

## Allergy-Immunology Glossary

**Zeinab A. El-Sayed, MD**

*Professor of Pediatrics, Ain Shams University*

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

<b>Antigen</b>	Foreign substance that induce specific immune responses or are targets of such responses <sup>1</sup> .	<sup>2</sup> مستضد
<b>Neoantigen</b>	Antigen acquired after a cell has been transformed by an oncogenic virus <sup>3</sup> or by drugs such as heparin resulting in heparin-induced thrombocytopenia <sup>4</sup> or procainamide causing drug-induced lupus erythematosus <sup>5</sup> . Radiotherapy, also, can induce neoantigen formation <sup>6</sup> . In the same way, environmental pollutants such as hexachlorobenzene produce autoimmune-like effects in humans <sup>7</sup> .	<sup>2</sup> مستضد مستحدث
<b>Superantigen</b>	An antigen, mostly of microbial origin, so called because of its ability to polyclonally activate large fractions (2-20%) of the T-cell population at picomolar concentrations. In general, the potent immunostimulatory properties of superantigens are a direct result of their simultaneous interaction with the V $\beta$ domain of the T-cell receptor (TCR) and the major histocompatibility complex (MHC) class II molecules on the surface of an antigen-presenting cell. Staphylococcal enterotoxins are the best known superantigens <sup>1,8</sup> .	<sup>2</sup> مستضد فوقي

### REFERENCES:

- 1- **ABBAS AK, LIGHTMAN AH, POBER JS.** Cellular and molecular immunology. 4<sup>th</sup> ed. Philadelphia: WB Saunders; 2000.
- 2- **UNIFIED MEDICAL DICTIONARY UMD-2000.** ISBN 92-9021-276-4. World Health Organization, Regional office for the Eastern Mediterranean.
- 3- **THE DICTIONARY OF CELL AND MOLECULAR BIOLOGY** – Online: Neoantigen. Cited in: <http://www.mblab.gla.ac.uk/~julian/head.html>, on Aug 17<sup>th</sup>, 2003.
- 4- **POSTGRADUATE MEDICINE:** Preventing complications in heparin-induced thrombocytopenia. Cited in: [http://www.postgradmed.com/issues/2002/09\\_02/rice.htm](http://www.postgradmed.com/issues/2002/09_02/rice.htm), on Aug 29<sup>th</sup>, 2003.
- 5- **S- GOEBEL C, VOGEL C, WULFERINK M, MITTMANN S, SACHS B, SCHRAA S, ET AL.** Procainamide, a drug causing lupus, induces prostaglandin H synthase-2 and formation of T cell-sensitizing drug metabolites in mouse macrophages. *Chem Res Toxicol.* 1999;12(6):488-500.
- 6- **ARDERN-JONES MR, BLACK MM.** Widespread morphea following radiotherapy for carcinoma of the breast. *Clin Exp Dermatol.* 2003; 28(2):160-2.
- 7- **EZENDAM J, VISSERS I, BLEUMINK R, VOS JG, PIETERS R.** Immunomodulatory effects of tetrachlorobenzoquinone, a reactive metabolite of hexachlorobenzene. *Chem Res Toxicol.* 2003; 16(6): 688-94.
- 8- **WHAT ARE SUPERANTIGENS?** Cited in: <http://public-1.cryst.bbk.ac.uk/sagdb/intro.html>, on Aug 17<sup>th</sup>, 2003.