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PERSONAL STATEMENT

My research group aims to develop novel therapeutics at the interface of immunology, pharmaceuticals, and engineering. Specifically, we are developing drug delivery systems designed to enhance delivery of antigen and adjuvant to lymphoid organs and manipulate immune functions in the context of vaccines and immunotherapies against cancer, infectious pathogens, and autoimmune diseases. Our work focusing on the development of nanotechnologies for vaccination has been published in *Nature Materials*, *Nature Medicine*, *Nature Reviews*, *Materials*, *Nature Biomedical Engineering*, *Nature Communications*, *PNAS*, *ACS Nano*, *Sci Transl Med*, and *Science Advances*. Our work has also led to 13 U.S. issued or pending patent applications as well as two startup biotech companies, Vedantra Pharmaceuticals (Cambridge, MA) and EVOQ Therapeutics (Ann Arbor, MI).

EDUCATION & TRAINING

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

POSITIONS & HONORS

POSITIONS

- 2018- present John Gideon Searle Associate Professor, with tenure, Department of Pharmaceutical Sciences, College of Pharmacy, University of Michigan, Ann Arbor, MI.
2018- present Associate Professor, Department of Biomedical Engineering, without tenure, College of Engineering, University of Michigan, Ann Arbor, MI
2016- present EVOQ Therapeutics, LLC. Co-Founder and Chief Scientific Officer.
2016- present Member, Graduate Program in Immunology, University of Michigan
2012- 2018 John Gideon Searle Assistant Professor, Department of Pharmaceutical Sciences, College of Pharmacy, University of Michigan, Ann Arbor, MI.
2012- 2018 Assistant Professor, Department of Biomedical Engineering, College of Engineering, University of Michigan, Ann Arbor, MI.
2012- present Core member, BioInterfaces Institute, University of Michigan
2012- present Core member, Comprehensive Cancer Center, University of Michigan
2012- present Member, Michigan Nanotechnology Institute for Medicine and Biological Sciences
2008- 2012 Postdoctoral Fellow, Professor Darrell Irvine, MIT, Cambridge, MA
2006 Summer research intern, Boston Scientific, Boston, MA

HONORS AND DISTINCTIONS

- 2018 Emerging Leader Award, American Association of Pharmaceutical Scientists
2018 Mid-Career Nanotechnology Scientific Award, Applied Nanotech and Nanoscience International Conf.
2017 CMBE Young Innovator
2017 University of Michigan Senior Forbes Scholar
2017 Rice University Outstanding Bioengineering Alumnus Award
2017-2019 Emerald Foundation Distinguished Investigator Award
2016-2021 National Science Foundation CAREER Award
2016-2019 Department of Defense Career Development Award (CDMRP)
2015-2108 Melanoma Research Alliance Young Investigator Award
2014- Associate Editor of *Annals of Biomedical Engineering*
2014 AAPS New Investigator Award in Pharmaceuticals and Pharmaceutical Technologies
2013 Recipient of John Gideon Searle Assistant Professorship
2012-2014 NIH/NIAID K22 Research Scholar Development and Faculty Transition Award
2012 American Association of Immunologist Trainee Award
2011 IEEE-EMBS Harvard Wyss Institute Award for Translational Research

- 2011 Biomaterials Gordon Research Conference Poster Award
- 2010 TERMIS Young Investigator Award (Tissue Engineering and Regenerative Medicine International Society)
- 2008 Mary F.D. Morse Graduate Fellowship Award (for outstanding graduate student research)
- 2007 American Society for Investigative Pathology Trainee Award
- 2007 American Anatomy Association Trainee Award
- 2007 First Place Graduate Student Research Award, North American Vascular Biology Organization
- 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, American Chemical Society
- 2009- Member, Controlled Release Society
- 2004- Member, Society for Biomaterials
- 2004- Member, Biomedical Engineering Society

TECHNOLOGY TRANSFER AND COMMERCIALIZATION

- 2016 EVOQ Therapeutics, LLC. Co-Founder and Chief Scientific Officer, Technology Licensed.
- 2012 Vedantra Pharmaceuticals, Scientific Advisory Board Member, Technology Licensed.

