* **135**:1857-1863.
12. **Brissette, J. L., and M. Russel.** 1990. Secretion and membrane integration of a filamentous phage-encoded morphogenetic protein. *Journal of Molecular Biology* **211**:565-580.
13. **Brissette, J. L., M. Russel, L. Weiner, and P. Model.** 1990. Phage shock protein, a stress protein of Escherichia coli. *Proc. Natl. Acad. Sci. USA* **87**:862-866.
14. **Brissette, J. L., L. Weiner, T. L. Ripmaster, and P. Model.** 1991. Characterization and sequence of the Escherichia coli stress-induced psp operon. *Journal of Molecular Biology* **220**:35-48.
15. **Bross, P., K. Bussmann, W. Keppner, and I. Rasched.** 1988. Functional analysis of the adsorption protein of two filamentous phages with different host specificities. *J Gen Microbiol* **134**:461-471.
16. **Cesareni, G., L. Castagnoli, and G. Cestra.** 1999. Phage displayed peptide libraries. *Combinatorial Chemistry & High Throughput Screening* **2**:1-17.
17. **Chamberlain, B. K., and R. E. Webster.** 1978. Effect of membrane-associated f1 bacteriophage coat protein upon the activity of Escherichia coli phosphatidylserine synthetase. *Journal of Bacteriology* **135**:883-887.

18. **Chopin, M. C., A. Rouault, S. D. Ehrlich, and M. Gautier.** 2002. Filamentous phage active on the gram-positive bacterium *Propionibacterium freudenreichii*. *Journal of Bacteriology* **184**:2030-2033.
19. **Click, E. M., and R. E. Webster.** 1997. Filamentous phage infection: required interactions with the TolA protein. *Journal of Bacteriology* **179**:6464-6471.
20. **Click, E. M., and R. E. Webster.** 1998. The TolQRA proteins are required for membrane insertion of the major capsid protein of the filamentous phage f1 during infection. *Journal of Bacteriology* **180**:1723-1728.
21. **Cortese, R., P. Monaci, A. Luzzago, C. Santini, F. Bartoli, I. Cortese, P. Fortugno, G. Galfre, A. Nicosia, and F. Felici.** 1996. Selection of biologically active peptides by phage display of random peptide libraries. *Current Opinion in Biotechnology* **7**:616-621.
22. **Crameri, R., and M. Suter.** 1993. Display of biologically active proteins on the surface of filamentous phages: a cDNA cloning system for selection of functional gene products linked to the genetic information responsible for their production. *Gene* **137**:69-75.
23. **Daefler, S., I. Guilvout, K. R. Hardie, A. P. Pugsley, and M. Russel.** 1997. The C-terminal domain of the secretin PulD contains the binding site for its cognate chaperone, PulS, and confers PulS dependence on pIVf1 function. *Molecular Microbiology* **24**:465-475.
24. **Daefler, S., M. Russel, and P. Model.** 1997. Module swaps between related translocator proteins pIV(f1), pIV(IKe) and PulD: identification of a specificity domain. *Journal of Molecular Biology* **266**:978-992.
25. **Darwin, A. J., and V. L. Miller.** 2001. The psp locus of *Yersinia enterocolitica* is required for virulence and for growth in vitro when the Ysc type III secretion system is produced. *Molecular Microbiology* **39**:429-44.

26. **Davis, B. M., E. H. Lawson, M. Sandkvist, A. Ali, S. Sozhamannan, and M. K. Waldor.** 2000. Convergence of the secretory pathways for cholera toxin and the filamentous phage, CTXphi. *Science* **288**:333-335.
27. **Deng, L.-W., and R. N. Perham.** 2002. Delineating the Site of Interaction on the pIII Protein of Filamentous Bacteriophage fd with the F-pilus of *Escherichia coli*. *Journal of Molecular Biology* **319**:603-614.
28. **Deng, L. W., P. Malik, and R. N. Perham.** 1999. Interaction of the globular domains of pIII protein of filamentous bacteriophage fd with the F-pilus of *Escherichia coli*. *Virology* **253**:271-277.
29. **Duenas, M., and C. A. K. Borrebaeck.** 1994. Clonal selection and amplification of phage display antibodies by lining antigen recognition and phage replication. *Bio/Technology* **12**:999-1002.
30. **Dunker, A. K., L. D. Ensign, G. E. Arnold, and L. M. Roberts.** 1991. A model for fd phage penetration and assembly. *Febs Letters* **292**:271-4.
31. **Dworkin, J., G. Jovanovic, and P. Model.** 2000. The PspA protein of *Escherichia coli* is a negative regulator of sigma(54)-dependent transcription. *Journal of Bacteriology* **182**:311-319.
32. **Dworkin, J., G. Jovanovic, and P. Model.** 1997. Role of upstream activation sequences and integration host factor in transcriptional activation by the constitutively active prokaryotic enhancer-binding protein PspF. *Journal of Molecular Biology* **273**:377-388.
33. **Dworkin, J., A. J. Ninfa, and P. Model.** 1998. A protein-induced DNA bend increases the specificity of a prokaryotic enhancer-binding protein. *Genes and Development* **12**:894-900.
34. **Endemann, H., P. Bross, and I. Rasched.** 1992. The adsorption protein of phage IKe. Localization by deletion mutagenesis. *Mol Microbiol* **6**:471-478.

