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PERSONAL STATEMENT

My research group aims to develop novel therapeutics at the interface of immunology, engineering, and pharmaceutical sciences. Specifically, we are developing drug delivery systems designed to target and modulate lymphoid organs and the gut microbiome in the context of vaccines and immunotherapies against cancer, infectious pathogens, and autoimmune disorders. Our work focusing on the development of nanotechnologies for vaccination and immunotherapy has been published in *Nature Materials*, *Nature Nano*, *Nature Medicine*, *Nature Biomedical Engineering*, and *Sci Transl Med*. Our work has also led to 27 issued or pending patent applications as well as 3 startup biotech companies.

EDUCATION & TRAINING

- 2008- 2012 **Postdoctoral Associate.** Advisor: Dr. Darrell Irvine
Materials Science & Engineering and Biological Engineering, MIT/HHMI, Cambridge, MA
- 2003- 2008 **Ph.D.**, Bioengineering, Rice University, Houston, TX. Advisor: Dr. Jennifer West
Dissertation: Synthesis of Biomimetic Hydrogels for Neovascularization in vivo.
- 1998- 2002 **B.S.**, Bioengineering, Univ. of California at Berkeley, CA. Advisor: Dr. Song Li & Dr. Luke Lee

POSITIONS & HONORS

Current positions

- 2025-current Interim Chair, Department of Pharmaceutical Sciences, College of Pharmacy, University of Michigan, Ann Arbor, MI
- 2021-current J. G. Searle Professor, Department of Pharmaceutical Sciences, College of Pharmacy, University of Michigan, Ann Arbor, MI (with tenure)
- 2021-current Professor, Department of Biomedical Engineering, College of Engineering, University of Michigan, Ann Arbor, MI
- 2021-current Professor, Department of Chemical Engineering, College of Engineering, University of Michigan, Ann Arbor, MI
- 2021-current Saros Therapeutics, LLC. Co-Founder and Chief Scientific Officer
- 2016-current Member, Graduate Program in Immunology, University of Michigan
- 2016-current EVOQ Therapeutics, LLC. Co-Founder and Chief Scientific Officer
- 2012-current Core Member, BioInterfaces Institute, University of Michigan, Ann Arbor, MI
- 2012-current Member, Comprehensive Cancer Center, University of Michigan

Previous positions

- 2018-2021 John Gideon Searle Associate Professor, Department of Pharmaceutical Sciences, College of Pharmacy, University of Michigan, Ann Arbor, MI (with tenure)
- 2018-2021 Associate Professor, Department of Biomedical Engineering, College of Engineering, University of Michigan, Ann Arbor, MI
- 2012-2018 Assistant Professor, Department of Biomedical Engineering, College of Engineering, University of Michigan, Ann Arbor, MI
- 2012-2018 John Gideon Searle Assistant Professor, Department of Pharmaceutical Sciences, College of Pharmacy, University of Michigan, Ann Arbor, MI
- 2012-2020 Member, Michigan Nanotechnology Institute for Medicine and Biological Sciences
- 2008-2012 Postdoctoral Fellow, Howard Hughes Medical Institute, Prof. Darrell Irvine, MIT, MA
- 2006 Summer research intern, Boston Scientific, Boston, MA

HONORS AND DISTINCTIONS

- 2025 Innovation Champion, University of Michigan
- 2025 Distinguished Graduate Mentor Award, College of Pharmacy, University of Michigan
- 2024 2024 Highly Ranked Scholar by ScholarGPS
- 2023 Samyang Controlled Release Society Award in Honor of Sung Wan Kim

Moon, CV. 1

Halozyme EX2075
Merck v. Halozyme
PGR2025-00017

2023 Controlled Release Society Award Fellow
 2023 The American Institute for Medical and Biological Engineering (AIMBE) Fellow
 2022 Biointerfaces Institute Innovator Award
 2022 Biomedical Engineering Society (BMES) Fellow
 2022 Mid-career Biosciences Faculty Achievement Recognition Award, University of Michigan.
 2019 Winner of Grand Prize in Innovate Michigan Competition for EVOQ Therapeutics
 2018 Emerging Leader Award, American Association of Pharmaceutical Scientists
 2018 Mid-Career Nanotechnology Scientific Award, Applied Nanotech. and Nanosci. Inter. Conf.
 2017-2019 Emerald Foundation Distinguished Investigator Award
 2017 Rice University Outstanding Bioengineering Alumnus Award
 2017 CMBE Young Innovator
 2017 University of Michigan Senior Forbes Scholar
 2016-2019 Department of Defense Career Development Award – Peer Reviewed Cancer Research
 2016-2021 National Science Foundation CAREER Award
 2015-2018 Melanoma Research Alliance Young Investigator Award
 2014-2017 Editorial Board, Annals of Biomedical Engineering
 2014 American Association of Pharmaceutical Scientists New Investigator Award
 2012 American Association of Immunologist Trainee Award
 2012 Recipient of John Gideon Searle Assistant Professorship
 2012-2014 NIH/NIAID K22 Research Scholar Development and Faculty Transition Award
 2011 IEEE-EMBS Harvard Wyss Institute Award for Translational Research
 2010 TERMIS Young Investigator Award
 2008 Mary F.D. Morse Graduate Fellowship Award (for outstanding graduate student research)
 2007 First Place Graduate Student Research Award, American Vascular Biology Organization
 2007 American Society for Investigative Pathology Trainee Award
 2006 Sigma Xi Graduate Student Research Award (for outstanding graduate research)

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIP

2012- Member, American Association of Pharmaceutical Scientists
 2011- Member, American Association of Immunologists
 2009- Member, Controlled Release Society
 2009- Member, American Chemical Society
 2004- Member, Biomedical Engineering Society
 2004- Member, Society for Biomaterials

TECHNOLOGY TRANSFER AND COMMERCIALIZATION

2022 Intrinsic Medicine. Scientific Advisory Board. Technology optioned.
 2021 Saros Therapeutics. Co-Founder and Chief Scientific Officer. Technology optioned.
 2016 EVOQ Therapeutics. Co-Founder and Chief Scientific Officer. Technology licensed.
**In 2021, EVOQ has entered a \$240M license and collaboration agreement with Amgen, Inc. ([LINK](#))*
**In 2022, EVOQ has entered a \$685M license and collaboration agreement with Gilead Sciences, Inc. ([LINK](#))*
 2012 Vedantra Pharmaceuticals (now Elicio Therapeutics). Technology licensed.

PANELS AND SERVICES

2025 NIH, “RFA AI-24-025; Engineering Durable HIV Vaccine Responses”, ad hoc reviewer.
 2025 NIH, “SEP-7: NCI Clinical and Translational Cancer Research”, ad hoc reviewer.
 2024 CDMRP, “Peer Reviewed Cancer Research Program”.
 2024 NIH, “Special Emphasis Panel NIAID-HIV-RFA-AI-24-008”, ad hoc reviewer.
 2024 NIH, “Special Emphasis Panel ZAI1 PP-A C2: Virological Core Laboratory”, ad hoc reviewer.
 2023 NIH, Chairperson “P01: NIAID Special Emphasis Panel ZAI1 KLM-I (J3)”.
 2023 NIH, “P41: NIBIB Special Emphasis Panel”.
 2023 NIH, “Drug and Biologic Therapeutic Delivery (DBTD)”, ad hoc reviewer.
 2022 NIH, “Special Emphasis Panel ZRG1 IDIB-J: Autoimmunity”, ad hoc reviewer.
 2018- American Foundation for Pharmaceutical Education Fellowships.
 2018-2022 NIH, “HIV Immunopathogenesis and Vaccine Development (HIVD)”, Study Section Panel Member.
 2021 NIH, “Special Emphasis Panel P01: NCI Program Project II”.
 2021 CDMRP, “Peer Reviewed Cancer Research Program”.
 2021 NIH, “U19: Integrated Preclinical / Clinical AIDS Vaccine Development Program (IPCAVD)”.
 2021 NIH, “Gene and Drug Delivery (R21, R01) Review Panel.”

2020	NIH, "SEP-2: NCI Clinical and Translational R21 and Omnibus R03", ad hoc reviewer.
2020	NIH, "COVID-19 Emergency Awards (R21, R01) Review Panel".
2019	NIH, "U19: Botanical Dietary Supplements Research Centers", ad hoc reviewer.
2019	NIH, "P01 HIVRAD: HIV Vaccine Research and Design Program", ad hoc reviewer.
2019	NIH, "U01: Immune-oncology translation network", ad hoc reviewer.
2019	NIH, "P30: NCI-designated cancer center", ad hoc reviewer.
2019	CDMRP, "Lung Cancer Research Program", ad hoc reviewer.
2018	NIH, "Innovative Research in Cancer Nanotechnology (ZRG1-IMST-LL 55)", ad hoc reviewer.
2018	NIH, "SBIR Phase I for Methods in Improving HIV Protein Expression (ZAI1-CB-A-C1)", ad hoc reviewer.
2017	NIH, "HIV/AIDS Vaccines (VACC)", ad hoc reviewer.
2017	NIH, "Nanotechnology (NANO)", ad hoc reviewer.
2017	NIH, "Innovation for HIV Vaccine Discovery", ad hoc reviewer.
2017	NIH, "HIV Vaccine Research and Design (HIVRAD, P01)", ad hoc reviewer.
2017	NIH, "AIDS and AIDS-related research (ZRG1-AARR-E)", ad hoc reviewer.
2016	NIH, Center for Scientific Review, "Small Business: Non HIV Microbial Vaccine Research", Special Emphasis Panel, ZRG1 IMM-R(12).
2016	National Science Foundation, Biomedical Engineering Program, ad hoc proposal reviewer.
2016	NIH, Center for Scientific Review, "Innovation for HIV Vaccine Discovery (R01)", Special Emphasis Panel, ZRG1 AARR-P (51) and AARR-K (50).
2016	NIH, Center for Scientific Review, "HIV Vaccine Research and Design (HIVRAD) Program (P01)", Special Emphasis Panel, ZAI1 VV-A (J1).

PEER-REVIEWED PUBLICATIONS (> 18,000 Google Scholar Citations, *h*-index = 61)

https://scholar.google.com/citations?hl=en&user=A_sDT6oAAAAJ

<https://www.ncbi.nlm.nih.gov/myncbi/14u1TxX3D9OQT/bibliography/public/>

(*Authors contributed equally; §Corresponding or Co-corresponding authors; Trainees are underlined)

- Zheng F, Zhang S, Chang AE, **Moon JJ**, Wicha MS, Wang SW, Chen J, Liu J, Cheng F, Li Q. Breaking Immunosuppression to Enhance Cancer Stem Cell-Targeted Immunotherapy. 21, 4, 1819-1836, 2025. **Int. J Biol Sci.**
- Ahn J, Kim B, Bello AB, **Moon JJ**, Ara Y, SH Lee. Regenerative Functions of Regulatory T Cells and Current Strategies Utilizing Mesenchymal Stem Cells in Immunomodulatory Tissue Regeneration. 22, 2, 167-180, 2025. **Tissue Eng Regn Med.**
- Zheng F, Zhang S, Chang AE, **Moon JJ**, Wicha MS, Wang SW, Chen J, Liu J, Cheng F, Li Q. Breaking Immunosuppression to Enhance Cancer Stem Cell-Targeted Immunotherapy. 21, 4, 1819-1836, 2025. **Int. J Biol Sci.**
- Takahashi M§, Mukhamejanova D, Jasewicz H, Acharya N, **Moon JJ**§, Hara T§. Opportunities to Modulate Tumor Ecosystem Toward Successful Glioblastoma Immunotherapy. 116, 6, 1482-1499, 2025. **Cancer Sci.**
- Han K*, Xie F*, Animasahun O, Nenwani M, Kitamoto S, Kim Y, Phoo MT, Xu J, Wuchu F, Omoloja K, Achreja A, Choppara S, Li Z, Gong W, Cho YS, Dobson H, Ahn J, Zhou X, Huang X, An X, Kim A, Xu Y, Wu Q, Lee SH, O'Konek JJ, Xie Y, Lei YL, Kamada N, Nagrath D, **Moon JJ**§. Inulin-gel-based oral immunotherapy remodels the small intestinal microbiome and suppresses food allergy. 23, 1444-1455, 2024. **Nature Materials**
- Sun S§, Zhou X, Shi X, Abed OA, An X, Lei YL, **Moon JJ**§. Strategies for the development of metalloimmunotherapies. 8, 1073-1091, 2024. **Nature Biomedical Engineering**
- Nam J*, Kim A*, Kim K*, Moon JH, Baig J, Phoo M, **Moon JJ**§, Son S§. Engineered polysaccharides for controlling innate and adaptive immune responses. 2, 733-751, 2024. **Nature Reviews Bioengineering**
- Cho YS*, Han K*, Xu J, **Moon JJ**§, Novel strategies for modulating the gut microbiome for cancer therapy. 210, 115332 2024, **Advanced Drug Delivery Reviews**.
- Sun X, Huang X, Park KS, Zhou X, Kennedy AA, Pretto CD, Wu Q, Wan Z, Xu Y, Gong W, Sexton JZ, Tai AW, Lei YL, **Moon JJ**§. Self-Assembled STING-Activating Coordination Nanoparticles for Cancer Immunotherapy and Vaccine Applications. 18, 10439-10453, 2024. **ACS Nano**.

10. Aikins ME, Sun X, Dobson H, Zhou X, Xu Y, Lei YL, Moon JJ[§]. STING-activating cyclic dinucleotide-manganese nanoparticles evoke robust immunity against acute myeloid leukemia. 368, 768-779, 2024. **Journal of Controlled Release**.
 11. Jang Y*, Cho YS*, Kim A, Zhou X, Kim Y, Wan Z, Moon JJ[§], Park H[§]. CXCR4-Targeted Macrophage-Derived Biomimetic Hybrid Vesicle Nanoplatform for Enhanced Cancer Therapy through Codelivery of Manganese and Doxorubicin. 16, 14, 17129-17144, 2024. **ACS Applied Materials and Interfaces**.
 12. Shinn J, Park S, Lee S, Park N, Kim S, Hwang S, **Moon JJ**, Kwon Y, Lee Y. Antioxidative Hyaluronic Acid-Bilirubin Nanomedicine Targeting Activated Hepatic Stellate Cells for Anti-Hepatic-Fibrosis Therapy. 18, 6, 4704-4716, 2024. **ACS Nano**.
 13. Han K*[§], Xu J*, Xie F*, Crowther J, Moon JJ[§]. Engineering strategies to modulate the gut microbiome and immune system. 212, 2, 208-215, 2024, **Journal of Immunology**.
 14. Han K*, Cho YS*, Moon JJ[§]. Antibiotic nanoparticles boost antitumor immunity. doi.org/10.1038/s41587-023-02046-6, 2023. **Nature Biotechnology**. (News and Views)
 15. Kim A*, Xie F*, Abed OA, Moon JJ[§]. Vaccines for immune tolerance and autoimmune disease. 203, 115140, 2023, **Advanced Drug Delivery Reviews**.
 16. Lee Y[§], Shinn J, Xu C, Dobson HE, Neamati N, **Moon JJ**[§]. Hyaluronic acid-bilirubin nanomedicine-based combination chemoimmunotherapy. 14, 1, 4771, 2023, **Nature Communications**.
 17. Sun X, Zhou X, Lei YL, Moon JJ. Unlocking the promise of systemic STING agonist for cancer immunotherapy. 357, 417-421, 2023. **Journal of Controlled Release**.
 18. Jang Y, Kim A, **Moon JJ**, Lee JY, Park H. Novel bioengineering strategies for drug delivery systems. 1, 33, 101834, 2023. **Applied Materials**.
 19. Pearson RM, Acharya AP, **Moon JJ**. Emerging immunotherapeutics for immune activation and tolerance. doi: 10.1007/s13346-023-01352-5, 2023. **Drug Deliv Transl Res**. (Editorial)
 20. Xu C, Dobson HE, Yu M, Gong W, Sun X, Park KS, Kennedy A, Zhou X, Xu J, Xu Y, Tai AW, Lei YL, Moon JJ. STING agonist-loaded mesoporous manganese-silica nanoparticles for vaccine applications. 357, 84-93, 2023, **Journal of Controlled Release**.
 21. Saud KT*[§], Xu J*, Wilkanowicz S, He Y, Moon JJ, Solomon MJ[§]. Electrospayed microparticles from inulin and poly (vinyl) alcohol for colon targeted delivery of prebiotics. 140, 108625, 2023, **Food Hydrocolloids**.
 22. Son S[§]*, Nam J*, Kim AS, Ahn J, Park KS, Phoo MT, Sherren B, Zou W, Lee SH, Farokhzad OC, Shi J, **Moon JJ**[§]. Induction of T-helper-17-cell-mediated anti-tumour immunity by pathogen-mimicking polymer nanoparticles. 7, 1, 72-84, 2023, **Nature Biomedical Eng**.
- ** Featured by Nature Biomedical Eng.** News and Views, 7, 6–7, 2023.
23. Heath BR, Gong W, Taner HF, Brodes L, Okuyama K, Cheng W, Jin M, Fitzsimonds ZR, Manousidaki A, Wu Y, Zhang S, Wen H, Chinn SB, Bartee E, Xie Y, **Moon JJ**, Lei YL. Saturated fatty acids dampen the immunogenicity of cancer by suppressing STING. 42, 4, 112303, 2023, **Cell Reports**.
 24. Aikins ME, Qin Y, Dobson HE, Najafabadi AH, Lyu K, Yu Y, Xin Y, Schwendeman A, Wicha M, Chang AE, Li Q[§], **Moon JJ**[§]. Cancer stem cell antigen nanodisc cocktail elicits anti-tumor immune responses in melanoma, 351, 872-882, 2022, **Journal of Controlled Release**.
 25. Abed OA, Atlassy Y, Xu J, Han K, Moon JJ[§]. Emerging Nanotechnologies and Microbiome Engineering for the Treatment of Inflammatory Bowel Disease. 19, 12, 4393-410, 2022, **Molecular Pharmaceutics**.
 26. Okeke EB[§], Louttit C, Snyder CM, **Moon JJ**[§]. Neutrophils and neutrophil extracellular traps in cancer: promising targets for engineered nanomaterials. Oct 2, 1-14. 2022, **Drug Deliv Transl Res**.

