

Interim Management of COVID-19 by Repurposed Homeopathic Medicines

Nilanjana Basu¹ Bhudev Chandra Das¹ Simran Tandon¹ 

¹Amity Institute Molecular Medicine & Stem Cell Research, Amity University, Noida, Uttar Pradesh, India

Address for correspondence Simran Tandon, PhD, Amity University, Noida, Uttar Pradesh 201313, India (e-mail: standon1@amity.edu).

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*.¹ 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.^{2,3} 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.⁴ 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.^{5,6} 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.⁷

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^{8–10}; however, homeopathy is still viewed critically by sceptics for not following the gold standard of research.¹¹ 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”.¹² 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,⁷ 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.¹³ Potential drug targets that have been identified by science include angiotensin-converting enzyme 2 (ACE-2) receptor and protease inhibitors.^{14,15} Homeopathic medicines such as *Bryonia alba*,¹⁶ *Calendula*,^{17,18} *Passiflora incarnata*,¹⁹ and *Zingiber officinale*,²⁰ 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.

References

- 1 Cascella M, Rajnik M, Cuomo A, Dulebohn SC, Di Napoli R. Features, evaluation and treatment Coronavirus (COVID-19). Stat Pearls 2020

received

May 10, 2020

accepted after revision

May 13, 2020

published online

June 9, 2020

Copyright © 2020 The Faculty of Homeopathy

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

- 2 Andersen PI, Ianevski A, Lysvand H, et al. Discovery and development of safe-in-man broad-spectrum antiviral agents. *Int J Infect Dis* 2020;93:268–276
- 3 Pushpakom S, Iorio F, Eyers PA, et al. Drug repurposing: progress, challenges and recommendations. *Nat Rev Drug Discov* 2019; 18:41–58
- 4 Rosa SGV, Santos WC. Clinical trials on drug repositioning for COVID-19 treatment. *Rev Panam Salud Publica* 2020;44:e40
- 5 Xu K, Cai H, Shen Y, et al. 2019 experience in the diagnosis and treatment of Coronavirus (Covid-19) in Zhejiang. *J Zhejiang Univ* 2020;49:147–157
- 6 Cao B, Wang Y, Wen D, et al. A trial of lopinavir-ritonavir in adults hospitalized with severe Covid-19. *N Engl J Med* 2020;382: 1787–1799
- 7 Kupferschmidt K, Cohen J. WHO launches global megatrial of the four most promising coronavirus treatments. March 22, 2020. Available at: <https://www.sciencemag.org/news/2020/03/who-launches-global-megatrial-four-most-promising-coronavirus-treatments>. Accessed April 15, 2020
- 8 Chakraborty P, Lamba C, Nayak D, et al. Effect of individualized homeopathic treatment in influenza like illness: a multicenter, single blind, randomized, placebo controlled study. *Indian J Res Homoeopath* 2013;7:22–30
- 9 Aparecida L, Nunes S. Contribution of homeopathy to the control of an outbreak of dengue in Macaé, Rio de Janeiro. *Int J High Dilution Res* 2008;7:186–192
- 10 Oberai P, Varanasi R, Padmanabhan M, et al. Effectiveness of homeopathic medicines as add-on to institutional management protocol for acute encephalitis syndrome in children: an open-label randomized placebo-controlled trial. *Homeopathy* 2018; 107:161–171
- 11 Shang A, Huwiler-Müntener K, Nartey L, et al. Are the clinical effects of homeopathy placebo effects? Comparative study of placebo-controlled trials of homeopathy and allopathy. *Lancet* 2005;366:726–732
- 12 World Health Organization. Ethical considerations for use of unregistered interventions for Ebola viral disease. Report of an advisory panel to WHO; 2014. Available at: http://apps.who.int/iris/bitstream/10665/130997/1/WHO_HIS_KER_GHE_14.1_eng.pdf?ua=1. Accessed April 15, 2020
- 13 Joshi RS, Jagdale SS, Bansode SB, et al. Discovery of potential multi-target-directed ligands by targeting host-specific SARS-CoV-2 structurally conserved main protease. *J Biomol Struct Dyn* 2020;1–16. Doi: 10.1080/07391102.2020.1760137
- 14 Ou X, Liu Y, Lei X, et al. Characterization of spike glycoprotein of SARS-CoV-2 on virus entry and its immune cross-reactivity with SARS-CoV. *Nat Commun* 2020;11:1620
- 15 Liu X, Wang XJ. Potential inhibitors against 2019-nCoV coronavirus M protease from clinically approved medicines. *J Genet Genomics* 2020;47:119–121
- 16 Ielciu I, Mouthys-Mickalad A, Franck T, et al. Flavonoid composition, cellular antioxidant activity and (myelo)peroxidase inhibition of a *Bryonia alba* L. (Cucurbitaceae) leaves extract. *J Pharm Pharmacol* 2019;71:230–239
- 17 Barbour EK, Sagherian V, Talhouk S, et al. Evaluation of homeopathy in broiler chickens exposed to live viral vaccines and administered *Calendula officinalis* extract. *Med Sci Monit* 2004;10: BR281–BR285
- 18 Kalvathev Z, Walder R, Garzaro D. Anti-HIV activity of extracts from *Calendula officinalis* flowers. *Biomed Pharmacother* 1997; 51:176–180
- 19 Ingale AG, Hivrale AU. Pharmacological studies of *Passiflora* sp. and their bioactive compounds. *Afr J Plant Sci* 2010;4:417–426
- 20 Balakrishnan S, Samuel S. Herbal inhibitors identified for renin and angiotensin converting enzymes by *in silico* structure based methods. *Int J Med Health Res* 2017;3:88–92