

VII. REFERENCES

- Balcewicz-Sablinska, M.K., Keane, J., Kornfeld, H. and Remold, H.G. (1998). Pathogenic *Mycobacterium tuberculosis* evades apoptosis of host macrophages by release of TNF-R2, resulting in inactivation of TNF- α . *J. Immunol.*, 161: 2636-2641.
- Benedict, C.A., Banks, T.A. and Ware, C.F. (2003). Death and survival: viral regulation of TNF signaling pathways. *Curr. Opin. Immunol.*, 15: 59-65.
- Bevilacqua, M.P., Armani, D., Mosesson, M.W. and Bianco, C. (1981). Receptors for cold-insoluble globulin (plasma fibronectin) on human monocytes. *J. Exp. Med.*, 153: 42-60.
- Bloom, B.R. *Tuberculosis, Pathogenesis, Protection and Control*. Washington, DC. American Society for Microbiology Press, 1994.
- Bogdan, C. (2001). Macrophages. *Encyclopedia of Life Science*, pp. 1-9.
- Chan, J., Fan, X.D., Hunter, S.W., Brennan, P.J. and Bloom, B.R. (1991). Lipoarabinomannan, a possible virulence factor involved in persistence of *Mycobacterium tuberculosis* within macrophages. *Infect. Immun.*, 59(5): 1755-1761.
- Chatterjee, D., Roberts, A.D., Lowell, K., Brennan, P.J. and Orme, I.M. (1992). Structural basis of capacity of lipoarabinomannan to induce secretion of tumor necrosis factor. *Infect. Immun.*, 60(3): 1249-1253.

Clemens, L.D., Lee, B.Y. and Horwitz, M.A. (2002) The *Mycobacterium tuberculosis* phagosome in human macrophages is isolated from the host cell cytoplasm. . *Infect. Immun.*, 70(10): 5800-5807.

Cole, S.T., Brosch, R., Parkhill, J., Garnier, T., Churcher, C., Harris, D., Goeron, S.V. and Barrell, B.G. (1998). Deciphering the biology of *Mycobacterium tuberculosis* from the complete genome sequence. *Nature*, 393(11): 537-544.

Cywes, C., Godenir, N.L., Hoppe, H.C., Scholle, R.R., Steyn, Kirsch, R.E. and Ehlers, M.R.W. (1996). Nonopsonic binding of *Mycobacterium tuberculosis* to human complement receptor type 3 expressed in Chinese hamster ovary cells. *Infect. Immun.*, 64(12): 5373-5383.

Cywes, C., Hoppe, H.C., Daffee, M. and Ehlers, R.W. (1997). Nonopsonic binding of *Mycobacterium tuberculosis* to complement receptor type 3 is mediated by capsular polysaccharide and is strain dependent. *Infect. Immun.*, 65(10): 4258-4266.

Davies, P. (2001). Tuberculosis. *Encyclopedia of Life Science*, pp. 1-9.

Dao, D.N., Kremer, L., Guerardel, Y., Molamo, A., Jacobs, W.R., Porcelli, S.A. and Briken, V. (2004). *Mycobacterium tuberculosis* lipomannan induces apoptosis and interleukin-12 production in macrophages. *Infect. Immun.*, 72(4): 2067-2074.

De Voss, J.J., Rutter, K., Schroeder, B.G., Su, H., Zhu, Y. and Barry III, C.E. (2000). The salicylate-derived mycobactin siderophores of *Mycobacterium tuberculosis* are essential for growth in macrophages. *Proc. Natl. Acad. Sci. USA*, 97: 1252-1257.

- Dockrell, D.H., Lee, M., Lynch, D.H. and Read, R.C. (2001). Immune-mediated phagocytosis and killing of *Streptococcus pneumonia* are associated with direct and bystander macrophages apoptosis. *J. Infect. Dis.*, 184: 713-722.
- Downing, J.F., Pasula, R., Wright, J.R., Twig II, H.L. and Martin II, W.J. (1995). Surfactant protein A promotes attachment of *Mycobacterium tuberculosis* to alveolar macrophages during infection with human immunodeficiency virus. *Proc. Natl. Acad. Sci. USA*, 92: 4848-4852.
- Dye, C., Williams, B.G., Espinal, M.A. and Raviglione, M.C. (2002). Erasing the world's slow stain: strategies to beat multidrug-resistant tuberculosis. *Science*, 295: 2042
- Ernst, I.D. (1998). Macrophage receptors for *Mycobacterium tuberculosis*. *Infect. Immun.*, 66(4): 1277-1281.
- Fairbrain, I.P. (2004). Macrophage apoptosis in host immunity to mycobacterial infections. *Biochem. Soc. Trans.*, 32: 496-498.
- Fenton, J.M. and Vermeulen, M.W. (1996). Immunopathology of tuberculosis : role of macropahges and monocytes. *Infect. Immun.*, 64(3): 683-690.
- Ferrari, G., Langen, H., Naito, M. and Pieters, J. (1999). A coat protein on phagosomes involved in the intracellular survival of mycobacteria. *Cell*, 97(4): 435-447.
- Fratazzi, C., Arbeit, R.D., Carini, C. and Remold, H.G. (1997). Programmed cell death of *Mycobacterium avium* serovar 4-infected human macrophages prevents the mycobacteria from spreading and induces mycobacterial growth inhibition by freshly added, uninfected macrophages. *J. Immunol.*, 158: 4320-4327.