27. Chan JF, Oh YJ, Yuan S, Chu H, Yeung ML, Canena D, Chan CC, Poon VK, Chan CC, Zhang AJ, Cai JP, Ye ZW, Wen L, Yuen TT, Chik KK, Shuai H, Wang Y, Hou Y, Luo C, Chan WM, Qin Z, Sit KY, Au WK, Legendre M, Zhu R, Hain L, Seferovic H, Tampe R, To KK, Chan KH, Thomas DG, Klausberger M, Xu C, **Moon JJ**, Stadlmann J, Penninger JM, Oostenbrink C, Hinterdorfer P, Yuen KY, Markovitz DM. A molecularly engineered, broad-spectrum anti-coronavirus lectin inhibits SARS-CoV-2 and MERS-CoV infection in vivo. 100774, 2022, **Cell Rep Med**.
 28. Ahn J, Arai Y, Kim BJ, Seo YK, **Moon JJ**, Shin DA, Choi, B, Lee SH. Combinatorial physicochemical stimuli in the three-dimensional environment of a hyaluronic acid hydrogel amplify chondrogenesis by stimulating phosphorylation of the Smad and MAPK signaling pathways. 14, 46, 2022, **NPG Asia Materials**.
 29. Liao F, Zhang J, Hu Y, Najafabadi AH, **Moon JJ**, Wicha MS, Kaspo B, Whitfield J, Chang AE, Li Q. Efficacy of an ALDH peptide-based dendritic cell vaccine targeting cancer stem cells. doi: 10.1007/s00262-021-03129-6, 2022, **Cancer Immunol Immunotherapy**.
 30. Lee Y[§], Kamada N, **Moon JJ[§]**. Oral nanomedicine for modulating immunity, intestinal barrier functions, and gut microbiome. 114021 2021, **Advanced Drug Delivery Reviews**.
 31. Sun X, Zhang Y, Li J, Park KS, Han K, Zhou X, Xu Y, Nam J, Xu J, Shi X, Wei L, Lei YL, **Moon JJ[§]**. Amplifying STING Activation by Cyclic Dinucleotide-Manganese Particles for Local and Systemic Cancer Metalloimmunotherapy. 16, 1260-1270, 2021, **Nature Nanotech**.
 32. Han K, Nam J, Xu J, Sun X, Huang X, Animasahun O, Achreja A, Joen JH, Pursley B, Kamada N, Chen GY, Nagrath D, **Moon JJ[§]**. Generation of systemic antitumour immunity via the in situ modulation of the gut microbiome by an orally administered inulin gel. 5, 1377-1388, 2021, **Nature Biomedical Eng**.
- ** Featured by National Institute of Biomedical Imaging and BioEngineering (NIBIB) [Science Highlights](#)**
- ** Featured by Highlighted by [Faculty Opinions \(F1000\)](#)**
33. Schardt JS, Pornnoppadol G, Desai AA, Park KS, Zupancic JM, Makowski EK, Smith MD, Chen H, Garcia de Mattos Barbosa M, Cascalho M, Lanigan TM, **Moon JJ**, Tessier PM. Discovery and characterization of high-affinity, potent SARS-CoV-2 neutralizing antibodies via single B cell screening. 11, 1, 1-16, 2021, **Scientific Reports**.
 34. Najafabadi AH, Abadi ZI, Aikins ME, Foulds KE, Donaldson MM, Yuan W, Okeke EB, Nam J, Xu Y, Weerappuli P, Hetrick T, Adams D, Lester PA, Salazar AM, Barouch DH, Schwendeman A, Seder RA, **Moon JJ[§]**. Vaccine nanodiscs plus polyICLC elicit robust CD8 T cell responses in mice and non-human primates. 337, 168-178, 2021, **Journal of Controlled Release**.
 35. **Moon JJ[§]**, De Geest B, Sun X. Next Generation Immunotherapies – Emerging Strategies for Immune Modulation against Cancer, Infections, and Beyond. doi.org/10.1002/adtp.202100157, 2021, **Advanced Therapeutics. (Editorial)**
 36. Nam J, Son S, Park KS, **Moon JJ[§]**. Photothermal therapy combined with neoantigen cancer vaccination for effective immunotherapy against large established tumors and distant metastasis. 2100093, 2021, **Advanced Therapeutics**.
 37. Park KS*, Nam J*, Son S, **Moon JJ[§]**. Personalized combination nano-immunotherapy for robust induction and tumor infiltration of CD8+ T cells, 274, 120844, 2021, **Biomaterials**.
 38. Alghamri MS, McClellan BL, Hartlage MS, Haase S, Faisal SM, Thalla R, Dabaja A, Banerjee K, Carney SV, Mujeeb AA, Olin MR, **Moon JJ**, Schwendeman A, Lowenstein PR, Castro MG. Targeting Neuroinflammation in Brain Cancer: Uncovering Mechanisms, Pharmacological Targets, and Neuropharmaceutical Developments. 12:680021, 2021, **Front. Pharmacology**.
 39. Garcia-Fabiani MB, Haase S, Comba A, Carney S, McClellan B, Banerjee K, Alghamri MS, Syed F, Kadiyala P, Nunez FJ, Candolfi M, Asad A, Gonzalez N, Aikins ME, Schwendeman A, **Moon JJ**, Lowenstein PR, Castro MG. Genetic Alterations in Gliomas Remodel the Tumor Immune Microenvironment and Impact Immune-Mediated Therapies. 11: 631037, 2021, **Front Oncol**.

40. Li G, Kryczek I, Nam J, Li X, Li S, Li J, Wei S, Grove S, Vatan L, Zhou J, Du W, Lin H, Wang T, Subramanian C, **Moon JJ**, Cieslik M, Cohen M, Zou W. LIMIT is an immunogenic lncRNA in cancer immunity and immunotherapy, 23, 526-537, 2021, **Nat. Cell Biol.**
41. Park KS*, Sun X*, Aikins ME*, **Moon JJ**[§]. Non-viral COVID-19 vaccine delivery systems, 169, 137-151, 2021, **Advanced Drug Delivery Reviews.**
42. Nam J, Son S, Park KS, **Moon JJ**[§]. Modularly programmable nanoparticle vaccine based on polyethyleneimine for personalized cancer immunotherapy, 8, 5:2002577, 2021, **Advanced Science.**
43. Arai Y, Choi B, Kim BJ, Park S, Park H, **Moon JJ**, Lee SH. Cryptic ligand on collagen matrix unveiled by MMP13 accelerates bone tissue regeneration via MMP13/Integrin α 3/RUNX2 feedback loop, S1742-7061, 21, 00137-9, 2021, **Acta Biomater.**
44. Yuan W, Yu B, Yu M, Kuai R, Morin EE, Wang H, Hu D, Zhang J, **Moon JJ**, Chen YE, Guo Y, Schwendeman A. Synthetic high-density lipoproteins delivering liver X receptor agonist prevent atherosclerosis by enhancing reverse cholesterol transport. 329:361-371, 2020, **Journal of Controlled Release.**
45. Park KS, Bazzill JD, Son S, Nam J, Shin SW, Ochyl LJ, Meagher JL, Chang L, Stuckey JA, Song J, Montefiori DC, LaBranche CC, Smith JL, Xu J, **Moon JJ**[§]. Lipid-based vaccine nanoparticles for induction of humoral immune responses against HIV-1 and SARS-CoV-2. 330:529-539, 2021, **Journal of Controlled Release.**
46. Chen XS, **Moon JJ**, Cheon J. New Opportunities in Cancer Immunotherapy and Theranostics. 53, 12:2763-2764, 2020, **Accounts of Chemical Research.** (Editorial)
47. Aikins ME, Xu C, **Moon JJ**[§]. Engineered Nanoparticles for Cancer Vaccination and Immunotherapy. 53, 10:2094-2105, 2020, **Accounts of Chemical Research.**
48. Kadiyala P, Carney SV, Gauss JC, Garcia-Fabiani MB, Haase S, Alghamri MS, Núñez FJ, Liu Y, Yu M, Taher AW, Nunez FM, Li D, Edwards MB, Kleer CG, Appelman H, Sun Y, Zhao L, **Moon JJ**, Schwendeman A, Lowenstein PR, Castro MG. Inhibition of 2-hydroxyglutarate elicits metabolic reprogramming and mutant IDH1 glioma immunity in mice. 131, 4, e139542, 2020, **Journal of Clinical Investigation.**
49. Zhou X, Jing X, Qu, M, Aninwene GE, Jacaud V, **Moon JJ**, Gu Z, Sun W, Khademhosseini A. Engineering Antiviral Vaccines. 14, 10:12370-12389, 2020, **ACS Nano.**
50. Hassani Najafabadi A*, Zhang J*, Aikins ME, Najaf Abadi ZI, Liao F, Qin Y, Okeke EB, Scheetz LM, Nam J, Xu Y, Adams D, Lester P, Hetrick T, Schwendeman A, Wicha MS, Chang AE, Li Q[§], **Moon JJ**[§]. Cancer Immunotherapy via Targeting Cancer Stem Cells Using Vaccine Nanodiscs. 20, 10:7783-7792, 2020, **Nano Letters.**
51. Xu C, Hong H, Lee Y, Park KS, Sun M, Wang T, Aikins ME, Xu Y, **Moon JJ**[§]. Efficient Lymph Node-Targeted Delivery of Personalized Cancer Vaccines with Reactive Oxygen Species-Inducing Reduced Graphene Oxide Nanosheets. 14, 10:13268-13278, 2020, **ACS Nano.**
52. Park KS, Xu C, Sun X, Louittit C, **Moon JJ**[§]. Improving STING Agonist Delivery for Cancer Immunotherapy Using Biodegradable Mesoporous Silica Nanoparticles. 3, 10, 2000130, 2020, **Advanced Therapeutics.**
53. Kuai R*, Singh PB*, Sun X*, Xu C, Najafabadi Hassani A, Scheetz L, Yuan W, Xu Y, Hong H, Keskin DB, Wu CJ, Jain R, Schwendeman A[§], **Moon JJ**[§]. Robust Anti-Tumor T Cell Response with Efficient Intratumoral Infiltration by Nanodisc Cancer Immunotherapy. 3, 9, 2000094, 2020, **Advanced Therapeutics.**
54. Habibi N, Christau S, Ochyl LJ, Fan Z, Hassani Najafabadi A, Kuehnhammer M, Zhang M, Helgeson M, von Klitzing R, **Moon JJ**, Lahann J[§]. Engineered Ovalbumin Nanoparticles for Cancer Immunotherapy. 3, 10, 2000100, 2020, **Advanced Therapeutics.**
55. Scheetz L*, Kadiyala P*, Sun X*, Son S, Najafabadi AH, Aikins, M, Lowenstein PR, Schwendeman A[§], Castro MG[§], **Moon JJ**[§]. Synthetic high-density lipoprotein nanodiscs for personalized immunotherapy against gliomas. 26, 16, 4369-4380, 2020, **Clinical Cancer Research.**

56. [Scheetz L](#), Yu M, Li D, Castro MG, **Moon JJ**[§], Schwendeman A[§]. Synthetic HDL Nanoparticles Delivering Docetaxel and CpG for Chemoimmunotherapy of Colon Adenocarcinoma. 21, 5, 1777, 2020, **Int. J. Mol. Sci.**
57. Garcia-Fabiani MB, Ventosa M, Comba A, Candolfi M, Nicola Candia AJ, Alghamri M, Kadiyala P, Carney S, Faisal SM, Schwendeman A, **Moon JJ**, [Scheetz L](#), Lahann J, Mauser A, Lowenstein PR, Castro MG. Immunotherapy for gliomas: shedding light on progress in preclinical and clinical development. 29, 7, 659-684, 2020, **Expert Opin Investig Drugs.**
58. [Okeke EB](#), [Louttit C](#), Fry C, [Najafabadi AH](#), Han K, Nemzek J[§], **Moon JJ**[§]. Inhibition of neutrophil elastase prevents neutrophil extracellular trap formation and rescues mice from endotoxic shock. 238, 119836, 2020, **Biomaterials.**
59. [Son S*](#), [Nam J*](#), Zenkov I, [Ochyl LJ](#), Xu Y, [Scheetz L](#), Shi J, Farokhzad OC[§], **Moon JJ**[§]. Sugar-Nanocapsules Imprinted with Microbial Molecular Patterns for mRNA Vaccination. 20, 3, 1499-1509, 2020, **Nano Letters.**
60. Draijer C, Speth JM, Penke LRK, Zaslona Z, [Bazzill JD](#), Lugogo N, Huang YJ, **Moon JJ**, Peters-Golden M. Resident alveolar macrophage-derived vesicular SOCS3 dampens allergic airway inflammation. 34, 3, 4718-4731, 2020, **FASEB J.**
61. Altshuler DB, Kadiyala P, Nuñez FJ, Nuñez FM, Carney S, Alghamri MS, Garcia-Fabiani MB, Asad AS, Nicola Candia AJ, Candolfi M, Lahann J, **Moon JJ**, Schwendeman A, Lowenstein PR, Castro MG. Prospects of biological and synthetic pharmacotherapies for glioblastoma. 20, 3, 305-317, 2020, **Expert Opin Biol Ther.**
62. [Lee Y](#), Sugihara K, Gilliland MG 3rd, Jon S, Kamada N, **Moon JJ**[§]. Hyaluronic acid–bilirubin nanomedicine for targeted modulation of dysregulated intestinal barrier, microbiome and immune responses in colitis. 19, 1, 118-126, 2020, **Nature Materials.**
- ** Featured by [Nature Materials: News and Views](#), 1, 3-4, 2020.**
- ** Featured by [New England Journal of Medicine](#), 383, 7, 684-686, 2020.**
63. Chen Z, Wholey WY, [Hassani Najafabadi A](#), **Moon JJ**, Grigorova I, Chackerian B, Cheng W. Self-Antigens Displayed on Liposomal Nanoparticles above a Threshold of Epitope Density Elicit Class-Switched Autoreactive Antibodies Independent of T Cell Help. 1801677, 2019, **J Immunology.**
64. Speth JM, Penke LR, [Bazzill JD](#), [Park KS](#), de Rubio RG, Schneider DJ, Ouchi H, **Moon JJ**, Keshamouni VG, Zemans RL, Lama VN, Arenberg DA, Peters-Golden M. Alveolar macrophage secretion of vesicular SOCS3 represents a platform for lung cancer therapeutics. 4, 20, 131340, 2019, **JCI Insight.**
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INVITED SEMINARS/PRESENTATIONS

1. Food as Medicine Across the World: Prebiotics, Probiotics, and Postbiotics. Georgetown University, 2025. (virtual).
2. 10th Annual Arrowhead Translational Microbiome Conference, Boston, MA, 2025.
3. Department of Chemical and Biomolecular Engineering, UIUC, Urbana-Champaign, IL, 2025.
4. AIMBE Translational Nanotechnology Symposium, Washington DC, 2025.
5. Koch Institute for Integrative Cancer Research, MIT, Cambridge, MA, 2025.
6. Department of Bioengineering, University of California, Berkeley, CA, 2024.

