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Pressemitteilung

Deutsches Zentrum für Infektionsforschung
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18.10.2024
http://idw-online.de/de/news841528

Forschungsergebnisse, Wissenschaftliche Publikationen
Biologie, Medizin
überregional

Vaccine against the MERS coronavirus tested as safe and effective in phase Ib clinical trial

The MERS coronavirus—MERS stands for "Middle East Respiratory Syndrome"—causes severe respiratory diseases with a high mortality rate. To date, there is neither a vaccine nor a specific treatment. The safety, immunogenicity and optimal dosing regimen of the MVA-MERS-S vaccine candidate developed at the DZIF have now been investigated in a phase Ib study in healthy individuals who were previously infected with the related coronavirus SARS-CoV-2. The study, led by Prof Marylyn Addo at the University Medical Center Hamburg-Eppendorf, has shown that the vaccine is safe and effective.

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First identified in the Middle East in 2012, the Middle East Respiratory Syndrome (MERS) coronavirus is transmitted from dromedaries to humans by droplet infection and can also be passed from person to person. The pathogen causes severe respiratory diseases, which are fatal in up to 36 per cent of cases. The MERS coronavirus has been classified by the World Health Organisation (WHO) as particularly dangerous to public health. To date, more than 2,600 cases of MERS have been confirmed in 27 countries worldwide, with a focus on Saudi Arabia. To date, there is no effective vaccine and no specific medication.

The MVA-MERS-S vaccine candidate developed at the German Center for Infection Research (DZIF) since 2013 is based on an attenuated virus—the so-called "Modified Vaccinia Ankara Virus" (MVA)—which has been supplemented with protein components of the MERS virus. The MVA-MERS-S vaccine has now been tested in a Phase Ib trial led by Prof Marylyn Addo at the University Medical Center Hamburg-Eppendorf (UKE). The results of the study, which were published yesterday in the renowned journal The Lancet Infectious Diseases, show that the vaccine is effective and safe, even in people with a previous or simultaneous infection with the COVID-19 pathogen SARS-CoV-2. Two vaccine doses and two different vaccination intervals were investigated in the placebo-controlled and randomised double-blind study. The 140 test subjects experienced isolated local reactions such as slight pain at the injection site, but no serious vaccine-related side effects.

"Further studies are now needed, including to verify these results in risk groups for severe MERS-CoV disease such as the elderly and people with relevant comorbidities," says the study's last author Prof Addo, director of the Institute for Infection Research and Vaccine Development at the UKE and coordinator of the DZIF research area "Emerging Infections". The Phase Ib study was also supported by the Coalition for Epidemic Preparedness Innovations (CEPI), a global partnership including the DZIF that works to accelerate the development of vaccines and other biologic

countermeasures against epidemic and pandemic threats.

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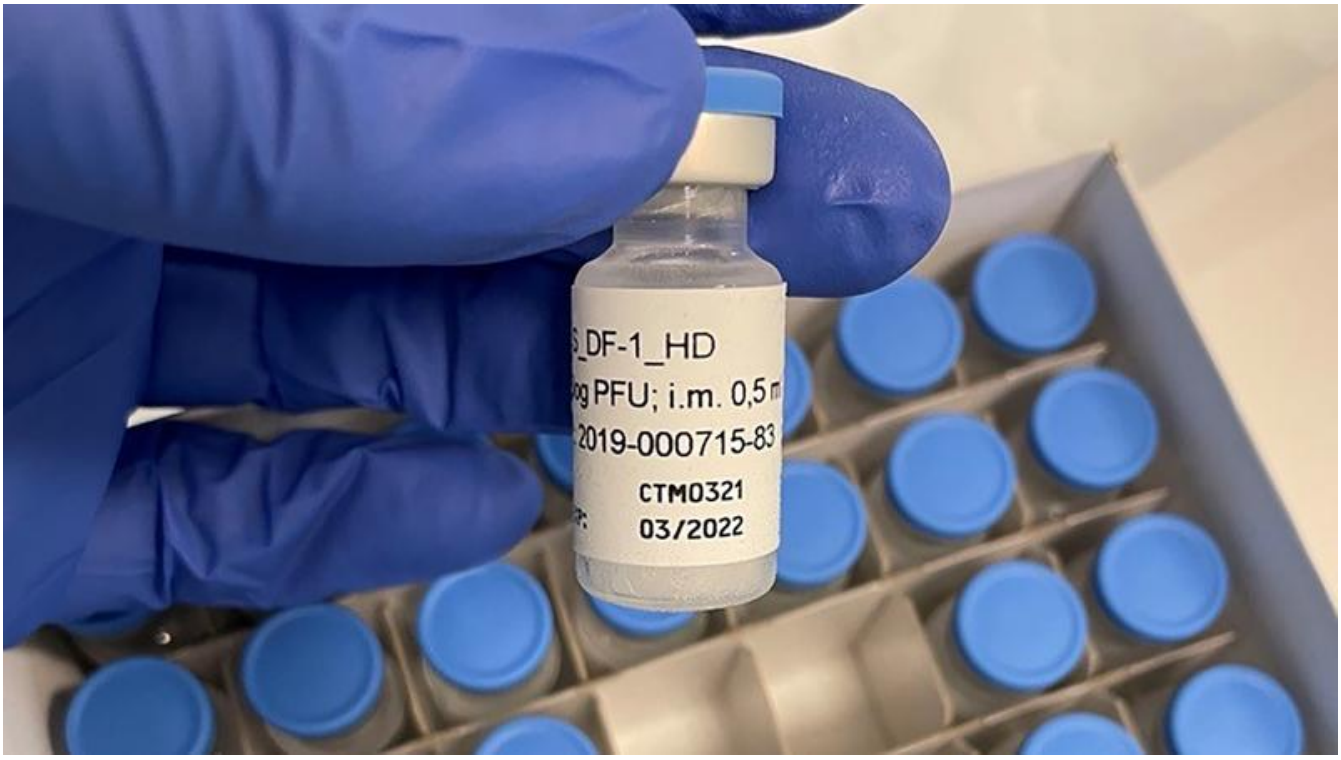
Originalpublikation:

Raadsen MP, Dahlke C, Fathi A, Hardtke S, Klüver M, Krähling V, Gerresheim GK, Mayer L, Mykytyn AZ, Weskamm LM, Zoran T, van Gorp ECM, Sutter G, Becker S, Haagmans BL, Addo MM; MVA-MERS-S_DF-1 Study group. Safety, immunogenicity, and optimal dosing of a modified vaccinia Ankara-based vaccine against MERS-CoV in healthy adults: a phase 1b, double-blind, randomised placebo-controlled clinical trial. Lancet Infect Dis. 2024, doi: 10.1016/S1473-3099(24)00423-7.

URL zur Pressemitteilung:
https://www.dzif.de/en/vaccine-against-mers-coronavirus-tested-safe-and-effective-phase-ib-clinical-trial Press release of the German Center for Infection Research (DZIF)



The vaccine candidate MVA-MERS-S
UKE