NEW ANTIBIOTICS TO FIGHT RESISTANT BACTERIA

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RESUMEN

The Institute of Organic Synthesis at the University of Alicante has discovered a new family of molecules that can effectively combat bacteria resistant to conventional antibiotics, including tuberculosis.

The innovation lies in the novel molecular structure of these compounds, and among their main advantages are their high antibiotic activity, their reduced degradation in the biological environment and the simple synthesis procedure.

Chemical and/or pharmaceutical companies interested in acquiring this technology for commercial exploitation through patent licensing agreements are sought.

VENTAJAS Y ASPECTOS INNOVADORES

ADVANTAGES OF THE TECHNOLOGY

This novel technology has the following advantages:

1) **Antibiotic efficacy** demonstrated in in vitro tests.

2) **Less degradation** in the biological environment.

3) **Greater therapeutic effect**.

4) **High antibiotic activity** against different bacteria resistant to conventional antibiotics.

5) **Greater specificity** towards antibiotic-resistant bacteria, including *Mycobacterium tuberculosis*, an infectious disease that is increasingly difficult to treat with existing antibiotics.

6) Enables treatment of infections that were previously difficult or impossible to cure due to bacterial resistance.

7) Potential to **prevent future resistance** by being effective against bacteria that have already developed resistance to other antibiotics.

8) **Wide field of application** in the field of pharmaceutical chemistry and medicine in general.

9) The synthesis procedure of these compounds is **very simple**: only three steps.

10) The synthesis procedure is carried out under **mild reaction conditions**.

11) The synthesis procedure allows **good yields** of the final compound.

Its potential to save lives and prevent future resistance makes it a valuable and promising technology for the future of medicine.

INNOVATIVE ASPECTS OF THE TECHNOLOGY

The main innovation lies in the **molecular structure** of these chemical compounds, which allows them to be effective against bacteria that have developed resistance to other antibiotics, representing a very significant advance in the effective fight against this type of bacteria, which is a growing and worrying problem worldwide.

The new compounds described in this patent can treat a **wide variety of infections** caused by resistant bacteria, which can significantly improve

the therapeutic options available.

These molecules can be used as active species against different types of microorganisms, preferably in the prevention and/or treatment of infections such as tuberculosis.

APLICACIONES DE LA OFERTA

This new set of molecules can be applied in:

- **Pharmaceutical industry**: the new compounds described in the patent have the potential to be used as antibiotics to treat a wide variety of infections caused by resistant bacteria.
- **Medical sector**: the new compounds can be used to treat resistant bacterial infections in patients.
- **Scientific research**: the technology can be used to research and develop new antimicrobial compounds.
- **Agricultural sector**: the new compounds can be used as antimicrobial agents in the production of food and animal feed.
- **Veterinary sector**: the new compounds can be used to treat resistant bacterial infections in animals.

One of the main benefits of this technology is its ability to treat infections caused by bacteria resistant to conventional antibiotics. For example, tuberculosis is an infectious disease caused by the bacterium *Mycobacterium tuberculosis*, and has become increasingly difficult to treat due to resistance to existing antibiotics. In this sense, the new compounds described in this patent have the potential to be **effective against resistant strains of *Mycobacterium tuberculosis***.

COLABORACIÓN BUSCADA

Currently, there are no commercial products related to these structures. In this sense, companies interested in acquiring this technology for **commercial exploitation** through **patent licensing agreements** are sought.

Company profile sought:

- Pharmaceutical industry.
- Chemical industry.