Abstract Lars Nitschke

Title:

CD22 and Siglec-G: Inhibitory receptors on B lymphocytes

Abstract:

CD22 and Siglec-G are B-cell specific inhibitory transmembrane proteins which inhibit B-cell receptor (BCR)-induced signalling processes. Both are specific sialic acid-binding proteins. We address the physiologic role of these proteins by genetic mouse models. We have mutated the ligand-binding domains of both proteins and can show that the ligand binding to sialic acids affects cis-association to the BCR and thereby controls signalling responses. Both receptors are involved in preventing autoimmune responses and control B cell tolerance. CD22 is also a target structure on B cell lymphomas which we address by a novel therapeutic approach involving synthetic CD22 ligands coupled to toxins.