

VI. Literaturverzeichnis

Abu Kwaik, Y., Eisenstein, B. I., Engleberg, N. C. (1993). Phenotypic modulation by *Legionella pneumophila* upon infection of macrophages. *Infect Immun.* 61: 1320-1329.

Abu Kwaik, Y., Engleberg, N. C. (1994). Cloning and molecular characterization of a *Legionella pneumophila* gene induced by intracellular infection and by various in vitro stress conditions. *Mol. Microbiol.* 13: 243-251.

Abu Kwaik, Y., Fields, B. S., Engleberg, N. C. (1994). Protein expression by the protozoan *Hartmanella vermiformis* upon contact with its bacterial parasite *Legionella pneumophila*. *Infect. Immun.* 62: 1860-1866.

Abu Kwaik, Y. (1996). The phagosome containing *Legionella pneumophila* within the protozoan *Hartmanella vermiformis* is surrounded by the rough endoplasmic reticulum. *Appl. Environ. Microbiol.* 62: 2022-2028.

Abu Kwaik, Y., Pederson, L. L. (1996). The use of differential display-PCR to isolate and characterize a *Legionella pneumophila* locus induced during the intracellular infection of macrophages. *Mol. Microbiol.* 21: 543-556.

Abu Kwaik, Y. (1998). Induced expression of the *Legionella pneumophila* gene encoding a 20-kilodalton protein during intracellular infection. *Infect. Immun.* 66: 203-212.

Alexander, E., Pham, D., Steck, D. R. (1999). The viable-but-nonculturable condition is induced by copper in *Agrobacterium tumefaciens* and *Rhizobium leguminosarum*. *Appl. Environ. Microbiol.* 65: 3754-3756.

Argast, M., Boos, W. (1979). Purification and some properties of the *sn*-glycerol 3-phosphate-binding protein of *Escherichia coli*. *J. Biol. Chem.* 254: 10931-10935.

Baine, W. B., Rasheed, J. K., Mackel, D. C., Bopp, C. A., Wells, J. G., Kaufmann, A. F. (1979). Exotoxin activity associated with the legionnaires' disease bacterium. *J. Clin. Microbiol.* 9: 453-465.

Bangsborg, J. M., Cianciotto, N. P., Hindersson, P. (1991). Nucleotide sequence analysis of the *Legionella micdadei mip* gene, encoding a 30-kilodalton analog of the *Legionella pneumophila* Mip protein. *Infect. Immun.* 59: 3836-3840.

- Bangsborg, J. M., Gerner-Smidt, P., Colding, H., Fiehn, N.-E., Brunn, B., Hoiby, N.** (1995). Restriction fragment length polymorphism of rRNA genes for molecular typing of members of the family *Legionellaceae*. *L. Clin. Microbiol.* 33: 402-406.
- Barbaree, J. M., Fields, B. S., Feeley, J. C., Gorman, G. W., Martin, W. T.** (1986). Isolation of protozoa from water associated with legionellosis outbreak and demonstration of intracellular multiplication of *Legionella pneumophila*. *Appl. Environ. Microbiol.* 51: 422-424.
- Baskerville, A., Fitzgeorge, R. B., Broster, M., Hambleton, P., Dennis, P. J.** (1981). Experimental transmission of legionnaires' disease by exposure to aerosols of *Legionella pneumophila*. *Lancet.* II: 1389-1390.
- Behrend, R. F., Young, H. W., Allen, R. G., Knutsen, G. L.** (1980). Dose-response of guinea pigs experimentally infected with aerosols of *Legionella pneumophila*. *J. Infect. Dis.* 141: 186-192.
- Bellinger-Kawahara, C., Horwitz, M. A.** (1990). Complement component C3 fixes selectively to the major outer membrane protein (MOMP) of *Legionella pneumophila* and mediates phagocytosis to liposome-MOMP complexes by human monocytes. *J. Exp. Med.* 172: 1201-1210.
- Bender, L., Ott, M., Marre, R., Hacker, J.** (1990). Genome analysis of *Legionella* spp. by orthogonal field alternation gel electrophoresis (OFAGE). *FEMS Micromiol. Lett.* 72: 253-258.
- Bender, L., Ott, M., Debes, A., Rdest, U., Hacker, J.** (1991). Distribution, expression and long-range-mapping of Legiolysin gene (Lly)-specific DNA sequences in *Legionellaceae*. *Infect. Immun.* 59: 3333-3336.
- Berendt, R. F.** (1981). Influence of blue-green Algae (Cyanobacteria) on survival of *Legionella pneumophila* in aerosols. *Infect. Immun.* 32: 690-692.
- Berger, J. D., Isberg, R. R.** (1993). Two distinct defects in intracellular growth complemented by a single genetic locus in *Legionella pneumophila*. *Mol. Microbiol.* 7: 7-19.
- Berger, J. D., Merriam, J. J., Isberg, R. R.** (1994). Altered intracellular targeting properties associated with mutations in the *Legionella pneumophila dotA* gene. *Mol. Microbiol.* 14: 809-822.
- Berlin, D. L., Herson, D. S., Hicks, D. T., Hoover, D. G.** (1999). Response of pathogenic *Vibrio* species to high hydrostatic pressure. *Appl. Environ. Microbiol.* 65: 2776-2780.
- Berk, S.G., Ting, R. S., Turner, R. J., Ashburn, R. J.** (1998). Production of respirable vesicles containing live *Legionella pneumophila* cells by two *Acanthamoeba* spp., *Appl. Environ. Mikrobiol.* 64: 279-286.

- Bethesda Research Laboratories** (1986). BRL pUC host *E. coli* DH5 α competent cells. Bethesda Res. Lab. Focus 8:9.
- Birnboim, H. C., Doly, J.** (1979). A rapid alkaline procedure for screening recombinant plasmid DNA. Nucl. Acids Res. 7: 1513-1523.
- Black, W. J., Quinn, F. D., Tompkins, L. S.** (1990). *Legionella pneumophila* zinc metalloprotease is structurally and functionally homologous to *Pseudomonas aeruginosa* elastase. J. Bacteriol. 172: 2608-2613.
- Blomfield, I. C., McClain, M. S., Eisenstein, B. I.** (1991). Type 1 fimbriae mutants of *Escherichia coli* K12: characterization of recognized afimbriate strains and construction of new *fim* deletion mutants. Mol. Microbiol. 5: 1439-1445.
- Blomfield, I. C., Vaughn, V., Rest R. F., Eisenstein, B. I.** (1991). Allelic exchange in *Escherichia coli* using the *Bacillus subtilis sacB* gene and a temperature-sensitive pSC101 replicon. Mol. Microbiol. 5: 1447-1457.
- Bogosian, G., Morris, P. J. L., O' Neil, J. P.** (1998). A mixed culture recovery method indicates that enteric bacteria do not enter the viable but nonculturable state. Appl. Environ. Microbiol. 64: 1736-1742.
- Bogosian, G., Sammons, L. E., Morris, P. J. L., O' Neil, J. P., Heitkamp, M. A., Weber, D. B.** (1996). Death of the *Escherichia coli* K-12 strain W3110 in soil and water. Appl. Environ. Microbiol. 62: 4114-4120.
- Bohach, G. A., Snyder, I. S.** (1983). Characterization of Surfaces Involved in Adherence of *Legionella pneumophila* to *Fischerella* Species. Infect. Immun. 42: 318-325.
- Borovansky, J.** (1996). Free radical activity of melanins and related substances: biochemical and pathobiochemical aspects. Sb. Lel. 97: 49-70.
- Bozue, J. A., Johnson, W.** (1996). Interaction of *Legionella pneumophila* with *Acanthamoeba castellanii*: Uptake by coiling phagocytosis and inhibition of phagosome-lysosome fusion. Infect. Immun. 64: 668-673.
- Bradley, F. C., Lindstedt, S., Lipscomp, J. D., Que, L. Jr., Roe, A. L., Rundgren, M.** (1986). 4-hydroxyphenylpyruvate dioxygenase is an iron-tyrosinate. J. Biol. Chem. 261: 11693-11696.
- Brand, B. C., Sadosky, A. B., Shuman, H. A.** (1994). The *Legionella pneumophila icm* locus: a set of genes required for intracellular multiplication in human macrophages. Mol. Microbiol. 14: 797-808.
- Brieland, J., McLain, M., Legendre, M., Engleberg, C.** (1997). Intrapulmonary *Hartmannella vermiformis*: a potential niche for *Legionella pneumophila* replication in a murine model of legionellosis. Infect. Immun. 65: 4892-4896.

