

CIPhER 2018-2019 Activities and Achievements

The Center for Innovative Pharmacy Education & Research (CIPhER) provides pharmacy educators and education scholars with innovative, evidence-based professional development programs and consulting. CIPhER's aim is to enhance the quality, effectiveness and efficiency of pharmacy education practice, scholarship and research locally, nationally and globally.

PROGRAMMING SUMMARY

29 professional development programs were offered by CIPhER. **New programming** this year included:

- Preceptor Development, in collaboration with Charlene Williams, Director of Preceptor Development
- Carolina Cancer Nanotechnology T32 training
- Participation in the National Rx Writing Challenge

2 visiting scholars were hosted aimed at increasing the School's understanding and use of Entrustable Professional Activities and Performance Assessment

864 participants, in total, attended CIPhER programs

519 individuals participated in those 29 CIPhER programs, including:

- **62** UNC Eshelman School of Pharmacy faculty:
 - **44** PACE faculty, **8** DPET faculty, **4** DPOP faculty, **3** DPMP faculty, **3** CBMC faculty
- **243** Preceptors
- **54** Faculty from other schools/colleges of pharmacy
- **79** UNC Eshelman School of Pharmacy Residents, Post-Doctoral Fellows, and Graduate Research Assistants
- **42** UNC Eshelman School of Pharmacy PharmD student Teaching Assistants
- **22** UNC Staff (13 from the Eshelman School; 9 from another UNC schools)
- **12** Faculty from other UNC schools
- **5** Students

81-1/4 hours of professional education were provided; including **38 hours of CE** offered through ACPE

28 hours of scholarly support were provided to **21** participants as part of the RxWritingChallenge

CIPhER sessions were rated by participants, overall, as:

- **4.2/5.0** for the **value** of what was learned
- **4.3/5.0** for the **quality** of the sessions
- **4.3/5.0** for the **effectiveness** of the session presenters

RESEARCH SUMMARY

CIPhER designs, implements, presents and publishes original research and scholarship in pharmacy and health sciences education. During 2018-2019 academic year, CIPhER personnel completed:

- **14** peer reviewed publications and **2** invited publications
- **13** conference presentations
- **12** conference posters
- **9** invited talks at other universities/associations, etc. and **2** at UNC (other than Eshelman)
- **1** summer internship program with 5 interns (including 1 YIP intern)

GRANTS and AWARDS SUMMARY: 2018 Eshelman Institute for Innovation Grant, 2018 AHEC Innovations Grant, 2018 AACP Best Graduate Student Poster Award, 2019 PharmAlliance Grant, 2019 UNC Graduate School Grant, 2019 AACP SoTL Grant, 2019 AACP SAS Best Poster Section Award

Appendix: 2018-2019 CIPhER Details

2018-2019 CIPhER Personnel

Jacqui McLaughlin, PhD, Director of CIPhER

Jessica Greene, PharmD, Director of Educational Development (July - November 2018)

Amber Frick, PharmD, PhD, Faculty Fellow (.2 FTE)

Amanda Savage, PharmD, Faculty Fellow (.2 FTE)

Michael Wolcott, PharmD, PhD, Faculty Fellow (starting in January 2018) (.2 FTE)

Susan Charamut, Center Administrator

Amanda Olsen, PhD, Postdoctoral Research Associate, PhD in Statistics, Measurement and Evaluation

Lana Minshew, PhD, Postdoctoral Research Associate, PhD in Education

Karen Chen, Center Assistant (Workstudy), Undergraduate student from UNC – Chapel Hill

Joe Yi, Graduate Research Assistant, DrPH student in the Gillings School of Public Health (September 2018 – May 2019)

Kayley Lyons, PharmD, BCPS, Graduate Research Assistant, Doctoral student in the UNC School of Education (July – December 2018)

Tazim Kalib, Summer Intern, Undergraduate student from Princeton University (June – August 2018)

