COVID-19 and Herbal Medicine? Challenge in Hand

Dear Editor,

The pandemic of coronavirus disease 2019 (COVID-19) infected millions of peoples. It caused death for hundreds of thousands, and it is representing a global public health challenge to identify effective drugs for prevention and treatment. Although SARS-CoV-2 virology provides a significant number of potential drug targets, currently, there are no proven effective therapies for this virus. The clinical trials launched to investigate possible cures for COVID-19 highlight the need and capability to produce high-quality evidence even in the middle of a pandemic.[1] This needs not only time to be achieved but also is highly costly for people in developing countries.

The medicinal plant has a long history in disease control and public health management; many communities are believed that can give remarkable outcome, and combat many diseases, including COVID-19. Medicinal plants are prescribed widely, even when their biologically active compounds are unknown because of their safety, effectiveness, and availability.[2] In this Letter, we think that there is an urgent need for alternative novel drugs. Analysis of the ethyl acetate fraction of *Acacia nilotica* pods revealed its high contents of both hydrolysable and condensed tannins.[3] *A. nilotica* has been used for the treatment of various diseases, such as diarrhea, dysentery, hemorrhoid, abdominal aches, toothaches, sore throat, colds, bronchitis, diabetes, asthma, hypertension, antioxidant activities, and anticancer activities[4] [Figure 1]. *A. nilotica* revealed significant activity against the chloroquine-sensitive strain of *Plasmodium falciparum*,[3] three bacterial (*Escherichia coli*, *Staphylococcus aureus*, and *Salmonella typhi*), two fungal strain (*Candida albicans* and *Aspergillus niger*),[5] and hepatitis C virus[6] and inhibited HIV-1-induced cytopathogenicity.[7] A study in Sudan showed that EtOAc fraction of *A. nilotica* was significantly inhibited the growth rate of *Leishmania donovani* and *Leishmania major promastigote* with IC_{50} of 40 and 10 μg/ml, respectively. EtOAc fraction caused substantially higher levels of interleukin (IL)-6 coupled with lowering tumor necrosis factor-alpha and IL-β levels in the infected macrophages of both *Leishmania* species.[7]

Figure 1: *Acacia nilotica* tree with pods

In Sudan, *A. nilotica* was conventionally used to treat patients with a respiratory infection. Further, many families are always kept at home for any emergency respiratory infection. In recent COVID-19 pandemic, some recovered patients quarantined at home were used *A. nilotica* and this raised question that *A. nilotica* might help save severely ill patients.[8] Up to date, 8416 COVID-19 cases were reported in Sudan, with 513 deaths and 3204 recovered cases. Therefore, we urge scientists to work further in *A. nilotica* to prove its treatment efficiency as a drug, which might be a significant health challenge in hand, especially for the poor communities in the developing countries.

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Conflicts of interest

There are no conflicts of interest.

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