Expression of Matrix Metalloproteinase-9 and -12 in Porcine Lung Infections - DTU Orbit (19/12/2018)

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Matrix metalloproteinases (MMPs) play a variety of roles during organogenesis, in the immune response and during acute and chronic diseases as well as in tissue remodelling. During the last decade, the pig has become used increasingly as a model for human diseases; however, studies on the expression of porcine MMPs are limited. In the present study species-specific antibodies were produced to investigate the expression of MMP-9 and MMP-12 immunohistochemically in lungs from pigs infected with Actinobacillus pleuropneumoniae, Pasteurella multocida and Staphylococcus aureus. The immunolabelling of lung tissues (one infected and one control pig representing each infection) was evaluated for cellular distribution and intensity, which was scored semiquantitatively. When compared with healthy, non-infected controls, the expression of both MMP-9 and MMP-12 was higher in infected lungs. The highest expressions were seen in the alveolar epithelium (MMP-9) and alveolar macrophages (MMP-12). These results are in accordance with studies of human lungs.

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