

PHARMTOX QUARTERLY

PHARMACOLOGY & TOXICOLOGY QUARTERLY

June 1, 2020- PQ N. 09

Pharmacology & Toxicology - Staying Busy During Covid-19 Lockdown

Dr. Nathan Tykocki Discusses Covid-19 and Making Face Shields

How has your area of expertise shaped the way you take precautions against coronavirus?

My expertise in science hasn't much shaped my precautions at all, simply because I am not an infectious disease expert or even from a lab regularly using viral vectors and the like. But my training as a scientist has helped me critically evaluate the bombardment of information regarding coronavirus and sort the fact from fiction. This has helped my family and me stay safe and sound whilst still leaving the house now and again.



Dr. Nathan Tykocki

How do the 3D masks you are making compare to a regular facemask?

We pretty quickly realized that printing masks wasn't going to work - they are too unreliable and too many pitfalls for safety and efficacy. So we quickly switched to face shields instead. These are used in conjunction with a disposable non-N95 surgical mask to protect the face. So far, we've delivered over 5,000 face shields to medical professionals all over the state, and we're still going strong. We're looking to expand to help other groups in need of face protection that can't get it. This includes meat processors, dentists, and medical students. And, given the resources and talents of our group, our shields are at least on-par with those available commercially (and some people like them better!).

What professional advice can you give to those unsure how to best protect themselves from covid-19?

If you're unsure how to protect yourself, the CDC and the State of MI websites on coronavirus are the best places to go... that and the NIH. Not Facebook, or twitter, or any social media. These places have the best information. I also try to err on the side of caution, and remember it's not just about keeping me healthy — its about keeping everyone healthy. My actions directly affect everyone around me.

How can people at home get actively involved with stopping the spread of covid-19?

To get actively involved is to be at home! Wear a mask if you do need to go out, wash your hands often, and keep your social distance. This will work wonders. If you're looking to help others (and have a 3D printer or sewing machine), you can join our Spartan 3D/PPE group to make cloth masks or print shields. More information is at lib.msu.edu/3DPPE or email PPEProvisions@msu.edu. If you are willing and able to sew masks, you can also join your neighborhood Nextdoor or Facebook groups. Many people have been banding together on these platforms to share masks with their friends and neighbors in a safe and meaningful way. [Click here to learn more about Dr. Tykocki and his research.](#)

Drs. Anne Dorrance & James Luyendyk Science Trivia!

Since the beginning of the shutdown one of the biggest concerns of the department was staying engaged with our PhD candidates and making sure they don't fall behind in the program. Drs. Anne Dorrance & James Luyendyk have hosted regular ZOOM meetings with our students, some of the highlights include:

- Data presentations led by PhD students who have completed industry internships
- Mentoring workshops: A series of 8 workshops hosted by [Dr. Anne Dorrance](#) that teach our students to be good mentors to undergrads in the lab with the occasional help from [Dr. Peter Cobbett](#)
- "Quiz Night" hosted by [Dr. James Luyendyk](#) featuring a mix of PharmTox questions & pop trivia

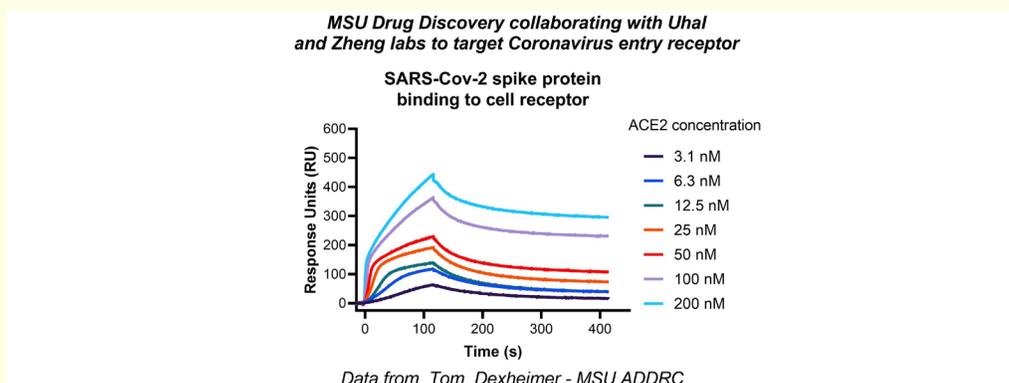


James Luyendyk - *"Interacting with the students is what makes this job so great!"*

Anne Dorrance - *"Many of our students live alone and are a long way from home. They are lonely and because they are used to being really busy they are finding the shutdown unsettling. I think it is important for us to see them at least once a week. If we can do that in a way that enhances their education, so much the better."*

MSU collaborates to understand and target COVID-19 coronavirus host cell entry

With global cases of COVID-19 surpassing 5 million, researchers are continuing to learn more about the virus and trying to find ways to treat it. The SARS-Cov-2 coronavirus that causes COVID-19 uses the angiotensin-converting enzyme 2 (ACE2) receptor to gain entry to host cells. At MSU, a collaboration has begun among the labs of Drs. [Bruce Uhal](#), [Yong-Hui Zheng](#), and the [MSU Drug Discovery group](#) to further understand the entry mechanism and to discover methods to block the virus and host cell interaction.



New Hires / Promotions



Dr. Brian Johnson joined Michigan State University as an Assistant Professor on May 1st, 2020. Dr. Johnson will be 60% Pharmacology & Toxicology, 40% Biomedical Engineering. He brings a unique combination of expertise in toxicology and engineering where he designs and constructs microsystems to study complex cell and tissue interactions to elucidate drug and toxin actions.



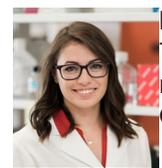
Dr. Matt Bernard is now the Director of the MSU Flow Cytometry Core Facility. In February of 2020, MSU merged both independent MSU Flow Cytometry Cores in East Lansing to create a fully integrated core facility. The mission of the integrated MSU Flow Cytometry Core Facility is to provide investigators with cell sorting services and access to cutting-edge analytical flow cytometry instrumentation, as well as training and experimental consultation.

New Grants

5-HT7 Receptor and Blood Pressure Regulation. Awarded to: Stephanie Watts, Gregory Fink (Co-Investigator). Sponsor: National Institutes of Health. \$ 1,700,740.00

Macrophage Phenotypic Modulators - A Novel Therapeutic Approach to Liver Fibrosis Treatment. Awarded to: Bryan Copple. Sponsor: National Institutes of Health. \$ 415,167.00

Our Newest PhD Graduates



Dr. Vanessa Benham (Jamie Bernard Lab)

Title: Investigating the mechanism of obesity-associated estrogen receptor-negative breast cancer to identify novel agents for chemoprevention

Committee: Dr. Jamie Bernard (Chair), Dr. Anne Dorrance, Dr. Kathy Gallo, Dr. Karen Liby, Dr. Stephanie Watts



Dr. Di Zhang (Karen Liby Lab)

Title: Applying synthetic chemistry and nanoparticle delivery to enhance drug efficacy and reduce toxicity for cancer prevention and treatment.

Committee: Dr. Karen Liby (Chair), Dr. Richard Neubig, Dr. Cheryl Rockwell, Dr. Eran Andrechek.

Blast from the past



Can you identify the Pharmacology & Toxicology Alumni in this photo?



Questions or comments? Something you'd like to share? Send us an email! We would love to hear from all of our alumni and friends. The more updates and news we get from our alumni, the more news and updates we will include in our communications!



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