Dear Friends and Alumni of the College of Pharmacy

The theme of this Annual Report is “Moving Forward” and that indeed is what we are doing on many fronts at the College of Pharmacy. I hope you enjoy this annual report and are as excited as I am about our many positive initiatives.

First, we are moving ahead on implementing the new curriculum. We are nearing the end of the second full year of implementing a curriculum with much more integration of courses and much more integration of faculty across the two campuses.

Many faculty have embraced active learning, using our technology equipped classrooms, and are pursuing the “flipped classroom” in which students prepare for class, and then do cases and solve problems in class to reinforce what they have learned.

Of course, not everything works perfectly the first time through, but the creativity and hard work of students and faculty alike are evident throughout the college.

We are deeply into assessment and continuous quality improvement as we go. While the outcome of all the changes will be measured in our graduates’ capabilities, we are seeing preliminary evidence that the new approach is yielding better students along the way. We now are knee-deep in detailed planning of the new Advanced Pharmacy Practice Experiences which will start one year from now.

Secondly, we are moving forward on research. Faculty are getting new grants to further our knowledge in every discipline, and successful initiatives are emerging in “precision medicine,” i.e., pharmacogenomics, and cancer therapeutics, Alzheimer’s Disease therapeutics and many other areas. Thanks to the generosity of Lyle and Sharon Bighley, who donated $1 million with the requirement for a match (which we reached thanks to the generosity of many other people), the Institute for Therapeutics Discovery and Development is on sounder financial ground with some much-needed new equipment and other infrastructure, as well as some project funding. They have many potential new drugs in the pipeline and we are moving forward on those projects.

We are also moving forward on our health equity and community engagement research. With the Research for Indigenous Community Health Center in Duluth and new faculty Oscar Garza and Olihe Okoro, we have a very talented group of faculty addressing the issues of health equity. It will be exciting to see what they are able to accomplish.

Finally, we are moving forward on our practice initiatives. The medication management network has reached 300 pharmacists in Minnesota who provide medication therapy management for patients insured by our client organizations. Some of the payment is pay-for-performance and some is fee-for-service, but whichever way the pharmacists are paid, they are being paid for providing direct patient care, proving that this is a sustainable practice for pharmacy. We are also actively engaged in a variety of new practice settings that are moving the profession forward. I will report on those during the year as they are fully implemented.

This past year has moved the excellence of the college forward in many ways other than those mentioned above. The energy in the college is palpable and everyone is working very hard. I am proud of what we are accomplishing and hope that you are, too. Please come visit us whenever it is convenient for you. We would love to have you see for yourselves all the great things that are happening.

Best wishes,

Marilyn K. Speedie, Ph.D.
Dean
The College of Pharmacy has been consistently ranked among the top three pharmacy schools in the nation. In 2003, the college opened its Duluth campus as part of its mission to meet the needs of all Minnesotans, especially those in rural areas. Since then, collaboration and cross-campus teamwork have accelerated—for the benefit of faculty, students and the constituents the college serves.

As part of the new curriculum launched in fall 2013, first year students on both campuses spend the first three weeks of their first semester in the course “Becoming a Pharmacist” to introduce them to the profession—and provide them with the knowledge, skills and information necessary for success.

Professor Paul Ranelli in Duluth and Associate Professor Julie Johnson in the Twin Cities serve as co-directors and co-instructors for the course, which was developed by faculty across the college.

“The course is an intensive, short-term introduction that offers our new students a semester’s worth of information in three weeks,” said Ranelli. “In the course, we combine an orientation to the college, an introduction to the profession of pharmacy, student governance, faculty governance, and an overview of the nuts and bolts information they will need to be successful.”

Johnson agrees. “We create the framework and bring in the experts to make this successful,” she explained. “We learned a great deal in our first year in the fall of 2013. Following that, we made adjustments and have worked hard to fine-tune the course since then.”

