

## References

1. **Abu Kwaik, Y., B. I. Eisenstein, and N. C. Engleberg.** 1993. Phenotypic modulation by *Legionella pneumophila* upon infection of macrophages. *Infect Immun* **61**:1320-1329.
2. **Adams, J. H., B. K. Sim, S. A. Dolan, X. Fang, D. C. Kaslow, and L. H. Miller.** 1992. A family of erythrocyte binding proteins of malaria parasites. *Proc Natl Acad Sci U S A* **89**:7085-7089.
3. **Albers, U., K. Reus, H. A. Shuman, and H. Hilbi.** 2005. The amoebae plate test implicates a parologue of IpxB in the interaction of *Legionella pneumophila* with *Acanthamoeba castellanii*. *Microbiology* **151**:167-182.
4. **Allewelt, M., F. T. Coleman, M. Grout, G. P. Priebe, and G. B. Pier.** 2000. Acquisition of expression of the *Pseudomonas aeruginosa* ExoU cytotoxin leads to increased bacterial virulence in a murine model of acute pneumonia and systemic spread. *Infect Immun* **68**:3998-4004.
5. **Altschul, S. F., T. L. Madden, A. A. Schaffer, J. Zhang, Z. Zhang, W. Miller, and D. J. Lipman.** 1997. Gapped BLAST and PSI-BLAST: a new generation of protein database search programs. *Nucleic Acids Res* **25**:3389-3402.
6. **Andrews, D. L., B. Beames, M. D. Summers, and W. D. Park.** 1988. Characterization of the lipid acyl hydrolase activity of the major potato (*Solanum tuberosum*) tuber protein, patatin, by cloning and abundant expression in a baculovirus vector. *Biochem J* **252**:199-206.
7. **Andrews, H. L., J. P. Vogel, and R. R. Isberg.** 1998. Identification of linked *Legionella pneumophila* genes essential for intracellular growth and evasion of the endocytic pathway. *Infect Immun* **66**:950-958.
8. **Aragon, V., S. Kurtz, and N. P. Cianciotto.** 2001. *Legionella pneumophila* major acid phosphatase and its role in intracellular infection. *Infect Immun* **69**:177-185.
9. **Aragon, V., S. Kurtz, A. Flieger, B. Neumeister, and N. P. Cianciotto.** 2000. Secreted enzymatic activities of wild-type and pilD-deficient *Legionella pneumophila*. *Infect Immun* **68**:1855-1863.
10. **Aragon, V., O. Rossier, and N. P. Cianciotto.** 2002. *Legionella pneumophila* genes that encode lipase and phospholipase C activities. *Microbiology* **148**:2223-2231.
11. **Arpigny, J. L., and K. E. Jaeger.** 1999. Bacterial lipolytic enzymes: classification and properties. *Biochem J* **343 Pt 1**:177-183.
12. **Atlas, R. M.** 1999. Legionella: from environmental habitats to disease pathology, detection and control. *Environ Microbiol* **1**:283-293.
13. **Bachman, M. A., and M. S. Swanson.** 2001. RpoS co-operates with other factors to induce *Legionella pneumophila* virulence in the stationary phase. *Mol Microbiol* **40**:1201-1214.
14. **Bandyopadhyay, P., B. Byrne, Y. Chan, M. S. Swanson, and H. M. Steinman.** 2003. *Legionella pneumophila* catalase-peroxidases are required for proper trafficking and growth in primary macrophages. *Infect Immun* **71**:4526-4535.
15. **Banerji, S., M. Bewersdorff, B. Hermes, N. P. Cianciotto, and A. Flieger.** 2005. Characterization of the major secreted zinc metalloprotease-dependent glycerophospholipid:cholesterol acyltransferase, PlaC, of *Legionella pneumophila*. *Infect Immun* **73**:2899-2909.
16. **Banerji, S., and A. Flieger.** 2004. Patatin-like proteins: a new family of lipolytic enzymes present in bacteria? *Microbiology* **150**:522-525.

17. **Bang, Y. B., S. E. Lee, J. H. Rhee, and S. H. Choi.** 1999. Evidence that expression of the *Vibrio vulnificus* hemolysin gene is dependent on cyclic AMP and cyclic AMP receptor protein. *J Bacteriol* **181**:7639-7642.
18. **Baskerville, A., J. W. Conlan, L. A. Ashworth, and A. B. Dowsett.** 1986. Pulmonary damage caused by a protease from *Legionella pneumophila*. *Br J Exp Pathol* **67**:527-536.
19. **Bateman, A., L. Coin, R. Durbin, R. D. Finn, V. Hollich, S. Griffiths-Jones, A. Khanna, M. Marshall, S. Moxon, E. L. Sonnhammer, D. J. Studholme, C. Yeats, and S. R. Eddy.** 2004. The Pfam protein families database. *Nucleic Acids Res* **32**:D138-141.
20. **Bellinger-Kawahara, C., and M. A. Horwitz.** 1990. Complement component C3 fixes selectively to the major outer membrane protein (MOMP) of *Legionella pneumophila* and mediates phagocytosis of liposome-MOMP complexes by human monocytes. *J Exp Med* **172**:1201-1210.
21. **Berger, K. H., and R. R. Isberg.** 1993. Two distinct defects in intracellular growth complemented by a single genetic locus in *Legionella pneumophila*. *Mol Microbiol* **7**:7-19.
22. **Berger, K. H., J. J. Merriam, and R. R. Isberg.** 1994. Altered intracellular targeting properties associated with mutations in the *Legionella pneumophila* dotA gene. *Mol Microbiol* **14**:809-822.
23. **Black, W. J., F. D. Quinn, and L. S. Tompkins.** 1990. *Legionella pneumophila* zinc metalloprotease is structurally and functionally homologous to *Pseudomonas aeruginosa* elastase. *J Bacteriol* **172**:2608-2613.
24. **Blander, S. J., L. Szeto, H. A. Shuman, and M. A. Horwitz.** 1990. An immunoprotective molecule, the major secretory protein of *Legionella pneumophila*, is not a virulence factor in a guinea pig model of Legionnaires' disease. *J Clin Invest* **86**:817-824.
25. **Bligh, E. G., and W. J. Dyer.** 1959. A rapid method of total lipid extraction and purification. *Can J Biochem Physiol* **37**:911-917.
26. **Botsford, J. L., and J. G. Harman.** 1992. Cyclic AMP in prokaryotes. *Microbiol Rev* **56**:100-122.
27. **Brand, B. C., A. B. Sadosky, and H. A. Shuman.** 1994. The *Legionella pneumophila* icm locus: a set of genes required for intracellular multiplication in human macrophages. *Mol Microbiol* **14**:797-808.
28. **Brassinga, A. K., M. F. Hiltz, G. R. Sisson, M. G. Morash, N. Hill, E. Garduno, P. H. Edelstein, R. A. Garduno, and P. S. Hoffman.** 2003. A 65-kilobase pathogenicity island is unique to Philadelphia-1 strains of *Legionella pneumophila*. *J Bacteriol* **185**:4630-4637.