PANELS AND SERVICES

- 2018- NIH, "HIV Immunopathogenesis and Vaccine Development (HIVD)", Study Section Panel Member.
- 2018- American Foundation for Pharmaceutical Education Fellowships, ad hoc reviewer.
- 2019 CDMRP, "Lung Cancer Research Program", ad hoc reviewer.
- 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.
- 2018 Melanoma Research Alliance, Grant Review Committee, ad hoc reviewer.
- 2018 NIH, "HIV/AIDS Vaccines (VACC)", ad hoc reviewer.
- 2018 NIH, "SBIR Phase I for Methods in Improving HIV Protein Expression (ZAI1-CB-A-C1)", ad hoc reviewer.
- 2018 NIH, "Innovative Research in Cancer Nanotechnology (ZRG1-IMST-LL 55)", ad hoc reviewer.
- 2017 NIH, "AIDS and AIDS-related research (ZRG1-AARR-E)", 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, "Nanotechnology (NANO)", ad hoc reviewer.
- 2017 NIH, "HIV/AIDS Vaccines (VACC)", ad hoc reviewer.
- 2017 Prostate Cancer Canada, Discovery Grants, ad hoc reviewer.
- 2016 NIH, NIAID, "Innovation for HIV Vaccine Discovery (R01)", Special Emphasis Panel.
- 2016 NIH, NIAID, "HIV Vaccine Research and Design (HIVRAD) Program (P01)", Special Emphasis Panel.
- 2016 National Science Foundation, Biomedical Engineering Program CAREER, ad hoc reviewer.
- 2016 NIH, NIAID, "Small Business: Non-HIV Microbial Vaccine Research", Special Emphasis Panel.
- 2016 FWO Research Foundation, Brussel, Belgium, ad hoc reviewer
- 2016 Partnership KWF-STW, Utrecht, Netherlands, ad hoc reviewer
- 2016 University of College London Hospitals, UCLH Charities and SLMS, ad doc reviewer
- 2015 US Department of Defense, CDMRP, ad hoc reviewer
- 2015 University of Michigan, MICHR PTSP, ad hoc reviewer.
- 2014 NIH, NIAID, "Beyond HAART: Innovative Approaches to Cure HIV-1 (U19)", Special Emphasis Panel.
- 2014 University of Michigan, BioInterfaces Institute Grand Challenge, ad doc reviewer.
- 2013 NIH, NIAID, "Center of Excellence for Translational Research", Special Emphasis Panel.
- 2013 Technology Foundation STW, ad hoc reviewer.
- 2013 University of Michigan, MICHR Translational Research, ad doc reviewer.
- 2012 Human Frontier Science Program, ad hoc reviewer.

PUBLICATIONS (> 6100 Google Scholar Citations, h-index = 33)

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)

