Allergy-immunology glossary

Zeinab A. El-Sayed  
Pediatric Department, Ain Shams University

Towards a clear designation of some of the terms used in allergology and immunology.

**Mast cells**

VEGF is a highly specific mitogen for vascular endothelial cells. Five VEGF isoforms are generated as a result of alternative splicing from a single VEGF gene. The expression of VEGF is potentiates in response to hypoxia, by activated oncogenes, and by a variety of cytokines. VEGF induces endothelial cell proliferation, promotes cell migration, and inhibits apoptosis. *In vivo* VEGF induces angiogenesis as well as permeabilization of blood vessels, and plays a central role in the regulation of vasculogenesis. Deregulated VEGF expression contributes to the development of solid tumors and to several additional diseases by promoting tumor angiogenesis. Consequently, inhibition of VEGF signaling abrogates the development of a wide variety of tumors. The various VEGF forms bind to two tyrosine-kinase receptors, VEGFR-1 (*flt-1*) and VEGFR-2 (*KDR/flk-1*), which are expressed almost exclusively in endothelial cells.  

**Vascular endothelial growth factor (VEGF)**

New blood vessel formation regulated by a number of protein factors elaborated by cells of the innate and adaptive immune systems. Excessive angiogenesis occurs in diseases such as cancer, diabetic blindness, rheumatoid arthritis, psoriasis. Insufficient angiogenesis occurs in diseases such as coronary artery disease, stroke, and chronic wounds. Angiogenic growth factors (GF) include angioenin, angiopoitetin-1, VEGF, fibroblast GF, follistatin, proliferin, transforming GFs and others. Angiogenic inhibitors include angioarrestin, angiostatin (plasminogen fragment), chondromodulin, CD59 complement fragment, heparinases, human chorionic gonadotropin (*hCG*), interleukin-12, platelet factor-4 (*PF4*), thrombospondin-1 and -2, vasostatin, etc.

REFERENCES:


