



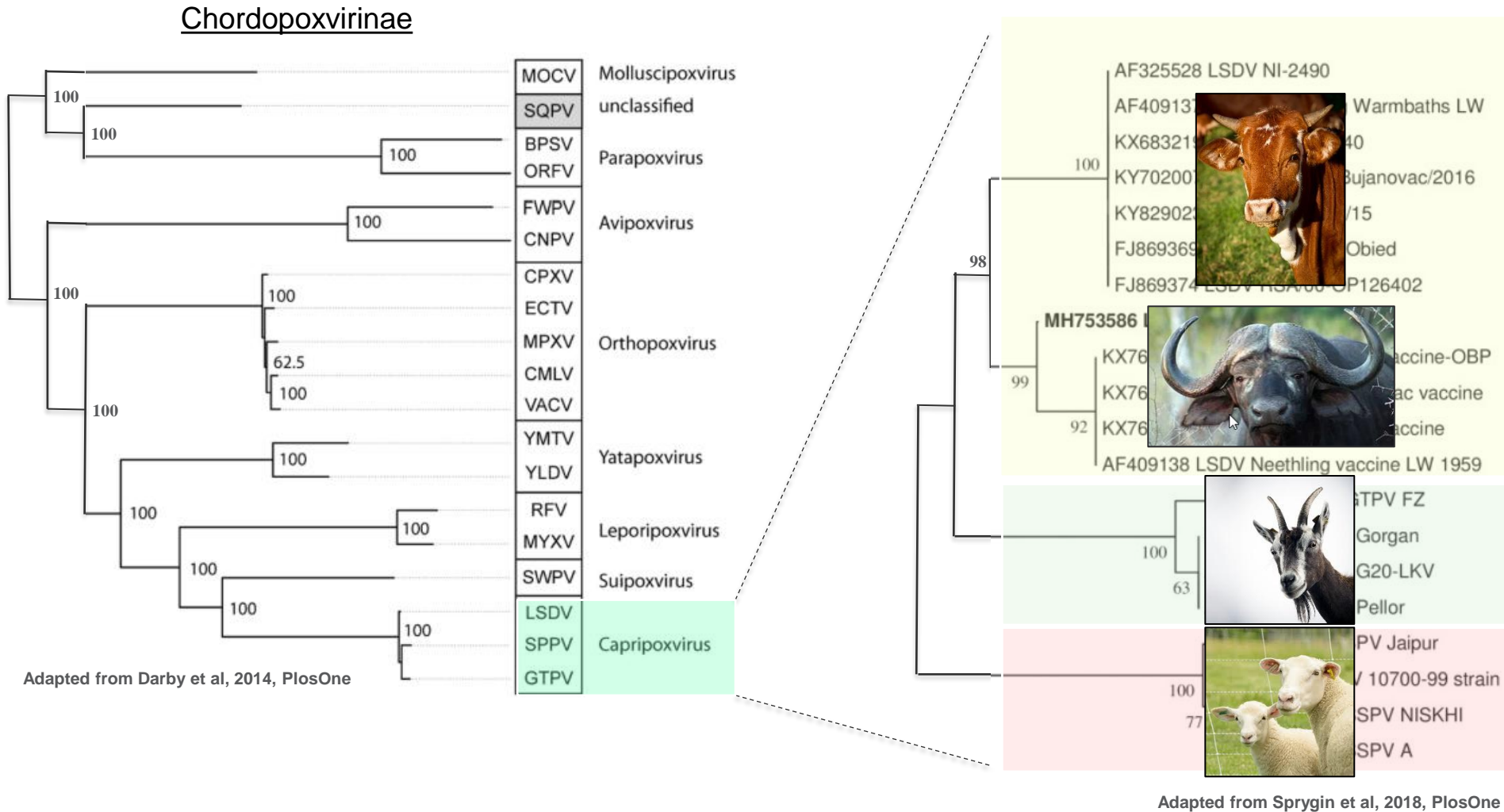
# UPDATE ON THE PHYLOGENETIC ANALYSIS OF THE SHEEPPOX VIRUSES CURRENTLY PRESENT IN THE EU

