



RESEARCH TOPIC MEM26

Analysis of drug effects on nasal tissue samples from healthy donors and Chronic Rhinosinusitis with Nasal Polyps (CRSwNP) patients MECM Standard

Research Area

Immunonology

Laboratory name

Mucosal immunology

Research Supervisor

Prof. Maria Rescigno

Abstract

Analysis of drug effects on nasal tissues from healthy donors and CRSwNP patients will be performed in two phases. Phase 1 will be conducted in the company's lab and includes studying drug activities on nasal epithelial 3D models (AIR-liquid interface) using TEER, IF, cytokine release, and histology. Additionally, an ex vivo organ culture (EVOC) model will be set up on healthy nasal mucosa to assess drug impact on barrier integrity and inflammation. Phase 2, will apply EVOC to CRSwNP samples. Alternative approaches include testing drugs on ex vivo nasal polyp fragments stimulated with cytokines. Further, drug effects will be evaluated on immune cells isolated from polyps.

Main technical approaches

While theoretical knowledge in mucosal immunology is preferred, it is not a mandatory requirement for this position.

Scientific references

Tsilingiri, K et al, Vis. Exp. 75, e4368 (2013)

Zhang Y. et al, Allergy 2018;

Patou J. et al, J Allergy Clin Immunol. 2008

Type of contract

PhD scholarship of € 21.000 gross per year awarded by Humanitas University. This sum is exempt from IRPEF income tax according to the provisions of art. 4 of Law no. 476 of 13th August 1984, and is subject to social security contributions according to the provisions of art. 2, section 26 and subsequent sections, of Law no. 335 of 8th August 1995 and subsequent modifications.



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