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VIRUCIDAL ACTIVITY OF NEW COMPOUNDS AGAINST MURINE CORONAVIRUS

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To date, there is an urgent need to develop new therapeutic approaches for the treatment of COVID-19 and new compounds are being studied for their potential virucidal action. The murine Coronavirus MHV-A59 has significant genetic and structural similarity with SARS-CoV-2, making it a great alternative model to SARS-CoV-2 and can be worked on in conventional safety level laboratories. Therefore, the objective of this work is to evaluate the virucidal effectiveness of 8 new compounds against coronaviruses. The experiment was carried out by exposing a suspension of activated compound in the presence of MHV-A59 and carrying out serial dilution of each suspension/treatment in a monolayer of L929 cells. Dilutions were made to concentration 10^{-4} and inoculated in duplicate in 24-well plates. After 48 hours of incubation, the cells were fixed and, after fixation, the cell monolayer was stained with Crystal Violet. After counting the number of lysis plaques in each treatment, a potent virucidal activity of 4 of the 8 compounds tested was observed, with a significant reduction in the viral titer. New tests will be carried out to evaluate the activity of these compounds against SARS-CoV-2.

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