**What can animal house dust tell us about hygiene and animal health and welfare in farms?**

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**Abstract**

Animal house dust particles are important carriers of bacteria and fungi, endotoxins, and gases. They are composed of feed components such as proteins, debris from litter, antibiotic residues and a high number of skin cells of the respective animal species kept in the barn. The particles when airborne are inhaled by animals and workforce and can cause severe acute and chronic respiratory affections in animal and man. Analysis of fresh and old dust samples from livestock houses showed that even after 20 years of dust storage, high amounts of bacteria and antibiotic residues can be found in the dust samples. Further, recent research revealed that also genetic material of the animal species kept in the barn can be isolated from animal house dust. With novel molecular analytical methods, it seems possible to gain information from collected dust on health and welfare status of the animals housed in the barn. Actual findings will be shown. Dust seems to be a neglected reservoir for potentially infectious agents, antimicrobial residues and health and welfare indicators.