Laura James, Summer Intern, Professional student from UNC Eshelman School of Pharmacy (June – August 2018)

Skye Zambrano, Summer Intern, Undergraduate student from NC State University (June – August 2018)

Carly Lupton-Smith, Summer Intern, Undergraduate student from Johns Hopkins University (May – July, 2019)

Shuyan Huang, Summer Intern, Professional student from UNC Eshelman School of Pharmacy (June - August 2019)

Devin Greene, Summer Intern, Professional student from UNC Eshelman School of Pharmacy (June – August 2019)

T. Morgan White, Summer Intern, Professional student from UNC, undergraduate (June – August 2019)

Cordelia Hume, YIP Summer Intern, High School Student (July – August 2019)

2018-2019 CIPhER Programs & Events

CIPhER Fridays

Growth Mindset, Lana Minshew, October 26, 2018, 1-2:30 pm

Preparing Students to Communicate about Sensitive Topics with Patients, Lesha Carpenter, November 16, 2018, 1-2:30 pm

A Lightning Round of Innovative Pharmacy Teaching, Assessment, and Education Research, Various School Personnel, December 14, 2018, 1-3 pm

The Future of Interprofessional Education at UNC, Phil Rodgers, January 11, 2019, 12-1:30 pm

Multiple Choice Questions: Do Yours Make the Cut?, Mari-Wells Hedgpeth (NCSU College of Veterinary Medicine), January 18, 2019, 3-4:30 pm

Learning Analytics: Using Course Data to Contribute Towards Student Success, Matthew Bernacki, (UNC School of Education), Michael Wolcott, Robert Plumley (UNC School of Education), March 29, 2019, 12-1:30pm

A Lightning Round of Innovative Pharmacy Teaching, Assessment, and Education Research, Various School Personnel, May 17, 2019, 12-2 pm

Teaching Assistant (TA) Orientation

TA Orientation #1, Amber Frick, August 10, 2018, 12:30–3:30 pm

TA Orientation #2, Jessica Greene, September 21, 2018, 12:30–3:30 pm

Teaching & Learning Certificate Program (TLC; formerly Resident Teaching Certificate Program)

TLC Colloquium #1, Jessica Greene, Amber Frick, Nikki Lobczowski, September 7, 2018, 1–2:30 pm

TLC Colloquium #3, Jacqui McLaughlin, Amber Frick, May 24, 2019, 12–3 pm

Facilitator Training Program

Facilitating Small Groups to Promote Learning and Collaboration, Jacqui McLaughlin & Lana Minshew, January 3, 2019, 10–11 am

Pharmacy Education and Research Community (PERC)

AACP 2018 Debrief, Michael Wolcott, August 27, 2018, 9–10 am

Self-Care and Strategic Planning, Michael Wolcott, September 18, 2018, 12-1:30 pm

Visiting Scholars

Entrustable Professional Activities (EPAs) for Health Professions Training, Olle (Th.J.) ten Cate (University Medical Center Utrecht, The Netherlands), February 12, 2019, 12-1:30 pm

Are You a Fair Grader? Ways to Improve Assessment of Student Performance, Kenneth Royal (NCSU College of Veterinary Medicine), April 26, 2019, 12-1:30 pm

2019 Summer Institute

Evidence-based Teaching and Course Design, Jacqui McLaughlin, Ken Royal, Tom Angelo, Michelle Farland, May 20-23, 2019, 8:30 am-4 pm, UNC Rizzo Center

Carolina Cancer Nanotechnology T32 Training Program [added in 2018-2019]

How to Design a Course and Syllabus, Amanda Olsen, September 10, 2018, 11:30 am-12:50 pm

How to Utilize a Flipped Classroom, Lana Minshew, September 24, 2018, 12-1:30 pm

Collaborative Project-Based Learning, Lana Minshew, February 25, 2019, 12:15-1:45 pm

