

## Overcoming resistance to Beta-lactam antibiotics in Bacterial species

CSIC and the University of Würzburg have developed a new method to eliminate antibiotic-resistant bacterial infections using classical antibiotics previously discarded due to the occurrence of antibiotic resistance.

### An offer for Patent Licensing

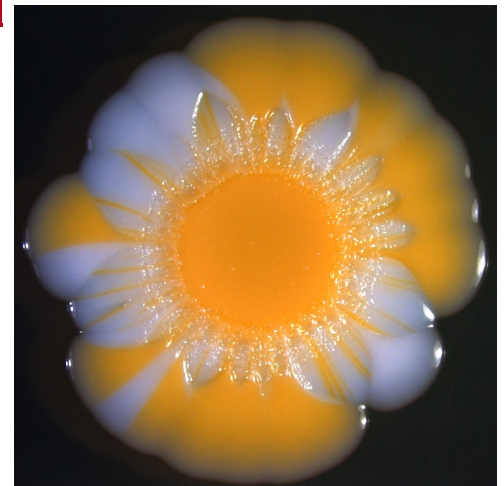
#### Method to eliminate antibiotic-resistant bacterial infections

The approach is the combination of B-lactam antibiotics with inhibitors of membrane microdomain formation in bacteria.

For the human pathogen MRSA resistant to penicillin and cephalosporin, the combination of penicillin with anti-microdomain compounds eliminate infections in animal models.

These anti-microdomain compounds are cholesterol-inhibitory drugs that are conventionally used to lower cholesterol in patients with hypercholesterolemia.

Industrial partners from the pharmaceutical industry are being sought to collaborate through a patent licence agreement.



Colonia de *Staphylococcus aureus* MRSA

#### Main innovations and advantages

- This method can be used to eliminate MRSA infections that are resistant to multiple antibiotics, which cause hard-to-treat infections in hospitals sometimes become lethal to the patient. As they are limited strategies to eliminate these infections, this method represents an outstanding possibility to treat patients with complicated infections.
- This method can be used to recycle conventional antibiotics that were discarded because of the spread of antibiotic resistance. Due to the lack of new antibiotics and the necessity to increase the arsenal to fight antibiotic resistance bacterial infections, recycling conventional antibiotics to fight new multi-drug resistant infections is a promising strategy to reduce the number of infection in clinical settings.

#### Patent Status

PCT patent application filed

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