

Natural garlic essential oil as a potential inhibitor of ACE 2 protein and the main protease PDB6LU7 of SARS-CoV2

In an investigation at DBT's Center of Innovative and Applied Bioprocessing (DBT-CIAB), garlic essential oil was found to contain allyl disulfide, allyl trisulfide, allyl tetrasulfide, allyl methyl trisulfide, allyl propenyl disulfide as major constituents while 2-vinyl-1,3-dithiine, carvone, and 1, 2-dithiolo as minor constituents. Having detected successfully the volatiles occurring in the garlic essential oil, its further *in vitro* and *in vivo* antiviral assays against the ACE2 protein and the main protease PDB6LU7 of SARS-CoV2 will be investigated by Regional Centre for Biotechnology (RCB) and Translational Health Science and Technology Institute (THSTI), Faridabad.

The recent outbreak of coronavirus disease (COVID-19) caused by SARS-CoV-2 infection in Wuhan, China has posed a serious threat to global public health. The World Health Organization (WHO) has designated the ongoing pandemic of novel COVID-19 a Public Health Emergency of International Concern. Therefore, development of natural and safe medicines to prevent coronavirus is of surging interest for all scientists around the world. With abundant medicinal resources in India and the specific medicinal properties of garlic, we undertook the work of qualitative compositional analysis of garlic (*Allium sativum* L.) essential oil followed by evaluation of its biological activity against angiotensin-converting enzyme 2 (ACE2), an integral membrane glycoprotein that is known for the highest expression in most tissues such as kidneys, endothelium, lungs, and heart.

Link: <https://pesquisa.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/en/covidwho-20895>

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