- Freundlich, B. and Avdalovic, N. (1983). Use of gelatin/plasma coated flasks for isolating human peripheral blood monocytes. *J. Immunol. Methods*, 62: 31-37.
- Gavrilescu, L.C. and Denkers, E.Y. (2003). Apoptosis and the balance of homeostatic and pathologic responses to protozoan infection. *Infect. Immun*, 71(11): 6109-6115.
- Gaynor, C.D., McCormack, F.X., Voelker, D.R., McGowan, S.E. and Schlesinger, L.S. (1995). Pulmonary surfactant protein A mediates enhanced phagocytosis of *Mycobacterium tuberculosis* by a direct interaction with human macrophages. *J. Immunol*, 155: 5343-5351.
- Germanier, R. Bacterial vaccines. Academic Press Inc., Orlando, Florida, 1984.
- Grange, J.M. Mycobacteria and human disease. Oxford University Press, Inc., New York, 1996.
- Hetts, S.W. (1998). To die or not to die : an overview of apoptosis and its role in disease. *JAMA*, 279(4): 300-307.
- Jones, B.M., Nicholson, J.K.A., Holman, R.C. and Hubbard, M. (1989). Comparison of monocyte separation methods using flow cytometric analysis. *J. Immunol. Methods*, 125: 41-47.
- Kaufmann, S.H.E. (2002). Protection against tuberculosis : cytokines, T cells, and macrophages. *Ann.Rheum.Dis*, 61: 54-58.
- Keane, J., Sablinska, M.K.B., Remold, H.G., Chupp, G.L., Meek, B.B., Fenton, M.J. and Kornfeld, H. (1997). Infection by *Mycobacterium tuberculosis* promotes human alveolar macrophage apoptosis. *Infect. Immun*, 65(1): 298-304.

Keane, J., Remold, H.G. and Kornfeld, H. (2000). Virulent *Mycobacterium tuberculosis* strains evade apoptosis of infected alveolar macrophages. *J. Immunol.*, 164: 2016-2020.

Klinger, K., Brandli, O., Aston, C., Kim, R., Chi, C. and Rom, W.N. (1997). Effects of mycobacteria on regulation of apoptosis in mononuclear phagocytes. *Infect. Immun.*, 65(12): 5272-5278.

Lopez, M., Sly, L.M., Luu, Y., Young, D., Cooper, H. and Reiner, N.E. (2003). The 19-kDa *Mycobacterium tuberculosis* protein induces macrophage apoptosis through toll-like receptor-2. *J. Immunol.*, 170: 2409-2416.

McDonough, K.A., Kress, Y. and Bloom, B.R. (1993). Pathogenesis of tuberculosis : interaction of *Mycobacterium tuberculosis* with macrophages. *Infect. Immun.*, 61(7): 2763-2773.

Molloy, B.A., Laochumroonvorapong, P. and Kaplan, G. (1994). Apoptosis, but not necrosis, of infected monocytes is coupled with killing of intracellular Bacillus Calmette-Guerin. *J. Exp. Med.*, 180: 1499-1509.

Monack, M.D., Hersh, D., Smith, M.R., Ghori, N., Falkow, S. and Zychlinsky, A. (1999). The *Salmonella* invasin SipB induces macrophage apoptosis by binding to caspase-1. *Proc. Natl. Acad. Sci. USA*, 96: 2396-2401.

Narain, J.P. Tuberculosis, Epidemiology and Control. World Health Organization, Regional office for Southeast Asia, New Delhi, 2002.

Nigou, J., Gilleron, M., Rojas, M., Garcia, L.F., Thurnher, M. and Puzo, G. (2002). Mycobacterial lipoarabinomannan: modulators of dendritic cell function and apoptotic response. *Microbes. Infect.*, 4: 945-953.

