

# Targeting the Molecular Action Pathways of COVID-19: A Prospective Therapeutic Strategy

Afeez Ishola<sup>1</sup> and Idris Adewale Ahmed<sup>2</sup>

<sup>1</sup>National Yang Ming Chiao Tung University International Health Program

<sup>2</sup>Universiti Malaya

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## Abstract

Developing a good therapeutic drug for SARS-CoV-2 infection responsible for the ongoing coronavirus disease 2019 (COVID-19) pandemic is highly essential. Thus, identifying the key host molecular pathway targeted by SARS-CoV-2 during infection is of topmost importance. Subsequent screening of old or new drugs as well as medicinal plants targeting the identified pathways will prove useful and hasten the discovery of a potent COVID-19 drug. The information and data on COVID-19 were collated from various resources and literature databases such as PubMed, Science Direct, Wiley, Springer, Taylor and Francis, Scopus, Infilbnet, Google, and Google Scholar. The keywords and corresponding Relevant Medical Subject Headings (MeSH) terms used for searching databases include COVID-19; Herbal Medicine; Molecular Pathways; Pathophysiology, Phytotherapy, SARS-CoV-2. The study reviewed the existing literature on molecular action pathways of SARS-CoV-2 infection. We also discussed the ongoing SARS-CoV-2 drugs. The review also critically analyzes the molecular signaling and prospective therapeutic targets, cellular infection, incubation and proliferation strategy, clinical signs, symptoms of COVID-19 infection, the current global infection, mortality statistics, current medical management, and the prospect of therapeutic development. Plant-derived natural compounds could be evaluated and developed into antiviral drugs for the inhibition of coronavirus enzymes. Some herbal medicines have also been used and found to be therapeutically effective as secondary interventions for the prevention and treatment of COVID-19.

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