Lung Inflammaging:
understand how aging predisposes the lung to the development of chronic lung diseases such as idiopathic pulmonary fibrosis and chronic obstructive pulmonary disease

We aim to understand how cellular aging affects stem cell capacities and cell-cell crosstalk, especially between immune cells and stem cells. In order to allow the aging lung to efficiently repair, we aim to develop biomarkers as well as therapeutic strategies targeting cellular aging phenotypes, thereby opening novel avenues for the diagnosis and treatment of chronic lung diseases.

To be able to test potential anti-senescent therapies in the human system, we are developing a human aging model based on human precision cut lung slices that displays relevant hallmarks of aging such as cellular senescence. This model will be used to verify target engagement of anti-senescent therapies in the human system and will help to screen for relevant biomarkers for companion diagnostics development.

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More information:
https://www.uni-marburg.de/en/fb20/departments/ciii/lung-research/research/lehmann-lab
https://www.helmholtz-munich.de/en/lhi/research-groups/lehmann-lab