

**Pulmonary and Sleep Medicine Department** 

Pediatric Pulmonology: State-of-the-Art

## Mucosal Immunity Stem Cells Underlying Chronic Lung Diseases

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Virtual via ZOOM

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To claim credit, text LUFZOS to 703.260.9391 **Target audience:** Pediatric Pulmonologists; Advance Practice Practitioners, nurses and respiratory therapists in pulmonary medicine; Intensivists; Emergency Medicine physicians; Allergists; General Pediatricians

## Learning objectives:

- Lung regeneration following acute disease is robust and mediated by a p63+ stem cell, which is identical to the dominant, clonogenic stem cell in normal adult lung.
- Chronic lung diseases are dominated by disease-specific patterns of "variant" stem cells marked by pathogenic properties.
- By way of example, COVID lungs have four p63+ stem cells, including three variants that individually drive neutrophilic inflammation, fibrosis, and mucin hypersecretion.
- These "pathogenic" variants are present (at low levels) in normal lung and even fetal lung, suggesting their intrinsic roles in mucosal immunity.

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