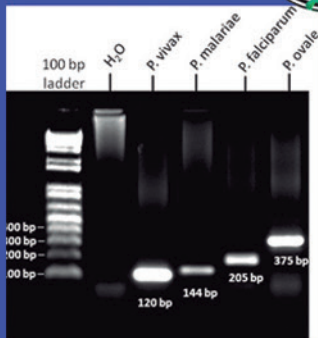
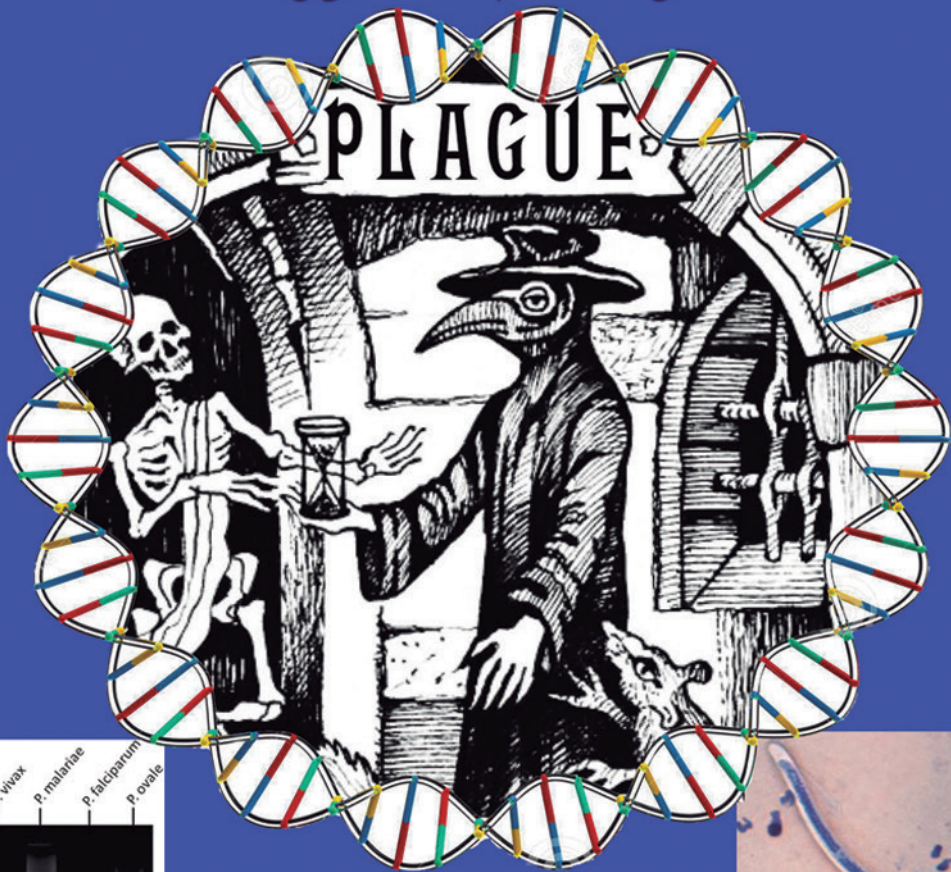


# SOVE

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 -



The 7th International Congress of the Society for  
Vector Ecology (SOVE)

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Palma from 1 to 6 October 2017



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## Old *Plasmodium* DNA from Spain hints at parasite origins

Carles Aranda<sup>1</sup>, Pere Gelabert<sup>2</sup>, Marcela Sandoval-Velasco<sup>3</sup>, Iñigo Olalde<sup>2</sup>, Rosa Fregel<sup>4</sup>, Adrien Rieux<sup>5</sup>, Raül Escosa<sup>6</sup>, Krijn Paaijmans<sup>7</sup>, Ivo Mueller<sup>7,8,9</sup>, Thomas Gilbert<sup>3,10,11</sup>, Carles Lalueza-Fox<sup>2</sup>

SCM, Baix Llobregat, Council, Sant Feliu de Llobregat, Spain<sup>1</sup>; Institute of Evolutionary Biology, Barcelona, Spain<sup>2</sup>; EvoGenomics, Natural History Museum of Denmark, Copenhagen, Denmark<sup>3</sup>; Department of Genetics, Stanford University, Stanford, USA<sup>4</sup>; CIRAD, BIOS Department, PVBMT laboratory, St. Pierre de la Réunion, France<sup>5</sup>; COPATE, Deltebre, Spain<sup>6</sup>; ISGlobal, Barcelona, Spain<sup>7</sup>; Population Health and Immunity Division, Walter & Eliza Hall Institute, Victoria, Australia<sup>8</sup>; Department of Medical Biology, University of Melbourne, Victoria, Australia<sup>9</sup>; Trace and Environmental DNA Laboratory, Department of Environment and Agriculture, Curtin University, Western Australia, Australia<sup>10</sup>; NTNU University Museum, Trondheim, Norway<sup>11</sup>.

[caranda@elbaixllobregat.cat](mailto:caranda@elbaixllobregat.cat)

After the certification of eradication of malaria in Spain in 1964, and in southern Europe in the mid-20th century, several studies focused on the capacity of the former malaria vector *Anopheles atroparvus*, still present in the region, to transmit different malaria parasites, mainly *Plasmodium vivax* and *Plasmodium falciparum*. A strain of *An. atroparvus* from Ebro delta in Tarragona was isolated and maintained and tests were carried out to determine its sensibility to *P. falciparum*, showing no infectivity. In 2015, a set of slides with blood stains of malaria-affected people from the Ebro delta, dated between 1942-1944, were recovered in a local medical collection. DNA was extracted from the slides, a subset stained with Giemsa and another consisting of dried blood spots; data was generated using Illumina sequencing. *P. vivax* and *P. falciparum* mitochondrial genome sequences were subsequently reconstructed from the resulting data. Phylogenetic analysis of the eradicated European *P. vivax* mtDNA genome indicates that the European isolate is closely related to the most common present-day American haplotype and likely entered the American continent post-Columbian contact. Furthermore, the European *P. falciparum* mtDNA indicates a link with current Indian strains that is in agreement with historical accounts. Present and future results will give light on the interaction vector parasite and supports that present *Plasmodium* distribution is a result of a series of human mediated dispersals involving transport between different continents.