Creating Authentic Assessments, Amanda Olsen, March 4, 2019, 12:15-1:45 pm

Rx Writing Challenge [added in 2018-2019]

Fall 2018 Rx Writing Challenge, Kayley Lyons, October 15-26, 2018, 8-9 am

Spring 2019 Rx Writing Challenge, Lana Minshew, March 31-April 13, 2019, 8-10 am

Preceptor Design Lab Series, a Collaboration [added in 2018-2019, in collaboration with Director of Preceptor Development and Office of Experiential Programs]

Engineering Your Practice Experiences and Activities to Elevate Every Level of Learner, Charlene Williams, Kayley Lyons, Ian Hollis (UNC Hospitals), Jessica Sinclair (Rx Clinic Pharmacy), Irene Ulrich (MAHEC), November 9, 2018, 12-1:30 pm

Feedback Finesse – Fine-Tuning Feedback for Quality, Charlene Williams, Laura Sjoquist, Michael Wolcott, Brian Donahue, Kathryn Fuller, May 8, 2019, 12-1 pm

Masterclass Sessions [added in 2018-2019]

Incorporation of EPAs Across the Curriculum for Assessment of Student Competency, Olle (Th.J.) ten Cate (University Medical Center Utrecht, The Netherlands), February 12, 2019, 11:45 am-2 pm

Student Wellness and Assessment in Health Professions Education, Kenneth Royal (NCSU College of Veterinary Medicine), April 26, 2019, 2:30-4 pm

Curriculum Focused Hands-On Workshops [added in 2018-2019, in collaboration with Office of Curricular Innovation]

Won't You Take Me to...OSCE-Town! A Hands-On OSCE Workshop, Amanda Savage, May 9, 2019, 9 am-4 pm

Multiple Choice Questions: Do Yours Make the Cut? A Hands-On Workshop, Mari-Wells Hedgpeth (NCSU College of Veterinary Medicine), May 10, 2019, 8:30 am-2:00 pm

2018-2019 CIPhER Publications

As of June 2019, CIPhER staff authored **52** products in the scholarship of education.

Peer Reviewed Publications

Zeeman, J.M., Bush, A.A., Cox, W.C., and **McLaughlin, J.E.** Assessing the co-curriculum by mapping student organization involvement to curricular outcomes using mixed methods. *American Journal of Pharmaceutical Education*. 2019 (published ahead of print). doi:10.5688/ajpe7354.

Minshew LM, McLaughlin JE. What's in a name? Considerations for authorship in pharmacy education. *American Journal of Pharmaceutical Education*. 2019 (in press). doi:10.5688/ajpe7463.

Lyons K, McLaughlin JE, Wolcott MD, Grandy R, and Williams CR. Teaching pharmacist preceptors the one-minute preceptor method to foster students' therapeutic reasoning. *American Journal of Pharmaceutical Education*. 2019 (in press) doi:10.5688/ajpe7212.

McLaughlin JE, Wolcott M, Hubbard D, Umstead K, and Rider TR. A qualitative review of the design thinking framework in health professions education. *BMC Medical Education*. 2019; (1): 98-106. doi:10.1186/s12909-019-1528-8.

Rhodes LA, Marciniak MW, **McLaughlin JE,** Melendez CR, Leadon KI, Pinelli NR. Exploratory analysis of entrustable professional activities as a performance measure during early practice experiences in a doctor of pharmacy program. *American Journal of Pharmaceutical Education*. 2019; 83 (2). doi: 10.5688/ajpe6517.

Olsen AA. Strategies to effectively implement self-assessment techniques. *Currents in Pharmacy Teaching and Learning*. 2019 (in press). doi:10.1016/j.cptl.2019.02.029.

Wolcott MD, Lobczowski N, Lyons K, McLaughlin JE. Design-based research: An iterative and practical approach in pharmacy educational intervention research. *Currents in Pharmacy Teaching and Learning*. 2019; 11(3): 309-318. doi:10.1016/j.cptl.2018.12.002.