The course format varies from day to day and includes lectures, small group work, readings, and other assignments and assessments. Students also participate in a one-day retreat at the Audubon Center in Sandstone, Minn., and take off-campus field trips to learn about interprofessional care in diverse and underserved communities. In-person classes take place in the new technology-enhanced classrooms on both campuses, connecting Duluth and the Twin Cities students to optimize active learning.

“We are dedicated to making sure that we’re meeting our students’ needs,” said Johnson. “We need to create an excitement, build confidence and get our students excited for the profession they have chosen. We’re a great team.”

The two-credit course meets for 14 days over a three-week period. Technology plays a key role in linking the campuses together and introducing the students based in Duluth and the Twin Cities to each other.

“The goal is to help students thrive in the college—to give them a sense of community, to help break down barriers, and provide that constant connection that our students need in order to be successful,” said Ranelli.
The Benefits of Active Learning

After many years of planning, the College of Pharmacy is in the second year of its new curriculum. Based on content synergies rather than rigid timing and sequencing of courses, the Curriculum Revision Steering Committee recognized that learning doesn’t happen in a specific timeframe, such as 15 weeks in a semester.

A hallmark of the new curriculum is a focus on active learning designed to engage a new generation of media- and technology-savvy students. Active learning requires that students be prepared to actively participate in their class time, rather than spending time listening to lectures—and involves techniques such as
scenarios, case studies and shared brainstorming.

“Students are more engaged when active learning takes place,” said Professor Wendy St. Peter. “The profession is changing and pharmacists need to be prepared to participate in team-based models of health care. Team-based active learning is a great segue into the work they will be doing in their professional lives.”

One form of active learning is team-based learning, which was first offered to students in the second year Pharmaceutical Care Skills Lab courses. Team-based learning encourages students to apply knowledge with the teacher as a guide—and it uses individual work, group work and immediate feedback to hold students accountable for being prepared and contributing to the discussion.

“Students enjoy the engagement with others,” said St. Peter. “Team-based learning allows them to meet other students they may not necessarily have met otherwise.”

Although active learning techniques have always been a part of the curriculum, faculty members have embraced the new curriculum’s emphasis on active learning strategies. Assistant Professor and Director of Pre-Advanced Pharmacy Practice Experiences Jeannine Conway sees great value in active learning techniques such as team-based learning as health care moves to a team-based model.

“Small group, active learning strategies engage students in the content and materials—and gives them an opportunity to develop the critical thinking skills that are so necessary in the clinical setting,” said Conway.

Skills such as compounding are interwoven with clinical skills such as interviewing and documentation skills.

“Students are presented with fairly complicated cases and are able to talk through them with peers to prepare them for their fourth-year rotations,” Conway added.

Conway points to innovative academic technologies in which the college has invested, such as a clinical documentation support tool that allows students to submit their clinical case notes and drug information answers electronically and allows for grading from pharmacy residents and pharmacists across the state.

“Watching students teach themselves and help their peers learn is an amazing thing to see,” said St. Peter.
New Practice Section
A Reflection of Contemporary Pharmacy

As the Pharmacy Practice Section leader, Assistant Professor Megan Undeberg leads a group of faculty committed to keeping as current as possible on today’s pharmacy practice setting, whether it’s the hospital, clinic, women’s health, psychiatry or other professional pharmacy practice.

“We aren’t just teaching from a textbook,” said Undeberg. “We’re all engaged with our different practice settings and are committed to tying it back to the curriculum.”

As part of the curricular revision process, the Pharmacy Practice Section was formed and in 2013 the college approved it. The members continue to work diligently on the revision of the Early Practice Experiences, Introductory Pharmacy Practice Experiences (IPPEs), and Advanced Pharmacy Practice Experiences (APPEs) for students.

“Our focus now is to use the outcome that must be achieved for our graduates, along with the national standards, in order to make the APPE experience as meaningful as possible for future pharmacists,” explained Undeberg.

With mandates from American Association of Colleges of Pharmacy to provide experiential learning focused on traditional pharmacy practice elements, and linking contemporary themes of cultural competency and inter-professionalism, the APPEs are designed to give pharmacy students the tools they need for future practice.