Andy Haegeman

05/03/2026

.be

# Capripox viruses

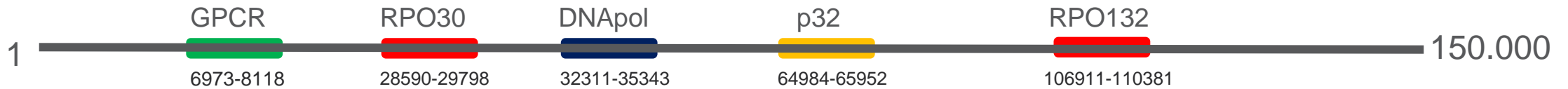


- High nucleotide identity between SPPV, GTPV, LSDV: +/- 96%



# WGS of capripox viruses

- In the past, often phylogeny on single or a few gene(s) using Sanger Sequencing – insufficient genetic variation



- WGS of capripox viruses is not straightforward (long, AT-rich, inverted terminal repeats)
- LSDV: +/-170 WGS available in 2025
- SPPV: +/- 30 WGS available in 2025
- Improvement of WGS methodology important topic for EURL

Journal of Virological Methods  
journal homepage: [www.elsevier.com/locate/jviromet](http://www.elsevier.com/locate/jviromet)  
A robust, cost-effective and widely applicable whole-genome sequencing protocol for capripoxviruses  
Elisabeth Mathijs<sup>1</sup>, Andy Haegeman, Kris De Clercq, Steven Van Borm, Frank Vandebussche

long range PCR - enrichment



Archives of Virology (2024) 169:234  
<https://doi.org/10.1007/s00705-024-06165-6>  
ORIGINAL ARTICLE  
Sheeppox virus genome sequences from the European outbreaks in Spain, Bulgaria, and Greece in 2022–2024  
Florin C. Breman<sup>1</sup> · Andy Haegeman<sup>1</sup> · Wannes Phillips<sup>1</sup> · Nina Krešić<sup>1</sup> · Stefan Hoffman<sup>2</sup> · Sigrid C. J. De Keersmaecker<sup>2</sup> · Nancy H. C. Roosens<sup>2</sup> · Montserrat Agüero<sup>3</sup> · Ruben Villalba<sup>3</sup> · Aleksandra Miteva<sup>4</sup> · Emiliya Ivanova<sup>4</sup> · Konstantia E. Tasioudis<sup>5</sup> · Serafeim C. Chaintoutis<sup>5</sup> · Aikaterini Kirtzalidou<sup>5</sup> · Nick De Regge<sup>1</sup>

direct sequencing approach

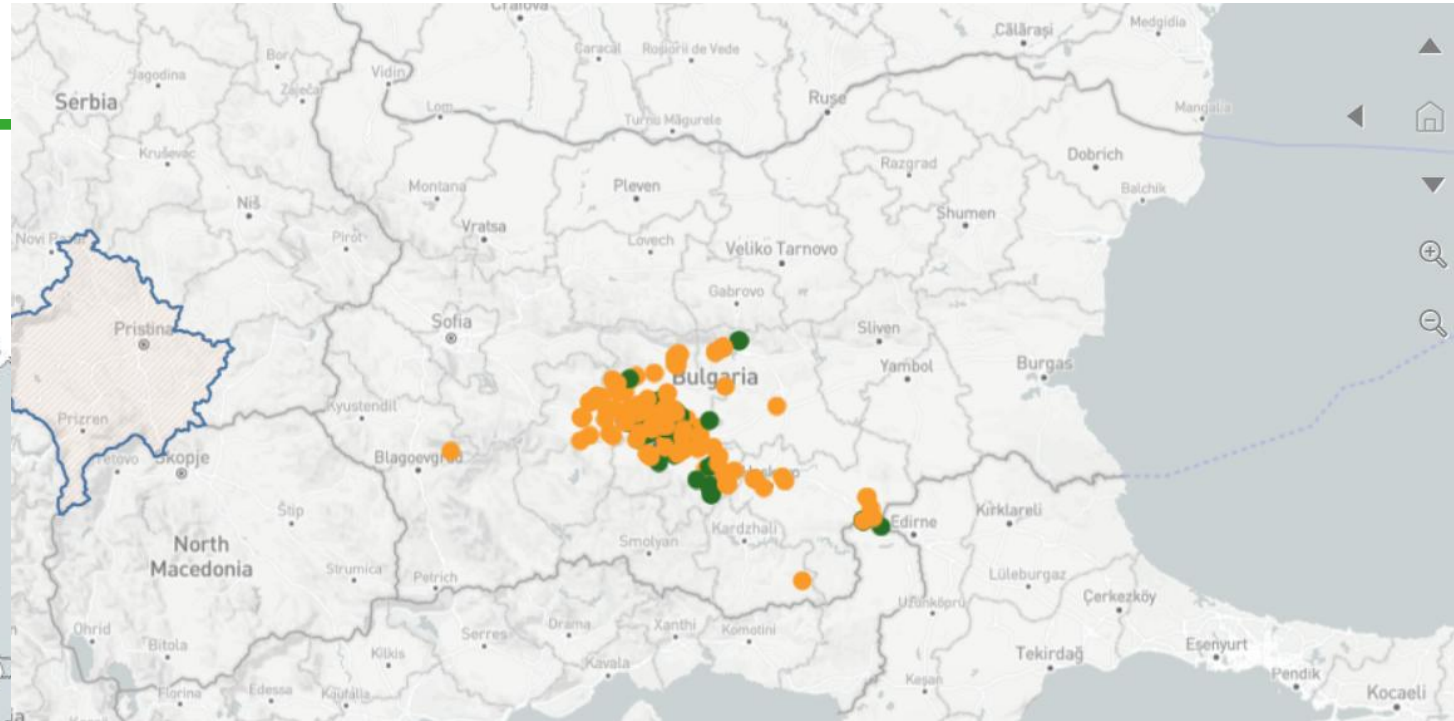
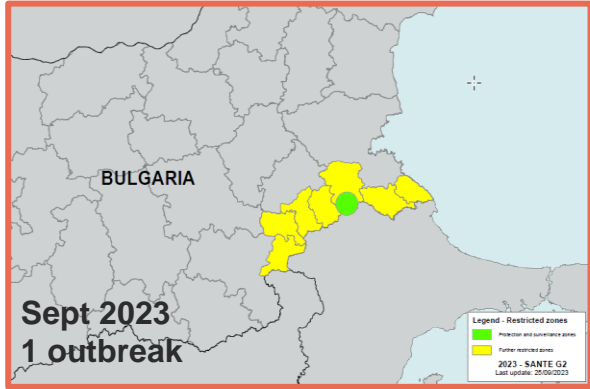


