

Novel approaches to reducing inflammation following respiratory virus infections - A focus on respiratory syncytial virus

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Indiscriminate targeting of cytokines in inflammatory disease has been met with major limitations. We have discovered a means to manipulate key cytokine and chemokine responses to selectively target these responses against inflammation. We demonstrate that small receptor antagonist that target TNF signaling or small molecule inhibitor that target the chemokines MCPs are effective in ameliorating RSV disease in mice. Histological analysis of lung tissues showed a reduction in inflammatory infiltrate in infected mice treated with these inhibitors. Importantly, treatment of mice with these inhibitors does not compromise antiviral immunity. These results suggest that these small molecule inhibitors may be useful in treating RSV-induced inflammation in humans. These findings represent novel approaches to targeting inflammatory processes caused by RSV infection. The findings will be discussed.

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