29. **Broich, M., K. Rydzewski, T. L. McNealy, R. Marre, and A. Flieger.** 2006. The global regulatory proteins LetA and RpoS control phospholipase A, lysophospholipase A, acyltransferase, and other hydrolytic activities of *Legionella pneumophila* JR32. *J Bacteriol* **188**:1218-1226.
30. **Brumlik, M. J., and J. T. Buckley.** 1996. Identification of the catalytic triad of the lipase/acyltransferase from *Aeromonas hydrophila*. *J Bacteriol* **178**:2060-2064.
31. **Buckley, J. T.** 1992. The channel-forming toxin aerolysin. *FEMS Microbiol Immunol* **5**:13-17.
32. **Buckley, J. T.** 1982. Substrate specificity of bacterial glycerophospholipid:cholesterol acyltransferase. *Biochemistry* **21**:6699-6703.
33. **Buckley, J. T., L. N. Halasa, and S. MacIntyre.** 1982. Purification and partial characterization of a bacterial phospholipid: cholesterol acyltransferase. *J Biol Chem* **257**:3320-3325.

34. **Byrne, B., and M. S. Swanson.** 1998. Expression of *Legionella pneumophila* virulence traits in response to growth conditions. *Infect Immun* **66**:3029-3034.
35. **Cazalet, C., C. Rusniok, H. Bruggemann, N. Zidane, A. Magnier, L. Ma, M. Tichit, S. Jarraud, C. Bouchier, F. Vandenesch, F. Kunst, J. Etienne, P. Glaser, and C. Buchrieser.** 2004. Evidence in the *Legionella pneumophila* genome for exploitation of host cell functions and high genome plasticity. *Nat Genet* **36**:1165-1173.
36. **Chamberlain, N. R., and S. A. Brueggemann.** 1997. Characterisation and expression of fatty acid modifying enzyme produced by *Staphylococcus epidermidis*. *J Med Microbiol* **46**:693-697.
37. **Chen, J., K. S. de Felipe, M. Clarke, H. Lu, O. R. Anderson, G. Segal, and H. A. Shuman.** 2004. Legionella effectors that promote nonlytic release from protozoa. *Science* **303**:1358-1361.
38. **Chien, M., I. Morozova, S. Shi, H. Sheng, J. Chen, S. M. Gomez, G. Asamani, K. Hill, J. Nuara, M. Feder, J. Rineer, J. J. Greenberg, V. Steshenko, S. H. Park, B. Zhao, E. Teplitskaya, J. R. Edwards, S. Pampou, A. Georghiou, I. C. Chou, W. Iannuccilli, M. E. Ulz, D. H. Kim, A. Geringer-Sameth, C. Goldsberry, P. Morozov, S. G. Fischer, G. Segal, X. Qu, A. Rzhetsky, P. Zhang, E. Cayanis, P. J. De Jong, J. Ju, S. Kalachikov, H. A. Shuman, and J. J. Russo.** 2004. The genomic sequence of the accidental pathogen *Legionella pneumophila*. *Science* **305**:1966-1968.
39. **Choi, M. H., H. Y. Sun, R. Y. Park, C. M. Kim, Y. H. Bai, Y. R. Kim, J. H. Rhee, and S. H. Shin.** 2006. Effect of the crp mutation on the utilization of transferrin-bound iron by *Vibrio vulnificus*. *FEMS Microbiol Lett* **257**:285-292.
40. **Cianciotto, N. P., B. I. Eisenstein, C. H. Mody, G. B. Toews, and N. C. Engleberg.** 1989. A *Legionella pneumophila* gene encoding a species-specific surface protein potentiates initiation of intracellular infection. *Infect Immun* **57**:1255-1262.
41. **Cianciotto, N. P., and B. S. Fields.** 1992. *Legionella pneumophila* mip gene potentiates intracellular infection of protozoa and human macrophages. *Proc Natl Acad Sci U S A* **89**:5188-5191.
42. **Cirillo, S. L., L. E. Bermudez, S. H. El-Etr, G. E. Duhamel, and J. D. Cirillo.** 2001. *Legionella pneumophila* entry gene rtxA is involved in virulence. *Infect Immun* **69**:508-517.
43. **Cirillo, S. L., J. Lum, and J. D. Cirillo.** 2000. Identification of novel loci involved in entry by *Legionella pneumophila*. *Microbiology* **146** (Pt 6):1345-1359.
44. **Cirillo, S. L., L. Yan, M. Littman, M. M. Samrakandi, and J. D. Cirillo.** 2002. Role of the *Legionella pneumophila* rtxA gene in amoebae. *Microbiology* **148**:1667-1677.
45. **Cluss, R. G., D. A. Silverman, and T. R. Stafford.** 2004. Extracellular secretion of the *Borrelia burgdorferi* Oms28 porin and Bgp, a glycosaminoglycan binding protein. *Infect Immun* **72**:6279-6286.
46. **Coers, J., C. Monahan, and C. R. Roy.** 1999. Modulation of phagosome biogenesis by *Legionella pneumophila* creates an organelle permissive for intracellular growth. *Nat Cell Biol* **1**:451-453.
47. **Cole, S. T., P. Supply, and N. Honore.** 2001. Repetitive sequences in *Mycobacterium leprae* and their impact on genome plasticity. *Lepr Rev* **72**:449-461.
48. **Conlan, J. W., A. Baskerville, and L. A. Ashworth.** 1986. Separation of *Legionella pneumophila* proteases and purification of a protease which produces lesions like those of Legionnaires' disease in guinea pig lung. *J Gen Microbiol* **132**:1565-1574.
49. **Conlan, J. W., A. Williams, and L. A. Ashworth.** 1988. Inactivation of human alpha-1-antitrypsin by a tissue-destructive protease of *Legionella pneumophila*. *J Gen Microbiol* **134**:481-487.

50. **Conover, G. M., I. Derre, J. P. Vogel, and R. R. Isberg.** 2003. The *Legionella pneumophila* LidA protein: a translocated substrate of the Dot/Icm system associated with maintenance of bacterial integrity. *Mol Microbiol* **48**:305-321.
51. **Cooper, C. L., L. Hsu, S. Jackowski, and C. O. Rock.** 1989. 2-Acylglycerolphosphoethanolamine acyltransferase/acyl-acyl carrier protein synthetase is a membrane-associated acyl carrier protein binding protein. *J Biol Chem* **264**:7384-7389.
52. **Crosa, J. H.** 1997. Signal transduction and transcriptional and posttranscriptional control of iron-regulated genes in bacteria. *Microbiol Mol Biol Rev* **61**:319-336.
53. **Dalrymple, B. P., D. H. Cybinski, I. Layton, C. S. McSweeney, G. P. Xue, Y. J. Swadling, and J. B. Lowry.** 1997. Three *Neocallimastix patriciarum* esterases associated with the degradation of complex polysaccharides are members of a new family of hydrolases. *Microbiology* **143 (Pt 8)**:2605-2614.
54. **De Buck, E., L. Maes, E. Meyen, L. Van Mellaert, N. Geukens, J. Anne, and E. Lammertyn.** 2005. *Legionella pneumophila* Philadelphia-1 tatB and tatC affect intracellular replication and biofilm formation. *Biochem Biophys Res Commun* **331**:1413-1420.