- Breimann R. F., Fields B. S., Sanden G. N., Volmer L, Meier A, Spika J. S. (1990)** Association of shower use with Legionnaires ' disease- Possible role of amoebae. *JAMA* 263 (21): 2924-2926.
- Brock, T. D. (1997).** *Biology of Microorganisms*. Eighth Edition. (Madigan, M. T., Martinko, J. M., Parker, J., Eds.) Prentice Hall International, London.
- Brzoska, P., Boos, W. (1988).** Characteristics of a *ugp*-encoded and *phoB*-dependent glycerophosphoryl diester phosphodiesterase which is physically dependent on the *ugp* transport system of *Escherichia coli*. *J. Bacteriol.* 170: 4125-4135.
- Butler, C. H., Hoffman, P. S. (1990).** Characterization of a major 31 kilodalton peptidoglycan-bound protein of *Legionella pneumophila*. *J. Bacteriol.* 172: 2401-2407.
- Byrd, T. F., Horwitz, M. A. (1989).** Interferon gamma-activated human monocytes downregulate transferrin receptors and inhibit the intracellular multiplication of *Legionella pneumophila* by limiting the availability of iron. *J. Clin. Invest.* 83: 1457-1465.
- Caro, A., Got, P., Lesne, J., Binard, S., Baleux, B. (1999).** Viability and virulence of experimentally stressed nonculturable *Salmonella tythimurium*. *Appl. Environ. Microbiol.* 65: 3229-3232.
- Cellini, L., Robuffo, I., Di Campli, E., Di Bartolomeo, S., Taraborelli, T., Dainelli, B. (1998).** Recovery of *Helicobacter pylori* ATCC43504 from a viable but nonculturable state: regrowth or resuscitation? *APMIS* 106: 571-579.
- Chang, T. M., Chuang, Y. C., Su, H. J., Chang, M. C. (1997).** Cloning and sequence analysis of a novel hemolysin gene (*vllY*) from *Vibrio vulnificus*. *Appl. Environ. Microbiol.* 63: 3851-3857.
- Cheng, H., Weeratna, R., Hoffman, P. S. (1996).** Cloning of the *Legionella pneumophila rpoD* operon and possible role in expression of Hsp60. 96th General Meeting, American Society for Microbiology, 1996, abstracts B-167: 183.
- Chmielewski, R. A., Frank, J. F. (1995).** Formation of viable but nonculturable *Salmonella* during starvation in chemically defined solutions. *Lett. Appl. Microbiol.* 20: 380-384.
- Cho, J. C., Kim, S. J. (1999).** Viable, but non-culturable, state of a green fluorescence protein-tagged environmental isolate of *Salmonella typhi* in groundwater and pond water. *FEMS Microbiol. Lett.* 170: 257-264.
- Cianciotto, N. P., Eisenstein, B. I., Mody, C. H., Toews, G. B., Engleberg, N. C. (1989).** A *Legionella pneumophila* gene encoding a species-specific surface protein potentiates initiation of intracellular infection. *Infect. Immun.* 57: 1255-1262.
- Cianciotto, N. P., Eisenstein, B. I., Mody, C. H., Toews, G. B., Engleberg, N. C. (1990a).** A mutation in the *mip*-gene results in an attenuation of *Legionella pneumophila* virulence. *J. Infect. Dis.* 162: 121-126.

Ciaccioto, N. P., Bangsberg, J. M., Eisenstein, B. I., Engleberg, N. C. (1990b). Identification of *mip*-like genes in the genus *Legionella*. *Infect. Immun.* 58: 2912-2918.

Ciaccioto, N. P., Fields, B. S. (1992). *Legionella pneumophila mip* gene potentiates intracellular infection of protozoa and human macrophages. *Proc. Natl. Acad. Sci. USA* 89: 5188-5191.

Clemens, D. L. 1996. Characterization of the *Mycobacterium tuberculosis* phagosome. *Trends in Microbiology*, Vol. 4 No. 3, 113-118.

Cole, S. P., Cirillo, D., Kagnoff, M. F., Guiney, D. G., Eckmann, L. (1997). Coccoid and spiral *Helicobacter pylori* differ in their abilities to adhere to gastric epithelial cells and induce interleukin-8 secretion. *Infect. Immun.* 65: 843-846.

Colwell, R. R., Brayton, P. R., Grimes, D. J., Roszak, D. B., Huq, S. A. Palmer, L. M. (1985). Viable but nonculturable *Vibrio cholerae* and related pathogens in the environment: implications for release of genetically engineered microorganisms. *Biotech.* 3: 817-820.

Colwell, R. R., Huq, A. (1994). Vibrios in the Environment: Viable but Nonculturable *Vibrio cholerae*. In: *Vibrio cholerae* and Cholera: Molecular to Global Perspectives (Wachsmuth, I. K., Blake, A. K., Olsvik, Ø., eds.) pp. 117-133. ASM, Washington, DC.

Coon, S. L., Kotob, S., Jarvis, B. B., Wang, S., Fuqua, W. C., Weiner, R. M. (1994). Homogentisic acid is the product of MelA, which mediates melanogenesis in the marine bacterium *Shewanella colwelliana*. *Appl. Environ. Microbiol.* 60: 3006-3010.

Dagert, M., Ehrlich, S. D. Prolonged incubation in calcium chloride improves the competence of *Escherichia coli* cells. *Gene* 6: 23-28.

Davis, G. S., Winn, W. C., Gump, D. W., Craighead, J. E., Beaty, H. N. (1982). Legionnaires' pneumonia after aerosol exposure in guinea pigs and rats. *Am. Rev. Respir. Dis.* 126: 1050-1057.

Denoya, C. D., Skinner, D. D., Morgenstein, M. R. (1994). A *Streptomyces avermitilis* gene encoding a 4-hydroxyphenylpyruvic acid dioxygenase-like protein that directs the production of homogentisic acid and an ochronotic pigment in *Escherichia coli*. *J. Bacteriol.* 176: 5312-5319.

Diederich, L., Rasmussen, L. J., Messer, W. (1992). New cloning vectors for integration in the lambda attachment site attB of the *Escherichia coli* chromosome. *Plasmid* 28: 14-24.

Dournon, E., Bure, A., Kemeny, J. L., Pourriat, L. J., Valeyre, D. (1982). *Legionella pneumophila* peritonitis (lett.). *Lancet.* i: 1363.

Doyle, R. M., Steele, T. W., McLennan, A. M., Parkinson, I. H., Manning, P. A., Heuzenroeder, M. W. (1998). Sequence analysis of the *mip* gene of the soilborne pathogen *Legionella pneumophila*. *Infect. Immun.* 1492-1499.

