ECP Gazette

Spring 2022

COLLEGE OF PHARMACY

UNIVERSITY OF MINNESOTA

Driven to Discover℠

ECP Gazette

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DEAR FRIENDS,

This spring marks a fresh start to envisioning our teaching, research, and service roles under more relaxed COVID-19 guidance. We hope that a thoughtful, cautious, and intentional return to greater in-person engagement with students, faculty, staff, and external partners will have a positive impact on both our translational research and educational mission. This newsletter contains some exciting examples of developments and accomplishments, including an alumni highlight, several changes in our departmental faculty and staff, and an exciting collaboration between the Center for Orphan Drug Research (CODR) and the Department of Theatre Arts & Dance.

Notable among these accomplishments are the formation and foundational activities of ECP's Diversity, Equity and Inclusion (DEI) task force, which will ratify its charter this spring and plans to host an event in the fall. We hope to match or exceed the outstanding engagement and discussion generated by Dr. Ahmar Zaidi's virtual presentation entitled, "The Sickle Caste: from a single mutation to victimization and the road back," last November.

ECP has had continued success in advancing its research agenda, and we have been mindful in the consideration of its evolution. Early last December, we completed a provost-initiated self-study of our department. We hope to use the feedback from external and internal reviewers to help guide modification of our departmental strategic plan and enhance our contributions to the College of Pharmacy's preparations for curricular change and an upcoming (2023) accreditation visit.

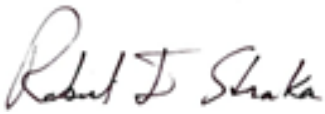
Finally, a fully functioning department requires an engaged, competent and efficient administrative team. We are very fortunate to benefit from the sustained contributions of all of our ECP staff, including Becky Palapala, Katherine Goffin, Susan Williford and Lori Endsley. In this newsletter, you will read about our newest member and administrative manager, Zack McGough, who joined our team in January 2022. Zack is a quick study who is highly organized; we have already enjoyed the benefit of his leadership in our department and welcome him on the team.

The retirement of ECP senior faculty member Esam El-Fakahany and other personnel changes are highlighted in this newsletter, and we hope you will join us in congratulating and celebrating these individuals' contributions to our department's success.

As you review the contents of this newsletter, be assured that exciting news will continue to come from ECP as we continue our work with all of you as alumni, donors, and friends of the department and college.

Energized by the approaching spring weather, I bid you all a safe, healthy, and productive end to the spring semester and beyond.

Sincerely,



Robert Straka, PharmD
Professor and Department Head

COMINGS & GOINGS

Lindsay Bork Nichols

Lindsay Bork Nichols, MBA, has left her position with ECP for a new opportunity as Administrative Director for the new Center for Learning Health System Sciences. Lindsay was an outstanding addition to ECP for almost two years as the department's Administrative Manager. Joining the department at a time of great change, she made the ECP (virtual) workplace manageable, efficient, collegial, and enjoyable. Lindsay's organization, personnel support, and vision made a positive impact enhancing the ECP department's capacity to advance its and the College's mission. We wish Lindsay all the best in her new endeavors.

Esam El-Fakahany

Esam El-Fakahany, PhD, officially retired on January 19, 2022. Dr. Fakahany began his career in Egypt where he both studied and taught at the University of Alexandria. In 1977, he began his doctoral studies at the Mayo Graduate School of Medicine in the Department of Pharmacology, after which he joined the faculty of the University of Maryland School of Pharmacy.

Our colleague Esam has been an example of kindness, respect, and mentoring since he joined the University of Minnesota's Medical school in 1991. In 2011, he brought those sterling qualities to the UMN College of Pharmacy as a professor in the department of Experimental and Clinical Pharmacology, where he has also contributed by serving in various administrative roles, (including Associate Dean of Research, Faculty Affairs, and Graduate studies), serving on numerous committees, and supporting faculty efforts to pursue extramural and intramural research grant support. Perhaps his greatest contribution has been as a mentor to both faculty and students. It is known among the graduate students that Dr. El-Fakahany always has time for them. This is consistent with his receipt of multiple awards for his teaching.

Esam's scientific focus as a neuroscience researcher included a focus on studies of adrenergic and muscarinic receptor pharmacology for which he has received numerous funded awards, and authored over 180 peer-reviewed papers and numerous book chapters, including his in-progress book on Mentoring.

