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Press Release

### **Possible Drug for treatment of COVID-19 identified by JMI researcher and his team**

The novel coronavirus disease-19 (COVID-19) needs immediate effective treatment using available drugs in the market, called drug repurposing. It is very efficient to apply computer-aided drug design techniques to quickly identify promising drug repurposing candidates, especially after the release of detailed 3D structures of key viral proteins.

Dr. Md. Imtiyaz Hassan's laboratory at the Centre for Inter-disciplinary Research in Basic Sciences (CIRBSc), Jamia Millia Islamia (JMI) took advantage of a recently released crystal structure of SARS-CoV-2 main protease, to screen FDA approved drugs, as a possible therapeutic option.

After extensive research, Dr. Hassan and his team identified Glecaprevir and Maraviroc as the best inhibitors SARS-CoV-2 main protease, which can be used as a possible therapeutic agent to address COVID-19 patients.

Glecaprevir is an antiviral drug used in the treatment of Hepatitis-C virus infected patients and Maraviroc is used to prevent HIV1 infection.

The repurposing of approved drugs provided an alternative approach to rapidly identify potential leads to develop effective and safe drugs against emerging COVID-19.

Although both drugs are clinically safe, even then some clinical trials should be conducted for their further use in the clinical management of severe COVID-19 patients being treated in hospitals.

Dr. Hassan quoted this work is a great effort of his students Dr. Anas Shamsi, Mr. Taj Mohammad and Ms. Saleha Anwar who worked day night even in the lockdown situation.

The present work is well recognized by the Editor of Bioscience Reports which provides a home for sound scientific research in all areas of cell biology and molecular life sciences. Its matter of pride and great satisfaction that the editor has selected figures of his paper as a Cover Page in the forthcoming issue of the Journal. The full paper is available at (DOI: <https://doi.org/10.1042/BSR20201256>).

Dr. Hassan's lab is running several research projects related to the design and development of anticancer molecules. But, considering the current need they put all their efforts as Corona worrier to discover new drugs to fight COVID-19 from the last three months. He also said that the methods of design and development of molecules for both are similar.

Dr. Hassan has also submitted three research proposals related to the drug design and development against novel coronavirus to Indian funding agencies. He has high hopes from the Government of India for the approval of proposals to facilitate his research which may be path

breaking to meet the much-needed drug to cure the COVID-19 patients in India as well across the globe.

So far Dr Hassan has submitted six different papers related to SARS-CoV-2 genome, structure, evolution, pathogenesis, diagnosis and therapies to leading international journals for publication.

Dr. Md. Imtiyaz Hassan is a decorated scientist having unique distinction of being a Fellow of Royal Society of Biology, U.K. (FRSB) as well as Fellow of Royal Society of Chemistry, U.K. (FRSC), has vast experience in the area of structure-based drug design and discovery.

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