

















- [15] Rowbotham TJ. Preliminary report on the pathogenicity of *Legionella pneumophila* for freshwater and soil amoebae. *J Clin Pathol* 1980; 33: 1179-83.
- [16] Cirillo JD, Falkow S, Tompkins LS. Growth of *Legionella pneumophila* in *Acanthamoeba castellanii* enhances invasion. *Infect Immun* 1994; 62: 3254-61.
- [17] Brieland J, McClain M, Heath L, et al. Co-inoculation with *Hartmannella vermiformis* enhances replicative *Legionella pneumophila* infection in a murine model of Legionnaires' disease. *Infect Immun* 1996; 64: 2449-56.
- [18] Lau HY, Ashbolt NJ. The role of biofilms and protozoa in *Legionella* pathogenesis: implications for drinking water. *J Appl Microbiol* 2009; 107: 368-78.
- [19] Chang C-W, Hwang YH, Cheng WY, Chang CP. Effects of chlorination and heat disinfection on long-term starved *Legionella pneumophila* in warm water. *J Appl Microbiol* 2007; 102: 1636-44.
- [20] Garcia MT, Jones S, Pelaz C, Millar RD, Abu-Kwaik Y. *Acanthamoeba polyphaga* resuscitates viable non-culturable *Legionella pneumophila* after disinfection. *Environ Microbiol* 2007; 14: 1267-77.
- [21] Steinert M, Emödy L, Amann R, Hacker J. Resuscitation of viable but non-culturable *Legionella pneumophila* Philadelphia JR32 by *Acanthamoeba castellanii*. *Appl Environ Microbiol* 1997; 63: 2047-53.
- [22] Ducret A, Chabaliere M, Dukan S. Characterization and resuscitation of non-culturable cells of *Legionella pneumophila*. *BMC Microbiol* 2014; 14: 3.
- [23] Alleron L, Merlet N, Lacombe C, Frère J. Long-term survival of *Legionella pneumophila* in the viable but nonculturable state after monochloramine treatment. *Curr Microbiol* 2008; 14: 497-502.
- [24] Ditommaso S, Gentile M, Giacomuzzi M, Zotti CM. Recovery of *Legionella* species from water samples using an internal method based on ISO 11731: suggestions for revision and implementation. *Diagn Microbiol Infect Dis* 2011; 70: 200-6.
- [25] Moffat JF, Tompkins LS. A quantitative model of intracellular growth of *Legionella pneumophila* in *Acanthamoeba castellanii*. *Infect Immun* 1992; 60: 296-301.
- [26] Wellinghausen N, Frost C, Marre R. Detection of legionellae in hospital water samples by quantitative real-time LightCycler PCR. *Appl Environ Microbiol* 2001; 67: 3985-93.
- [27] Mérault N, Rusniok C, Jarraud S, et al. Specific real-time PCR for simultaneous detection and identification of *Legionella pneumophila* serogroup 1 in water and clinical samples. *Appl Environ Microbiol* 2011; 77: 1708-17.
- [28] Gianinazzi C, Schild M, Wüthrich F, et al. Screening Swiss water bodies for potentially pathogenic free-living amoebae. *Res Microbiol* 2009; 160: 367-74.
- [29] Thomas V, McDonnell G, Denyer SP, Maillard J-Y. Free-living amoebae and their intracellular pathogenic microorganisms: Risk for water quality. *FEMS Microbiol* 2010; 34: 231-59.
- [30] Thomas JM, Ashbolt NJ. Do free-living amoebae in treated drinking water systems present an emerging health risk? *Environ Sci Technol* 2011; 45: 860-9.
- [31] Bouwknecht M, Schijven JF, Schalk JAC, de Roda Husman AM. Quantitative risk estimation of *Legionella pneumophila* infection due to whirlpool use. *Risk Analysis* 2013; 33: 1228-36.
- [32] Mosteo R, Ormad MP, Goñi P, Rodríguez-Chueca J, García A, Clavel A. Identification of pathogen bacteria and protozoa in treated urban wastewaters discharged in the Ebro River (Spain): water reuse possibilities. *Water Sci Technol* 2013; 68: 575-83.
- [33] Coulon C, Collignon A, McDonnell G, Thomas V. Resistance of *Acanthamoeba* cysts to disinfection treatments used in health care settings. *J Clin Microbiol* 2010; 48: 2689-97.
- [34] Buse HY, Ashbolt NJ. Differential growth of *Legionella pneumophila* strains within a range of amoebae at various temperatures associated with in-premise plumbing. *Lett Appl Microbiol* 2011; 53: 217-24.
- [35] Thomas V, Bouchez T, Nicolas V, Robert S, Loret JF, Lévi Y. Amoebae in domestic water systems: resistance to disinfection treatments and implication in *Legionella* persistence. *J Appl Microbiol* 2004; 97: 950-63.
- [36] Wéry N, Bru-Adan V, Minervini C, Delgenes JP, Garrelly L, Godon JJ. Dynamics of *Legionella* spp. and bacterial populations during the proliferation of *L. pneumophila* in cooling tower facility. *Appl Environ Microbiol* 2008; 74: 3030-7.
- [37] Chiao TH, Clancy TM, Pinto A, Xi C, Raskin L. Differential resistance of drinking water bacterial populations to monochloramine disinfection. *Environ Sci Technol* 2014; 48: 4038-47.
- [38] Barker J, Brown MR, Collier PJ, Farrell I, Gilbert P. Relationship between *Legionella pneumophila* and *Acanthamoeba polyphaga*: Physiological status and susceptibility to chemical inactivation. *Appl Environ Microbiol* 1992; 58: 2420-25.
- [39] Greub G, Raoult D. Morphology of *Legionella pneumophila* according to their localization within *Hartmannella vermiformis*. *Res Microbiol* 2003; 154: 619-21.
- [40] Behets J, Declercq P, Delaet Y, Verelst L, Ollevier F. Survey for the presence of specific free-living amoebae in cooling waters from Belgian power plants. *Parasitol Res* 2007; 100: 1249-56.
- [41] Rowbotham TJ. Isolation of *Legionella pneumophila* from clinical specimens via amoebae, and the interaction of those and other isolates with amoebae. *J Clin Pathol* 1983; 36: 978-86.
- [42] Greub G, Raoult D. Microorganisms resistant to free-living amoebae. *Clin Microbiol Rev* 2004; 17: 413-33.
- [43] Bozue JA, Johnson W. Interaction of *Legionella pneumophila* with *Acanthamoeba castellanii*: Uptake by coiling phagocytosis and inhibition of phagosome-lysosome fusion. *Infect Immun* 1996; 64: 668-73.
- [44] Bigot R, Bertaux J, Frere J, Berjeaud JM. Intra-amoeba multiplication induces chemotaxis and biofilm colonization and formation for *Legionella*. *PLoS One* 2013; 8: e77875.