55. **De Siervo, A. J.** 1969. Alterations in the phospholipid composition of *Escherichia coli* B during growth at different temperatures. *J Bacteriol* **100**:1342-1349.
56. **Derre, I., and R. R. Isberg.** 2005. LidA, a translocated substrate of the *Legionella pneumophila* type IV secretion system, interferes with the early secretory pathway. *Infect Immun* **73**:4370-4380.
57. **Dessen, A., J. Tang, H. Schmidt, M. Stahl, J. D. Clark, J. Seehra, and W. S. Somers.** 1999. Crystal structure of human cytosolic phospholipase A2 reveals a novel topology and catalytic mechanism. *Cell* **97**:349-360.
58. **Dietrich, C., K. Heuner, B. C. Brand, J. Hacker, and M. Steinert.** 2001. Flagellum of *Legionella pneumophila* positively affects the early phase of infection of eukaryotic host cells. *Infect Immun* **69**:2116-2122.
59. **Dreyfus, L. A., and B. H. Iglewski.** 1986. Purification and characterization of an extracellular protease of *Legionella pneumophila*. *Infect Immun* **51**:736-743.
60. **Edelstein, P. H.** 2006. Deja vu all over again: rapid enumeration of *Legionella pneumophila* in water. *Appl Environ Microbiol* **72**:980.
61. **Edelstein, P. H.** 1981. Improved semiselective medium for isolation of *Legionella pneumophila* from contaminated clinical and environmental specimens. *J Clin Microbiol* **14**:298-303.
62. **Edelstein, P. H., M. A. Edelstein, F. Higa, and S. Falkow.** 1999. Discovery of virulence genes of *Legionella pneumophila* by using signature tagged mutagenesis in a guinea pig pneumonia model. *Proc Natl Acad Sci U S A* **96**:8190-8195.
63. **Engleberg, N. C., N. Cianciotto, J. Smith, and B. I. Eisenstein.** 1988. Transfer and maintenance of small, mobilizable plasmids with ColE1 replication origins in *Legionella pneumophila*. *Plasmid* **20**:83-91.
64. **Escalar, L., J. Perez-Martin, and V. de Lorenzo.** 1999. Opening the iron box: transcriptional metalloregulation by the Fur protein. *J Bacteriol* **181**:6223-6229.
65. **Faulkner, G., and R. A. Garduno.** 2002. Ultrastructural analysis of differentiation in *Legionella pneumophila*. *J Bacteriol* **184**:7025-7041.
66. **Feeley, J. C., R. J. Gibson, G. W. Gorman, N. C. Langford, J. K. Rasheed, D. C. Mackel, and W. B. Baine.** 1979. Charcoal-yeast extract agar: primary isolation medium for *Legionella pneumophila*. *J Clin Microbiol* **10**:437-441.
67. **Fields, B. S.** 1996. The molecular ecology of legionellae. *Trends Microbiol* **4**:286-290.
68. **Finck-Barbancon, V., and D. W. Frank.** 2001. Multiple domains are required for the toxic activity of *Pseudomonas aeruginosa* ExoU. *J Bacteriol* **183**:4330-4344.

69. **Finck-Barbancon, V., J. Goranson, L. Zhu, T. Sawa, J. P. Wiener-Kronish, S. M. Fleiszig, C. Wu, L. Mende-Mueller, and D. W. Frank.** 1997. ExoU expression by *Pseudomonas aeruginosa* correlates with acute cytotoxicity and epithelial injury. *Mol Microbiol* **25**:547-557.
70. **Finnerty, W. R., R. A. Makula, and J. C. Feeley.** 1979. Cellular lipids of the Legionnaires' disease bacterium. *Ann Intern Med* **90**:631-634.
71. **Fischer, G., H. Bang, B. Ludwig, K. Mann, and J. Hacker.** 1992. Mip protein of *Legionella pneumophila* exhibits peptidyl-prolyl-cis/trans isomerase (PPIase) activity. *Mol Microbiol* **6**:1375-1383.
72. **Flieger, A., S. Gong, M. Faigle, M. Deeg, P. Bartmann, and B. Neumeister.** 2000. Novel phospholipase A activity secreted by *Legionella* species. *J Bacteriol* **182**:1321-1327.
73. **Flieger, A., S. Gong, M. Faigle, S. Stevanovic, N. P. Cianciotto, and B. Neumeister.** 2001. Novel lysophospholipase A secreted by *Legionella pneumophila*. *J Bacteriol* **183**:2121-2124.
74. **Flieger, A., S. Gongab, M. Faigle, H. A. Mayer, U. Kehrer, J. Mussotter, P. Bartmann, and B. Neumeister.** 2000. Phospholipase A secreted by *Legionella pneumophila* destroys alveolar surfactant phospholipids. *FEMS Microbiol Lett* **188**:129-133.
75. **Flieger, A., B. Neumeister, and N. P. Cianciotto.** 2002. Characterization of the gene encoding the major secreted lysophospholipase A of *Legionella pneumophila* and its role in detoxification of lysophosphatidylcholine. *Infect Immun* **70**:6094-6106.
76. **Flieger, A., K. Rydzewski, S. Banerji, M. Broich, and K. Heuner.** 2004. Cloning and characterization of the gene encoding the major cell-associated phospholipase A of *Legionella pneumophila*, plAB, exhibiting hemolytic activity. *Infect Immun* **72**:2648-2658.
77. **Freiberg, C., R. Fellay, A. Bairoch, W. J. Broughton, A. Rosenthal, and X. Perret.** 1997. Molecular basis of symbiosis between Rhizobium and legumes. *Nature* **387**:394-401.
78. **Fuchs, T. M., H. Deppisch, V. Scarlato, and R. Gross.** 1996. A new gene locus of *Bordetella pertussis* defines a novel family of prokaryotic transcriptional accessory proteins. *J Bacteriol* **178**:4445-4452.
79. **Gabay, J. E., M. Blake, W. D. Niles, and M. A. Horwitz.** 1985. Purification of *Legionella pneumophila* major outer membrane protein and demonstration that it is a porin. *J Bacteriol* **162**:85-91.
80. **Gibson, F. C., 3rd, A. O. Tzianabos, and F. G. Rodgers.** 1994. Adherence of *Legionella pneumophila* to U-937 cells, guinea-pig alveolar macrophages, and MRC-5 cells by a novel, complement-independent binding mechanism. *Can J Microbiol* **40**:865-872.
81. **Goldfine, H., T. Bannam, N. C. Johnston, and W. R. Zuckert.** 1998. Bacterial phospholipases and intracellular growth: the two distinct phospholipases C of *Listeria monocytogenes*. *Symp Ser Soc Appl Microbiol* **27**:7S-14S.
82. **Hales, L. M., and H. A. Shuman.** 1999. *Legionella pneumophila* contains a type II general secretion pathway required for growth in amoebae as well as for secretion of the Msp protease. *Infect Immun* **67**:3662-3666.
83. **Hales, L. M., and H. A. Shuman.** 1999. The *Legionella pneumophila* rpoS gene is required for growth within *Acanthamoeba castellanii*. *J Bacteriol* **181**:4879-4889.