Finally, his love of food and cooking will not be forgotten.

Zach McGough

After a robust search and evaluation of a large number of candidates to fill the position of Administrative Manager in the Department of Experimental and Clinical Pharmacology (ECP) that was vacated by Lindsay Bork Nichols, Zack McGough was offered and accepted the position.

Zack comes to us from a position as Program Director in the College

of Continuing and Professional Studies (UMN), where he has been since October 2014. He has a B.A. in Communication Studies (Bethel University) and Master of Education (M.Ed.) in Human Resource Development (University of Minnesota).

We had an outstanding pool of candidates, and we are confident that Zack will have a smooth transition as he brings his strategic planning, process improvement, and management skills to the operations of ECP.

Zack officially started January 3, 2022 and will rapidly transition into his role in the coming months.

Bill Oetting

William Oetting, PhD, officially retired on December 30, 2021. Dr. Oetting began his career at the Universities of Kansas and Nebraska where he both studied and conducted research. He joined the University of Minnesota in 1986 as a researcher and instructor in genetics and as the Director of the General Clinical Research Center, Molecular Genetics Core in the Department of Medicine. In 2006 Bill joined the Department of Experimental and Clinical Pharmacology as a professor while continuing his association with the Department of Genetics, Cell Biology and Development. His expertise as a geneticist has been an invaluable part of his contribution to the College of Pharmacy, where he has also contributed as a researcher, teacher, committee member, and student mentor.

Bill is probably best known for his collaborative and positive nature which has been particularly complimentary to numerous faculty within and beyond ECP collaborations that have helped advance our department's thrust in pharmacogenomics.

- Bill's scientific expertise has been recognized through his key role in a numerous funded research awards in the areas of genomics of kidney transplantation and outcomes, immunosuppressants and the like.
- Bill's scientific contributions include over 120 peer-reviewed publications, 225 abstracts as well as invited speaker credits at many talks and seminars. Finally, Bill's most pleasant demeanor and unassuming wit will be missed as he transitions into the warmer southern climate of Texas.

ECP EVENTS

CoP Media and Book Club Presentation: Doctor Ahmar U. Zaidi

Ahmar U. Zaidi, MD, Medical Director, Clinical Development, Sickle Cell Disease Program at Agios Pharmaceuticals, presented "The Sickle Caste: From a Single Mutation to Victimization and the Road Back" on November 4, 2021. More than 70 viewers attended the webinar and breakout sessions. Dr. Zaidi's science-based, human-centered and eloquent presentation generated heartfelt, thoughtful discussions in the post-presentation discussion and in the breakouts. The recording is available for viewing at the College of Pharmacy website.

Rare Disease Day

200 people virtually attended the tenth annual Rare Disease Day at the University of Minnesota on Friday, 2/25/2022. This event was co-sponsored by the Center for Orphan Drug Research (CODR) and the Stem Cell Institute. The theme of this year's event was transition of care. The program, "Successes & Challenges in Transition of Care for Rare Disorders," featured three keynote speakers and a panel discussion. We were honored to have University of Minnesota President, Joan TA Gabel, provide recorded remarks for the program as well.

Even though the event was hosted virtually again, we still had great community engagement with 21 local/regional patient advocacy groups in attendance and 24 research posters presented. Thank you to everyone who attended and to our event sponsors who made it possible!

PGx 2022 slated for fall, 2022!

The 4th University of Minnesota Biennial Pharmacogenomics Conference, "Pharmacogenomics and the Path to Higher Value Healthcare" will take place September 21-23, 2022 in a live virtual format.

The 3-day conference will feature a clinical case workshop and two days of themed morning and afternoon sessions, as well as virtual vendor booths. Optional PGx testing by OneOme (Minneapolis, MN) will be available to conference participants at no charge for educational purposes. The first 200 conference participants to visit the OneOme booth will receive information and the link to receive a collection kit. Participants must have a United States mailing address and attend the conference between September 21-23, 2022 to receive the link for no-cost educational testing.

For more information, and to register, please visit: https://pgxconference.umn.edu/

ALUMNI SPOTLIGHT

GHADA AHMED
GRAD YEAR: 2012

What is your current position title, name of organization? Briefly describe your professional path to this point.

