

## **An Orf disease outbreak diagnosed by electron microscopy**

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### **Abstract**

Orf virus, the causative agent of Orf, also known as contagious pustular dermatitis or contagious ecthyma, is the member of the genus *Parapoxvirus* belong to the subfamily Chordopoxvirinae of the Poxviridae. This genus also includes pseudocowpox virus (Milker's nodular virus or Paravaccinia virus) (PCPV), bovine papular stomatitis virus (BPSV) in cattle and *Parapoxvirus* of red deer in New Zealand. Virions are ovoid shape, 220-300×140-170 nm in size with a surface filament that appear as a regular cross-hatched, spiral coil involving a continuous thread. Contagious ecthyma is an epidermal disease of sheep, goats wild ruminants and humans with a worldwide distribution. Symptoms of sheep infection with *Parapoxvirus* involve painful erosive papules or vesicles on the muzzle, lips and teats. These lesions are usually to the areas of the virus entry sites. In this communication, we reported the presence of the Orf virus infection in three sheeps in Iasi County, Romania, very quick diagnosed by electron microscopy. The crust specimens have been collected from three sheeps having symptoms consistent with poxvirus associated infections. Tissue specimens were homogenized in tissue mortars, 40% w/v in 1×DMEM medium (Gibco). The samples were centrifuged at 5000× g for 60 min, after which the supernatants were inactivated adding 25% glutaraldehyde 2.5% (Merk) and incubated 30 minutes at room temperature. The negative staining was performed as previously described. Characterization of clinical samples from all three sheeps revealed typical *Parapoxvirus* particles. The infection is usually diagnosed based on the exposure history and the presence of specific injuries. Virus isolation requires primary ovine or bovine cell lines and may be time consuming and difficult to obtain. Therefore, contagious ecthyma being a self-limiting zoonosis, quick diagnosis is of vital importance to avoid inadequate treatment and unwanted stress.

### **Biography**

Vlad Vuta is currently a PhD student at the University of Agronomic Study and Veterinary Medicine, Faculty of Veterinary Medicine, Bucharest. He is also working at the Institute for Diagnosis and Animal Health Bucharest, Virology Department. He has more than 30 papers and communications in reputed journals and international congresses.

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