Letter From The Chair

Dear faculty, staff, students, alumni, and friends of MSU Pharmacology and Toxicology,

2020 has been a year of many challenges and changes for our Department. When I started as Chair in 2012, we had all learned to deal with more uncertainty and the rapid adjustments needed to respond to the COVID-19 pandemic. Within days, virtually all teaching was moved online and wet-lab research was halted for 3 months. Equally challenging was the loss of social interactions that are so critical to graduate training and to science in general. The caring, adaptability, and creativity of our community in responding to COVID was tremendous. As many of you know, I have decided, after 7½ years leading an amazing group of faculty, staff, and students, to step down as Chair to focus on scholarship, mentoring, MSU Drug Discovery, and my family. MSU and our outstanding team have provided tremendous support to build our new programs. We recruited 27 new faculty (7 primary tenure-track, 9 joint tenure-track, 3 joint fixed-term, and 11 fixed-term). We worked hard to maintain traditional strengths (in vivo pharmacology and environmental toxicology) and added new areas (drug discovery, cancer, and computational pharmacology).

This has brought great energy and excitement to the Department. Our new back faculty (Drs. J. Bernard, Liby, Lauver, Lee, Tewari-Singh, Tykocki, and Johnson) are doing amazing things. The department has also expanded its reach across campus with the formation of the Center for Research on Ingredient Safety (CRIS) and my future program MSU Drug Discovery. Joint faculty hires have enriched our scholarship in computational sciences (Bhattacharya, Chen, and Prokop) and advanced technologies (Johnson and Park) to complement our strong primary focus areas. Collaborative programs reach beyond our department walls with the Pervascular Adipose Tissue program by Drs. Watts and the Plant-inspired Chemical Diversity program that I lead. Dr. Rockwell is also interim director of the new Applied Immunology Center for Education and Research established by the College of Osteopathic Medicine and Dr. Matt Bernard now leads MSU Flow Cytometry.

Our educational programs are also expanding. The new undergraduate Minor in Pharmacology and Toxicology initiated by Dr. Peter Cobbett and now directed by Dr. Stephanie Watts has grown tremendously in the last 4 years to -175 students. The Online MS in Pharmacology established by Dr. Jay Goodman, the Maddox remains strong and provides important national recognition and financial support. Our PharmTox PhD program is a flagship program through the efforts of Dr. Anne Dorrance and is recognized by PhD students as the place to be. The T32 training program (NIDEG/Dorrance PIs) further enhances the reach of graduate pharmacology education at MSU. I thank Dr. Karen Liby for taking over as new PhD program director. Also Dr. Colleen Hegg has taken on directorship of the Graduate Program in Comparative Medicine and Integrative Biology (CMIB) program in Veterinary Medicine.

In addition to celebrating the new faculty, I also want to recognize our retired (or soon to be retired) faculty. Drs. Jay Goodman, Peter Cobbett, and Bob Roth have all retired after outstanding service to the Department. Also, Drs. Patti Ganey, Bill Atchison, and Yukun Yuan will be retiring in 2021. Thanks for your amazing contributions.

It was also a pleasure to preside over the 50th anniversary celebration for MSU PharmTox in 2016. It has been great to connect with alumni at the anniversary and other events at EB and SoT. Building connections through the Alumni Steering Committee helps our students and faculty to learn about the great legacy of MSU Pharmacology and Toxicology. Please contact us when you have news or just to reconnect.

As I wrap up my tenure as chair of MSU Pharmacology and Toxicology, I want to thank our incredible team of Faculty, Staff, and Students. I am tremendously excited by the potential for scholarship by our faculty and students in the coming years. Also, I want to thank our amazing office staff who have supported me and our faculty and students with great dedication. Despite COVID-19, we remain a strong community. The creative “Drug-Drug Interactions” gatherings held weekly by Zoom to introduce new students - and the rest of our community - to each other in the last few years and for taking on the important job of keeping up our momentum.

Happy 2021 and Go Green!

Rick

The last nine months have taught my family that we can thrive without doing the same things we have always done. I am looking forward to a similar time of reflection within the department. As we come back to “normal” department life, we will have an opportunity to reassess and decide how to focus our energy and resources on the things that matter to us as a team. For now, we will certainly continue to work to keep our faculty, students, and staff engaged as members of the Pharmacology and Toxicology family while so many people are still working from home. To expand on this endeavor, we have a new initiative to improve connections between our current students and our alumni. My goal is to build a network where our students can obtain career advice and where our alumni can share information and job postings. More information will follow in the next few weeks, until then, I wish you all the best for 2021.