7. Keynote Presentation, Research Day, University of Illinois Chicago College of Pharmacy, Chicago, IL, 2024.
8. Advances in Drug Delivery Technologies for Bioavailability Enhancement, Ascendia Pharma, Princeton, NY, 2024.
9. CRI-ENCI Eighth International Cancer Immunotherapy Conference, Washington DC, 2024.
10. Science, AAAS, Microbiome Webinar, 2024. (virtual)
11. Immune-Oncology 360, Webinar, 2024. (virtual)
12. NanoKorea, Kintex, South Korea, 2024.
13. Department of Biomedical Sciences, Inha University, South Korea, 2024.
14. College of Medicine, Kyungpook University, South Korea, 2024.
15. Department of Biomedical Sciences, Inha University, South Korea, 2024.
16. Department of Environmental Science & Ecological Engineering, Korea University, South Korea, 2024.
17. Department of Biomedical Engineering, Dongguk University, South Korea, 2024.
18. College of Pharmacy, Chonnam University, South Korea, 2024.
19. 12th World Biomaterials Congress, Daegu, South Korea, 2024.
20. Annual Basic Science Retreat, Rogel Cancer Center, University of Michigan, Ann Arbor, MI, 2024.
21. Drug Formulation Division, Millipore Sigma, 2024. (virtual)
22. Department of Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA, 2024.
23. Immune-Oncology 360, New York, NY, 2024
24. Joint institute for Translational and Clinical Research, Michigan Medicine and Peking University, 2024. (virtual)
25. BAM for the Cure 2024: Bioengineering in Cancer Summit, Moffitt Cancer Center, Tampa, FL, 2024.
26. Biointerfaces Institute, Spatial Transcriptomics Workshop, Ann Arbor, MI, 2024.
27. Biomedical Engineering Society Annual Meeting, Seattle, WA, 2023. (Keynote presentation)
28. Department of Immunology, Stanford University, Palo Alto, CA, 2023.
29. College of Pharmacy, Arizona State University, Tucson, AZ, 2023.
30. Department of Biology, Northeastern University, Boston, MA, 2023. (virtual)
31. College of Pharmacy, Ewha University, Korea, 2023.
32. College of Pharmacy, Chonnam University, Korea, 2023.
33. Department of Material Sciences and Engineering, Seoul National University, Korea, 2023.
34. Department of Biological Sciences, Inha University, Korea, 2023.
35. Controlled Release Society Annual Meeting, Las Vegas, NV, 2023 (Award presentation)
36. Gordon Research Conference on Preclinical form and formulation, Mount Snow, VT, 2023

37. Major Symposium. American Association of Immunologists Annual Meeting, Washington DC, 2023.
38. Head and Neck Oncology Program Annual Retreat, University of Michigan, Ann Arbor, 2023.
39. American Association of Immunologists Annual Meeting, Washington DC, 2023.
40. Department of Biomedical Engineering, Purdue University, 2023.
41. International Flavors & Fragrances, Inc., 2023.
42. Department of Chemistry, Miami University, 2023.
43. Society for Biomaterials Annual Meeting, San Diego, CA, 2023.
44. Todd Symposium, University of Kentucky, 2023.
45. 10th year Biointerfaces Institute Meeting, University of Michigan, Ann Arbor, 2022.
46. Bristol Myers Squibb, 2022. (Virtual)
47. Merck & Co., Inc., 2022. (Virtual)
48. Pfizer, Inc., 2022. (Virtual)
49. Department of Bioengineering, University of Pennsylvania, 2022.
50. SungKyunKwan University, Korea, 2022.
51. Dongguk University, Korea, 2022.
52. Institute of Bioengineering of the Swiss Federal Institute of Technology in Lausanne, Switzerland, 2022.
53. K-BioX Global Class Seminar, 2022. (Virtual)
54. Department of Biomedical Engineering, Johns Hopkins University, Baltimore, Maryland, 2022.
55. The Korean Society of Biomaterials, Korea, 2022. (Virtual)
56. B & T Cell-Mediated Autoimmune Disease, Boston, MA, 2022.
57. 52nd Annual Pharmaceuticals Graduate Students Research Meeting, Omaha, Nebraska, 2022. (Keynote Speaker)
58. The Landscape of Cancer Research, 2022. (Virtual)
59. 5th Antigen-specific Immune Tolerance Drug Development, 2022. (Virtual)
60. University of Michigan Head and Neck Cancer Symposium, 2022. (Virtual)
61. The Polymer Society of Korea, Seoul, Korea, 2022. (Virtual)
62. Department of Bioengineering, UCLA, Los Angeles, CA, 2022.
63. University of Michigan Rogel Cancer Center Technology Showcase, 2022. (Virtual)
64. Amirkabir University of Technology Winter School, Iran, 2022. (Virtual)
65. Biomedical Engineering Symposium, US-Korea Conference, Los Angeles, CA, 2021.
66. Michigan Medicine and Peking University Joint Institute Bridging Conference – Cancer Immunology, 2021. (Virtual)

67. 3rd Annual Immune Modulation & Engineering Symposium, Drexel University, 2021. (Virtual)
68. Center for Targeted Therapeutics and Translational Nanomedicine 10th Annual CT3N Symposium 2021, University of Pennsylvania, 2021. (Virtual)
69. Department of Cancer Immunology & Virology, Dana-Faber Cancer Institute, Harvard Medical School, 2021. (Virtual)
70. The Korean Society of Pharmaceutical Sciences and Technology Annual Meeting and International Conference, 2021. (Virtual)
71. Department of Materials Science and Engineering, Drexel University, 2021. (Virtual)
72. Terasaki Institute, 2021. (Virtual)
73. Yuhan Corporation, Korea, 2021. (Virtual)
74. BioInnovations in Brain Cancer Seminar, University of Michigan, Ann Arbor, 2021.
75. Department of Biomedical Engineering, Department of Chemical Engineering, University of Florida, 2021. (Virtual)
76. 14th Annual Meeting of Korean Society of Medical Oncology, Korea, 2021. (Virtual)
77. Controlled Release Society Annual Meeting, 2021. (Virtual)
78. Nano Korea Symposium, Korea, 2021. (Virtual)
79. The University of Michigan Cancer & Microbes Monthly Seminar, Ann Arbor MI, 2021. (Virtual)
80. National Taiwan University School of Pharmacy Research Day and International Conference, Taiwan, 2021. (Virtual)
81. The University of Michigan Biomedical Engineering Symposium, Ann Arbor MI, 2021. (Virtual)
82. The University of Michigan Center for Gastrointestinal Research Winter Retreat, Ann Arbor MI, 2021. (Virtual)
83. Materials Research Society, USA, 2021. (Virtual)
84. The Pharmaceutical Society of Korea Conference, Korea, 2021. (Virtual)
85. SungKyunKwan University, Korea, 2021. (Virtual)
86. Ask the EXPERTS, Controlled Release Society, Panelist, 2021 (Virtual)
87. Environmental Science & Ecological Engineering, Korea University, Korea, 2021. (Virtual)
88. Korea Institute of Science and Technology, Korea, 2020. (Virtual)
89. Dongguk University, Korea, 2020. (Virtual)
90. Seminars in Immunology, University of California, Irvine, CA, 2020. (Virtual)
91. The Korean Society for Biomaterials, South Korea, 2020. (Virtual)
92. Department of Pharmaceutics, Virginia Commonwealth University, VA, 2020. (Virtual)
93. NIH-NCI Glycans, Microbes & Cancer Workshop, MI, 2020. (Virtual)
94. BSI Symposium on SARS-CoV-2 and COVID-19. University of Michigan, MI, 2020. (Virtual)
95. Department of Biomedical Engineering, Duke University, NC, 2020.

96. Korean American Scientists and Engineers Association, invited by students for the annual IGNITE symposium, University of Michigan, MI, 2019.
97. T32 Gastrointestinal Basic and Translational Research Conference, University of Michigan, MI, 2019.
98. Bioengineering & Translational Medicine Conference, Durham, NC, 2019.
99. Gordon Research Conference: Cancer Nanotechnology, Dover, VT, 2019.
100. Department of Biomedical Engineering, Michigan State University, Lansing, MI, 2019.
101. University of Michigan Rogel Cancer Center Symposium, Ann Arbor, MI, 2019.
102. CIMT: Cancer Immunotherapy Conference, Mainz, Germany, 2019.
103. Center for Nanotechnology in Drug Delivery, Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, 2019.
104. Biomedical Engineering Symposium, US-Korea Conference, Chicago, IL, 2019.
105. Korean-American Scientists and Engineers Association: Academic Career Seminar. Ann Arbor, MI, 2019.
106. Cellular and Biotechnology Training Program Symposium, University of Michigan, Ann Arbor, 2019.
107. American Chemical Society Annual Meeting, Orlando, FL, 2019.
108. Department of Chemical Engineering, Wayne State University, Detroit, MI, 2019.
109. Department of Bioengineering, Rice University, Houston, TX, 2018.
110. School of Pharmacy, Seoul National University, Seoul, South Korea, 2018.
111. KIST Immuno-Oncology Symposium, Seoul, South Korea, 2018.
112. Applied Nanotechnology and Nanoscience International Conference, Berlin, Germany, 2018. **(Mid-Career Nanotechnology Scientific Award)**.
113. Precision Medicine Initiative, University of Michigan, Ann Arbor, MI, 2018.
114. CRI-CIMT-EATI-AACR International Cancer Immunotherapy Conference, NYC, NY, 2018.
115. A Convergence Research Approach to an Effective HIV Vaccine: an NIAID/NIBIB Collaboration, Rockville, MD, 2018.
116. NanoEngineering for Medicine and Biology (NEMB), LA, CA, 2018.
117. Gordon Research Conference, Drug Carriers in Medicine and Biology, West Dover, VT, 2018.
118. US-Korea Conference on Science, Technology, and Entrepreneurship, Queens, NY, 2018.
119. AKIA Symposium on Immunity, Infection, and Inflammation, Ann Arbor, MI, 2018.
120. NIH AIDS Vaccine Research Subcommittee, Rockville, MD, 2018.
121. The University of Michigan Board of Regents, MI, 2018. **(Selected as an exemplary faculty promotion/tenure case)**.
122. Vaccine World Congress, Washington DC, 2018.
123. Icahn School of Medicine at Mount Sinai, NYC, NY, 2018.

124. CHA University, Korea, 2018.
125. POSTECH, Korea, 2018.
126. SungKyunKwan University, Korea, 2018.
127. Department of Pharmaceutical Sciences, Wayne State University, Detroit, MI, 2018.
128. END2Cancer: Emerging Nanotechnology and Drug Delivery Applications for Cancer Conference, Oklahoma City, OK, 2017.
129. Vaccines R&D, Washington DC, 2017.
130. Emory University, Atlanta, GA, 2017.
131. CMBE Young Innovator Symposium, Biomedical Engineering Society Annual Meeting, Phoenix, AZ, 2017.
132. US-Korea Joint Workshop in Biomedical Engineering, Biomedical Engineering Society Annual Meeting, Phoenix, AZ, 2017
133. Biomaterials Day 2017, Vanderbilt University, Nashville, TN, 2017. (**Keynote Speaker**)
134. 15th Infectious Disease Summit Baltimore, GTC-Bio, MD, 2017.
135. US-Korea Conference on Science, Technology, and Entrepreneurship, Washington DC, 2017.
136. MTRAC Innovation Cup, Ypsilanti, MI, 2017.
137. Graduate Immunology Program Retreat, Ann Arbor, MI, 2017.
138. Biointerfaces Institute Annual Symposium, Ann Arbor, MI, 2017.
139. Vaccine World Congress, Washington DC, 2017.
140. American Chemical Society Annual Conference, San Francisco, CA, 2017.
141. Melanoma Research Alliance Annual Retreat, Washington DC, 2017.
142. Medical College of Wisconsin Cancer Center, Milwaukee, WI, 2016.
143. Vaccine Antigen Delivery: New Approaches to Vaccine Development. EuroSciCon, 2016.
144. Nanotechnology for HIV, RNA and Vaccine Delivery Workshop. NIH NIAID, Rockville, MD, 2016.
145. Department of Pharmaceutics and Pharmaceutical Chemistry, The University of Utah, Salt Lake, Utah, 2016.
146. Henry Ford Cancer Institute, Detroit, MI, 2016.
147. The Korean Biochip Society Annual Conference, Korea, 2016.
148. Keystone Symposium on Cancer Vaccines, Whistler, Canada, 2016.
149. Translational Research Cancer Centers Consortium, Seven Springs, PA, 2016.
150. US-Korea Conference on Science, Technology, and Entrepreneurship, Atlanta, GA, 2015.
151. Department of Integrative Biosciences & Biotechnology, POSTECH, Korea, 2015.
152. Department of Biotechnology, Yonsei University, Korea, 2015.

153. Department of Materials Science & Engineering, KAIST, Korea, 2015.
154. Department of Hematology & Oncology, Samsung Medical Center, SungKyunKwan University, Korea, 2015.
155. Department of Integrative Engineering, Chung-Ang University, Korea, 2015.
156. Department of Biomedical Science, CHA University, Korea, 2015.
157. Department of Chemical Engineering, SungKyunKwan University, Korea, 2015.
158. Department of Chemical and Biological Engineering, Korea University, Korea, 2015.
159. University of Michigan Cancer Center, Ann Arbor, MI, 2015.
160. American Chemical Society National Meeting, Denver, CO, 2015.
161. Nanomedicine and Drug Delivery Symposium (NanoDDS'14), Chapel Hill, NC, 2014.
162. IEEE-EMBS Annual Conference Pre-workshop on the topic of "Regenerative Nanomedicine", Chicago, IL, 2014.
163. American Association of Pharmaceutical Sciences Student Chapter, Ann Arbor, MI, 2014.
164. Korean-American Scientists and Engineers Association, Ann Arbor, MI, 2014.
165. Biointerfaces Institute Nanomedicine Grand Challenge, University of Michigan, Ann Arbor, MI, 2014.
166. Division of Thoracic Surgery, University of Michigan, Ann Arbor, MI, 2014.
167. Department of Pharmacology and Toxicology, University of Texas Medical Branch, TX, 2013.
168. Biointerfaces Institute Nanomedicine Challenge, University of Michigan, Ann Arbor, MI, 2013.
169. Tumor Immunology and Host Response Program, University of Michigan, Ann Arbor, MI, 2013.
170. Division of Hematology and Oncology, University of Michigan, Ann Arbor, MI, 2013.
171. Department of Pharmacology, College of Pharmacy, University of Toledo, Toledo, OH, 2013.
172. Nanotechnology Institute of Medicine and Biological Sciences, University of Michigan, Ann Arbor, MI, 2013.
173. Department of Biomedical Science, CHA University, Republic of Korea, 2013.
174. Department of Biomedical Engineering, University of Michigan, 2012.
175. Microfluidics Biomedical Sciences Training Program, University of Michigan, Ann Arbor, MI, 2012.
176. IEEE-Engineering in Medicine & Biology Society, Boston, MA, 2011.
177. Department of Biomedical Engineering, Ohio State University, Columbus, OH, 2011.
178. Department of Bioengineering, University of Pennsylvania, Philadelphia, PA, 2010.

CONFERENCE PROCEEDINGS AND PRESENTATIONS IN SCIENTIFIC MEETINGS

1. Yakubogullari N, **Moon JJ**, Bedir E., "Nanoparticulate TLR4-agonist/Saponin Adjuvanted Peptide Vaccines for Melanoma," 19th International Congress of Immunology, Vienna, Austria. 2025.

