

Receptor editing in central B cell tolerance

David Nemazee, Annica Mårtensson, Laurent Verkoczy, Patrick Skog, Janice Sudaria
Department of Immunology, The Scripps Research Institute

Receptor editing involves secondary antibody V gene rearrangements in cells carrying a surface receptor. Immune tolerance can stimulate such rearrangements, which often alter antigen receptor specificity of developing B cells. We review experiments that test this model and recent studies analyzing the changes in gene expression that correlate with editing.

Hertz, M. and Nemazee, D. (1997). BCR ligation induces receptor editing in IgM+D- bone marrow B-cells in vitro. *Immunity* 6, 429-436.

Melamed, D., Benschop, R. J., Cambier, J. C., and Nemazee, D. (1998). Developmental regulation of B lymphocyte immune tolerance compartmentalizes clonal selection from receptor selection. *Cell*, 92, 173-182.

Retter, M.W. and Nemazee, D. (1998). Receptor editing occurs frequently during normal B cell development. *J. Exp. Med.*, 188, 1231-1238.

Nemazee, D. 2000. Receptor selection in B and T lymphocytes. *Annu. Rev. Immunol.*, 18, 19-51.

Kouskoff, V., Lacaud, G., Retter, M., and Nemazee, D. 2000. B cell receptor expression level determines the fate of developing B lymphocytes: Receptor editing versus selection. *Proc. Natl. Acad. Sci. USA*, 97: 7435-7439.