SSI-002 (Drugs for treating Idiopathic Pulmonary Fibrosis(IPF)): Summary

SSI-002 is a promising therapeutic candidate for pulmonary fibrosis, planned Phase I clinical study in 2026.

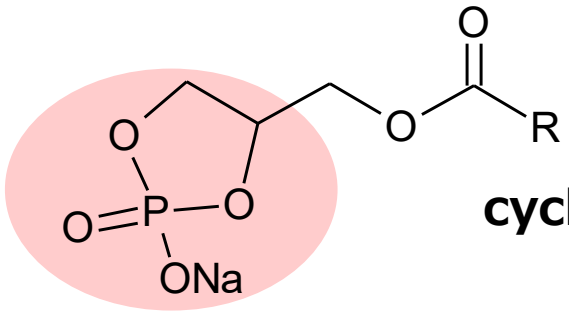
SSI-002 is a phospholipid mediator with inhibitory effects on ATX. ATX has been reported to promote lung fibrosis by converting LPC to the LPA. SSI-002 inhibited the fibroblast activity induced by the activation of ATX/LPA axis. The inhibitory effect of SSI-002 on fibroblast migration was strong, while its interference with epithelial cell migration was mild. Considering that epithelial cell migration is important for the recovery of lung tissue from injury, we believe that SSI-002 is a promising therapeutic candidate for pulmonary fibrosis.

SANSHO Development Pipeline

	Non-clinical to Pre-clinical	Phase I	Phase II
Orthopedics		SSO-001 (OA*)	
Respiratory Medicine	SSI-002 (IPF**)		
Ophthalmology	SSG-003 (Glaucoma)		
Dermatology	SSD-004 (Scleroderma) SSH-005 (Hypotrichosis)		

*Osteoarthritis
**Idiopathic pulmonary fibrosis

Conversion of cPA to chemically stable derivatives

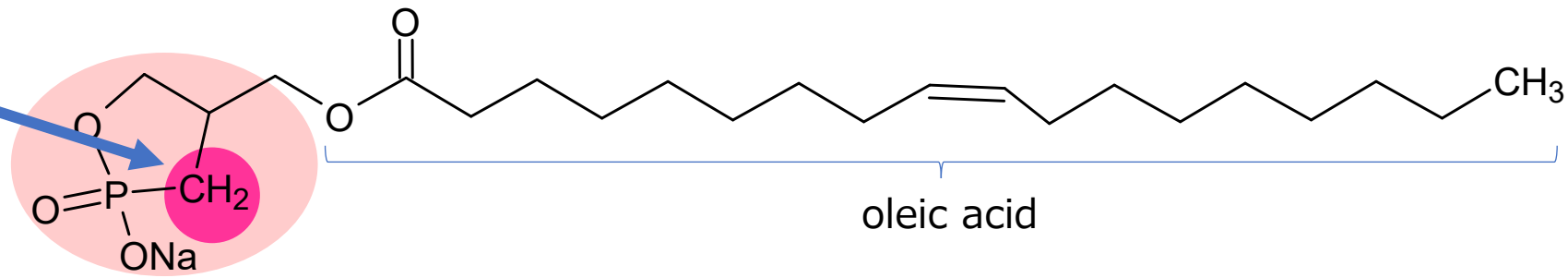


Various fatty acids such as linoleic acid, palmitic acid, and oleic acid

cyclic Phosphatidic **Acid** (cPA, R=C:16~22)

Improved in vivo stability by converting oxygen (O) to methylene (CH_2)

