

17:00- 17.10

Prof. Dr. Carmen Faso, MCID Co-Chair Prof. Dr. med. Nicola Low (Moderator)

Speaker presentation

- **17:15- Dr. Emma Hodcroft,** Institute of Social and Preventive Medicine, UniBern "What is Omicron and how do we identify it?"
- **17: 30- Prof. Dr. Volker Thiel**, Institute for Virology and Immunology, Vetsuisse, UniBern "How is Omicron different from other variants?"
- **17:45- PD Dr. Christian Althaus**, Institute of Social and Preventive Medicine, UniBern "How well does Omicron spread compared to other variants?"
- **18:00- Prof. Dr. med. Annelies Wilder-Smith,** Institute of Social and Preventive Medicine, UniBern "What does Omicron mean for international travel?"
- 18:15- Prof. Dr. Joseph Francois, World Trade Institute, UniBern"Why and how does Omicron cause an international economic shock?"

Panel discussion

Including the speakers above, together with:

Prof. Dr. Dr. Claus Beisbart Institute of Philosophy, UniBern

PD Dr. med. Manuela Funke-Chambour Department for Biomedical Research, Inselspital





Multidisciplinary Center for Infectious Diseases

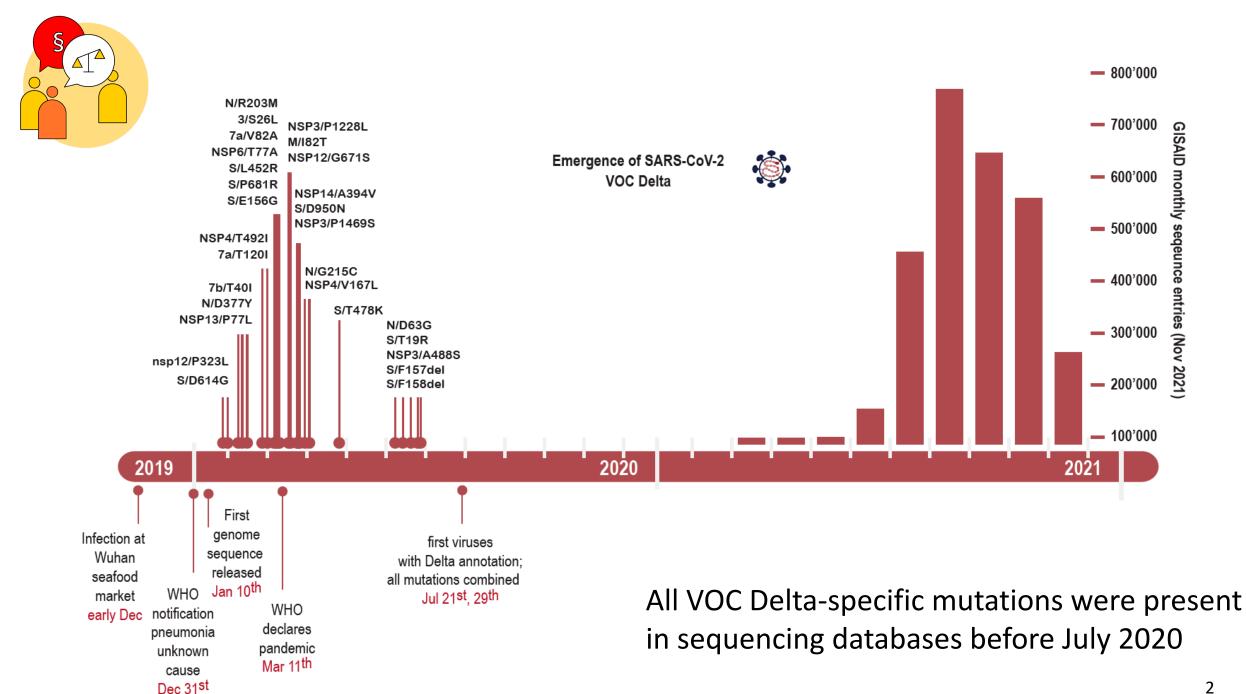
MCID Bern

11,

www.mcid.unibe.ch

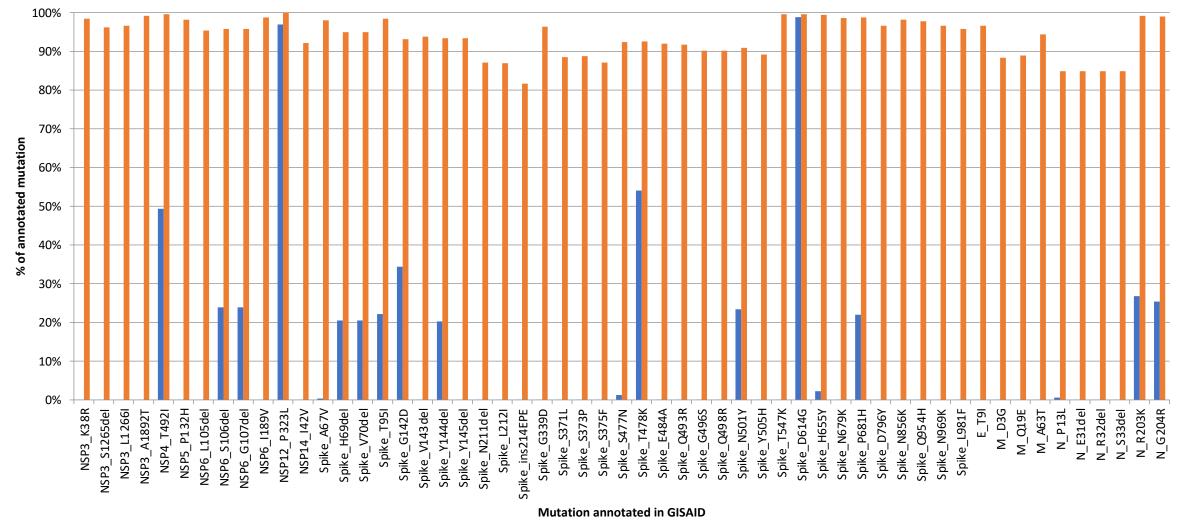








GISAID annotated mutations in Human sequences in % of all sequences compared to Omicron

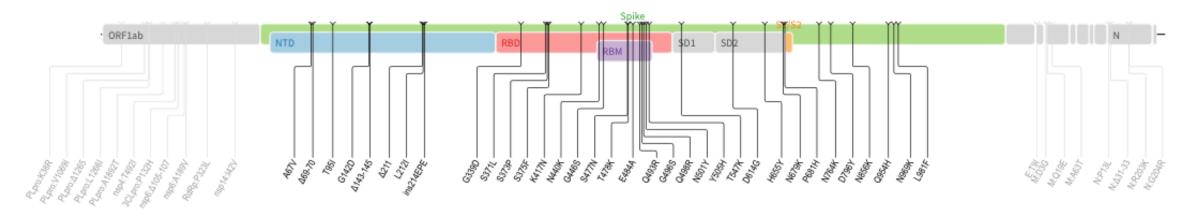


% Human (no Omicron) Sequences GISAID 5. Dec. 2021 (n=5'734'824)

