Vaccine improves fibrosis in mouse model of idiopathic pulmonary fibrosis

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Idiopathic pulmonary fibrosis (IPF) is a progressive, fatal disease characterized by lung fibrosis and declining lung function. There are currently few effective treatments for IPF, and the median survival following diagnosis is between 2 and 5 years.

In this issue of *JCI Insight*, Maureen Horton and colleagues at the Johns Hopkins School of Medicine report that intranasal administration of a vaccine for vaccinia, the virus that causes small pox, improved lung function in a mouse model of IPF. The vaccine induced a population of T cells, known as resident memory CD4+ T cells, within the lungs of treated mice, which was associated with fewer fibrosis-inducing cells within the lungs and a marked reduction in lung fibrosis.

These findings indicate that therapies to induce such immune cell populations may be a promising approach for the treatment of IPF.

More information: Samuel L. Collins et al. Vaccinia vaccine–based immunotherapy arrests and reverses established pulmonary fibrosis, *JCI Insight* (2016). DOI: 10.1172/jci.insight.83116

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