Stay safe and take care

Anne
**Department Updates**

### New Hires
- Brian Johnson, PhD. Assistant Professor
- Jack Kottwitz, DVM, PhD, CERTAQV. Assistant Professor
- Joseph Nichols, PhD. Specialist - Research (Drug Discovery)
- Daniel Vocelle, PhD. Research Assistant III (Flow Core)
- Eileen Rodriguez-Tapia, PhD. Assistant Professor
- Bardees Foda, PhD. Research Associate (Neubig Lab)

### Select Reappointments/Promotions
- Jamie Alan, PhD. Promoted to Associate Professor - Fixed Term.
- Matt Bernard, PhD. Promoted to Director of MSU Flow Cytometry Core Facility
- Anne Dorrance, PhD. Appointed as Interim Chair for Department of Pharmacology & Toxicology
- Kin Sing Stephen Lee, PhD. Reappointed as Assistant Professor
- Karen Liby, PhD. Appointed as PhD Program Director for Pharmacology & Toxicology
- Stephanie Watts, PhD. Appointed as Undergrad Education Program Director for Pharmacology & Toxicology

### Faculty Grants 2020
- **Mast Cells in Sulfur Mustard Exposure: Novel Targets for Modulation to Develop Therapies Against the Long-Term Health Effects in Gulf War Veterans**
  - Awarded to: Dr. Neera Tewari-Singh
  - Sponsor: Department of Defense - $357,584.00
- **5-HT7 Receptor and Blood Pressure Regulation**
  - Awarded to: Drs. Stephanie Watts & Greg Fink
  - Sponsor: National Heart, Lung, and Blood Institute - $1,700,740.00
- **Administrative Supplement: Mechanisms of Small Molecule Gene Transcriptional Regulators**
  - Awarded to: Dr. Richard Neubig
  - Sponsor: National Institute of General Medical Sciences - $80,000.00
- **Macrophage Phenotypic Modulators - A Novel Therapeutic Approach to Liver Fibrosis Treatment**
  - Awarded to: Dr. Bryan Copple
  - Sponsor: National Institute of Allergy and Infectious Diseases - $415,167.00
- **Mechanistic Role of Obesity in Benzo(a)pyrene Initiated Cancer**
  - Awarded to: Dr. Jamie Bernard
  - Sponsor: National Institute of Environmental Health Sciences - $1,537,350.00
- **Novel Coagulation-Dependent Mechanisms of Liver Regeneration to Detect and Prevent Liver Dysfunction After Partial Hepatectomy**
  - Awarded to: Dr. James Luyendyk
  - Sponsor: National Institute of Diabetes and Digestive and Kidney Diseases - $2,064,053.00
- **Integrative Transcriptional and Epigenomic Modeling of Xenobiotic-Activated Gene Regulatory Networks**
  - Awarded to: Dr. Sudin Bhattacharya
  - Sponsor: National Institute of Environmental Health Sciences - $2,355,648.00
- **Validation of Immune-Mediated Mechanism of MSU-42011**
  - Awarded to: Dr. Karen Liby
  - Sponsor: Michigan State University - $60,000.00
- **Pearl J Aldrich Endowment in Aging Related Research and Education**
  - Awarded to: Drs. Sing Lee & Jamie Alan
  - Sponsor: Michigan State University - $20,000.00
COVID-19

As COVID-19 spread throughout the world, Michigan State University started identifying ways it could help. The Department of Pharmacology & Toxicology stepped up immediately and offered its support. Assistant Professor Dr. Nathan Tykocki along with researchers in the College of Osteopathic Medicine, College of Engineering, College of Natural Science, College of Agriculture and Natural Resources, and the College of Arts and Letters put to use their expertise in 3D-Printing to help address critical shortages with medical face shields. This was in addition to numerous existing supplies already donated by departments all over campus. Dr. Tykocki collaborated with researchers all over the globe to learn about what was needed to 3D-print Safety Shields, and worked with various departments to make the final product here on MSU Campus. “In this crisis situation, all of these people are sitting here talking with me from their living rooms to their dining rooms, doing this together from different colleges. This really shows me that collaboration is not limited at all to research. It expands to every aspect of the university, and the willingness of the people to work together to help when it’s needed. This is a true example of Spartans Will. This is not just our tagline; at the moment, it is the true statement of what makes us MSU.”

