Journal of Mucosal Immunology Research

Yadav, J Mucosal Immunol Res 2020, 4:1

Commentary Open Access

Mucosal Immunology: Attack of Antigens

Sindhuja Yadav I*

Department of Pharmacy(Alumnus), Vignan Institue of Pharmaceutical Technology, Visakhapatnam, India

***Corresponding author:** Sindhuja Yadav I, Bachelor of Pharmacy, Vignan Institue of Pharmaceutical Technology, Visakhapatnam, India, E-mail: sindhujaidadasa@gmail.com

Received date: July 09, 2020; **Accepted date:** July 21, 2020; **Published date:** July 28, 2020

Citation: Yadav SI (2020) Mucosal Immunology : Attack of Antigens. J Mucosal Immunol Res.4(1): 120

Description

Antigens are transported through many ways such as Air, water, food. So our body defense mechanism helps in throwing them out of the body in the form of saliva, expiration, cough, nasal droplets, sweat, urine and feces.

Absorption of Antigens

Antigens are transported through mucosal barriers in 2 components Extrinsic mechanism will limit the amount of antigen reaching the surface; intrinsic barrier consists of the structural and functional properties. Production of immunoglobulin directed towards luminal antigen depends on immunologically intact antigen interacting with membrane bound immunoglobulins on the surface of B cells that are located beyond the epithelium. Mechanisms that allow passage of antigen through the intestinal epithelium in controlled amounts are therefore an essential prelude to B cell activation.

Tcell responses on the other hand are initiated by presentation of short peptides bound to major histocompatibility complexes. As luminal antigen can activate mucosal T cells, the luminal antigens are produced by internal organs to reduce them to peptide so that they can bind to major histocompatibility complex molecules and in turn interact with T cell receptors. Antigens can be processed in three ways first one is the peptide fragments generation during transit in lumen with proteins acted on luminal proteases second one is antigen can be processed during epithelial transport and third is antigen could be processed from whole antigen that has traversed the epithelium and reached antigen presenting cells in the mucosal immune system.

Major thing is antigen uptake is also necessary for the body so that our body becomes immune by causing some minor hypersensitivity reactions. If the dosage of antigens increased the sensitive body may experience fever, cough, cold, corona etc and many more.

Physiologic Transport

Receptor bound transport across enterocytes

Passage across M cells

Uptake, processing and presentation in association with class II Major histocompatibility complex molecules

Mucosa Functions

It's a viscous coat where there a number of ways by which mucus offer protection to internal organs. Initially mucus blanket is provided where the chemical structure of the glycoprotein molecules. The sticky quality of the mucus is an important mechanism for preventing penetration of organisms. The antigen motility decreases the viscosity of this layer. The increased viscosity of provides ubnstirred surfaces of the internal organs. This diffusion of molecules towards surfaces and this will limit the absorption of antigens rather than nutrient molecules.

The mucosal barrier like skin defines the boundary between the host and its environment. Unlike the skin the mucosae of gut and respiratory tract must absorb substances that are essential for life. To be selective the mucosa has developed a complex network composed of elements that are extrinsic that are defined by intestinal structure.

The challenges for the future lie in defining the role of this barrier in the establishment. It is so interesting to examine the cellular elements in mucosal immune system where it can recognize antigens without their needing to penetrate the intestinal epithelium. The observations that members of the immunoglobulin super family are found on the surface of the epithelium and that lymphocytes can pass into the intestinal lumen make tantalizing possibility. So one should stay immunogenic by taking balanced nutrients.