CMMC RESEARCH FOR HEALTH

CMMC SEMINAR

in cooperation with the Immunology Seminar Series & CIM Center for Infectious Diseases

Prof. Dr. Susanne Herold

Universities of Giessen and Marburg
Lung Center (UGMLC), Giessen, Germany



Lung macrophages: determinants of functional plasticity in pneumonia and beyond

Macrophages regulate pulmonary immunity, inflammation, and tissue homeostasis. Beyond host defense, they support inflammation resolution, epithelial regeneration, and lung recovery.

Their heterogeneity and plasticity depend on cellular origin, tissue signals, and systemic inflammation. During severe respiratory infections, distinct macrophage subsets drive tissue damage or repair, shaping disease progression and recovery.

This lecture explores molecular and cellular mechanisms of macrophage heterogeneity and plasticity in injured lungs, focusing on interactions with the pulmonary microenvironment and epithelial stem and progenitor cells during repair.

Susanne Herold will discuss how systemic inflammation and cardiovascular comorbidities shape macrophage function. Understanding these mechanisms may inform host-directed therapies to limit lung injury, promote regeneration, and improve outcomes after severe respiratory infections.

Dec. 10, 2026
4:00 – 5:00 p.m.

Seminar Room 3-4
Center of Integrated Oncology (Geb. 70)

Hosts Sebastian Theobald
Esther von Stebut
Thomas Riffelmacher

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Information