I am currently Director, Clinical Pharmacology at UCB Pharma in the United Kingdom. I am a pharmacist by training; I got my B. Pharm from Helwan University, Cairo in 2004 and my PhD in Experimental and Clinical Pharmacology from the University of Minnesota in 2012. Since graduating, I have worked in various pharma companies across countries (US and UK) and therapeutic areas (infectious diseases, neuroscience, immunology and oncology).

What is your primary role in your current position?

I lead a cross functional team with expertise in the areas of clinical pharmacology, pharmacometrics, toxicology, bioanalysis, and preclinical drug development. We work on projects in immunology and start with drugs as early as discovery all the way to clinical stages and approval. Our team is involved with developing the right preclinical package and dose projections to enable IND applications and first in human studies for new chemical and biologic entities. Throughout clinical development of new drugs, we utilize modeling and simulation to guide study designs and dose settings for phase 1 – 3 trials. We also use tools like model-based meta-analysis to understand where we differentiate from competitors and inform the right investment decisions as we enter phase 3 and 3b trials.

Have you had any major field or focus changes since beginning your career? How have your interests evolved?

Yes, my interest has broadened since graduation, although I still have a strong foot in clinical pharmacology! My ECP studies were focused on the areas of clinical pharmacology and pharmacometrics, and it was great to spend the time at school to get in-depth training there. I imagined that I would have the same track in the pharma industry; however, as I evolved in my role, I developed a broader interest in drug development—the regulatory and the business aspects of it—so I took the chance while supporting drug development projects for international markets to spend time with our regulatory colleagues in the EU, Japan, and China to understand medicine regulations in these regions and where they overlap and diverge. I've also had some wonderful opportunities to shadow senior company leaders to meetings where in-licensing and new business ventures were debated. These were precious experiences to see the interplay between science and business, how each side enriched the other and shaped the company strategy.

Since graduating from ECP's grad program, what would you say are your most significant professional accomplishments? What particular achievement are you most proud of?

I'm proud of our teamwork in the areas of oncology and immunology for two reasons: in oncology, we

were able to use the pharmacology and modeling knowledge to set two key programs at the right dose for phase 3. This was a significant shift from how they were dosed in early trials with results confirming better benefit-risk for the patients. In immunology, our team did extensive modeling of published competitor data, which informed the business decisions to invest in areas of the highest chance of success and led to the conduct of successful phase 3/3b superiority trials. We're seeing the impact of that in bringing in commercial value and unlocking the full potential of our brands. Finally, I'm fortunate to be part of the team currently driving Bimzelx® to approvals in key markets and immunology indications.

Reflecting back on your experiences as an ECP Graduate Student: What are your fondest memories from that time?

My experience in the ECP graduate program was one of the best in my life. It is hard to say what my fondest memories are because it was all amazing. Whenever I think of my time in ECP, I remember a time where I had lots of fun, positive challenges and lots of learning. The best gift I received from ECP was the robust academic training and the wonderful friends and connections I made.

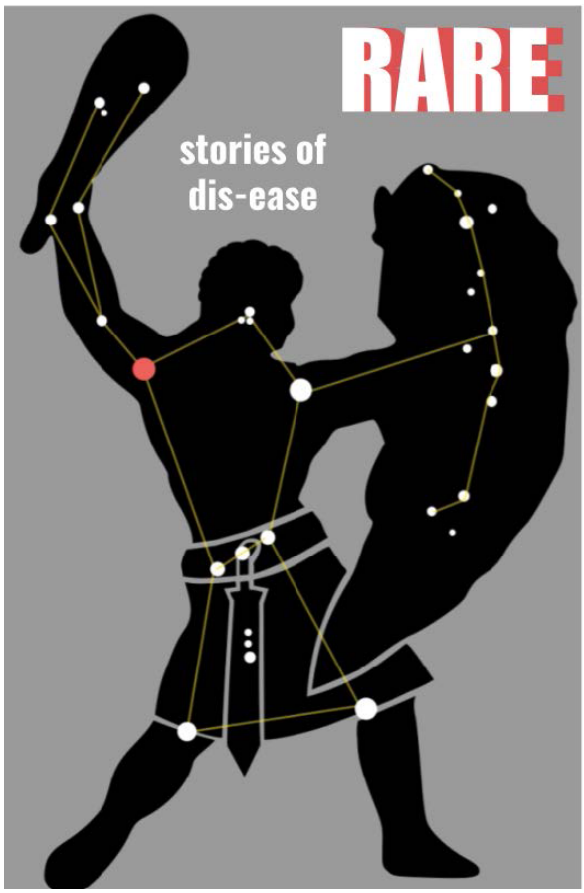
What advice can you give to current and/or prospective students in ECP?