Two 15-week experiences during the final year provide a focus on acute and institutional care, and community and ambulatory care. A third 15 weeks is focused on electives such as international experiences, managed care or specialized practice areas.

“Pharmacy education ought to have an element of fun,” said Undeberg. “Our students need to explore and enjoy these opportunities, while meeting the educational requirements and needs. We want to expose them to as many direct educational experiences as possible.”

During the APPEs, students learn to fine-tune their interpersonal skills with different populations and how to interact with other health care professionals.

“We wanted to draw on the expertise and input of other faculty,” said Undeberg. “As practitioners, we knew there was so much more that our students needed to be exposed to and that we could make a greater impact by uniting.”

The Pharmacy Practice Section includes 22 pharmacists, all of whom are deeply invested in making a great impact on student education by offering real-life settings to provide the best experience for students. The group plans on incorporating additional pharmacists from the larger community setting, as well as other health care professionals working as part of the growing interprofessional team focused on patient care.

“Our students are learning about the clinical decision-making process, they are part of the care team and we make sure that their voices are heard,” said Undeberg. “We are shattering the image of a pharmacist in a white coat behind the counter. In this day and age of managed care, pharmacists are an integral part of the care team.”
The Quest to Halt Vision Loss and Blindness

With no early warning signs and symptoms, glaucoma is a complicated, progressive group of eye diseases. Left untreated, it is a leading cause of vision loss and irreversible blindness.

With no cure available, Research Assistant Professor Peter Dosa of the college’s Institute for Therapeutics Discovery & Development is working to halt glaucoma’s vision loss through the development of improved medications, which is especially critical for those populations disproportionately affected by glaucoma—African Americans, seniors age 60 and older, individuals with a family history of glaucoma and those with diabetes.

With funding from the Minnesota Partnership for Biotechnology and Medical Genomics and the U’s Clinical and Translational Science Institute, Dosa is working with Associate Professor Michael Fautsch from Mayo Clinic’s Department of Ophthalmology on the research to find a new medication option for those suffering from glaucoma.

“My main research interest is modifying existing drugs to get better therapeutics,” said Dosa. “So, when Mayo Clinic came to us with this novel class of compounds with great potential to treat glaucoma, it was a good opportunity for us to work together on an unmet need.”

Existing medications to treat glaucoma often have side effects. Mayo Clinic preliminary research showed that a new class of drugs offered great potential in halting glaucoma’s progression. However, the drugs needed to be modified in order to be suitable for eye drop administration.

“Intraocular pressure of the eye is the only thing that we can easily modify to treat glaucoma today,” said Dosa. “We are working diligently to modify an existing drug to make it suitable for eye drop administration. This medication offers a new way of lowering intraocular pressure—and the goal is to develop a way to deliver it right to the eye with a small, once-a-day, appropriate dose.”

According to Dosa, preliminary evidence suggests that the drug may offer neuro-protective benefits—a major benefit not available in existing glaucoma medications.

“If we are able to lower elevated intraocular pressure and also directly protect the optic nerve, we should be able to significantly lower the possibility of vision loss or blindness.”

The next phase of research is to continue pre-clinical work on the compound and then advance to human clinical trials through the collaborative efforts of Dosa and other members of the college, including Research Associate Professor Vadim Gurvich, and Professor and Peters Endowed Chair Raj Suryanarayanan.

“If we find a drug that works as neuro-protective in humans, it will be a huge step forward in the treatment of glaucoma,” said Dosa. “If someone has high intraocular pressure and it’s detected early, this medication could prevent and control glaucoma.”
A Targeted, Individualized Therapies Focus

Cancer remains the second most common cause of death in the United States, accounting for nearly one in four deaths according to the American Cancer Society. Research on cancer-fighting drugs has been a top priority for faculty at the College of Pharmacy.

Three faculty members are leading collaborative efforts on some of the most challenging cancers to treat, including breast cancer and brain cancer.

