the F genotype is significantly associated with protection to severe malaria ($p = 0.045$; OR $= 0.909$, 95% CI $= 0.819–1.008$). The results therefore suggest that whilst the mixed genotype CF EBA-175 is associated with malaria severity, the F genotype of EBA-175 is protective.

doi:10.1016/j.ijid.2008.05.023

14.010

*Mycobacterium avium* KatG protein (MAV2753): Possible Role in the Pathogenesis of MAC disease

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**Background:** The dissemination of *Mycobacterium avium* complex (MAC) disease could be due to certain mycobacterial factors causing cytotoxicity of host cells, thereby leading to lysis of the cells and spreading of infection. Recently, in our lab, an 82 kDa *M. avium* immunodominant protein was identified to be *M. avium* KatG homologue (MAV2753). The BLAST search showed the N-terminal 40 amino acids of *M. avium* KatG to be 100% different from the N-terminal of *M. tuberculosis* KatG. Present study was designed to explore the role of *M. avium* KatG protein in the interaction with the host cells and its possible role in the pathogenesis of MAC disease.

**Methods:** Organ specific (human alveolar macrophages and A549 lung epithelial cell line) and systemic cells (human blood monocyte derived macrophages) were used to study the interaction of *M. avium* KatG protein in terms of various cytological, molecular and biochemical changes.

**Results:** *M. avium* KatG protein showed significant binding with the host cells and resulted into significant reduction in the percent cellular viability ($p < 0.001$) thereby depicting its cytotoxic influence. The fragmentation of cellular DNA of the KatG treated cells into smaller fragments demonstrating characteristic 'ladder like pattern' and the exposure of phosphatidylserine on the outer leaflet of the plasma membrane as represented by green halo and membrane blebbing further defined these cytotoxic effects as apoptosis. The apoptosis of the host cells, as an effect of KatG protein was mediated by ROS generation, caspase-3, caspase-7 and PARP activation but not by TNF-alpha production. An increase in the cellular viability following treatment with an antioxidant, further confirmed the role of ROS in KatG mediated apoptosis.

**Conclusion:** KatG protein of *M. avium* can bind to host cells, leading to their killing by apoptosis and might play a role in the cell to cell dissemination and pathogenesis of the disease.

doi:10.1016/j.ijid.2008.05.024

**32.001**

Postpartum Onset of HTLV-1-Associated Myelopathy/Tropical Spastic Paraparesis (HAM/TSP): A Report of 7 Cases from Peru

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**Background:** HAM/TSP is a chronic progressive disease that causes impairment of the lower limbs and occurs in 1–5% of HTLV-1 carriers. The disease affects women three times more frequently than men.

**Methods:** We describe 7 cases of women in whom HAM/TSP initiated within 6 months after delivery. They are all participants of the HTLV-1 cohort at the Institute of Tropical Medicine Alexander von Humboldt in Lima. HAM/TSP diagnosis was based on WHO criteria.

**Results:** The age at HAM/TSP onset ranged from 24–39 years (mean: 31.4). The initial symptoms were noticed 3 to 16 weeks after delivery (mean: 8.8). Three of 6 women for whom information was available developed HAM/TSP after the birth of their first child. Four women were of Andean and 3 of mestizo origin. None of the women reported a family history of HAM/TSP. Information about the initial symptoms was available for 6 women: 3 had lower limb weakness, 2 reported sensory symptoms, and 1 woman had urinary incontinence. During the course of disease, all developed the classic clinical presentation of HAM/TSP. Finally, 2/7 presented rapidly progressive HAM/TSP, defined as the inability to walk unaided within 2 years after HAM/TSP onset.

**Conclusion:** This is the first report of several cases of postpartum HAM/TSP. Several reports have shown that HAM/TSP patients have a higher proviral load than asymptomatic carriers. In one study, this difference was significant only among women. It has also been described that clinical progression is faster in women than in men, especially in pre-menopausal women. We suggest that pregnancy could cause a state of immunosuppression with diminished cytotoxic T-cell response, expansion of HTLV-1-infected cells, and increased proviral load. After delivery, the immune system returns to normality and the high proviral load might lead to an intense inflammatory response in the central nervous system causing HAM/TSP.

doi:10.1016/j.ijid.2008.05.025

**32.002**

Clinico-Epidemiological Study of Pure Neural Leprosy From a Tertiary Hospital in Delhi, India

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**Background:** Pure neural leprosy (PNL) continues to be common in India. This form of disease is least studied and very little information exists in literature. We analyzed the