International Symposium on Natural Immunity to HIV: A Gathering of the HIV-Exposed Seronegative Clan

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This supplemental issue of the Journal of Infectious Diseases collects summaries of oral presentations on the phenomenon of natural immunity to human immunodeficiency virus type (HIV) infection that were given at the International Symposium on Natural Immunity to HIV in Winnipeg, Manitoba, Canada, in November 2009.

November 2009 marked the first time that scientists from around the globe gathered to discuss the phenomenon of natural resistance to human immunodeficiency virus (HIV) infection at the International Symposium on Natural Immunity to HIV. This gathering took place in Winnipeg, Manitoba, Canada, and involved 2 days full of presentations, workshops, discussion groups, and insightful, informed dialogue about various genetic and immune factors believed to be involved in protection against infection. The goals of this meeting were 2-fold. The first goal was to bring researchers together to exchange knowledge on correlates of HIV protection and identify existing gaps in the research. The second goal was to determine whether there were sufficient interest, need, and commitment to move forward with the formation of an international consortium for studying natural resistance to HIV to promote collaboration and strengthening of what is already known about natural immunity to HIV.

The meeting brought together >100 leading researchers in the field, including pioneers in the field, such as Dr. Gene Shearer and meeting organizer Dr. Francis Plummer. This conference provided a much-needed, unique opportunity for groups from around the world to share their experiences and insights from studies with each other, identifying the different groups of individuals who are considered “at risk” for exposure yet remain uninfected. These include sex workers, clients of sex workers, injection drug users who share needles, “discordant” couples in which 1 partner is infected and the other remains uninfected, homosexual men who have sex with multiple partners, and infants of HIV infected mothers.

Much time was spent discussing definitions by the various groups—what constitutes risk of exposure and what “resistance” means in different groups—as well as identifying the various correlates of protection that are present in the various groups. The response was unanimous in agreement that this type of gathering of minds was long overdue. There was powerful support for the formation of the consortium to provide a platform for moving forward, with sharing of protocols, samples, and methods of data analysis and data sharing to provide a more complete picture of resistance to HIV.

The oral presentations at the meeting consisted of presentations from leaders in the field on natural resistance to HIV and from experts in other fields. This supplement provides summaries of those presentations related to natural resistance to HIV infection and models that can inform the field. It has 11 articles divided into 4 thematic areas: (1) perspectives on HIV-exposed uninfected cohorts, (2) immune activation, (3) innate and mucosal systems, and (4) model systems. This supplement represents the first time a collection of publications has been gathered on the topic of natural resistance to HIV infection. Because the articles are written by leaders in the field, this supplement can serve as a summary of the field to date and provide insights as to where it is heading.

An HIV vaccine is unlikely to be developed without defining the correlates of protection. The various models of HIV-exposed seronegative cohorts highlighted in this supplement provide tangible evidence that HIV infection can be pre-
vented. It became apparent during that meeting that through broader collaborative approaches, regular scientific exchanges, and highly focused efforts, it may be within reach to understand those correlates of protection and how to apply them to an HIV vaccine. The feeling among the participants was that this conference marked a significant milestone in the journey toward making an HIV vaccine a reality.

**Acknowledgments**

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**Note added in proof.** In July 2010, the National Institutes of Health sponsored a “Workshop on HIV: Exposed and Uninfected.” To unify the terminology in the field, it was proposed at this workshop that there be adoption of the term “HIV-exposed seronegative (HESN)” to describe individuals who are exposed to HIV yet remain seronegative. Where authors felt it was appropriate, this term has been adopted for the articles in this supplement.