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Prospects Of Antiviral Drugs Derived From Natural Products: Targeting SARS-CoV Entry And Replication.

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Abstract:
The recent coronavirus disease (COVID-19) pandemic outbreak caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and its rapid spread from continent to continent pose a global health emergency. Researchers are making headway to combat the ongoing COVID-19 to prevent further losses. Many natural antiviral compounds have been explored for their potential application in treating viral infections, including those caused by SARS- and MERS-CoV. This review focuses on natural compounds that have been showing promising results against SARS-CoV, SARS-CoV-2 and MERS-CoV, along with their mechanism of action. The entry and replication of CoV are among the major mechanism for the spread of COVID-19. In this context, natural compounds inhibiting the proteins essential for SARS-CoV-2 entry and replication in the nanomolar (nicotianamine) and micromolar (baicalin, baicalein, scutellarein, dihydromyricetin, quercetagetin, myricetin, amentoflavone, herbacetin, isobavachalcone, quercetin 3-β-d-glucoside, helichrysetin, hirsutenone, hirsutanonol, oregonin, rubranol, rubranoside B, rubranoside A, tanshinones, emodin, and griffithsin) concentration could be potential sources of new anti-SARS-CoV-2 drugs.