MSU Collaborates to Understand & Target COVID-19 Host Cell Entry

MSU PharmTox Supporting COVID-19 Vaccine Program

Our Department was honored to help the COVID-19 Vaccine Program this winter by supplying it with a -80 freezer that helped store valuable vaccines and the proper temperature. Heather deFeijter-Rupp coordinated the transfer and Drs. Roth & Ganey supplied their -80 freezer to the vaccine program.

With global cases of COVID-19 surpassing four 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 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.

Tewari-Singh Lab Investigating the Immune Mechanism of Mustard Gas Toxicity

MSU Pharmacology & Toxicology Assistant Professor Dr. Neera Tewari-Singh recently began work on a Defense Department Tier 1 Discovery award focused on identifying a novel immune mechanism of mustard gas (sulfur mustard; SM) toxicity, which could also be applicable to other chemical exposures in Gulf War Illness (GWI). The grant, “Mast cells in sulfur mustard exposure: novel targets for modulation to develop therapies against the long-term health effects in Gulf War Veterans,” is funded through the Gulf War Illness Research Program in the Department of Defense Congressionally Directed Medical Research Programs.

It is reported that during the Gulf War (1990-1991) U.S. troops could have been exposed to a number of chemicals including the low levels of chemical warfare agents (CWAs) like SM. Studies in the U.S. and other locations have dependably established that approximately 25-32% of Gulf War veterans suffer from a disorder with variable symptoms including fatigue, headaches, cognitive dysfunction, musculoskeletal pain, and respiratory, gastrointestinal and dermatologic complaints. These symptoms of GWI relate closely to the long-term consequences observed with SM exposure. Mast cells are well known to contribute to allergic inflammatory diseases, but also have wide ranging effects on many physiological systems that are affected in GWI including pulmonary, dermal, gastrointestinal and nervous systems when activated (e.g. degranulation). Importantly, a role for mast cells has been suggested in the mechanism of vesicating chemical agents like SM-induced inflammatory response and tissue damage.

Tewari-Singh, under this project, will embark on understanding the role of mast cell-induced immune responses in vesicant inhalation and skin exposures using nitrogen mustard [NM: bis(2-chloroethyl) methylamine] as a surrogate for SM. Tewari-Singh and her team are conducting cell culture studies to elucidate mast cell-induced immune responses following mustard vesicating agent exposure. Further, in vivo studies in mast cell and wild-type mice are also planned, to confirm the role for mast cells in NM-induced skin and lung toxicity as well as inflammation.

For over a decade, Tewari-Singh has worked with the National Institutes of Health’s Countermeasures Against Chemical Threats (CounterACT) program, to understand the mechanisms related to the inflammation/injuries from exposure to chemical threats including vesicating agents. Her goal is to further use this information to identify targeted therapies.

“I am extremely excited about this project,” said Tewari-Singh, “because the proposed studies will have a strong potential to aid in understanding the mechanism of the inflammatory process and immune response following low exposures to alkylating warfare agent SM. The identification of applicable markers for therapeutic approaches will have a strong translational impact to potentially develop targeted treatments against chronic SM exposure. These treatments will be highly valuable in GWI, and for future veterans as well as vulnerable civilian populations, who are at risk to be exposed to similar chemical agents.”
Dr. Stephanie Watts: AHA Harriet Dustan Award & Outstanding Faculty Mentor Award

Dr. Stephanie Watts was awarded the Harriet Dustan Award from the American Heart Association for 2020. The Harriet Dustan Award recognizes female investigators who have made outstanding contributions in the field of hypertension and the American Heart Association for more than 50 years. During her career, she served as president of the American Heart Association, chaired its Ethics and Research Committees, and was the founding editor-in-chief of Hypertension. She was also the first woman on the Board of Governors of the American Board of Internal Medicine. From the AHA website: "Dr. Watts revels in the laboratory, having been active in a lab since she was 12. She graduated with a BS in Chemistry from the University of Illinois, and then earned a PhD in Pharmacology and Toxicology at Indiana University/Purdue University at Indianapolis. After a postdoctoral fellowship at The University of Michigan, she came to Michigan State University in 1995. This year marks 25 years at MSU, serving as a Full Professor since 2005." Read more at American Heart Association.

