



L. S. SKAGGS PHARMACY INSTITUTE

## *Department of Pharmaceutics and Pharmaceutical Chemistry University of Utah*

### Message from Outgoing Chair Dr. Carol Lim



**Dr. Carol Lim**

Dear faculty, students, staff, and colleagues,

It has been a great honor to serve as Interim Chair of our department for the last 3.5 years. Much has been accomplished during my time as Chair, including revamping of our curriculum based on the needs of our students and the workforce, serving as a student advocate, increasing interactions with alumni in industry, introducing leadership and management articles and techniques, working towards pay equity for our faculty, producing a balanced budget yearly, mentoring junior faculty, and facilitating communication within the department during some difficult times. During my time as chair we also experienced a revival in grant funding, which is rebuilding our department as leaders in research. My greatest joy has been getting to know everyone better, from faculty to staff to students, and having an excellent administrative team (Dalynn Berglund and Lisa Chandler) to work with. What a privilege it has been to work with incredible talented people towards a common goal of improving health.

I am pleased to pass the reigns over to Dr. Hamid Ghandehari, who will provide excellent leadership, enthusiasm, recognition, and success for our department.

### Welcome Message from Incoming Chair

Dear colleagues,

Welcome to the 2020 issue of the University of Utah Pharmaceutics and Pharmaceutical Chemistry Department newsletter!

The year 2020 is one that will remain in our memories for the losses and uncertainties due to the pandemic, social distancing protocols, Zoom meetings, and juggling childcare and



**Dr. Hamid Ghandehari**

homeschooling with remote work. It was also a year that further highlighted the value of scientific work for the general public as well as how much work needs to be done for a more just, inclusive, and equitable society. In our department we lost a good friend and scientist Sung Wan Kim whose career spanned five decades with immeasurable impact on training new generations of scientists and advancing the science of drug delivery. Despite these challenges, our department continued to excel in research and professional and graduate education. I invite you to read the related stories in this newsletter.

Special thanks to our past chair Carol Lim for her selfless and productive efforts to guide the department, and to our staff members Dalynn Berglund, Lisa Chandler, and Hallie McCarthy who carried out the day to day support activities of the department.

Moving forward, we have ambitious plans to grow. A faculty search at all ranks is already under way to recruit world class scientists and educators. Our research faculty, now five in total, make significant contributions to the mission of the department. Combined with our tenure track faculty the department now has 14 faculty members, and with the anticipated hires we aim to reach a total of at least 16 to 18 faculty members within the next two to four years. This will make the department faculty size one of the largest of its kind in the country.

As the department grows, so will our efforts in recruiting enthusiastic graduate students. Effective Fall 2020 we have established rotation experiences for entering Pharmaceutics graduate students and restarted our summer undergraduate research program. Our campus's annual research funding has surpassed \$600 million, the department was ranked #1 by academic analytics amongst all departments at the University, and Utah is a great place to live. We need your support in identifying outstanding faculty candidates, scholars, and students to join our ranks.

I am pleased to announce the establishment of our Academic Advisory Board comprised of professors Christine Allen, Tejal Desai, Sasha Kabanov, Twan Lammers, and Nicholas Peppas. These distinguished scientists and educators will advise us on current and future trends in pharmaceutics and drug delivery and help sharpen our vision. We are grateful for their time and commitment to our department.

Our department has a rich history of training pharmaceutical scientists who have leading positions in industry. To rekindle our ties with industry we have established a Department

Advocacy Group comprised of alumni Rebecca Blanchard, Pad Chivukula, Mudit Kakar, Nate Larson, and Monica Tijerina, and community entrepreneur and friend Alex Kim. We are grateful to these colleagues who advise and advocate for the Department, help identify sources of support, and connect our faculty and students to industry. I invite you to connect with our Advisory Board and Advocacy Group members introduced in this newsletter.

In this growth phase, our department needs your support more than ever before. Our faculty and students welcome new opportunities for academic-industry partnerships, support for student fellowships and awards, as well as summer internships, organizing industry recruitment events on campus, sharing job postings online, research collaborations, and the like.

