Andrographolide derivatives for its use as treatment for COVID-19 disease and pulmonary fibrosis related to COVID-19

CSIC, the Polytechnic University of Valencia, the University of Navarra and the Medical Applied Research Foundation have developed semi-synthetic derivatives of andrographolide, a plant-derived product, very useful for the treatment of COVID-19 disease and pulmonary fibrosis related to it. These new compounds show a secure and specific way to control the inflammation related to the infection by SARS-CoV-2 virus. Industrial partners are being sought to collaborate through a patent licence agreement or co-development.

An offer for Patent Licensing or Collaboration for development

Plant-derived compounds with anti-inflammatory and antiviral effect

A large percentage of COVID-19 patients die due to the cytokine storm, an uncontrolled immune response where the body releases excessive cytokines, against an infection to which it has no previous immunity. There are treatments based on monoclonal antibodies and drugs focused on inhibiting those cytokines, but they present toxicity in most cases with major secondary effects.

The developed compounds derived from the andrographolide, an existing component in Andrographis paniculata, a long-standing traditional medical plant widely used in Asia, Africa and Central America with therapeutic qualities such as antiviral, antibacterial and anti-inflammatory effects.

These andrographolide derivatives constitute a new tool, more specific and safe than the current treatments, in order to control the inflammatory response due to COVID-19 and pulmonary fibrosis related to this disease.

Main innovations and advantages

- Semi-synthetic compounds of simple synthesis from a natural compound (which is commercialized).
- Strong antiviral, anti-inflammatory and immunomodulatory activity tested in in-vitro cells and in vivo models of inflammation (zebra fish, mice).
- Non-mutagenic and do not present toxicity in model organisms.
- Via oral or parenteral administration route.
- Regulatory preclinical development is getting completed and the production is being scaled up to industrial level.
- A clinical trial (phases I and II) in COVID-19 patients is being planned.
- Of great interest for the treatment of COVID-19 with bilateral pneumonia, accompanied by acute respiratory distress syndrome (ARDS).

Patent Status
European patent application filed suitable for international extension

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