

Technology Offer

CCSIC/AH/053

Compounds with antiparasitic and antiviral activity



Family of compounds that exhibits in vitro antiprotozoal and antiviral activity, useful for treating diseases caused by protozoa, such as Leishmania, Trypanosoma, and Plasmodium, or human coronaviruses, such as SARS-CoV-2.

Intellectual Property

Spanish priority patent application filed

Stage of development

Tested in *in vitro* assays

Intended Collaboration

Licensing and/or co-development

Contact

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Market need

Leishmaniasis, with 12 million cases worldwide, has toxic and costly treatments, and resistance is increasing. Chagas disease, caused by *Trypanosoma cruzi*, has no vaccine, and the only available drugs are poorly effective in the chronic phase and present adverse effects and resistance. For this reason, the development of new trypanocidal and leishmanicidal agents, including for veterinary use, is a priority. Likewise, malaria remains a serious problem because of resistance to current treatments, making the search for new therapies urgent. In addition, there are only a few antivirals approved for COVID-19, and their effectiveness is limited, so new effective drugs against different viral variants, low-cost, and easy to administer are needed.



Proposed solution

Piperidin-4-amine derivatives for the treatment of diseases caused by protozoa, especially those belonging to the genera *Leishmania*, *Trypanosoma*, and *Plasmodium*, and by viruses belonging to the *Coronaviridae* family.

The compounds, which interfere with phospholipid metabolism, are selective for these parasites and show low cytotoxicity.

Competitive advantages

- No compounds have been described with activity against coronaviruses and, in addition, trypanocidal and antimalarial activity.
- Potent compounds, in the low micromolar range, and selective against intracellular amastigotes of *Leishmania donovani*.
- Easily scalable synthesis.