

THE THERAPEUTIC POTENTIAL OF IVERMECTIN FOR COVID-19: A SYSTEMATIC REVIEW OF MECHANISMS AND EVIDENCE

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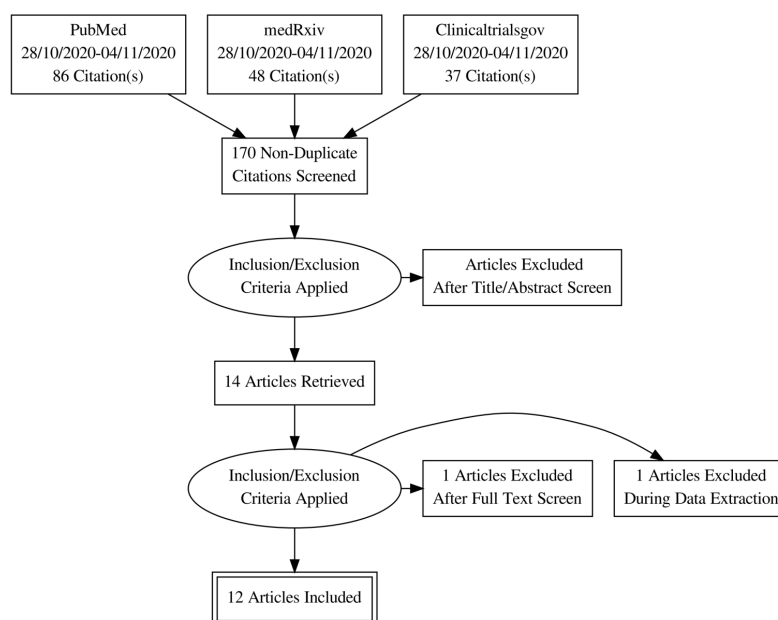
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Abstract

Introduction: Ivermectin is a commonly used antihelminthic agent with over 35 years of established safety data in humans. Recent data demonstrates antiviral activity in vitro against SARS-CoV-2, in addition to a range of viruses. In vitro and animal models also provide evidence of immunomodulatory action. These additional modes of action are supported by in silico modelling, which propose a number of viral and host targets that would mediate these effects. **Objectives:** The aim of this study is to systematically review the published and preprint clinical literature and study results that assessed the potential role of ivermectin as a COVID-19 therapeutic and prophylactic agent. **Methods:** We conducted a comprehensive review of PubMed, medRxiv, ClinicalTrials.gov, Global Coronavirus COVID-19 Clinical Trial Tracker, World Health Organization International Clinical Trials Registry Platform, EU Clinical Trials Register, ANZ clinical trials registry, and references from relevant articles. PRISMA guidelines for systematic reviews were employed. **Results:** Search keywords- “COVID-19 (and synonyms) AND ivermectin”- generated 86 articles on PubMed, 48 on medRxiv and 37 on clinicaltrials.gov at the time of writing. Twelve of these were listed as completed clinical trials and of these, 8 were included as investigators had released results. Positive mortality benefit, reduced time to clinical recovery, reduced incidence of disease progression and decreased duration of hospital admission were reported in patients across all stages of clinical severity. **Limitations:** Due to the time-critical nature of the COVID-19 pandemic our review included preprint data, which must be interpreted with caution while it awaits peer review.

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Figure 2- Table 1, Table 2.pdf available at <https://authorea.com/users/469058/articles/562177-the-therapeutic-potential-of-ivermectin-for-covid-19-a-systematic-review-of-mechanisms-and-evidence>