

Late-stage diazomethylations to impact urgent & unmet medical needs

Timeline | 12/2021 to 11/2023

ICIQ People | [Marcos G. Suero Research Group](#)

Budget | 109,250 €

Call | Pruebas de Concepto 2021

SUMMARY

Finding a drug molecule that can save the life of infected people with SARS-CoV-2 (and its new variants) is complementary to the COVID vaccines and highly necessary in this pandemic times. However, the pace of production of effective antivirals to control SARS-CoV-2 is slow. The repurposing of known antiviral drugs and new derivatives to fight COVID-19 is a current option that might lead to successful results. We will generate new bioactive analogues of known antivirals and antibiotics against SARS-CoV-2 and Gram-negative and Gram positive bacteria respectively, by a late-stage functionalization technology; and perform in vitro testing of antiviral and antibiotic activity. The proprietary technology of the Suero laboratory published in Nature is based on the use of bespoke reagents with the capacity of transforming a C-H bond in complex molecules into a chiral centre with a high degree of modularity. This concept has a potential which is unique in providing access to proprietary libraries of drug molecules with ease, which are very difficult or unthinkable by other means. We hope that the experimental proof of usefulness of the late-stage functionalization technology in the straightforward production of improved APIs from known drugs will increment the Technological Readiness Levels of the technology, while providing real-life applications in infectious diseases and awaken the interest of discovery departments of pharmaceutical companies.

CURRENT CHALLENGES