84. **Hammer, B. K., and M. S. Swanson.** 1999. Co-ordination of *legionella pneumophila* virulence with entry into stationary phase by ppGpp. *Mol Microbiol* **33**:721-731.

85. Hammer, B. K., E. S. Tateda, and M. S. Swanson. 2002. A two-component regulator induces the transmission phenotype of stationary-phase *Legionella pneumophila*. *Mol Microbiol* **44**:107-118.
86. Hatakeyama, S., and K. I. Nakayama. 2003. U-box proteins as a new family of ubiquitin ligases. *Biochem Biophys Res Commun* **302**:635-645.
87. Heath, R. J., and C. O. Rock. 1998. A conserved histidine is essential for glycerolipid acyltransferase catalysis. *J Bacteriol* **180**:1425-1430.
88. Hell, W., A. Essig, S. Bohnet, S. Gatermann, and R. Marre. 1993. Cleavage of tumor necrosis factor-alpha by *Legionella* exoprotease. *Apmis* **101**:120-126.
89. Hickey, E. K., and N. P. Cianciotto. 1994. Cloning and sequencing of the *Legionella pneumophila* fur gene. *Gene* **143**:117-121.
90. Hilbi, H., G. Segal, and H. A. Shuman. 2001. Icm/dot-dependent upregulation of phagocytosis by *Legionella pneumophila*. *Mol Microbiol* **42**:603-617.
91. Hilton, S., and J. T. Buckley. 1991. Studies on the reaction mechanism of a microbial lipase/acyltransferase using chemical modification and site-directed mutagenesis. *J Biol Chem* **266**:997-1000.
92. Hirschberg, H. J., J. W. Simons, N. Dekker, and M. R. Egmond. 2001. Cloning, expression, purification and characterization of patatin, a novel phospholipase A. *Eur J Biochem* **268**:5037-5044.
93. Ho, Y. S., L. Swenson, U. Derewenda, L. Serre, Y. Wei, Z. Dauter, M. Hattori, T. Adachi, J. Aoki, H. Arai, K. Inoue, and Z. S. Derewenda. 1997. Brain acetylhydrolase that inactivates platelet-activating factor is a G-protein-like trimer. *Nature* **385**:89-93.
94. Holk, A., S. Rietz, M. Zahn, H. Quader, and G. F. Scherer. 2002. Molecular identification of cytosolic, patatin-related phospholipases A from *Arabidopsis* with potential functions in plant signal transduction. *Plant Physiol* **130**:90-101.
95. Horwitz, M. A. 1987. Characterization of avirulent mutant *Legionella pneumophila* that survive but do not multiply within human monocytes. *J Exp Med* **166**:1310-1328.
96. Horwitz, M. A. 1983. Formation of a novel phagosome by the Legionnaires' disease bacterium (*Legionella pneumophila*) in human monocytes. *J Exp Med* **158**:1319-1331.
97. Horwitz, M. A. 1983. The Legionnaires' disease bacterium (*Legionella pneumophila*) inhibits phagosome-lysosome fusion in human monocytes. *J Exp Med* **158**:2108-2126.
98. Horwitz, M. A., and F. R. Maxfield. 1984. *Legionella pneumophila* inhibits acidification of its phagosome in human monocytes. *J Cell Biol* **99**:1936-1943.
99. Horwitz, M. A., and S. C. Silverstein. 1980. Legionnaires' disease bacterium (*Legionella pneumophila*) multiples intracellularly in human monocytes. *J Clin Invest* **66**:441-450.
100. Howard, S. P., and J. T. Buckley. 1985. Phospholipids and lipopolysaccharide of *Aeromonas hydrophila*. *J Bacteriol* **161**:463-465.
101. Hsieh, C. C., M. H. Yen, H. W. Liu, and Y. T. Lau. 2000. Lysophosphatidylcholine induces apoptotic and non-apoptotic death in vascular smooth muscle cells: in comparison with oxidized LDL. *Atherosclerosis* **151**:481-491.
102. Hsu, L., S. Jackowski, and C. O. Rock. 1991. Isolation and characterization of *Escherichia coli* K-12 mutants lacking both 2-acyl-glycerophosphoethanolamine acyltransferase and acyl-acyl carrier protein synthetase activity. *J Biol Chem* **266**:13783-13788.
103. Hsu, L., S. Jackowski, and C. O. Rock. 1989. Uptake and acylation of 2-acyl-lysophospholipids by *Escherichia coli*. *J Bacteriol* **171**:1203-1205.
104. Huijbregts, R. P., A. I. de Kroon, and B. de Kruijff. 2000. Topology and transport of membrane lipids in bacteria. *Biochim Biophys Acta* **1469**:43-61.

105. **Jackowski, S., P. D. Jackson, and C. O. Rock.** 1994. Sequence and function of the aas gene in *Escherichia coli*. *J Biol Chem* **269**:2921-2928.
106. **Jacobi, S., R. Schade, and K. Heuner.** 2004. Characterization of the alternative sigma factor sigma54 and the transcriptional regulator FleQ of *Legionella pneumophila*, which are both involved in the regulation cascade of flagellar gene expression. *J Bacteriol* **186**:2540-2547.
107. **Jepras, R. I., R. B. Fitzgeorge, and A. Baskerville.** 1985. A comparison of virulence of two strains of *Legionella pneumophila* based on experimental aerosol infection of guinea-pigs. *J Hyg (Lond)* **95**:29-38.
108. **Kagan, J. C., and C. R. Roy.** 2002. *Legionella* phagosomes intercept vesicular traffic from endoplasmic reticulum exit sites. *Nat Cell Biol* **4**:945-954.
109. **Kanfer, J., and E. P. Kennedy.** 1963. Metabolism And Function Of Bacterial Lipids. I. Metabolism Of Phospholipids In *Escherichia Coli* B. *J Biol Chem* **238**:2919-2922.
110. **Kirby, J. E., J. P. Vogel, H. L. Andrews, and R. R. Isberg.** 1998. Evidence for pore-forming ability by *Legionella pneumophila*. *Mol Microbiol* **27**:323-336.
111. **Krinos, C., A. S. High, and F. G. Rodgers.** 1999. Role of the 25 kDa major outer membrane protein of *Legionella pneumophila* in attachment to U-937 cells and its potential as a virulence factor for chick embryos. *J Appl Microbiol* **86**:237-244.
112. **Kume, N., M. I. Cybulsky, and M. A. Gimbrone, Jr.** 1992. Lysophosphatidylcholine, a component of atherogenic lipoproteins, induces mononuclear leukocyte adhesion molecules in cultured human and rabbit arterial endothelial cells. *J Clin Invest* **90**:1138-1144.
113. **La Camera, S., P. Geoffroy, H. Samaha, A. Ndiaye, G. Rahim, M. Legrand, and T. Heitz.** 2005. A pathogen-inducible patatin-like lipid acyl hydrolase facilitates fungal and bacterial host colonization in *Arabidopsis*. *Plant J* **44**:810-825.
114. **Lammertyn, E., and J. Anne.** 2004. Protein secretion in *Legionella pneumophila* and its relation to virulence. *FEMS Microbiol Lett* **238**:273-279.