Professor Bill Elmquist serves as the director of the University’s Brain Barriers Research Center and has led research focused on improving the targeted delivery of novel anti-cancer drugs to brain tumors. Although he has focused on primary brain tumors (glioblastomas), his research has potential applications for treating brain metastases of other cancers, especially lung, breast, kidney and melanoma—the most common brain metastases.

“We’ve made tremendous progress in educating the clinical community and the pharmaceutical industry on the problems in developing new drugs for brain tumors,” said Elmquist. “It’s critical to know why current therapies have failed in treating brain tumors. Effective delivery of a compound across the blood-brain barrier presents great challenges.”
The potential benefits in finding the most appropriate combinations of targeted, individualized therapies are tremendous.

“The goal is to find the best compounds ‘personalized’ for a specific patient, and then determine how to best deliver those compounds to the area of the brain tumor that needs it the most—the growing edge,” explained Elmquist. “The analogy here is that this is like fighting a forest fire. You need to fight the fire at its burning edge. That is to drop water, through personalized therapies, on where the fire is burning; otherwise the fire—the tumor—continues to grow.”

**Associate Professor Jayanth Panyam’s research has focused on circulating tumor cell (CTC) detection as an important new diagnostic tool for patients with metastatic breast cancer.** CTCs, which are obtained through a routine blood draw, serve as a marker and provide insight as tumors often mutate and develop resistance to previously effective treatments. In particular, the research holds potential for those diagnosed with triple negative breast cancer, which has a 22 to 25 percent five-year survival rate for those diagnosed in the advanced metastatic stage.

Patients with advanced metastatic cancers are very difficult to treat because of the lack of effective drugs and the fact that many patients develop resistance to all available treatment options. “If we are able to take a blood sample and perform a genomic analysis, we could identify how a person will respond to a particular drug and customize treatment for that patient,” said Panyam.

Three faculty members are leading collaborative efforts on some of the most challenging cancers to treat, including breast cancer and brain cancer.
For the past two years, Panyam and graduate student Steve Kalscheuer have conducted research leading to the discovery of a new antibody called Clone 6, which holds great potential to recognize and capture CTCs leading to more accurate and personalized treatment protocols for those suffering from triple negative breast cancer.

“Right now we are focused on the potential for breast cancer patients,” said Panyam. “This also holds potential for those diagnosed with melanoma and other cancers involving circulating tumor cells.”

Developing novel treatment options for those suffering from triple negative breast cancer has also been a focus on another faculty member at the college. For the past five years, Associate Professor Venkatram Mereddy has worked on innovative research to develop more than 400 new compounds. This led to the groundbreaking discovery of compounds to inhibit monocarboxylate transporter (MCT1-4)—a biomarker highly overexpressed in triple negative breast cancer patients.

Preliminary studies show great potential in the mice model to efficiently reduce tumor growth in triple negative breast cancer.

“Triple negative breast cancer, the most aggressive of all breast cancers, disproportionately affects younger patients and African Americans and has a higher mortality rate,” said Mereddy. “The discovery of this biomarker holds great potential. We are identifying plans for translation to the bedside, establishing an investigational new drug and performing eventual clinical trials. The outcome and significance will be enhanced anti-tumor agents and a longer, better quality of life for patients with this disease.”
Addressing One of the Greatest Public Health Challenges

According to the American Alzheimer’s Association, an estimated 5.2 million Americans are living with Alzheimer’s disease and every 67 seconds someone else is diagnosed. One of the greatest public health challenges of our time, Alzheimer’s disease is the sixth leading cause of death in the United States.

Three faculty members at the College of Pharmacy are conducting leading-edge, collaborative research projects with the goal of changing Alzheimer’s troublesome trajectory.

Professor and VFW Endowed Chair Ling Li has taken Alzheimer’s disease research in a new direction. In the early 1990s, the connection between cardiovascular disease and the brain was established. Li’s research shows that a molecule from a protein known as APOJ may be capable of preventing toxic amyloid-beta protein, a widely recognized culprit of Alzheimer’s disease, from building up in the brain. Thus it could potentially slow and prevent memory loss associated with Alzheimer’s.

