

## Coronavirus Disease – COVID-19

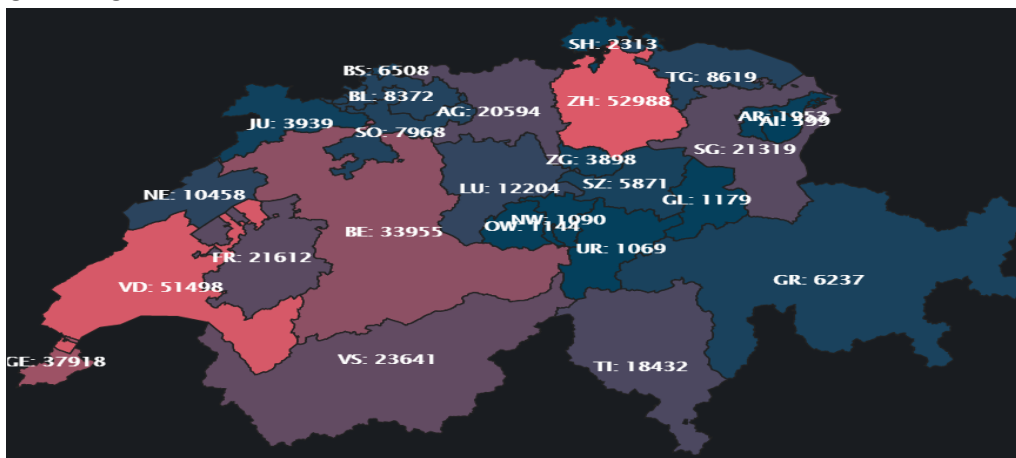
### 11.12.2020

- The death toll from the coronavirus outbreak is over 1,594,530 worldwide, with the highest number of deaths in USA (300,401) and Brazil (179,897). There have been more than 71,053,024 global cases in 210 countries and territories. [1]
- Scientists have identified mutations in five genes associated with the development of life-threatening illness in patients with Covid-19. UK researchers said their work, published in the journal Nature, sheds light on the mechanisms that underpin severe coronavirus symptoms and could lead to potential new drug treatments for the disease. Dr Kenneth Baillie, the project's chief investigator and senior research fellow at University of Edinburgh's Roslin Institute, said: *"This is a stunning realisation of the promise of human genetics to help understand critical illness... "Our results immediately highlight which drugs should be at the top of the list for clinical testing. We can only test a few drugs at a time, so making the right choices will save thousands of lives."* Dr Baillie and his team performed a genome-wide association study (GWAS) on 2,244 critically ill patients with Covid-19 from 208 intensive care units (ICU) in the UK. Working with experts from the GenOMICC consortium, a global collaboration looking into the links between genetics and critical illness, the researchers compared the genetic information of Covid-19 patients in ICU with samples provided by healthy volunteers from other studies. The team found that variations in five genes - IFNAR2, TYK2, OAS1, DPP9 and CCR2 - was associated with the development of severe illness in Covid-19 patients. [2]
- Pharmaceutical giant AstraZeneca is launching a joint clinical trial with the makers of Russian Sputnik V to test the combination of coronavirus vaccines, according to a statement published on AstraZeneca's Russian website on Friday. *"Today we announce a clinical trial programme to assess safety and immunogenicity of combination of AZD1222, developed by AstraZeneca and Oxford University and Sputnik V, developed by Russian Gamaleya Research institute. It will begin enrolling adults aged 18 years and older,"* AstraZeneca said. According to the British-Swedish drugmaker, a combination of the two coronavirus vaccines may help in generating "wider protection through a stronger immune response and better accessibility." [3]
- Australia has cancelled the production of a locally made vaccine against Covid-19 after trials showed it could interfere with HIV diagnosis. The government has instead securing additional doses of rival vaccines. Antibodies generated by the vaccine being developed by the University of Queensland and biotech firm CSL, one of four candidates contracted by the Australian government, were found to lead to some false positive HIV test results, the makers said. While the vaccine had elicited a "robust" immune response to the novel Sars-COV-2 virus without serious adverse effects in a Phase 1 trial with 216 participants, re-engineering a fix could take another 12 months, they said. CSL and the Australian government had together decided to stop Phase 2 and Phase 3 trials. [4]
- The reproduction number, or R value, of coronavirus transmission across the UK is now between 0.9 and 1, the Government Office for Science and the Scientific Advisory Group for Emergencies (Sage) said. Last week, the R number was between 0.8 and 1. [4]

