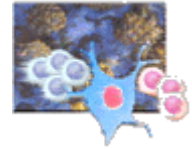




# "FORMULA" OF IMMUNITY



<i>Feature</i>	<i>Innate immunity</i>	<i>Adaptive immunity</i>
Trigger	Molecular patterns	Antigens
Development	Rapid	Slow
The fate of a pathogen	Immune containment	Immune clearance
Memory	Phylogenetic polyspecific memory to pathogens; no formation of monoclonal memory after a primary infection	Formation of long-term monoclonal memory after a primary infection
Crucial cells	Dendritic cells, macrophages, NK cells, mast cells, etc.	T cells and B cells
Effector events	"Acute phase" reaction, complement activation, phagocytosis, NETosis, pyroptosis, simple inflammation, apoptosis	Antigen neutralization by antibodies with or without inflammation; CD4+T-cell-initiated immune inflammation; CD8+T-cell-induced apoptosis in target cells
Paradigm	Pattern recognition theory  C.A. Janeway, Jr. (1943-2003)	Clonal selection theory  Sir F. Macfarlane Burnet (1899-1985)
Immunopathology	Immunodeficiency, autoinflammatory disorders	Immunodeficiency, autoimmune diseases, allergic disorders

**Immunomics** is the study of the **immunome**, i.e., the set of antigens and molecular patterns in the interface of the immune system reactions and responses, including all related processes such as immunoregulation, immunointervention, and vaccination. Immunomics shares genomics and proteomics approaches.