

Dean's Report – NDSU School of Pharmacy
Charles D. Peterson, Dean and Professor
137th NPhA Annual Meeting, March 10-13, 2022
Bismarck, North Dakota

Executive Summary

The College has had another very busy and productive year. On September 9th, the College held its 20th Annual Career Fair at the Fargodome with numerous exhibitors representing the professions of pharmacy, nursing, allied sciences, and public health including various healthcare entities from the state, region, and nation. Both pre-professional and professional students as well as area high school juniors and seniors attended the event exploring various health care careers, employment opportunities, and internships. It was a tremendous success and the day was topped off by our College of Health Professions Annual Scholarship Recognition Program which brought our entire College together including all disciplines to congratulate the scholarship award recipients, thank the donors for their generosity, and to disburse a record total of \$455,340 (263 awards including Fargo and Bismarck locations) in scholarships to deserving pharmacy, nursing, allied sciences, and public health students. I would like to thank all the alumni and corporate friends of our College who have given so generously to support our students. Thanks to you, our scholarship program is alive and well. Next fall, our Annual Career Fair and Scholarship Recognition Program will be held on Thursday, September 15, 2022 at the Fargodome. So please mark your calendars and plan to attend. As in the past, North Dakota Opportunities Night will be held the evening before the Career Fair on Wednesday, September 14, 2022. Come join us for these awesome events ! To register for any of these events or for more information, contact Kristi Weston, Special Events Coordinator, at (701) 231-7751 or email at Kristi.Weston@ndsuh.edu .

During the 2021 Fall Semester, the State Board of Higher Education launched a national search for the next President of North Dakota State University. Five candidates from a national pool of 47 were invited for on-campus interviews during the last week of January and the first week of February 2022. On February 4th the search committee forward the names of three finalists to the Chancellor and State Board of Higher Education for their consideration and final decision. The State Board of Higher Education conducted finalist interviews on February 23rd on the NDSU campus and selected Dr. David Cook, Vice Chancellor for the Office of Public Affairs & Economic Development at the University of Kansas as the 15th President of NDSU. Dr. Cook will also be given a tenured faculty position in the College of Health Professions and he will begin his presidency at NDSU around July 1st. President Dean Bresciani served as President at NDSU for 12 years (2010 – 2022) and recently resigned his position to accept a tenured distinguished professor faculty appointment in the College of Human Sciences and Education.

Dr. Michael Kelsch was recently hired as the permanent Associate Dean of Academic Affairs for the School of Pharmacy. He will join our current Executive Leadership Team of Dr. Daniel Friesner, Senior Associate Dean of the College, Dr. Amy Werremeyer, Department Chair of Pharmacy Practice, and Dr. Jagdish Singh, Department Chair of Pharmaceutical Sciences in assisting the Dean in managing all administrative affairs related to the School of Pharmacy. Dr. Kelsch earned his Doctor of Pharmacy from NDSU in 1999, and his Board Certified Pharmacotherapy Specialization certification in 2000. After completing a PGY1 Residency at the University of Wisconsin, he returned to NDSU as Assistant Professor

of Practice in the Department of Pharmacy Practice in 2000, focusing primarily on pharmacotherapy of infectious diseases. He has been employed in the NDSU School of Pharmacy since that time, and he currently holds the rank of Professor of Practice. Dr. Kelsch served as the Interim Associate Dean for Academic Affairs in the School of Pharmacy since April 2020. He previously served as the Vice Chair in the Department of Pharmacy Practice (2016-2020) and as the School of Pharmacy Curriculum Committee Chair (2013-2018). At the University level, Dr. Kelsch served on the NDSU Athletic Academic Advisory Committee from 2005-2017, including a term as Vice-Chair (2008-2011) of the Committee. Please join me in congratulating Dr. Kelsch in his new administrative role.