To connect with us and with the alumni please visit the department LinkedIn group at: <https://www.linkedin.com/groups/3373662/>

I wish you a happy and prosperous year to come (hopefully with the pandemic behind us) and look forward to hearing from you. I can be reached via email at [hamid.ghandehari@pharm.utah.edu](mailto:hamid.ghandehari@pharm.utah.edu), on Twitter [@H\\_Ghandehari](https://twitter.com/H_Ghandehari), or via [LinkedIn](#).

Yours,

Hamid Ghandehari, PhD  
Professor and George S. and Dolores Doré  
Eccles Presidential Endowed Chair,  
Pharmaceutics and Pharmaceutical Chemistry  
Professor, Biomedical Engineering  
Director, Utah Center for Nanomedicine  
<https://pharmacy.utah.edu/pharmaceutics/>

## Honoring Distinguished Professor Sung Wan Kim (1940-2020)

Dr. Sung Wan Kim, a faculty of the department since the 1970s, passed away peacefully, surrounded by family and friends on February 24, 2020 at the University of Utah Medical Center.

Born on August 21, 1940 in Busan, South Korea, Dr. Kim is survived by his loving wife Hee Kyung, son Alex, daughter-in-law Catherine, daughter Kara, son in-law Brian, and four grandchildren. Dr. Kim, Distinguished Professor of Pharmaceutics and Pharmaceutical Chemistry, as well as Distinguished Professor of Bioengineering at the University of Utah, is known as a pioneer in the world of pharmaceutics. Dr. Kim influenced countless people as a teacher, advisor, collaborator, friend, father, grandparent, and husband. His incredible energy and remarkable legacy will continue to inspire all who had the privilege to know him.

### Eulogy by Dr. Jindřich Kopeček

Dear Hee Kyung, Kara, Alex, family, friends, and colleagues,

Several years ago, during a discussion with Sung Wan Kim we agreed that one of us who will be still around will present a eulogy when time comes. Sadly, it is me who has the task to fulfil.

I first met Sung Wan in 1977 at a Symposium in Prague, Czech Republic. Since 1986 when I joined the University of Utah we had adjacent offices. From that perspective I have had the chance to know Sung Wan not only as a colleague, but as a close friend.

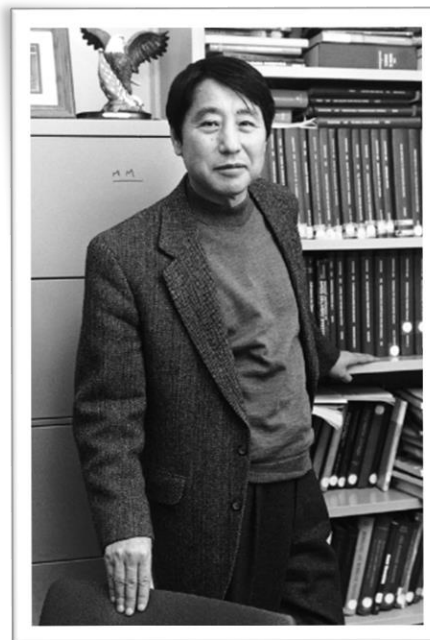
Distinguished Professor Sung Wan Kim was an inspiring figure in the scientific careers of his numerous students, postdoctorals, and collaborators during his more than 50 years at the University of Utah. While he was a master's student at Seoul University, he had a chance to encounter with Professor Edward Eyring, who was visiting from the University of Utah Chemistry Department.

Professor Eyring suggested Sung Wan move to the US, and in 1966 he did, joining Dr. Eyring's laboratory. After receiving his Ph.D, he stayed in Utah, continuing as a postdoctoral

fellow with Professor Willem Kolff, the father of artificial organs.

Sung Wan's pioneering research in biomaterials and drug delivery has been inspiring for the scientific community. In particular, his contributions to the science of hydrogels, biodegradable drug conjugates, stimuli-sensitive polymers, and polymer-based gene-delivery systems were truly visionary. These interdisciplinary research results from his laboratory were not only translated into the clinics but also created scientific foundations that played an influential role in facilitating further inventions of scientists around the world.

