



## Preface



Lumpy skin disease (LSD) is a cattle disease caused by a capripoxvirus, mainly transmitted mechanically by blood-feeding arthropods and characterised by fever and nodules on the skin, mucosal membranes and internal organs. Considered endemic to Africa, the disease has spread in the current decade to the Middle East (2012–2013), Turkey (2013), and then into Greece, where the first outbreaks were notified in 2015. In the following year LSD spread further over the Balkans to Albania, Bulgaria, Kosovo, Montenegro, Serbia and the Republic of North Macedonia. The LSD virus spread, however, slowed down upon implementation of area-wide preventive vaccination using homologous vaccine in 2017.

The work presented in this special issue is based on data collected by the veterinary services of the affected and at risk countries that have been analysed by the European Food Safety Authority (EFSA) upon request of the European Commission.

Four papers summarise the main experiences obtained in the control of LSD outbreaks and the outcomes of epidemiological analysis of data gained during the 2015–2017.

The first paper (Tuppurainen et al., 2018) describes field observations and experiences gained from the implementation of control measures against LSD in South-East Europe between 2015 and 2017, with emphasis to challenges and lessons learnt while dealing with the first LSD epidemics in Europe. The cross-border collaboration by the veterinary authorities of all affected countries, coordinated by the European Commission and with the technical support by many other international organizations, was the corner stone for the success of the applied control strategy, enabling to stop the spread of a disease to further European territories.

A second paper (Gubbins et al., 2018) focusses on the development of a mathematical model on LSD transmission between herds, based on LSD outbreaks data recorded in Albania in 2016, and exploring the main factors influencing LSD spread. The results of the model show that most transmission occurs over short distances (< 5 km), but with an appreciable probability of transmission at longer distances. In addition, that there is evidence for seasonal variation in the force of infection associated with temperature, possibly due to vectors abundance and

dynamics.

A third paper (Klement et al., 2018) is exploring the vaccine effectiveness (VE) and risk factors for LSD infection at the farm level, using data from the LSD outbreaks in six Balkan countries: Bulgaria, Greece, Serbia, Montenegro, Republic of North Macedonia and Albania. It has been clearly demonstrated that the vaccination with high coverage, using a live homologous vaccine can effectively reduce LSD virus spread.

Finally a fourth paper (Haegeman et al., 2019) makes a clear overview of diagnostic tools available for Capripox virus infections, reporting the current knowledge on limits and performances of different serological and virological diagnostic tools that can be used in the surveillance and control of LSD.

## References

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Arjan Stegeman\*

Utrecht University, Faculty of Veterinary Medicine, Yalelaan 7, 3584 CL

Utrecht, the Netherlands

E-mail address: [j.a.stegeman@uu.nl](mailto:j.a.stegeman@uu.nl).

Paolo Calistri

Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise, Epidemiology

Unit, Via Campo Boario, 64100, Teramo, Italy

\* Corresponding author.