In October 2021, under the direction and leadership of Dr. Michael Kelsch, Associate Dean for Academic Affairs in the School of Pharmacy, the Pharm.D. program submitted an Interim Report to the Accreditation Council for Pharmacy Education (ACPE) to address six standards that were classified as 'Compliant with Monitoring' during the ACPE Board of Directors annual meeting in January 2021. Of note, 19 standards were considered 'Compliant'. The ACPE Board of Directors reviewed the School's report at its annual meeting in January 2022 and determined that Organization and Governance, Admissions, and Faculty and Staff Quantitative Factors standards are now fully compliant; Strategic Plan, Faculty and Staff Qualitative Factors, and Financial Resources remain Compliant with Monitoring. The next Interim Report to ACPE will be due in April 2023 to address the three standards being monitored.

Over the past five years, the College of Health Professions has experienced unprecedented growth in research with grant funding totaling \$38,618,486. The College has consistently been the highest or second highest in annual research production of all academic Colleges on the NDSU campus. The School of Pharmacy has observed a 325% increase in research grant funding since 2012. The Department of Pharmaceutical Sciences has seen tremendous growth in procuring highly competitive grants. In FY2021, the Department procured more than \$6.5M in grants and contracts including eleven grants from the National Institutes of Health (six R-01 grants, two R15 grants, two R21 grants, and a P20 COBRE grant) as well as grants from the State of North Dakota and several other sources. The NDSU Department of Pharmaceutical Sciences continues to rank among the top 5 of U.S. pharmacy schools in the nation for total amount of NIH funding per year per funded faculty member. The College of Health Professions continues to have exciting research being conducted encompassing a wide array of health-related areas including: pancreatic and colorectal cancer, Alzheimer's disease, bariatric surgery, obesity, cardiovascular disease, hypertension, diabetes, pulmonary disease, hepatitis C, antibiotic delivery for bone infections, opiate abuse prevention, SARS-CoV-2 virus pandemic and vaccines, research on health care disparities in the American Indian and other indigenous populations, research on effective strategies for improving immunization rates in North Dakota, telepharmacy/telehealth, and many other exciting areas. To further expand its research capacity, the College recently completed a \$3.5M renovation all three floors of Sudro Hall including additional research laboratories, common core equipment room, cold room, graduate student space, and seminar room. An additional \$1.5M renovation and expansion of the Sudro Hall small animal research facility is also being planned to accommodate the anticipated future growth in research within the Department of Pharmaceutical Sciences. We are making new discoveries every year and finding ways to improve human health through our biomedical research activities. If you have a research project area or idea you would like to pursue, NDSU would love to partner with you.