Since 1974 he published over 500 papers in high impact journals and received numerous patents. Most importantly, he trained over 150 scientists from all over the world. He made all



efforts to create an environment where young people could develop their talent to the fullest. I have seen first-hand these scientists go on to successful careers.

Sung Wan's contributions enhanced the standing of the College of Pharmacy and the University of Utah around the world. In 1983 he started a biannual symposium on Drug Delivery, founded the Center for Controlled Chemical Delivery and initiated numerous international scientific collaborations. This had also an important impact on the education of young scientists – it created an opportunity to meet and discuss with leaders in our field.

Sung Wan was also a successful entrepreneur; he was founder of Expression Genetics, Macromed, and co-founder of TheraTech.

During his career Sung Wan received numerous awards, he was a member of the National Academies of Engineering, Medicine, and Inventors, recipient of UofU Rosenblatt Prize for Excellence, Volwiler Award from American Association of Colleges of Pharmacy, Biomaterials Society Clemson Award, honorary doctorate from the University of Twente, Distinguished Professor at Hanyang University, Korea, and many others.

He was an outstanding scientist but also a wise, modest man who enjoyed life and playing golf. I recall our skiing in Alta, hiking in the Korean mountains, trip to southern Bohemia in Czech Republic, and discussions about science and life. Sung Wan always tried to make you happy. During my first visit to Salt Lake City in 1982, Joe Andrade and Sung Wan tried to convince me that Utah is not only a great place for research but also beautiful place to live. On Joe's suggestion we all went camping in the Wasatch mountains. Sung Wan clearly was not a camper, but did it because he knew I would appreciate it. He always demonstrated his kindness, wisdom, and compassion with others.

Sung Wan, thank you for all your guidance, help, and friendship. Coming from a different social system, thanks to your advice, I accommodated to the life in the US quickly and smoothly.

Sung Wan Kim's devotion to science, his innovative spirit, his wisdom and kindness formed both the scientific careers and the character of his students, coworkers and friends. He was a great teacher, a great scientist, and a great man.

Sung Wan, you will live in our hearts; our lives have been shaped by your wisdom and legacy.

### A Message from John and Karen Mauger



Karen and I have been associated with academic pharmacy for nearly 50 years. We have especially enjoyed the past 25 years at the U where we have made meaningful and long-lasting friendships with students, faculty, alumni, and staff. The U of U College of Pharmacy has become our academic home. My faculty affiliation with the Department of Pharmaceutics and Pharmaceutical Chemistry means a great deal to me and I am very grateful for the opportunity to continue to serve and to associate with longtime colleagues and friends as well as students. Karen and I look forward to continuing this important association into the foreseeable future.

*Dean emeritus John Mauger continues to advise the faculty and students in the department with his wealth of experience in pharmacy and pharmaceuticals research, education and administration.*

## Department Advocacy Group

The Department of Pharmaceutics and Pharmaceutical Chemistry has a rich history of training world class scientists with leading positions in pharmaceutical industry who continue to contribute to the department mission. Our Department Advocacy Group, comprised of distinguished alumni and friends of the department, is formed to advise and advocate for us, to help identify sources of support, and to connect our faculty and students to industry. We are thankful for the continuous support from our alumni and friends, and welcome new opportunities for academic-industry partnerships.



**Rebecca Blanchard**  
Ph. D (1995), Vice President,  
Translational Pharmacology,  
CRISPR Therapeutics,  
Cambridge, MA



**Mudit Kakar**  
Ph. D (2008), JD, Partner,  
Intellectual Property at Choi  
Capital Law,  
Seattle, WA



**Nate Larson**  
Ph. D (2012)  
CSO, Deseret  
Laboratories, Inc.,  
St. George, UT



**Pad Chivukula**  
Ph. D (2008)  
CSO and COO,  
Arcturus  
Therapeutics, Inc.,  
San Diego, CA



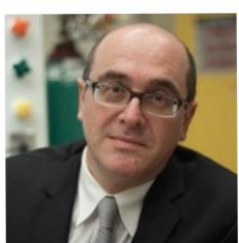
**Alex Kim**  
M.A., Entrepreneur,  
CEO of Elevar Therapeutics,  
Salt Lake City, UT