35. **Endemann, H., V. Gailus, and I. Rasched.** 1993. Interchangeability of the adsorption proteins of bacteriophages Ff and IK<sub>E</sub>. *Journal of Virology* **67**:3332-3337.
36. **Endemann, H., and P. Model.** 1995. Location of filamentous phage minor coat proteins in phage and in infected cells. *Journal of Molecular Biology* **250**:496-506.
37. **Fairbrother, W. J., H. W. Christinger, A. G. Cochran, G. Fuh, C. J. Keenan, C. Quan, S. K. Shriver, J. Y. Tom, J. A. Wells, and B. C. Cunningham.** 1998. Novel peptides selected to bind vascular endothelial growth factor target the receptor-binding site. *Biochemistry* **37**:17754-17764.
38. **Felici, F., L. Castagnoli, A. Musacchio, R. Jappelli, and G. Cesareni.** 1991. Selection of antibody ligands from a large library of oligopeptides expressed on a multivalent exposition vector. *Journal of Molecular Biology* **222**:301-310.
39. **Feng, J. n., P. Model, and M. Russel.** unpublished.
40. **Feng, J. N., P. Model, and M. Russel.** 1999. A trans-envelope protein complex needed for filamentous phage assembly and export. *Molecular Microbiology* **34**:745-755.
41. **Feng, J. N., M. Russel, and P. Model.** 1997. A permeabilized cell system that assembles filamentous bacteriophage. *Proceedings of the National Academy of Sciences of the United States of America* **94**:4068-4073.
42. **Forrer, P., S. Jung, and A. Pluckthun.** 1999. Beyond binding: using phage display to select for structure, folding and enzymatic activity in proteins. *Current Opinion in Structural Biology* **9**:514-520.
43. **Fuh, G., and S. S. Sidhu.** 2000. Efficient phage display of polypeptides fused to the carboxy-terminus of the M13 gene-3 minor coat protein. *FEBS Letters* **480**:231-234.

44. **Fulford, W., and P. Model.** 1988. Bacteriophage f1 DNA replication genes. II. The roles of gene V protein and gene II protein in complementary strand synthesis. *Journal of Molecular Biology* **203**:39-48.
45. **Fulford, W., and P. Model.** 1984. Gene X of bacteriophage f1 is required for phage DNA synthesis. Mutagenesis of in-frame overlapping genes. *Journal of Molecular Biology* **178**:137-153.
46. **Fulford, W., and P. Model.** 1988. Regulation of bacteriophage f1 DNA replication. I. New functions for genes II and X. *Journal of Molecular Biology* **203**:49-62.
47. **Gailus, V., and I. Rasched.** 1994. The adsorption protein of bacteriophage fd and its neighbour minor coat protein build a structural entity. *European Journal of Biochemistry* **222**:927-931.
48. **Gao, C., S. Mao, C. H. Lo, P. Wirsching, R. A. Lerner, and K. D. Janda.** 1999. Making artificial antibodies: a format for phage display of combinatorial heterodimeric arrays. *Proceedings of the National Academy of Sciences of the United States of America* **96**:6025-6030.
49. **Gaspar, J. A., J. A. Thomas, C. L. Marolda, and M. A. Valvano.** 2000. Surface expression of O-specific lipopolysaccharide in *Escherichia coli* requires the function of the TolA protein. *Molecular Microbiology* **38**:262-275.
50. **Goodrich, A. F., and D. A. Steege.** 1999. Roles of polyadenylation and nucleolytic cleavage in the filamentous phage mRNA processing and decay pathways in *Escherichia coli*. *Rna* **5**:972-985.
51. **Gray, C. W.** 1989. Three-dimensional structure of complexes of single-stranded DNA-binding proteins with DNA. IK<sub>E</sub> and fd gene 5 proteins form left-handed helices with single-stranded DNA. *Journal of Molecular Biology* **208**:57-64.

