

MEΦI / MEPHI**Microbes, Evolution, Phylogeny and Infection**

Marseille, January 21st, 2021

To the Editor of Clin Infect Dis

Dear Editor,

We would like to submit to Clinical Infectious Diseases an original article entitled “Heterogeneity in susceptibility to hydroxychloroquine of SARS-CoV-2 isolates”. Hydroxychloroquine has been demonstrated *in vitro* to control SARS-Cov2 multiplication on Vero E6 cells on a limited number of isolates. We screened 30 different selected isolates of SARS-CoV-2 from different patients who received azithromycin and/or hydroxychloroquine, especially those having viral persistence during the two episodes of French epidemic, late winter-spring then summer. Dose-response curves in single-molecule assays with hydroxychloroquine were done for isolates with suspected reduced susceptibility. Dose-response model showed a decrease of susceptibility of 3 strains to hydroxychloroquine. Whole genome sequencing showed that these three strains are all from the second epidemic episode and 2 clusters with isolates from Africa, the continent where hydroxychloroquine was the most used.

All authors have seen and approved the content of the submitted version of the paper and have contributed significantly to the work. This manuscript is original and has not been submitted for publication elsewhere. The authors declare no conflict of interest. Any correspondence regarding this manuscript can be sent to: bernard.la-scola@univ-amu.fr. We hope that our data will be sufficiently convincing and interesting to warrant publication in your journal.

Yours sincerely,



Professeur Bernard LA SCOLA