Since joining University of Michigan in 2012

1. 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**.
2. 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**.
3. 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**.
4. Weerappuli PD*, Louttit C*, Kojima T, Brennan L*, Yalavarthi S, Xu Y, Ochyl LJ, Maeda ML, Kim HS, Knight JS, Takayama S§, **Moon JJ**§. Extracellular trap-mimicking DNA-histone mesostructures synergistically activate dendritic cells. 8, 22, e1900926, 2019, **Advanced Healthcare Materials**.
5. Xu C, Nam J, Hong H, Xu Y, **Moon JJ**§. Positron Emission Tomography-Guided Photodynamic Therapy with Biodegradable Mesoporous Silica Nanoparticles for Personalized Cancer Immunotherapy. 13, 10, 12148-12161, 2019, 2019, **ACS Nano**.
6. Fan Y, Stronsky SM, Xu Y, Steffens JT, van Tongeren SA, Erwin A, Cooper CL§, **Moon JJ**§. Multilamellar Vaccine Particle Elicits Potent Immune Activation with Protein Antigens and Protects Mice against Ebola Virus Infection. 13, 10, 11087-11096, 2019, **ACS Nano**.
7. Scheetz L*, Park KS*, Li Q, Lowenstein PR, Castro MG, Schwendeman A, **Moon JJ**§. Engineering patient-specific cancer immunotherapies. 3, 10, 768-782, 2019, **Nature Biomedical Engineering**.
8. Louttit C*, Park KS*, **Moon JJ**§. Bioinspired nucleic acid structures for immune modulation. 217, 119287, 2019, **Biomaterials**.
9. Nam J*, Son S*, Park KS, Zou W, Shea L, **Moon JJ**§. Cancer nanomedicine for combination cancer immunotherapy. 4, 398-414, 2019, **Nature Reviews Materials**.
10. Lee Y, Arai Y, Ahn J, Kim D, Oh S, Kang D, Lee H, **Moon JJ**, Choi B, Lee SH. Three-dimensional microenvironmental priming of human mesenchymal stem cells in hydrogels facilitates efficient and rapid retroviral gene transduction via accelerated cell cycle synchronization. 11, 27, 2019, **NPG Asia Materials**.
11. Wang T, Subramanian C, Yu M, White P, Kuai R, Sanchez J, **Moon JJ**, Timmermann BM, Schwendeman A, Cohen MS. Mimetic sHDL nanoparticles: A novel drug-delivery strategy to target triple-negative breast cancer. 166, 6, 1168-1175, 2019, **Surgery**.
12. Song Y, Kadiyala U, Weerappuli P, Valdez JJ, Yalavarthi S, Louttit C, Knight JS, **Moon JJ**, Weiss DS, VanEpps JS, and Takayama S. Antimicrobial Microwebs of DNA-Histone Inspired from Neutrophil Extracellular Traps. 13, 1807436, 2019, **Advanced Materials**.
13. Kadiyala P, Li D, Nuñez FM, Altshuler D, Doherty R, Kuai R, Yu M, Kamran N, Edwards M, **Moon JJ**, Lowenstein PR, Castro MG, and Schwendeman A. High-Density Lipoprotein-Mimicking Nanodiscs for Chemo-immunotherapy against Glioblastoma Multiforme. 13, 2, 1365-1384, 2019, **ACS Nano**.
14. Lee B, Ahn SY, Park C, **Moon JJ**, Lee JH, Luo D, Um SH, and Shin SW. Revealing the Presence of a Symbolic Sequence Representing Multiple Nucleotides Based on K-Means Clustering of Oligonucleotides. 24, 4, 348, 2019, **Molecules**.
15. Bazzill JD, Ochyl LJ, Giang E, Castillo S, Law M§, and **Moon JJ**§. Interrogation of antigen display on individual vaccine nanoparticles for achieving neutralizing antibody responses against hepatitis C virus. doi: 10.1021/acs.nanolett.8b03601, 2018, **Nano Letters**. §Co-corresponding authors.
16. Ochyl LJ, and **Moon JJ**§. Dendritic cell membrane vesicles for activation and maintenance of antigen-specific T cells. <http://doi.org/10.1002/adhm.201801091>, 2018, **Advanced Healthcare Materials**.
17. Bazzill JD*, Stronsky SM*, Kalinyak LC, Ochyl LJ, Steffens JT, van Tongeren SA, Cooper CL§, **Moon JJ**§. Vaccine nanoparticles displaying recombinant Ebola virus glycoprotein for induction of potent antibody and polyfunctional T cell responses. doi: 10.1016/j.nano.2018.11.005., 2018, **Nanomedicine**. §Co-corresponding authors.
18. Ochyl LJ, Bazzill JD, Park C, Xu Y, Kuai R, and **Moon JJ**§. PEGylated tumor cell membrane vesicles as a new vaccine platform for cancer immunotherapy. 182, 157-166, 2018, **Biomaterials**.
19. Liu Z, Jiang W, Nam J, **Moon JJ**§, and Kim BY§. Immunomodulating Nanomedicine for Cancer Therapy. 18, 11, 6655-6659, 2018, **Nano Letters**. §Co-corresponding authors.
20. Bose RJ, Kim BJ, Arai Y, Han IB, **Moon JJ**, Paulmurugan R, Park H, and Lee SH. Bioengineered stem cell membrane functionalized nanocarriers for therapeutic targeting of severe hindlimb ischemia. 185, 360-370, 2018, **Biomaterials**.
21. **Moon JJ**§, Schwendeman SP, Schwendeman A. Nanomedicine: past, present, and future. 130, 1-2, 2018, **Adv. Drug. Deliv. Rev. (Editorial)**