115. **Lee, K. K., and A. E. Ellis.** 1990. Glycerophospholipid:cholesterol acyltransferase complexed with lipopolysaccharide (LPS) is a major lethal exotoxin and cytolsin of *Aeromonas salmonicida*: LPS stabilizes and enhances toxicity of the enzyme. *J Bacteriol* **172**:5382-5393.
116. **Lema, M. W., and A. Brown.** 1995. *Legionella pneumophila* has two 60-kilodalton heat-shock proteins. *Curr Microbiol* **31**:332-335.
117. **Lieber, M., B. Smith, A. Szakal, W. Nelson-Rees, and G. Todaro.** 1976. A continuous tumor-cell line from a human lung carcinoma with properties of type II alveolar epithelial cells. *Int J Cancer* **17**:62-70.
118. **Liles, M. R., P. H. Edelstein, and N. P. Cianciotto.** 1999. The prepilin peptidase is required for protein secretion by and the virulence of the intracellular pathogen *Legionella pneumophila*. *Mol Microbiol* **31**:959-970.
119. **Liles, M. R., T. A. Scheel, and N. P. Cianciotto.** 2000. Discovery of a nonclassical siderophore, legiobactin, produced by strains of *Legionella pneumophila*. *J Bacteriol* **182**:749-757.
120. **Liles, M. R., V. K. Viswanathan, and N. P. Cianciotto.** 1998. Identification and temperature regulation of *Legionella pneumophila* genes involved in type IV pilus biogenesis and type II protein secretion. *Infect Immun* **66**:1776-1782.
121. **Litwin, C. M., and S. B. Calderwood.** 1993. Role of iron in regulation of virulence genes. *Clin Microbiol Rev* **6**:137-149.
122. **Lonetto, M., M. Gribskov, and C. A. Gross.** 1992. The sigma 70 family: sequence conservation and evolutionary relationships. *J Bacteriol* **174**:3843-3849.

123. **Luo, Z. Q., and R. R. Isberg.** 2004. Multiple substrates of the *Legionella pneumophila* Dot/Icm system identified by interbacterial protein transfer. *Proc Natl Acad Sci U S A* **101**:841-846.
124. **MacIntyre, S., and J. T. Buckley.** 1978. Presence of glycerophospholipid: cholesterol acyltransferase and phospholipase in culture supernatant of *Aeromonas hydrophila*. *J Bacteriol* **135**:402-407.
125. **MacIntyre, S., T. J. Trust, and J. T. Buckley.** 1980. Identification and characterization of outer membrane fragments released by *Aeromonas* sp. *Can J Biochem* **58**:1018-1025.
126. **Mailaender, C., N. Reiling, H. Engelhardt, S. Bossmann, S. Ehlers, and M. Niederweis.** 2004. The MspA porin promotes growth and increases antibiotic susceptibility of both *Mycobacterium bovis* BCG and *Mycobacterium tuberculosis*. *Microbiology* **150**:853-864.
127. **Marra, A., S. J. Blander, M. A. Horwitz, and H. A. Shuman.** 1992. Identification of a *Legionella pneumophila* locus required for intracellular multiplication in human macrophages. *Proc Natl Acad Sci U S A* **89**:9607-9611.
128. **Martinez-Morales, F., M. Schobert, I. M. Lopez-Lara, and O. Geiger.** 2003. Pathways for phosphatidylcholine biosynthesis in bacteria. *Microbiology* **149**:3461-3471.
129. **Mintz, C. S., R. D. Miller, N. S. Gutgsell, and T. Malek.** 1993. *Legionella pneumophila* protease inactivates interleukin-2 and cleaves CD4 on human T cells. *Infect Immun* **61**:3416-3421.
130. **Moffat, J. F., W. J. Black, and L. S. Tompkins.** 1994. Further molecular characterization of the cloned *Legionella pneumophila* zinc metalloprotease. *Infect Immun* **62**:751-753.
131. **Moffat, J. F., P. H. Edelstein, D. P. Regula, Jr., J. D. Cirillo, and L. S. Tompkins.** 1994. Effects of an isogenic Zn-metalloprotease-deficient mutant of *Legionella pneumophila* in a guinea-pig pneumonia model. *Mol Microbiol* **12**:693-705.
132. **Molgaard, A., S. Kauppinen, and S. Larsen.** 2000. Rhamnogalacturonan acetylersterase elucidates the structure and function of a new family of hydrolases. *Structure* **8**:373-383.
133. **Molmeret, M., and Y. Abu Kwaik.** 2002. How does *Legionella pneumophila* exit the host cell? *Trends Microbiol* **10**:258-260.
134. **Molmeret, M., O. A. Alli, M. Radulic, M. Susa, M. Doric, and Y. A. Kwaik.** 2002. The C-terminus of IcmT is essential for pore formation and for intracellular trafficking of *Legionella pneumophila* within *Acanthamoeba polyphaga*. *Mol Microbiol* **43**:1139-1150.
135. **Molmeret, M., O. A. Alli, S. Zink, A. Flieger, N. P. Cianciotto, and Y. A. Kwaik.** 2002. icmT is essential for pore formation-mediated egress of *Legionella pneumophila* from mammalian and protozoan cells. *Infect Immun* **70**:69-78.
136. **Molmeret, M., D. M. Bitar, L. Han, and Y. A. Kwaik.** 2004. Cell biology of the intracellular infection by *Legionella pneumophila*. *Microbes Infect* **6**:129-139.
137. **Molmeret, M., S. D. Zink, L. Han, A. Abu-Zant, R. Asari, D. M. Bitar, and Y. Abu Kwaik.** 2004. Activation of caspase-3 by the Dot/Icm virulence system is essential for arrested biogenesis of the *Legionella*-containing phagosome. *Cell Microbiol* **6**:33-48.
138. **Moss, C. W., R. E. Weaver, S. B. Dees, and W. B. Cherry.** 1977. Cellular fatty acid composition of isolates from Legionnaires disease. *J Clin Microbiol* **6**:140-143.
139. **Nagai, H., E. D. Cambronne, J. C. Kagan, J. C. Amor, R. A. Kahn, and C. R. Roy.** 2005. A C-terminal translocation signal required for Dot/Icm-dependent delivery of the *Legionella* RalF protein to host cells. *Proc Natl Acad Sci U S A* **102**:826-831.

140. **Nagai, H., J. C. Kagan, X. Zhu, R. A. Kahn, and C. R. Roy.** 2002. A bacterial guanine nucleotide exchange factor activates ARF on Legionella phagosomes. *Science* **295**:679-682.
141. **Nagai, H., and C. R. Roy.** 2001. The DotA protein from *Legionella pneumophila* is secreted by a novel process that requires the Dot/Icm transporter. *Embo J* **20**:5962-5970.
142. **Niles, R. M., and J. S. Makarski.** 1979. Regulation of phosphatidylcholine metabolism by cyclic AMP in a model alveolar type 2 cell line. *J Biol Chem* **254**:4324-4326.
143. **O'Connell, W. A., J. M. Bangsborg, and N. P. Cianciotto.** 1995. Characterization of a *Legionella micdadei* mip mutant. *Infect Immun* **63**:2840-2845.