In addition, Dr. Watts was also awarded the Outstanding Faculty Mentor Award from the Graduate School at Michigan State University. From the Graduate School: "Dr. Watts is an exceptional scholar and teacher who exhibits all of the foundational values of mentoring when working with her students: listening, nurturing, empowering, and supporting her students, creating a culture of shared responsibility and respect in her lab while providing the individual attention needed by all students. The passion and heartfelt sentiments from current and former students in their nomination letter attested to the lasting impact of her efforts.” Read more at the Graduate School.

Dr. Susan Barman: 2020 Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award of the American Physiological Society. Dr. Barman is recognized for her outstanding contributions to physiological research and demonstrated dedication and commitment to excellence in training of young physiologists. Read more at the International Union of Physiological Sciences.

Dr. Cheryl Rockwell: 2020 Kenneth E. Moore Distinguished Alumnus Award. Michigan State University, Department of Pharmacology and Toxicology.

Dr. Nathan Tykocki: Early Promise of Research Excellence Award. Michigan State University, College of Osteopathic Medicine.

Dr. Anne Dorrance: My time as PhD Program Director

As I step back from being PhD program director, I have been reflecting on the last ten years. I don't think it is any secret that I have loved this job; the last few years have been full of challenges and amazing opportunities, and I am thankful for both. The advent of the Biomolecular Sciences Gateway in 2012 precipitated a major curricular change that helped bring more students to our PhD program. Finding willing mentors for this sudden influx of students has, at times, been a challenge. But is has also been a blessing as the Department was introduced to many new faculty in East Lansing and Grand Rapids. Having Pharm Tox students in Grand Rapids meant we learned how to include distant students when teaching, mentoring, and planning activities. I like to think that this experience helped facilitate the pivot to remote learning when COVID-19 struck. The expansion of the Integrative Pharmacological Sciences Training Program also brought us new opportunities that included developing a mechanism for students from outside of Pharmacology and Toxicology to earn dual major PhDs. We have now have students from Chemistry, Neuroscience and Food Science and Human Nutrition working on dual major degrees.

A lot of my time as program director has been spent thinking about mentoring and community building. Having been a solo PhD student in huge department, I understand too well the need for students to have a support network. Building this was nothing short of fun. We planned crazy events like speed data, we ate good food every Thanksgiving, and with the help of our Graduate Student Organization, we had happy hours and picnics. We also came together as a group for career development activities. These included fireside chats from some of our current faculty, career talks from alumni, and a slew of workshops on writing, mentoring, and giving presentations. Of course, none of this would have been possible without a huge amount of support from the faculty in Pharmacology and Toxicology and from Dr. Neubig. Without this support the program would not have been able to grow in the way it has. Forty-nine PhDs have graduated in the last ten years, and there are currently thirty students in our program and five new students will enter in April from the BMS gateway. I look forward to continuing my support of the PhD program as interim Chair and I am confident that Dr. Liby will be an outstanding director to lead this program into the next decade.

New PhD Program Director: Dr. Karen Liby

We are in good hands with Dr. Karen Liby in charge of our PhD Program. Dr. Liby joined Pharmacology & Toxicology at MSU in 2015 and is currently an Associate Professor with Tenure.

In 2017, Dr. Liby was presented with the Michigan State University College of Osteopathic Medicine Early Promise of Research Award which is given to a faculty member who has demonstrated early success in research and enhanced the research stature of the college.

Prior to becoming director of our PhD Program, Dr. Liby was Program Director for the Summer Undergraduate Research Fellows (SURF) program for 4 years (2016-2020). Additionally she has also served as a member of our Faculty Advisory committee, serving as Chair her last year of service in 2019.

Read more about Dr. Karen Liby and her current research here.
Anna Stoll: My Internship with Merck

Catching up with Anna Stoll

Can you Tell us a bit about what you are studying?

I am a 5th year grad student in Dr. Caryl Sortwell's lab studying microglial response to alpha synuclein aggregation and neurodegeneration in the alpha-synuclein preformed fibril model of synucleinopathy.

How did you hear about the internship with Merck?

