

Healthcare industry BW

New Alliance in the Fight Against Coronavirus and COVID-19

Scientists from Heidelberg and Mannheim launch research and development task force

Researchers at Heidelberg University have formed an alliance – the fightCOVID @ Heidelberg research and development task force – with the aim to curb the coronavirus pandemic. To this end, scientists of the two Medical Faculties and the Heidelberg and Mannheim University Hospitals, the BioQuant centre, the Center for Molecular Biology and the Central Institute of Mental Health in Mannheim have joined forces with colleagues from the German Cancer Research Center (DKFZ) and the European Molecular Biology Laboratory (EMBL) in Heidelberg. The task force pools the resources of numerous research projects and initiatives relating to coronavirus/COVID-19 in the fields of antibody testing, drug screening, disease development (pathogenesis) and vaccine development and brings together experts from a broad range of disciplines including immunology, virology, genome research, psychology and bioinformatics. The central research topics of the task force include the development of serological tests and the investigation of antiviral drugs, particularly drugs that have already been approved for other applications and therefore, can be tested in compassionate use on patients in an attempt to cure the disease or alleviate its symptoms.

Among other things, the scientists want to determine at which point patients are no longer infectious, when they started to produce antibodies against the virus and whether these antibodies can protect against infection. This requires the establishment and validation of suitable antibody testing procedures. In their investigation of antiviral agents that may be effective against COVID-19, the researchers are concentrating on compounds that have already been approved for treatment of other conditions, e.g. within the context of immunotherapy, or other infectious diseases such as malaria. The task force also wants to determine why some COVID-19 patients become severely ill while others develop only mild symptoms. These studies will capitalise on new methods, such as computer models of lung tissue, to analyse the spread of infection and the resulting immune response in an attempt to understand how these factors affect the progression of the disease. Another focal area is vaccine development, for which the task force can draw on a technology that has long been established at the DKFZ. Other questions to be investigated relate to mental health and therapeutic interventions for emotional stress and mental issues that may develop as a result of the social distancing measures that were introduced in the context of the coronavirus pandemic. Another important element is the development of app-based systems for reliable tracing of infections and potential contact persons and fast access to coronavirus testing based on displayed symptoms.

The task force relies on an interdisciplinary and cross-institutional research network that covers the entire breadth of fundamental life science and medical research in Heidelberg and Mannheim and bridges the gap to rapid clinical applications. The fightCOVID @ Heidelberg task force is coordinated by Prof. Dr Hans-Georg Kräusslich, spokesperson of the Centre of Infectious Diseases at Heidelberg University Hospital and Director of its virology division, and Prof. Dr Ralf Bartenschlager, director of the centre's molecular virology division and spokesperson of the Research Topic "Infection, Inflammation and Cancer" at the German Cancer Research Center.

Press release

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Source: University of Heidelberg

Further information

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