- Dreyfus, L. A.** (1989). Molecular cloning and expression in *Escherichia coli* of the *recA* gene of *Legionella pneumophila*. *J. Gen. Microbiol.* 135: 3097-3107.
- Dreyfus, L. A., Iglewsky, B. H.** (1986). Purification and characterization of an extracellular protease of *Legionella pneumophila*. *Infect. Immun.* 51: 736-743.
- Dukan, S., Levi, Y., Touati, D.** (1997). Recovery of culturability of an HOCl-stressed population of *Escherichia coli* after incubation in Phosphate buffer: Resuscitation or regrowth? *Appl. Environ. Microbiol.* 63: 4204-4209.
- Edelstein, P. H., Meyer, R. D., Finegold, S. M.** (1979). Isolation of *Legionella pneumophila* from blood. *Lancet.* i: 750-751.
- Ehret, W.** (1989). Methoden und Probleme der Legionelladiagnostik. *Immun. Infekt.* 17: 4-12.
- Elliot, J. A., Winn, W. C.** (1986). Treatment of alveolar macrophage with Cytochalasin D inhibits uptake and subsequent growth of *Legionella pneumophila*. *Infect. Immun.* 31: 822-824.
- Elvin, C. M., Hardy, C. M., Rosenberg, H.** (1985). Pi exchange mediated by the GlpT-dependent sn-glycerol-3-phosphate transport system in *Escherichia coli*. *J. Bacteriol.* 161: 1054-1058.
- Emmerling, P.** (1980) Mikrobiologische Labordiagnostik der Legionärskrankheit. *Forum Mikrob.* 5: 280-283.
- Endo, F., Awata, H., Tanoue, A., Ishiguro, M., Eda, Y., Titani, K., Matsuda, I.** (1992). Primary structure deduced from complementary DNA sequence and expression in cultured cells of mammalian 4-hydroxyphenyl-pyruvic acid dioxygenase. *J. Biol. Chem.* 267: 24235-24240.
- Endo, F., Awata, H., Matsuda, I.** (1995). A nonsense mutation in the 4-hydroxyphenylpyruvic acid dioxygenase gene (Hpd) causes skipping of the constitutive exon and hypertyrosinemia in mouse strain III. *Genomics* 25: 164-169.
- Engleberg, N. C., Aarter, C., Weber, D. R., Cianciotto, N. P., Eisenstein, B. I.** (1989). DNA sequence of *mip*, a *Legionella pneumophila* gene associated with macrophage infectivity. *Infect. Immun.* 57: 1263-1270.
- Engleberg, N. C., Howe, D. C., Rogers, J. E., Arroyo, J., Eisenstein, B. I.** (1991). Characterization of a *Legionella pneumophila* gene encoding a lipoprotein antigen. *Mol. Microbiol.* 5: 2021-2029.
- Fields, B. S., Barbaree, J. M., Sanden, G. N., Morell, W. E.** (1990). Virulence of a *Legionella anisa* strain associated with Pontiac fever: an evaluation using protozoan, cell culture, and guinea pig models. *Infect. Immun.* 58: 3139-3142.

- Fields, B. S.** (1993). *Legionella* and protozoa: Interaction of a pathogen and its natural host. In *Legionella Current Status and emerging perspectives*. (Barbaree, J. M., Breiman, R. F., Dufour, A. P., Eds.) pp. 129-136. ASM, Washington, D.C..
- Fields, B. S.** (1996). The molecular ecology of *Legionellae*. *Trends Microbiol.* 4: 286-290.
- Finlay, B. B., Falkow, S.** (1997). Common themes in microbial pathogenicity revisited. *Microbiol. Mol. Biol. Rev.* 61: 136-169.
- Fischer, G., Schmid, F. X.** (1990). The mechanism of protein folding. Implications of *in vitro* refolding models for *de novo* protein folding and translocation in the cell. *Biochemistry* 29: 2205-2212.
- Fischer, G., Hang, H., Ludwig, B., Mann, K. H., Hacker, J.** (1992). Mip protein of *Legionella pneumophila* exhibits peptidyl-prolyl *cis/trans* isomerase (PPIase) activity. *Mol. Microbiol.* 6: 1375-1383.
- Fliermans, C. B., Cherry, W. B., Orrison, L. H., Smith, S. J., Tison, D. L., Pope, D. H.** (1981). Ecological distribution of *Legionella pneumophila*. *Appl. Environ. Microbiol.* 41: 9-16.
- Fraser, D. W.** (1985). Potable water as a source for legionellosis. *Environ. Health Perspect.* 62: 337-341.
- Friedman, R. L., Iglewski, B. H., Miller, R. D.** (1980). Identification of a cytotoxin produced by *Legionella pneumophila*. *Infect. Immun.* 29: 271-274.
- Fuqua, W. C., Coyne, V. C., Stein, D. C., Lin, C. M., Weiner, R. M.** (1991). Characterization of *melaA*: a gene encoding melanin biosynthesis from the marine bacterium *Shewanella colwelliana*. *Gene* 109: 131-136.
- Gabay, J. E., Blake, M., Niles, W. D., Horwitz, M. A.** (1985). Purification of *Legionella pneumophila* major outer membrane protein and demonstration that it is a porin. *J. Bacteriol.* 162: 85-91.
- Galeazzi, L., Groppa, G., Ginnta, S.** (1990). Mueller-Hinton broth undergoes visible oxidative color changes in the presence of peroxidase and hydrogen peroxide. *J. Clin. Microbiol.* 28: 2145-2147.
- Garbe, P. L., Davis, B. J., Weisfeld, J. S., Markowitz, L., Miner, P., Garrity, F., Barbaree, J. M., Reingold, A. L.** (1985). Nosocomial Legionnaires' disease: epidemiologic demonstration of cooling towers as a source. *JAMA.* 254: 521-524.
- Gao, L.-Y., Harb, O. S., Abu Kwaik, Y.** (1997). Utilization of similar mechanisms by *Legionella pneumophila* to parasitize two evolutionary distant host cells, mammalian macrophages and protozoa. *Infect. Immun.* 58: 3139-3142.

- Gao, L.-Y., Harb, O. S., Abu Kwaik, Y. (1998).** Identification of macrophage-specific infectivity loci (*mil*) of *Legionella pneumophila* that are not required for infectivity of protozoa. *Infect. Immun.* 66: 883-892.
- Garduño, R. A., Faulkner, G., Trevors, M. A., Vats, N., Hoffman, P. S. (1998).** Immunolocalization of Hsp60 in *Legionella pneumophila*. *J. Bacteriol.* 180: 505-513.
- Gattermann, S., Hollandt, H., Hohlbach, G., Marre, R. (1989).** *Legionella pneumophila* als Erreger nosokomialer Pneumonien auf einer Intensivstation. *Internist. Prax.* 29: 711-716.
- Gay, P., Le Coq, D., Steinmetz, M., Berkelman, T., Kado, C. I. (1985).** Positive selection procedure for the entrapment of insertion sequence elements in Gram-negative bacteria. *J. Bacteriol.* 164: 918-921.
- George J. R., Pine, L., Reeves, M.W., Harrell, W. K. (1980)** Amino acid requirements of *Legionella pneumophila*. *J. Clin. Microbiol.* 11: 286-291.
- Georghiou, P. R., Doggett, A. M., Kielhofner, M. A., Stout, J. E. Watson, D. A., Lupski, J. R. Hamill, J. R. (1994)** Molecular Fingerprinting of *Legionella* species by repetitive element PCR.
- Gershwin, M. E., Coppel, R. L., Bearer, E., Peterson, M. G., Sturgess, A., Mackay, I. R. (1987).** Molecular cloning of the liver-specific rat F-antigen. *J. Immunol.* 139: 3828-3833.
- Ghezzi, J. I. (1999).** Induction of the viable but non-culturable condition in *Xanthomonas campestris* pv. *campestris* in liquid microcosms and sterile soil. *FEMS Microbiol. Ecol.* 30: 203-208.
- Gounot, A.-M. (1991).** Bacterial life at low temperature: physiological aspects and biotechnological implications. *J. Appl. Bacteriol.* 71: 386-397.
- Gregory, S. T., Steinman, H. S. (1996).** Periplasmic copper-zinc superoxide dismutase of *Legionella pneumophila*: Role in stationary phase survival. *J. Bacteriol.* 178: 1578-1584.
- Grimm, D., Merkert, H., Ludwig, W., Schleifer, K. H., Hacker, J., Brand, B. C. (1998).** Specific detection of *Legionella pneumophila*: construction of a new 16S rRNA-targeted oligonucleotide probe. *Appl. Environ. Microbiol.* 64: 2686-2690.
- Günther, O. (1980).** Die Entdeckung der Legionärskrankheit- *For. Mikrobiol.* 1: 8-10
- Günther, O. (1981).** Die Erreger des Pontiac-Fiebers: Legionellen und Amöben. *For. Mikrobiol.* 3: 154-155.
- Hacker, J., Fischer, G. (1993).** Immunophilins: structure-function relationship and possible role in microbial pathogenicity. *Mol. Microbiol.* 10: 445-456.
- Hara, O., Hutchinson, C. R. (1992).** A macrolide 3-O-acetyltransferase gene from the midecamycin-producing species *Streptomyces mycarofaciens*. *J. Bacteriol.* 174: 5141-5144

