

References

1. Grayston JT, Kuo CC, Wang SP, et al. A new *Chlamydia psittaci* strain, TWAR, isolated in acute respiratory tract infections. *N Engl J Med* 1986;315:161- 168.
 2. Grayston JT, Campbell LA, Kuo CC, et al. A new respiratory tract pathogen: *Chlamydia pneumoniae* strain TWAR. *J Infect Dis* 1990;161:618-625.
 3. Grayston JT. *Chlamydia pneumoniae*, strain TWAR pneumonia. *Ann Rev Med* 1992;43:317-323.
 4. Grayston JT. Infections caused by *Chlamydia pneumoniae* strain TWAR. *Clin Infect Dis* 1992;15:757-63.
 5. Blasi F, Cosentini R, Tarsia P. *Chlamydia pneumoniae* respiratory infections. *Curr Opin Infect Dis* 2000;13:161-164.
 6. Burillo A, Bouza E. *Chlamydia pneumoniae*. *Infect Dis Clin North Am* 2010;24:61-71.
 7. Moazed TC, Kuo CC, Grayston JT, Campbell LA. Evidence of systemic dissemination of *Chlamydia pneumoniae* via macrophages in the mouse. *J Infect Dis* 1998;177:1322-1325.
 8. Gieffers J, van Zandbergen G, Rupp J, et al. Phagocytes transmit *Chlamydia pneumoniae* from the lungs to the vasculature. *Eur Respir J* 2004;23:506-510.
 9. Witte L, Droemann D, Dalhoff K, Rupp J. *Chlamydia pneumoniae* is frequently detected in the blood after acute respiratory tract infection. *Eur Respir J* 2011;37: 712-714.
 10. Trentmann O, Horn M, van Scheltinga AC, Neuhaus HE, Haferkamp I. Enlightening energy parasitism by analysis of an ATP/ADP transporter from *chlamydiae*. *PLoS Biol* 2007;5:e231.
 11. Fisher SF, Vier J, Kirschnek S, et al. *Chlamydia* inhibit host cell apoptosis by degradation of proapoptotic BH3-only proteins. *J Exp Med* 2004;200:905- 916.
 12. Sarkar A, Moller S, Bhattacharyya A, et al. Mechanisms of apoptosis inhibition in *Chlamydia pneumoniae*-infected neutrophils. *Int J Med Microbiol* 2015;305:493-500.
 13. Sarkar A, Moller S, Bhattacharyya A, et al. Mechanisms of apoptosis inhibition in *Chlamydia pneumoniae*-infected neutrophils. *Int J Med Microbiol* 2015;305:493-500.
 14. Van Zandbergen G, Gieffers J, Kothe H, et al. *Chlamydia pneumoniae* multiply in neutrophil granulocytes and delay their spontaneous apoptosis. *J Immunol* 2004;172:1768-1776.
- Cardiac Disease**
15. Rasmussen SJ, Eckmann L, Qualyle AJ, et al. Secretion of proinflammatory cytokines by epithelial cells in response to *Chlamydia* infection suggests a central role for epithelial cells in chlamydial pathogenesis. *J Clin Invest* 1997;99:77-87.
 16. Gaydos CA. Growth in vascular cells and cytokine production by *Chlamydia pneumoniae*. *J Infect Dis* 2000;30:541-549.

17. Fryer RH, Schwobe EP, Woods ML, Rodgers GM. *Chlamydia species infect human vascular endothelial cells and induce procoagulant activity.* *J Invest Med* 1997; 45:168-174.
18. Dechend R, Maass M, Gieffers J, Dietz R, Scheidereit C, Leutz A, Gulba DC. *Chlamydia pneumoniae infection of vascular smooth muscle and endothelial cells activates NF-kappaB and induces tissue factor and PAI-1 expression: a potential link to accelerated arteriosclerosis.* *Circulation* 1999;100:1369- 1373.
19. Boman J, Soderberg S, Forsberg J, et al. *High prevalence of Chlamydia pneumoniae DNA in peripheral blood mononuclear cells in patients with cardiovascular disease and in middle-aged blood donors.* *J Infect Dis* 1998;178:274-277.
20. Kaul R, Uphoff J, Wiedeman J, Yadlapalli S, Wenman WM. *Detection of Chlamydia pneumoniae DNA in CD3+ lymphocytes from healthy blood donors and patients with coronary artery disease.* *Circulation* 2000;102:2341-2346.
21. Saikku P. *Chlamydia pneumoniae infection as a risk factor in acute myocardial infarction.* *Eur Heart J* 1993;14(Suppl K):S62-65.
22. Saikku P. *Epidemiology of Chlamydia pneumoniae in atherosclerosis.* *Am Heart J* 1999;138(5 Pt 2):S500-503.
23. Saikku P. *Epidemiologic association of Chlamydia pneumoniae and atherosclerosis: the initial serologic observation and more.* *J Infect Dis* 2000;181(Suppl 3):S411-413.