The School of Pharmacy continues to focus its outreach efforts on helping the profession of pharmacy advance the knowledge, skills, and practices of pharmacists in the state to benefit the patients they serve. The following is a summary of outreach activities conducted by the Department Pharmacy Practice this past year for the benefit of the profession and North Dakota: (a.) Drs. Mark Strand, Heidi Eukel, Elizabeth Skoy, Jayme Steig, and Amy Werremeyer, along with colleague Oliver Frenzel and several PharmD students greatly expanded the ONE Program which included: pharmacist and pharmacy technician training, reimbursement for services, monthly pharmacy newsletters, and submissions to the NoDak Pharmacy Journal. As of December 1, 2021, 9912 patients across North Dakota have been screened and 42.89% of them were provided one or more of six opioid safety services. The ONE Program has become a model practice for others in the nation and is currently in the process of expansion into West Virginia with additional expansion conversations taking place in other states. The ONE Program has established a medication safety and opioid risk assessment program with nurse home visit programs in 7 counties across ND, CHI Health at Home, and Essentia Health. Additional collaborations have been established with Essentia's Community Paramedics and Sanford's Community Workers to integrate medication safety and opioid risk assessment for every patient. Additionally, the ONE Program pioneered an opioid safety follow-up program which utilizes the pharmacy technician to follow up with all patients prescribed an opioid to ensure safety and assess for misuse or overdose, with over 350 patients receiving services in 4 months. Drs. Slevin and Skoy are currently working on implementing Hepatitis C testing in pharmacies (a pilot) in rural areas of ND, which is an additional area of ONE program expansion. (b.) In addition, the Department of Pharmacy Practice launched the Collaboration and Advancement in Pharmacy (CAP) Center (<https://www.ndsu.edu/centers/cap/>) by holding its inaugural symposium in September. The CAP Center is made up of Pharmacy Practice faculty and it has begun working with pharmacies and many others to help fulfill its mission to *advance patient care and outcomes by providing training, resources, and interventions fostering advancement of pharmacy and collaboration with other healthcare professionals using evidence-based best practices resulting in improved population health outcomes*. The CAP Center in collaboration with the NDSU Center for Immunization Research and Education (CIRE) has sponsored webinars to provide education on COVID-19 immunization and vaccine. (c.) Dr. Daniel Kenzie arranged a client project, in which five students developed educational materials on immunization (COVID boosters, pediatric immunizations, and pneumococcal) for Southpointe Pharmacy in coordination with Dr. Jayme Steig as well as for wider distribution to North Dakota pharmacies. (d.) The CIRE Immunization Grant allowed an NDSU pharmacist to travel across the state to all community pharmacies receiving COVID 19 vaccines from the ND Department of Health. Nearly 5,000 miles were driven to visit 52 pharmacies. Pharmacists and technicians received specific feedback on immunization practices, storage, and handling of vaccines. (e.) Drs. Elizabeth Skoy and Lisa Nagel have worked with the Board of Pharmacy to develop the new protocol for immunization administration. They are also working on adding immunization information to the BOP website. Dr. Skoy has also provided training to pharmacists and technicians to get certified to provide immunizations. In addition, Dr. Skoy has coordinated implementation and distribution of 1815-program funded student scholarships to enhance rural pharmacy initiatives. As a result, 2 NDSU Pharmacy students have implemented collaborative practice agreements during their P4 year Advanced Pharmacy Practice Experiences. (f.) Dr. Jayme Steig and 4th year pharmacy students provided health screenings at Big Iron again in 2021 to provide over 150 health screenings to event attendees. Dr. Steig also collaborated with Valley Senior Services to have P4 students provide Medicare Part D plan reviews during open enrollment. Dr. Steig is also collaborating with NDPhA to start a Facebook group for pharmacists to share best practices. (g.) Dr. Brody Maack assisted the Board of Pharmacy with creating the Tobacco

Cessation Prescribing Protocol and he is currently working with both ND Dept of Health and the Rx for Change program to offer pharmacist training opportunities for tobacco cessation prescribing. Dr. Maack also continues to participate in the ND Dept of Health ND Quits grant program at Family HealthCare, aimed at enhancing tobacco cessation services. He and Dr. Amber Slevin provided tobacco cessation medications and counseling to patients of Family HealthCare. Dr. Maack also participated in a HRSA grant program at Family HealthCare to spearhead a remote patient monitoring program focused on hypertension and home blood pressure monitoring. The program aims to reach over 1,000 Family HealthCare patients in the next 2 years. Dr. Maack also collaborated with faculty at Northeast Ohio Medical University and The Ohio State University to develop a student-focused initiative to provide legislative advocacy experience. (h.) APPE Director Udem facilitated numerous requests for student assistance with immunization/wellness screening clinics for area pharmacies/preceptors. Udem has also worked with the UND School of Medicine to partner pharmacy students with medical students for interprofessional learning activities in rural settings. She has also work with NDSU Extension Services to develop programs that provide services to our North Dakota senior citizens through the Aging in Community Project. (i.) And finally, Dr. Amy Werremeyer partnered with Lighthouse Church of Fargo, ND to provide staff education regarding naloxone and assisting people with understanding psychiatric medications. We are committed to serving our profession and its citizens !