52. **Gray, C. W., R. S. Brown, and D. A. Marvin.** 1981. Adsorption complex of filamentous fd virus. *Journal of Molecular Biology* **146**:621-627.
53. **Greenstein, D., and K. Horiuchi.** 1989. Double-strand cleavage and strand joining by the replication initiator protein of filamentous phage f1. *Journal of Biological Chemistry* **264**:12627-12632.
54. **Greenwood, J., G. J. Hunter, and R. N. Perham.** 1991. Regulation of filamentous bacteriophage length by modification of electrostatic interactions between coat protein and DNA. *Journal of Molecular Biology* **217**:223-227.
55. **Greenwood, J., A. E. Willis, and R. N. Perham.** 1991. Multiple display of foreign peptides on a filamentous bacteriophage. *Journal of Molecular Biology* **220**:821-827.
56. **Griffith, J., M. Manning, and K. Dunn.** 1981. Filamentous bacteriophage contract into hollow spherical-particles upon exposure to a chloroform-water interface. *Cell* **23**:747-753.
57. **Griffiths, A. D., and A. R. Duncan.** 1998. Strategies for selection of antibodies by phage display. *Current Opinion in Biotechnology* **9**:102-108.
58. **Haigh, N. G., and R. E. Webster.** 1999. The pI and pXI assembly proteins serve separate and essential roles in filamentous phage assembly. *J Mol Biol* **293**:1017-1027.
59. **Hardie, K. R., S. Lory, and A. P. Pugsley.** 1996. Insertion of an outer membrane protein in *Escherichia coli* requires a chaperone-like protein. *EMBO Journal* **15**:978-988.
60. **Hardie, K. R., A. Seydel, I. Guivout, and A. P. Pugsley.** 1996. The secretin-specific, chaperone-like protein of the general secretory pathway: separation of proteolytic protection and piloting functions. *Molecular Microbiology* **22**:967-976.
61. **Higashitani, A., D. Greenstein, H. Hirokawa, S. Asano, and K. Horiuchi.** 1994. Multiple DNA conformational changes induced by an initiator protein precede the nicking reaction in a rolling circle replication origin. *Journal of Molecular Biology* **237**:388-400.

62. **Higashitani, A., N. Higashitani, and K. Horiuchi.** 1997. Minus-strand origin of filamentous phage versus transcriptional promoters in recognition of RNA polymerase. *Proceedings of the National Academy of Sciences of the United States of America* **94**:2909-2914.
63. **Higashitani, N., A. Higashitani, Z. W. Guan, and K. Horiuchi.** 1996. Recognition mechanisms of the minus-strand origin of phage f1 by Escherichia coli RNA polymerase. *Genes to Cells* **1**:829-841.
64. **Higashitani, N., A. Higashitani, and K. Horiuchi.** 1993. Nucleotide sequence of the primer RNA for DNA replication of filamentous bacteriophages. *Journal of Virology* **67**:2175-2181.
65. **Hoess, R. H.** 2001. Protein design and phage display. *Chemical Reviews* **101**:3205-3218.
66. **Holliger, P., and L. Riechmann.** 1997. A conserved infection pathway for filamentous bacteriophages is suggested by the structure of the membrane penetration domain of the minor coat protein g3p from phage fd. *Structure* **5**:265-275.
67. **Holliger, P., L. Riechmann, and R. L. Williams.** 1999. Crystal structure of the two N-terminal domains of g3p from filamentous phage fd at 1.9 Å: evidence for conformational lability. *Journal of Molecular Biology* **288**:649-57.
68. **Hoogenboom, H. R., and P. Chames.** 2000. Natural and designer binding sites made by phage display technology. *Immunology Today* **21**:371-378.
69. **Horabin, J. I., and R. E. Webster.** 1988. An amino acid sequence which directs membrane insertion causes loss of membrane potential. *Journal of Biological Chemistry* **263**:11575-11583.
70. **Horabin, J. I., and R. E. Webster.** 1986. Morphogenesis of f1 filamentous bacteriophage. Increased expression of gene I inhibits bacterial growth. *Journal of Molecular Biology* **188**:403-413.