- Harb, O. S., Venkataraman, C., Haack, B. J., Gao, L.-Y., Abu Kwaik, Y.** (1998). Heterogeneity in the attachment and uptake mechanism of the legionnaires disease bacterium *Legionella pneumophila* by protozoan hosts. *Appl. Environ. Microbiol.* 64: 126-132.
- Hegedus, Z. L., Nayak, U.** (1994). Homogentisic acid and structurally related compounds as intermediates in plasma soluble melanin formation and in tissue toxicities. *Arch. Int. Physiol. Biophys.* 102: 175-181.
- Heuner, K.** (1994). Herstellung und Screening einer Expressionsgenbank von *Legionella pneumophila* Corby. Diplomarbeit, Universität Würzburg.
- Heuner, K., Bender-Beck, L., Brand, B. C., Lück, P. C., Mann, K. H., Marre, R., Ott, M., Hacker, J.** (1995). Cloning and genetic characterization of the flagellum subunit gene (*flaA*) of *Legionella pneumophila* serogroup 1. *Infect. Immun.* 63: 2499-2507.
- Heuner, K., Hacker, J., Brand, B. C.** (1997). The alternative sigma factor σ^{28} of *Legionella pneumophila* restores flagellation and motility to an *Escherichia coli fliA* mutant. *J. Bacteriol.* 179: 17-23.
- Heuner, K., Brand, B. C., Hacker, J.** (1999). The expression of the flagellum of *Legionella pneumophila* is modulated by different environmental factors. *Fems Microbiol. Lett.* 175: 69-77.
- Hickey, E. K., Cianciotto, N. P.** (1994). Cloning and sequencing of the *Legionella pneumophila fur* gene. *Gene* 143: 117-121.
- Hickey, E. K., Cianciotto, N. P.** (1995). Identification of Fur-repressed genes from *Legionella pneumophila*. 95th general Meeting, American Society for Microbiology, abstracts B-375: 230.
- Hickey, E. K., Cianciotto, N. P.** (1997). An iron- and Fur-repressed *Legionella pneumophila* gene that promotes intracellular infection and encodes a protein with similarity to the *Escherichia coli* aerobactin synthetases. *Infect. Immun.* 65: 133-143.
- Hiraku, Y., Yamasaki, M., Kawanishi, S.** (1998). Oxidative DNA damage induced by homogentisic acid, a tyrosine metabolite. *FEBS Lett.* 432: 13-16.
- Hobbie, J. E., Daley, R. J., Jasper, S.** (1977). Use of nucleopore filters for counting bacteria by fluorescence microscopy. *Appl. Environ. Microbiol.* 33: 1225-1228.
- Hodinka, R. L., Wyrick, B. P.** (1986). Ultrastructural study of mode of entry of *Chlamydia psittaci* into L-929 cells. *Infect. Immun.* 54:855-863.
- Hoffman, P.** (1984). Bacterial physiology, pp 61-67. In: Thornsberry, C., Balows, A., Feeley, J. C., Jakubowski, W. (ed.), Proceedings of the 2nd international symposium on *Legionella*. ASM Washington, D. C.

- Hoffman, P. S., Butler, C. A., Quinn, F. D.** (1989). Cloning and temperature-dependent expression in *E. coli* of a *Legionella pneumophila* gene coding for a genus common 60 kilodalton antigen. *Infect. Immun.* 57: 1731-1739.
- Hoffman, P. S., Houston, L., Butler, C. A.** (1990). *Legionella pneumophila* htpAB heat shock operon: nucleotide sequence and expression of the 60-kilodalton antigen in *L. pneumophila*-infected HeLa cells. *Infect. Immun.* 58: 3380-3387.
- Hoffman, P. S., Ripley, M., Weeranta, R.** (1992a). Cloning and nucleotide sequence of a gene (*ompS*) encoding the major outer membrane protein of *Legionella pneumophila*. *J. Bacteriol.* 174: 914-920.
- Hoffman, P. S., Seyer, J. H., Butler, C. A.** (1992b). Molecular characterization of the 28 and 31 kilodalton subunits of the *Legionella pneumophila* major outer membrane protein. *J. Bacteriol.* 174: 908-913.
- Horwitz, M. A., Silverstein, S. C.** (1980). Legionnaires' disease bacterium (*Legionella pneumophila*) multiplies intracellularly in human monocytes. *J. Clin. Invest.* 66: 441-450.
- Horwitz, M. A.** (1983a). Formation of a novel phagosome by the legionnaires' disease bacterium (*Legionella pneumophila*) in human monocytes. *J. Exp. Med.* 158: 1618-1635.
- Horwitz, M. A.** (1983b). The legionnaires' disease bacterium (*Legionella pneumophila*) inhibits phagosome-lysosome fusion in human monocytes. *J. Exp. Med.* 158: 2108-2126.
- Horwitz, M. A.** (1984). Phagocytosis of the legionnaires' disease bacterium (*Legionella pneumophila*) occurs by a novel mechanism: engulfment within a pseudopod coil. *Cell* 36: 27-33.
- Horwitz, M. A.** (1988). Phagocytosis and intracellular biology of *Legionella pneumophila*. In NATO ASI Series, Vol H24: Bacteria, complement and the phagocytic cell. (Cabellao, F. C., Pruzzo, Eds.). Springer-Verlag, Berlin, Heidelberg.
- Horwitz, M. A.** (1989). Immunobiology of *Legionella pneumophila*. In: Intracellular Parasitism (Moulder, J. W., Ed.), pp 141-156. CRC Press, Boca Raton, FL.
- Horwitz, M. A., Maxfield, F. R.** (1989). *Legionella pneumophila* inhibits acidification of its phagosome in human monocytes. *J. Cell Biol.* 99: 1936-1943.
- Husmann, L. K., Johnson, W.** (1992). Adherence of *Legionella pneumophila* to guinea pig peritoneal macrophages, J774 mouse macrophages, and undifferentiated U937 human monocytes: role of Fc and complement receptors. *Infect. Immun.* 60: 5212-5218.
- Hussong, D., Colwell, R. R., O' Brien, M., Weiss, E., Pearson, A. D., Weiner, R. M., Burge, W. D.** (1987). Viable *Legionella pneumophila* not culturable by culture on agar medium. *Biotechnology* 5: 947-950.

- Jepras, R. I., Fitzgeorge, R. B., Baskerville, A.** (1985). A comparison of virulence of two strains of *Legionella pneumophila* based on experimental aerosol infection of guinea pigs. *J. Hyg.* 95: 29-38.
- Jiang, X., Chai, T. J.** (1996). Survival of *Vibrio parahaemolyticus* at low temperatures under starvation conditions and subsequent resuscitation of viable, nonculturable cells. *Appl. Environ. Microbiol.* 62: 1300-1305.
- Johnson, W., Varner, L., Poch, M.** (1991). Acquisition of iron by *Legionella pneumophila*: role of iron reductase. *Infect. Immun.* 59: 2376-2381.
- Jones, P. G., Cashel, M., Glaser, G., Neidhardt, F. C.** (1992). Function of a relaxed-like state following temperature downshifts in *Escherichia coli*. *J. Bacteriol.* 174: 3903-3914.
- Kaminski, P. A., Kitts, C. L., Zimmerman, Z., Ludwig, R. A.** (1996). *Azorhizobium caulinodans* uses both cytochrome bd (quinol) and cytochrome cbb3 (cytochrome c) terminal oxidases for symbiotic N₂ fixation. *J. Bacteriol.* 178: 5989-5994.
- Keen, M. G., Hoffman, P. S.** (1989). Characterization of a *Legionella pneumophila* extracellular protease exhibiting hemolytic and cytotoxic activities. *Infect. Immun.* 57: 732-738.
- Kim, M. J., Rogers, J. E., Hurley, M. C., Engleberg, N. C.** (1994). Phosphatase-negative mutants of *Legionella pneumophila* and their behavior in mammalian cell infection. *Microbiol. Pathog.* 17: 51-62.
- King, C. H., Fields, B. S., Shotts, E. B., White, E.H.** (1991). Effects of cytochalasin and methylamine on intracellular growth of *Legionella pneumophila* in amoebae and human monocyte-like cells. *Infect. Immun.* 59: 758-763.
- Klebanoff, S. J.** (1982). Oxygen-dependent cytotoxic mechanisms of phagocytes. In: Gallin, J. I., Fauci, A. S. (eds). *Advances in host defence mechanisms*. Vol 1: 111; Phagocytic cells. New York, Raven press.
- Kogure, K., Simidu, U., Taga, N.** (1979). A tentative direct microscopic method for counting living marine bacteria. *Can. J. Microbiol.* 25: 415-420.
- Kogure, K., Ikemoto, E.** (1997). Wide occurrence of enterohemorrhagic *Escherichia coli* O157 in natural freshwater environment. *Nippon Saikingaku Zasshi.* 52: 601-607.
- Kondo, K., Takade, A., Amako, K.** (1994). Morphology of the viable but nonculturable *Vibrio cholerae* as determined by the freeze fixation technique. *FEMS Microbiol. Lett.* 123: 179-184.
- Korhonen, L. K., Martikainen, P. J.** (1991). Survival of *Escherichia coli* and *Campylobacter jejuni* in untreated and filtered lake water. *J. Appl. Bacteriol.* 71: 379-382.