Bates JS, Auten J, Sketch MR, Patel T, Clark SM, Morgan KP, Muluneh B, **McLaughlin JE**, Pinelli NR, Foster MC, Amerine L. Patient engagement in first cycle comprehensive chemotherapy consultation pharmacist services and impact on patient activation. *Journal of Oncology Pharmacy Practice*. 2019 June;25(4):896-902. doi: 10.1177/1078155219832644.

Zeeman JM, Kang I, **Angelo TA**. Assessing student academic time use: Assumptions, predictions and realities. *Medical Education*. 2018. doi: 10.1111/medu.13761.

Frick A, Benton C, Suzuki O, Dong O, Howard R, El-Sabae H, Wiltshire T. Implementing clinical pharmacogenomics in the classroom: student pharmacist impressions of an educational intervention including personal genotyping. *Pharmacy*. 2018 Dec; 6(4): 115. doi:10.3390/pharmacy6040115.

McLaughlin JE, Bush AA, Rodgers PT, Scott MA, Zomorodi M, Roth MT. Characteristics of high performing interprofessional teams involving student pharmacists. *American Journal of Pharmaceutical Education*. 2018 (in press). doi: 10.5688/ajpe7095.

Tester CS, **Wolcott MD**. Describing education management and perceptions in health-system pharmacy. *Journal of American College of Clinical Pharmacy*. 2018 (in press). doi: 10.1002/jac5.1045.

DeAngelis JT, **Wolcott MD**. Defining preceptorship: A job analysis to describe the role of the pharmacy preceptor. *American Journal of Pharmaceutical Education*. 2018 (in press). doi:10.5688/ajpe7196.

McLaughlin JE, **Lupton-Smith C**, **Wolcott MD**. Text mining as a method for examining the alignment between educational outcomes and workforce needs. *Education in the Health Professions*. 2018; 1 (2): 55-60. doi:10.4103/EHP.EHP_25_18.

Other Publications

Lyons K, **Minshaw LM**, **McLaughlin JE**. Response to Student and School-level Predictors of Pharmacy Residency Attainment. *American Journal of Pharmaceutical Education*. 2018 October;82(8):7320.

McLaughlin JE. Flipped classrooms, by design. Invited commentary to *Medical Education*. 52(9), 887-888.

Presentations

Frick A. Pharmacogenomics for the pharmacy practitioner. CE presentation at the North Carolina Association of Pharmacists Chronic Care and Health System Conference; February 28, 2019; Chapel Hill, NC.

Wolcott MD, **Lobczowski NG**. They Snooze, We Lose: Strategies to Motivate Learners. CE Presentation at: American Society of Health-Systems Pharmacists (ASHP) Midyear Meeting; December 2-6, 2018; Anaheim, CA.

Wolcott MD, **Lobczowski NG**. Breathe In, Breathe Out: How to Manage Emotions in the Workplace. CE Presentation at: American Society of Health-Systems Pharmacists (ASHP) Midyear Meeting; December 2-6, 2018; Anaheim, CA.

Lyons K, **Lobczowski N**, **Greene JA**, **McLaughlin JE**. Exploring differences between students' motivation processes in collaborative learning in H. Jarvenoja (Chair), Processes matter? Exploring the role of motivation and emotions in the process of learning. Symposium presentation at the International Conference on Motivation of the European Association for Research on Learning and Instruction (EARLI); August 16, 2018; Aarhus, Denmark.

Lyons, K, **Lobczowski N**, **Green JA**, **McLaughlin J**. Exploring differences between students' motivation processes in collaborative learning. In H. Jarvenoja (Chair), Processes matter? Exploring the role of motivation and emotions in the process of learning. Podium presentation at the International Conference on Motivation of the European Association for Research on Learning and Instruction (EARLI); August 2018; Aarhus University, Denmark.

