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Superantigen

National Cancer Institute

Source

National Cancer Institute. *Superantigen*. NCI Thesaurus. Code C1456.

An antigen produced by bacteria or viruses that cause non-specific activation of T-lymphocytes. Superantigens form crosslinks between either two major histocompatibility class (MHC) II molecules, which increases both cytokine expression and costimulatory receptor expression in antigen presenting cells, or one MHC class II molecule and the variable region of the T-cell receptor beta chain, which results in increased proliferation of and cytokine expression by T-lymphocytes. This non-specific release of cytokines and upregulation of immune cell activation can lead to rashes, fever, vomiting, anergy, and damage to tissues and organs. These symptoms can progress to autoimmunity, multi-organ failure, coma and death.