Upcoming: Comparison of WGS approaches for capripox viruses

# SPPV in Europe, 2022-2026



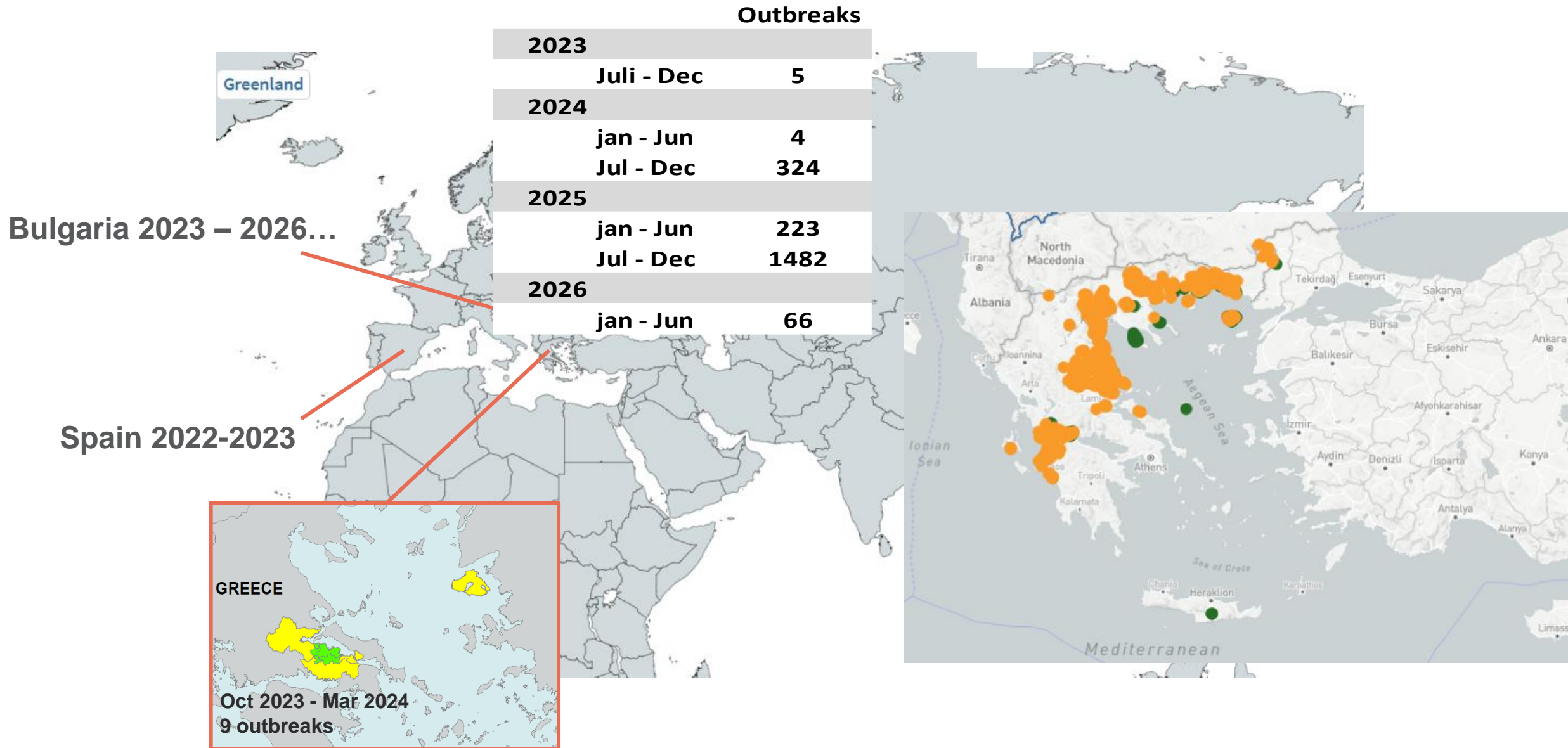
# SPPV in Europe, 2023-2026



**Spain 2022-2023**