Countries	Deaths	Cases	Recovered
USA	300,401	16,088,352	9,340,223
Brazil	179,897	6,794,910	5,931,777
India	142,417	9,814,064	9,309,031
Mexico	112,326	1,217,126	896,130
UK	63,082	1,787,783	N/A
Italy	63,387	1,805,873	1,052,163
France	56,940	2,337,966	174,658
Iran	51,727	1,092,407	787,853
Spain	47,344	1,734,386	N/A
Russia	45,893	2,597,711	2,059,840
Argentina	40,431	1,482,216	1,318,187
Colombia	38,484	1,399,911	1,296,420
Peru	36,499	979,111	914,600
South Africa	22,747	836,764	756,671
Poland	22,174	1,115,201	815,356
Germany	21,533	1,285,308	942,100
Indonesia	18,511	605,243	496,886
Belgium	17,692	600,397	40,789
Chile	15,782	567,974	541,345
Turkey	15,977	1,780,673	1,154,333
Ecuador	13,858	200,765	174,188
Ukraine	14,755	872,228	480,348
Canada	13,207	445,630	359,225
Iraq	12,549	572,600	503,897
Romania	13,116	545,567	443,168
Netherlands	9,966	594,523	N/A
Bolivia	9,008	146,385	125,716
Czechia	9,341	569,205	497,828
Philippines	8,709	447,039	409,329
Pakistan	8,653	432,327	379,092
Sweden	7,514	320,098	N/A
Bangladesh	6,986	487,849	414,318
Egypt	6,854	120,147	104,281
Morocco	6,492	391,529	345,934
Saudi Arabia	6,023	359,583	350,108
Hungary	6,622	271,200	78,700
Switzerland	5,888	373,831	288,400
Portugal	5,373	340,287	263,648
China	4,634	86,688	81,762
Bulgaria	5,405	174,568	75,232
Guatemala	4,376	128,541	117,013
Austria	4,289	316,581	273,503
Tunisia	3,758	107,814	82,193
Panama	3,287	185,424	157,888
Jordan	3,286	255,459	209,746
Honduras	2,968	113,207	50,948
Israel	2,969	353,269	333,900
Bosnia and Herzegovina	3,250	99,543	63,733
Greece	3,472	122,648	9,989
Algeria	2,575	91,121	59,590
Moldova	2,521	124,264	106,471
Dominican Republic	2,359	152,452	118,877
Armenia	2,445	146,317	123,474
Japan	2,502	171,542	145,014
Ireland	2,117	75,203	23,364
Myanmar	2,220	105,863	84,338
Croatia	2,484	168,388	140,898
Kazakhstan	2,088	139,995	124,056
North Macedonia	2,051	70,883	47,364
Afghanistan	1,949	48,826	38,266
Serbia	2,227	255,758	31,536
Paraguay	1,914	90,958	64,527
Costa Rica	1,882	149,815	109,855
Ethiopia	1,791	115,782	91,209
Slovenia	1,998	93,737	70,733
Nepal	1,674	246,694	232,872
Azerbaijan	1,840	167,155	103,550

Kenya	1,582	90,978	71,579
Oman	1,463	125,669	117,327
Georgia	1,694	183,099	150,461
Kyrgyzstan	1,307	76,718	69,341
Sudan	1,319	20,468	11,673
Libya	1,278	89,880	59,839
Belarus	1,246	156,359	133,930
Nigeria	1,190	71,344	65,474
El Salvador	1,186	40,741	37,172
Lebanon	1,170	142,187	95,737
Slovakia	1,122	127,087	93,533
Venezuela	938	106,280	101,384
Australia	908	28,011	25,665
Kuwait	910	145,495	141,259
Albania	977	46,863	24,136
Denmark	927	103,564	76,927
Palestine	931	106,622	81,166
Yemen	606	2,081	1,383
Uzbekistan	611	74,664	71,921
Lithuania	764	86,949	36,168
UAE	607	182,601	162,435
S. Korea	572	40,786	31,157
Montenegro	569	40,546	29,462
Cameroon	443	25,087	23,851
Syria	476	8,787	4,174
Finland	453	30,073	20,000
Malaysia	402	80,309	67,173
Zambia	365	18,161	17,329
Norway	387	40,194	34,463
Angola	362	15,925	8,679
Bahrain	347	88,632	86,684
Luxembourg	392	40,755	31,678
DRC	350	14,169	12,208
Senegal	345	16,893	16,015
Ghana	326	52,738	51,518
Zimbabwe	305	11,081	9,253
Jamaica	270	11,509	7,667
Madagascar	255	17,473	16,927
Latvia	319	24,386	1,866
Qatar	240	140,680	138,194
Haiti	233	9,465	8,214
Uganda	220	25,730	9,605
Malawi	186	6,055	5,490
Mauritania	210	10,268	7,957
Belize	183	8,805	4,141
Bahamas	163	7,585	6,032
Mali	184	5,576	3,502
Nicaragua	162	5,887	4,225
Namibia	160	16,097	14,332
Guyana	154	5,811	4,925
Malta	166	10,980	8,935
Guadeloupe	151	8,472	2,242
Cuba	136	9,267	8,290
Ivory Coast	133	21,590	21,203
Mozambique	139	16,680	14,793
Sri Lanka	146	31,375	22,831
Estonia	142	16,956	10,533
Gambia	123	3,779	3,645
Eswatini	126	6,633	6,221
Trinidad and Tobago	122	6,833	6,060
Somalia	121	4,579	3,529
Suriname	117	5,337	5,218
Hong Kong	114	7,378	5,996
Cabo Verde	109	11,203	10,836
Chad	102	1,739	1,587
Congo	99	6,049	4,988
Tajikistan	88	12,588	12,009
Equatorial Guinea	85	5,183	5,048
Liberia	83	1,676	1,358
Uruguay	90	8,487	5,747