“The good news is that the APOJ-derived peptide has been proven to be vascular protective in animal models,” said Li. “We also have been working on other promising vascular protective and anti-inflammatory peptides that inhibit toxic effects of amyloid-beta protein. Our research has focused on tackling Alzheimer’s by improving both heart and brain health.”
Assistant Professor Karunya Kandimalla’s research on Alzheimer’s disease has focused on nanoparticles, which are theranostic—meaning they serve both diagnostic and therapeutic functions—and specifically target amyloid-beta protein accumulated in brain blood vessels, which causes cerebral amyloid angiopathy (CAA). More than 80 percent of Alzheimer’s disease patients manifest CAA—and its presence accelerates memory loss and cognitive decline in patients diagnosed with Alzheimer’s.

According to Kandimalla, CAA is also present in 30 percent of elderly individuals who are 70 years of age or older, and could lead to dementia or vascular dysfunction. If left undiagnosed and untreated, it could also lead to hemorrhages and eventually stroke.

“Several amyloid-beta mutations that cause severe form of CAA have been identified in people of Scandinavian ancestry—of particular interest to us in Minnesota,” added Kandimalla. “With a genetic predisposition to accumulate the amyloid-beta protein in their blood vessels, these individuals are at a higher risk for serious stroke before they could even be potentially diagnosed with dementia.”
Research Associate Professor Michael A. Walters is collaborating with Professor Karen H. Ashe from the University’s Medical School, on Alzheimer’s research related to tauopathies, which arise from a peptide in the brain that is one of two key players linked to the progression of the disease. Ashe and her researchers identified an enzyme that can interact with the non-tangled forms of tau and discovered its relationship to memory deficits.

Funded by the N. Bud Grossman Center for Memory Research and Care, the research has great potential to address Alzheimer’s disease.

“We’re most excited that this could offer a way of developing a therapeutic that would not target the tangles or plaques commonly associated with Alzheimer’s disease,” said Walters, a medicinal chemist. “We have high hopes for this.”

According to the researchers, one magic bullet will most likely not solve this chronic disease.

“Alzheimer’s disease is a multi-factorial disease,” said Li. “Multiple factors contribute to the development of the disease and we will need a combination of approaches to prevent, delay or treat this societal problem. It’s imperative that we find novel therapeutic strategies using dietary, genetic and pharmacological approaches to combat this devastating disease.”
**Alumni Profile: Jeanne Erickson, Class of 1946**

From the time she was a young child, Jeanne Erickson knew she wanted to be a pharmacist, just like her father.

Jeanne was born to Ed and Etta Holland who were beloved pioneers in Warroad, Minn. They owned Holland’s Pharmacy and were heavily involved in community affairs. It was from these two that Jeanne learned not only the trade of pharmacy, but also the importance of commitment to others.

Jeanne has many fond memories of her youth in Warroad. In high school she played the French horn, made bandages at the hospital during World War II, wrote an article for the local paper, and even recalls a family dinner with Normal Rockwell as a guest. The feature story in the March 18, 1939 edition of the *Saturday Evening Post* magazine was about borders between Canada and the United States. The cover of that edition depicted a pharmacist. His license bore the name “Holland,” a tribute to Jeanne’s father, Edward.

After high school graduation, Jeanne enrolled at Macalester College, where she played in the concert band and was the only female in her class in analytical geometry. She transferred to the University of Minnesota College of Pharmacy, though many doubted her potential success in a “man’s profession.”

At the U, she was the first person to occupy her room in Comstock Hall. Martin Erickson, her fiancé, was a senior in the U’s College of Technology. His fraternity brothers played in a campus dance band, and Jeanne and Martin spent many happy hours dancing in the student union ballroom. Jeanne played her horn in the varsity band that sophomore year and volunteered as an usher at Northrop Auditorium.