- Nuzzo, I., Galdiero, M., Bentivoglio, C., Galdieri, R. and Carratelli, C.R. (2002). Apoptosis modulation by mycolic acid, tuberculostearic acid and trehalose 6,6'-dimycolate. *J. Infect.*, 44: 229-235.
- Oddo, M., Renno, T., Attinger, A., Bakker, T., McDonald, H.R. and Meylan, P.R.A. (1998). Fas ligand-induced apoptosis of infected human macrophages reduces the viability of intracellular *Mycobacterium tuberculosis*. *J. Immunol.*, 160: 5488-5454.
- Opferman, J.T. and Korsmeyer, S.J. (2003). Apoptosis in the development and maintenance of the immune system. *Nat. Immunol.*, 4(5): 410-415.
- Peracchia, M.T., Barratt, G. and Couvreur, P. (2001). Mononuclear phagocytic system. *Encyclopedia of Life Science*, pp. 1-5.
- Piddington, D.L., Fang, F.C., Laessig, T., Cooper, A.M., Orme, I.M. and Buchmeier, N.A. (2001). Cu, Zn superoxide dismutase of *Mycobacterium tuberculosis* contributes to survival in activated macrophages that are generating an oxidative burst. *Infect. Immun.*, 69(8): 4980-4987.
- Rojas, M., Barrera, L.F. and Garcia, L. (1998). Induction of apoptosis in murine macrophage by *Mycobacterium tuberculosis* is reactive oxygen intermediates-independent. *Biochem. Biophys. Res. Commun.*, 247: 436-442.
- Schlesinger, L.S. (1993). Macrophage phagocytosis of virulent but not attenuated strains of *Mycobacterium tuberculosis* is mediated by mannose receptors in addition to complement receptors. *J. Immunol.*, 150: 2920-2929.
- Schorey, J.S., Carroll, M. and Brown, E.J. (1997). A macrophage invasion mechanism of pathogenic mycobacteria. *Science*, 277: 1091-1093.

Schreiber, S., Perkins, S.L., Teitelbaum, S.L., Chappel, J., Stahl, P.D. and Blum, J.S. (1993). Regulation of mouse bone marrow macrophage mannose receptor expression and activation by prostaglandin E and IFN-gamma. *J. Immunol.*, 151: 4973-4981.

Sibley, L.D., Hunter, S.W., Brennan, P.J. and Krahenbuhl, J.L. (1988). Mycobacterial lipoarabinimannan inhibits gamma interferon-mediated activation of macrophages. *Infect. Immun.*, 56(5): 1232-1236.

Silver, R.F., Li, Q. and Eliner, J.J. (1998). Expression of virulence of *Mycobacterium tuberculosis* within human monocytes : virulence correlates with intracellular growth and induction of tumor necrosis factor alpha but not with evasion of lymphocyte-dependent monocyte effector functions. *Infect. Immun.*, 66(3): 1190-1199.

Strasser, A., O'Connor, L. and Dixit, V.M. (2000). Apoptosis signaling. *Annu. Rev. Biochem.*, 69: 217-245.

Stokes, R.W., Jones, R.N., Brooks, D.E., Beveridge, T.J., Doxsee, D. and Thorson, L.M. (2004). The Glycan-rich outer layer of the cell wall of *Mycobacterium tuberculosis* acts as an antiphagocytic capsule limiting the association of the bacterium with macrophages. *Infect. Immun.*, 72(10): 5676-5686.

Studzinski, G.P. Apoptosis: A practical approach. Oxford University Press Inc., New York, 1999.

Swartz, R.P., Naai, D., Vogel, C.W. and Yeager, H. (1988). Differences in uptake of mycobacteria by human monocytes: a role of complement. *Infect. Immun.*, 56 (9): 2223-2227.

Taylor, M.E. (1993). Recognition of complex carbohydrates by the macrophage mannose receptor. *Biochem. Soc. Trans.*, 21: 468-473.

Velasco-Velazquez, M.A., Barrera, D., Gonzalez-Arenas, A., Rosales, C. and Agramonte-Hevia, J. (2003). Macrophage-*Mycobacterium tuberculosis* interactions: role of complement receptor 3. *Microb. Pathog.*, 35(3): 125-131.

Wright, E.L., Quenelle, D.C., Suring, W.J. and Barrow, W.W. (1996). Use of mono Mac6 human monocytic cell line and J774 murine macrophages cell line in parallel antimycobacterial drug studies. *Antimicrob. Agent. Chemother.*, 40(9): 2206-2208.

Wu, M., Ding, H.F. and Fisher, D.E. (2001). Apoptosis: molecular mechanism. *Encyclopedia of Life Science*, pp. 1-8.

Yamashiro, S., Kawakami, K., Uezu, K., Kinjo, T., Miyagi, K., Nakamura, K. and Saito A. (2005). Lower expression of Th1-related cytokines and inducible nitric oxide synthase in mice with streptozotocin-induced diabetes mellitus infected with *Mycobacterium tuberculosis*. *Clin Exp Immunol.*, 139(1): 57-64.

Zychlinsky, A., Prevost, M.C. and Sansonetti, P.J. (1992). *Shigella flexneri* induces apoptosis in infected macrophages. *Nature*, 358: 167-169.