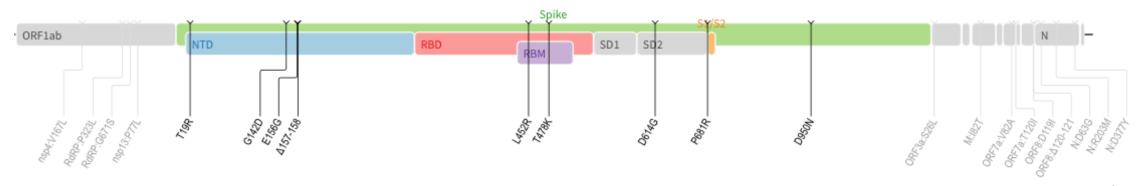
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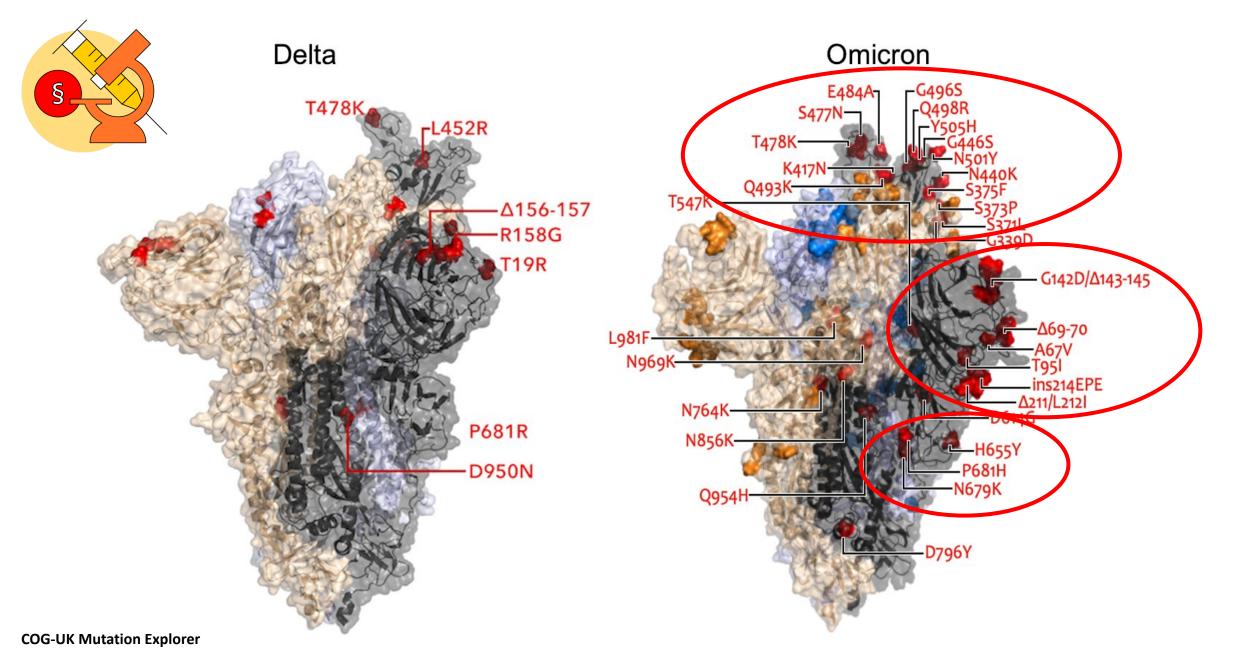
Omicron

