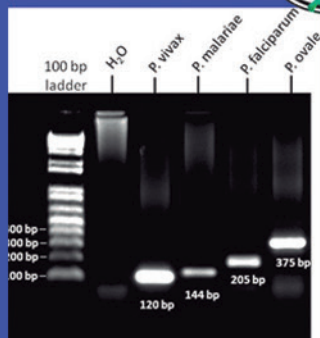
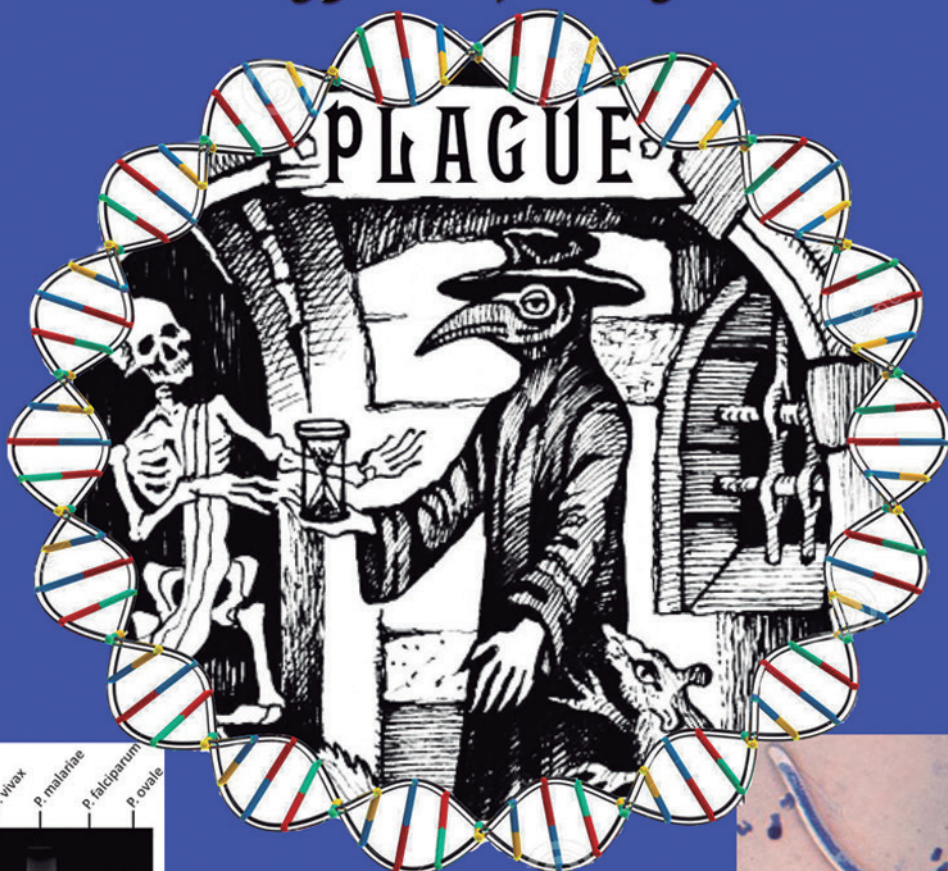


SOVE

7th International SOVE Congress
New Technology Conquering Old Vectors?



October 1-7, 2017
Palma of Mallorca
Spain



NEW TECHNOLOGY CONQUERING OLD VECTORS?





SOVE 2017

NEW TECHNOLOGY CONQUERING OLD VECTORS?

- Book of Abstracts -



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Only one species? Cryptic diversity and spatial distribution of *Culicoides obsoletus sensu lato* (Diptera: Ceratopogonidae) in Europe

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Vector competence studies and virus detection in *Culicoides* populations have highlighted the role of *Culicoides obsoletus* as main vector species of bluetongue and Schmallenberg viruses in the Palearctic region. *Culicoides obsoletus* is a well-described species, recorded in sympatry with an undistinguishable species, *C. scoticus*, and other morphologically closely related species, *C. chiopterus*, *C. dewulfi*, and *C. montanus*. Recently, several authors have reported the existence of cryptic diversity within the usually called *C. obsoletus*. This raises the question of the taxonomic validity of this newly reported diversity, its spatial distribution and eventually the specificity of the molecular diagnostic tools. This is of main importance to assess the epidemiological role of all the valid taxa. In this study, we molecularly identified 1300 *C. obsoletus s.l.* specimens from 11 countries in Europe. The phylogenetic reconstruction confirmed the existence of at least three undescribed species within *C. obsoletus s.s.* (*C. obsoletus* #O2, *C. obsoletus* #dark and a yet undetermined species) and reported the existence of two clades within *C. scoticus*. A distribution map of these species gives a first insight of the European spatial distribution of the different species within *C. obsoletus s.l.*

This work shows the importance of taxonomic reassessment of vector species and the constant evaluation of diagnostic molecular tools at regional level.