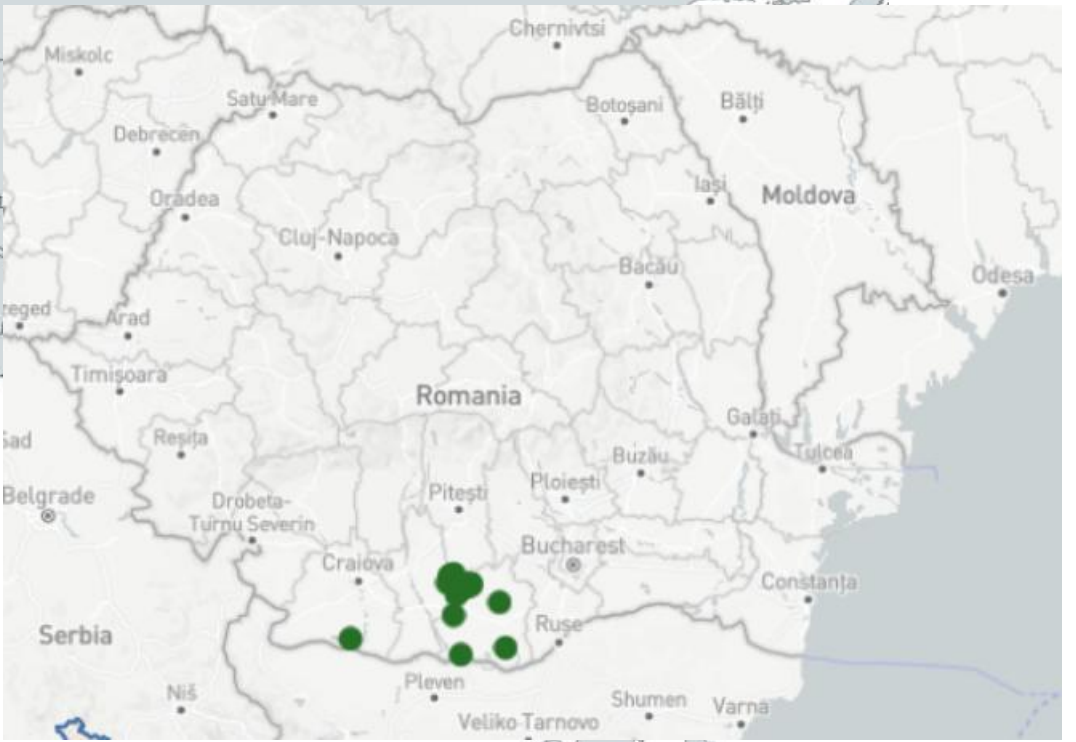
	Outbreaks
<b>2023</b>	
Juli - Dec	<b>1</b>
<b>2024</b>	
Juli - Dec	<b>11</b>
<b>2025</b>	
jan - Jun	<b>7</b>
Jul - Dec	<b>182</b>
<b>2026</b>	
jan - Jun	<b>1</b>