2. Kim Y, **Moon JJ**. "Apoptotic Mimicry mRNA Lipid Nanoparticles Target Dendritic Cells, Induce Memory Precursor Effector Cells, and Exert Robust Anti-Tumor Efficacy," The American Association of Immunologists, Hawaii, HI, 2025. (Poster)
3. Xie F, Dobson HE, Schwendeman A, Moon JJ. "Nanodisc-based therapy induces antigen-specific immune tolerance against type 1 diabetes," The American Association of Immunologists, Hawaii, HI, 2025. (Poster)
4. Kim A, Cheng X, Xu J, Schwendeman A, **Moon JJ**. "Tolerogenic Nanodisc Vaccination for the Treatment of Experimental Autoimmune Encephalomyelitis," The American Association of Immunologists, Hawaii, HI, 2025. (Oral)
5. Kim Y, **Moon JJ**. "Lymph Node-Targeted Lipid Nanoparticles with Dendritic Cell Tropism Effectively Induce Memory Precursor Effector Cells and Boost mRNA Cancer Vaccine Efficacy," Society for Immunotherapy of Cancer, Houston, TX, 2024. (Poster)
6. Cho YS, Han K, Lei HL, **Moon JJ**. "Microbial metabolite-derived oral prodrug reprograms T cell metabolism and improves cancer immunotherapy," Society for Immunotherapy of Cancer, Houston, TX, 2024. (Oral)
7. Zhou X, Sun X, Gong W, Wan Z, Li Q, Yuzbasiyan-Gurkan V, Lei YL, **Moon JJ**. "Crystalized cyclic dinucleotide-manganese nanoparticles potentiate systemic STING activation across different species," Society for Immunotherapy of Cancer, Houston, TX, 2024. (Poster)
8. Xu J, Han K, Huang X, He Y, Schmidt A, Schmidt T, **Moon JJ**. "Oral inulin gel formulation modulates the gut microbiome and improves the safety and efficacy of immune checkpoint blockers," Society for Immunotherapy of Cancer, Houston, TX, 2024. (Poster)
9. Abed O, Huang X, Cho Y, Zhang Y, Greineder C, Tessier P, **Moon JJ**. "Engineering IL-2 Muteins for Immunotherapy against Inflammation and Autoimmune Diseases," American Institute of Chemical Engineers Annual Meeting, San Diego, CA, 2024. (Poster)
10. Cho YS, Han K, Lei HL, **Moon JJ**. "Microbial metabolite-derived oral prodrug reprograms T cell metabolism and improves cancer immunotherapy," CRI-ENCI Eighth International Cancer Immunotherapy Conference, Washington DC, 2024. (Poster)
11. Zhou X, Sun X, Gong W, Wan Z, Li Q, Yuzbasiyan-Gurkan V, Lei YL, **Moon JJ**. "Crystalized cyclic dinucleotide-manganese nanoparticles potentiate systemic STING activation across different species," CRI-ENCI Eighth International Cancer Immunotherapy Conference, Washington DC, 2024. (Poster)
12. Kim Y, **Moon JJ**. "Lymph Node-Targeted Lipid Nanoparticles with Dendritic Cell Tropism Effectively Induce Memory Precursor Effector Cells and Boost mRNA Cancer Vaccine Efficacy," CRI-ENCI Eighth International Cancer Immunotherapy Conference, Washington DC, 2024. (Poster)
13. Xu J, Han K, Huang X, He Y, Schmidt A, Schmidt T, **Moon JJ**. "Oral inulin gel formulation modulates the gut microbiome and improves the safety and efficacy of immune checkpoint blockers," CRI-ENCI Eighth International Cancer Immunotherapy Conference, Washington DC, 2024. (Poster)
14. Din C, Xu J, **Moon JJ**, and Schwendeman SP. "Remote Loaded PLGA Nanoparticles Modulate Decrease in Maturation Levels in Dendritic Cells," Controlled Release Society, Bolongna, Italy, 2024. (Poster)
15. Kodamasimham S, Haggag Y, **Moon, JJ**, Schwendeman SP. "Codelivery of STING Agonist & Manganese in Injectable PLGA Implants for Enhanced Cancer Immunotherapy." Controlled Release Society, Bolongna, Italy, 2024. (Poster)
16. McDougle D, Kim A, Fox D, Schwendeman A, and **Moon JJ**. "Formulation and evaluation of celastrol-nanodiscs for treatment of RA." Rheumatology Research Workshop, Denver, CO, 2024. (Poster award)
17. Han K, Xie F, Animasahun O, O'Konek JJ, Lei, YL, Kamada K, Nagrath D, and **Moon JJ**. "Engineered inulin gel/allergen oral formulation remodels the small intestinal microbiome and suppresses food allergy." Controlled Release Society Annual Meeting, Las Vegas, NV, 2023. (Poster)

18. Din C, Xu J, **Moon JJ**, and Swendeman SP. "Remote Loading of Autoantigens in PLGA Nanoparticles for the Treatment of Autoimmune Diseases." Controlled Release Society Annual Meeting, Las Vegas, NV, 2023. (Poster)
19. Kodamasimham S, Swendeman SP, and **Moon JJ**. "Controlled Release of TLR7/8 Agonist-Manganese from PLGA Microparticles for Enhanced Cancer Immunotherapy." American Association of Pharmaceutical Scientists Annual Conference, Tampa, FL, 2023. (Poster)
20. Kim A, Xu C, Xu J, Schwendeman A, and **Moon JJ**. "Antigen-Specific Tolerogenic Nanodiscs for the Treatment of Experimental Autoimmune Encephalomyelitis." American Association of Pharmaceutical Scientists Annual Conference, Tampa, FL, 2023. (Poster)
21. Cho YS, Han K, and **Moon JJ**. "A new oral microbial metabolite prodrug preserves CD8+ T cell stemness and improves the antitumor efficacy of immune checkpoint blockers." Society for Immunotherapy of Cancer (SITC), San Diego, CA, 2023. (Oral)
22. Zhou X, Sun X, Gong W, Wan Z, Lei YL, and **Moon JJ**. "Enhancing STING activation by cyclic dinucleotide-manganese particles for systemic cancer immunotherapy." Society for Immunotherapy of Cancer (SITC), San Diego, CA, 2023. (Poster)
23. Xu J, Han K, Huang X, and **Moon JJ**. "Oral inulin gel formulation modulates the gut microbiome and improves the safety and efficacy of immune checkpoint blockers." Society for Immunotherapy of Cancer (SITC), San Diego, CA, 2023. (Poster)
24. Cho YS, Zhou X, and **Moon JJ**. "Reprogramming tumor microenvironment via systemic delivery of TLR3/Mn²⁺ coordination nanomedicine." Biomedical Engineering Society Annual Meeting (BMES), Seattle, WA, 2023. (Poster)
25. Xu J, Han K and **Moon JJ**. "Optimization and scale-up production of oral inulin gel for modulation of the gut microbiome for cancer immunotherapy." Biomedical Engineering Society Annual Meeting (BMES), Seattle, WA, 2023. (Poster)
26. Xie F, Han K, and **Moon JJ**. "Modulation of the gut microbiome with engineered inulin gel/allergen leads to potent efficacy against food allergy." Biomedical Engineering Society Annual Meeting (BMES), Seattle, WA, 2023. (Oral)
27. Abed O, Lwo T, **Moon JJ**, and Greineder C. "Engineering an α -P-selectin Antibody for Inducible Drug Localization in Glioblastoma." American Institute of Chemical Engineers, Tampa, FL, 2023. (Poster)
28. Zhou X, Sun X, Gong W, Lei YL, and **Moon JJ**. "Enhancing STING activation by cyclic dinucleotide-manganese particles for systemic cancer immunotherapy." American Society of Clinical Oncology (ASCO), Chicago, IL, 2023. (Poster)
29. Han Kai, Cho YS, and **Moon JJ**. "Tcf1⁺CD8⁺ T cells expanded by orally administered microbial-based prodrug augment immune checkpoint blockade therapy." Federation of Clinical Immunology Societies (FOCIS), Boston, MA, 2023. (Poster)
30. Xie F, Dobson HE, Schwendeman A, and **Moon JJ**. "Nanodisc Technology for Inducing Antigen-specific Immune Tolerance against Type 1 Diabetes." Federation of Clinical Immunology Societies (FOCIS), Boston, MA, 2023. (Poster)
31. Din C, Xu J, **Moon JJ**, and Schwendeman SP. "Remote Loading of Auto-Antigens in PLGA Nanoparticles for the Treatment of Autoimmune Diseases." American Association of Pharmaceutical Scientists Annual Conference, Boston, MA, 2022. (Poster)
32. Han K, Xu J, Xie F, and **Moon JJ**. "Engineered oral inulin gel for modulating the gut microbiota and improving immunotherapy." Controlled Release Society Annual Meeting, Montreal, Canada, 2022. (Oral)
33. Zhou X, Sun X, Gong W, Lei YL, and **Moon JJ**. "Enhancing STING activation by cyclic dinucleotide-manganese particles for systemic cancer immunotherapy." Controlled Release Society Annual Meeting, Montreal, Canada, 2022. (Poster)

34. Xu J, Huang X, Han K, He Y, and **Moon JJ**. "Optimization and scale-up production of oral inulin gel for modulating the gut microbiome." Controlled Release Society Annual Meeting, Montreal, Canada, 2022. (Poster)
35. Xie F, Dobson H, Schwendeman A, and **Moon JJ**. "Development of Antigen-specific Therapy for Autoimmune Diabetes Using Nanodiscs." Metabolism, Obesity & Diabetes (CDI-MOD) Symposium, University of Michigan Ann Arbor, MI, 2022 (Oral and Poster).
36. Zhou X, Sun X, Gong W, Lei YL, and **Moon JJ**. "Amplifying STING activation by cyclic dinucleotide–manganese particles for systemic cancer immunotherapy" American Association of Cancer Research, New Orleans, LA, 2022 (Poster).
37. Han K, Nam J, Xu J, and **Moon JJ**. "In situ modulation of the gut microbiome and microbial metabolites for improved systemic antitumor immunity." Annual Meeting of the International Society of Microbiota, 2021. (Oral, Virtual Meeting)
38. Son S, Nam J, Park C, Shannon B, Zou W, Shi J, Farokhzad OC, and **Moon JJ**. "Elicitation of antitumor Th17 immunity by pathogen-mimicking nanocapsules." Controlled Release Society Annual Meeting, Virtual, 2021. (Oral, Virtual Meeting)
39. Huang X, Han K, Xu J, Han K, and **Moon JJ**. "The degree of inulin polymerization affects cancer immunotherapy." Controlled Release Society Annual Meeting, Virtual, 2021. (Poster)
40. Aikins M, Qin Y, Najafabadi AH, Schwendeman A, Q Li, Wicha M, **Moon JJ**. "Synthetic High-Density Lipoprotein Nanodiscs as Immunotherapy Against Cancer Stem Cells." American Association of Pharmaceutical Scientists, 2021 (oral and poster) presentations. ***2021 AAPS Best Abstract Award * 2021 AAPS Travel Award**
41. Han K, Xu J, and **Moon JJ**. "Engineering the gut microbiome for improving immune checkpoint inhibitors." Biomedical Engineering Society Annual Meeting, 2020. (Oral, Virtual Meeting)
42. Park C, Nam J, Son S, and **Moon JJ**. "Improving Tumor-infiltration of Circulating Tumor-specific CD8+ T cells by Nanoparticle Vaccination Combined with STING Agonists." Biomedical Engineering Society Annual Meeting, 2020. (Oral, Virtual Meeting)
43. Aikins M, Qin Y, Najafabadi AH, Schwendeman A, Li Q, **Moon JJ**. "Immunotherapy against cancer stem cells using synthetic high-density lipoprotein nanodiscs." American Association of Pharmaceutical Scientists, Virtual 2020 (poster).
44. Park C, Bazzill J, and **Moon JJ**. "Vaccination against HIV-1 with Interbilayer cross-linked multilamellar vesicles carrying SOSIP trimer." 23rd International AIDS Conference, Virtual, 2020. (Oral presentation)
45. Han K, Xu J, and **Moon JJ**. "Engineering the gut microbiome for improving immune checkpoint inhibitors." Controlled Release Society Annual Meeting, Virtual, 2020. (Oral presentation)
46. Xu J, Han K, Pudlo N, Martens E, and **Moon JJ**. "Fermentation and metabolism of prebiotics with gut commensal bacteria." Controlled Release Society Annual Meeting, Virtual, 2020. (Poster)
47. Scheetz L, Sun X, Schwendeman A, and **Moon JJ**. "Synthetic high-density lipoprotein nanodiscs for personalized vaccination against glioblastoma multiforme." American Association of Pharmaceutical Scientists, San Antonio, TX, 2019 (poster and oral presentation).
48. Park C, Xu C, and **Moon JJ**. "Delivery of STING Agonist with Bio-degradable Silica Nanoparticles for Cancer Immunotherapy." Biomedical Engineering Society Annual Meeting, Philadelphia, PA, 2019. (Oral)
49. Lee Y, Sugihara K, Kamada N, and **Moon JJ**. "Hyaluronic acid-bilirubin Nanomedicine for Modulation of Dysregulated Intestinal Barrier, Microbiome, and Immune Responses in Colitis." Biomedical Engineering Society Annual Meeting, Philadelphia, PA, 2019. (Oral)
50. Xu C, Hong H, and **Moon JJ**. "Personalized Cancer Immunotherapy with Positron Emission Tomography-guide Photodynamic Therapy." Biomedical Engineering Society Annual Meeting, Philadelphia, PA, 2019. (Oral)

51. Aikins M, Schwendeman A, Bonifant C, and **Moon JJ**. "Vaccination against Acute Myeloid Leukemia using WT1 Peptide Nanodiscs." Biomedical Engineering Society Annual Meeting, Philadelphia, PA, 2019. (Poster)
52. Sun X, Kuai R, Schwendeman A, and **Moon JJ**. "Subcutaneous Nanodisc Vaccination with Neo-antigens and Dual-adjuvants for Effective Cancer Immunotherapy." Biomedical Engineering Society Annual Meeting, Philadelphia, PA, 2019. (Poster)
53. Han K, and **Moon JJ**. "Peptide self-assembly for combined photodynamic therapy and immunotherapy." Gordon Research Conference: Cancer Nanotechnology, Dover, VT, 2019 (poster).
54. Lee Y, Kamada N, Gilliland III MG, Jon S, and **Moon JJ**. "Hyaluronic acid-bilirubin nanomedicine for modulation of dysregulated intestinal barrier, microbiome, and immune responses in colitis." Controlled Release Society Annual Meeting, Valencia, Spain, 2019 (oral and poster).
55. Hassani-Najafabadi A, Hendy D, Lee Y, Munie A, Duncker PC, Wilkinson N, Schwendeman A, Segal BM, and **Moon JJ**. "Myelin-based peptide-conjugated nanodiscs to promote immunological tolerance against multiple sclerosis/experimental autoimmune encephalomyelitis." Controlled Release Society Annual Meeting, Valencia, Spain, 2019 (oral and poster).
56. Okeke E, Louttit C, Fry C, Nemzek J, and **Moon JJ**. "Targeted inhibition of neutrophil elastase prevents neutrophil extracellular trap formation and rescues mice from endotoxic shock" Gordon Research Conference, Phagocyte functions through life. Waterville Valley, VT, 2019 (**GRC excellent poster award**)
57. Park C and **Moon JJ**. "Delivery of STING agonist for augmenting adoptive T cell therapy." Society for Biomaterials, Seattle, WA, 2019. (poster)
58. Son S, Farokhzad OC, and **Moon JJ**. "Self-adjuvanting polysaccharide nanocapsules for mRNA vaccination against cancer." Biomedical Engineering Society Annual Meeting, Atlanta, GA, 2018. (oral)
59. Nam J, Son S, Ochyl LJ, Kuai R, and **Moon JJ**. "Combinational chemo-photothermal immunotherapy exerts potent anti-tumor efficacy against advanced metastatic cancer." Biomedical Engineering Society Annual Meeting, Atlanta, GA, 2018. (oral)
60. Xu C, and **Moon JJ**. "Positron emission tomography-guided photodynamic therapy with biodegradable silica nanoparticles for personalized cancer immunotherapy" CRI-CIMT-EATI-AACR International Cancer Immunotherapy Conference, NYC, NY, 2018 (poster).
61. Sun X, Kuai R, Schwendeman A, and **Moon JJ**. "Subcutaneous nanodisc vaccination with dual-adjuvants for cancer immunotherapy." American Association of Pharmaceutical Scientists, Washington DC, 2018 (poster).
62. Scheetz L, Sun X, Schwendeman A, and **Moon JJ**. "Synthetic high-density lipoprotein nanodiscs for personalized vaccination against glioblastoma multiforme." American Association of Pharmaceutical Scientists, Washington DC, 2018 (poster).
63. Hassani-Najafabadi A, Kuai R, Schwendeman A, and **Moon JJ**. "Synthetic high-density lipoprotein nanodiscs loaded with myelin oligodendrocyte glycoprotein peptides for the treatment of experimental autoimmune encephalomyelitis." American Association of Pharmaceutical Scientists, Washington DC, 2018 (poster).
64. Lee Y, Gilliland III MG, Kamada N, and **Moon JJ**. "Novel nanoparticle system for treatment of acute colitis" Gordon Research Conference, West Dover, VT, 2018 (poster).
65. Son S, Farokhzad OC, and **Moon JJ**. "Self-adjuvanting polysaccharide nanocapsules for mRNA vaccination against cancer." NANO Korea, 2018 (oral).
66. Nam J, Son S, Ochyl LJ, Kuai R, and **Moon JJ**. "Combinational chemo-photothermal therapy using a novel nanoplatform elicits potent anti-tumor immunity against advanced metastatic cancer." NANO Korea, 2018 (oral).
67. Sun X, Kuai R, Schwendeman A, and **Moon JJ**. "Subcutaneous Nanodisc Vaccination with Dual-adjuvants for Cancer Immunotherapy." Society for Biomaterials, Atlanta, GA, 2018 (poster)