Costelloe M, Brock T, Mak V, Steeb D, Whittelsea C, **Lyons K**. Special session: Emphasizing the 'LAB' in Collaboration—Demonstrating How to Work Together Scientifically Across Cultures. Podium presentation at the American Association of Colleges of Pharmacy (AACP) Meeting; July 23, 2018; Boston, MA.

Lyons K, Brock T, Hubal R, MacDougall C. Special Session: Better, cheaper, faster, easier: The story of four educational technology innovations in pharmacy education. Podium presentation at the American Association of Colleges of Pharmacy (AACP) Meeting; July 22, 2018; Boston, MA.

Wolcott MD, **Lyons K**. Taking your SoTL to the next level: Design-based research. Podium presentation at: American Association of Colleges of Pharmacy (AACP) Meeting; July 21-25, 2018; Boston, MA.

Zeeman J, Medina M, Castleberry A, Franks A, **McLaughlin JE**. Expanding your assessment toolkit: Selection, identification, and evaluation of social, behavioral, and professional competency assessment. Podium presentation at the American Association of Colleges of Pharmacy Annual Meeting; July 2018; Boston, MA.

Alston G, Nguyen M, Cox WC, **McLaughlin JE**. Evidence-based admissions: the search for the best applicants. Podium presentation at American Association of Colleges of Pharmacy Annual Meeting; July, 2018; Boston, MA.

McLaughlin JE, Bush AA, Romanelli F, Persky AM. Winner takes all: Debating the merits of quantitative and qualitative research. Podium presentation at the American Association of Colleges of Pharmacy Annual Meeting; July 2018; Boston, MA.

Zeeman J, Medina M, Castleberry A, Franks A, **McLaughlin JE**. Expanding your assessment toolkit: Selection, identification, and evaluation of social, behavioral, and professional competency assessment. Podium presentation at the American Association of Colleges of Pharmacy Annual Meeting; July 2018; Boston, MA.

Alston G, Nguyen M, Cox WC, **McLaughlin JE**. Evidence-based admissions: the search for the best applicants. Podium presentation at American Association of Colleges of Pharmacy Annual Meeting; July 2018; Boston, MA.

Posters

Olsen AA, Hingtgen SD, **Greene JM**, **McLaughlin JE**. Exploring the feasibility of flipping a PhD course with the same materials designed for a PharmD Course. Poster presented at the North Carolina State University Postdoctoral Research Symposium; May 2019; Raleigh, NC

Olsen AA, Hingtgen SD, **Greene JM**, **McLaughlin JE**. Implementing flipped classroom materials developed for a professional program (PharmD) in a PhD course. Poster presented at PharmAlliance Annual Meeting; February 2019; Melbourne, Australia.

Ma C, Hubard R, Kazim T, **McLaughlin JE**. Case element analysis for automated generation of cases in pharmacy education. Poster presented at the American Society of Health-System Pharmacists Midyear Meeting; December 2018; Anaheim, CA.

Bobbitt L, **McLaughlin J**. Pay to play: The cost of the pre-pharmacy curriculum. Poster presented at the North Carolina Association of Pharmacists Annual Meeting; September 26, 2018; Winston-Salem, NC.

Kim C, Dong O, Howard R, Benton C, Dupuis R, Wiltshire T, **Frick A**. Impact of a pharmacogenomics educational intervention utilizing a next-generation sequencing platform on future pharmacists. Poster presented at North Carolina Association of Pharmacists Annual Convention; September 2018; Winston-Salem, NC.

Rubin D, Dong O, Howard H, Suzuki O, Benton C, Wiltshire T, **Frick A**. Advancing precision medicine: improving attitudes and confidence in pharmacogenomics with educational programming and personalized genotyping. Poster presented at North Carolina Association of Pharmacists Annual Convention; September 2018; Winston-Salem, NC.

