

# Otolaryngologic Mucosal Immune Compartments

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**Editorial**

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## Editorial

Nose, Ear, and Tonsils are the anatomic compartments that functions in respiration, hearing and swallowing accordingly. Nasal mucosa, ear internal surface mucosa and wax as well as the glandular tissues of the tonsils are parts of the common mucosal immune system. They constitute an inductive site for the mucosal immune responses. Mucosal immunoglobulins, mucosal macrophages, mucosal T helpers, and mucosal B lymphocytes are the main players in the local immune responses in these compartments [1]. The total microbial entities in these compartments, the microbiome [2] interplayed an integral roles in maintaining compartmental homeostasis, mucosal protection there in the commensal parts of the microbiome may played the role of the balance to the intruding microbial pathogens and might produce secondary metabolite of an indispensable importance to the biochemic and immunobiologic mechanisms. Focusing on nasal compartment [NC]. NC served several biologic and immunobiologic functions which are depicted in (Table 1). The collective personal experience on the nasal mucosal vaccination at the levels of laboratory animal models have shown that the systemic immune response to mucosally applied bacterial and/or allergens, (Tables 2 & 3), were of variable degrees depending on the nature of the applied bacterin or allergen. Thus infection, vaccination, infection and vaccination as well as the inhaled allergens were the main inducers to the local nasal immune responses and mucosal allergy which might be terminated by the rising of the allergic nasal polyps [3]. Common cold and /or bacterial pathogens may initiate the cascade of infection cycle up to allergic rhinitis. So to draw a conclusion to the welfare of layman in the underdeveloped, developing and developed countries, be aware of getting common cold and of the exposure to an indoor or outdoor infectious agents and/or allergens.

Biologic Functions
Balancing the asthetic compartment of human face
Exhalation of CO <sub>2</sub> ,Inhalation of O <sub>2</sub>
Inhalation of perfumes
Inhalation of nasty odors
The Mucosal Immunobiologic Functions
It constitute the NALT compartment of the CMIS
Site for induction of mucosal immune responses
Site for allergenic reactions
It serves as a niche for the microbial succession initiated in the nasal mcirobiome

Table 1: Nasal biologic and immunobiologic functions.

Infection
Vaccination
Infection and vaccination
Inhaled allergens

Table 2: Nature of the nasal mucosal immune response inducers.

Bacterial type	Mucosal Immune Induction/systemic conc. mg/ml. of cryoglobulin	References
M. tuberculosis/BCG	39,32	Shnawa & Jassim [4]
Salmonella typhi	18.51	Shnawa & Alserhan [5]
Br. meletensis	6.33	Shnawa & Jassim [6]

Table 3: The potency variations in the lapin nasal mucosal vaccination.

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