- Kotob, S. L., Coon, S. L., Quintero, E. J., Weiner, R. M.** (1995). Homogentisic acid is the primary precursor of melanin synthesis in *Vibrio cholerae*, a *Hyphomonas* strain, and *Shewanella colwelliana*. *Appl. Environ. Microbiol.* 61: 1620-1622.
- Köhler, R., Bubert, A., Goebel, W., Steinert, M., Hacker, J., Bubert, B.** (1999). Expression and use of the green fluorescent protein as a reporter system in *Legionella pneumophila*. *Mol. Gen. Genet.* im Druck.
- Kurokawa, M., Nukina, M., Nakanishi, H., Tomita, S., Tamura, T., Shimoyama, T.** (1999). Resuscitation from the viable but nonculturable state of *Helicobacter pylori*. *Kansenshogaku Zasshi.* 73: 15-19.
- Kyhse-Andersen, J.** (1984). Electrophoretic transfer of multiple gels: a simple apparatus without buffer tank for rapid transfer of proteins from polyacrylamide to nitrocellulose. *J. Biochem. Biophys. Methods* 10: 203-209.
- Lee, J. V., West, A. A.** (1991). Survival and growth of *Legionella* species in the environment. *J. Appl. Bacteriol. (Suppl.)* 70: 121-129.
- Levin, M. A., Strauss, H. S.** (1991). Risk assessment in genetic engineering. McGraw Hill, New York.
- Liles, M. R., Cianciotto, N. P.** (1996). Absence of siderophore-like activity in *Legionella pneumophila* supernatants. *Infect. Immun.* 64: 1873-1875.
- Linder, K., Oliver, J. D.** (1989). Membrane fatty acid and virulence changes in the viable but nonculturable state of *Vibrio vulnificus*. *Appl. Environ. Microbiol.* 55: 2837-2842.
- Lleo, M. del M., Tafi, M. C., Canepari, P.** (1998). Nonculturable *Enterococcus faecalis* cells are metabolically active and capable of resuming active growth. *Syst. Appl. Microbiol.* 21: 333-339.
- Ludwig, B., Schmidt, A., Marre, R., Hacker, J.** (1991). Cloning, genetic analysis and nucleotide sequence of a determinant coding for a 19 kilodalton peptidoglycan protein (Ppl) of *Legionella pneumophila*. *Infect. Immun.* 59: 2515-2521.
- Ludwig, B., Rahfeld, J., Schmidt, B., Mann, K. H., Wintermeyer, E., Fischer, G., Hacker, J.** (1994). Characterization of Mip proteins of *Legionella pneumophila*. *FEMS Microbiol. Lett.* 118: 23-30.
- Lück, P. Ch., Helbig, J. H., Witzleb, W.** (1990) Legionellen im Wasser medizinischer Einrichtungen, einer Gefahr für Patienten und Personal? *Z. gesame Hyg.* 36: 380-382.
- Maki, N., Sekiguchi, F., Nishimaki, J., Miwa, K., Hayano, T., Takahashi, N., Swzutei, M.** (1990). Complementary DNA encoding the human T-cell FK 506-binding protein, a peptidylprolyl *cis/trans* isomerase distinct from cyclophilin. *Proc. Natl. Acad. Sci. USA* 87: 5440-5443.

- Manz, W., Amman, R., Szewzyk, R., Szewzyk, U., Stenström, T. A., Hutzler, P., Schleifer, K. H.** (1995). In situ identification of *Legionellaceae* using 16 S rRNA-targeted oligonucleotide probes and confocal laser scanning microscopy. *Microbiol.* 141: 29-39.
- Marahiel, M. A., Zuber, P.** (1999). Sporulation and Cell Differentiation. In: *Biology of the Prokaryotes.* (Lengeler, J. W., Drews, G., Schlegel, H., Eds.). Thieme, Stuttgart, New York.
- Marchal, K., Sun, J., Keijers, V., Haaker, H., Vanderleyden, J.** (1998). A cytochrome *cbb3* (cytochrome *c*) terminal oxidase in *Azospirillum brasilense* Sp7 supports microaerobic growth. *J. Bacteriol.* 180: 5689-5696.
- Marra, A., Shuman, H. A.** (1989). Isolation of a *Legionella pneumophila* restriction mutant with increased ability to act as a recipient in heterospecific matings. *J. Bacteriol.* 171: 2238-2240.
- Marra, A., Shuman, H. A.** (1990). The HL60 model for the interaction of human macrophages with legionnaires' disease bacterium. *J. Immun.* 144: 2738-2744.
- Marra, A., Shuman, H. A.** (1992). Genetics of *Legionella pneumophila* virulence. *Annu. Rev. Genet.* 26: 51-69.
- Marra, A., Blander, S. J., Horwitz, M. A., Shuman, H. A.** (1992). Identification of a *Legionella pneumophila* locus required for intracellular multiplication in human macrophages. *Proc. Natl. Acad. Sci. USA* 89: 9607-9611.
- Marre, R.** (1987). Die Bedeutung der Legionellose 10 Jahre nach ihrer Entdeckung. *Focus MHL* 4, Heft 3: 148-153.
- Matsiota-Bernard, P., Lefebvre, M. C., Sedqui, M., Cornillet, P., Guenounou, M.** (1993). Involvement of tumor necrosis factor alpha in intracellular multiplication of *Legionella pneumophila* in human monocytes. *Infect. Immun.* 61: 4980-4983.
- McClain, M. S., Hurley, M. C., Brieland, J. K., Engleberg, N. C.** (1996). The *Legionella pneumophila* *hel* locus encodes intracellularly induced homologs of heavy-metal ion transporters of *Alcaligenes* spp. *Infect. Immun.* 64: 1532-1540.
- McDade, J. E., Shepard, C. C., Fraser, W. W., Tsai, T. R., Redus, M. A., Dowdle, W. R.** (1977). Legionnaires' disease: isolation of a bacterium and demonstration of its role in other respiratory disease. *N. Engl. J. Med.* 297: 1197-1203.
- Medema, G. F., Schets, F. M., van de Giessen, A. W., Havelaar, A. H.** (1992). Lack of colonization of 1 day old chicks by viable, nonculturable *Campylobacter jejuni*. *J. Appl. Bacteriol.* 72: 512-516.
- Mengaud, J. M., Horwitz, M. A.** (1993). The major iron-containing protein of *Legionella pneumophila* is an aconitase homologous with the human iron-responsive element-binding protein. *J. Bacteriol.* 175: 5666-5676.