Asthma

24. Hahn DL, Dodge RW, Golubjatnikov R. *Association of Chlamydia pneumoniae (strain TWAR) infection with wheezing, asthmatic bronchitis, and adult-onset asthma.* *JAMA* 1991;266:225-230.
25. Hahn DL. *Chlamydia pneumoniae and asthma.* *Thorax* 1998;53:1095-1066.
26. Endo Y, Shirai T, Saigusa M, Mochizuki E. *Severe acute asthma caused by Chlamydia pneumoniae.* *Respirol Case Rep* 2017;5:e00239.
27. Emre U, Roblin PM, Gelling M, et al. *The association of Chlamydia pneumoniae infection and reactive airway disease in children.* *Arch Pediatr Adolesc Med* 1994;148:727-732.
28. Webley WC, Salva PS, Andrzejewski C, et al. *The bronchial lavage of pediatric patients with asthma contains infectious Chlamydia.* *Am J Respir Crit Care Med* 2005;171:1083-1088.
29. Asner SA, Jatun K, Kyprianidou S, et al. *Chlamydia pneumoniae: possible association with asthma in children.* *Clin Infect Dis* 2014;58:1198-1199.
30. Iramain R, De Jesus R, Spitters C, et al. *Chlamydia pneumoniae and Mycoplasma pneumoniae: are they related to severe asthma in childhood?* *J Asthma* 2016;53:618-621.
31. Rodel J, Woytas M, Groh A, et al. *Production of basic fibroblast growth factor and interleukin 6 by human smooth muscle cells following infection with Chlamydia pneumoniae.* *Infect Immun* 2000;68:3635-3641.
32. Hahn DL, Peeling RW. *Airflow limitation, asthma, and Chlamydia pneumoniae-specific heat shock protein 60.* *Ann Allergy Asthma Immunol* 2008;101:614-618.

33. Metz G, Kraft M. *Effects of atypical infections with Mycoplasma and Chlamydia on asthma. Immunol Allergy Clin North Am* 2010;30:575-585.
34. Burrows B, Martinez FD, Halonen M, et al. *Association of asthma with serum IgE levels and skin-test reactivity to allergens. N Engl J Med* 1989;320:271- 277.
35. Emre U, Sokolovskaya N, Roblin PM, et al. *Detection of anti-Chlamydia pneumoniae IgE in children with reactive airway disease. J Infect Dis* 1995;172:265-267.
36. Patel KK, Anderson E, Salva PC, Webley WC. *The prevalence and identity of Chlamydia-specific IgE in children with asthma and other chronic respiratory symptoms. Respir Res* 2012;13:32.
37. Hahn DL, Schure A, Patel K, et al. *Chlamydia pneumoniae-specific IgE is prevalent in asthma and is associated with disease severity. PLoS One* 2012;7:e35945.
38. Johnston SL, Blasi F, Black PN, et al. *The effect of telithromycin on acute exacerbations of asthma. N Engl J Med* 2006;354:1589-1600.
39. Dzhindzhikhashvili MS, Joks R, Smith-Norowitz T, et al. *Doxycycline suppresses Chlamydia pneumoniae-mediated increases in ongoing immunoglobulin E and interleukin-4 responses by peripheral blood mononuclear cells of patients with allergic asthma. J Antimicrob Chemotherapy* 2013;68:2363-2368.
40. Gibson PG, Yang IA, Upham JW, et al. *Effect of azithromycin on asthma exacerbations and quality of life in adults with persistent uncontrolled asthma (AMAZES): a randomised, double-blind, placebo-controlled trial. Lancet* 2017;390:659-668.
41. Hahn DL, Webley WC. *Chronic Chlamydia pneumoniae lung infection: a neglected explanation for macrolide effects in wheezing and asthma? Lancet Resp Dis* 2016;4:e8.
42. Webley WC, Hahn DL. *Infection-mediated asthma: etiology, mechanisms and treatment options, with focus on Chlamydia pneumoniae and macrolides. Respir Res* 2017;18:98.