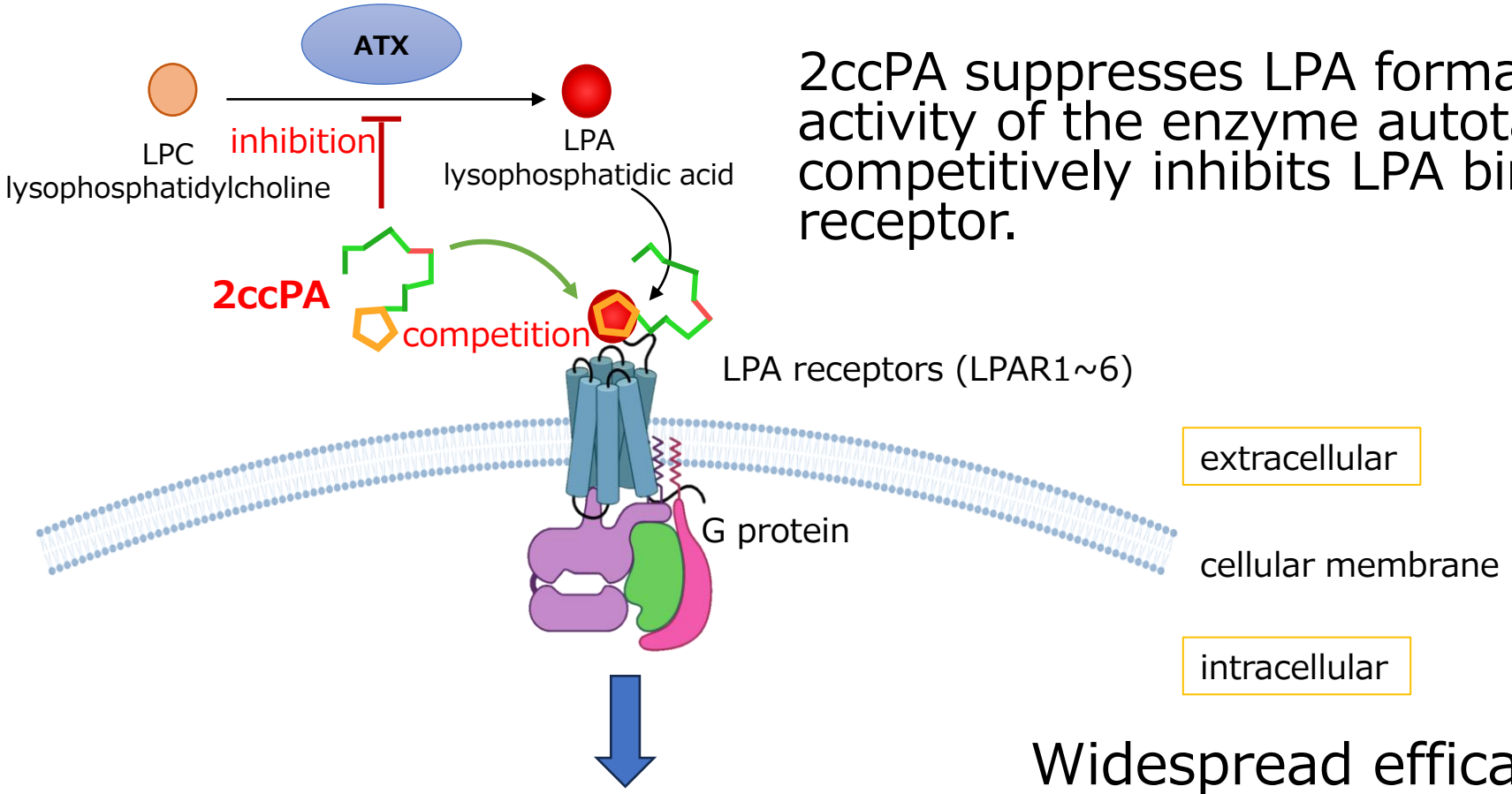
Conversion to chemically stable derivative



2-carba-cyclic phosphatidic acid (2ccPA)