144. **O'Connell, W. A., E. K. Hickey, and N. P. Cianciotto.** 1996. A *Legionella pneumophila* gene that promotes hemin binding. *Infect Immun* **64**:842-848.
145. **Ogino, H., S. Hiroshima, S. Hirose, M. Yasuda, K. Ishimi, and H. Ishikawa.** 2004. Cloning, expression and characterization of a lipase gene (*lip3*) from *Pseudomonas aeruginosa* LST-03. *Mol Genet Genomics* **271**:189-196.
146. **Ohlson, M. B., K. Fluhr, C. L. Birmingham, J. H. Brumell, and S. I. Miller.** 2005. SseJ deacylase activity by *Salmonella enterica* serovar *Typhimurium* promotes virulence in mice. *Infect Immun* **73**:6249-6259.
147. **Ollis, D. L., E. Cheah, M. Cygler, B. Dijkstra, F. Frolov, S. M. Franken, M. Harel, S. J. Remington, I. Silman, J. Schrag, and et al.** 1992. The alpha/beta hydrolase fold. *Protein Eng* **5**:197-211.
148. **Pankhaniya, R. R., M. Tamura, L. R. Allmond, K. Moriyama, T. Ajayi, J. P. Wiener-Kronish, and T. Sawa.** 2004. *Pseudomonas aeruginosa* causes acute lung injury via the catalytic activity of the patatin-like phospholipase domain of ExoU. *Crit Care Med* **32**:2293-2299.
149. **Payne, N. R., and M. A. Horwitz.** 1987. Phagocytosis of *Legionella pneumophila* is mediated by human monocyte complement receptors. *J Exp Med* **166**:1377-1389.
150. **Phillips, R. M., D. A. Six, E. A. Dennis, and P. Ghosh.** 2003. In vivo phospholipase activity of the *Pseudomonas aeruginosa* cytotoxin ExoU and protection of mammalian cells with phospholipase A2 inhibitors. *J Biol Chem* **278**:41326-41332.
151. **Plekhanov, A. Y.** 1999. Rapid staining of lipids on thin-layer chromatograms with amido black 10B and other water-soluble stains. *Anal Biochem* **271**:186-187.
152. **Poch, M. T., and W. Johnson.** 1993. Ferric reductases of *Legionella pneumophila*. *Biometals* **6**:107-114.
153. **Pope, C. D., W. O'Connell, and N. P. Cianciotto.** 1996. *Legionella pneumophila* mutants that are defective for iron acquisition and assimilation and intracellular infection. *Infect Immun* **64**:629-636.
154. **Purcell, M., and H. A. Shuman.** 1998. The *Legionella pneumophila* icmGCDJBF genes are required for killing of human macrophages. *Infect Immun* **66**:2245-2255.
155. **Quinn, F. D., M. G. Keen, and L. S. Tompkins.** 1989. Genetic, immunological, and cytotoxic comparisons of *Legionella* proteolytic activities. *Infect Immun* **57**:2719-2725.
156. **Quinn, F. D., and L. S. Tompkins.** 1989. Analysis of a cloned sequence of *Legionella pneumophila* encoding a 38 kD metalloprotease possessing haemolytic and cytotoxic activities. *Mol Microbiol* **3**:797-805.
157. **Rabin, S. D., and A. R. Hauser.** 2005. Functional regions of the *Pseudomonas aeruginosa* cytotoxin ExoU. *Infect Immun* **73**:573-582.
158. **Rabin, S. D., J. L. Veesenmeyer, K. T. Biegling, and A. R. Hauser.** 2006. A C-Terminal Domain Targets the *Pseudomonas aeruginosa* Cytotoxin ExoU to the Plasma Membrane of Host Cells. *Infect Immun* **74**:2552-2561.

159. **Rechnitzer, C., M. Diamant, and B. K. Pedersen.** 1989. Inhibition of human natural killer cell activity by *Legionella pneumophila* protease. *Eur J Clin Microbiol Infect Dis* **8**:989-992.
160. **Ridenour, D. A., S. L. Cirillo, S. Feng, M. M. Samrakandi, and J. D. Cirillo.** 2003. Identification of a gene that affects the efficiency of host cell infection by *Legionella pneumophila* in a temperature-dependent fashion. *Infect Immun* **71**:6256-6263.
161. **Robey, M., and N. P. Cianciotto.** 2002. *Legionella pneumophila* feoAB promotes ferrous iron uptake and intracellular infection. *Infect Immun* **70**:5659-5669.
162. **Rodgers, F. G., and F. C. Gibson, 3rd.** 1993. Opsonin-independent adherence and intracellular development of *Legionella pneumophila* within U-937 cells. *Can J Microbiol* **39**:718-722.
163. **Rossier, O., and N. P. Cianciotto.** 2001. Type II protein secretion is a subset of the PilD-dependent processes that facilitate intracellular infection by *Legionella pneumophila*. *Infect Immun* **69**:2092-2098.
164. **Rossier, O., S. R. Starkenburg, and N. P. Cianciotto.** 2004. *Legionella pneumophila* type II protein secretion promotes virulence in the A/J mouse model of Legionnaires' disease pneumonia. *Infect Immun* **72**:310-321.
165. **Roy, C. R., and R. R. Isberg.** 1997. Topology of *Legionella pneumophila* DotA: an inner membrane protein required for replication in macrophages. *Infect Immun* **65**:571-578.
166. **Roy, C. R., and L. G. Tilney.** 2002. The road less traveled: transport of *Legionella* to the endoplasmic reticulum. *J Cell Biol* **158**:415-419.
167. **Ruiz-Albert, J., X. J. Yu, C. R. Beuzon, A. N. Blakey, E. E. Galyov, and D. W. Holden.** 2002. Complementary activities of SseJ and SifA regulate dynamics of the *Salmonella typhimurium* vacuolar membrane. *Mol Microbiol* **44**:645-661.
168. **Rydel, T. J., J. M. Williams, E. Krieger, F. Moshiri, W. C. Stallings, S. M. Brown, J. C. Pershing, J. P. Purcell, and M. F. Alibhai.** 2003. The crystal structure, mutagenesis, and activity studies reveal that patatin is a lipid acyl hydrolase with a Ser-Asp catalytic dyad. *Biochemistry* **42**:6696-6708.
169. **Sadosky, A. B., L. A. Wiater, and H. A. Shuman.** 1993. Identification of *Legionella pneumophila* genes required for growth within and killing of human macrophages. *Infect Immun* **61**:5361-5373.
170. **Sakurai, J., M. Nagahama, and M. Oda.** 2004. *Clostridium perfringens* alpha-toxin: characterization and mode of action. *J Biochem (Tokyo)* **136**:569-574.
171. **Saliba, A. M., D. O. Nascimento, M. C. Silva, M. C. Assis, C. R. Gayer, B. Raymond, M. G. Coelho, E. A. Marques, L. Touqui, R. M. Albano, U. G. Lopes, D. D. Paiva, P. T. Bozza, and M. C. Plotkowski.** 2005. Eicosanoid-mediated proinflammatory activity of *Pseudomonas aeruginosa* ExoU. *Cell Microbiol* **7**:1811-1822.
