神戸大学グローバルCOEプログラム「次世代シグナル伝達医学の教育研究国際拠点」

第28回グローバルCOE学術講演会

日時：平成22年8月24日（火）18：00～
場所：医学部附属病院外来診療棟　4階　A講義室

"The immunobology of the (not so) neonatal FcR for IgG"

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Careful regulation of the body's immunoglobulin-G (IgG) and albumin concentrations is necessitated by the importance of their respective functions. As such, the neonatal Fc receptor (FcRn) which, as a single receptor, is capable of regulating both of these molecules has become an important focus of investigation. In addition to these essential protection functions, FcRn possesses a host of other functions that are equally as critical and are increasingly coming to attention. During the very first stages of life, FcRn mediates the passive transfer of IgG from mother to offspring both before and after birth. In the adult, FcRn regulates the persistence of both IgG and albumin in the serum as well as the movement of IgG, and any bound cargo, between different compartments of the body. This shuttling allows for the movement not only of monomeric ligand but also of antigen/antibody complexes from one cell type to another in such a way as to facilitate the efficient initiation of immune responses towards opsonized pathogens. Consistent with this, FcRn is now recognized to not only function in albumin and IgG homeostasis and the transcytosis of IgG but also to MHC class II presentation and MHC class I cross-presentation by dendritic cells. As such, FcRn continues to play the role of an immunological sensor throughout adult life, particularly in regions such as the gut which are exposed to a large number of infectious antigens. Increasing appreciation for the contributions of FcRn to both homeostatic and pathological states is generating an intense interest in the potential for therapeutic modulation of FcRn binding to IgG and albumin.

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