On February 14, 2022, the six-year comprehensive fund-raising campaign to support North Dakota State University called *"In Our Hands"* officially concluded with a campus-wide celebration at the Alumni Center. This University campaign raised a grand total of \$586,651,144 in support of student scholarships, faculty, programs, and Bison Athletics. This University-wide campaign not only set an all-time new fund-raising record for North Dakota State University but it also set a new record for a philanthropic campaign for North Dakota. For the College of Health Professions, the College has continued to receive incredible support from generous donors including alumni, corporate partners, and friends of the College through philanthropic giving! The College had a very successful scholarship awards ceremony in September 2021, awarding \$455,340 to our outstanding students in pharmacy, nursing, allied sciences, and public health. In addition, the College raised a total of \$202,920 from 166 donors in just 24 hours during our 2021 December Annual Giving Day, a \$64,418 increase from the previous year ! The support our students, faculty, and staff receive does not go unnoticed! We are eternally grateful for all your generosity and support. If you are one of the many that have given your time, your talent, or your treasures, WE THANK YOU. If you are interested in learning more about ways to support our many goals and priorities that will take the Bison of today to becoming our future health profession leaders of tomorrow, please contact our new Associate Director of Development, Meghan Yerhot at meghan.yerhot@ndsufoundation.com or by calling 507-440-8081. Meghan Yerhot joined our CHP team in September 2021 after a successful graduate career at North Dakota State University, during her time in graduate school she held many roles as a student advisor, taught various undergraduate courses, and spearheaded many great initiatives to help support students across campus. Her passion for higher education fundraising stems from her own experiences in college and receiving many generous scholarships that made it possible for her to pursue her degree. She is an advocate for Higher Education and believes wholeheartedly the impact it has on our students lives and the communities we serve. With starting in September, Meghan is excited to continue to build relationships and support for our future health professionals at NDSU. She looks forward to working with all of you to continue to support our College of Health Professions and its School of Pharmacy to provide the best education and opportunities for the future! Please join me in welcoming Meghan Yerhot to our CHP team!

The School of Pharmacy also had a very active year with its communications and marketing division under the leadership of Carol Renner, Marketing/Communications Lead. Through December 2021, SOP communications and marketing activities included but were not limited to: creating and distributing more than 82 news releases to state and national media resulting in increasing awareness and visibility of NDSU School of Pharmacy and College of Health Professions; contributing 17 articles to the NoDak Pharmacy Journal newsletter for continuing program updates; garnered coverage of CHP and SOP community outreach activities in regional print and broadcast media with stories about the following: how pharmacy students assisted with vaccination and contact tracing during the pandemic; national awards of pharmacy students and faculty; establishment of the Center for Collaboration and Advancement in Pharmacy; ONE Program opioid education; biomedical research; student and faculty achievements; alumni achievements; program accreditation; new pharmacy admission pathways and other topics. Activities related to marketing, promotional materials and web development included but was not limited to: creating a new NDSU Pharmacy video; creating print and digital advertising and recruitment materials to enhance student recruitment and promote new admissions pathways; promoting Aldevron Tower Open House; creating multimedia materials and advertising for Career Fair, Scholarship Program, Hooding/White Coat/College Awards/Graduation Ceremonies; promoting National Pharmacy Week and National Pharmacists Day; fundraising efforts for NDSU Giving Day; providing newsletters to alumni as well as other outreach materials to implement Advisory Board suggestions. Page followers of the CHP facebook page increased more than 13 percent. Page likes increased just over 9 percent. SOP twitter accounts currently at 256 and 249 followers respectively. Created official chp instagram account with Health Professions Student Ambassadors to offer students' perspective on their programs as a tool for student recruitment. As a result of Carol Renner's outstanding work as our College Marketing/Communications Lead, the following communication awards were received in 2021: (a.) Awarded 1st place from National Federation of Press Women for Giving Day online video campaign. (b.) Received awards from ND Professional Communicators including: 1st for NDSU CHP Giving Day social media campaign; 3rd for "I Am a Nurse" advertising campaign for NDSU Nursing Bismarck, and for NDSU Nursing Thank You video tribute; and honorable mention for news release about NDSU Public Health students contact tracing. Congratulations Carol !