Learn as much as you can, make noise and ask questions, and have fun on the ride!

INCREASING AWARENESS OF RARE DISEASES AMONG MINNESOTANS THROUGH THEATER: A COLLABORATION OF ART AND SCIENCE

The University's Center for Orphan Drug Research (CODR) and the Theater Arts and Dance Department—in collaboration with community members diagnosed with rare diseases—are producing a play that examines the challenges faced by those living with rare disorders.

The play is based on Sophocles' *Philoctetes*, in which the bow of Heracles holds the power to at once slay enemies and sustain the survival of an abandoned man. In the case of rare disease, this vital "weapon" is story. Woven together with strands of myth, folklore, rarely told tales of disease, and the resilience of hope, the play's mission is to generate compassion and cure.



The inspiration for the project came from a pharmacy faculty member with an interest in linking the health sciences to the arts, who read a story in the *New York Times* about a family dealing with the many issues related to their child with a rare disease. This led to discussions with Luverne Seifert, Head of BA Theater Performance in the CLA Department of Theater Arts & Dance, which culminated in an agreement for the College of Pharmacy Center for Orphan Drug Research and the Department of Theater Arts and Dance to create and produce a play focused on rare diseases.

The play was developed during the spring semester in a University Creative Collaboration course led by Professor Seifert and Professor Sonja Kuftinec, who is also in the Department of Theater Arts and Dance. The class included presentations by medical experts, as well as people who have rare diseases and their family members. The presentations provided the students, the playwright, and director with an understanding of all the issues surrounding those dealing with this topic.

The creative team leaders on the project are experienced professionals. Kevin Kling, 2009 recipient of the A. P. Anderson Award for Outstanding Contributions to Literature and the Arts in Minnesota and frequent commentator on NPR's All Things Considered, has agreed to write the script.

Input into the script will be provided by members from the Center for Orphan Drug Research, the medical community, and patients and families dealing with rare diseases. Professor Seifert will direct the play through the Sod House Theater Company, which is a local theater that specializes in creating professional theater experiences in close collaboration with Minnesota communities in order to illuminate timely and relevant issues and create an empowering space for public dialogue and reflection.

Over 7,000 diseases are considered rare, affecting one in ten Americans and their families who face few available effective treatments. The rare disease theater project aims to help a state-wide audience gain greater awareness and deeper understanding of the medical, economic, and social challenges facing people with rare diseases.

The play is slated for opening in fall, 2022 at venues on and off campus.

Performances will take place across the state of Minnesota. Tentative locations for the performances include Minneapolis/St. Paul, Winona, Duluth, Rochester, Crookston, and the Moorhead area.

FACULTY NEWS

Angela Birnhaum

Charul Avachat

Jeffery R. Bishop

Scott Chapman

Elizabeth Hirsch

Stephanie Huang

Reena Kartha

Angela Birnbaum received a $35k grant from Seed Grants for Interdisciplinary Research on Aging in Women through the Building Interdisciplinary Research Careers in Women's Health (BIRCWH)/Women's Health Research program. The grant is titled, "Characterization of the use and extent of concentration fluctuation of lamotrigine in postmenopausal women with epilepsy". Sima Patel is Co-PI, and **Charul Avachat** is the ECP graduate student researcher on the grant. Dr. Birnbaum's paper, "Antiseizure Medication Concentrations During Pregnancy," published in JAMA Neurology 02/14/2022 has been featured in a UMN news brief, and news releases from U of MN, U of Pittsburgh, and the National Institutes of Health.

Jeffrey R. Bishop, Pharm.D., M.S., FCCP, BCPP, was selected by the Board of Trustees to serve as the new ACCP Foundation chair. He was elected to the board in 2020 for a 3-year term and assumed the chair position on October 17, 2021.

