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# Type i interferon in human autoimmune disease

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## Abstract

The type I interferon system plays a critical role in host defense in health, and a growing body of literature suggests that type I interferon is a critical mediator of human autoimmune disease. Type I interferons function as a bridge between the innate and adaptive immune systems, and as such plays an important role in setting thresholds for response against self antigens. We have studied type I interferon responses in a number of autoimmune diseases, including systemic lupus erythematosus, dermatomyositis, multiple sclerosis, neuromyelitis optica, and others. In this plenary session, I will summarize our findings and the pathogenic implications of the type I interferon system in human autoimmune disease pathogenesis. Major topics will include how genetic variations impact type I interferon responses in humans, and how activation of this pathway corresponds with particular disease features, providing a window into human disease pathogenesis.

## Biography

Niewold is a human geneticist and translational researcher, bridging the traditional gap between the basic and clinical sciences. His work focuses on identifying and understanding the pathogenic factors in human autoimmune disease, and the ways in which underlying genetic factors impact immune responses. Dr. Niewold is recognized for important contributions to our understanding of how genes influence pathogenic cytokine patterns that give rise to human disease. He has published more than 80 papers in the fields of Immunology and Genetics, and is a member of numerous editorial boards and advisory committees, including the Scientific Advisory Committee of the American College of Rheumatology Research Foundation, and the Editorial Board of Arthritis and Rheumatism, the official journal of the American College of Rheumatology. He also directs the Federation of Clinical Immunology Societies Centers of Excellence, a group of 68 centers at major academic institutions in the United States and around the world that are focused on human immunology studies.