172. **Samrakandi, M. M., S. L. Cirillo, D. A. Ridenour, L. E. Bermudez, and J. D. Cirillo.** 2002. Genetic and phenotypic differences between *Legionella pneumophila* strains. *J Clin Microbiol* **40**:1352-1362.
173. **Sato, H., J. B. Feix, C. J. Hillard, and D. W. Frank.** 2005. Characterization of phospholipase activity of the *Pseudomonas aeruginosa* type III cytotoxin, ExoU. *J Bacteriol* **187**:1192-1195.
174. **Sato, H., D. W. Frank, C. J. Hillard, J. B. Feix, R. R. Pankhaniya, K. Moriyama, V. Finck-Barbancon, A. Buchaklian, M. Lei, R. M. Long, J. Wiener-Kronish, and T. Sawa.** 2003. The mechanism of action of the *Pseudomonas aeruginosa*-encoded type III cytotoxin, ExoU. *Embo J* **22**:2959-2969.
175. **Schmiel, D. H., and V. L. Miller.** 1999. Bacterial phospholipases and pathogenesis. *Microbes Infect* **1**:1103-1112.

176. **Schrag, J. D., and M. Cygler.** 1997. Lipases and alpha/beta hydrolase fold. *Methods Enzymol* **284**:85-107.
177. **Schulz, T.** 2001. Molekulare Grundlagen der Stereoselektivität Lipase-katalysierter Umsetzungen. Universität Stuttgart, Stuttgart.
178. **Segal, G., M. Feldman, and T. Zusman.** 2005. The Icm/Dot type-IV secretion systems of *Legionella pneumophila* and *Coxiella burnetii*. *FEMS Microbiol Rev* **29**:65-81.
179. **Segal, G., M. Purcell, and H. A. Shuman.** 1998. Host cell killing and bacterial conjugation require overlapping sets of genes within a 22-kb region of the *Legionella pneumophila* genome. *Proc Natl Acad Sci U S A* **95**:1669-1674.
180. **Segal, G., J. J. Russo, and H. A. Shuman.** 1999. Relationships between a new type IV secretion system and the icm/dot virulence system of *Legionella pneumophila*. *Mol Microbiol* **34**:799-809.
181. **Segal, G., and H. A. Shuman.** 1997. Characterization of a new region required for macrophage killing by *Legionella pneumophila*. *Infect Immun* **65**:5057-5066.
182. **Segal, G., and H. A. Shuman.** 1999. *Legionella pneumophila* utilizes the same genes to multiply within *Acanthamoeba castellanii* and human macrophages. *Infect Immun* **67**:2117-2124.
183. **Seubert, A., R. Hiestand, F. de la Cruz, and C. Dehio.** 2003. A bacterial conjugation machinery recruited for pathogenesis. *Mol Microbiol* **49**:1253-1266.
184. **Sexton, J. A., J. S. Pinkner, R. Roth, J. E. Heuser, S. J. Hultgren, and J. P. Vogel.** 2004. The *Legionella pneumophila* PilT homologue DotB exhibits ATPase activity that is critical for intracellular growth. *J Bacteriol* **186**:1658-1666.
185. **Sexton, J. A., and J. P. Vogel.** 2004. Regulation of hypercompetence in *Legionella pneumophila*. *J Bacteriol* **186**:3814-3825.
186. **Sharbati-Tehrani, S., J. Stephan, G. Holland, B. Appel, M. Niederweis, and A. Lewin.** 2005. Porins limit the intracellular persistence of *Mycobacterium smegmatis*. *Microbiology* **151**:2403-2410.
187. **Shohdy, N., J. A. Efe, S. D. Emr, and H. A. Shuman.** 2005. Pathogen effector protein screening in yeast identifies *Legionella* factors that interfere with membrane trafficking. *Proc Natl Acad Sci U S A* **102**:4866-4871.
188. **Silverman, D. J., L. A. Santucci, N. Meyers, and Z. Sekeyova.** 1992. Penetration of host cells by *Rickettsia rickettsii* appears to be mediated by a phospholipase of rickettsial origin. *Infect Immun* **60**:2733-2740.
189. **Skorupski, K., and R. K. Taylor.** 1997. Cyclic AMP and its receptor protein negatively regulate the coordinate expression of cholera toxin and toxin-coregulated pilus in *Vibrio cholerae*. *Proc Natl Acad Sci U S A* **94**:265-270.
190. **Smith, G. A., H. Marquis, S. Jones, N. C. Johnston, D. A. Portnoy, and H. Goldfine.** 1995. The two distinct phospholipases C of *Listeria monocytogenes* have overlapping roles in escape from a vacuole and cell-to-cell spread. *Infect Immun* **63**:4231-4237.
191. **Sonda, S., L. M. Ting, S. Novak, K. Kim, J. J. Maher, R. V. Farese, Jr., and J. D. Ernst.** 2001. Cholesterol esterification by host and parasite is essential for optimal proliferation of *Toxoplasma gondii*. *J Biol Chem* **276**:34434-34440.
192. **Stephan, J., C. Mailaender, G. Etienne, M. Daffe, and M. Niederweis.** 2004. Multidrug resistance of a porin deletion mutant of *Mycobacterium smegmatis*. *Antimicrob Agents Chemother* **48**:4163-4170.
193. **Stone, B. J., and Y. Abu Kwaik.** 1998. Expression of multiple pili by *Legionella pneumophila*: identification and characterization of a type IV pilin gene and its role in adherence to mammalian and protozoan cells. *Infect Immun* **66**:1768-1775.

194. **Stone, B. J., and Y. A. Kwaik.** 1999. Natural competence for DNA transformation by *Legionella pneumophila* and its association with expression of type IV pili. *J Bacteriol* **181**:1395-1402.
195. **Stover, C. K., X. Q. Pham, A. L. Erwin, S. D. Mizoguchi, P. Warrener, M. J. Hickey, F. S. Brinkman, W. O. Hufnagle, D. J. Kowalik, M. Lagrou, R. L. Garber, L. Goltry, E. Tolentino, S. Westbrock-Wadman, Y. Yuan, L. L. Brody, S. N. Coulter, K. R. Folger, A. Kas, K. Larbig, R. Lim, K. Smith, D. Spencer, G. K. Wong, Z. Wu, I. T. Paulsen, J. Reizer, M. H. Saier, R. E. Hancock, S. Lory, and M. V. Olson.** 2000. Complete genome sequence of *Pseudomonas aeruginosa* PA01, an opportunistic pathogen. *Nature* **406**:959-964.
196. **Strickland, J. A., G. L. Orr, and T. A. Walsh.** 1995. Inhibition of *Diabrotica* Larval Growth by Patatin, the Lipid Acyl Hydrolase from Potato Tubers. *Plant Physiol* **109**:667-674.
197. **Sturgill-Koszycki, S., and M. S. Swanson.** 2000. *Legionella pneumophila* replication vacuoles mature into acidic, endocytic organelles. *J Exp Med* **192**:1261-1272.
