

Newsletter April 2020

Dear reader,

Switzerland as well as the University of Zurich and ETH Zurich are currently facing an extraordinary situation. All lectures and teaching have gone online. All other planned events including the Life Science Zurich activities are cancelled until the end of May if they can't be organized via digital channels. This means, that workshops and courses at our Learning Center and Graduate School are on hold, too. Both UZH and ETH are running on a minimum level allowing only the staff within essential research areas and IT and technical staff on site. The vast majority of the employees are thus working from home. Despite these circumstances many important things are happenig.

In this newsletter we would like to inform you about some of these efforts. They are all about tackling the Corona pandemic in one way or the other. Especially, the research in the virology is now extremely busy. There is a wide range of initiatives being built up to support hospitals and other organizations. And you can also help!

During the lock down, the LSZ team members keep on with their daily business as far as possible and are of course planning activities and courses for the time after the corona crisis.

On the trail of the virus



Participate in containing the coronavirus: medical informatics specialists at ETH Zurich have developed a monitoring system to complement corona tests and track how the virus is spreading in Switzerland. All residents of Switzerland can take part in the online survey. You can find more information in the [ETH News article](#)

Let's fight the COVID-19 pandemic together. Give us 1 minute of your time and help flattening the curve! <https://covid19survey.ethz.ch/>.

Reducing the risk of infection



Coronaviren werden über Tröpfchen übertragen. (Grafik: Science Photo Library)

Biology shows us that there are additional ways to reduce the risk of serious coronavirus infections, in addition to hand hygiene and keeping distance, as Viola Vogel writes in the [ETH Zukunftsblog Health](#). We all know the importance of good hand hygiene and of keeping our distance if we want to protect ourselves and others from infection with the novel coronavirus. These are targeted measures to curb the epidemic and relieve the burden on our health care system, giving it sufficient capacity to treat the most vulnerable people in our society.

However, there are additional measures that we can take to reduce the risk of infection and the severity of the disease: Paying conscious attention to taking care of our throat and everything that supports the self-cleaning powers of the respiratory tract make a difference. As the situation develops, this will become increasingly important. The more the virus spreads in our environment, the harder it will become to avoid coming into contact with it. It is thus increasingly important to ensure that as few of the virus particles as possible reach our lungs and cause inflammation.

Virology on the frontline



Already in January, virologists at the UZH-Institute started the development of a test for detecting the SarsCoV-2. (image: istock/gevende)

Thanks to a huge effort 800-1000 tests can be run daily at the Institute of Medical Virology at the UZH (IMV). While the UZH research laboratories on the Irchel Campus have currently shut down operations, the Institute of Medical Virology (IMV) is still very much open: “We’re in an exceptional situation – everyone’s working flat out,” says Alexandra Trkola, who heads up the institute. Operations have been steadily ramped up over the past two months, with experts brought in from other laboratories at UZH and ETH, and new staff recruited. At the beginning of last week, the institute moved to shifts, so it could operate 24/7. Meanwhile, all 77 IMV staff members plus an additional 41 externals are working in diagnostics and analyzing some 800 to 1,000 test samples every day. In the [UZH news](#)

Alexandra Trkola, who heads the institute, explains what determines the quality of a good diagnosis.

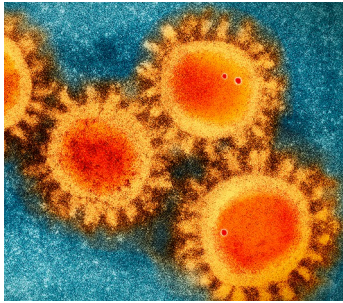
New UZH Coronavirus Test Center relieves strain on family doctors



The UZH is offering this high-quality service in the interest of public health to complement the tests provided by family doctors and boost Canton Zurich’s COVID-19 testing capabilities.

The University of Zurich has repurposed its Travel Clinic as a COVID-19 test center. Designed to complement the tests currently offered by family doctors in Canton Zurich, it is geared to other people who work in healthcare services. The center also offers an X-ray service to ensure that pneumonia does not go undetected. It is primarily designed to relieve the strain on family practices that are not able to or do not wish to do their own testing. Its services are also geared to members of University of Zurich and ETH staff who have contact with patients, as well as to other people in the canton who work in healthcare. For more information see the [UZH press release](#).

Corona vaccine soon to be here?



The new coronavirus in a magnetic electron microscope. The well visible spikes should be neutralized by the vaccine. (Photo: istock/narvikk)

In the efforts against the spread of the Sars Coronavirus the search for vaccine is essential. Thanks to new technology Steve Pascolo at the UZH has produced a possible vaccine. The same method has already found its way abroad into early stage clinic trials. As the development and production of a new vaccine usually takes years rather than months, researchers are putting all their strength in finding antiviral substances for the treatment of the disease until a vaccine is ready to enter the market. Read more in the [UZH News](#) about the new technologies that might help speeding up results.

ETH makes laboratory equipment available for coronavirus tests



Coronavirus testing is an essential part of identifying infected people and curbing the spread of the pandemic. To speed up the testing process, the Department of Environmental Systems Science at ETH Zurich has made its laboratory equipment available to the canton of Thurgau. Read more in the [ETH News](#).

