

# Interim Management of COVID-19 by Repurposed Homeopathic Medicines

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Homeopathy 2020;109:182–183.

Recent publications focus on coronavirus disease 2019 (COVID-19), a disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which has gravely impacted the entire world. It is an enveloped RNA virus arising from the genus *betacoronavirus*.<sup>1</sup> Owing to the lack of any previous treatment modalities available for COVID-19, clinical and health care experts have resorted to the use of drugs known to be effective against other viral fevers. This emergence of drug repurposing has arisen for several reasons, which can be attributed to the slow pace of new drug discovery along with high-cost involvement.<sup>2,3</sup> Examples of such repurposed drugs include hydroxychloroquine, arbidol, remdesivir, favipiravir, lopinavir, and ritonavir, and these have now been selected for further testing as potential treatment candidates.<sup>4</sup> However, clinical trials on repurposed drugs for the treatment of COVID-19 have not been entirely successful, though they are being used in several countries despite having moderate to severe adverse effects.<sup>5,6</sup> A critical flaw in such trials is their study design, which is compromised by the fact that these are not double-blind studies and also have a low sample size; however, the scientific rationale given for conducting such trials is to balance scientific rigor against speed.<sup>7</sup>

Currently, the worldwide acceptance rate and the use of homeopathy are increasing. Homeopathic medicines have shown promising results for epidemic diseases such as influenza, dengue, and Japanese encephalitis<sup>8–10</sup>; however, homeopathy is still viewed critically by sceptics for not following the gold standard of research.<sup>11</sup> Thus, during such unprecedented times, as the scientific world is moving forward using modified and less stringent protocols to study the efficacy of repurposed drugs, homeopathy can also take an initiative to showcase its scientific potential for the treatment of COVID-19.

With a hope to quickly single out homeopathic candidate medicines for COVID-19, we can adopt an approach to screen the available medicines that are in use for treating other viral diseases. During the Ebola virus outbreak, for example, the

WHO gave ethical consideration to the use of unregistered intervention for Ebola viral disease: it mentions “Compassionate use is justified as an exceptional emergency measure”.<sup>12</sup> The contemporary outbreak of COVID-19 is a pandemic and it deserves interim intervention from other therapeutic approaches such as homeopathy to support ailing people as well as to provide prophylaxis options for health care workers. Since the development of specific treatments and vaccines is still underway and might take up to 12 to 18 months to achieve fruition,<sup>7</sup> homeopathy can offer support along with conventional drugs and clinical management.

Due to the lack of time, we the homeopathy community can collect available data about potential drug targets based upon the source material of homeopathic medicines and use those selected for repurposing in COVID-19 treatment. There are several candidates that can be targeted to inhibit the entry of SARS-CoV-2 and its subsequent multiplication in the human body.<sup>13</sup> Potential drug targets that have been identified by science include angiotensin-converting enzyme 2 (ACE-2) receptor and protease inhibitors.<sup>14,15</sup> Homeopathic medicines such as *Bryonia alba*,<sup>16</sup> *Calendula*,<sup>17,18</sup> *Passiflora incarnata*,<sup>19</sup> and *Zingiber officinale*,<sup>20</sup> are in use for several other maladies. Based on the properties of their source materials, these medicines might prove to be potential inhibitors of ribosome inactivating protein, proteases, and ACE-2, and hence may be worth investigating for the treatment of COVID-19.

## Funding

None.

## Conflict of Interest

None declared.

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received

May 10, 2020

accepted after revision

May 13, 2020

published online

June 9, 2020

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DOI <https://doi.org/10.1055/s-0040-1713004>.  
ISSN 1475-4916.

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