**Monica Tijerina**  
Ph. D (2002)  
Executive Director,  
Gilead Sciences,  
Foster City, CA

## Department Advisory Board

We are pleased to announce that professors Tejal Desai, Sasha Kabanov, Nicholas Peppas, Christine Allen and Twan Lammers have accepted our invitation for the inaugural academic advisory board of the Department of Pharmaceutics and Pharmaceutical Chemistry. Internationally acclaimed experts, these colleagues advise our faculty and students on current and future trends in pharmaceutics and drug delivery.



**Chair: Alexander Kabanov, Ph. D,**  
**Mescal S. Ferguson Distinguished Professor, Director of**  
**the Center for Nanotechnology in Drug Delivery at the**  
**UNC Eshelman School of Pharmacy, co-director of**  
**the Carolina Institute for Nanomedicine**  
**University of North Carolina at Chapel Hill**



**Tejal Desai, Ph. D**  
**Professor, Bioengineering**  
**Chair, Bioengineering and Therapeutic Sciences**  
**University of California San Francisco**



**Nicholas Peppas, Ph. D**  
**Professor & Director of the Institute for Biomaterials, Drug**  
**Delivery and Regenerative Medicine,**  
**Cockrell Family Regents Chair in Engineering,**  
**The University of Texas at Austin**



**Christine Allen, Ph. D,**  
**Professor, Associate Vice-President and Vice-Provost of Strategic**  
**Initiatives,**  
**University of Toronto**



**Twan Lammers, Ph. D,**  
**Professor, Head of Department Nanomedicine and Theranostics,**  
**RWTH Aachen University**

## International Symposium on Biomedical Materials for Drug/Gene Delivery, February 2020

On the occasion of the 80th birthday of **Professor Jindrich (Henry) Kopeček**, a close-knit collection of alumni, colleagues, collaborators, friends, and family gathered on February 7 - 8, 2020 in the snowy Salt Lake City valley shadowed by the Wasatch Mountain range to celebrate the career of our esteemed mentor and friend.

Attendees came from the USA, Canada, Czech Republic, France, Israel, Japan, Korea, Switzerland, and Taiwan with total number close to 150. Eight members of US National Academies took active part in the conference.

Two days of excellent research presentations, combined with friendly banter and laughter, created an atmosphere that mirrored Henry's love of science and friends. Dr. Kopeček presented keynote lecture *My First Sixty Years in Science*.

The main symposium sponsors were Arcturus Therapeutics (San Diego, CA) and Alumni of Biomedical Polymers Laboratory (Kopeček Laboratory), University of Utah (Salt Lake City, UT). Many institutions and friends also made contributions to this unique event.



Local and international scholars gathered for the special symposium in Salt Lake City.

## FACULTY NEWS

Highlighted below are a sample of the impressive publications from our team in 2019 and 2020. For a complete list of all department members' publications, please visit:

### [Pharmaceutics and Pharmaceutical Chemistry Research: Publications](#)

## Publication Highlights

**Dr. You Han Bae** and Dr. Kinam Park (Purdue University) published "Advanced Drug Delivery 2020 and Beyond: Perspectives on the Future" in *Advanced Drug Delivery Reviews* in June 2020.

**Dr. Carol Lim** and graduate students **Katherine Bowman**, **Phong Lu**, and **Erica Vander Mause** published "Advances in Delivery Vectors for Gene Therapy in Liver Cancer" in *Therapeutic Delivery* in January 2020.



