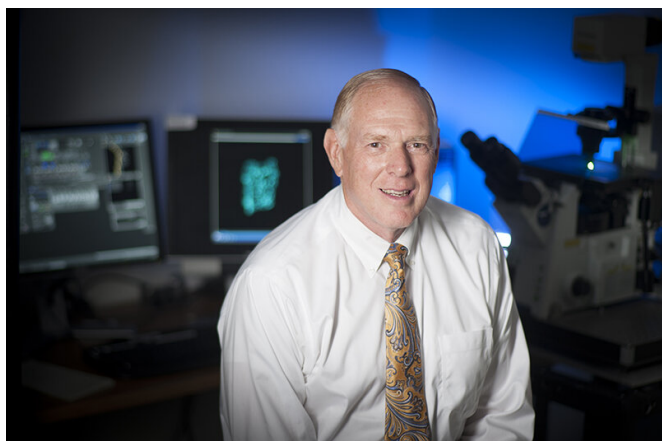


# Targeted therapies developed to reduce lung fibrosis

11 November 2020, by Chris Adam



A new treatment option for lung fibrosis is being developed by Philip Low, a Purdue University scientist, and his team. Credit: Philip Low/Purdue University

A new treatment option for lung fibrosis is being developed by Purdue University scientists. Lung fibrosis has been a concern for COVID-19 patients.

People with [idiopathic pulmonary fibrosis](#) (IPF) have a [life expectancy](#) of less than five years. Fibrotic diseases cause organ failure that lead to about 45% of all deaths in the United States. Existing therapies do little to slow progression.

Now, Philip S. Low, the Purdue Ralph C. Corley Distinguished Professor of Chemistry and Presidential Scholar for Drug Discovery, has led a team to develop two targeted therapies for people with IPF. The two different therapeutic approaches are published in *Science Translational Medicine* and *EMBO Molecular Medicine*.

"This is a horrible disease that claimed the lives of my next-door neighbor and a good friend's wife," Low said. "We developed two targeted therapies that allow us to use powerful drugs with high

toxicities because we specifically deliver them to diseased cells without harming healthy ones."

The first of the Purdue team's novel targeted molecules is designed to slow fibrosis and extend life. The second IPF therapy suppresses fibrosis-inducing cytokine production.

The two therapies will be moving into human clinical trials within the next several months. The developments come as a number of people with COVID-19 or who have recovered from COVID-19 experience [lung fibrosis](#) or other related conditions.

**More information:** Suraj U. Hettiarachchi et al, Targeted inhibition of PI3 kinase/mTOR specifically in fibrotic lung fibroblasts suppresses pulmonary fibrosis in experimental models, *Science Translational Medicine* (2020). [DOI: 10.1126/scitranslmed.aay3724](#)

Provided by Purdue University

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