Drug repurposing against pneumococcus and other Streptococcus genus species

CSIC has developed a patent for the use of 7 drugs as novel antimicrobials that display bactericidal activity against *Streptococcus pneumoniae* (pneumococcus), acting on therapeutic targets not considered in the usual treatments for this pathogen.

Industrial partners are sought which are interested in patent licensing for the development of the mentioned drugs as antibacterials targeting the *Streptococcus* genus and that open up new ways for treatments against these pathogens and for combating current antibiotic resistance issues.

An offer for patent licensing

A new antipneumococcal treatment to combat antibiotic resistance

Pneumococcus is a human pathogen causing important diseases such as pneumonia, sepsis and meningitis. This organism is a major infectious agent responsible of more than a million deaths a year worldwide, with the highest incidence on people under 5 and over 65 years old. Vaccination provides an insufficient protection due to the high serotype variety of this bacterium leading to serotype replacement phenomena. On the other hand, in the last years, a notable increase has been observed in clinical pneumococcal strains resistant to traditional antibiotics, making it necessary the search for alternative treatments to combat this pathogen.

The compounds developed here are drugs selected from the screening of a commercial library, but without any activity against pneumococcus previously described. All of them display analogous chemical features and act by a similar molecular mechanism.

Main innovations and advantages

- The entry of these compounds in clinical phases would be favoured as they are drugs already approved by international medicines agencies, so data on their pharmacodynamics, pharmacokinetics and toxicity are widely known.
- Appearance of resistances against these compounds is highly unlikely, since their action mechanism is different to that of traditional antibiotics.

Patent Status
Spanish patent application filed

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