68. Scheetz L, Schwendeman A, and **Moon JJ**. "Synthetic high-density lipoprotein nanodiscs for personalized vaccination against glioblastoma multiforme." Society for Biomaterials, Atlanta, GA, 2018 (poster)
69. Park C, and **Moon JJ**. "Targeted Immunomodulation of CD8+ T cells with F(ab')₂-conjugated liposomes." Society for Biomaterials, Atlanta, GA, 2018 (poster)
70. Hassani-Najafabadi A, Kuai R, Schwendeman A, and **Moon JJ**. "Nanomaterials for immunotherapy against multiple sclerosis/experimental autoimmune encephalomyelitis." Society for Biomaterials, Atlanta, GA, 2018 (poster)
71. Kuai R, Schwendeman A, and **Moon JJ**. "Personalized vaccine nanodiscs for elimination of established tumors" Keystone Conference, Cancer Immunotherapy: Combinations, Montreal, Canada, 2018 (poster)
72. Fan Y and **Moon JJ**. "Co-localized delivery of immunogenically dying tumor cells and Toll-like receptor agonists for cancer immunotherapy" NanoDDS Conference, Ann Arbor, MI, 2017 (poster)
73. Kuai R, Yuan W, Xu Y, Fan Y, Schwendeman A, and **Moon JJ**. "Combined Cancer Chemoimmunotherapy for Elimination of Established Tumors" NanoDDS Conference, Ann Arbor, MI, 2017 (poster)
74. Hassani-Najafabadi A, Kuai R, Schwendeman A, and **Moon JJ**. "Synthetic high-density lipoprotein delivery of myelin based antigen for treatment of experimental autoimmune encephalomyelitis." NanoDDS Conference, Ann Arbor, MI, 2017 (poster)
75. Brennan L, Louttit C, Weerappuli P, Kojima T, Yamanishi C, **Moon JJ**, Takayama S. "Synthetic neutrophil extracellular trap platform to study cellular and molecular interactions in conditions of vascular shear." NanoDDS Conference, Ann Arbor, MI, 2017 (poster)
76. Kuai R, Xu Y, Schwendeman A, and **Moon JJ**. "Cancer immunotherapy with novel vaccine nanodiscs for efficient elimination of mucosal tumors." Society for Immunotherapy of Cancer, Washington DC, 2017 (poster)
77. Ochyl LJ, and **Moon JJ**. "PEGylated tumor membrane nano-vesicles for eliciting adaptive immune responses against melanoma." Society for Immunotherapy of Cancer, Washington DC, 2017 (poster)
78. Fan Y and **Moon JJ**. "Engineering immunogenically dying tumor cells for whole-cell cancer vaccination" Biomedical Engineering Society Annual Meeting, Phoenix, AZ, 2017. (oral)
79. Kuai R, Xu Y, Fan Y, Schwendeman A, and **Moon JJ**. "Combined cancer chemoimmunotherapy for elimination of established tumors." Biomedical Engineering Society Annual Meeting, Phoenix, AZ, 2017. (oral)
80. Fan Y and **Moon JJ**. "Immunogenically dying tumor cells designed to release immunostimulatory ligands for new cancer immune-chemotherapy." Controlled Release Society Annual Meeting, Boston, MA, 2017. (oral)
81. Kuai R, Xu Y, Schwendeman A, and **Moon JJ**. "Cancer immunotherapy with novel vaccine nanodiscs for efficient elimination of mucosal tumors." Controlled Release Society Annual Meeting, Boston, MA, 2017. (poster)
82. Louttit C, Weerappuli P, Kojima T, Maeda M, Song Y, Kim HS, Yamanishi C, Takayama S, and **Moon JJ**. "Synthetic DNA-based structures provide in vitro recapitulation of neutrophil extracellular traps." Controlled Release Society Annual Meeting, Boston, MA, 2017. (poster)
83. Kuai R, Yuan W, Xu Y, Fan Y, Schwendeman A, and **Moon JJ**. "Combined cancer chemoimmunotherapy for elimination of established tumors." Gordon Research Conference, Cancer Nanotechnology, West Dover, VT, 2017. **(GRC excellent poster award)**
84. Fan Y and **Moon JJ**. "Exploiting immunogenic cell death for cancer immunotherapy." Gordon Research Conference, Cancer Nanotechnology, West Dover, VT, 2017. (poster)
85. Bazzill J, Fan Y, Giang E, Law M, and **Moon JJ**. "Lipid-based Nanoparticles Loaded with Hepatitis C Virus Glycoproteins for Induction of Potent Humoral Responses." AAPS – National Biotechnology Conference, San Diego, CA, 2017 (poster)

86. Kuai R, Ochyl LJ, Schwendeman A, and **Moon JJ**. "Designer vaccine nanodiscs for personalized cancer immunotherapy." AAPS – National Biotechnology Conference, San Diego, CA, 2017 (oral)
87. Hassani-Najafabadi A, Kuai R, Georgiev P, Schwendeman A, and **Moon JJ**. "Development of Synthetic High-Density Lipoproteins for Treatment of Experimental Autoimmune Encephalomyelitis." AAPS – National Biotechnology Conference, San Diego, CA, 2017 (poster)
88. Kuai R, Ochyl LJ, Schwendeman A, and **Moon JJ**. "Nanodisc neo-antigen vaccination combined with immune checkpoint blockade efficiently eliminates established tumors." Society for Immunotherapy of Cancer, Washington, D.C., 2016 (poster)
89. Nam J, and **Moon JJ**. "Combinational Chemo-Immuno-Photothermal Cancer Therapeutics Based on Polydopamine-coated Spiky Gold Nanoparticles." Materials Research Society, Boston, MA, 2016 (oral)
90. Ochyl LJ, and **Moon JJ**. "PEGylated lysate membrane vesicles for elicitation of adaptive immune responses against melanoma." American Association of Pharmaceutical Scientists, Denver, CO, 2016 (poster)
91. Balwani I, Kuai R, Schwendeman A, and **Moon JJ**. "Stimulation of NKT cells with a novel nano-delivery system loaded with alpha-galactosylceramide." American Association of Pharmaceutical Scientists, Denver, CO, 2016 (poster)
92. Louttit C, Weerappuli P, Kojima K, Maeda M, Yamanishi C, Takayama S, and **Moon JJ**. "Probing the Roles of Neutrophil Extracellular Trap Components with Synthetic DNA-Histone Structures." Biomedical Engineering Society Annual Meeting, Minneapolis, MN, 2016 (oral)
93. Weerappuli P, Louttit C, Kojima K, Maeda M, Yamanishi C, Oliver CR, **Moon JJ**, and Takayama S. "Bioinspired DNA-Histone Complex to Study Metastasis-Promoting Activity of Neutrophil Extracellular Traps." Biomedical Engineering Society Annual Meeting, Minneapolis, MN, 2016 (poster)
94. Louttit C, Weerappuli P, Kojima K, Maeda M, Takayama S, and **Moon JJ**. "Novel nanofibrous DNA-histone structures mediate reproducible, high-throughput analyses of neutrophil extracellular traps and their effects in vitro." American Association of Immunologists Annual Meeting, Seattle, WA, 2016 (**AAI Trainee Travel Award**, podium and poster)
95. Bazzill JD, Cooper CL, Fan Y, Bavari S, Stronsky SM, and **Moon JJ**. "Lipid nanoparticles incorporated with Ebola Glycoprotein for induction of humoral immunity against Ebola infection." American Association of Immunologists Annual Meeting, Seattle, WA, 2016 (poster)
96. Kuai R, Ochyl LJ, Schwendeman A, and **Moon JJ**. "Nanodisc-based peptide vaccines for personalized cancer immunotherapy." Keystone Symposium on Cancer Vaccines, Whistler, Canada, 2016 (podium and poster)
97. Ochyl LJ, and **Moon JJ**. "Tumor membrane vesicles for elicitation of cellular and humoral immune responses." Keystone Symposium on Cancer Vaccines, Whistler, Canada, 2016 (poster)
98. Fan Y, Sahdev P, Ochyl LJ, Akerberg J, and **Moon JJ**. "Lipid-Biopolymer Hybrid Nanoparticles for Intranasal Vaccination against Infectious Pathogens." Biomedical Engineering Society Annual Meeting, Tampa, FL, 2015. (oral)
99. Kuai R, Schwendeman A, and **Moon JJ**. "Nanodisc vaccine platform for elicitation of anti-tumor cytotoxic CD8+ T lymphocytes." Biomedical Engineering Society Annual Meeting, Tampa, FL, 2015. (poster)
100. Nam J and **Moon JJ**. "Tuning Immune Activation with Adjuvant-Loaded Spiky Gold Nanoparticles." Biomedical Engineering Society Annual Meeting, Tampa, FL, 2015. (poster)
101. Nam J and **Moon JJ**. "Mussel-Inspired Coating of Spiky Gold Nanoparticles for Enhanced Stability and Therapeutic Efficacy." Elicitation of robust adaptive immune responses with lipid-based nanoparticles." Biomedical Engineering Society Annual Meeting, Tampa, FL, 2015. (poster)
102. **Moon JJ**. "Elicitation of robust adaptive immune responses with lipid-based nanoparticles." US-Korea Conference on Science, Technology, and Entrepreneurship, Atlanta, GA, 2015. (**Invited talk**)

103. **Moon JJ.** "Engineering lipid-based nanoparticles for elicitation of cytotoxic CD8+ T cell responses." American Chemical Society National Meeting, Denver, CO, 2015. (**Invited talk**)
104. Ochyl LJ, Bazzill J, and **Moon JJ.** "Engineered vaccine nanoparticles for induction of potent immune responses." Keystone Symposium, Tumor Immunology, Banff, Canada, 2015. (poster)
105. **Moon JJ,** Ochyl LJ, and Bazzill J. "Engineering lipid-based vaccine nanoparticles for modulation of cellular and humoral immune responses." American Association of Pharmaceutical Sciences National Meeting, San Diego, CA, 2014. (poster)
106. **Moon JJ.** "Elicitation of robust cellular and humoral immunity with vaccine nanoparticles." Nanomedicine and Drug Delivery Symposium (NanoDDS'14), Chapel Hill, NC, 2014. (**Invited talk**)
107. **Moon JJ.** "Nanotechnology for modulation of immune responses." IEEE-EMBS Annual Conference Pre-workshop on the topic of "Regenerative Nanomedicine", Chicago, IL, 2014. (**Invited talk**)
108. Nam J, Monroe CJ, **Moon JJ.** "Development of photothermally-active gold shell-coated lipid nanoparticles." Controlled Release Society Annual Meeting, Chicago, IL, 2014. (poster)
109. Kuai R, Subramaniam C, Timmermann BN, **Moon JJ,** Cohen MS, Schwendeman A. "Synthetic high density lipoproteins for targeted delivery of withalongoles to adrenocortical carcinomas." Controlled Release Society Annual Meeting, Chicago, IL, 2014. (poster)
110. Ochyl LJ, **Moon JJ.** "Lipid-based nanoparticles co-loaded with tumor cell lysate and immunostimulatory agents for cancer immunotherapy." Controlled Release Society Annual Meeting, Chicago, IL, 2014. (poster)
111. **Moon JJ.** "Lipid-based vaccine nanoparticles for induction of robust cellular and humoral immune responses against malaria and HIV antigens." American Society for Nanomedicine, Rockville, MD, 2014. (**Best Poster Award**)
112. **Moon JJ.** "Lipid-based vaccine nanoparticles for elicitation of robust cellular and humoral immune responses in mucosal surfaces." Keystone Symposium, HIV Vaccines: Adaptive immunity and beyond, Banff, Canada, 2014. (poster)
113. Ochyl LJ, **Moon JJ.** "Co-encapsulation of adjuvant and antigen into lipid-based nanoparticles for cancer immunotherapy." Annual Symposium in the Pharmacological Sciences and Bio-related Chemistry, U. of Michigan, MI, 2014. (poster)
114. Nam J, Monroe CJ, **Moon JJ.** "Gold shell-coated lipid nanoparticles for stable cargo delivery and photothermal release." Science Day, College of Pharmacy, U. of Michigan, MI, 2014. (poster)
115. Kuai R, Subramaniam C, Timmermann BN, **Moon JJ,** Cohen MS, Schwendeman A. "Synthetic high density lipoproteins for targeted delivery of withalongoles to adrenocortical carcinomas." Science Day, College of Pharmacy, U. of Michigan, MI, 2014. (oral and poster presentation)
116. Ochyl LJ, **Moon JJ.** "Co-encapsulation of adjuvant and antigen into lipid-based nanoparticles for cancer immunotherapy." Science Day, College of Pharmacy, U. of Michigan, MI, 2014. (poster)
117. **Moon JJ.** "Elicitation of robust cellular and humoral immune responses against malaria and HIV antigens with lipid nanocapsules." World Congress on Biomimetics, Artificial Muscles, and Nano-Bio, Korea, 2013. (**Invited talk**)
118. **Moon JJ.** "Nanoparticles for modulation of immune responses." Gordon Conference, Environmental Nanotechnology, Stowe, VT, 2013. (**Invited talk**)
119. **Moon JJ.** "Nanoparticle Vaccines for induction of cellular and humoral immune responses." Autumn Immunology Conference, Chicago, IL, 2012. (oral)
120. **Moon JJ,** Li A, Suh H, Yadava A, and Irvine DJ. "Antigen delivery via nanocapsules elicits robust cellular and humoral responses against malaria and HIV antigens." Biomedical Engineering Society Annual Meeting, Atlanta, 2012. (oral)

121. Li A, **Moon JJ**, Elkhader J, Abraham W, Suh H, and Irvine DJ. "Generating long lasting mucosal and systemic CD8 T-cell responses via pulmonary vaccination with synthetic lipid nanoparticles." Biomedical Engineering Society Annual Meeting, Atlanta, 2012. (oral)
122. **Moon JJ**, Suh S, Li A, Yadava A, and Irvine DJ. "Nanoparticle vaccines enhance humoral responses to a malaria antigen with nanoparticle vaccines by expanding Tfh cells and inducing germinal center formation." American Association of Immunologists, Boston, MA, 2012. (**AAI Trainee Travel Award**)
123. **Moon JJ**, Suh S, Yadava A, and Irvine DJ. "Enhancing humoral responses to a malaria antigen with nanoparticle vaccines that expand Tfh cells and promote germinal center induction." New England Immunology Conference, Woods Hole, MA, 2012. (poster)
124. **Moon JJ**, Suh S, Yadava A, and Irvine DJ. "Interbilayer-crosslinked multilamellar vesicles as synthetic vaccines for potent humoral and cellular immune responses." American Institute of Chemical Engineers Annual Meeting, Minneapolis, MN, 2011. (oral)
125. **Moon JJ**, Suh S, Yadava A, and Irvine DJ. "Novel nanoparticle vaccines elicit robust humoral responses mediated by CD4 helper T cells." Biomedical Engineering Society Annual Meeting, Hartford, CT, 2011. (oral)
126. **Moon JJ**, Suh S, Yadava A, and Irvine DJ. "Interbilayer-crosslinked multilamellar vesicles as a potent vaccine platform." Biomaterials, Gordon Research Conference, Holderness, NH, 2011. (**Best Poster Award**)
127. **Moon JJ**, Suh S, Bershteyn A, Stephan M, Luo S, and Irvine DJ. "Development of interbilayer-crosslinked multilamellar vesicles as a potent vaccine platform." Society for Biomaterials Annual Meeting, Orlando, FL 2011. (poster)
128. **Moon JJ**, Suh S, Sohail M, Bershteyn A, Yadava A, and Irvine DJ. "Interbilayer-crosslinked multilamellar vesicles for vaccine delivery." Keystone Symposia, Dendritic Cells and the Initiation of Adaptive Immunity, Santa Fe, NM 2011. (poster)
129. **Moon JJ**, Suh S, and Irvine DJ. "Interbilayer-crosslinked multilamellar vesicles for drug delivery applications." Tissue Engineering and Regenerative Medicine International Society Annual Meeting, Orlando, FL, 2010. (oral)
130. **Moon JJ**, Suh S, Sohail M, Bershteyn A, Yadava A, and Irvine DJ. "Interbilayer-crosslinked multilamellar vesicles for antigen delivery and vaccine applications." Biomedical Engineering Society Annual Meeting, Austin, TX 2010. (oral)
131. **Moon JJ**, Suh S, Sohail M, Bershteyn A, Um SH, Stephan M, Huang B, and Irvine DJ. "Synthesis and characterization of interbilayer-crosslinked multilamellar vesicles for vaccine delivery." American Chemical Society, Boston, MA 2010. (oral)
132. **Moon JJ**, Um SH, Bershteyn A, Suh H, Sohail M, Stephan MT, Huang B, and Irvine DJ. "Interbilayer-crosslinked multilamellar vesicles for vaccine applications." Controlled Release Society Research Conference, Portland, OR, 2010. (oral)
133. **Moon JJ**, Um SH, Stephan M, and Irvine DJ. "Novel DNA-gel particles as a platform for drug delivery and vaccine development." Biomaterials, Gordon Research Conference, Holderness, NH, 2009. (poster)
134. **Moon JJ**, Um SH, Stephan M, Huang B, Bershteyn A, and Irvine DJ. "DNA-gel particles as a novel platform for cancer vaccines and immunotherapy." MIT Koch Cancer Institute Annual Research Forum, Watervalley, NH, 2009. (oral)
135. **Moon JJ**, Lee SH, Kim I, Hahn MS, Nsiah BA, and West JL. "Synthetic biomimetic hydrogels incorporated with angiogenic factors for regulated endothelial vessel formation" Biomaterials, Gordon Research Conference, Holderness, NH, 2007. (poster)
136. **Moon JJ**, Lee SH, Hahn MS, Nsiah BA, and West JL. "Regulation of endothelial angiogenesis and vasculogenesis in synthetic poly(ethylene glycol) hydrogels modified with biomolecules." Society for Biomaterials Annual Meeting, Chicago, IL, 2007. (oral)

