

## IIT Delhi to develop home-based COVID-19 testing kit

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**IIT Delhi and Wells Fargo recently signed a Memorandum of Understanding (MoU) for the development of a peptide-based ELISA test for the detection of COVID-19 antibodies**



US based Wells Fargo International Solutions Private Limited through their philanthropic partner, United Way of Bengaluru (UWBe), has joined hands with IIT Delhi in this fight against coronavirus.

IIT Delhi and Wells Fargo recently signed a Memorandum of Understanding (MoU) for the development of a peptide-based ELISA test for the detection of COVID-19 antibodies.

ELISA, short for serological enzyme-linked immunosorbent assay, determines whether a person possesses antibodies for COVID-19 in the blood. The test results can help the medical fraternity fight the disease in many ways; a significant way would be the identification of individuals with antibodies who can donate their blood as part of an experimental treatment of infected patients.

This project- a collaboration between IIT Delhi and National Chemical Laboratory (NCL), Pune - has the potential of making a meaningful difference to this situation by enabling affordable, home-based testing.

This research will utilise the microplate-based enzyme immune-assay technique. The choice of antigen will be a peptide that has been computationally identified. Structural analysis of the available complex will be performed to design a novel peptide that has a complementary property with spike protein of COVID-19.

A set of peptides will be designed using a combination approach to test their binding. From the sequences of the variable regions of the Heavy and Light chain including the novel designed peptide, cloning of the mAb fragment (CV-Fab) will be performed. CV-Fab will be produced from which ELISA based testing kits will be created.