Oleic acid is selected as the fatty acid

Unique mechanism of action of 2ccPA



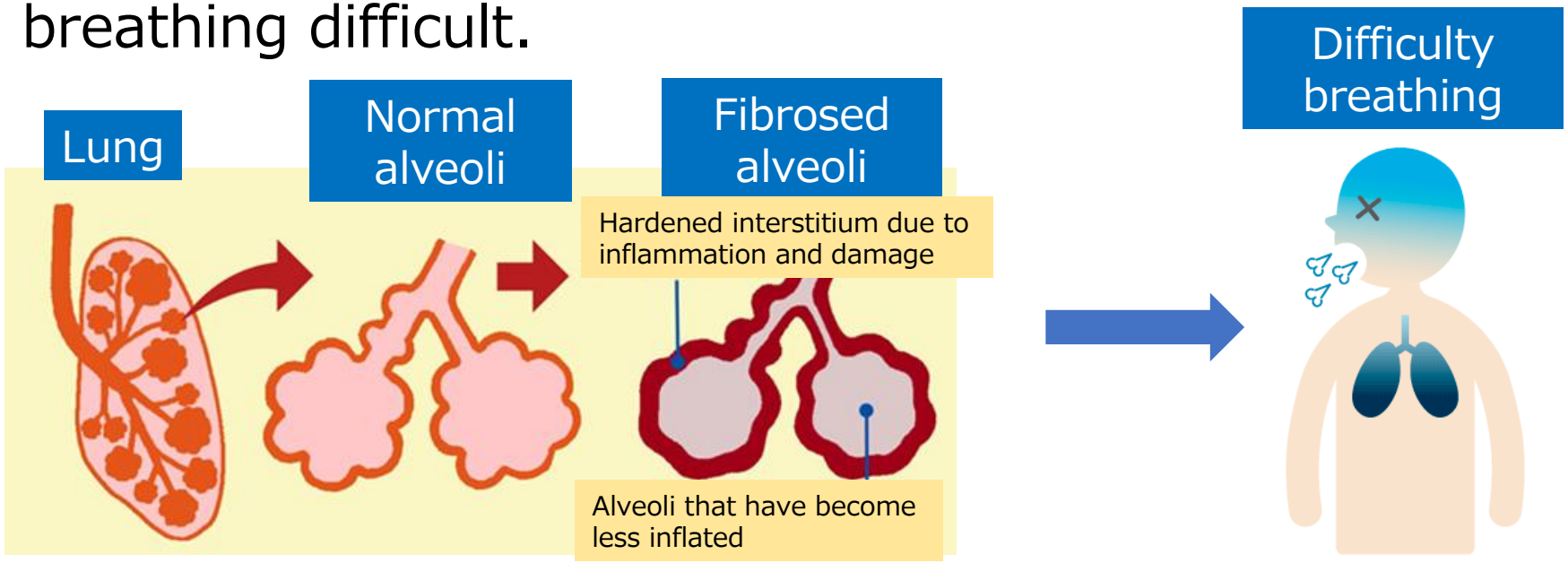
2ccPA suppresses LPA formation by inhibiting the activity of the enzyme autotaxin (ATX) and competitively inhibits LPA binding to the LPA receptor.

Widespread efficacy in diseases caused by inflammation

Development of the treatment for Idiopathic Pulmonary Fibrosis (IPF) (SSI-002)

What is Idiopathic Pulmonary Fibrosis?

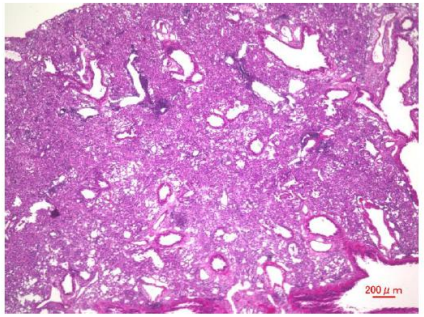
A disease in which wounds form in the alveoli and the interstitium thickens as collagen and other substances increase to repair the wounds, making breathing difficult.



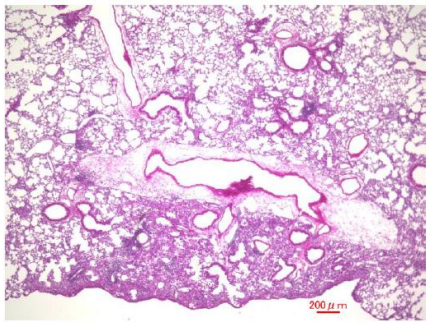
Existing therapies only suppress the decline in respiratory function; there is no fundamental cure.