**Dr. Henry Kopeček and group**

**The Kopeček Lab** published four papers in 2020: graduate student **Christopher Radford** et al., "Multivalent HER2-Binding Polymer Conjugates Facilitate Rapid Endocytosis and Enhance Intracellular Drug Delivery" in the *Journal of Controlled Release*; **Drs. Lian Li**, **Jane Yang** et al., "Inhibition of Immunosuppressive Tumors by Polymer-Assisted Inductions of Immunogenic Cell

Death and Multivalent PD-L1 Crosslinking" in *Advanced Functional Materials*; graduate student **Jiawei Wang** et al., "Exploration and Evaluation of Therapeutic Efficacy of Drug-Free Macromolecular Therapeutics in Collagen-Induced Rheumatoid Arthritis Mouse Model" in *Macromolecular Bioscience*; **Drs. Kopeček** and **Yang** "Polymer Nanomedicines" in *Advanced Drug Delivery Reviews*.

**Drs. David Grainger**, **Kyungsook Kim**, **Teruo Okano**, and graduate students **Sophia Bou-Ghannam** and **Hallie Thorp** published "Human mesenchymal stem cell sheets in xeno-free media for possible allogenic applications" in *Scientific Reports* in October 2019. This article is among the [Top 100 Downloaded Articles in 2019 from Nature: Scientific Reports](#).

**Drs. Mingnan Chen** and **Shuyun Dong**, graduate students **Peng Wang** and **Peng Zhao** et al published "Depletion of PD-1-positive cells ameliorates autoimmune disease" in *Nature Biomedical Engineering* in March 2019.

Research Associate **Dr. Raziye Mohammadpour's** work (Ghandehari Lab) on nanotoxicology of silica nanoparticles was featured on the cover of *Journal of Controlled Release* and by [The Frederick National Laboratory's Nanotechnology Characterization Laboratory](#) in August 2020.

## Grants

**Dr. Chen's group** received a three-year research grant from National Multiple Sclerosis Society. This funding support, together with the existing Ro1 support from the NIH to Chen's group, enables them to search for better treatments for patients with autoimmune diseases. The group was also awarded a Pioneer Grant from the Center for Technology & Venture Commercialization of the University of Utah. The pioneer grant is to promote the commercialization of a technology developed in Chen's group.

The National Cancer Institute of the National Institutes of Health awarded **Dr. Kopeček** a 5-year RO1 grant of \$1,744,220 to continue supporting 'Drug-free Macromolecular Therapeutics' until November 2024. **Drs. Kopeček, Yang, Shami**, and others will concentrate on developing lymphoma therapeutics based on antibody recognition combined with receptor crosslinking.

**Dr. Yang** from the Kopeček Lab received a DoD Breast Cancer Research Program Breakthrough Level 2 grant entitled "KT-1 Paired with Multivalent Polymer-anti-PD-L1 Peptide Hybrid: A Synergistic Chemoimmunotherapy for Treatment of Triple-negative and Metastatic Breast Cancer". The 3-year funding (07/01/2020 – 06/30/2023) with total \$1,509,750 will support **Dr. Yang** and her co-investigators (Drs. Bryan Welm, Siwen Hu-Lieskovan, and Tim Luetkens from the Huntsman Cancer Institute) to study a novel chemo/immuno-combinatory strategy for cure of breast cancer. **Dr. Yang** also initiated cooperation with Dr. Douglas Sborov (Internal Medicine) on "A Novel Antibody-drug Conjugate for the Treatment of Multiple Myeloma". The research is supported by a one-year pilot grant of \$31,000 from the Experimental Therapeutics (ET) Program, Huntsman Cancer Institute.



**Dr. Mingnan Chen and group**

**Dr. Lim** recently received "fundable" scores (based on last year's paylines) on two NCI/NIH grants.

The first is a \$275K NIH R21 grant, "Re-engineered Mitochondrially Targeted p53 Gene Therapy in Liver Cancer" which received a 6<sup>th</sup> percentile score. This grant is a collaborative effort between the Lim lab and Dr. Kimberley Evason and Dr. David Lum, both at the Huntsman Cancer Institute (HCI).