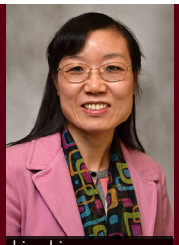
Scott Chapman is Co-I with the UMN site team on NIH National COVID Cohort Collaborative (N3C) RECOVER Long COVID Study, a multi-institutional study to evaluate long COVID (PASC) using N3C harmonized data. Dr. Chapman was also appointed co-Lead for the National COVID Cohort Collaborative (N3C) Cardiovascular Diseases Domain Team (Nov. 2021). Dr. Chapman co-presented with co-leads George Sokos, DO and Brijesh Patel, DO on the N3C Community Forum Presentation: Cardiovascular Diseases Domain Team Update. This is a weekly session open to all N3C researchers and leadership.

Elizabeth Hirsch was appointed to the editorial board of the journal, Antimicrobial Agents and Chemotherapy (AAC), for a 3-year term beginning Jan 1, 2022.

Stephanie Huang is invited to be an expert speaker at the International Research Conference in Health Sciences 2022 on March 31. Host: University of Sri Jayewardenepura, Sri Lanka.

Reena Kartha was honored by Engage Health as a Rare Disease Difference Maker for her positive impact in the rare disease community. The person who nominated her noted, "Dr. Kartha has created an undergraduate course which is inspiring future med students, researchers, and medically-interested individuals to explore the impacts of rare disease and how underserved these communities are underserved within healthcare, along with ways that we can work to improve their healthcare services." **Dr. Kartha** also received an educational grant from Sanofi-Genzyme for 3rd year Translational Pharmacology Research Fellowship for Lysosomal Storage Diseases. This is a postdoctoral fellowship position for PharmD/MD/PhD holders. Additionally, **Dr. Kartha** has been appointed to Uplifting Athletes Scientific Advisory Council. Uplifting Athletes is a nonprofit

FACULTY NEWS


Ling Li

Melanie Nichol

Beshay Zordoky

organization whose mission is to inspire the Rare Disease Community with hope through the power of sport. The focus of the Uplifting Athletes Scientific Advisory Council is to fund and support the next generation of rare disease researchers through our Rare Disease Research program and the Young Investigator Draft initiative. Finally, Dr. Kartha received a CoP 2020 Above and Beyond Award

Ling Li was invited by the UMN Institute for Engineering in Medicine (IEM) to speak at the 2021 Inspire Conference for high school students on November 18, 2021 at McNamara Alumni Center. The title of her talk was "Understanding and Defeating Alzheimer's Disease".

Melanie Nicol, a K to R CTSI Scholar, received a Best Poster Travel Award at the CTSI Poster Show on October 4, 2021

Beshay Zordoky was invited to Elsevier to submit a review article for publication in the Special Issue: 2022 BBA Rising Stars in Biochemistry and Biophysics. The aim of this biennial initiative is to recognize the accomplishments and promise of researchers in the early stages of their independent careers and draw international attention to the work they are doing. Title: "Cardiovascular ramifications of therapy-induced endothelial cell senescence in cancer survivors. Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease. Volume 1868, Issue 4, 1 April 2022, 166352. Dr. Zordoky also received a College of Pharmacy 2020 Above and Beyond Award for "performance in 2020 was truly exceptional, going above what is expected and beyond what many considered possible."

STUDENT NEWS

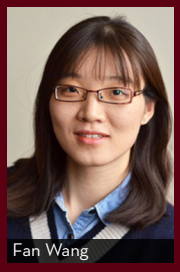
Ibrahim Abdelgawad

Jessica Barry

Mu'taz Jaber

Siddhee Sahasrabudhe

Boguang Sun


Fan Wang

Ibrahim Abdelgawad, ECP graduate student in the lab of **Beshay Zordoky**, was awarded the Dr. Burhan Ghanayem Outstanding Graduate Research Award by the Arab Toxicologists Association. The award supports Ibrahim's attendance at the Society of Toxicology Meeting in San Diego, March 2022. Ibrahim also got married this spring to his wife, Norhan!

Jessica Barry, ECP PhD student in the lab of **Angela Birnbaum** married husband Andy on August 20, 2021.

Welcome to **Sinan**, son of ECP graduate student **Mu'taz Jaber** and his wife, Batool. Sinan was born Oct 13, 2021 and was 7.2 lb. and 20 in. He shares a birthday with his father. Congratulations to the new family!