The NDSU School of Pharmacy is currently in the process of evaluating applications for admission to the professional pharmacy program for the 2022 Fall Semester. We have offered admission to 62 students for this coming Fall 2022 Semester. The academic credentials of our incoming class remain strong and compare favorably against other pharmacy programs nationwide. Our pool of traditional applicants is higher than last year, but continues to be less than ideal. This is consistent with national trends, where applicants through PharmCAS have declined consistently and steadily for the past 5 years. The most recent (January 2022) PharmCAS report indicates that, while applications are up 3.6%, the number of applicants is down by 10.9%. This follows a 0.8% increase in applications and a 2.1% decrease in applicants in 2021, a 20.3% decline in applications 2020, an 18% decline in applications in 2019, and a 20% decline in applications in 2018 (all measured in June of each year). We are continuing to revise our recruiting and our admissions practices, as well as our pre-professional curriculum, to ensure that the NDSU pharmacy program has access to a strong, well-qualified applicant pool. Our Early Admissions Pathway (EAP) initiative was implemented in 2018. Students are offered admission to EAP during their first year in college. The 2022 incoming class is the second class that was recruited out of high school using this pathway. Unfortunately, the strain of the COVID pandemic significantly impacted our students, especially our EAP

students. We have currently accepted 62 students (38 EAP, 13 traditional, and 11 post-baccalaureate application) into the fall 2022 cohort. This compares favorably to the 55 students (40 EAP and 15 traditional applicants) accepted into the fall 2021 P1 cohort. The quality of accepted students is comparable to previous years. The average selected GPA was approximately 3.60 in 2022 (compared to 3.71 in 2021, 3.69 in 2020, 3.68 in 2019, 3.69 in 2018, 3.69 in 2017); and the average PCAT score was approximately 45.55% in 2022, compared to 51.11% in 2021, 46.88% in 2020, 54.88% in 2019, 56.85% in 2018, and 54.89% in 2017. Most of our applicants now complete the PCAT exam at the end of their first year in college (and without much of the coursework covered on the exam), and so to score near or at the national median (against college sophomores and juniors) is truly an impressive accomplishment! As noted above, we continue to revise our recruiting and admission practices. Last year, we added two new pathways to our Doctor of Pharmacy program. The first pathway – the Post-Baccalaureate Pathway – is designed for students who hold a bachelor degree in a health field or in a STEM field focusing on the biological, chemical, or physical sciences. Many of these students have met our curricular requirements, albeit in a slightly different manner than our EAP and traditional applicants, and likely discovered an interest in pharmacy during their junior or senior years in college. This pathway provides a more flexible pathway for these students to meet our admission requirements and immediately apply to our program. Moreover, if a student is missing a required course, we allow them to complete the course in the summer prior to their P1 year. The second pathway – the Pharmacy Technician Pathway – is designed for select pharmacy technicians who have previous academic credit and wish to continue their studies and become a pharmacist. The pathway uses the College’s new Bachelor of Science in Health Services program to complete a bachelor degree in a manner that recognizes all previous academic coursework and meet all pharmacy admission requirements. Upon receiving a bachelor degree, these students apply for admission through the Post-Baccalaureate Pathway process. Both of these pathways are currently available, and are positively impacting our current and future admissions pools. As noted above, we accepted 11 post-baccalaureate students into the fall 2022 cohort. We are expanding our marketing initiatives (including those through digital media) to attract applications who are not on the EAP track. As such, expect our applicant pools to slowly and steadily increase over the next few years. Over time we expect to admit incoming classes of 70-75 students per year, with 50-60% of the class being recruited through our EAP program, and another 30% through the Post-Baccalaureate program. We continue to ensure that our student body reflects the region we serve, and are prepared both professionally and academically, for the professional pharmacy program. More specifically, we continue to give preference to students with demonstrated leadership skills; a commitment to community service; completion of some or all pre-professional coursework at a North Dakota University System (NDUS) institution; and residency in North Dakota. Of the 62 students admitted thus far for the Fall 2022 P1 cohort, 26 are from North Dakota. Moreover, we admitted 100% of the applicants who are North Dakota residents and who met all admission requirements. Student tuition and fees for first year professional students enrolled in the pharmacy professional program at NDSU for the current 2021-22 academic year are approximately \$18,101 for the academic year, and approximately \$20,514 for the calendar year (inclusive of summer Introductory Pharmacy Practice Experience credits), compared to much larger tuition and fees charged at other schools regionally and nationally. So NDSU continues to be one of best quality and best value programs for a pharmacy education nationally.