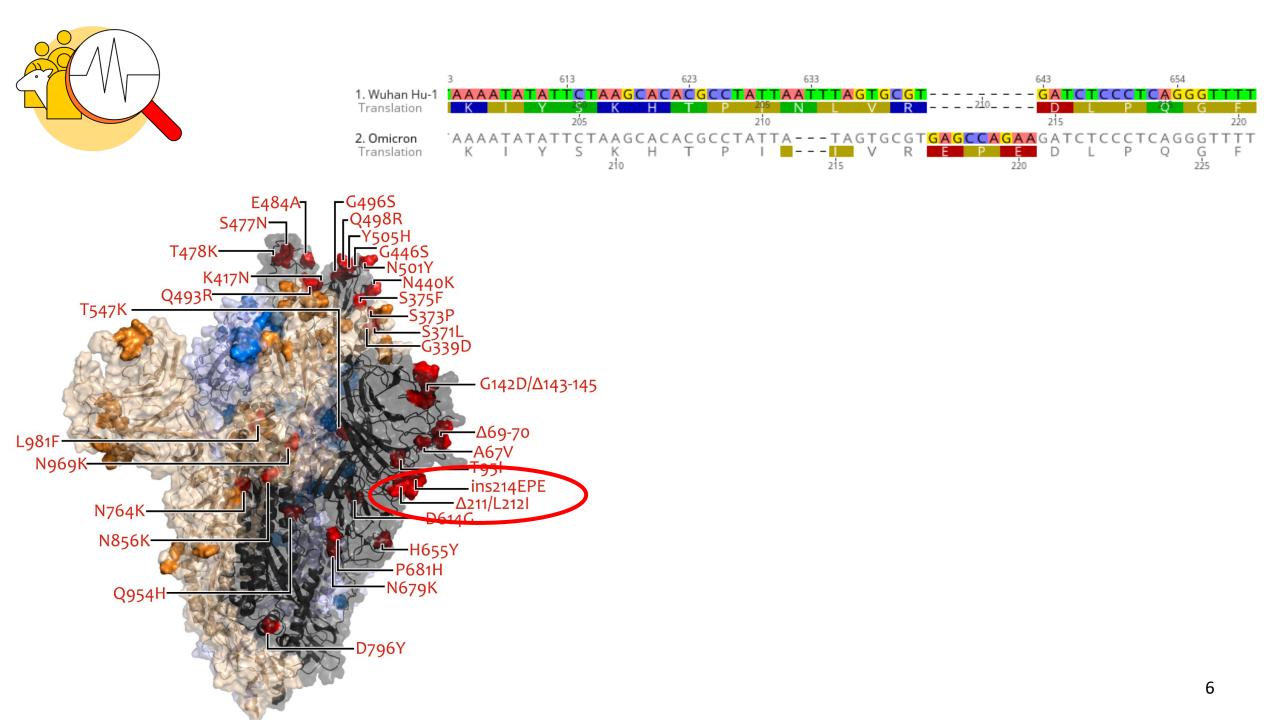


Delta



Stanford University Coronavirus Database





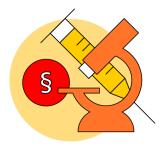


On Friday Nov 26th 2021, WHO declared B.1.1.529 VOC Omicron

- >30 mutations is the spike gene
- rapid spead in some regions in South Africa
- increased frequency of re-infections with omicron compared to previous VOCs



- will omicron replace Delta?
- is there immune evasion?
- will severity of disease change?
- will vaccines still protect?
- will antivirals and theraputic antibodies still work?



- will omicron replace Delta?

- is there immune evasion?

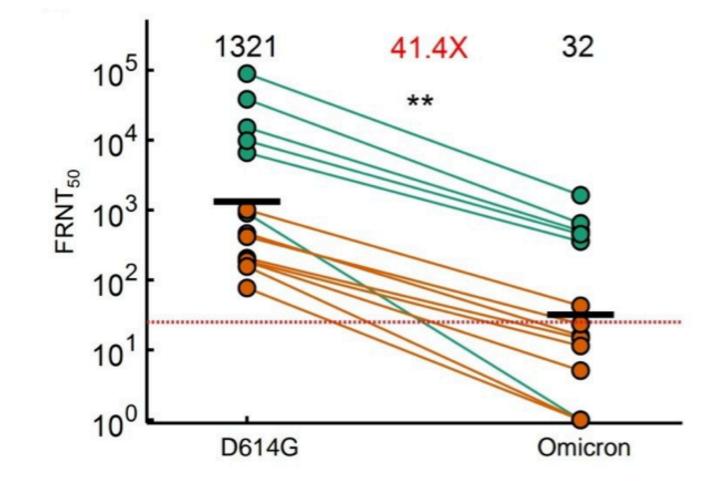
- will severity of disease change?

epidemiology soon; lab experiments will take time neutralization data soon T-cell data will take time epidemiology (weeks months)

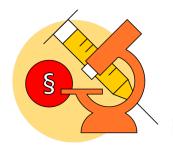
https://twitter.com/sigallab/status/1468325162860826634?s=21



Is there immune evasion?



BNT162b2 + infection
BNT162b2 only



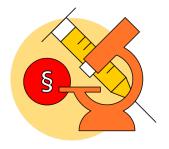
Is there immune evasion? А в 32.8x 22.7x NT₅₀ (recipr. dilutions) 25% NT₅₀ (recipr. dilutions) 37.0x *** 78% 1000 1000 24.5x 25% 20.0x 100 100 11.4x 10 2xBNT_{fm} 2xBNT/BNT0.5m 2xBNT/BNT_{3m} 2xBNT/infection 2xMOD_{6n} 2xMOD/BNT0.5m С D 100 NT₅₀ (recipr. dilutions) 1000 27.1x Inhibition [%] 100 10.0x 50· 10 1xChAd/BNT_{6m} 1xChAd/2xBNT_{0.5m} 0.01 0.1

Casirivimab/Imdevimab [µg/mL]

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- will omicron replace Delta?
 epidemiology soon; lab
 - experiments will take time
- is there immune evasion? first neutralization data available
 - T-cell data will take time
- will severity of disease change?
- epidemiology (weeks -



will vaccines still protect? epidemiology (weeks – months)
 lab experiments will take time

will antivirals and theraputic antibodies still work?
 some antibodies may not work anymore (data expected soon)
 polymerase and protease inhibitors very likely still active



A word on travel bans:

- Thanks to our colleagues in South Africa for their great work!

- Since almost two weeks scientists are trying to distribute and share virus isolates – urgently needed to perform lab experiments
- Many flights are canceled no isolate shipped so far!



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