Daniel Mansour, a CTSI PReP student in the Zordoky lab, won a Best Poster Travel Award at the CTSI Virtual Poster Session on October 4, 2021.

Patricia Moua, a PD2 student in the ECP research emphasis track under the mentorship of **Dr. Ling Li**, has been awarded a Melendy Summer Research Scholarship for the summer of 2022 to conduct Alzheimer's research in the Li lab.

Siddhee Sahasrabudhe received a Career Development award from Council of Graduate Students (COGS). The award money covers Siddhee's attendance at TACA Pharmacometrics Statistics Workshop. She is also the 2022 Sternfels Prize top applicant. The Sternfel Prize is to incentivize pharmacologists, pharmacists, medical practitioners, academics, and students to think about ways to reduce the real world risks patients face from polypharmacy, interacting co-morbidities, and genetic variations. As a top applicant, Siddhee will receive an Apple device.

Jenna Salay, former SCoPE scholar and undergraduate student in the Hirsch lab, was awarded a spring UROP grant for the project entitled "Comparison of Escherichia coli Parent Isolates to Inner Colony (IC) Isolates in Fosfomycin Disk Diffusion Testing".

ECP PhD student **Boguang Sun** was selected as a recipient of an American College of Clinical Pharmacy (ACCP) Annual Meeting Resident/Fellow Award.

Fan Wang, 4th year ECP graduate student, received a Student Travel Award to attend the 2022 ASCPT Annual Meeting and present her poster, "The Feasibility of Using Population (POP) Pharmacokinetics (PK) Based Virtual Control Group in Pharmacokinetic Studies in Subjects with Organ (Renal/Hepatic) Impairment (OI)," summarizing work she completed during her Gilead internship in summer 2021. Ms. Wang also received a New Investigator Scholarship to attend CROI 2022 (Conference on Retroviruses and Opportunistic Infections) where she will present her abstract "Anti-Infectives' Penetration in Upper and Lower Female Genital Tissues."

Mingyi Zhang, a PharmD student working in Dr. R. Stephanie Huang's lab, has been awarded the Melendy & Peter's Summer Research Scholarship.

Weijie Zhang, a Bioinformatics and Computational Biology PhD student in the lab of **Stephanie Huang**, lab has been awarded a UMN Interdisciplinary Doctoral Fellowship for the 2022-23 academic year.

ECP FELLOWSHIP RECIPIENTS

Morgan Bixby, Coin Fellowship

Advisor: Elizabeth Hirsch

Siddhee Sahasrabudhe, Cloyd Fellowship

Advisors: Reena Kartha, James Cloyd

Boguang Sun, Straka Fellowship

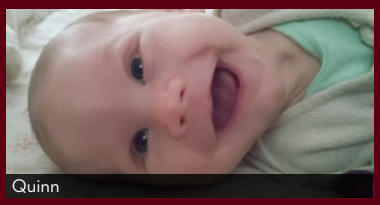
Advisors: Robert Straka

Lusi Zhang, ECP Fellowship

Advisors: Jeffery Bishop

AROUND THE DEPARTMENT

Kevin Agostinucci


Quinn

Lori Endsley

Dr. Kevin Agostinucci, postdoc in the lab of **Beshay Zordoky**, received a General Travel Award in the Postdoctoral Scientist category to attend the ASPET Annual Meeting at Experimental Biology (EB) 2022 in Philadelphia, PA.

Lindsey Collins and her husband Ryan welcomed a son, Quinn Harrison, on 12/24/2021

Lori Endsley, Administrative Associate for the Center for Orphan Drug Research (CODR) and ECP, received a College of Pharmacy 2020 Meritorious Service Award. Ms. Endsley was also promoted to Administrative Associate 3 for her continued contributions to the Center for Orphan Drug Research and ECP, above and beyond the scope of her former classification.

Marianne Grant, researcher in the lab of **Beshay Zordoky**, received a College of Pharmacy 2020 Above and Beyond Award for "performance in 2020 was truly exceptional, going above what is expected and beyond what many considered possible."

ECP alumnus **Abhishek Sathe**, PhD, has been promoted at Gilead Sciences to a Senior Clinical Pharmacologist I.