198. **Swanson, M. S., and B. K. Hammer.** 2000. *Legionella pneumophila* pathogenesis: a fateful journey from amoebae to macrophages. *Annu Rev Microbiol* **54**:567-613.
199. **Swanson, M. S., and R. R. Isberg.** 1995. Association of *Legionella pneumophila* with the macrophage endoplasmic reticulum. *Infect Immun* **63**:3609-3620.
200. **Szeto, L., and H. A. Shuman.** 1990. The *Legionella pneumophila* major secretory protein, a protease, is not required for intracellular growth or cell killing. *Infect Immun* **58**:2585-2592.
201. **Tamura, M., T. Ajayi, L. R. Allmond, K. Moriyama, J. P. Wiener-Kronish, and T. Sawa.** 2004. Lysophospholipase A activity of *Pseudomonas aeruginosa* type III secretory toxin ExoU. *Biochem Biophys Res Commun* **316**:323-331.
202. **Tanaka, H., R. Minakami, H. Kanaya, and H. Sumimoto.** 2004. Catalytic residues of group VIB calcium-independent phospholipase A2 (iPLA<sub>2</sub>gamma). *Biochem Biophys Res Commun* **320**:1284-1290.
203. **Tekaia, F., S. V. Gordon, T. Garnier, R. Brosch, B. G. Barrell, and S. T. Cole.** 1999. Analysis of the proteome of *Mycobacterium tuberculosis* in silico. *Tuber Lung Dis* **79**:329-342.
204. **Thiolas, A., C. Bornet, A. Davin-Regli, J. M. Pages, and C. Bollet.** 2004. Resistance to imipenem, cefepime, and cefpirome associated with mutation in Omp36 osmoporin of *Enterobacter aerogenes*. *Biochem Biophys Res Commun* **317**:851-856.
205. **Thompson, J. D., F. Plewniak, J. Thierry, and O. Poch.** 2000. DbClustal: rapid and reliable global multiple alignments of protein sequences detected by database searches. *Nucleic Acids Res* **28**:2919-2926.
206. **Tilney, L. G., O. S. Harb, P. S. Connelly, C. G. Robinson, and C. R. Roy.** 2001. How the parasitic bacterium *Legionella pneumophila* modifies its phagosome and transforms it into rough ER: implications for conversion of plasma membrane to the ER membrane. *J Cell Sci* **114**:4637-4650.
207. **Uchiya, K., and T. Nikai.** 2004. *Salmonella enterica* serovar Typhimurium infection induces cyclooxygenase 2 expression in macrophages: involvement of *Salmonella* pathogenicity island 2. *Infect Immun* **72**:6860-6869.
208. **Ulsamer, A. G., P. L. Wright, M. G. Wetzel, and E. D. Korn.** 1971. Plasma and phagosome membranes of *Acanthamoeba castellanii*. *J Cell Biol* **51**:193-215.
209. **Upton, C., and J. T. Buckley.** 1995. A new family of lipolytic enzymes? *Trends Biochem Sci* **20**:178-179.
210. **Vipond, R., I. R. Bricknell, E. Durant, T. J. Bowden, A. E. Ellis, M. Smith, and S. MacIntyre.** 1998. Defined deletion mutants demonstrate that the major secreted toxins

- are not essential for the virulence of *Aeromonas salmonicida*. *Infect Immun* **66**:1990-1998.
211. **Viswanathan, V. K., P. H. Edelstein, C. D. Pope, and N. P. Cianciotto.** 2000. The *Legionella pneumophila* *iraAB* locus is required for iron assimilation, intracellular infection, and virulence. *Infect Immun* **68**:1069-1079.
212. **Viswanathan, V. K., S. Kurtz, L. L. Pedersen, Y. Abu-Kwaik, K. Krcmarik, S. Mody, and N. P. Cianciotto.** 2002. The cytochrome c maturation locus of *Legionella pneumophila* promotes iron assimilation and intracellular infection and contains a strain-specific insertion sequence element. *Infect Immun* **70**:1842-1852.
213. **Vogel, J. P., H. L. Andrews, S. K. Wong, and R. R. Isberg.** 1998. Conjugative transfer by the virulence system of *Legionella pneumophila*. *Science* **279**:873-876.
214. **Watarai, M., I. Derre, J. Kirby, J. D. Grownay, W. F. Dietrich, and R. R. Isberg.** 2001. *Legionella pneumophila* is internalized by a macropinocytotic uptake pathway controlled by the Dot/Icm system and the mouse Lgn1 locus. *J Exp Med* **194**:1081-1096.
215. **Wei, Y., J. L. Schottel, U. Derewenda, L. Swenson, S. Patkar, and Z. S. Derewenda.** 1995. A novel variant of the catalytic triad in the *Streptomyces scabies* esterase. *Nat Struct Biol* **2**:218-223.
216. **Wei, Y., L. Swenson, C. Castro, U. Derewenda, W. Minor, H. Arai, J. Aoki, K. Inoue, L. Servin-Gonzalez, and Z. S. Derewenda.** 1998. Structure of a microbial homologue of mammalian platelet-activating factor acetylhydrolases: *Streptomyces exfoliatus* lipase at 1.9 Å resolution. *Structure* **6**:511-519.
217. **Wheeler, P. R., and C. Ratledge.** 1991. Phospholipase activity of *Mycobacterium leprae* harvested from experimentally infected armadillo tissue. *Infect Immun* **59**:2781-2789.
218. **White, D. A., W. J. Lennarz, and C. A. Schnaitman.** 1972. Distribution of lipids in the wall and cytoplasmic membrane subfractions of the cell envelope of *Escherichia coli*. *J Bacteriol* **109**:686-690.
219. **Wiater, L. A., K. Dunn, F. R. Maxfield, and H. A. Shuman.** 1998. Early events in phagosome establishment are required for intracellular survival of *Legionella pneumophila*. *Infect Immun* **66**:4450-4460.
220. **Winkler, H. H., and E. T. Miller.** 1980. Phospholipase A activity in the hemolysis of sheep and human erythrocytes by *Rickettsia prowazekii*. *Infect Immun* **29**:316-321.
221. **Winkler, H. H., and E. T. Miller.** 1982. Phospholipase A and the interaction of *Rickettsia prowazekii* and mouse fibroblasts (L-929 cells). *Infect Immun* **38**:109-113.
222. **Zhang, Z., G. Gosset, R. Barabote, C. S. Gonzalez, W. A. Cuevas, and M. H. Saier, Jr.** 2005. Functional interactions between the carbon and iron utilization regulators, Crp and Fur, in *Escherichia coli*. *J Bacteriol* **187**:980-990.
223. **Zink, S. D., L. Pedersen, N. P. Cianciotto, and Y. Abu-Kwaik.** 2002. The Dot/Icm type IV secretion system of *Legionella pneumophila* is essential for the induction of apoptosis in human macrophages. *Infect Immun* **70**:1657-1663.
224. **Zusman, T., M. Feldman, E. Halperin, and G. Segal.** 2004. Characterization of the *icmH* and *icmF* genes required for *Legionella pneumophila* intracellular growth, genes that are present in many bacteria associated with eukaryotic cells. *Infect Immun* **72**:3398-3409.