71. **Horiuchi, K.** 1983. Co-evolution of a filamentous bacteriophage and its defective interfering particles. *Journal of Molecular Biology* **169**:389-407.
72. **Horiuchi, K.** 1997. Initiation mechanisms in replication of filamentous phage DNA. *Genes to Cells* **2**:425-432.
73. **Hunter, G. J., D. H. Rowitch, and R. N. Perham.** 1987. Interactions between DNA and coat protein in the structure and assembly of filamentous bacteriophage fd. *Nature* **327**:252-254.
74. **Iannolo, G., O. Minenkova, R. Petruzzelli, and G. Cesareni.** 1995. Modifying filamentous phage capsid: limits in the size of the major capsid protein. *Journal of Molecular Biology* **248**:835-844.
75. **Il'ichev, A. A., O. O. Minenkova, S. I. Tat'kov, N. N. Karpyshev, A. M. Eroshkin, V. I. Ofitserov, Z. A. Akimenko, V. A. Petrenko, and L. S. Sandakhchiev.** 1990. The use of filamentous phage M13 in protein engineering [Rus]. *Molekuliarnaia Biologija* **24**:530-535.
76. **Ivey-Hoyle, M., and D. A. Steege.** 1992. Mutational analysis of an inherently defective translation initiation site. *Journal of Molecular Biology* **224**:1039-1054.
77. **Ivey-Hoyle, M., and D. A. Steege.** 1989. Translation of phage f1 gene VII occurs from an inherently defective initiation site made functional by coupling. *Journal of Molecular Biology* **208**:233-244.
78. **Jespers, L. S., J. H. Messens, A. De Keyser, D. Eeckhout, I. Van Den Brande, Y. G. Gansemans, M. J. Lauwereys, G. P. Vlasuk, and P. E. Stanssens.** 1995. Surface expression and ligand-based selection of cDNAs fused to filamentous phage gene VI. *BioTechnology* **13**:378-382.
79. **Jovanovic, G., J. Dworkin, and P. Model.** 1997. Autogenous control of PspF, a constitutively active enhancer-binding protein of Escherichia coli. *Journal of Bacteriology* **179**:5232-5237.

80. **Jovanovic, G., L. Weiner, and P. Model.** 1996. Identification, nucleotide sequence, and characterization of PspF, the transcriptional activator of the *Escherichia coli* stress-induced *psp* operon. *Journal of Bacteriology* **178**:1936-1945.
81. **Kang, A. S., C. F. Barbas, K. D. Janda, S. J. Benkovic, and R. A. Lerner.** 1991. Linkage of recognition and replication functions by assembling combinatorial antibody Fab libraries along phage surfaces. *Proceedings of the National Academy of Sciences of the United States of America* **88**:4363-4366.
82. **Kay, B., G. Winter, and J. McCafferty (ed.).** 1996. Biology of the filamentous bacteriophage. Academic Press, New York.
83. **Kazmierczak, B. I., D. L. Mielke, M. Russel, and P. Model.** 1994. pIV, a filamentous phage protein that mediates phage export across the bacterial cell envelope, forms a multimer. *Journal of Molecular Biology* **238**:187-198.
84. **Kleerebezem, M., and J. Tommassen.** 1993. Expression of the *pspA* gene stimulates efficient protein export in *Escherichia coli*. *Molecular Microbiology* **7**:947-956.
85. **Klug, A.** 1999. Zinc finger peptides for the regulation of gene expression. *Journal of Molecular Biology* **293**:215-218.
86. **Koebnik, R., K. P. Locher, and P. Van Gelder.** 2000. Structure and function of bacterial outer membrane proteins: barrels in a nutshell. *Molecular Microbiology* **37**:239-253.
87. **Kokoska, R. J., and D. A. Steege.** 1998. Appropriate expression of filamentous phage f1 DNA replication genes II and X requires RNase E-dependent processing and separate mRNAs. *Journal of Bacteriology* **180**:3245-3249.
88. **Konings, R. N. H., R. H. A. Folmer, P. J. M. Folkers, M. Nilges, and C. W. Hilbers.** 1995. Three-dimensional structure of the single-stranded DNA-binding protein encoded by gene V of

the filamentous bacteriophage m13 and a model of its complex with single-stranded DNA.

Fems Microbiology Reviews **17**:57-72.

89. **Kroll, D., K. Meierhoff, N. Bechtold, M. Kinoshita, S. Westphal, U. C. Vothknecht, J. Soll, and P. Westhoff.** 2001. VIPP1, a nuclear gene of *Arabidopsis thaliana* essential for thylakoid membrane formation. Proceedings of the National Academy of Sciences of the United States of America **98**:4238-4242.
90. **Kuhn, A.** 1995. Major coat proteins of bacteriophage Pf3 and M13 as model systems for Sec-independent protein transport. Fems Microbiology Reviews **17**:185-190.
91. **Laird-Offringa, I. A., and J. G. Belasco.** 1996. In vitro genetic analysis of RNA-binding proteins using phage display libraries. Methods in Enzymology **267**:149-168.
92. **Li, H. M., Y. Kaneko, and K. Keegstra.** 1994. Molecular cloning of a chloroplastic protein associated with both the envelope and thylakoid membranes. Plant Molecular Biology **25**:619-632.
93. **Lin, N. T., B. Y. You, C. Y. Huang, C. W. Kuo, F. S. Wen, J. S. Yang, and Y. H. Tseng.** 1994. Characterization of two novel filamentous phages of *Xanthomonas*. Journal of General Virology **75**:2543-2547.
94. **Linderoth, N. A., P. Model, and M. Russel.** 1996. Essential role of a sodium dodecyl sulfate-resistant protein IV multimer in assembly-export of filamentous phage. Journal of Bacteriology **178**:1962-1970.
95. **Linderoth, N. A., M. N. Simon, and M. Russel.** 1997. The filamentous phage pIV multimer visualized by scanning transmission electron microscopy. Science **278**:1635-1638.
96. **Lloubes, R., E. Cascales, A. Walburger, E. Bouveret, C. Lazdunski, A. Bernadac, and L. Journet.** 2001. The Tol-Pal proteins of the *Escherichia coli* cell envelope: an energized system required for outer membrane integrity? Research in Microbiology **152**:523-529.