- Mintz, C. S., Schultz, D. R., Arnold, P. I., Johnson, W.** (1992). *Legionella pneumophila* lipopolysaccharide activates the classical complement pathway. *Infect. Immun.* 60: 2769-2776.
- Mintz, C. S., Arnold, P. I., Johnson, W., Schultz, D. R.** (1995). Antibody-independent binding of complement component C1q by *Legionella pneumophila*. *Infect. Immun.* 63: 4939-4943.
- Moffat, J. F., Edelstein, P. H., Regula, D. P., Cirillo, J. D., Tompkins, L.S.** (1994). Effects of an isogenic Zn-metalloprotease deficient mutant of *Legionella pneumophila* in guinea pig pneumonia model. *Mol. Microbiol.* 12: 693-705.
- Morgan, J. A. W., Rhodes, G., Pickup, R. W.** (1993). Survival of nonculturable *Aeromonas salmonicida* in lake water. *Appl. Environ. Microbiol.* 59: 874-880.
- Muder, R. R., Yu, V. L., Woo, A. H.** (1986). Mode of transmission of *Legionella pneumophila*. A critical review. *Arch. Intern. Med.* 146: 1607-1612.
- Müller, A., Hacker, J., Brand, B.** (1996). Evidence for apoptosis of human macrophage-like HL-60 cells by *Legionella pneumophila* infection. *Infect. Immun.* 64: 1973-1980.
- Nagata, S., Tanizawa, K., Esaki, N., Sakamoto, Y., Ohshima, T., Tanaka, H., Soda, K.** (1988). Gene cloning and sequence determination of leucine dehydrogenase from *Bacillus stearothermophilus* and structural comparison with other NAD(P)⁺-dependent dehydrogenases. *Biochemistry* 27: 9056-9062.
- Nakamura, Y., Kaneko, T., Hirose, M., Miyajima, N., Tabata, S.** (1998). CyanoBase, a www database containing the complete nucleotide sequence of the genome of *Synechocystis sp.* strain PCC6803. *Nucleic Acid Res.* 26: 63-67.
- Nash, T. W., Libby, D. M., Horwitz, M. A.** (1984). Interaction between the legionnaires' disease bacterium (*Legionella pneumophila*) and human alveolar macrophages. Influence of antibody, lymphokines, and hydrocortisone. *J. Clin. Invest.* 74: 771-782.
- Nelson, S. M., Attwell, R. W., Dawson, M. M., Smith, C. A.** (1996). The effect of temperature on viability of carbon- and nitrogen-starved *Escherichia coli*. *Microb. Ecol.* 32: 11-21.
- Nilsson, L., Oliver, J. D., Kjelleberg, S.** (1991). Resuscitation of *Vibrio vulnificus* from the viable but nonculturable state. *J. Bacteriol.* 173: 5054-5059.
- O'Connell, W. A., Hickey, E. K., Cianciotto, N. P.** (1996). A *Legionella pneumophila* gene that promotes hemin binding. *Infect. Immun.* 64: 842-848.
- Okazaki, M., Hibino, Y., Asano, Y., Ohmori, M., Numao, N., Kondo, M.** (1988). Cloning and nucleotide sequencing of phenylalanine dehydrogenase gene of *Bacillus sphaericus*. *Gene* 63: 337-341.
- Oldham, L., Rodgers, F. G.** (1985). Adhesion, penetration and intracellular replication of *Legionella pneumophila*: an *in vitro* model of infection. *J. Gen. Microbiol.* 131: 697-706.

- Oliver, J. D., Wanucha, D.** (1989). Survival of *Vibrio vulnificus* at reduced temperatures and elevated nutrient. *J. Food Safety* 10: 79-86.
- Oliver, J. D., Bockian, R.** (1995). *In vivo* resuscitation, and virulence towards mice, of viable but nonculturable cells of *Vibrio vulnificus*. *Appl. Environ. Microbiol.* 61: 2620-2623.
- Oliver, J. D., Hite, F., McDougald, D., Andon, N. L., Simpson, L. M.** (1995). Entry into, and resuscitation from, the viable but nonculturable state by of *Vibrio vulnificus* in an estuarine environment. *Appl. Environ. Microbiol.* 61: 2624-2630.
- Ott, M., Messner, P., Heesemann, J., Marre, R., Hacker, J.** (1991). Temperature-dependent expression of flagella in *Legionella*. *J. Biol. Chem* 267: 16460-16466.
- Ott, M., Bender, L., Marre, R., Hacker, J.** (1991). Puls field electrophoresis of genomic restriction fragments for the detection of nosocomial *Legionella pneumophila* in hospital water supplies. *J. Clin. Microbiol.* 29: 813-815.
- Paszko-Kova, C., Shahamat, M., Colwell, R. R.** (1993). Effect of temperature on survival of *Legionella pneumophila* in the aquatic environment. *Microb. Releases* 2: 73-79.
- Payne, N. R., Horwitz, M. A.** (1987). Phagocytosis of *Legionella pneumophila* is mediated by human monocyte complement receptors. *J. Exp. Med.* 166: 1377-1389.
- Pearlman, E., Jiwa, A. H., Engleberg, N. C., Eisenstein, B. I.** (1988). Growth of *Legionella pneumophila* in a human macrophage like cell line. *Microb. Pathog.* 5: 87-95.
- Podlesek, Z., Comino, A., Herzog-Velikonja, B., Zgur-Bertok, D., Komel, R., Grabnar, M.** (1995). *Bacillus licheniformis* bacitracin-resistance ABC transporter: relationship to mammalian multidrug resistance. *Mol. Microbiol.* 16: 969-976.
- Pommepuy, M., Butin, M., Derrien, A., Gourmelon, M., Colwell, R. R., Cormier, M.** (1996). Retention of enteropathogenicity by viable but nonculturable *Escherichia coli* exposed to seawater and sunlight. *Appl. Environ. Microbiol.* 62: 4621-4626.
- Pope, C., Dhand, L., Cianciotto, N. P.** (1994). Random mutagenesis of *Legionella pneumophila* with mini-Tn10. *FEMS Microbiol. Lett.* 124: 107-112.
- Pope, C. D., O'Connell, W. A., Cianciotto, N. P.** (1996). *Legionella pneumophila* mutants that are defective for iron acquisition and assimilation and intracellular infection. *Infect. Immun.* 64: 629-636.
- Pope, D. H., Soracco, R. J., Gill, H. K., Fliermans, C. B.** (1982). Growth of *Legionella pneumophila* in twomembered cultures with green algae and cyanobacteria. *Curr. Microbiol.* 7: 319-322.
- Pruckler, J. M., Benson, R. F., Moyenuddin, M., Martin, W. T., Fields, B. S.** (1995). Association of flagellum expression and intracellular growth of *Legionella pneumophila*. *Infect. Immun.* 63: 4928-4932.

- Purcell, M., Shuman, H. A.** (1998). The *Legionella pneumophila* *icmGCDJBF* genes are required for killing of human macrophages. *Infect. Immun.* 66: 2245-2255.
- Quinn, F. D., Keen, M. G., Tompkins, L. S.** (1989). Genetic, immunological and cytotoxic comparison of *Legionella* proteolytic activities. *Infect. Immun.* 57: 2719-2725.
- Quinn, F. D., Tompkins, L. S.** (1989). Analysis of a cloned sequence of *Legionella pneumophila* encoding a 38 kD metalloprotease possessing haemolytic and cytotoxic activities. *Mol. Microbiol.* 3: 797-805.
- Quinn, J. P.** (1984). The modification and evaluation of some cytochemical techniques for the enumeration of metabolically active heterotrophic bacteria in the aquatic environment. *J. Appl. Bacteriol.* 57: 51-57.
- Rahman, I., Shahamat, M., Kirchman, P. A., Russek-Cohen, E., Colwell, R. R.** (1994). Methionine uptake and cytopathogenicity of viable but nonculturable *Shigella dysenteriae* type 1. *Appl. Environ. Microbiol.* 60: 3573-3578.
- Rahman, I., Shahamat, Chowdhury, M. A. R., Colwell, R. R.** (1996). Potential virulence of viable but nonculturable *Shigella dysenteriae* type 1. *Appl. Environ. Microbiol.* 62: 115-120.
- Recorbet, G., Steinberg, C., Faurie, G.** (1992). Survival in soil of genetically engineered *E. coli* as related to inoculum density, predation and competition. *FEMS Microbiol. Ecol.* 101: 251-260.
- Reeves, M. W., Pine, L., Neilands, J. B., Balows, A.** (1983). Absence of siderophore activity in *Legionella* species grown in iron-deficient media. *J. Bacteriol.* 154: 324-329.
- Rigsbee, W., Simpson, L. M., Oliver, J. D.** (1997). Detection of viable but nonculturable state in *Escherichia coli* O157 : H7. *J Food Safety* 16: 255-262.
- Rodriguez, G. G., Phipps, D., Ishiguro, K., Ridgeway, H. F.** (1992). Use of a fluorescent redox probe for direct visualization actively respiring bacteria. *Appl. Environ. Microbiol.* 58: 1801-1808.
- Rollins, D. M., Colwell, R. R.** (1986). Viable but nonculturable state of *Campylobacter jejuni* and its role in survival in the natural environment. *Appl. Environ. Microbiol.* 52: 531-538.
- Roszak, D. B., Colwell, R. R.** (1987). Survival strategies of bacteria in the natural environment. *Microbiol. Rev.* 51: 365-379.
- Rowbotham, T. J.** (1986). Current views on the relationship between amoebae, legionellae and man. *Israel. J. Med. Science* 22: 678-689.
- Ruzafa, C., Solano, F., Sanchez-Amat, A.** (1994). The protein encoded by the *Shewanella colwelliana* *melA* gene is a *p*-hydroxyphenylpyruvate dioxygenase. *FEMS Microbiol. Lett.* 124: 179-184.