Based on a survey of 85 (98.8%) of our 2021 pharmacy program graduates, the following are the most recent employment statistics of our graduates: 47.6% became licensed in North Dakota, 56.0% became licensed in Minnesota, and 19.0% became licensed in all other states. At the time of graduation, 21.4% of

students received a job offer in North Dakota, 39.3% received a job offer in Minnesota, 7.1% received job offer in all other locations; **32.2% had no job offer (or did not answer this survey question; 2 students) at the time of graduation.** I would like to note in passing that the percentage of students who are licensed in North Dakota is slightly less than the 63.4% in 2020 and the 69.1% in 2019, but is higher than in previous years (37.4% in 2018, and 43.4% in 2017). Similarly, the percent that received an offer of employment in North Dakota is slightly lower than last year (24.4%), but slightly higher than in 2019 (19.1%). The percentage of students without an offer at graduation is comparable to previous years (26.8% in 2020, 32.4% in 2019, and 28.0% in 2018, and 19.7%). With regard to the size of community they will be practicing = (6.0% <5,000; 10.7% between 5,000-14,999; 7.1% between 15,000-24,999; 16.7% between 25,000-99,000 and 28.6% 100,000 and above; and 31.0% no current job offer or did not answer the question), type of practice setting = 8.3% Independent Community Pharmacy; 37.0% Chain Community Pharmacy; 2.4% Health System Pharmacy, 21.4% postgraduate residency and 1.2% in other settings; starting salary = (13.1% <\$50,000; 7.1% between \$50,000-74,000; 16.7% between \$75,000-99,000; 21.4% between \$100,000-124,000; and 7.1% >\$125,000. Note that 4.8% of students did not report a salary because they were paid on a PRN basis). I would like to thank Dr. Daniel Friesner, Senior Associate Dean of the College for conducting this annual survey of graduates and compiling these important statistics for our pharmacy program.

Noteworthy faculty/staff awards from this past year include: School of Pharmacy Awards – Dr. Sanku Mallik Professor of Pharmaceutical Sciences was selected as the recipient of the 2021 School of Pharmacy Teacher of the Year Award; Dr. Amber Slevin, Assistant Professor of Practice in Pharmacy Practice, and clinical pharmacy specialist at Family HealthCare in Fargo, received the 2021 School of Pharmacy Faculty Preceptor of the Year Award; and Dr. Ashlee Anderson, Pharmacist with Sanford Specialty Pharmacy in Fargo, North Dakota received the 2021 School of Pharmacy Adjunct Preceptor of the Year Award. In addition, Drs Jagdish Singh and Kristine Steffen were recently named among the top 100,000 scientists in the world based on an annual report compiled by Stanford University. Dr. Elizabeth Skoy was recognized with the Chamber of Commerce NDSU Distinguished Faculty Service Award during this year's NDSU Faculty Awards Ceremony. Dr. Heidi Eukel received the Generation Rx Award of Excellence from the American Pharmacists Association. Pharmacy alumni Dr. John Wold ('66) and Barb and Mike Jones ('70/'69) were the recipients of the NDSU Foundation's Service Award and Heritage Award respectively, at the 2021 Evening of Distinction Ceremony during Homecoming. Please join me in congratulating these deserving award recipients.

The 2022 NDSU Pharmacy Program Graduation Hooding Ceremony will be held on Friday, May 13th at 10:00 am at Festival Concert Hall on NDSU campus. NDSU will hold its University commencement exercises at the Fargodome on Saturday, May 14th with two ceremonies this year, one at 10:00 am and one at 2:00 pm. The College of Health Professions graduates will be honored at the 2:00 pm ceremony.