

## Zurückgezogene Publikation: "Corona Impfung" beeinträchtigt DNA Reparaturmechanismen

### Description

Jiang, H., & Mei, Y. F. (2021). SARS-CoV-2 Spike Impairs DNA Damage Repair and Inhibits V(D)J Recombination In Vitro. *Viruses*, 13(10), 2056. [doi.org/10.3390/v13102056](https://doi.org/10.3390/v13102056) (Retraction published *Viruses*. 2022 May 10;14(5):)

#### [viruses-13-02056-v3](https://doi.org/10.3390/v13102056)

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TI - SARS-CoV-2 Spike Impairs DNA Damage Repair and Inhibits V(D)J Recombination In Vitro.

LID - 10.3390/v13102056 [doi]

LID - 2056

AB - Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has led to coronavirus disease 2019 (COVID-19) pandemic, severely affecting public health and the global economy. Adaptive immunity plays a crucial role in fighting against SARS-CoV-2 infection and directly influences the clinical outcomes of COVID-19 patients. Clinical studies have indicated that patients with severe COVID-19 exhibit delayed and weak adaptive immune responses; however, the mechanism by which SARS-CoV-2 impedes adaptive immunity remains unclear. Here, by using an *in vitro* cell line, we report that the SARS-CoV-2 spike protein significantly inhibits DNA damage repair, which is required for effective V(D)J recombination in adaptive immunity. Mechanistically, we found that the spike protein localizes in the nucleus and inhibits DNA damage repair by impeding key DNA repair proteins BRCA1 and 53BP1 recruitment to the damage site. Our findings reveal a potential molecular mechanism by which the spike protein might impede adaptive immunity and underscore the potential side effects of full-length spike-based vaccine.

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TA - Viruses  
JT - Viruses  
JID - 101509722  
RN - 0 (Antibodies, Neutralizing)  
RN - 0 (Antibodies, Viral)  
RN - 0 (BRCA1 Protein)  
RN - 0 (BRCA1 protein, human)  
RN - 0 (COVID-19 Vaccines)  
RN - 0 (Spike Glycoprotein, Coronavirus)  
RN - 0 (TP53BP1 protein, human)  
RN - 0 (Tumor Suppressor p53-Binding Protein 1)  
RN - 0 (spike protein, SARS-CoV-2)  
SB - IM  
ECI - Viruses. 2021 Dec 22;14(1):. PMID: 35062216  
RIN - Viruses. 2022 May 10;14(5):. PMID: 35632859  
MH - Adaptive Immunity/\*immunology  
MH - Antibodies, Neutralizing/blood/immunology  
MH - Antibodies, Viral/blood/immunology  
MH - BRCA1 Protein/antagonists & inhibitors  
MH - CD4 Lymphocyte Count  
MH - CD8-Positive T-Lymphocytes/immunology  
MH - COVID-19/\*pathology  
MH - COVID-19 Vaccines/immunology  
MH - Cell Line  
MH - DNA Damage/genetics  
MH - DNA Repair/\*genetics  
MH - HEK293 Cells  
MH - Humans  
MH - Immunity, Humoral/immunology  
MH - Immunosuppression Therapy  
MH - SARS-CoV-2/genetics/\*immunology  
MH - Spike Glycoprotein, Coronavirus/\*genetics/immunology  
MH - T-Lymphocytes, Helper-Inducer/immunology  
MH - Tumor Suppressor p53-Binding Protein 1/antagonists & inhibitors  
MH - V(D)J Recombination/\*genetics  
PMC - PMC8538446  
OTO - NOTNLM  
OT - \*DNA damage repair  
OT - \*SARS-CoV-2  
OT - \*V(D)J recombination  
OT - \*spike  
OT - \*vaccine  
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