- Rüetschi, U., Odelhög, B., Lindstedt, S., Barros-Sölderling, J., Person, B., Jörnvall, H.** (1992). Characterization of 4-hydroxyphenylpyruvate dioxygenase. Primary structure of the *Pseudomonas* enzyme. *Eur. J. Biochem.* 205: 459-466.
- Rüetschi, U., Dellsén, A., Sahlin, P., Stenmann, G., Rymo, L., Lindstedt, S.** (1993). Human 4-hydroxyphenylpyruvate dioxygenase. Primary structure and chromosomal localization of the gene. *Eur. J. Biochem.* 213: 1081-1089.
- Sadosky, A. B., Wilson, J. W., Steinman, H. M., Shuman, H. A.** (1994). The iron superoxide dismutase fo *Legionella pneumophila* is essential for viability. *J. Bacteriol.* 176: 3790-3799.
- Saha, S. K., Saha, S., Sanyal, S. C.** (1991). Recovery of injured *Campylobacter jejuni* cells after animal passage. *Appl. Environ. Microbiol.* 57: 3388-3389.
- Sampson, J. S., O' Connor, S. P., Holloway, B. P., Plikaytis, B. B., Carlone, G. M., Mayer, L. W.** (1990). Nucleotide sequence of *htpB*, the *Legionella pneumophila* gene encoding the 58-kilodalton (kDa) common antigen, formerly designated the 60-kDa antigen. *Infect. Immun.* 58: 3154-3157.
- Sanchez-Amat, A., Ruzafa, C., Solano, F.** (1998). Comparative tyrosine degradation in *Vibrio cholerae* strains. The strain ATCC 14035 as a procaryotic melanogenic model of homogentisate-releasing cell. *Comp. Biochem. Physiol. B. Biochem. Mol. Biol.* 119: 557-562.
- Sanger, F., Nicklen, S., Coulson, A. R.** (1977). DNA sequencing with chain terminating inhibitors. *Proc. Natl. Acad. Sci. USA* 74: 25-66.
- Scazzocchio, C.** (1997). Alcaptonuria: from humans to moulds and back. *TIG.* 13: 125-127.
- Schmidt, T., Pfeiffer, A., Ehrte, W., Kreiditsch, E., Ruckdeschel, G., Kaess, H.** (1989) *Legionella* infection of the colon presenting as acute attack of ulcerative colitis. *Gastroenterol.* 97: 751-755.
- Schmidt, B., Tradler, T., Rahfeld, J. U., Ludwig, B., Jain, B., Mann, K., Rücknagel, K. P., Janowski, B., Schierborn, A., Küllertz, G., Hacker, J., Fischer, G.** (1996). A cyclophilin-like peptidyl-prolyl *cis/trans* isomerase from *Legionella pneumophila* - characterization, molecular cloning and overexpression. *Mol. Microbiol.* 21: 1147-1160.
- Schmitt, D., Pakusch, A. E., Matern, U.** (1991). Molecular cloning, induction, and taxonomic distribution of caffeoyl-CoA 3-O-methyltransferase, an enzyme involved in disease resistance. *J. Biol. Chem.* 266: 17416-17423.
- Segal, G., Shuman, H. A.** (1997). Characterization of a new region required for macrophage killing by *Legionella pneumophila*. *Infect. Immun.* 65: 5057-5066.
- Segal, G., Purcell, M., Shuman, H. A.** (1998). Host cell killing and bacterial conjugation require overlapping sets of genes within a 22-kb region of *Legionella pneumophila* genome. *Proc. Nat. Acad. Sci.* 95: 1669-1674.

- Skerrett, S. J., Martin, T. R.** (1996). Roles for Tumor Necrosis Factor alpha and nitric oxide in resistance of rat alveolar macrophages to *Legionella pneumophila*. *Infect. Immun.* 64: 3236-3243.
- Smith, J. J., Howington, J. P., McFeters, A.** (1994). Survival, physiological response, and recovery of enteric bacteria exposed to a polar marine environment. *Appl. Environ. Microbiol.* 60: 2977-2984.
- Steinert, M.** (1991). Diplomarbeit, Universität Würzburg
- Steinert, M.** (1996). Dissertation, Universität Würzburg
- Steinert, M., Ott, M., Lück, P. C., Tannich, E., Hacker, J.** (1994) Studies on the uptake and intracellular replication of *Legionella pneumophila* in protozoa and in macrophage-like cells. *FEMS Microbiol Ecol.* 15: 299-308.
- Steinert, M., Engelhard, H., Flügel, M., Wintermeyer, E., Hacker, J.** (1995). The Lly protein protects *Legionella pneumophila* from light but does not directly influence its survival in *Hartmannella vermiformis*. *Appl. Environ. Microbiol.* 61: 2428-2430.
- Steinert, M., Emödy, L., Amman, R., Hacker, J.** (1997). Resuscitation of viable but nonculturable *Legionella pneumophila* Philadelphia I JR32 by *Acanthamoeba castellanii*. *Appl. Environ. Microbiol.* 63: 2047-2053.
- Steinman, H. M.** (1992). Construction of an *Escherichia coli* K-12 strain deleted for manganese and iron superoxide genes and its use in cloning the iron superoxide dismutase gene of *Legionella pneumophila*. *Mol. Gen. Genet.* 232: 427-430.
- Stephens, R. S., Kalman, S., Lammel, C. J., Fan, J., Marathe, R., Aravind, L., Mitchell, W. P., Olinger, L., Tatusov, R. L., Zhao, Q., Koonin, E. V., Davis, R. W.** (1998). Genome sequence of an obligate intracellular pathogen of humans: *Chlamydia trachomatis*. *Science* 282: 754-759.
- Stone, B. J., Abu Kwaik, Y.** (1998). Expression of multiple pili by *Legionella pneumophila*: identification and characterization of a type IV pilin gene its role in adherence to mammalian and protozoan cells. *Infect. Immun.* 66: 1768-1775.
- Strockbine, N. A., Marques, L. R., Newland, J. W., Smith, H. W., Holmes, R. K., O'Brien, A. D.** (1986). Two toxin-converting phages from *Escherichia coli* O157 : H7 strain 933 encode antigenically distinct toxins with similar biologic activities. *Infect. Immun.* 53: 135-140.
- Susa, M., Hacker, J., Marre, R.** (1996). *De novo* synthesis of *Legionella pneumophila* antigens during intracellular growth in phagocytic cells. *Infect. Immun.* 64: 1679-1684.
- Swanson, M. S., Isberg, R. R.** (1995a). Formation of the *Legionella pneumophila* replicative phagosome. *Infect. Agents Dis.* 2: 269-271.
- Swanson, M. S., Isberg, R. R.** (1995b). Association of *Legionella pneumophila* with the macrophage endoplasmic reticulum. *Infect. Immun.* 63: 3609-3620.

