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PNEUMONIA EPIZOOTICS IN NORWEGIAN MUSKOXEN CAUSED BY *MYCOPLASMA OVIPNEUMONIAE*

**KJELL HANDELAND¹, TORSTEIN TENGS¹, BRANKO KOKOTOVIC², TURID VIKØREN¹,
ROGER D. AYLING³, BJARNE BERGSJØ¹, ÓLÖF G. SIGURÐARDÓTTIR⁴, FAISAL SUHEL¹
AND MARIANNE HEUM¹**

¹Norwegian Veterinary Institute, Oslo, Norway; ²National Veterinary Institute, Copenhagen, Denmark; ³Animal Health and Veterinary Laboratories Agency (Weybridge), Addlestone, Surrey, UK ; ⁴Institute for Experimental Pathology, University of Iceland, Keldur, Iceland; Corresponding author (e-mail: kjell.handeland@vetinst.no)

The Norwegian muskox population consists of approximately 300 individuals living on the mountain plateau of Dovre in southern Norway. They originate from 21 muskox calves that were introduced from Greenland between 1947 and 1953. The population is not actively controlled and normally the two main causes of mortality are animals that are killed when they stray from the area and from railroad accidents. During late summer 2006 and 2012, severe outbreaks of pneumonia with die-offs of 25-30% occurred. During the 2012 outbreak, efforts were made to gather high quality microbiological lung samples from sick animals culled in the field. These samples were examined both by bacteriology and modern molecular-biological methods, including high throughput sequencing (pyrosequencing). The study also included retrospective immunohistochemical examination of lung materials from the 2006 epidemic and sera from muskoxen killed in the period 2004-2013, as well as *Mycoplasma* examinations from sheep flocks that were present in the muskox area during the summer of 2012. This study identified *M. ovipneumoniae* as the plausible primary cause of the muskox pneumonia epidemics both in 2006 and 2012 and domestic sheep as the likely source of infection introduction.