- Swissmedic has said it received additional details from companies on their vaccines that would enable it to issue authorisations quickly once sufficient data on safety, efficacy and quality were available. However, it added: “An emergency approval for vaccines is not a legal option in Switzerland,” the agency said, ruling out what it called “premature vaccinations” for the country. The world’s eyes are on the UK as the first country to approve and roll out a vaccine – from Pfizer and its partner BioNTech. Switzerland said this month it has signed a contract to deliver 3m doses of the same vaccine. It has also signed agreements with Moderna and AstraZeneca. [5]
- The current situation remains very worrying, according to the Swiss government, with the country facing a persistently high level of Covid-19 infections and deaths. The seven-day average of new positive daily cases stands at 4,120; this is 11% more than the previous week. At its meeting today, the Federal Council tightened its measures to counter the spread of the coronavirus. The aim is to reduce the level of contact between people and to prevent people from gathering together. Restaurants and bars, shops and markets, museums and libraries, and sports and leisure facilities will be required to **close at 7pm** from Saturday, 12 December. With the exception of restaurants and bars they must also remain closed on Sundays and public holidays. Cantons with a more favourable epidemiological situation may extend the closing time until 11pm. Events are banned, with certain exceptions, while sports and cultural activities are still permitted in groups of up to five people. Ski resorts, which were the focus of much debate last week, are exempt from this as an “outdoor activity”. The plan also foresees church services, as well as legislative and parliamentary gatherings, being allowed to continue, as exceptions to the ban on public gatherings. [5]



Cases in Switzerland. [6]

## • Funding opportunity for researchers

PRACE (Partnership for Advanced Computing in Europe) Fast Track Call for Proposals

- <https://prace-ri.eu/prace-support-to-mitigate-impact-of-covid-19-pandemic/>

The US Congressionally Directed Medical Research Program - a call for proposals on COVID-19

- <https://ebrap.org/eBRAP/public/ProgramFY.htm?programFYid=256400>

Anyone submitting to US (NIH, DoD) or EU Horizon 2020 calls can contact the Grants Office for support: [grantsoffice@research.unibe.ch](mailto:grantsoffice@research.unibe.ch). The Grants Advisors responsible for the ISPM are Aline Schögler ([aline.schoegler@research.unibe.ch](mailto:aline.schoegler@research.unibe.ch)) and Leah Witton ([leah.witton@research.unibe.ch](mailto:leah.witton@research.unibe.ch)).

## Sources

[1] <https://www.worldometers.info/coronavirus/>

[2] <https://www.pressreader.com/canada/covid-19-news>

[3] <https://edition.cnn.com/world/live-news/coronavirus-pandemic-12-11-20-intl/index.html>

[4] <https://www.theguardian.com/world/live/2020/dec/11/coronavirus-live-news-canada-could-start-vaccinations-within-days-as-global-cases-near-70m>

[5] [https://www.swissinfo.ch/eng/covid-19\\_coronavirus--the-situation-in-switzerland/45592192](https://www.swissinfo.ch/eng/covid-19_coronavirus--the-situation-in-switzerland/45592192)

[6] <https://www.corona-data.ch/>