

Identifying Possible Pharmacological Anti-COVID-19 Components of TCM

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Abstract

The herbal medicine product Lianhuaqingwen (LHQW) capsule has been clinically proven to be useful in the treatment of coronavirus disease 2019 (COVID-19) pneumonia. Human exposure to components of LHQW and its pharmacological effects.

Keywords

Herbal medicine • Coronavirus • Pharmacological effects • Therapeutic

Description

The herbal medicine product Lianhuaqingwen (LHQW) capsule has been clinically proven to be useful in the treatment of coronavirus disease 2019 (COVID-19) pneumonia. Human exposure to components of LHQW and its pharmacological effects, however, remain largely unknown. Several ACE2 binding components with good enzyme inhibitory effects were screened out by ACE2 biochromatography on the basis of human exposure study. The findings obtained by the authors showed chemical and biochemical evidence to investigate the molecular mechanisms of therapeutic effects of the LHQW capsule in the care of patients with COVID-19 on the basis of human-exposed components [1]. On the basis of either a direct effect on

the coronavirus itself and/or immunotherapy options, future anti-COVID-19 therapy can be envisaged. Targeting receptor proteins on host cell surfaces that are often targeted by coronaviruses to bind through their Receptor-Binding Domain (RBD) is one attractive strategy [2].

The viral RNA-dependent RNA polymerase is inhibited by ribavirin, a guanine analogue. Its operation against other nCoVs makes it a candidate for treatment with COVID-19. Its in vitro activity against SARS-CoV, however, was limited and high concentrations were needed to inhibit viral replication, requiring high-dose and combination therapy [3]. Another possible class of adjunctive therapies for COVID-19 is monoclonal antibodies directed against main inflammatory cytokines or other elements of the innate immune response. The reason for their use is that an amplified immune response and cytokine release, or 'cytokine storm,' triggers the underlying pathophysiology of serious organ damage in the lungs and other organs (Figure 1) [4,5].

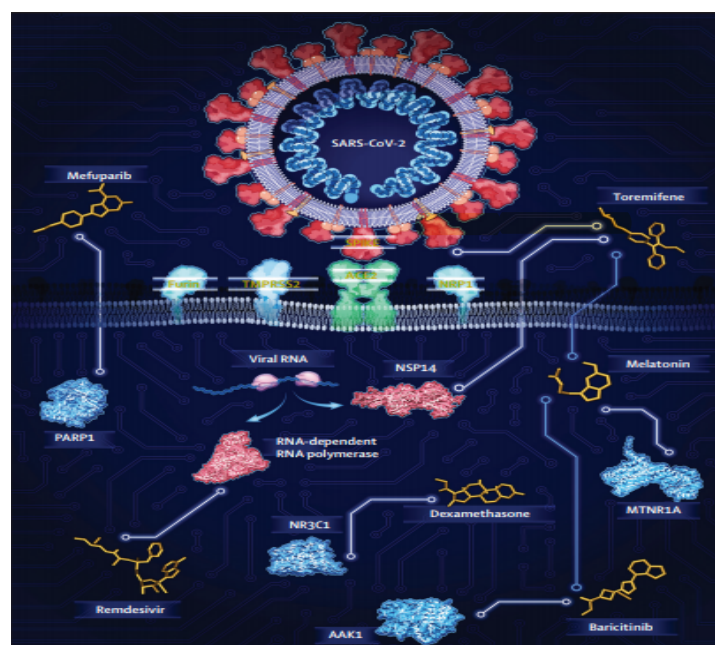


Figure 1. Identification of possible pharmacological anti-COVID-19 components.

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