"What are you planning on doing next?" This is a question I have been asked many times during grad school and have discussed with my PI a couple of times. Through these discussions we realized that I was leaning towards going into industry. However, I had very little industry experience. I had the incredible opportunity to go with IPSTP to tour Lycera and Eli Lilly but that was the extent of my experience. So, we knew that more experience and insight into industry was needed and I started to look into different opportunities. Last October Caryl received an email from a senior scientist in the Early Discovery Neuroscience group at Merck Inc. with information about a 6-month internship with them. She forwarded that email to me with the statement "If you want to do this, we can make it work" and two days later my application was submitted. A couple of weeks later I had a phone interview and then a month later I knew I was moving to Pennsylvania for 6-months (this was pre-COVID).

Can you tell us about your experience with Merck?

When I first found out about the Co-Op, I was nervous about applying and had no idea what to expect or what it would be like to leave my academic bubble. And then the phone call came that due to COVID the entire internship would be virtual... but I will say this: the 6-months of my Co-Op were amazing, and I am so thankful for the opportunity. My mentor at Merck and the entire neuroscience group worked endlessly to ensure that I and the other Co-Ops got to learn what it is like to work at Merck. Being a part of the drug development program meetings gave me insight into the number of scientists who do those processes each day. This gave a great insight into what it is like day to day at Merck. Being a part of the drug development program meetings gave me insight into the number of people and the wide range of expertise that goes into the development of a new drug. From chemists to safety pharmacologist, these scientists would get together to discuss the newest results with the molecules they had developed. I also had the amazing opportunity to collaborate across the globe with the Merck IT team in Prague on some new technologies that they are creating to make the lives of bench scientists easier. Getting to see a different side to the science and seeing how much goes into the computer programs that we utilize each day gave me a new appreciation for technology and its uses. One-on-one meetings with Merck employees from all different parts of the company were another invaluable experience; from neuroscience to vaccines, manufacturing, industry-academia liaisons, just to name a few. With the Co-Op being virtual, the networking opportunities were significantly greater since I was meeting each person virtually. Otherwise, who knows if I would have been able to meet people who work for Merck in Prague and China!

How will your internship help you along your career path?

This internship has given me the deeper look into industry that I was missing, and this has helped to strengthen my decision to apply after grad school. Furthermore, this internship has allowed for me to grow my networks and connections and to interact with, hopefully, future colleagues.

Final advice for others thinking about an internship?

The worst-case scenario is that you do an internship and learn what you do not want to do with your future, which is just as important as knowing what you do want to do. Either scenario will help you to answer the question “What are you planning on doing next?”. My overall advice to anyone thinking about an internship- go for it! I know it can be scary and stressful to think about walking away from your graduate lab for 3-6 months, but I learned so much and have zero regrets.

Select Alumni Updates

Dr. Sandra Hewett (1992 PharmTox, Atchison) Recipient of Landis Award for Outstanding Mentorship 2020. This is an annual award given by the National Institute of Neurological Disorders and Stroke (NINDS). This award recognizes researchers efforts in advancing careers of students and postdoctoral fellows in their lab.

Dr. Nancy L. Kanagy (1992 PharmTox, Fink) Started new position as Chair of Cell Biology & Physiology Department at the University of New Mexico School of Medicine. Additionally has been working with a small start-up company on a Phase IIa SBIR project to develop a device that uses transdermal hydrogen sulfide levels to evaluate microvascular function in healthy and diabetic subjects.

Dr. Joe Patterson (2016 Genetics, Lookingland/Goudreau) worked with Brian Jespersen from our Masters Program to help launch MSU's Spartan Spit (Covid-19 Early Community Detection) Program that's currently under Dr. Jack Lipton and the College of Human Medicine. They were able to start a lab in under 2 months that is capable of analyzing 10k spit samples per week.

Dr. Sophia Kaska (2017 PharmTox, Mazei-Robison) started new position as Manager of Science Initiatives and Outreach at Research!America, a non-profit organization.

