Special Issue

Host Immune Responses in the Control of Leishmania Infection and New Forms of Therapy for Tegumentary Leishmaniasis

Message from the Guest Editors

Immunologic responses in different forms of leishmaniasis vary considerably depending the species of leishmania, genotypic differences intraspecies, and clinical forms of the diseases (visceral, cutaneous, mucosal, disseminated leishmaniasis, and diffuse cutaneous leishmaniasis). In American tegumentary leishmaniasis caused by *L. braziliensis* infection, macrophages produce reactive oxygen species and nitric oxide but have a limited ability to kill leishmania. In contrast, macrophages from subjects with SC infection are less permissive to leishmania penetration and kill parasites, even in the absence of a Th1 immune response. In subjects cured of CL, the ability to control leishmanial infection is restored and, despite the observation of a poor immune response in peripheral blood, there is a strong DTH to leishmania antigens. In mice, resident memory T cells, together with macrophages, control a new infection, but this subject has not been studied in humans. This SI aims to show how the immune response controls or facilitates parasite multiplication in human cells and the use of immunotherapy and chemotherapy in the treatment of tegumentary leishmaniasis.

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The worldwide impact of infectious disease is incalculable. The consequences for human health in terms of morbidity and mortality are obvious and vast but, when infections of animals and plants are also taken into account, it is hard to imagine any other disease that has such a significant impact on our lives—on healthcare systems, on agriculture and on world economics. *Pathogens* is proud to continue to serve the international community by publishing high quality studies that further our understanding of infection and have meaningful consequences for disease intervention.

Editor-in-Chief

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