Martin and Jeanne were married in 1941 after Martin’s graduation. They moved to Warroad where Martin joined his father in managing Warroad Light and Power. Jeanne joined her father working at Holland’s Pharmacy.

When Martin was called to take a radar position on a ship during WWII, Jeanne enrolled in the College of Pharmacy accelerated program, attending classes year round.

Jeanne graduated from the college in 1946 with four others, which was the smallest class in the college’s history. During her last year, she received the Kappa Epsilon Award which was awarded annually to a senior female student who had rendered outstanding service to the college.

After graduation, Jeanne and Martin returned to Warroad where their children, Martin III, Marilyn and Kirk were born. Martin eventually sold his power company to the city. He accepted a position with International Milling Company and the family transferred to Hamburg, New York.
During their 10 years in Hamburg, Jeanne served as the Eric County chairman for the cancer crusade (she is a cancer survivor), superintendent of Release Time Education, and continued as a Girl Scout leader for 27 years. She also taught Sunday School for many years. She is very proud that one of her students, Barbara Peterson, went on to become Miss America.

When the Ericksons returned to Minnesota, Jeanne resumed her profession, working part time at Olson Brothers Pharmacy in Edina. She fondly remembers that the signer-songwriter John Denver was a frequent customer in the music department.

Eventually she accepted the position as pharmacist in charge of five nursing homes in the Twin Cities area and also mentored students at the College of Pharmacy.

Upon her husband’s retirement in 1975, Jeanne and her family returned to Warroad and, along with their son Martin III, bought her father’s pharmacy, then named Heritage Pharmacy. They immediately became involved in the community. Because of her previous experiences in nursing homes, she was instrumental in the edification of Warroad’s first care center and became the first chairman of the board.

“In Warroad, everybody cares for each other and that’s great,” she said.

Over the years, Jeanne has been a vital philanthropic supporter of several organizations. She has been an active member of the Eastern Star and Warroad Chamber of Commerce. She also served on the advisory board to the state board of pharmacy. To this day, she remains a member of the American Pharmacists Association, the Minnesota Pharmacists Association and the college’s Century Mortar Club.

During her time as owner of Heritage Pharmacy, Jeanne’s son, Kirk, and grandchildren Michelle and Justin worked with her at the pharmacy. She also mentored many pharmacy students.

She holds strong beliefs about attaining an education.

“Education is so important, it can never be taken away,” she said. “It is a wonder to have shared my family’s passion for pharmacy—which started with my father before I was born—with other generations. Over the years, we have made lifelong pharmacy relationships with so many people who have introduced me as the pharmacist who took care of them for so many years. The profession has given my life purpose. I like the contact with people and knowing that in collaboration with health care professionals we can achieve positive outcomes.”

Jeanne is especially proud of her three children, Martin III, Marilyn and Kirk, her seven grandchildren and four great grandchildren.

In 1972, the Rembrandt Corporation awarded Jeanne the “Reverence for Life” Hall of Fame award. In 2004, the Warroad Alumni Association recognized her as an outstanding alumnus for her dedication to the Warroad community.
PH.D. AND M.S. GRADUATES

Experimental and Clinical Pharmacology Ph.D.
Suresh Agarwal
Jie Zhou

Medicinal Chemistry Ph.D.
Amit Gangar
Kwon Hong
Adwait Ranade
Dewakar Sangaraju
Xia Zhang

