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Nota di contenuto	The Old but New IgM Fc Receptor (FcR) -- Emerging Roles for FCRL Family Members in Lymphocyte Biology and Disease -- Intracellular antibody immunity and the cytosolic Fc receptor TRIM21 -- Computational modeling of the main signaling pathways involved in mast cell activation -- Calcium channels in FcR signaling -- Regulation of FcRI signaling by lipid phosphatases -- Fc Receptors as Adaptive Immunoreceptors -- Glycosylation and Fc Receptors -- Antibodies as natural adjuvants -- IgA, IgA receptors and their anti-inflammatory properties -- Humanized mice to study FcR function -- FcRn: from molecular interactions to regulation of IgG pharmacokinetics and functions -- Human FcR polymorphism and disease -- Bridging auto-antibodies and arthritis; the role of Fc Receptors -- The FcR of humans and non-human primates and their interaction with IgG: Implications for induction of inflammation, resistance to infection and the use of therapeutic monoclonal antibodies -- FcgRIIB as a key determinant of agonistic antibody efficacy -- Fc receptor dependent mechanisms of monoclonal antibody therapy of cancer; professionals at work -- Sweet and Sour: The role of glycosylation for the anti-inflammatory activity of immunoglobulin G.

Sommario/riassunto

This volume provides a state-of-the-art update on Fc Receptors (FcRs). It is divided into five parts. Part I, Old and New FcRs, deals with the long-sought-after FcμR and the recently discovered FCRL family and TRIM21. Part II, FcR Signaling, presents a computational model of FcRI signaling, novel calcium channels, and the lipid phosphatase SHIP1. Part III, FcR Biology, addresses major physiological functions of FcRs, their glycosylation, how they induce and regulate both adaptive immune responses and inflammation, especially in vivo, FcR humanized mice, and the multifaceted properties of FcRn. Part IV, FcRs and Disease, discusses FcR polymorphism, FcRs in rheumatoid arthritis and whether their FcRs make macaques good models for studying HIV infection. In Part V, FcRs and Therapeutic Antibodies, the roles of various FcRs, including FcRIIB and FcRI, in the immunotherapy of cancer and autoimmune diseases using monoclonal antibodies and IVIg are highlighted. All 18 chapters were written by respected experts in their fields, offering an invaluable reference source for scientists and clinicians interested in FcRs and how to better master antibodies for therapeutic purposes.