137. **Moon JJ**, Lee SH, Kim I, Hahn MS, Nsiah BA, and West JL. "Synthetic biomimetic hydrogels incorporated with angiogenic factors for regulated endothelial vessel formation" Institute of Biosciences and Bioengineering Symposium, Houston, TX, 2007. **(Best Poster Award)**
138. **Moon JJ**, Lee SH, Hahn MS, Nsiah BA, and West JL. "Regulation of endothelial angiogenesis and vasculogenesis in synthetic poly(ethylene glycol) hydrogels modified with biomolecules." Experimental Biology, Washington, DC, 2007. (poster)
139. **Moon JJ**, Lee SH, Hahn MS, Nsiah BA, and West JL. "Modifications of PEG hydrogels to regulate endothelial vessel formation" Biomedical Engineering Society Annual Meeting, Hollywood, CA, 2007. (oral)
140. **Moon JJ**, Lee SH, Hahn MS, Nsiah BA, and West JL. "Regulation of endothelial angiogenesis and vasculogenesis in synthetic poly(ethylene glycol) hydrogels modified with biomolecules." Hilton Head Tissue Engineering Workshop, Hilton Head, GA, 2007. (poster)
141. **Moon JJ**, and West JL. "Immobilized ephrin-A1 and EphB4 on PEG hydrogel for angiogenic applications." Experimental Biology, San Francisco, CA, 2006. (oral)
142. **Moon JJ**, Nsiah BA, Hahn MS, and West JL. "Endothelial tubulogenesis on surface patterned poly(ethylene glycol) hydrogels." Society for Biomaterials Annual Meeting, Memphis, TN, 2006. (oral)
143. **Moon JJ**, and West JL. "Immobilized ephrin-A1 and EphB4 on PEG hydrogel for angiogenic applications." Society for Biomaterials Annual Meeting, Memphis, TN, 2006. (poster)
144. **Moon JJ**, and West JL. "Surface patterning of polyethylene glycol hydrogels for directed tubulogenesis." Houston Conference on Biomedical Engineering Research Annual Meeting, Houston, TX, 2006. (poster)
145. **Moon JJ**, and West JL. "Immobilization of ephrin-A1 and EphB4 on PEG hydrogels for angiogenic applications." Biomedical Engineering Society Annual Meeting, Baltimore, MD, 2005. (oral)
146. **Moon JJ**, Lee SH, and West JL. "Biomimetic hydrogels incorporated with ephrin-A1 and EphB4 for therapeutic angiogenesis." Institute of Biosciences and Bioengineering Symposium, Houston, TX, 2005. **(Best Poster Award)**
147. **Moon JJ**, and West JL. "Immobilized ephrin-A1 and EphB4 on PEG hydrogel for angiogenic applications." Society for Biomaterials Annual Meeting, Memphis, TN, 2005. (oral)
148. **Moon JJ**, Matsumoto M, and Li S. "Heparan sulfate proteoglycan mediates cellular adhesion and migration during wound healing process via regulation of focal adhesions." American Heart Association Scientific Sessions, Orlando, FL, 2003. (oral)

RESEARCH SUPPORT

ACTIVE RESEARCH SUPPORT

PIs: Moon (contact PI) and Lei NIH R01 DE030691 <i>New Engineering Strategy for Harnessing Immune System against Head and Neck Cancer</i>	07/01/2021 - 04/30/2026
PIs: Moon (contact PI) and Castro NIH R01 NS122536 <i>Novel nano-vaccine technology for inducing immunity against gliomas</i>	07/15/2021 - 06/30/2026
PIs: Moon (contact PI) and Lei NIH R01 DE031951 <i>Engineered Nano-formulations for STING Activation</i>	7/6/2022 – 2/28/2027
PIs: Moon (contact PI) and Nagrath NIH R01 CA271799 <i>Biomaterials for modulating the gut microbiome for immune activation</i>	5/1/2022 – 4/30/2027

PIs: Lei (contact PI) and Moon 7/1/2023 – 6/30/2028
NIH R01 DE026728
Restoring the Immunogenicity of Head and Neck Cancer

PIs: Tessier (contact PI) and Moon 2/1/2025 – 1/31/2028
NIH R01 EB036493
Non-invasive and Long-lived CNS Delivery of Treg-inducing Cytokine Depots

PIs: Moon (contact PI) and A. Schwendeman 3/2/2022 – 3/1/2027
EVOQ General Service Agreement

PI: Peters-Golden 3/25/19-02/28/26
NIH R35 HL144979 (role: co-I)
Novel Functions of Lung Macrophages and Fibroblasts in Pulmonary Inflammation and Fibrosis

COMPLETED RESEARCH SUPPORT

PI: Moon 11/30/2022 – 11/30/2023
UM Rogel cancer center breast cancer grant
New immunotherapy against triple-negative breast cancer

PI: Moon (site PI) 7/15/2022 – 7/15/2023
NIH R43 AI72705 subcontract
EVOQ Therapeutics: Novel Immunotherapy Against MOG Antibody Disease

PI: You 06/07/2018 – 05/31/2023
NIH R01CA223804-01 FP11970 Medical College of Wisconsin (role: subcontract PI)
Chemoimmunoprevention of EGFR-Driven Non-Small Cell Lung Cancer

PI: Moon (site PI) 4/1/2023 – 5/15/2023
NIH R44 DK135218 subcontract
EVOQ Therapeutics: New approach for immune modulation against T1D

PI: Luker 4/01/2017 - 3/31/2023
NIH U01 CA210152 (role: Project leader)
Environmental Regulation of Cancer Stem Cell Plasticity in Metastasis

PI: Oscherwitz 05/01/2019-05/31/2022
NIH R44 A1142939 VLP Biotech, Inc. (role: co-I)
An epitope-focused nanoparticle vaccine for anthrax

PI: Moon 12/01/2020-11/30/2021
UM Diabetes Center
New approach for immune modulation against T1D

PI: Moon 01/01/2021 – 12/31/2021
UMICH Rogel Cancer Center Discovery Award
Targeting the gut microbiome for improving cancer immunotherapy

PI: Moon 12/1/2017 – 11/30/2021
NIH R01 CA210273 (Diversity Supplement)
Nanomaterials for eliciting anti-tumor T-Cells-Diversity Supplement

PI: Moon 12/15/2016 – 11/30/2021

NIH R01 CA210273*Engineering Nanomaterials to Prime Immunity*

PI: Moon

08/01/20-07/31/21

UM Biointerfaces Institute*SARS-CoV-2 vaccine development*

PI: Moon

08/01/2019 – 08/31/2021

Michigan Drug Discovery*Novel strategy for drug discovery in cancer immunotherapy*

PI: Moon

7/1/2016-6/30/2021

NSF 1553831*CAREER: Engineering multilamellar vaccine platforms for vaccination against HIV*

PI: Moon

6/20/2016-8/31/2021

NIH R01 AI127070*Elicitation of mucosal immune responses against HIV*

PIs: Lei/Neamati/Moon

9/01/2018 -12/31/2020

University of Michigan: MCubed program*Drug-like small molecule modulators for interferons*

PI: Moon

7/1/2016 – 6/30/2020

NIH R01 EB022563*Tuning biomaterials-immune cell interactions for treatment of glioblastoma multiforme*

PI: Li/Moon

02/01/2019 – 08/30/2020

MEDC Mi-TRAC*Application of cancer stem cell (CSC) peptides-vaccine with novel delivery technology against CSCs*

PI: You

06/02/2017 – 11/30/2019

HHSN261201500037I: NIH/Medical College of Wisconsin*Effect of a Multipeptide KRAS Vaccine in the Prevention of Pancreatic Cancer Driven by KRAS Oncoprotein*

PI: Oscherwitz

5/1/19-4/30/20

NIH R44 A1142939/955341*An epitope-focused nanoparticle vaccine for anthrax*

PI: Chen

4/15/19-4/14/20

UM Office of Research*Enhancing CD8+ T-Cell Activation via Bispecific liposomes to Deliver PD-L1 mAb to TDLNs*

PI: Peters-Golden

07/01/2015 – 3/24/19

NIH R01HL125555*Secreted SOCS Proteins as Vectors of Lung Macrophage to Epithelial Cell Crosstalk*

PI: Moon

09/01/2017-08/31/2019

Emerald Foundation*Distinguished Investigator Award*

PI: Moon

7/15/2016 – 7/14/2019

DoD CDMRP CA150068: Career Development Award*A New Vaccination Strategy for Treatment of Melanoma*

Co-PI: Moon, Anna Schwendeman

2/01/2017-1/31/2018

MTRAC Life Sciences Hub – State of Michigan*A novel nano-vaccine technology for cancer immunotherapy*

PI: Moon

03/01/2017-02/28/2018

University of Michigan Forbes Institute for Cancer Discovery
Towards Precision Cancer Immunotherapy

PI: Moon 5/01/2015-4/30/2018
Melanoma Research Alliance Young Investigator Award (348774)
Novel approaches for immunotherapy against melanoma

PI: Lundy 07/01/2015 – 06/30/2017
NIH R21 AI115117
B Cell Exosome and Nanoparticle Treatment of Allergic Asthma

Co-PI: Wei Cheng, James Moon, and Irina Grigorova 4/29/2015-4/29/2016
MCubed program - University of Michigan
Impact of Envelope Glycoprotein Density on B Cell Activation

PI: Moon 9/16/2016 – 12/15/2016
HHSN261201100046C
NCI Fee-for-service: proprietary lung cancer vaccine nanodiscs

Co-PI: James J. Moon, Maria Castro and Pedro Lowenstein 12/01/2014 – 11/30/2015
John S. and Suzanne C. Munn Cancer Fund - University of Michigan
Novel therapeutic vaccination strategy for treatment of glioblastoma multiforme

PI: James J. Moon 1/01/2015 – 12/31/2015
MICHR/CTSA Pilot Grant Programs - University of Michigan
Targeted delivery of anti-retroviral drugs for prevention of HIV spread

PI: Jean Nemzek 09/01/2014 – 07/28/2015
Michigan Center for integrative Research in Critical Care: Grand Challenge in Sepsis - University of Michigan
Immunotherapy and immunophenotyping for treatment of sepsis

PI: Maria Castro 02/01/2014 – 01/31/2015
Biointerfaces Institute: Grand Challenge in Nanomedicine - University of Michigan
Novel drug delivery platforms for glioma therapeutics

PI: Qiao Li, Co-I: James J. Moon 7/01/2013 - 6/30/2014
Cancer Center Innovation Grant - University of Michigan
Therapeutic efficacy of a novel cancer stem cell antigen-loaded dendritic cell vaccine using a new adjuvant nanoparticle system

PI: James J. Moon 6/01/2013 – 11/30/2014
MICHR/CTSA Pilot Grant Programs - University of Michigan
Elicitation of cancer stem cell-specific CD8⁺ T cell responses with nanoparticle-DC vaccination

Co-PI: James J. Moon, Anna Schwendeman, and Mariana Kaplan 2/1/2013-1/31/2014
MCubed program - University of Michigan
Therapeutic application of synthetic HDL for treatment of autoimmune diseases

PI: James J. Moon 1/1/2013-12/31/2014
NIAID Research Scholar Development K22 Award AI097291
Delivery of Particle Vaccines to Control Trafficking Patterns of T Cells

PIs: Moon (contact PI) and Kamada 5/1/2020-4/30/2024
NIH R01 DK125087
Novel biomaterials for IBD treatment

PIs: Moon (contact PI) and Lei 10/1/2022 - 9/30/2024
Frankel Innovation Initiative – University of Michigan, Ann Arbor
New Nanoparticle Platform for Metallo-Immunotherapy

PI: Moon (contact PI) and Isabelle Lombaert 7/1/2022 - 6/30/2024

Regenerative Medicine Grand Challenge – University of Michigan, Ann Arbor

Engineered IL-2 Muteins for Immunotherapy against Inflammation and Autoimmune Diseases

TEACHING

University of Michigan, Ann Arbor

- 2024 Winter PharmSci 718, Advanced Pharmaceutical Biotechnology (14 course hours, course coordinator)
- 2024 Winter PharmSci 402, Undergraduate Seminar
- 2023 Fall PharmSci 402, Undergraduate Seminar
- 2023 Winter PharmSci 718, Advanced Pharmaceutical Biotechnology (12 course hours, course coordinator)
- 2023 Winter PharmSci 705, Advances in Drug Delivery Technology (22 course hours)
- 2023 Winter PharmSci 402, Undergraduate Seminar
- 2022 Fall PharmSci 402, Undergraduate Seminar
- 2022 Winter PharmSci 402, Undergraduate Seminar
- 2022 Winter PharmSci 718, Advanced Pharmaceutical Biotechnology (12 course hours, course coordinator)
- 2021 Fall PharmSci 402, Undergraduate Seminar
- 2021 Winter PharmSci 705, Advances in Drug Delivery Technology (22 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.60/5.00**)
- 2021 Winter PharmSci 718, Advanced Pharmaceutical Biotechnology (12 course hours, course coordinator)
(Q1 "Overall, this was an excellent course," course evaluation = **4.53/5.00**)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.75/5.00**)
- 2021 Winter PharmSci 101, Introduction to Drug Delivery (Guest lecturer)
- 2021 Winter ChemEng 519, Modern Pharmaceutical Engineering (Guest lecturer)
- 2020 Summ Responsible Conduct of Research. Collaboration with industry (Guest lecturer)
- 2020 Winter PharmSci 101, Introduction to Drug Delivery (Guest lecturer)
- 2019 Fall PharmSci 508, Introduction to Drug Delivery and Drugs in Solution (20 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.38/5.00**)
- 2019 Summ Responsible Conduct of Research. Collaboration with industry (Guest lecturer)
- 2019 Winter PharmSci 705, Nanotechnology for Drug Delivery (22 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.83/5.00**)
- 2018 Fall PharmSci 508, Introduction to Drug Delivery and Drugs in Solution (23 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.34/5.00**)
- 2018 Winter Anatomy 504, Cellular Biotechnology (Guest lecturer)
- 2018 Winter PharmSci 101, Introduction to Drug Delivery (Guest lecturer)
- 2017 Fall PharmSci 702, Pharmaceutical Design, Delivery, and Targeting (15 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **5.00/5.00**)
- 2017 Fall PharmSci 508, Introduction to Drug Delivery and Drugs in Solution (23 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.16/5.00**)
- 2017 Winter PharmSci 101, Introduction to Drug Delivery (Guest lecturer)
- 2017 Winter PharmSci 705, Nanotechnology for Drug Delivery (19 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.92/5.00**)
- 2017 Winter DAPCEP, Biotechnology for Healthy Humans ****STEM outreach activity for high school students**
(Organized 6 Saturday morning workshops for 20+ local high school students)
- 2016 Fall PharmSci 508, Introduction to Drug Delivery and Drugs in Solution (24 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.56/5.00**)
- 2016 Winter Anatomy 504, Cellular Biotechnology (Guest lecturer)
- 2015 Fall PharmSci 702, Pharmaceutical Design, Delivery, and Targeting (15 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.33/5.00**)
- 2015 Fall PharmSci 508, Introduction to Drug Delivery and Drugs in Solution (24 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.46/5.00**)
- 2015 Winter PharmSci 705, Nanotechnology for Drug Delivery (18 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **5.00/5.00**)
- 2015 Winter Anatomy 504, Cellular Biotechnology (Guest lecturer)
- 2015 Winter ChemEng 519, Pharmaceutical Engineering (Guest lecturer)
- 2015 Winter BME 500, Biomedical Engineering Departmental Seminar (Guest lecturer)
- 2014 Fall MedChem 660, Responsible Conduct of Research and Scholarship (8 course hours)
- 2014 Fall PharmSci 508, Introduction to Drug Delivery and Drugs in Solution (13 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.07/5.00**)
- 2014 Fall ChemEng 696, BioMEMS and Nanotechnology for Life Sciences (Guest lecturer)
- 2013 Fall PharmSci 702, Pharmaceutical Design, Delivery, and Targeting (Guest lecturer)

