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Experimental approaches in differentiating between Idiopathic Pulmonary Fibrosis (IPF) and Nonspecific Interstitial Pneumonia (NSIP)

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During the study of lung diseases, researchers face numerous impediments, representing common challenges in advancing research. One such problem involves the identification of cells associated with two diseases: idiopathic pulmonary fibrosis (IPF) and nonspecific interstitial pneumonia (NSIP), which differ significantly in severity, with one being easily treated and the other fatal.
To address these challenges, various experiments involving alterations in the cell environment are carried out, such as the addition of biomolecules (e.g., proteins) or modification of the substrate structure. This requires the use of various intriguing techniques, such as culturing on glass substrates that resemble the 3D structure of the lungs. Utilizing several microscopy techniques, such as fluorescence microscopy or atomic force microscopy, enables effective visualization of changes in the culture. Such actions allow us to gain insights into the cell properties, representing a significant step towards understanding them and thereby improving accuracy in distinguishing between these two types of diseases.

Field

Biosciences

Length

Poster

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