Development of a novel drug for respiratory diseases.

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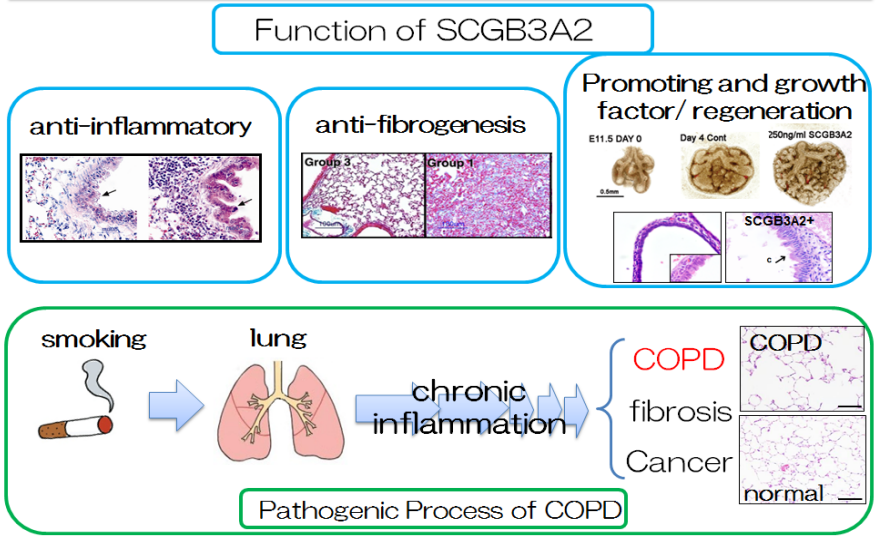
Curing Respiratory Disease with Surfactant Proteins!

Function and Expectation of a Novel protein, SCGB3A2



Our goal is to develop a novel drug for respiratory diseases, pneumonia, pulmonary fibrosis, and chronic obstructive pulmonary disease (COPD) using a surfactant protein, SCGB3A2.

Content:

Our goal is to understand the mechanism of lung development and respiratory diseases for developing a novel drug to help patients with respiratory distress syndrome and respiratory diseases. Because an increasing number of people are affected by respiratory diseases worldwide, with increasing morbidity and mortality rates.

We focus on the roles of a surfactant protein, Secretoglobin (SCGB)3A2 in lung development and respiratory diseases. We have already revealed that 1) SCGB3A2 promotes branching of bronchi and maturation of lung, 2) SCGB3A2/UGRP1 suppresses allergic airway inflammation, and 3) SCGB3A2 suppresses (***Pharmacol Ther.* 2022**), and 4) SCGB3A2 protects lung from developing cigarette smoke-induced pulmonary emphysema (***Int J Biochem Cell Biol.*** 2023). In our projects, many techniques are used as follows; cell engineering, molecular biological technique, animal study, pathological and physiological techniques.

Appealing point:

SCGB3A2 has a potential to improve systemic allergic reactions. We will solve the mystery of SCGB3A2 and contribute to "Ensure healthy lives and promote well-being for all at all ages " in SDG3.

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