97. **Lopez, J., and R. E. Webster.** 1985. Assembly site of bacteriophage f1 corresponds to adhesion zones between the inner and outer membranes of the host cell. *Journal of Bacteriology* **163**:1270-4.
98. **Lopez, J., and R. E. Webster.** 1983. Morphogenesis of filamentous bacteriophage f1: orientation of extrusion and production of polyphage. *Virology* **127**:177-193.
99. **Lubkowski, J., F. Hennecke, A. Pluckthun, and A. Wlodawer.** 1999. Filamentous phage infection: crystal structure of g3p in complex with its coreceptor, the C-terminal domain of TolA. *Structure with Folding & Design* **7**:711-722.
100. **Lubkowski, J., F. Hennecke, A. Pluckthun, and A. Wlodawer.** 1998. The structural basis of phage display elucidated by the crystal structure of the N-terminal domains of g3p. *Nature Structural Biology* **5**:140-147.
101. **Makowski, L., and M. Russel.** 1997. Structure and assembly of filamentous bacteriophages, p. 352-380. In W. Chiu, R. M. Burnett, and R. L. Garcea (ed.), *Structural Biology of Viruses*. Oxford University Press, New York.
102. **Marciano, D. K., M. Russel, and S. M. Simon.** 1999. An aqueous channel for filamentous phage export. *Science* **284**:1516-1519.
103. **Marciano, D. K., M. Russel, and S. M. Simon.** 2001. Assembling filamentous phage occlude pIV channels. *Proceedings of the National Academy of Sciences of the United States of America* **98**:9359-9364.
104. **Markland, W., B. L. Roberts, M. J. Saxena, S. K. Guterman, and R. C. Ladner.** 1991. Design, construction and function of a multicopy display vector using fusions to the major coat protein of bacteriophage M13. *Gene* **109**:13-19.

105. **Marks, J. D., H. R. Hoogenboom, A. D. Griffiths, and G. Winter.** 1992. Molecular evolution of proteins on filamentous phage. Mimicking the strategy of the immune system. *Journal of Biological Chemistry* **267**:16007-16010.
106. **Marvin, D. A.** 1998. Filamentous phage structure, infection and assembly. *Current Opinion in Structural Biology* **8**:150-158.
107. **Marvin, D. A., R. D. Hale, C. Nave, and M. H. Citterich.** 1994. Molecular models and structural comparisons of native and mutant class I filamentous bacteriophages: Ff (fd, f1, M13), If1 and IK<sub>E</sub>. *Journal of Molecular Biology* **235**:260-286.
108. **Michel, B., and N. D. Zinder.** 1989. In vitro binding of the bacteriophage f1 geneV protein to the geneII RNA operator and its DNA analog *Nucleic Acids Research* **17**:7333-7344.
109. **Michel, B., and N. D. Zinder.** 1989. Translational repression in bacteriophage f1: characterization of the gene V protein target on the gene II mRNA. *Proceedings of the National Academy of Sciences of the United States of America* **86**:4002-4006.
110. **Minenkova, O. O., A. A. Ilyichev, G. P. Kishchenko, and V. A. Petrenko.** 1993. Design of specific immunogens using filamentous phage as the carrier. *Gene* **128**:85-88.
111. **Model, P., G. Jovanovic, and J. Dworkin.** 1997. The Escherichia coli phage-shock-protein (psp) operon. *Molecular Microbiology* **24**:255-261.
112. **Model, P., and M. Russel.** 1988. Filamentous Bacteriophage, p. 375-456. *In* R. Calendar (ed.), *The Bacteriophages*. Plenum Publishing, New York.
113. **Nelson, F. K., S. M. Friedman, and G. P. Smith.** 1981. Filamentous phage DNA cloning vectors: A non-infective mutant with a non-polar deletion in gene III. *Virology* **108**:338-350.
114. **O'Neil, K. T., W. F. DeGrado, S. A. Mousa, N. Ramachandran, and R. H. Hoess.** 1994. Identification of recognition sequences of adhesion molecules using phage display technology. *Methods in Enzymology* **245**:370-386.