Have updates you would like to share? New Job? New Contact Information? Interested in mentoring? Let us know by clicking here and completing the form.
## Current PhD Students

<table>
<thead>
<tr>
<th>Name</th>
<th>Mentor 1</th>
<th>Mentor 2</th>
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<tbody>
<tr>
<td>Rachel Bauer</td>
<td>Mentor: Dr. Courtney Carignan</td>
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<tr>
<td>Maja Blake</td>
<td>Mentor: Dr. Andrea Amalfitano</td>
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<tr>
<td>Allison Boss</td>
<td>Mentor: Dr. Cheryl Rockwell</td>
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<tr>
<td>Sierra Boyd</td>
<td>Mentor: Dr. Alison Bernstein</td>
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<tr>
<td>Laura Chambers</td>
<td>Mentor: Dr. Anne Dorrance</td>
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<tr>
<td>Devon Dattmore</td>
<td>Mentor: Dr. Sing Lee</td>
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<tr>
<td>Nick Ether</td>
<td>Mentor: Dr. Adam Lauver</td>
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<tr>
<td>Olivia Favor</td>
<td>Mentors: Dr. James Pestka &amp; Dr. Sing Lee</td>
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<tr>
<td>David Ferland</td>
<td>Mentor: Dr. Stephanie Watts</td>
<td>Currently working as a Systems Engineer with L3 Harris in Rochester, NY</td>
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<tr>
<td>Jeremy Gingrich</td>
<td>Mentor: Dr. Almudena Veiga-Lopez</td>
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<tr>
<td>Kevin Baker</td>
<td>Mentor: Dr. James Luyendyk</td>
<td>Currently working as a Postdoctoral Researcher at Dana-Farber Cancer Institute</td>
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<tr>
<td>Yajing Ji</td>
<td>Mentor: Dr. Richard Neubig</td>
<td>Currently in MSU COM Medical School</td>
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## 2020 Graduates

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<tr>
<th>Name</th>
<th>Mentor 1</th>
<th>Mentor 2</th>
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<tbody>
<tr>
<td>Vanessa Benham</td>
<td>Mentor: Dr. Jamie Bernard</td>
<td>Currently working as Operations Manager/CFO at Indie Mane Salon in Indianapolis</td>
</tr>
<tr>
<td>Ramya Kalyana Kumar</td>
<td>Mentor: Dr. Stephanie Watts</td>
<td>Currently working for Safety Pharmacology Unit at Charles River in Ohio</td>
</tr>
<tr>
<td>David Ferland</td>
<td>Mentor: Dr. Stephanie Watts</td>
<td>Currently working as a Systems Engineer with L3 Harris in Rochester, NY</td>
</tr>
<tr>
<td>Di Zhang</td>
<td>Mentor: Dr. Karen Liby</td>
<td>Currently a Postdoctoral Researcher at Dana-Farber Cancer Institute</td>
</tr>
<tr>
<td>Robert Freeborn</td>
<td>Mentor: Dr. Cheryl Rockwell</td>
<td>Postdoctoral Researcher at Stanford University</td>
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## 2020 Comprehensive Exam Completions

- Laura Chambers: Mentor: Dr. Anne Dorrance
- Nick Ether: Mentor: Dr. Adam Lauver
- Olivia Favor: Mentors: Dr. James Pestka & Dr. Sing Lee
- Amanda Jurgelewicz: Mentor: Dr. John Lapres
- Luca Kaiser: Mentor: Dr. Cheryl Rockwell
- Brad Ryvva: Mentor: Dr. Rita Strakovsky
- Erin Zaluzec: Mentor: Dr. Lorenzo Sempere

## PhD Select Awards

- Luca Kaiser: 1st prize at Michigan Osteopathic Associations Scientific Meeting Poster Competition
- Jenna Strickland: John A Penner Fellowship. Best Presentation at Michigan Society of Toxicology
- Allison Boss: John A Penner Fellowship. 1st prize at Michigan Society of Toxicology poster session
- Malique Jones: Teaching Experiences for Biosciences Educators (TEBioED) Fellowship Award
- Amanda Kusnezki: NIH F31 fellowship for project titled “The Vascular Effects Of Clopidogrel Metabolites”
Strategic Impact Endowment Fund

We have met our primary goal for the funding of PharmTox Strategic Impact Endowment Fund! Thanks to all of our Alumni, Faculty, Staff, and Students for supporting our Department.

- As it currently stands, we are at $53,680.28
- We received $7,090.00 in donations during the month of December
- We received $14,100 in the month of December!
- This endowment will spin off an annual amount that we can use towards our key goals of the program (student travel, awards, and other key department priorities)
- Any further donations would be welcome and will further enhance our ability to use this to support PharmTox. Help us by clicking here