Oral presentation:

**Microbial observatory of Spanish caves: assessing the origin of fungal outbreaks**

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The last decade has seen a progressive colonization of visitable caves by microorganisms. The caves of Lascaux, Montignac, France, and of Castañar de Ibor, Cáceres, have suffered outbreaks of *Fusarium solani*, a fungus that has also been found in the air and sediments of the Doña Trinidad Cave, Ardales, Málaga. This work sets the bases for the creation of a Cave Microbiological Observatory for controlling the fungus present in the ecosystem and the timely detection of outbreaks that could compromise the integrity of the cave and any cave paintings present. At the same time, it is intended to study the relationships between the fungal community and cave inhabitants (insects, rodents, etc.), as many of the fungi present are parasites, and use the inhabitants to enter the cave and disperse in it. The execution of this study entails monitoring of the cave air, and the use of molecular techniques such as the amplification of gene sequences of 18S and ITS ribosomal RNA to identify the members of the fungal communities. Knowing the processes of spore dispersion and modelling it taking into account air currents and temperature gradients, the eventual colonization of different materials by microbial communities, the trophic nature of the latter, and the relationships between the different inhabitants of the cave, should enable the design of a control strategy to guarantee its conservation.

Poster presentation:

**The heavy metal content in bat guano heaps in karst caves**

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Compared to surface habitats, caves are frequently nutrient-poor. The main source of carbon in caves originates from percolation water, sinking streams and droppings of cave animals. Bat guano is one of the most important food sources