Neurologic Disorders: Alzheimer's and MS

43. Boelen E, Steinbusch HW, Bruggeman CA, Stassen FR. *The inflammatory aspects of Chlamydia pneumoniae-induced brain infection. Drugs Today* 2009;48(Suppl B):159-164.
44. Contini C, Seraceni S, Cultrera R, et al. *Chlamydia pneumoniae infection and its role in neurological disorders. Interdiscip Perspect Infect Dis* 2010;2010:273573.
45. Stallings TL. *Association of Alzheimer's disease and Chlamydia pneumoniae. J Infect* 2008;56:423-31.
46. Balin BJ, Gerard HC, Arking EJ, et al. *Identification and localization of Chlamydia pneumoniae in the Alzheimer's brain. Med Microbiol Immunol* 1998;187:23-42.
47. Arking EJ, Appelt DM, Abrams JT, et al. *Ultrastructure analysis of Chlamydia pneumoniae in the Alzheimer's brain. Pathogenesis* 1999;1:201- 211.
48. Gieffers J, Reusche E, Solbach W, Maass M. *Failure to detect Chlamydia pneumoniae in brain sections of Alzheimer's disease patients. J Clin Microbiol* 2000;38:881-882.

49. Ring RH, Lyons JM. Failure to detect *Chlamydia pneumoniae* in the late-onset Alzheimer's brain. *J Clin Microbiol* 2000;38:2591-2594.
50. Hammond CJ, Hallock LR, Howanski RJ, et al. Immunohistological detection of *Chlamydia pneumoniae* in the Alzheimer's disease brain. *BMC Neurosci* 2010;11:121.
51. Gerard HC, Dreses-Werringloer U, Wildt KS, et al. *Chlamydophila (Chlamydia) pneumoniae* in the Alzheimer's brain. *FEMS Immunol Med Microbiol* 2006;48:355-366.
52. Dreses-Werringloer U, Bhuiyan M, Zhou Y, et al. Initial characterization of *Chlamydophila (Chlamydia) pneumoniae* cultured from the late-onset Alzheimer brain. *Int J Med Microbiol* 2009;299:187-201.
53. Little CS, Hammond CJ, MacIntyre A, et al. *Chlamydia pneumoniae* induces Alzheimer-like amyloid plaques in brains of BALB/c. *Neurobiol Aging* 2004;25:419-429.
54. Maheshwari P, Eslick GD. Bacterial infection and Alzheimer's disease: a meta-analysis. *J Alzheimers Dis* 2015;43:957-966.
55. Miklossy J, Khalili K, Gern L, et al. *Borrelia burgdorferi* persists in the brain in chronic lyme neuroborreliosis and may be associated with Alzheimer's disease. *J Alzheimers Dis* 2004;6:639-681.
56. Miklossy J. Alzheimer's disease – a neurospirochetosis. Analysis of the evidence following Koch's and Hill's criteria. *J Neuroinflammation* 2011;8:90.
57. Miklossy J. Historic evidence to support a causal relationship between spirochetal infection and Alzheimer's disease. *Front Aging Neurosci* 2015;7:46.
58. Allen HB. Alzheimer's disease: assessing the role of spirochetes, biofilms, the immune system, and amyloid-beta with regard to potential treatment and prevention. *J Alzheimers Dis* 2016;53:1271-1276.
59. Balin BJ, Little CS, Hammond CJ, Appelt DM, Whittum-Hudson JA, Gerard HC, Hudson AP. *Chlamydophila pneumoniae* and the etiology of late-onset Alzheimer's disease. *J Alzheimers Dis* 2008;13:371-380.
60. Fainardi E, Castellazzi M, Seraceni S, et al. Under the microscope: focus on *Chlamydia pneumoniae* infection and multiple sclerosis. *Curr Neurovasc Res* 2008;5:60-70.
61. Stratton CW, Wheldon DB. Multiple sclerosis: an infectious syndrome involving *Chlamydophila pneumoniae*. *Trends Microbiol* 2006;14:474-479.
62. Stratton CW. A review of multiple sclerosis as an infectious syndrome. *J Neurol Neurophysiol* 2016;7:5.
63. Sriram S, Ljunggren-Rose A, Yao SY, Whetsell WO Jr. Detection of chlamydial bodies and antigens in the central nervous system of patients with multiple sclerosis. *J Infect Dis* 2005;192:1219-1228.
64. Yao SY, Stratton CW, Mitchell WM, Sriram S. CSF oligoclonal bands in MS include antibodies against *Chlamydophila* antigens. *Neurology* 2001;56:1168-1176.
65. Fainardi E, Castellazzi M, Tamborino C, Seraceni S, Tola MR, Granieri E, Contini C. *Chlamydia pneumoniae*-specific intrathecal oligoclonal antibody response is predominantly detected in a subset of multiple sclerosis patients with progressive forms. *J Neurovirol* 2009;15:425-343.