115. **Oliver, A. W., I. Bogdarina, E. Schroeder, I. A. Taylor, and G. G. Kneale.** 2000. Preferential binding of fd gene 5 protein to tetraplex nucleic acid structures. *J Mol Biol* **301**:575-584.
116. **Opalka, N., R. Beckmann, N. Boisset, M. Simon, M. Russel, and S. Darst.** 2003. Structure of the filamentous phage pIV multimer by cryo-electron microscopy. *Journal of Molecular Biology* **325**:461-470.
117. **Parmley, S. F., and G. P. Smith.** 1989. Filamentous fusion phage cloning vectors for the study of epitopes and design of vaccines. *Advances in Experimental Medicine & Biology* **251**:215-218.
118. **Pasqualini, R., and E. Ruoslahti.** 1996. Organ targeting in vivo using phage display peptide libraries. *Nature* **380**:364-366.
119. **Pederson, D. M., L. C. Welsh, D. A. Marvin, M. Sampson, R. N. Perham, M. Yu, and M. R. Slater.** 2001. The protein capsid of filamentous bacteriophage PH75 from *Thermus thermophilus*. *Journal of Molecular Biology* **309**:401-421.
120. **Perham, R. N., T. D. Terry, A. E. Willis, J. Greenwood, F. di Marzo Veronese, and E. Appella.** 1995. Engineering a peptide epitope display system on filamentous bacteriophage. *FEMS Microbiology Reviews* **17**:25-31.
121. **Rakonjac, J., J. n. Feng, and P. Model.** 1999. Filamentous phage are released from the bacterial membrane by a two-step mechanism involving a short C-terminal fragment of pIII. *Journal of Molecular Biology* **289**:1253-1265.
122. **Rakonjac, J., and P. Model.** 1998. Roles of pIII in filamentous phage assembly. *Journal of Molecular Biology* **282**:25-41.

123. **Rampf, B., P. Bross, T. Vocke, and I. Rasched.** 1991. Release of periplasmic proteins induced in *E. coli* by expression of an N-terminal proximal segment of the phage fd gene 3 protein. *Febs Letters* **280**:27-31.
124. **Rapoza, M. P., and R. E. Webster.** 1995. The products of gene I and the overlapping in-frame gene XI are required for filamentous phage assembly. *Journal of Molecular Biology* **248**:627-638.
125. **Rebar, E. J., H. A. Greisman, and C. O. Pabo.** 1996. Phage display methods for selecting zinc finger proteins with novel DNA-binding specificities. *Methods in Enzymology* **267**:129-149.
126. **Riechmann, L., and P. Holliger.** 1997. The C-terminal domain of TolA is the coreceptor for filamentous phage infection of *E. coli*. *Cell* **90**:351-360.
127. **Rieul, C., J. C. Cortay, F. Bleicher, and A. J. Cozzone.** 1987. Effect of bacteriophage M13 infection on phosphorylation of dnaK protein and other *Escherichia coli* proteins. *European Journal of Biochemistry* **168**:621-627.
128. **Roberts, B. L., W. Markland, and R. C. Ladner.** 1996. Affinity maturation of proteins displayed on surface of M13 bacteriophage as major coat protein fusions. *Methods in Enzymology* **267**:68-82.
129. **Roth, T., G. Weiss, C. Eigenbrot, and S. S. Sidhu.** 2002. A minimized m13 coat protein defines the minimum requirements for assembly into the bacteriophage particle. submitted.
130. **Rowitch, D. H., G. J. Hunter, and R. N. Perham.** 1988. Variable electrostatic interaction between DNA and coat protein in filamentous bacteriophage assembly. *Journal of Molecular Biology* **204**:663-674.
131. **Ruoslahti, E.** 2000. Targeting tumor vasculature with homing peptides from phage display. *Seminars in Cancer Biology* **10**:435-442.

132. **Russel, M.** 1992. Interchangeability of related proteins and autonomy of function. The morphogenetic proteins of filamentous phage f1 and IKe cannot replace one another. *Journal of Molecular Biology* **227**:453-462.
133. **Russel, M.** 1998. Macromolecular assembly and secretion across the bacterial cell envelope: type II protein secretion systems. *Journal of Molecular Biology* **279**:485-499.
134. **Russel, M.** 1994. Mutants at conserved positions in gene IV, a gene required for assembly and secretion of filamentous phage. *Molecular Microbiology* **14**:357-369.
135. **Russel, M.** 1994. Phage assembly: a paradigm for bacterial virulence factor export? *Science* **265**:612-614.
136. **Russel, M.** 1993. Protein-protein interactions during filamentous phage assembly. *Journal of Molecular Biology* **231**:689-697.
137. **Russel, M.** 1995. Thioredoxin genetics, p. 265-275. In L. Packer (ed.), *Biothiols Part B Glutathione and thioredoxin thiols in signal transduction and gene regulation*, vol. 252. Academic Press, New York.
138. **Russel, M., and B. Kazmierczak.** 1993. Analysis of the structure and subcellular location of filamentous phage pIV. *Journal of Bacteriology* **175**:3998-4007.
139. **Russel, M., N. A. Linderoth, and A. Sali.** 1997. Filamentous phage assembly: variation on a protein export theme. *Gene* **192**:23-32.
140. **Russel, M., and P. Model.** 1989. Genetic analysis of the filamentous bacteriophage packaging signal and of the proteins that interact with it. *Journal of Virology* **63**:3284-3295.
141. **Russel, M., and P. Model.** 1986. The role of thioredoxin in filamentous phage assembly. Construction, isolation, and characterization of mutant thioredoxins. *Journal of Biological Chemistry* **261**:14997-15005.

