Research Lab Health Plan for the COVID-19 (disease)/SARS-CoV-2 (virus) Outbreak

Prepared by the Provost’s Office to facilitate discussions and as inspiration for PIs at Clemson University (timestamp 1 March 2020)

Note: many elements contained in this document were used with permission from the following blog (Prof. R. Lenski’s personal website; Dr. Lenski is a Distinguished Professor of Microbial Ecology at Michigan State University): https://telliamedrevisited.wordpress.com/2020/02/29/the-lenski-lab-health-plan-for-the-new-coronavirus-outbreak/

Anyone who suspects/worries that they are infected and/or have special health needs should talk to a doctor and/or health-care providers immediately.

“Everything we do before a pandemic will seem alarmist. Everything we do after a pandemic will seem inadequate. This is the dilemma we face, but it should not stop us from doing what we can to prepare. We need to reach out to everyone with words that inform, but not inflame. We need to encourage everyone to prepare, but not panic.” — Michael O. Leavitt, 2007

The SARS-CoV-2 virus that causes the COVID-19 disease is spreading around the globe and the impact this infection will continue to have is unclear, globally and locally. Some experts are predicting that something like half of the adult population will be infected, although not all at the same time. Many cases are relatively mild and are difficult to distinguish from a typical cold or flu infection. Additionally, some people with the virus may be asymptomatic either for some time before eventually exhibiting symptoms or even without possibly ever having any symptoms at all. Very importantly, we also know that other cases—perhaps 20% or so—are very serious and can be life-threatening.

As a research lab, what can we all do to protect ourselves, our families and friends, each other, our communities on and off campus, and our research? Some items to consider are provided below, drawn heavily from the referenced website above, with an emphasis on activities related to our laboratory and our academic setting.
Refer to Clemson University website for University updates: https://www.clemson.edu/campus-life/student-health/COVID-19.html

Sign up for CU Safety alerts here: https://www.getrave.com/login/clemson

1) **Get your flu shot.** While it won’t protect against the coronavirus specifically, and it does not provide perfect protection against the influenza virus, getting the flu shot reduces the chance of you getting the flu and spreading it to others. This helps the population at-large be a bit healthier and better prepared to cope for other infections like COVID-19.

2) **Prepare for a period of self-isolation or quarantine lasting 2 weeks, or perhaps longer** (for you as an individual and for your household). Stock up on food staples and toiletries. Very importantly, stock up on medicines including prescriptions and items you use when you have a bad cold. For prescription medicines, it is suggested to have at least a full month’s supply, maybe longer, in case there are disruptions to availability. Talk to your physician about extending prescriptions or any other special needs you might have.

3) **If you develop symptoms of a cold or flu—even mild symptoms—please stay at home** and don’t come into the office, the lab or to campus. Don’t spread the infection. Just email the group so we know that you are OK and to let us know. Work from home on writing, reading literature, review experiment plans and timelines, work on presentation slides, or think through the tough research questions that you keep wanting to dissect but haven’t had time to work through (only if you feel up to it). You will not impress me, or anyone, by trying to work while you’re sick and you could spread the infection to the lab group, other people in the building, and others you may contact while getting to-from the lab. If you need help with accessing any files or with logging into any secured internet resources, please email me.

4) **If a member of your household becomes ill,** see and follow point 3 as well as prioritize taking care of those that need you. Also consider using grocery delivery services like InstaCart in order to avoid leaving your home.

5) **Practice social distancing.** We should all reduce physical interactions and set good examples not only among ourselves but also for our colleagues, friends, and families. This means greeting and congratulating one another from a distance (skipping hugs and handshakes, for the time being). Instead, you could put your own hands together and bow your head slightly to greet or congratulate someone. Other options include bumping
elbows, if you really must make contact. Foot bumps are apparently another new thing, too.

6) **Be prepared to stop your lab work abruptly, on very short notice.** In the meantime, now (first 1-2 weeks of March) might be a good time to get a week-long or two-week experiment done, should the epidemic grow too large (again, if it does). However, I suggest holding off starting, *for the time being*, on any plan to start a large and/or long experiment that does not have a clear ‘hold’ option such as putting all samples in progress in the -80°C freezer without compromising later steps in the experiment. Think about this before you leave at the end of each day/night, including how to communicate to others what to do with anything that is in progress should you need to explain anything remotely via email or possibly by voice in a phonecall.

7) **Be prepared to restart experiments that are in progress, your individual experiments, and experiments involving multiple researchers.** Ensure that samples or materials you and others that you are collaborating with are using can be replenished should you need to restart an experiment. This may mean scaling back some plans regarding the scale and number of samples you use right now. It also includes work you are doing with others in the lab or with other labs (don’t forget interns). This is in case it will be necessary to restart any key steps in the event that people get sick, or if the university should at some point need to lock building doors or curtail certain activities for a while.

8) **Be prepared to cancel your attendance at scientific conferences and other academic, professional development activities on campus, or social events.** Even if an event organizer decides to push ahead, you do not have to go if you feel it is risky for you personally. If possible, I recommend delaying purchases of airfares until an event is closer in time, given the current uncertainty. Note: Refundable tickets on most airlines are very expensive, and other tickets have restrictions. Hotel reservations can usually be cancelled on shorter notice (a day or week, check to be sure), but not if they were booked through a discount vendor.

9) **Practice good personal hygiene.** Learn how to avoid touching your own face. This coronavirus can survive for hours as tiny droplets on surfaces, which you and others may inadvertently touch (“fomite transmission”). Then, when we touch our mouth, nose, or eyes, we can infect ourselves. Cover your mouth with your forearm or the inside of your elbow when you cough or sneeze. If you find yourself coughing or sneezing repeatedly, see point 3 above. Wash your hands (and the surface of your
cellphones) regularly and thoroughly after you’ve touched shared surfaces, especially before eating.

10) **Follow the news, and get your news from trustworthy, reliable sources.** If it becomes clear that infections are spreading locally, or even if you are just concerned about that possibility, then avoid crowded public venues. This does not mean that you should follow the news obsessively, as that can be exhausting. One approach that may help with avoiding anxiety and awareness fatigue is to limit the time you spend getting updated on global status and tracking by setting an approximate time with a time limit (15 minutes, for example) once or twice a day (in the morning for awareness). Global developments don’t change so significantly within 24 hours time and it is easy to get drawn into seeking many answers that have not yet (and possibly may never) emerged. By decreasing the frequency and duration of searching for answers, you can also decrease the proportion of rumor and speculation versus facts and informed inferences.

There is a great discussion about facts, informed inferences, and speculation. Among other things, the podcast below with career academic epidemiologist Marc Lipsitch (Harvard University) also describes in basic terms the modeling (basic parameters) used to project numbers and spatial, temporal spread:


Note that several scientific societies, publication offices, and genomic DNA sequencing labs are providing open access availability to all peer-reviewed publications and whole genome sequencing data of this and other coronaviruses.

Some people also find these websites, among others, helpful when trying to scale scientific vocabulary to public (and family) discussions:


[https://www.who.int/](https://www.who.int/)


11) **Maintain frequent social contact if you do isolate yourself.** Whether because of illness or concern, keep lines of communication
open with your family, friends, neighbors, and the lab via phone, email, social media, or whatever works best for you. Don’t let physical isolation and loneliness make you feel miserable. For a good read on preparedness for infectious disease outbreaks, you may find it helpful to read _Words of Wisdom_, by Michael Leavitt, a former Secretary of Health and Human services.