The second is a \$1.25M Ro1 grant, "A Leukemia Cell-Specific Coiled-Coil Protein for Treatment of Chronic Myeloid Leukemia" that received a 9<sup>th</sup> percentile score, a collaboration between Dr. Lim and Dr. Thomas Cheatham (Medicinal Chemistry), Dr. Michael Kay (Biochemistry), Dr. Michael Deininger, and Dr. Thomas O'Hare (HCI). Official funding decisions will be made in the fall of 2020.

This year the **Ghandehari lab** primarily focused on research projects investigating localized delivery of glycosaminoglycan ethers for the treatment of radiation induced proctitis (NIH Ro1 CA227225), understanding the long-term toxicity of silica nanoparticles (NIH Ro1 ES024681), and investigating the potential of silk-

elastinlike protein-based polymers as liquid embolics for the treatment of hepatocellular carcinoma (NIH R42 CA168123) and for brain aneurysms (1R41 NS100184).

Spearheaded by **Dr. Paris Jafari**, Research Assistant Professor in the Ghandehari Lab, several seed projects were funded in 2019-2020: A Utah Center for Clinical and Translational Sciences Pilot Award on "Injectable Antibacterial Dressings for the Treatment of Chronic Rhinosinusitis", a Huntsman Cancer Institute, Neurologic Cancer Center Seed grant on "Matrix-Mediated Gene Delivery for the Treatment of Glioblastoma", "Bioinks for 3D printing of Vascular Grafts" funded by the College of Engineering and a University of Utah Research Instrument Fund for purchase of a 3D Bioprinter. This equipment will be used to start a state-of-the-art research direction by using recombinant technology in developing tissue-specific Bioinks.

## Accomplishments

The **Owen Lab** continues to construct antibody-based platforms for therapeutics and diagnostics. This year, they received patent approval for their antibody split-enzyme system and are working with local companies to commercialize the technology. Prior to implementing an adjusted schedule to fit the new "coronagenda", **Dr. Shawn Owen** was disseminating the group's research with visits to University of Toronto, UCSF, UC Davis, and many locations in between. The new normal has allowed him to stay closer to home and become an expert of multiple conferencing platforms and related virtual backgrounds. This fall, he will be well-dressed from the waist up to present current research at the Protein and Antibody Engineering Summit (PEGS), the University of Wisconsin-Madison, and other pending locations. He will also

remotely teach several short courses as a guest lecturer of Keio University, Japan.



**Drs. Teruo Okano, David Grainger, and the CSTE team.**

**The Cell Sheet Tissue Engineering Center (CSTEC)** formed collaborations at The University of Utah School of Medicine (orthopedics, OB/GYN, dentistry, and hepatology). From these collaborations, CSTEC submitted five papers and two provisional patents. CSTEC is also under triangle collaboration between Clinical Trials Office & Orthopedics to submit pre-IND application for FDA meeting to discuss cell sheet regenerative therapy for Knee cartilage deficiency patients.

Distinguished Professor **Dr. David Grainger** was bestowed the International Award from [the European Society for Biomaterials](#). This prestigious award represents recognition of scientists who have generally spent their career outside Europe, who have been internationally recognized, have a high scientific profile, and have made major contributions to the field of biomaterials.

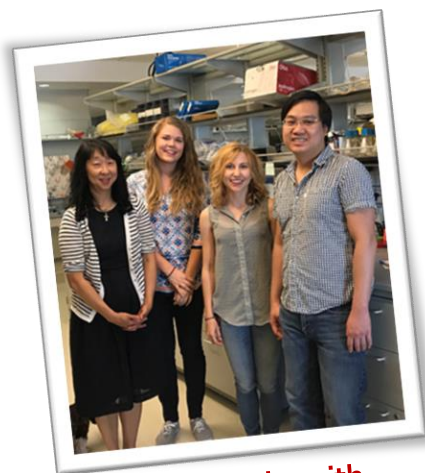
**Dr. Kopeček** presented invited lectures at: University of Southern California, Los Angeles, CA (January 25, 2019), West China College of