Lyons K, **Lobczowski N**, **Green JA**, **McLaughlin JE**. Exploring differences between students' motivation processes in collaborative learning. In H. Jarvenoja (Chair), Processes matter? Exploring the role of motivation and emotions in the process of learning. Poster presented at the International Conference on Motivation of the European Association for Research on Learning and Instruction (EARLI); August, 2018; Aarhus University, Denmark.

Wolcott MD, Zeeman JM, Cox WC, **McLaughlin JE**. The multiple mini interview as an assessment strategy within the first year of a PharmD curriculum. Poster presented at: American Association of Colleges of Pharmacy 2018 Annual Meeting; July 21-25, 2018; Boston, MA.

Wolcott MD, Greene JM. Not so flawless: The impact of item writing flaws in multiple choice examinations. Poster presented at: American Association of Colleges of Pharmacy 2018 Annual Meeting; July 21-25, 2018; Boston, MA.

McLaughlin JE, Bush A, Anderson J, Corbat J, and Lai S. Immersive pharmaceutical sciences research training for high school students through the Young Innovators Program. Poster presented at American Association of Colleges of Pharmacy Annual Meeting; July 2018; Boston, MA.

Patel A, **McLaughlin JE**, Zhang K, Bush A, Jackson A, and Lewis K. Training, confidence, and career goals in underrepresented minority students. Poster presented at American Association of Colleges of Pharmacy Annual Meeting; July 2018; Boston, MA.

Frick A, Harris SC, Anksorus HN, Williams C, Osa L, Rodgers P. Implementing Mental Health First Aid training into the Doctor of Pharmacy curriculum. Poster presented at American Association of Colleges of Pharmacy Annual Meeting; July 2018; Boston, MA.

Invited talks - External

McLaughlin JE. (May, 2019). Beginner's guide to the scholarship of teaching and learning. Invited talk to University of British Columbia Faculty of Pharmaceutical Sciences, Vancouver, Canada.

Hatton Kolpek J, **McLaughlin JE**, Cochran G, Baker WL, Moga D, Snyder ME. Statistical issues & Regulatory and ethical issues. Invited talk at: American College of Clinical Pharmacists, Research and Scholarship Academy Midyear Meeting; April, 2019; St Louis, MO.

McLaughlin JE. Evidence-based curriculum design in pharmacy education. Invited talk at: Pacific University School of Pharmacy; March, 2019; Hillsboro, OR.

McLaughlin JE. Evidence-based course design: Rethinking pedagogy in pharmacy education. Invited talk at: University of Houston College of Pharmacy, Department of Pharmacy Practice and Translational Research; February, 2019; Houston, TX.

Wolcott MD, Lobczowski NG. Breathe In, Breathe Out: How to Manage Emotions in your Workplace. Invited talk at: Carolina Donor Services; October, 2018; Durham, NC.

Hatton Kolpek J, **McLaughlin JE**, Cochran G, Kane-Gill S. Research primer (educational research in clinical pharmacy) & Research basics. Invited talk at: American College of Clinical Pharmacists, Research and Scholarship Academy; October, 2018; Seattle, WA.

McLaughlin JE. Training students for expertise: Research-based strategies. Invited talk at: North Carolina State University College of Veterinary Medicine; September, 2018; Raleigh, NC.

Wolcott MD. Managing your digital footprint. Invited talk at: North Carolina Association of Pharmacists (NCAP) Annual Convention; September 21-22, 2018; Winston Salem, NC.

McLaughlin JE. Innovation in academy. Invited talk at: International Pharmaceutical Federation Annual Congress; September, 2018; Glasgow, Scotland.

Invited talks - Internal

Minshew LM. Teamwork Team Contracts. Invited talk at: Integrative Pharmacotherapy course, UNC School of Pharmacy; January, 2019; Chapel Hill, NC.

McLaughlin JE, Lyons K, and Wolcott M. Teaching adult learners. Invited talk at: UNC School of Medicine Academic Medicine Rotation, UNC School of Medicine; November, 2018; Chapel Hill, NC.