

学 位 論 文 の 要 旨

三 重 大 学

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<p>主論文の題名</p> <p>Inhibition of a Microbiota-Derived Peptide Ameliorates Established Acute Lung Injury</p> <p>主論文の要旨</p> <p>Acute lung injury (ALI) is a clinical syndrome characterized by a diffuse lung inflammation that commonly evolves into acute respiratory distress syndrome and respiratory failure. The lung microbiota is involved in the pathogenesis of ALI. Corisin, a proapoptotic peptide derived from the lung microbiota, plays a role in ALI and acute exacerbation of pulmonary fibrosis. Preventive therapeutic intervention with a monoclonal anticorisin antibody inhibits ALI in mice. However, whether inhibition of corisin with the antibody ameliorates established ALI is unknown. Here, the therapeutic effectiveness of the anticorisin antibody in already established ALI in mice was assessed. Lipopolysaccharide was used to induce ALI in mice. After causing ALI, the mice were treated with a neutralizing anticorisin antibody. Mice treated with the antibody showed significant improvement in lung radiological and histopathologic findings, decreased lung infiltration of inflammatory cells, reduced markers of lung tissue damage, and inflammatory cytokines in bronchoalveolar lavage fluid compared with untreated mice. In addition, the mice treated with anticorisin antibody showed significantly increased expression of antiapoptotic proteins with decreased caspase-3 activation in the lungs compared with control mice treated with an irrelevant antibody. In conclusion, these observations suggest that the inhibition of corisin is a novel and promising approach for treating established ALI.</p>			