Coronavirus testing sets with test swabs and samples taken from the throat. (Photo: Keystone)

Students 4 hospitals



ETH students have launched a new web platform, “Students4Hospitals”. Students of all disciplines from across Switzerland can register there to be placed on a relief mission in a healthcare institution. The platform also lets hospitals register their need for volunteers. This should help the health care institutions to find suitable volunteers for administration and simple lab and care tasks quickly and easily. See the website <https://students4hospitals.ch/en/>

Showing solidarity: students offer pharmacies their support



The new platform «pharmadelivery» helps matching students in pharmaceutical sciences from ETH volunteering for a support of pharmacies. Students register with their home and addresses including the zip code. This way several involved branch groups can easily find the right persons nearby willing to help out.

See the website: <https://pharmadelivery.ch>

Pharmacies are currently under a great deal of stress. A new platform connects them with pharmacy students who want to help staff. (Photo: Keystone)

Vital support for Swiss hospitals

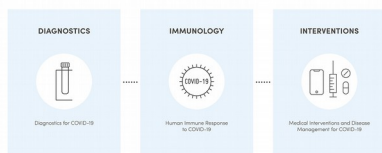
The expected surge in coronavirus patients is pushing Swiss hospitals to the very limits of their capacity. Equipment, consumables and other resources are desperately needed. Researchers right across Switzerland can provide valuable support through pooled resources. The ETH Domain has set up a dedicated platform “Academic Resources for COVID” to coordinate their efforts. Equipment and consumable materials are currently standing around in Swiss universities and research institutes which are barely being used now that laboratory work has been run down to a bare minimum. These materials are badly needed in hospitals, however. Therefore, the platform that coordinates demand from the medical sector with the resources of Swiss research was created. It is open to all members of institutions of all Swiss universities and related organizations. For more information see the [ETH News](#).

together - ETH Zurich provides help

The Corona helper pool at ETH aims to help balance resources and arranges suitable work assignments for ETH members. It also organizes driving and transport services. For more information see the [Services and Resources website](#) of ETH Zurich.

Additional funding for Covid 19 research

BRCCH Fast Track Call (FTC) for Acute Global Health Challenges
Emergency Response to COVID-19



Total Initiative: 15 Mio CHF | Each Project: up to 2.5 Mio CHF for 2.5 Years | Project Start: May '20, 2020

The Botnar Research Center for Child Health (BRCCH), which was founded jointly by ETH Zurich and the University of Basel in 2019, develops new pediatric approaches to promote the health of children and adolescents worldwide. Researchers from the University Children's Hospital Basel and the Swiss Tropical and Public Health Institute are also involved in the Center.

In the face of the global Covid 19 crisis, the BRCCH is now launching an emergency initiative for the first time in order to develop practicable approaches as quickly as possible to cope with this extraordinary situation. The Fondation Botnar, which made the establishment of this centre possible with a donation, has now provided additional funds of 15 million Swiss francs. The funds will be used to support projects of the four participating institutions over a

period of two and a half years. Funding will be given to projects dealing with the diagnosis and human immune response to Covid-19, as well as to projects in the fields of medical interventions and disease management.

Website of the Botnar Research Center for Child Health <https://brc.ch>

Swiss Scientific COVID-19 Task Force



Switzerland, as many countries worldwide, is facing a huge healthcare crisis. The country, but also our institutions, are challenged to find the best approach to address the current pandemic. The ETH Domain, as the main scientific arm of the Confederation, has a huge potential to positively influence the outcome of this crisis, be it through research, education, knowledge transfer or even simply through our activities as large institutions with many employees. The ETH Domain should have the ambition to be a role model on how we handle the current crisis.

See the website: <https://www.ethrat.ch/en/eth-domain-covid-19-task-force>

Confederation appoints scientific advisory board

The current COVID-19 pandemic presents huge challenges for Switzerland and its health system. The Swiss scientific community has a high potential to positively influence on how this crisis develops in a number of ways, including through research, education and knowledge transfer.

In the current crisis, the federal government wants to exploit the potential available in the Swiss scientific community to an even greater extent by working with scientists to find the best approach to overcoming the pandemic. To this end, it has set up a task force of researchers from higher education institutions throughout the country.

Headed by Matthias Egger, president of the National Research Council at the Swiss National Science Foundation SNSF, the task force will act as an advisory body to the Federal Council, the head of the Federal Department of Home Affairs FDHA, and to the federal and cantonal offices concerned. Its members do not represent the higher education institutions to which they are affiliated but are instead selected on the basis of their specialist expertise. The Task Force makes use of an initiative recently set up in the ETH Domain, and combines initiatives and expertise from the SNSF, swissuniversities and the Academies.

For more information see the [website of the FOPH](#).

This newsletter mentions many initiatives by the ETH or UZH but probably not all. If you know about other projects please let us know so that we can spread the information in our next newsletter. Are there other research topics than virology and immunology that you would like to know more about? If you have any suggestions or comments, please contact us in a short e-mail.

Stay healthy, best wishes

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