142. **Russel, M., H. Whirlow, T. P. Sun, and R. E. Webster.** 1988. Low-frequency infection of F-bacteria by transducing particles of filamentous bacteriophages. *Journal of Bacteriology* **170**:5312-5316.
143. **Sandkvist, M., M. Bagdasarian, and S. P. Howard.** 2000. Characterization of the multimeric Eps complex required for cholera toxin secretion. *Ijmm International Journal of Medical Microbiology* **290**:345-350.
144. **Sidhu, S. S.** 2001. Engineering M13 for phage display. *Biomolecular Engineering* **18**:57-63.
145. **Sidhu, S. S., H. B. Lowman, B. C. Cunningham, and J. A. Wells.** 2000. Phage display for selection of novel binding peptides. *Methods in Enzymology* **328**:333-363.
146. **Sidhu, S. S., G. A. Weiss, and J. A. Wells.** 2000. High copy display of large proteins on phage for functional selections. *J Mol Biol* **296**:487-495.
147. **Silverman, P. M.** 1997. Towards a structural biology of bacterial conjugation. *Molecular Microbiology* **23**:423-429.
148. **Skinner, M. M., H. Zhang, D. H. Leschnitzer, Y. Guan, H. Bellamy, R. M. Sweet, C. W. Gray, R. N. Konings, A. H. Wang, and T. C. Terwilliger.** 1994. Structure of the gene V protein of bacteriophage f1 determined by multiwavelength x-ray diffraction on the selenomethionyl protein. *Proceedings of the National Academy of Sciences of the United States of America* **91**:2071-2075.
149. **Smith, G. P.** 1985. Filamentous fusion phage. Novel expression vectors that display cloned antigens on the virion surface. *Science* **228**:1315-1317.
150. **Smith, G. P., and J. K. Scott.** 1993. Libraries of peptides and proteins displayed on filamentous phage. *Methods in Enzymology* **217**:228-257.
151. **Spada, S., C. Krebber, and A. Pluckthun.** 1997. Selectively infective phages (SIP). *Biological Chemistry* **378**:445-456.

152. **Specthrie, L., E. Bullitt, K. Horiuchi, P. Model, M. Russel, and L. Makowski.** 1992. Construction of a microphage variant of filamentous bacteriophage. *Journal of Molecular Biology* **228**:720-724.
153. **Stassen, A. P., E. F. Schoenmakers, M. Yu, J. G. Schoenmakers, and R. N. Konings.** 1992. Nucleotide sequence of the genome of the filamentous bacteriophage I2-2: module evolution of the filamentous phage genome. *Journal of Molecular Evolution* **34**:141-152.
154. **Stathopoulos, C., D. R. Hendrixson, D. G. Thanassi, S. J. Hultgren, J. W. St Geme, 3rd, and R. Curtiss, 3rd.** 2000. Secretion of virulence determinants by the general secretory pathway in gram-negative pathogens: an evolving story. *Microbes & Infection* **2**:1061-1072.
155. **Stengele, I., P. Bross, X. Garces, J. Giray, and I. Rasched.** 1990. Dissection of functional domains in phage fd adsorption protein. Discrimination between attachment and penetration sites. *J Mol Biol* **212**:143-149.
156. **Stump, M. D., A. S. Madison, R. J. Kokoska, and D. A. Steege.** 1997. Filamentous phage IKe mRNAs conserve form and function despite divergence in regulatory elements. *Journal of Molecular Biology* **266**:51-65.
157. **Stump, M. D., and D. A. Steege.** 1996. Functional analysis of filamentous phage f1 mRNA processing sites. *Rna* **2**:1286-1294.
158. **Sun, T.-P., and R. E. Webster.** 1986. *fii*, a bacterial locus required for filamentous phage infection and its relation to colicin-tolerant *tolA* and *tolB*. *Journal of Bacteriology* **165**:107-115.
159. **Sun, T.-P., and R. E. Webster.** 1987. Nucleotide sequence of a gene cluster involved in the entry of the *E* coli colicins and the single-stranded DNA of infecting filamentous phage into *Escherichia coli*. *Journal of Bacteriology* **169**:2667-2674.

