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## 4-amino-1,2-Naphthoquinone triazoles as potential anti-SARS-CoV-2

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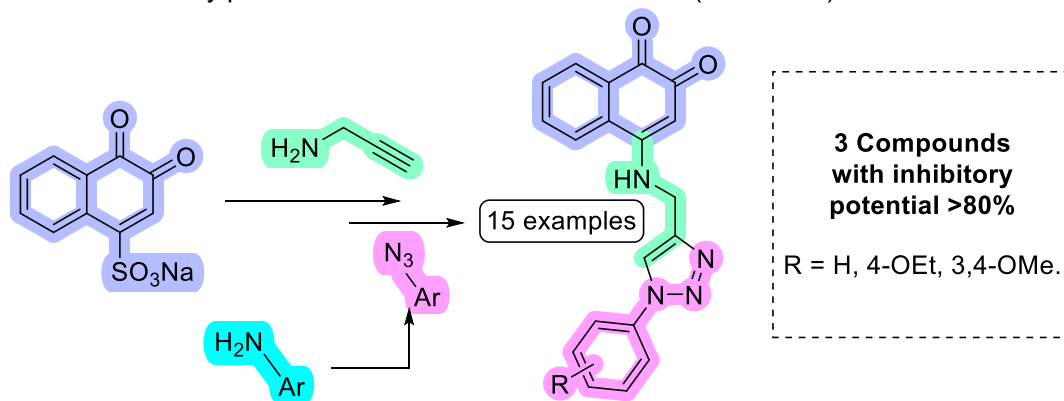
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### ABSTRACT

COVID-19 disease promoted by the SARS-CoV-2 virus caused more than 6.6 million deaths between 2019-2022.<sup>1</sup> Therefore, research groups have been trying to find new drugs or small molecules to be produced as medicines that can inhibit the virus.<sup>2</sup> Quinones are promising COVID-19 drug candidates to be explored, due may inhibit M<sub>pro</sub>, enzyme responsible for replication.<sup>3</sup> Santos and coworkers employed computational study of naphthoquinones against SARS-CoV-2, herewith experimental evaluation getting micromolar to nanomolar range for M<sub>pro</sub>.<sup>3</sup> Here, we developed a new method to obtain 1,2,3-triazole from sodium 1,2-naphthoquinone-4-sulfonic acid ( $\beta$ -NQSNa) to afford 15 unpublished examples of naphthoquinones derivatives (33-66% yield) *via* microwave. All compounds were initially tested in a 10  $\mu$ M screen for SARS-CoV-2 replication inhibition assays. That were performed in Calu-3 cells, infected with an MOI of 0.1 of SARS-CoV-2 for 1h at 37 °C. After 48h, virus-containing supernatants were collected for quantification of viral replication using plaque formation assay. After quantification, the percentage of inhibition of the compounds was calculated, where three compounds show inhibitory potential anti-SARS-CoV-2 above 80% (**Scheme 1**).



**Scheme 1.** Triazole derivatives with promissory structures anti-SARS-CoV-2.

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