Pharmaceutics Ph.D.
Isha Koonar
Khushboo Kothari
Lin Niu
Rajneet Kaur Oberoi

Pharmaceutics M.S.
Karen Grinnen

Social and Administrative Pharmacy Ph.D.
Del Doherty
Dan Tomaszewski

Social and Administrative M.S.
Bernadette Aragon
Brandon Ferlas

PHARM.D. GRADUATES

Susan Lorraine Allen
Lucas Anderson
Nicole Rose Anderson
Susan Lynne Anderson
Chelsey Ann Anfinson
Alexandra A. Antell
Jessica Lynn Astrup
Michael Berg Astrup
Ericka Christine Busby
Atkinson
Katherine Kohl Augustine
Elliot Hayward Ballance
Kelsey Ann Bartz
Kori Elizabeth Berg
Ryan C. Bezdicek
Lesley Chinanga
Marissa T. Collard
Carolyn Elizabeth Crust
Gina Fasching Danielson
Hung The Doan
John Doric
Natassha Crystal Ebert
David James Eckwright
Sarah Elizabeth Erickson
Heather Anne Ervasti
Jenna Mae Evenson
Stefania Valentina Faraca
Aimee Michelle Felland
Sara Elizabeth Fix
Joseph R. Flynn
Beth Moria Fruehauf
Mandy Lynn Gagnon
Rachel Diane Gahn
Jesse Godding
Peter Alberto
Gonzalez Griffin
Alicia Gunterus
Arienne Lee Adria Hakkola
Gabrielle Renee Haugen
Alex C. Hennen
Chee Yang Her
Amy Tonette Herbranson
Anne Marie Hildebrandt
An Hoang
Cassandra M. Hopp
Swetha Ramanan Hossain
Melissa Ann Hulscher
Lindsay Yoonchung Hur
Huy Huynh
Abdurahman
Abdulahi Jama
Justin R. Jones
Deepa Joshi
Jennifer Lynn Josselyn
Alaina Marie Just
Zahra Karimian
Emiliya Arkadyevna Khazan
Ami Kim
Melissa Potts Kobs
Ashley Marie Kosloske
Melinda D. Kounthapanya
Vanessa M. Kowalski
Samantha Jean Larson
Krista Leigh Lavender
Jeremy Mattheau LeBlanc
Camille Marie
Noelle Lebrec
Andrew Lenander
Shelly Lynn Lettman
Laura Lin
Xiaomei Liu
Kristine Marie Lojovich
Pai Lor
Oluwaseyi Modupe
Makanjuola
Abrah Elizabeth Maki
Monisha Mathews
Ryan John McIntosh
Adam Joseph Miller
Anna S. Miller
Kate Marie Morizio
Katherine Lisabeth
Morrissey
Adam Michael Nelson
Andrew John Nelson
Lucas Nelson
Erin Elise Neumann
Anita Ngo
Ryan Nguyen
PHARM.D. GRADUATES (CONT.)

Sarah E. Normand
Corissa Anne Norton
Morah Ngozi Nwaneri
Dallas Jeffrey Nyflot
Linda O. Obiero
Brittany Ann Okland
Katherine Louise Olson
Olufemi O. Osho
Alexandra Paffrath
Jihyun Park
Mary Ann
Weinzierl Paskach
Jill Paslier
Ankita Ankit Patel
Jennifer Ann Pernat
Jennifer Lynn Petroske
Souksavanh
Phaengkhouane
Rebecca Ann Piekarski
Marjorie Jo Ploeger
Christopher D. Ploenzke
Chelsey Hannah Poquette
John James Powers III
Amanda Pratt
Maureen Holly Reilly
Justin Tyler Richards
Jessica Marie Robotnik
Aimee Lee Rosin
Jaclyn Mae Rust
Melissa Ann Salmela
Amanda Corin Schauer
Jesse Ryan Scheid
Daniel J. Schneider
Joseph Adam Schneider
Michael Irving Shonts
Justin David Skluzacek
Lauren Michaela Skrbich
Linda Bennion Smith
Sara Moran Smith
Matthew Song
Yang Song
Ryan Jacob Stachon
Ellen Shea Stasney
Astrid M. Steffen
Shana Holly Steinbeck
Erin Kraemer Suomala
Lee Garrett Swenson
Joann Yumi Synn
Katherine Azadeh Tadayoni
Sarah Marie Thiry
Scott Lee Thomas
Sarah Jean Timm
Samantha Lynn Todd
Ashley Maxine Tollefson
Bryant David Torkelson
Kim Thi Tran
Kim Ngan Thi Tran
Phat Huu Tran
Valerie Ann Van Beusekom
Jared Collins Van Hooser
Tanya Kay VanVoorst
William Frank Vouk III
Payeng Vue
Jane Walker
Kara Christine Webber
Jenna Rose Wentzlaff
Melissa Westberg
William Wilberg
Caitlin Samantha Wilke
Kyle Thomas Wilke
Douglas Alan
Wojciechowski
Jenny Chun Ye Wong
Marianna Lee Wong
Nancy Yang
Yang Yang
Christina Yi
Kelsey Cassandra Zielke