22. Mazzara JM, [Ochyl LJ](#), Hong JKY, **Moon JJ**, Prausnitz MR, Schwendeman SP. Self-healing Encapsulation and Controlled Release of Vaccine Antigens from PLGA Microparticles and Microneedles. <http://doi.org/10.1002/btm2.10103>. 2018, **Bioengineering & Translational Medicine**.
23. Subramanian C, White PT, [Kuai R](#), Kalidindi A, Castle VP, **Moon JJ**, Timmermann BN, Schwendeman A, and Cohen MS. Synthetic high-density lipoprotein nanoconjugate targets neuroblastoma stem cells, blocking migration and self-renewal, doi: 10.1016/j.surg.2018.01.023, 2018, **Surgery**.
24. [Kuai R](#), [Sun X](#), Yuan W, [Ochyl LJ](#), [Xu Y](#), [Hassani Najafabadi A](#), [Scheetz L](#), Yu MZ, [Balwani I](#), Schwendeman A_s, and **Moon JJ**_s. Dual TLR agonist nanodiscs as a strong adjuvant system for vaccines and immunotherapy. 282, 131-139, 2018, **J Control Release**.
25. **Moon JJ**, Hennink WE, Schwendeman SP, Schwendeman A. NanoDDS 2017: The 15th International Nanomedicine & Drug Delivery Symposium. 282, 1-2, 2018, **J Control Release (Editorial)**
26. [Kuai R](#)^{*}, Yuan W^{*}, [Xu Y](#), [Fan Y](#), Schwendeman A_s, **Moon JJ**_s. Elimination of established tumors with nanodisc-based combination chemoimmunotherapy. 4,4, eaao1736, 2018, **Science Advances**.
27. [Nam J](#)^{*}, [Son S](#)^{*}, [Ochyl LJ](#), [Kuai R](#), Schwendeman A, and **Moon JJ**_s. Chemo-photothermal therapy combination elicits anti-tumor immunity against advanced metastatic cancer. 9, 1, 1074, 2018, **Nature Communications**.
28. [Xu C](#), Chen F, Valdovinos HF, Jiang D, Goel S, Yu B, Sun H, Barnhart TE, **Moon JJ**, Cai W. Bacteria-like mesoporous silica-coated gold nanorods for positron emission tomography and photoacoustic imaging-guided chemo-photothermal combined therapy. 165, 56-65, 2018, **Biomaterials**.
29. Park HJ, [Kuai R](#), Jeon EJ, Seo Y, Jung Y, **Moon JJ**, Schwendeman A, Cho SW. High-density lipoprotein-mimicking nanodiscs carrying peptide for enhanced therapeutic angiogenesis in diabetic hindlimb ischemia. doi: 10.1016/j.biomaterials.2018.01.027, 2018, **Biomaterials**.
30. [Kuai R](#), [Sun X](#), Yuan W, [Xu Y](#), Schwendeman A_s, **Moon JJ**_s. Subcutaneous Nanodisc Vaccination with Neoantigens for Combination Cancer Immunotherapy. 2018 doi: 10.1021/acs.bioconjchem.7b00761, 2018, **Bioconj Chem**.
31. Chen Z, **Moon JJ**, Cheng W. Quantitation and stability of protein conjugation on liposomes for controlled density of surface epitopes. doi: 10.1021/acs.bioconjchem.8b00033, 2018, **Bioconj Chem**.
32. Bose RJ, Paulmurugan R, **Moon J**, Lee SH, Park H. Cell membrane-coated nanocarriers: the emerging targeted delivery system for cancer theranostics. doi: 10.1016/j.drudis.2018.02.001, 2018, **Drug Discov Today**.
33. Guo Y, Yuan W, Yu B, [Kuai R](#), Hu W, Morin EE, Garcia-Barrio MT, Zhang J, **Moon JJ**, Schwendeman A, Eugene Chen Y. Synthetic High-Density Lipoprotein-Mediated Targeted Delivery of Liver X Receptors Agonist Promotes Atherosclerosis Regression. doi: 10.1016/j.ebiom.2017.12.021, 2018, **EBioMedicine**.
34. [Fan Y](#), [Kuai R](#), [Xu Y](#), [Ochyl LJ](#), Irvine DJ, and **Moon JJ**_s. Immunogenic cell death amplified by co-localized adjuvant delivery for cancer immunotherapy. 17(12):7387-739, 2017, **Nano Letters**.
35. [Kuai R](#), Subramanian C, White P, **Moon JJ**, Cohen MS_s, Schwendeman A_s. Synthetic high-density lipoproteins for targeted delivery of withalongolides to treat adrenocortical carcinoma, 12, 6581, 2017, **Int. J. Nanomedicine**.
36. [Nam J](#), [Son S](#), **Moon JJ**_s. Adjuvant-loaded spiky gold nanoparticles for activation of innate immune cells, DOI: 10.1007/s12195-017-0505-8, 2017, **Cellular and Molecular Bioengineering**.
37. Bailey BA, Desai KG, [Ochyl LJ](#), Ciotti SM, **Moon JJ**, Schwendeman SP. Self-encapsulating poly(lactic-co-glycolic acid) (PLGA) microspheres for intranasal vaccine delivery, DOI: 10.1021/acs.molpharmaceut.7b00586, 2017, **Molecular Pharmaceutics**.
38. Tang J, [Kuai R](#), Yuan W, Drake L, **Moon JJ**_s, Schwendeman A_s. Effect of size and PEGylation of liposomes and peptide-based synthetic lipoproteins on tumor targeting. 13, 1869-78, 2017, **Nanomedicine**. _sCo-corresponding authors.
39. [Kuai R](#), [Ochyl LJ](#), Bahjat KS, Schwendeman A_s and **Moon JJ**_s. Designer vaccine nanodiscs for personalized cancer immunotherapy. 16, 4, 489-496, 2017, **Nature Materials**. _sCo-corresponding authors.
**** Featured by Nature World News, Science Alert, Fierce Biotech, Yahoo! News, R&D, eCancer, Medical Physics Web, Nanotechweb, Technology Networks, Technology.org, C2W.nl, La Stampa, Scientias, Controlled Environments, Tech Times, STRF.ru, Business Standard, CanIndia, La Razon, Health Canal, E! Informador, My Science, Azonano, Nanowerk, Health Medicine, The Medical News, Health Medicinet**
40. Bailey BA, [Ochyl LJ](#), Schwendeman SP, and **Moon JJ**_s. Towards a single dose vaccination strategy with self-encapsulating PLGA microspheres. doi: 10.1002/adhm.201601418, 2017, **Advanced Healthcare Materials**. **(most read article of the month)**
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41. [Gao J](#)_s, [Ochyl LJ](#), [Yang E](#), and **Moon JJ**_s. Cationic liposomes promote antigen cross-presentation in dendritic cells by alkalizing the lysosomal pH and limiting degradation of antigens. 12, 1251-64, 2017, **International J. Nanomedicine**. _sCo-corresponding authors.
42. [Aikins M](#), [Bazzill J](#), and **Moon JJ**_s. Vaccine nanoparticles for protection against HIV infection. 12, 6, 673-782, 2017, **Nanomedicine (Lond)**.
43. [Fan Y](#) and **Moon JJ**_s. Particulate delivery systems for vaccination against bioterrorism agents and emerging infectious pathogens, doi:10.1002/wnan.1403. 2016, **WIREs Nanomedicine & Nanobiotechnology**. **(selected as the cover & one of the Top 10 most accessed articles in 2016)**