- 2013 Fall PharmSci 508, Introduction to Drug Delivery and Drugs in Solution (13 course hours)
(Q2 "Overall, the instructor was an excellent teacher," instructor evaluation = **4.03/5.00**)
- 2012 Fall ChemEng 690, BioMEMS and Nanotechnology for Life Sciences (Guest lecturer)
- 2012 Fall BME 500, Biomedical Engineering Departmental Seminar (Guest lecturer)
- 2012 Fall PharmSci 462, Introduction to Drug Delivery and Drugs in Solution (5 course hours)
(Q4 "Overall, the instructor was an excellent teacher," instructor evaluation = **3.42/5.00**)

MIT

2010 Spring #3.014: Materials Laboratory (guest instructor)

Rice University

- 2009 Fall BIOE 322, Fundamentals of Systems Physiology (Graduate student instructor)
- 2009 Spring BIOE 420, Biosystems Transport and Reaction Processes (Graduate student instructor)
- 2008 Fall BIOE 451, Bioengineering Design (Graduate student instructor)

MENTORING

Awards granted to trainees while actively under mentorship

- Julia Crowther NIH T32 Cellular Biotechnology Predoctoral Fellowship, 2024
- Hulya Tanner NIH F31 Predoctoral Fellowship, 2024
- Fang Xie UM Rackham Pre-doctoral Fellowship, 2024.
- Himani Jasewicz NIH T32 Cancer Biology Predoctoral Fellowship, 2024
- Amani Djouadi NSF Predoctoral Fellowship, 2023
- Omar Abed NSF Predoctoral Fellowship, 2022
- Georgina Stephanie NIH Diversity Administrative Supplement, 2022
- April Kim NIH T32 Cellular Biotechnology Predoctoral Fellowship, 2022
- Marisa Aikins Kristen L. McGlone Research Award, College of Pharmacy, University of Michigan, 2022
- Marisa Aikins AAPS, Best Poster Award, 2021 (only given to 6 out of 700 poster presenters)
- Xiaoqi Sun UM Rackham Pre-doctoral Fellowship, 2021.
- Fang Xie UM Rackham International Student Fellowship, 2020.
- Dr. Kai Han Controlled Release Society, Oral Drug Delivery Trainee Award, 2020.
- Dr. Emeka Okeke Postdoctoral Translational Scholar Program — MICHHR, University of Michigan, 2020.
- Lindsay Scheetz AAPS, Best Poster Award, 2019.
- Dr. Emeka Okeke Excellent Poster Award, Gordon Research Conference, 2019.
- Dr. Emeka Okeke Canadian Institutes of Health Research Postdoctoral Fellowship, 2019.
- Dr. Sejin Son BMES Career Development Award, 2018.
- Xiaoqi Sun UM Rackham International Student Fellowship, 2018.
- Lukasz Ochyl 2nd Place Poster Award, UM, College of Pharmacy, Research Forum, 2018
- Rui Kuai Chinese Government Award for Outstanding Self-financed Students Abroad, 2017.
- Cameron Louttit GAANN Fellowship, 2017.
- Rui Kuai Excellent Poster Award, Cancer Nanotechnology, Gordon Research Conference, 2017.
- Cameron Louttit Outstanding Poster Award in the UM Cellular Biotechnology Training Program Symposium, 2017.
- Rui Kuai AAPS Innovation in Biotechnology Award, 2017.
- Yuchen Fan UM Rackham Pre-doctoral Fellowship, 2017.
- Cameron Louttit 1st Place Poster Award in the UM Biointerfaces Institute Annual Symposium, 2017.
- Lukasz Ochyl American Foundation for Pharmaceutical Education Pre-doctoral Fellowship, 2016-2018
- Cameron Louttit American Association of Immunologist Trainee Travel Award, 2016.
- Rui Kuai 2nd Place Poster Award in the UM PSTP Annual Symposium, 2016.
- Lukasz Ochyl UM Rackham Pre-doctoral Fellowship, 2016.
- Charles Park NIH T32 Tissue Engineering and Tissue Regeneration Program, 2016-2018.
- Yuchen Fan Broomfield International Student Fellowship, 2015.
- Cameron Louttit NIH T32 Cellular Biotechnology Training Program, 2015-2017.
- Rui Kuai American Heart Association Pre-doctoral Fellowship (Percentile rank: 1.06%), 2015-2017.
- Cameron Monroe The Congress-Bundestag Youth Exchange for Young Professionals, 2014.
- Rui Kuai Broomfield International Student Fellowship, 2013.

University of Michigan, Ann Arbor

Postdoctoral Associates and Clinical Fellows

- 2025-present Jin Xu, PhD, BI Innovation Fellow. Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.

2024-present Xiang Ling, PhD, Department of Pharmaceutics, China Pharmaceutical University, China
 2023-present Daniel McDougale, MD/PhD, University of Michigan, Rheumatology Fellowship. (Clinical fellow)
 2023-present Jie Zhang, PhD, Department of Nanoscience and Technology, University of Chinese Academy of Sciences, China
 2023-present Yujin Kim, PhD, Department of Biological Sciences, KAIST, Korea
 2021-present Youngseok Cho, PharmD, PhD, Department of Molecular Medicine and Biopharmaceutical Sciences, Seoul National University, Korea
 2017-present Cheng Xu, PhD, Chemistry, Hunan University, China
 2018-2023 Kai Han, PhD, Polymer Chemistry and Physics, Wuhan University, China.
 (Current: Assistant Professor in China Pharmaceutical University, China)
 2017-2021 Sejin Son, PhD, Chemistry, POSTECH, Korea
 (Current: Associate Professor in Inha University, South Korea)
 2013-2021 Jutaek Nam, PhD, Chemistry, POSTECH, Korea
 (Current: Associate Professor in Chonnam University, South Korea)
 2017-2020 Emeka Okeke, PhD, Immunology, University of Manitoba, Canada
 (Current: Assistant Professor in SUNY Fredonia, NY)
 2017-2020 Yonghyun Lee, PhD, Pharmaceutics, Busan National University, Korea
 (Current: Assistant Professor in Ewha Women's University, South Korea)
 2012-2013 Preety Sahdev, PhD, Pharmaceutical Sciences, South Dakota State University
 (Current: Senior Scientist in AbbVie)

Graduate Students (PhD):

2025-present Katherine Dong, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2024-present Quguang Li, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2024-present Yue He, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2024-present Qing Sun, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor. (co-advised with Dr. Julian Zhu)
 2024-present Himani Jasewicz, Cancer Biology (PIBS), University of Michigan, Ann Arbor.
 2023-present Amani Djouadi, Department of Biomedical Engineering, University of Michigan, Ann Arbor.
 2023-present Julia Crowther, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2022-present Swetha Kodamasimham, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor. (co-advised with Dr. Steve Schwendeman)
 2021-present Omar Abed, Department of Chemical Engineering, University of Michigan, Ann Arbor.
 2020-present April Kim, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2020-present Xingwu Zhou, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2019-present Fang Xie, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2018-2025 Jin Xu, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2017-2021 Marisa Aikins, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 Topic: Cancer immunotherapy against acute myeloid leukemia. (current: Postdoc, University of Michigan)
 2016-2021 Xiaoqi Sun, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 Topic: Novel STING agonist formulation for cancer immunotherapy. (current: Scientist, Editas Medicine)
 2015-2021 Charles Park, Department of Biomedical Engineering, University of Michigan, Ann Arbor.
 Topic: Immunoengineering Approaches for the Treatment of Cancer and Prevention of Infectious Diseases. (current: Postdoc, Harvard University)
 2015-2020 Alireza Hassani Najafabadi, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor. Topic: Immune modulation with engineering nanomaterials. (current: Fellow, Terasaki Institute for Biomedical Innovation)
 2017-2019 Lindsay Scheetz, co-advised with Prof. Anna Schwendeman, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 Topic: Cancer immunotherapy against glioblastoma multiforme. (current: Scientist, Merck)
 2014-2019 Cameron Louttit, Department of Biomedical Engineering, University of Michigan, Ann Arbor.
 Topic: Reprogramming neutrophils for targeted drug delivery. (current: Lecturer, Umich BME)
 2014-2019 Yuchen Fan, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 Topic: Lipid-biopolymer hybrid nanoparticles for whole tumor cell vaccination.
 (current: Scientist in Genentech, Inc.)
 2014-2018 Joseph Bazzill, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 Topic: Formulation of Lipid Nanoparticles with Viral Subunit Antigens for Vaccination.
 (current: Scientist in Seqirus USA, Inc.)

- 2013-2018 Lukasz Ochyl, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
Topic: Preparation and Characterization of Cell Membranes for Cancer Immunotherapy.
(current: Scientist in Xencor, Inc.)
- 2013-2018 Rui Kuai, co-advised with Prof. Anna Schwendeman, Department of Pharmaceutical Sciences,
University of Michigan, Ann Arbor.
Topic: Synthetic high density lipoprotein nanodiscs for cancer immunotherapy and
chemoimmunotherapy. (current: Assistant Professor, Tsinghua University, China)

Visiting Scholar:

- 2023-2025 Nilgün Yakubogullari, PhD Candidate, Izmir Institute of Technology, Bioengineering, Turkey
- 2016-2017 Jie Gao, Ph.D., Associate Professor, Shanghai Second Military Medical University, China.
- 2016-2017 Clemence Tarirai, Ph.D., Senior Lecturer, Tshwane University of Technology, South Africa.
- 2015-2016 Yanhong Shen, Ph.D., Chief Pharmacist, Hebei Chest Hospital, China.

Graduate Students (Masters, PharmD, visiting, and rotation students):

- 2025-present Chuan Li, MS Candidate, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2024-present Zijia Li, MS Candidate, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2022-2023 Ziye Wan, MS Candidate, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2022-2023 Lingwei Lyu, MS Candidate, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2023 Himani Jasewicz, Rotation student, Cancer Biology, University of Michigan, Ann Arbor.
- 2023 Allison Wang, Rotation student, Immunology, University of Michigan, Ann Arbor.
- 2023 Reid Williams, Rotation student, Immunology, University of Michigan, Ann Arbor.
- 2023 Armin Ahnoud, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2023 Neha Kretar, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2023 Qing Sun, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2023 Quguang Li, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2023 You He, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2021-2023 Georgina Stephanie, Department of Chemical Engineering, University of Michigan, Ann Arbor.
- 2022-2023 Yeonwoo Jang, Department of Integrative Engineering, Chung-Ang University, Korea.
- 2022-2023 Timon Lwo, MS Candidate, Biomedical Engineering, University of Michigan, Ann Arbor.
- 2022 Andrew Alvarez, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2022 Kaikai Wang, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2021 Xingwu Zhou, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2021-2022 Jinsung Ahn, Department of Medical Biotechnology, Dongguk University, Korea.
- 2019-2021 Xuehui Huang, Department of Materials Science and Engineering, Southwest Jiaotong University,
Chengdu, China.
- 2021 Ishani Sharma, MS Candidate, Biomedical Engineering, University of Michigan, Ann Arbor.
- 2021 Xingwu Zhou, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2021 April Kim, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2021 Shuying Wang, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2021 Aishwarya Chandrashekar, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann
Arbor.
- 2020 Fang Xie, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2020 Corrine Din, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2020 Tao Zheng, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2019 Luchen Zhang, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2019 Kristen Hong, Rotation, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2018-2019 Cameron Monroe, MS Candidate, Biomedical Engineering, University of Michigan, Ann Arbor.
- 2017 Marisa Aikins, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2017 Ghasidit Pornnoppadol, Rotation, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2017 Jason Albert, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2017 King Yeung Hong, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2017 Hongxiang Hu, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2016 Xiaoqi Sun, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2016-2017 Ishina Balwani, MS Candidate, Medical Biotechnology, University of Illinois at Chicago.
- 2016-2019 Ai-Thuan Nguyen, PharmD Candidate, University of Michigan, Ann Arbor.
- 2015-2017 Marisa Aikins, MS Candidate, Biomedical Engineering, University of Michigan, Ann Arbor.
- 2015 Humaira Nawer, PharmD Candidate, University of Michigan, Ann Arbor.
- 2014 Zhilin Chen, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2014 Patrick Sinko, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.

2014 Ila Myers, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2014 Ryan Clauson, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2013 Jonathan Akerberg, Exchange student, PharmD Candidate, University of Gothenburg, Sweden.
 2013 Chang-ching Lin, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2013 Nicholas Waltz, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2013 Morgan Giles, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2013 Mari Gasparyan, Rotation student, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2013 Isaac Dripps, Rotation student, Pharmacology PIBS, University of Michigan, Ann Arbor.
 2013 Divya Sanghvi, MS Candidate, Biomedical Engineering, University of Michigan, Ann Arbor.
 2013 Tony Koehn, PharmD Candidate, University of Michigan, Ann Arbor.

Undergraduate Students:

2023-present Alicja Krasowska, University of Michigan, Ann Arbor.
 2025-present Kehan Liu, University of Michigan, Ann Arbor.
 2025-present Geshen Feng, University of Michigan, Ann Arbor.
 2024-present Emma Camp, University of Michigan, Ann Arbor.
 2024-2025 Sashider Rajesh, Biochemistry, University of Michigan, Ann Arbor.
 2024-2025 Isabel Comfort, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2023-2025 Katherine Dong, Biology, Health and Society, University of Michigan, Ann Arbor.
 2022-2025 Brianna Ha, Biomedical Engineering, University of Michigan, Ann Arbor.
 2022-2025 Clara Huang, Biomedical Engineering, University of Michigan, Ann Arbor.
 2022-2023 Yue He, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2021-2023 May Phoo, Biomedical Engineering, University of Michigan, Ann Arbor.
 2021-2022 Xinran An, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2020-2021 Xiaoyue Shi, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2019-2020 Mingjiao Sun, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2018-2020 Tianrui Wang, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2018-2020 Yu Zhang, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2019 Chipo Chisowa, Biological Sciences, Oakwood University, Huntsville, AL. (REU student)
 2018-2019 Dylan Hendy, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2018-2019 Derek Ge, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2018 Haley Burger, REU Summer Student, Biochemistry, Pitzer College, CA.
 2016-2018 Luke Brennan, Biomedical Engineering, University of Michigan, Ann Arbor.
 2016-2017 Pirinka Georgiev, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2015-2018 Ellen Yang, Biochemistry, University of Michigan, Ann Arbor.
 2015-2016 Ashley Stephenson, Biomedical Engineering, University of Michigan, Ann Arbor.
 2015 Lauren D'Cruz, Chemical Engineering, University of Michigan, Ann Arbor.
 2015 Mananga Mutombo, SROP student, Biomedical Engineering, University of Illinois, Chicago.
 2015 Hannah Pfershy, Biomedical Engineering, University of Michigan, Ann Arbor.
 2015 Amanda Fodera, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
 2013-2015 Rohan Addala, Biomedical Engineering, University of Michigan, Ann Arbor.
 2013-2015 Cameron Monroe, Biomedical Engineering, University of Michigan, Ann Arbor.
 2013-2014 Ramakrishnan Jayaraman, UROP student, Neuroscience, University of Michigan, Ann Arbor.
 2013-2014 Xerxes Sanii, Biomedical Engineering, University of Michigan, Ann Arbor.
 2013-2014 Scott Mansfield, Biomedical Engineering, University of Michigan, Ann Arbor.
 2013 Alice Baek, Biochemistry, University of Michigan, Ann Arbor.

