

Pere Santamaria

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Looking at the immunogenetics and immunopathogenesis of autoimmune disorders, with a particular focus on type 1 diabetes.

The main focus of Dr. Santamaria's scientific career has been to try to understand the immunogenetics and immunopathogenesis of autoimmune disorders, with a particular focus on type 1 diabetes, to try to find targets for therapeutic intervention.

Early efforts focused on the relationship between genetic susceptibility and resistance to autoimmunity and T-cell tolerance. This work culminated in the discovery of a new therapeutic platform for the treatment of chronic inflammatory disorders based on nanomedicine. This therapeutic approach triggers the formation of extensive antigen- and disease-specific networks of regulatory T and γ -cells that efficiently suppress the progression of several different autoimmune disorders without compromising systemic immunity.

Current efforts focus on dissecting the mechanisms that sustain and regulate these regulatory cellular networks, the developmental origin(s) of their cellular components and the molecules that control cell-to-cell communication within the networks. Mice humanized with peripheral blood mononuclear cells from patients are used to select candidate nanomedicines for clinical development. Ultimately, Santamaria's goal is to bring this new technology to the clinic.

Research, Health Care - Providers, Health and Wellness

Autoimmune Diseases, Type 1 Diabetes, Immunogenetics, Therapeutic Intervention

Group Leader : Institut d'Investigacions Biomediques August Pi i Sunyer (IDIBAPS) Barcelona Spain,
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