Pharmacy, Sichuan University, Chengdu, China (April 30, 2019), the 83<sup>rd</sup> Prague Meeting on Macromolecules, Polymers in Medicine 2019, the Institute of Macromolecular Chemistry, Prague, Czech Republic (June 23-27, 2019), the 2019 Fall American Chemical Society Meeting, San Diego, California, (August 25-29, 2019), the Pharmaceutical Technology Innovations Meeting, Ritsumeikan University, Kyoto, Japan (November 5, 2019), the International Conference on Colloid and Surface Science "Okinawa Colloids 2019", The Busena Terrace, Okinawa, Japan (November 3-8, 2019), and the International Symposium on Biomedical Materials for Drug/Gene Delivery in Salt Lake City (February 6-7, 2020).

**Dr. Yang** presented invited lectures at: West China College of Pharmacy, Sichuan University, Chengdu, China (April 30, 2019), and the International Symposium on Stimuli-Sensitive Materials, Windsor, California (October 21, 2019).

**Dr. Lim** participated in a panel for the American Association of Pharmaceutical Scientists Women in Pharmaceutical Science on

May 14, 2020 on "Work-Life Balance" during COVID. She also organized two Zoom panels for high school students ("College Admissions" and "Science Panel") with guests from academia and industry



**Dr. Carol Lim with graduate students**

In addition to the main projects highlighted above, the **Ghandehari group** engaged in collaborative projects on campus ranging from understanding the role of



**Dr. Hamid Ghandehari and group**

combustion particle pollution and upper airway disease in Utah, drawing on expertise in nanotoxicology, to localized delivery approaches for pharmacological interventions that restore function in arterial dysfunction. This past year the publications from the Ghandehari group surpassed 200 in total with 256 invited talks to-date.

**Dr. Ghandehari** finished his term as chair of NIH NANO Study Section in June 2020. He continues to serve as Editor in Chief of *Advanced Drug Delivery Reviews*, the leading review journal in drug delivery. During his years of service, the impact factor of this journal has increased from single digit to double digits where it now stands at 13.30, with a respectable CiteScore of 29.3.

Finally, the Salt Lake City Award Program named the **Department of Pharmaceutics and Pharmaceutical Chemistry** the 2019 Best of Salt Lake Award in the University Department category. The annual awards program honors the accomplishments of groups that enrich the Salt Lake City area. [The full press release can be found here.](#)

## STUDENT NEWS

### Student Awards and Accomplishments



**Nithya  
Subrahmanyam**

The winner of the Annual Fox Award for 2019-2020 was a deserving tie between **Nithya Subrahmanyam** and **Nitish Khurana** (both of the Ghandehari lab). This award is intended to recognize an outstanding graduate student based on the recommendation of his or her peers. The award recipient is selected based not only on academic merit, but also on service to the Department, the University, and to fellow students. Each winner receives a cash prize and a

framed certificate. We congratulate these students for the contributions to the experience of their fellow students and the department!



**Nitish Khurana**

**Nitish Khurana** (Ghandehari lab) received the 2020-2021 Skaggs Graduate Research Fellowship Award. This award, supported by the Skaggs Family, is based on his academic performance, noting Nitish's description of his research project as extremely impressive. Nitish's project, in collaboration with Dr. Jeremiah Alt (Otolaryngology), is to design systems for localized drug delivery to the inflamed sinonasal tissue.



**Jessica McCombs**

**Jessica McCombs** (Owen lab) discussed her science and experiences at the American Chemical Society national meeting and as the Society for Advancement of Chicanos/Hispanics and Native Americans in Science invited speaker. She was a Cross Award Nominee, a recipient of the African American Diversity Scholars Initiative Scholar Travel award, and winner of the 2019 ACS Biochemistry division design contest, all while leading as the University of Utah Black Graduate Student Association Co-Chair.



**Keith Arlotta**

**Keith Arlotta** (Owen lab) published his study on hybrid antibody fragment-collagen binding peptide molecules in *Bioconjugate Chemistry* and *Wiley Interdisciplinary Reviews*:

### *Meet our 2020 -2021 Student Advisory Committee*

The purpose of SAC is to promote communication and interaction among students, faculty, staff and administrators.