# SPPV in Europe, 2023-2026



# SPPV in Europe, 2023-2026

Outbreaks	
2025	
jan - Jun	6
Jul - Dec	21



# SPPV in Europe, 2022-2026

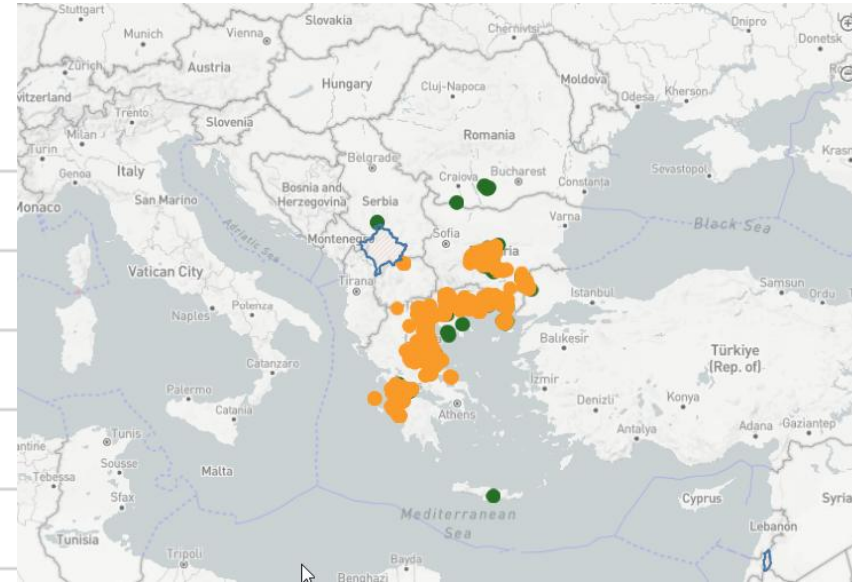
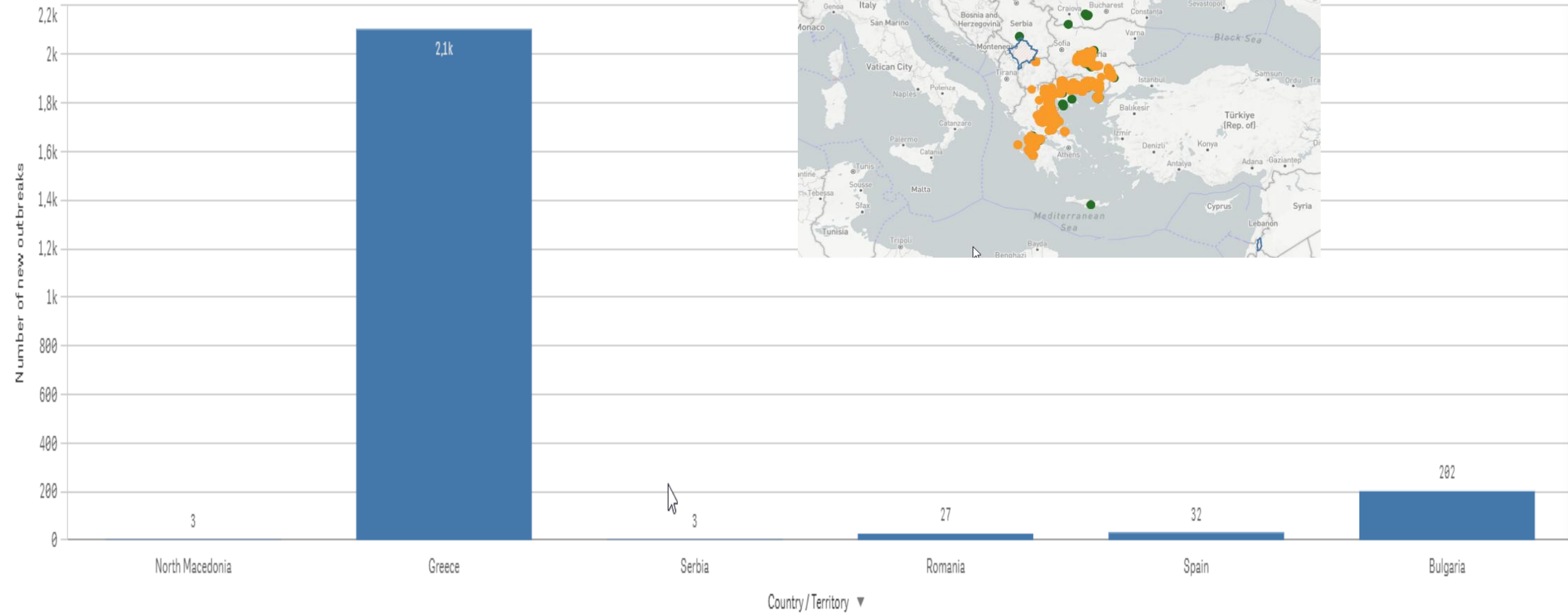