Development of the treatment for Idiopathic Pulmonary Fibrosis (IPF) (SSI-002)

Lung tissue images from the bleomycin model drug efficacy study

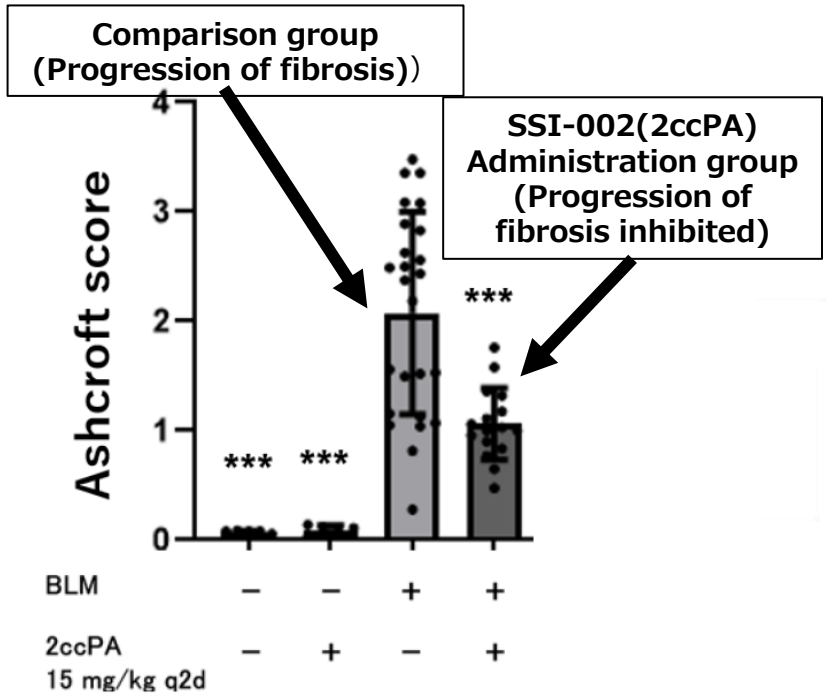


Subject of comparison
(Bleomycin administration causes fibrosis)

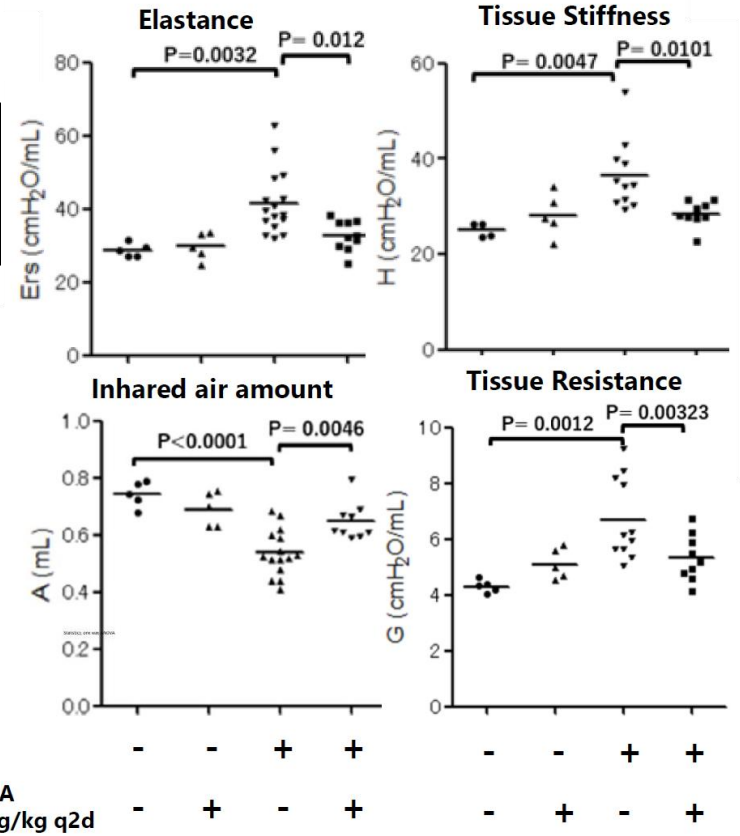


Example of SSI-002 (2ccPA) administration
(Reduced fibrosis progression)

Comparison based on histological examination scores



Pulmonary function test results



SSI-002 (2ccPA) in animal models to improve lung function
Currently conducting joint research with Prof. Yasuhiko Nishioka (Tokushima University)

SSI-002 inhibits the decline in lung function caused by fibrosis.