- Szeto, L., Shuman, H. A.** (1990). The *Legionella pneumophila* major secretory protein, a protease, is not required for intracellular growth or cell killing. *Infect. Immun.* 58: 2585-2592.
- Takada, H., Yoshimura, T., Ohshima, T., Esaki, N., Soda, K.** (1991). Thermostable phenylalanine dehydrogenase of *Thermoactinomyces intermedius*: cloning, expression, and sequencing of its gene. *J. Biochem.* 109: 371-376.
- Tartakovski, I. S., Belij, J. F., Prosorovski, S. W.** (1989). Mechanismen des zellulären Parasitismus von Legionellen und anderen Bakterien. *Z. Mikrobiol. epid. Immun.* 93-100.
- Tesh, J., Miller, R.** (1981). Amino acid requirements for *Legionella pneumophila* Growth. *J. Clin. Microbiol.* 13: 865-869.
- Tesh, J., Morse, S. A., Miller, R.** (1983). Intermediary metabolism in *Legionella pneumophila*: Utilization of amino acids and other compounds as energy sources. *J. Bacteriol.* 154: 1104-1109.
- Tholozan, J. L., Cappelier, J. M., Tissier, J. P., Delattre, G., Federighi, M.** (1999). Physiological characterization of viable-but-nonculturable *Campylobacter jejuni* cells. *Appl. Environ. Microbiol.* 65: 1110-1116.
- Thuring, R. W., Sanders, J. R., Borst, P.** (1975). A freeze-squeeze method for recovering long DNA from agarose gels. *Anal. Biochem.* 66: 213-220.
- Tison, D. L., Pope, D. H., Cherry, W. B., Fliermans, C. B.** (1980). Growth of *Legionella pneumophila* in association with blue-green algae (cyanobacteria). *Appl. Environ. Microbiol.* 39: 456-459.
- Towbin, H., Staehelin, T., Gordon, J.** (1979). Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets: procedure and some applications. *Proc. Natl. Acad. Sci. USA* 76: 4350-4354.
- Tully, M.** (1991). A plasmid from a virulent strain of *Legionella pneumophila* is conjugative and confers resistance to ultraviolet light. *FEMS Microbiol. Lett.* 90: 43-48.
- Tully, M., Sharpe, S. A., Ashworth, S.** (1992a). Transposon mutagenesis in *Legionella pneumophila*. I.-Persistence of suicide and broad host-range plasmids. *Res. Microbiol.* 143: 471-479.
- Tully, M., Williams, A., Fitzgeorge, R. B.** (1992b). Transposon mutagenesis in *Legionella pneumophila*. II.-Mutants exhibiting impaired intracellular growth within cultured macrophages and reduced virulence *in vivo*. *Res. Microbiol.* 143: 481-488.
- Venkataraman, C., Haack, B. J., Bondada, S., Abu Kwaik, Y.** (1997). Identification of a Gal/GalNac lectin in the protozoan *Hartmanella vermiformis* as a potential receptor for attachment and invasion by the legionnaires disease bacterium. *J. Exp. Med.* 186: 537-547.

- Vickers, R. M., Yu, V. L.** (1984). Clinical laboratory differentiation of *Legionellaceae* family members with pigment production and fluorescence on media supplemented with aromatic substrates. *J. Clin. Microbiol.* 19: 583-587.
- Vogel, J. P., Andrews, H. L., Wong, S. K., Isberg, R. R.** (1998). Conjugative transfer by the virulence system of *Legionella pneumophila*. *Science* 279: 873-876.
- Wai, S. N., Moriya, T., Kondo, K., Misumi, H., Amako, K.** (1996). Resuscitation of *Vibrio cholerae* O1 strain TSI-4 from a viable but nonculturable state by heat shock. *FEMS Microbiol. Lett.* 136: 187-191.
- Wang, G., Doyle, M. P.** (1998). Survival of enterohemorrhagic *Escherichia coli* O157 : H7 in water. *J. Food Prot.* 61: 662-667.
- Warburton, D. W., Austin, J. W., Harrison, B. H., Sanders, G.** (1998). Survival and recovery of *Escherichia coli* O157 : H7 in inoculated bottled water. *L. Food Prot.* 61: 948-952.
- Weeratna, R., Stamler, D. A., Edelstein, P. H., Ripley, M., Marrie, T. J., Hoskin, D., Hoffman, P. S.** (1994). Human and guinea pig immune responses to *Legionella pneumophila* protein antigens: vaccination of guinea pigs with OmpS, but not Hsp60, induces cell-mediated and protective immunity. *Infect. Immun.* 62: 3454-3462.
- Wehrmann, A., Morakkabati, S., Kramer, R., Sahn, H., Eggeling, L.** (1995). Functional analysis of sequences adjacent to *dapE* of *Corynebacterium glutamicum* reveals the presence of *aroP*, which encodes the aromatic amino acid transporter. *J. Bacteriol.* 177: 5991-5993.
- Weichart, D., Kjelleberg, S.** (1996). Stress resistance and recovery potential of culturable and viable but nonculturable cells of *Vibrio vulnificus*. *Microbiology* 124: 845-853.
- Weiss, E., Peacock M. G., Williams, C.** (1980). Glucose and Glutamate Metabolism of *Legionella pneumophila*. *Curr. Microbiol.* 4: 1-6.
- West, A. A., Rogers, J., Lee, V. J., Keevil, C. W.** (1993). Lack of dormancy in *Legionella pneumophila*? In: *Legionella: Current status and emerging perspectives* (Barbaree, J. M., Breiman, R. F., Dufour, P., Eds.) pp. 201-203. ASM, Washington, DC.
- Whitesides, M. D., Oliver, J. D.** (1997). resuscitation of *Vibrio vulnificus* from the viable but nonculturable state. *Appl. Environ. Microbiol.* 63: 1002-1005.
- Wiater, L. A., Sadosky, A. B., Shuman, A. B.** (1994). Mutagenesis of *Legionella pneumophila* using Tn903dIIIacZ: identification of growth-phase regulated pigmentation gene. *Mol. Microbiol.* 11: 641-653.
- Williams, J. G. K., Kubelick, K. J., Livak, J. A., Rafalski, J. A., Tingey, S. V.** (1990). DNA polymorphisms amplified by arbitrary primers as useful genetic markers. *Nucleic Acids Res.* 18: 6531-6535.
- Winn, W. C.** (1988). Legionnaires disease: historical perspective. *Clin. Microbiol. Rev.* 1: 60-81.

- Wintermeyer, E., Rdest, U., Ludwig, B., Debes, A., Hacker, J.** (1991). Characterization of legiolysin (Lly), responsible for haemolytic activity, color production and fluorescence of *Legionella pneumophila*. *Mol. Microbiol.* 5: 1135-1143.
- Wintermeyer, E., Flügel, M., Steinert, M., Rdest, U., Mann, K. H., Hacker, J.** (1994). Sequence determination and mutational analysis of the *lly* locus of *Legionella pneumophila*. *Infect. Immun.* 62: 1109-1117.
- Wintermeyer, E., Ludwig, B., Steinert, M., Schmidt, B., Fischer, G., Hacker, J.** (1995). Influence of site specifically altered Mip proteins on intracellular survival of *Legionella pneumophila* in eucaryotic cells. *Infect. Immun.* 63: 4576-4583.
- Wyckoff, E. E., Pishko, E. J., Kirkland, N. T., Cole, G. T.** (1995). Cloning and expression of a gene encoding a T-cell reactive protein from *Coccidioides immitis*: homology to 4-hydroxyphenylpyruvate dioxygenase and the mammalian F antigen. *Gene* 161: 107-111.
- Yabuuchi, E., Ohyama, A.** (1972). Charakterization of "pyomelanin"-producing strains of *Pseudomonas aeruginosa*. *Int. J. Syst. Bacteriol.* 22: 53-64.
- Yamamoto, Y., Klein, T. W., Newton, C. A., Widen, R., Friedman, H.** (1987). Differential growth of *Legionella pneumophila* in guinea pig versus mouse macrophage cultures. *Infect Immun.* 55: 1369-1374.
- Yanisch-Perron, C., Vieira, J., Messing, J.** (1985). Improved M13 phage cloning vectors and host strains: nucleotide sequences of M13mp18 and pUC19 vectors. *Gene* 33: 103-119.
- Yu, V. L., Zurafeff, J. J., Gavlik, L., Magnussen, M. H.** (1983). Lack of evidence for person to person transmission of Legionnaires' disease. *J. Infect. Dis.* 147: 362.
- Zähringer, U., Knirel, Y. A., Linder, B., Helbig, J. H., Sonesson, A., Marre, R., Rietschel, E. T.** (1995). In: *Proceedings of the third International Endotoxin Society*. Levin, J., Alving, C. R., Mundford, R. S., Redl, H., Eds.); Wiley and Liss, New York.
- Zhao, X., Dreyfus, L. A.** (1990). Expression and nucleotide sequence analysis of the *Legionella pneumophila recA* gene. *FEMS Microbiol. Lett.* 70: 227-232.