Staff:

2023-present Qi Wu, Research Scientist, University of Michigan, Ann Arbor.
 2016-present Yao Xu, Laboratory manager, University of Michigan, Ann Arbor.
 2023-2024 Ziye Wan, Research Associate, University of Michigan, Ann Arbor.
 2023-2024 Lingwei Lyu, Research Associate, University of Michigan, Ann Arbor.
 2021-2023 Hannah Dobson, Research Associate, University of Michigan, Ann Arbor.
 2017-2018 Ishina Balwani, Research Associate, University of Michigan, Ann Arbor.

Dissertation committee member for:

2025-present May Phoo, Pharmaceutical Sciences, (Advisor: Dr. Anna Schwendeman), UM, Ann Arbor.
 2025-present Ajay Chavda, Chemical Engineering, (Advisor: Dr. Jouha Min), UM, Ann Arbor.
 2025-present Yulia Rakova, Chemistry, (Advisor: Dr. Adam Matzger), UM, Ann Arbor.
 2025-present Shurong Zhou, Pharmaceutical Sciences, (Advisor: Dr. Julian Zhu), UM, Ann Arbor.

2023-present Namir Khalasawi, Pharmaceutical Sciences, (Advisor: Dr. Pete Tessier), UM, Ann Arbor.

2024-present Mary Dickenson, Biomedical Engineering, (Advisor: Dr. Aaron Morris), UM, Ann Arbor.

2024-present Sydney Wheeler, Biomedical Engineering, (Advisor: Dr. Aaron Morris), UM, Ann Arbor.

2023-present Namir Khalasawi, Pharmaceutical Sciences, (Advisor: Dr. Pete Tessier), UM, Ann Arbor.

2023-present Fjorela Xhyliu, Chemical Engineering, (Advisor: Dr. Joerg Lahann), UM, Ann Arbor.

2023-2025 Antonela Rodriguez, Pharmaceutical Sciences, (Advisor: Dr. Anna Schwendeman), UM, Ann Arbor.

2023-2025 Ian Schrack, Biomedical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.

2023-2025 Jinsung Ahn, Biomedical Engineering, (Advisor: Dr. Soo-Hong Lee), Dongguk University, Korea.

2023-2025 Jeff Ma, Biomedical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.

2023-2025 Yeonwoo Jang, Biomedical Engineering, (Advisor: Dr. Hansoo Park), Chung-ang University, Korea.

2023-2024 Xiaomeng Hu, Biotechnology & Bioengineering, (Advisor: Dr. Li Tang), École polytechnique fédérale de Lausanne (EPFL), Lausanne, Switzerland.

2023-present Rebecca Pereles, Biomedical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.

2022-2025 Nna-Emeka Onukwugha, Chemical Engineering, (Advisor: Dr. Sunitha Nagraath), UM, Ann Arbor.

2022-present Aishwarya Chandrashekar, Pharmaceutical Sciences, (Advisor: Dr. Schwendeman), UM, Ann Arbor.

2022-present Minal Nenwani, Biomedical Engineering, (Advisor: Dr. Deepak Nagraath), UM, Ann Arbor.

2022-present Guillermo Escalona, Biomedical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.

2021-2023 Sun Min Jung, Pharmaceutical Sciences, (Advisor: Dr. Haojie Zhu), UM, Ann Arbor.

2021-present Jin Heon Jeon, Biomedical Engineering, (Advisor: Dr. Deepak Nagraath), UM, Ann Arbor.

2021-2025 Corrine Din, Pharmaceutical Sciences, (Advisor: Dr. Steve Schwendeman), UM, Ann Arbor.

2021-2025 Zera Montemayor, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2021-2024 Chengyi Li, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2021-2024 Michael Saunders, Biomedical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.

2020-2025 Brandon McClellan, Microbiology and Immunology, (Advisor: Dr. Maria Castro), UM, Ann Arbor.

2020-2024 Anna Mauser, Biomedical Engineering, (Advisor: Dr. Joerg Lahann), UM, Ann Arbor.

2020-2025 Luchen Zhang, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2020-2023 Yingzi Bu, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2020-2023 Kristen Hong, Pharmaceutical Sciences, (Advisor: Dr. Anna Schwendeman), UM, Ann Arbor.

2020-2021 Manali Sawant, Pharmaceutical Sciences, (Advisor: Dr. Pete Tessier), UM, Ann Arbor.

2020-2023 Anna Kopp, Chemical Engineering, (Advisor: Dr. Pete Tessier), UM, Ann Arbor.

2020-2023 Jill Coghlan, Pharmaceutical Sciences, (Advisor: Dr. Anna Schwendeman), UM, Ann Arbor.

2020-2022 Emily Makowski, Pharmaceutical Sciences, (Advisor: Dr. Pete Tessier), UM, Ann Arbor.

2019-2022 Harkamal Jhaji, Biomedical Engineering, (Advisor: Dr. Pete Tessier), UM, Ann Arbor.

2019-2022 Jenny Choi, Cancer Biology, (Advisor: Drs. Weiping Zou and Arul Chinnaiyan), UM, Ann Arbor.

2019-2020 Duy Luong, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2019-2021 Ravi Raghani, Biomedical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.

2019-2022 Zeqi Niu, Chemical Engineering, (Advisor: Dr. Sunitha Nagraath), UM, Ann Arbor.

2019-2023 Jennifer Diaz, Pharmaceutical Sciences, (Advisor: Dr. Gus Rosania), UM, Ann Arbor.

2019-2022 Richard Schutzman, Pharmaceutical Sciences, (Advisor: Dr. Steve Schwendeman), UM, Ann Arbor.

2018-2021 Hongxiang Hu, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2019-2020 William Kelly, Chemical Engineering, (Advisor: Dr. Omolola Eniola-Adefeso), UM, Ann Arbor.

2018-2019 Ryan Clauson, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2018-2019 Liam Casey, Chemical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.

2017-2021 Daniel Quevedo, Biomedical Engineering, (Advisor: Dr. Joerg Lahann), UM, Ann Arbor.

2017-2021 Catherine Snyder, Materials Science and Engineering, (Advisor: Drs. Geeta Mehta and Anish Tuteja), UM, Ann Arbor.

2017-2022 Ashley Velez, Cell and Developmental Biology, (Advisor: Dr. Mariana Pasca di Magliano), UM, Ann Arbor.

2017-2021 Nahal Habibi, Chemical Engineering, (Advisor: Dr. Joerg Lahann), UM, Ann Arbor.

2017-2021 Jenna Walker, Pharmaceutical Sciences, (Advisor: Dr. Steve Schwendeman), UM, Ann Arbor.

2017-2020 Yining Zhang, Chemical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.

2016-2017 Angela Yang Wang, Chemical Engineering (Advisor: Dr. Sunitha Nagraath), UM, Ann Arbor.

2016-2021 Emine Sumeyra Turali-Emre, Biomedical Engineering, (Advisor: Dr. Nick Kotov), UM, Ann Arbor.

2016-2019 Mikhail Murashov, Pharmaceutical Sciences, (Advisor: Dr. Gus Rosania), UM, Ann Arbor.

2016-2021 Ahmet Emrehan Emre, Biomedical Engineering, (Advisor: Dr. Nick Kotov), UM, Ann Arbor.

2016-2020 Nathan Truchan, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2016-2019 Sang Kim, Pharmaceutical Sciences, (Advisor: Dr. Anna Schwendeman), UM, Ann Arbor.

2015-2017 Phillip Rzeczycki, Pharmaceutical Sciences, (Advisor: Dr. Gus Rosania), UM, Ann Arbor.

2015-2019 Emily Morin, Pharmaceutical Sciences, (Advisor: Dr. Anna Schwendeman), UM, Ann Arbor.

2015-2019 Ila Myers, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.

2015-2018 Zhilin Chen, Pharmaceutical Sciences, (Advisor: Dr. Wei Cheng), UM, Ann Arbor.
 2015-2017 Robert Kuo, Biomedical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.
 2014-2018 Chang-ching "Albert" Lin, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.
 2016 Seung Won Shin, Chemical Engineering, Sungkyunkwan University, (Advisor: Dr. Soongho Um) Republic of Korea.
 2014-2016 Allison Matyas, Pharmaceutical Sciences, (Advisor: Dr. KD Lee), UM, Ann Arbor.
 2013-2016 Kellisa Hansen, Pharmaceutical Sciences, (Advisor: Dr. Steve Schwendeman), UM, Ann Arbor.
 2013-2016 J. Max Mazzara, Pharmaceutical Sciences, (Advisor: Dr. Steve Schwendeman), UM, Ann Arbor.
 2013-2016 Rhonda Jack, Chemical Engineering, (Advisor: Dr. Sunitha Nagrath), UM, Ann Arbor.
 2013-2015 Oluseyi Adeniyi, Pharmaceutical Sciences, (Advisor: Dr. KD Lee), UM, Ann Arbor.
 2012-2016 Brittany Agius Bailey, Pharmaceutical Sciences, (Advisor: Dr. Steve Schwendeman), UM, Ann Arbor.

MIT

2011-2012 Wuhbet Abraham, Research technician, Koch Institute, MIT
 2010-2011 Samantha Luo, Undergraduate student, Materials Science & Engineering, MIT
 2010-2011 Sandra Bustamante, Research technician, Koch Institute, MIT
 2009-2012 Heikyung Suh, Research technician, Koch Institute, MIT
 2009-2010 Mashaal Sohail, Undergraduate student, Biological Engineering, MIT
 2008-2009 Jose Chaparro, Undergraduate student, Biological Engineering, MIT
 2008-2009 Richard Yau, Undergraduate student, Biological Engineering, MIT

Rice University

2007 Iris Kim, REU Program, Biomedical Engineering, University of Texas – Austin.
 2006 Barbara Nsiah, REU Program, Biomedical Engineering, Georgia Institute of Technology.

PROFESSIONAL SOCIETIES AND SERVICES

Session/Meeting Organization/Chairing

2013-present. Board Member, Korean-American Biomedical Engineering Society.
 2024-present. Vice President, Korean-American Biomedical Engineering Society.
 2024-present. Korean-American Scientists and Engineers Association (KSEA) Councilor (Technical Group: Bioengineering and Biomedical Engineering)
 2020-2022 Chair, Immuno Delivery, Focus Group, Controlled Release Society.
 2019 Session Chair, US-Korea Conference on Science, Technology, and Entrepreneurship. Chicago, IL.
 2019 Symposium Organizer, 7th Korea-US Joint Workshop in Biomedical Engineering Society Annual Meeting, Philadelphia, PA.
 2018-2020. Vice Chair, Immuno Delivery, Focus Group, Controlled Release Society.
 2018 Symposium Organizer, 6th Korea-US Joint Workshop in Biomedical Engineering Society Annual Meeting, Atlanta, GA.
 2017 Conference Co-Chair and Organizer, NanoDDS, 15th International Nanomedicine & Drug Delivery Symposium, Ann Arbor, MI.
 2017 Symposium Organizer, 5th Korea-US Joint Workshop in Biomedical Engineering Society Annual Meeting, Phoenix, AZ.
 2016 Symposium Organizer and Session Chair, 4th Korea-US Joint Workshop in Biomedical Engineering Society Annual Meeting, Minneapolis, MN.
 2016 Session Chair, Nano Drug Delivery Systems Annual Conference, Baltimore, MD.
 2015 Session Chair in multiple tracks in Drug delivery, Biomedical Engineering Society Annual Meeting.
 2015 Symposium Organizer, 3rd Korea-US Joint Workshop in Biomedical Engineering Society Annual Meeting, Tampa, FL.
 2015 Session Chair, Interacting with the Immune System using Polymeric Systems, American Chemical Society Meeting.
 2015 Abstract Reviewer, Biomedical Engineering Society Annual Meeting.
 2014 Session Chair, Innovations in Micro- and Nano-based Delivery, Controlled Release Society Annual Meeting.
 2014 Abstract Reviewer, Controlled Release Society Annual Meeting.
 2014 Abstract Reviewer, Society for Biomaterials Annual Meeting.
 2014 Symposium Organizer, 2nd Korea-US Joint Workshop in Biomedical Engineering Society Annual Meeting, San Antonio, TX.
 2012 Session Chair, Biomaterials for delivery of siRNA, Biomedical Engineering Society Annual Meeting.

Reviewer for Scientific Journals (reviewed 584 journal manuscripts, as of 5/2025)

<i>AAPS Journal</i>	<i>Molecular Pharmaceutics</i>
<i>ACS Applied Mat & Interfaces</i>	<i>Molecular Therapy</i>
<i>ACS Biomaterials Science & Engineering</i>	<i>Nano Letters</i>
<i>ACS Central Science</i>	<i>Nanomedicine</i>
<i>ACS Nano</i>	<i>Nanomedicine and Nanotechnology</i>
<i>Acta Biomaterialia</i>	<i>Nanoscale</i>
<i>Advanced Materials</i>	<i>Nature Biomedical Engineering</i>
<i>Advanced Drug Delivery Systems</i>	<i>Nature Biotechnology</i>
<i>Advanced Sciences</i>	<i>Nature Cancer</i>
<i>Advanced Therapeutics</i>	<i>Nature Communications</i>
<i>Annals of Biomedical Engineering</i>	<i>Nature Materials</i>
<i>Bioconjugate Chemistry</i>	<i>Nature Nanotechnology</i>
<i>Bioengineering & Translational Medicine</i>	<i>Nature Reviews Materials</i>
<i>Biomaterials</i>	<i>New England Journal of Medicine (News)</i>
<i>Biomaterials Research</i>	<i>Oncotarget</i>
<i>BioMed Res International</i>	<i>PLoS ONE</i>
<i>Cancer Immunology, Immunotherapy</i>	<i>Regenerative Medicine</i>
<i>ChemMedChem</i>	<i>Science Advances</i>
<i>Current Drug Therapy</i>	<i>Science Immunology</i>
<i>Integrative Biology</i>	<i>Scientific Reports</i>
<i>JACS</i>	<i>Scientific Translational Medicine</i>
<i>Journal of Biomedical Nanotech</i>	<i>Theranostics</i>
<i>Journal of Controlled Release</i>	<i>Therapeutic Delivery</i>
<i>Journal of Materials Chemistry B</i>	<i>Tissue Engineering</i>
<i>Journal of NanoSci & Nanotech</i>	<i>Trends in Biotechnology</i>
<i>Langmuir</i>	<i>Vaccine</i>
<i>Molecular Biotechnology</i>	

Services as Editorial Board Member

2023- current	Editorial Board of Journal of Controlled Release
2022- current	International Advisory Board of Advanced Therapeutics
2021- current	Associate Editor for Drug Delivery and Translational Research
2020- current	Associate Editor for Advanced Drug Delivery Systems
2020- current	Associate Editor for Pharmaceutics
2021	Guest Editor for Journal Controlled Release: RNA therapeutics
2021	Guest Editor for Advanced Therapeutics: Next-generation immunotherapies
2020-2021	Guest Editor for Frontiers in Immunology: Emerging Therapeutics in Immune Tolerance
2020	Guest Editor for Accounts of Chemical Research: Cancer immunotherapy
2018	Guest Editor for Advanced Drug Delivery Systems: Nanomedicine
2018	Guest Editor for Journal of Controlled Release: Nanomedicine
2014-2018	Associate Editor for Annals of Biomedical Engineering

Services for the University of Michigan, Ann Arbor

2025- current	University of Michigan Innovations Champions
2025- current	University of Michigan BioInnovations Institute Committee
2021- current	University of Michigan Biosciences Initiative Coordinating Committee
2021- current	Advisory Committee, Rogel Cancer Center Immunology Core
2021- current	Advisory Committee, Rogel Cancer Center Flow Cytometry Core
2021- current	Biosciences Initiative Liaison, Technological Innovations in Brain Cancer
2021-2025	Biosciences Operating Committee, Michigan Center for Regenerative Medicine
2021-2025	Biosciences Operating Committee, Michigan Center for Infectious Disease Threats
2020-2024	Co-chair, Cancer & Microbes Work Group, UM Rogel Cancer Center
2018-2019	Microscopy Core Facility Committee
2018-2019	BioMedical Innovation Council

Services for College of Pharmacy, University of Michigan, Ann Arbor

2020-2023	Executive Committee Member, College of Pharmacy
2015- current	Safety Committee

2014-2017 Faculty mentor for College of Pharmacy Graduate Student Organization
2013-2017 Pharm.D. Investigations Committee
2013-2015 Faculty Development Committee

Services for Departmental Committees, University of Michigan, Ann Arbor

2012-current Chair, Graduate Admissions and Recruitment Committee, Pharmaceutical Sciences
2019-2021 Co-chair, Faculty Search Committee, Pharmaceutical Sciences
2014 Fall Faculty Search Committee, Biomedical Engineering
2014-2015 Bachelor of Sciences in Pharmaceutical Sciences Advisory Committee, Pharmaceutical Sciences