160. **Viti, F., F. Nilsson, S. Demartis, A. Huber, and D. Neri.** 2000. Design and use of phage display libraries for the selection of antibodies and enzymes. *Methods in Enzymology* **326**:253-275.
161. **von Heijne, G., and Y. Gavel.** 1988. Topogenic signals in integral membrane proteins. *European Journal of Biochemistry* **174**:671-678.
162. **Waldor, M.** 1998. Bacteriophage biology and bacterial virulence. *Trends in Microbiology* **6**:295-297.
163. **Waldor, M. K., and J. J. Mekalanos.** 1996. Lysogenic conversion by a filamentous phage encoding cholera toxin. *Science* **272**:1910-1914.
164. **Wall, D., and D. Kaiser.** 1999. Type IV pili and cell motility. *Molecular Microbiology* **32**:1-10.
165. **Wang, C. I., Q. Yang, and C. S. Craik.** 1996. Phage display of proteases and macromolecular inhibitors. *Methods in Enzymology* **267**:52-68.
166. **Webster, R. E.** 1999. Phage display of antibodies, CSH manual. Cold Spring Harbor Press.
167. **Webster, R. E.** 1991. The tol gene products and the import of macromolecules into *Escherichia coli*. *Molecular Microbiology* **5**:1005-1011.
168. **Webster, R. E., R. A. Grant, and L. A. W. Hamilton.** 1981. Orientation of the DNA in the filamentous bacteriophage fl. *Journal of Molecular Biology* **152**:357-374.
169. **Weiner, L., J. L. Brissette, and P. Model.** 1991. Stress-induced expression of the *Escherichia coli* phage shock protein operon is dependent on sigma 54 and modulated by positive and negative feedback mechanisms. *Genes & Development* **5**:1912-1923.
170. **Weiner, L., J. L. Brissette, N. Ramani, and P. Model.** 1995. Analysis of the proteins and *cis*-acting elements regulating the stress-induced phage shock protein operon. *NAR* **23**:2030-2036.

171. **Weiner, L., and P. Model.** 1994. Role of an *Escherichia coli* stress-response operon in stationary-phase survival. *Proceedings of the National Academy of Sciences of the United States of America* **91**:2191-2195.
172. **Weiss, G. A., and S. S. Sidhu.** 2000. Design and evolution of artificial M13 coat proteins. *J Mol Biol* **300**:213-219.
173. **Weiss, G. A., J. A. Wells, and S. S. Sidhu.** 2000. Mutational analysis of the major coat protein of M13 identifies residues that control protein display. *Protein Sci* **9**:647-654.
174. **Wengelnik, K., C. Marie, M. Russel, and U. Bonas.** 1996. Expression and localization of HrpA1, a protein of *Xanthomonas campestris* pv. *vesicatoria* essential for pathogenicity and induction of the hypersensitive reaction. *Journal of Bacteriology* **178**:1061-1069.
175. **Westphal, S., L. Heins, J. Soll, and U. C. Vothknecht.** 2001. Vipp1 deletion mutant of *Synechocystis*: a connection between bacterial phage shock and thylakoid biogenesis? [see comments.]. *Proceedings of the National Academy of Sciences of the United States of America* **98**:4243-4248.
176. **Widersten, M., L. O. Hansson, L. Tronstad, and B. Mannervik.** 2000. Use of phage display and transition-state analogs to select enzyme variants with altered catalytic properties: glutathione transferase as an example. *Methods in Enzymology* **328**:389-404.
177. **Winter, G., A. D. Griffiths, R. E. Hawkins, and H. R. Hoogenboom.** 1994. Making antibodies by phage display technology. *Annual Review of Immunology* **12**:433-455.
178. **Woolford, J. L., J. S. Cashman, and R. E. Webster.** 1974. f1 coat protein synthesis and altered phospholipid metabolism in f1 infected *Escherichia coli*. *Virology* **58**:544-560.
179. **Work, L. M., S. A. Nicklin, S. J. White, and A. H. Baker.** 2002. Use of phage display to identify novel peptides for targeted gene therapy. *Methods in Enzymology* **346**:157-176.

180. **Wrighton, N. C., F. X. Farrell, R. Chang, A. K. Kashyap, F. P. Barbone, L. S. Mulcahy, D. L. Johnson, R. W. Barrett, L. K. Jolliffe, and W. J. Dower.** 1996. Small peptides as potent mimetics of the protein hormone erythropoietin. *Science* **273**:458-64.
181. **Yip, Y. L., G. Smith, and R. L. Ward.** 2001. Comparison of phage pIII, pVIII and GST as carrier proteins for peptide immunisation in Balb/c mice. *Immunology Letters* **79**:197-202.
182. **Yu, J. S., S. Madison-Antenucci, and D. A. Steege.** 2001. Translation at higher than an optimal level interferes with coupling at an intercistronic junction. *Molecular Microbiology* **42**:821-834.