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44. Kuai R, Li D, Chen YE, **Moon JJ**§, and Schwendeman A§. High density lipoproteins: nature's multifunctional nanoparticles, 10, 3, 3015-41, 2016, **ACS Nano**. §Co-corresponding authors.
45. Fan Y and **Moon JJ**§. Nanoparticle vaccine delivery systems designed to improve cancer vaccines and immunotherapy, 3, 662-685, 2015, **Vaccines**.
46. Fan Y*, Sahdev P*, Ochyl LJ, Akerberg J, and **Moon JJ**§. Cationic liposome-hyaluronic acid hybrid nanoparticles for intranasal vaccination with subunit antigens. 208, 121-9, 2015, **J Control Release**. *Authors contributed equally.
47. Subramanian C, Kuai R, Zhu Q, White P, **Moon JJ**, Schwendeman A, and Cohen MS. Synthetic high-density lipoprotein nanoparticles: a novel therapeutic strategy for adrenocortical carcinomas, 159, 1, 284-95, 2016, **Surgery**.
48. Kuai R*, Ochyl LJ*, Schwendeman A§, and **Moon JJ**§. Lipid-based nanoparticles for vaccine applications. Book chapter in Biomedical Engineering: Frontier Research and Converging Technologies. Edited by Drs. Jo, Jun, Shin, and Lee, Springer, 9, 177-197, 2016. *Authors contributed equally. §Co-corresponding authors. (**PEER-REVIEWED BOOK CHAPTER**)
49. Ochyl JL and **Moon JJ**§. Whole-animal imaging and flow cytometric techniques for analysis of antigen-specific CD8+ T cell responses after nanoparticle vaccination, e52771, doi:10.3791/52771, 2015, **JoVE**.
50. Sahdev P, Ochyl JL, and **Moon JJ**§. Biomaterials for nanoparticle vaccine delivery systems, 31, 2563-2582, 2014, **Pharmaceutical Research**.