Administration

College of Pharmacy
Administration
Marilyn K. Speedie, Ph.D.
dean
Caroline Gaither, Ph.D.
senior associate dean
Randall Seifert, Pharm.D.
senior associate dean
Esam El-Fakahany, Ph.D.
associate dean
Ron Hadsall, Ph.D.
interim assistant dean
Julie Johnson, Pharm.D.
associate dean
Tom Larson, Pharm.D.
associate dean

Department Heads
Grant Anderson, Ph.D.
William Elmquist, Pharm.D., Ph.D.
Gunda Georg, Ph.D.
Stephen Schondelmeyer, Ph.D.
Robert Straka, Pharm.D.
Bob Busch
development director
Darren Hoff
human resources director
Amy Leslie
communications director
Jeff Thomas
finance director
Board of Advisors
Lowell Anderson
Robert Beacher
William T. Beck
Mary Ann Blade
Elizabeth Cinqueonce
Chris Dimos
Don Gerhardt
Richard Hammel
Judith Jacobi
Ronald B. Johnson
Tom Kellenberger
Michael Koski
Marie DeGayner Kuker
Crystal Lennartz
Jeff Lindoo
James Marttila
Dave McLean
Marsha Millonig
Bruce Paddock
Gary Raines
Rory L. Rickert
Jeanette C. Roberts
Gary Schneider
Robert Schultz
Bonnie Senst
Carolyn Sieraski
Steve Simenson
Wendy Simenson
Jill Strykowski
Norrie Thomas
Bruce Thompson
Al Towle
Dianne Witten

New Faculty

Jeffrey Bishop
Experimental and Clinical Pharmacology
Research interest: psychiatric pharmacology and pharmacogenomics

Kylee Funk
Pharmaceutical Care & Health Systems
Research interests: diabetes, medication adherence and the pharmacist’s role in transitions of care

Olihe Okoro
Pharmacy Practice and Pharmaceutical Sciences
Research interests: social, cultural, environmental and economic determinants of population and community health, and the role of the pharmacist in assuring optimal health outcomes of patients

Jacob Brown
Pharmacy Practice and Pharmaceutical Sciences
Research interest: pharmacogenetics and pediatric pharmacokinetics

Melanie Nicol
Experimental and Clinical Pharmacology
Research interests: infectious diseases pharmacology and antiviral drug therapy

Laura Palombi
Pharmacy Practice and Pharmaceutical Sciences
Research interests: rural, indigenous and other underserved populations
Financial Information

Sources for Fiscal Year 2014 (in millions)

- Tuition & Fees: $22.2
- State Support: $5.8
- Royalties: $1.5
- Gifts & Endowment Income: $3.7
- Indirect Cost Recovery: $4.0
- Grants & External Sales*: $4.1
- Transfers (Net): $2.8
- Sponsored (Direct): $12.2
- Total Sources: $56.3

* Includes accounts receivable and deferred revenue.

Uses for Fiscal Year 2014 (in millions)

- Salaries & Benefits: $33.6
- General Lab Supplies: $9.3
- Consulting Services: $0.4
- Student Assistance: $0.9
- Equipment & Facilities: $2.1
- Central Assessments: $8.2
- Total Uses: $54.5
The University of Minnesota shall provide equal access to and opportunity in its programs, facilities, and employment without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression.

The College of Pharmacy inspires and educates current and future pharmacists and scientists, engages in cutting-edge research and leads practice development to improve the health of the people of Minnesota and the world.

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