# SPPV in Europe, 2023-2026

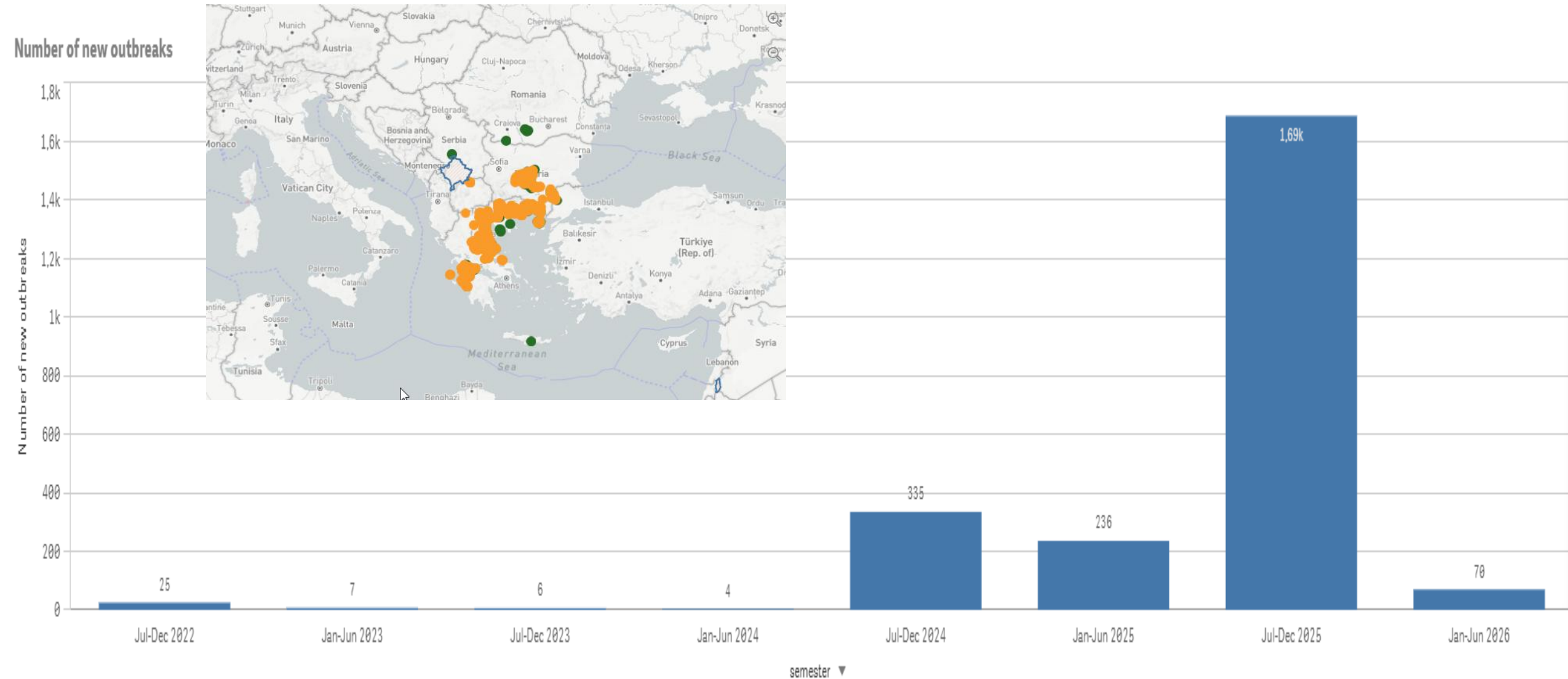


# SPPV in Europe, 2023-2026

Number of new outbreaks



# SPPV in Europe, 2023-2026



# Phylogeny SPPV outbreaks 2022 - 2026



- **Samples received for WGS**

NRL Spain: Agüero M, Villalba R

NRL Greece: Tasioudi K, Chaintoutis S,  
Kirtzalidou A

NRL Bulgaria: Ivanova E

NRL Romania: Ancuceanu BC

NRL Serbia: Vidanović D

- **Samples requested**

NRL Republic of North Macedonia: in progress