

**Study Group AIDS-therapy** c/o F. de Fries Juliastr. 8 8032 Zürich

To those affected  
Their doctors and caretakers  
To politicians and institutions  
To Media

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### **SARS-Cov-2: Mutations turn up**

Dear Sir/Madam

Four strains of SARS Cov-2, which have developed through mutations in England, the USA, Brazil and South Africa since its appearance in China and Italy, show changed properties that affect their transmissibility and pathogenicity. While some mutations are supposed to increase their virulence, others lead to a reduced ability to bind on cells.

Before it jumped over to humans, the SARS-Cov-2 viruses evidently passed from their original host to an intermediate host in which they could develop further. Even before the pandemic began, they are likely to have developed in human carriers over longer time. In order to maintain their virulence in the long term they are dependent on the renewed transfer from the original host to the intermediate host or from this to humans.

**[\[HTML\] Genome-wide identification and characterization of point mutations in the SARS-CoV-2 genome](#)**

[\[HTML\] nih.gov](#)

**[Reporting two SARS-CoV-2 strains based on a unique trinucleotide-bloc mutation and their potential pathogenic difference](#)**

[PDF\] preprints.org](#)

**[Distinct viral clades of SARS-CoV-2: implications for modeling of viral spread](#)**

[PDF\] wiley.com](#)

[HTML] [Spike mutation D614G alters SARS-CoV-2 fitness](#)

[HTML] [nature.com](#)

[Emergence of Novel Coronavirus and COVID-19: whether to stay or die out?](#)

[HTML] [nih.gov](#)

[HTML] [ACE2 coding variants in different populations and their potential impact on SARS-CoV-2 binding affinity](#)

[HTML] [sciencedirect.com](#)

[SARS-CoV-2 and ORF3a: nonsynonymous mutations, functional domains, and viral pathogenesis](#)

[PDF] [asm.org](#)Free from Publisher

[PDF] [Emerging SARS-CoV-2 mutation hot spots include a novel RNA-dependent-RNA polymerase variant](#)

[PDF] [springer.com](#)

[Characterizations of SARS-CoV-2 mutational profile, spike protein stability and viral transmission](#)

[HTML] [nih.gov](#)

[Spike mutation pipeline reveals the emergence of a more transmissible form of SARS-CoV-2](#)

[PDF] [biorxiv.org](#)

[HTML] [Spike mutation D614G alters SARS-CoV-2 fitness](#)

[HTML] [nature.com](#)

[SARS-CoV-2 D614G variant exhibits efficient replication ex vivo and transmission in vivo](#)

[PDF] [sciencemag.org](#)

[Analysis of the mutation dynamics of SARS-CoV-2 reveals the spread history and emergence of RBD mutant with lower ACE2 binding affinity](#)

[PDF] [biorxiv.org](#)Free from Publisher

**[HTML] [Genome-wide analysis of SARS-CoV-2 virus strains circulating worldwide implicates heterogeneity](#)**

[HTML] [nature.com](https://www.nature.com)

**Genetic drift and regional spreading dynamics of COVID-19**

[PDF] [medrxiv.org](https://www.medrxiv.org)

**[HTML] [Geographic and genomic distribution of SARS-CoV-2 mutations](#)**

[HTML] [frontiersin.org](https://www.frontiersin.org)

**Mutation landscape of SARS-CoV-2 reveals five mutually exclusive clusters of leading and trailing single nucleotide substitutions**

[PDF] [biorxiv.org](https://www.biorxiv.org)

**[HTML] [Mutations in SARS-CoV-2 viral RNA identified in Eastern India: Possible implications for the ongoing outbreak in India and impact on viral structure and host ...](#)**

[HTML] [springer.com](https://www.springer.com)

Since SARS-Cov-2 as RNA viruses continuously go through mutations, they are already going through changes within one organism. Antibodies that are formed against them allow a partial or complete defense for a longer time and lead to changes in their inheritance structure by putting pressure on them. This also applies to antibodies that are formed after vaccinations and to antibodies that are administered as therapy.

**Escape from neutralizing antibodies by SARS-CoV-2 spike protein variants**

[PDF] [elifesciences.org](https://www.elifesciences.org)

**Prevalence of IgG antibodies to SARS-CoV-2 in Wuhan-implications for the ability to produce long-lasting protective antibodies against SARS-CoV-2**

[PDF] [medrxiv.org](https://www.medrxiv.org)

Via aerosols and droplets that are deposited on various materials, they can infect people over a longer time and develop further in them. Particulate matter in outdoor spaces, which can concentrate indoors, promotes this transmission indoors. They end up in wastewater via human excretions and even after the water has been cleaned in sewage treatment plants, come back to places that are visited by wild animals,

which they can transfer to livestock, from which they can in turn reach humans.

### **[Transmission of SARS-CoV-2: a review of viral, host, and environmental factors](#)**

[PDF] [acpjournals.org](#)

### **[SARS-CoV-2 and COVID-19: A genetic, epidemiological, and evolutionary perspective](#)**

[HTML] [nih.gov](#)

### **[SARS-CoV-2 genomic surveillance in Taiwan revealed novel ORF8-deletion mutant and clade possibly associated with infections in Middle East](#)**

PDF] [tandfonline.com](#)

In these cycles, the environmental conditions in individual locations (including air pollution, water pollution, environmental toxins, insecticides, herbicides, and antibiotics), which affect animal and human host organisms, play an important role. They have an effect either on the host as also on the formation of antibodies against the viruses and on the formation of virus mutants with altered properties in terms of transferability and pathogenicity.

