Blood pressure drug limits cigarette smoke-induced lung injury in mice

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Chronic obstructive pulmonary disease (COPD) is among the most common causes of death in the US. It is a smoking-related disease for which there are currently no disease-altering therapies. However, hope that one could be developed is now provided by the work of Enid Neptune and colleagues, at Johns Hopkins University, Baltimore, in a mouse model of lung disease caused by exposure to cigarette smoke.

Neptune and colleagues found that lostartan, a drug used widely in the clinic (e.g., to treat high blood pressure), reduced lung disease in mice caused by exposure to cigarette smoke.

Losartan blocks the protein angiotensin receptor type 1, and its effects on cigarette smoke - induced lung injury were a result of the fact that blocking angiotensin receptor type 1 leads to a decrease in levels of the soluble molecule TGF-beta.

The authors therefore suggest that other TGF-beta - targeted therapeutics might also be viable candidates for the treatment of COPD.

More information: Angiotensin receptor blockade attenuates cigarette smoke - induced lung injury and rescues lung architecture in mice, *Journal of Clinical Investigation*.

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