66. Dong-Si T, Weber J, Liu YB, et al. Increased prevalence of and gene transcription by *Chlamydia pneumoniae* in cerebrospinal fluid in patients with relapsing-remitting multiple sclerosis. *J Neurol* 2004;251:542-547.
67. Contini C, Seraceni S, Castellazzi M, Fainardi E. *Chlamydia pneumoniae* DNA and mRNA transcript levels in peripheral blood mononuclear cells and cerebrospinal fluid of patients with multiple sclerosis. *Neurosci Res* 2008;62:58-61.
68. Tang YW, Sriram S, Li H, et al. Qualitative and quantitative detection of *Chlamydia pneumoniae* DNA in cerebrospinal fluid from multiple sclerosis patients and controls. *PLoS One* 2009;4:e5200.
69. Contini C, Seraceni S, Cultrera R, et al. Molecular detection of Parachlamydia-like organisms in cerebrospinal fluid of patients with multiple sclerosis. *Mult Scler* 2008;14:564-566.
70. Woessner R, Grauer MT, Frese A, Bethke F, Ginger T, Hans A, Treib J. Long-term antibiotic treatment with roxithromycin in patients with multiple sclerosis. *Infection* 2008;34:342-344.
71. Sriram S, Yao SY, Stratton C, Moses H, Narayana PA, Wolinsky JS. Pilot study to examine the effect of antibiotic therapy on MRI outcomes in RRMS. *J Neurol Sci* 2005;234:87-91.
72. Thibault P, Attia J, Oldmeadow C. A prolonged antibiotic protocol to treat persistent *Chlamydia pneumoniae* infection improves the extracranial venous circulation in multiple sclerosis. *Phlebology* 2017; In Press.

Arthritis

73. Carter JD, Hudson AP. Recent advances and future directions in understanding and treating *Chlamydia*-induced reactive arthritis. *Expert Rev Clin Immunol* 2017;13:197-206.
74. Gerard HC, Schumacher HR, El-Gabalawy H, et al. *Chlamydia pneumoniae* present in the human synovium are viable and metabolically active. *Microb Pathog* 2000;29:17-24.
75. Gerard HC, Carter JD, Hudson AP. *Chlamydia trachomatis* is present and metabolically active during the remitting phase in synovial tissues from patients with chronic *Chlamydia*-induced reactive arthritis. *Am J Med Sci* 2013;346:22-25.
76. Villareal C, Whittum-Hudson JA, Hudson AP. Persistent *Chlamydiae* and chronic arthritis. *Arthritis Res* 2002;4:5-9.
77. Gerard HC, Whittum-Hudson JA, Carter JD, Hudson AP. Molecular biology of infectious agents in chronic arthritis. *Rheum Dis Clin North Am* 2009;35:1-19.
78. Carter JD, Hudson AP. The evolving story of *Chlamydia*-induced reactive arthritis. *Curr Opin Rheumatol* 2010;22:424-430.
79. Kvien TK, Gaston JS, Bardin T, et al. Three-month treatment of reactive arthritis with azithromycin: a EULAR double blind, placebo controlled study. *Ann Rheum Dis* 2004;63:1113-1119.
80. Carter JD, Valeriano J, Vasey FB. Doxycycline versus doxycycline and rifampin in undifferentiated spondyloarthropathy, with special reference to *chlamydia*-induced arthritis. A prospective, randomized 9-month comparison. *J Rheumatol* 2004;31:1973-1980.

81. Carter JD, Espinoza LR, Inman RD, et al. Combination antibiotics as a treatment for chronic Chlamydia-induced reactive arthritis: a double-blind, placebo-controlled, prospective trial. *Arthritis Rheum* 2010;62:1298-1307.
82. Rihl M, Kulpers JG, Zeidler H. Combination antibiotics for Chlamydia-induced arthritis: breakthrough to a cure? *Arthritis Rheum* 2010;62:1203- 1207.
83. Arto T, Pulliainen, Christof Dehio. Persistence of Bartonella spp. stealth pathogens: from subclinical infections to vasoproliferative tumor formation. *FEMS Microbiol Rev* 36 (2012) 563–599.