### **[Regional contributions to particulate matter concentration in the Seoul metropolitan area, South Korea: seasonal variation and sensitivity to meteorology and ...](#)**

[PDF] [copernicus.org](#)

### **[Could changes in the airborne pollutant particulate matter acting as a viral vector have exerted selective pressure to cause COVID-19 evolution?](#)**

[HTML] [nih.gov](#)

### **[Effects of particulate matter exposure on the transmissibility and case fatality rate of COVID-19: A Nationwide Ecological Study in China](#)**

[PDF] [researchgate.net](#)

### **[Zoonanthroponotic potential of SARS-CoV-2 and implications of re-introduction into human population](#)**

[PDF] [cell.com](#)

**[HTML] [Decoding the global outbreak of COVID-19: the nature is behind the scene](#)**

[HTML] [springer.com](#)

**Present cum future of SARS-CoV-2 virus and its associated control of virus-laden air pollutants leading to potential environmental threat-A Review**

[HTML] [nih.gov](#)

**[HTML] [Challenges to the poultry industry: current perspectives and strategic future after the COVID-19 outbreak](#)**

[HTML] [nih.gov](#)

**Nurture to nature via COVID-19, a self-regenerating environmental strategy of environment in global context**

[HTML] [nih.gov](#)

**Agroecology and the reconstruction of a post-COVID-19 agriculture**

PDF] [academia.edu](#)

**[HTML] [Agroecology and the emergence of a post COVID-19 agriculture](#)**

HTML] [springer.com](#)

**[HTML] [Rethinking wastewater risks and monitoring in light of the COVID-19 pandemic](#)**

HTML] [nature.com](#)

In the course of such measures the use of antibiotics in animal breeding and medicine must also be revised. Their ongoing preventive administration to elder people, in whom the vessels of the lungs slowly diminish, are likely to be responsible for the storm of messenger substances that occurs in them with a Covid-19 infection.

**Implications of antibiotics use during the COVID-19 pandemic: present and future**

[PDF] [semantic scholar.org](#)

**Possible cause of inflammatory storm and septic shock in patients diagnosed with (COVID-19)**

[HTML] [nih.gov](http://nih.gov)

## **[HTML] COVID-19 and the elderly: insights into pathogenesis and clinical decision-making**

HTML] [springer.com](http://springer.com)

It is now becoming clear that the Covid-19 pandemic can only be halted if these cycles can be interrupted within a useful time. This requires significant changes in animal husbandry, agriculture, water purification and air quality.

In view of the constant mutation of the RNA virus SARS-Cov-2, which was already well known from previous outbreaks of similar viruses such as MERS, one can still wonder about the approach taken by medicine and politics.

That the need for action was seen from the beginning solely in the area of vaccines, which were supposed to solve all problems in one fell swoop, that had become visible with Covid-19 while preventive medical therapies for vulnerable groups, which appeared in old people's homes from the beginning of the pandemic, never became a political topic is just as memorable as the total abandonment of measures in the area of air quality, which improved slightly during lockdown, only to quickly return to the old values for particulate matter, CO<sub>2</sub>, O<sub>3</sub> or nitrogen oxides after exiting the lockdown, of which it was known since the experiences in Milan and Bergamo that they promote the spread of infections and the severe course of Covid-19.

Although it had to be clear to the representatives of medicine and politics from the beginning that the Covid-19 pandemic may have something to do with changes in the context of global warming, and various studies since its beginning have proven this, they consistently ignored this connection, whilst they presented the vaccine as the only feasible and final solution to the Covid-19 crisis.

That a vaccine could in any case only bring a temporary relief from the Covid-19 pandemic, because without changes in passenger- and freighttraffic, in industry, in agriculture, in heating, in energy generation and in wastewater treatment these cycles could not be interrupted is obviously not understood by the representatives of medicine and politics.

Their policy of not taking any short-term effective measures in any of these areas, whereby the rapid spread of the virus and the overloading of intensive care units could only be avoided through lockdown measures, creates enormous economic and human damage whilst at the same time it creates through

ongoing deaths in old people's homes the perfect scenario for the mass vaccination without any control group.

Many politicians do not see that under the conditions prevailing today in various environmental areas, mutations will continuously occur in the SARS-Cov-2 virus, which can only be partially absorbed by the administration of vaccines and antibodies, so that new niches for the formation of new mutants are constantly emerging. At present, they are telling us in portions that the mutants that appear would have to be fought continuously with booster vaccinations. Now we are learning from the news that mutated strains from South Africa show resistance to new vaccines and that vaccinated persons in old people's homes still show Covid-19 infections.

The statement that a worldwide, long-term herd immunity will now emerge if everyone is vaccinated with one of the new vaccines even as they will not be available for many people world-wide in the foreseeable future, must be regarded as wishful thinking in view of the ongoing cycles described above. The statement that all citizens should be vaccinated, because otherwise they could lose access to cafes, cultural institutions and means of transport, contradicts the human- and civil rights that are enshrined in the constitutions of Western democracies.

The immunity against the infectious diseases that occur more frequently under today's environmental conditions must remain our cause as citizens. It cannot be maintained continuously through repeated vaccinations. It is our task to fight for the changes in the environmental area that are necessary to end the Covid-19 pandemic and to do everything individually to keep ourselves as healthy as possible in today's existing environments. The task of medicine is to support us in this to the best of its knowledge and belief. Only the doctors we have chosen can advise us on whether a certain vaccination means more advantage or disadvantage for us.

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More texts on Covid-19 with links to references are available at: <https://www.immunity.org.uk/articles/felix-de-fries/>