**Jason Grunberger**



**Nitish Khurana**



**Bhuvan Yathavan (Chair)**

*Nanomedicine and Nanobiotechnology*. He will present his current results at the upcoming Protein Engineering and Cell Therapy conference as a recipient of the University's Virtual Conference Award.



**Christine Nervig**

**Christine Nervig** (Owen lab) published a News and Views commentary in *Nature Biomedical Engineering* and a review article on antibody-drug conjugates in the *Encyclopedia of Pharmacology*. She presented her research at the ACS National Meeting and the recent Controlled Release Society meeting where she also led a panel discussion. Christine is the recipient of an American Foundation for Pharmaceutical Education Predoctoral Fellowship for this year.



**Erica Vander Mause**

**Erica Vander Mause** (Lim lab) was the recipient of the 2019-2020 Skaggs Graduate Research Fellowship Award. Erica was also selected for the 2020 St. Jude National Graduate Student Symposium. Over 1,500 people were invited to apply, and she was one of 23 selected!



**Katherine Redd Bowman**

**Katherine Redd Bowman** (Lim lab) was the recipient of the 2019 Wolf Prize

for Excellence in Teaching, and gave one of the two commencement speeches at graduation. She passed her thesis defense with flying colors on "A Novel Re-engineered p53-BH<sub>3</sub> Fusion Gene Therapeutic, p53-Bad, for Treatment of Hepatocellular Carcinoma," which was the basis for Dr. Lim's NIH R21 grant.



**Jiawei Wang**

**Jiawei Wang** (Kopeček Lab) received the Arcturus Fellowship Award. This award is supported by Arcturus Therapeutics, San Diego, CA. Jiawei published a study on B-cell depletion therapy in rheumatoid arthritis in *Macromolecular Bioscience* and presented her data at the recent Controlled Release Society meeting.



**Christopher Radford**

**Christopher Radford** (Kopeček Lab) received Best Poster Award (sponsored by the Journal of Controlled Release) at the recent International Symposium on Biomedical Materials for Drug/Gene Delivery in Salt Lake City. He published his study on the impact of multivalency of polymer nanomedicines on binding and uptake in HER2 positive ovarian carcinoma cells in the *Journal of Controlled Release*. Chris participated at the recent Controlled Release Society meeting as presenter and panel discussion leader.

## Department of Pharmaceutics and Pharmaceutical Chemistry Staff

Our staff members are always available to answer your questions and act as a resource to our alumni and friends. Please do not hesitate to reach out if you ever need us!

**Dalynn Berglund** **Administrative Manager**

**Lisa Chandler** **Accountant**

**Hallie McCarthy** **Project Coordinator**



L. S. SKAGGS PHARMACY INSTITUTE

*Department of  
Pharmaceutics and  
Pharmaceutical  
Chemistry  
University of Utah*

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SALT LAKE CITY UT 84112

## Help our Department Grow!

### Faculty Search

The Department of Pharmaceutics and Pharmaceutical Chemistry at The University of Utah College of Pharmacy seeks excellent, diverse applicants for two tenure-track faculty positions across all ranks. We are specifically interested in applicants involved in pharmaceutics and drug delivery research. [The full job listing can be found here.](#)

### Donor Opportunities

We welcome contributions to make a difference in our department. Please consider donating to the department in the following ways:

**Graduate Student Emergency Health Fund:** Student health insurance is not adequate if students have a major health crisis, such as emergency surgery. We would like to have an emergency reserve fund available to students for catastrophic situations.

**Student Scholarships:** Please consider donating towards graduate student scholarships for exceptional students in our department.

**Fox Award donations:** Each year, we honor the memory of Dr. Jeffrey Fox with this award. The award is intended to recognize an outstanding graduate student based on the recommendation of his or her peers. Award recipients are selected based not only on academic merit, but also on service to the Department, the University, and to fellow students.

**Department development account:** Funds to be used at the department's discretion.

**Other donation opportunities:** Be creative in helping our department thrive! Please contact us if you have other donation ideas.