Prior to University of Michigan

51. Li AV*, **Moon JJ***, Abraham W, Elkhader J, Suh K, Yen M, Im EJ, Barouch DH, and Irvine DJ. Generation of robust effector memory T-cell-based mucosal and systemic immunity with pulmonary nanoparticle vaccination. 5, 204, 204ra130, 2013, **Science Translational Medicine**. *Authors contributed equally. (**selected as the cover**)
** Featured by Science News Daily, Chemistry Views, Newswise, Vaccine News, The Medical News, Medical News Today, Scicasts, MedicalXpress, LiveScience, Health Canal, and Nanowerk.
52. Kim M, Song L, **Moon J**, Sun ZY, Bershteyn A, Hanson M, Cain D, Goka S, Kelsoe G, Wagner G, Irvine D, Reinherz EL. Immunogenicity of membrane-bound HIV-1 gp41 MPER segments is dominated by residue accessibility and modulated by stereochemistry. 288, 44, 31888-901, 2013, **J. Biol. Chem**.
53. Demuth PC*, **Moon JJ***, Suh H, Hammond PT, and Irvine DJ, and Huang B. Releasable layer-by-layer assembly of stabilized lipid nanocapsules on microneedles for enhanced transcutaneous vaccine delivery, 6, 8041-51, 2012, **ACS Nano**. *Authors contributed equally.
54. **Moon JJ**, Huang B, and Irvine DJ. Engineering nano- and micro-particles to tune immunity, 24, 3724-46, 2012, **Advanced Materials**.
55. **Moon JJ**, Suh H, Li AV, Ockenhouse CF, Yadava A, and Irvine DJ. Enhancing humoral responses to a malaria antigen with nanoparticle vaccines that expand Tfh cells and promote germinal center induction, 109, 1080-5, 2012, **PNAS**.
** Featured by PNAS: Commentary, 109, 999-1000, 2012.
56. **Moon JJ**, Suh H, Polhemus ME, Ockenhouse CF, Yadava A, and Irvine DJ. Antigen-displaying lipid-enveloped PLGA nanoparticles as delivery agent for Plasmodium vivax malaria vaccine, 7, e31472, 2012, **PLoS One**.
57. **Moon JJ**, Suh H, Bershteyn A, Stephan MT, Liu H, Huang B, Sohail M, Luo S, Um SH, Chiu W, and Irvine DJ. Interbilayer-crosslinked multilamellar vesicles for potent humoral and cellular immune responses, 10, 243-251, 2011, **Nature Materials**.
** Featured by Nature Materials: News and Views, 10, 166-68, 2011, and Nature Biotech: Research Highlights, 29, 330, 2011.
58. Bershteyn A, Hanson MC, Crespo MP, **Moon JJ**, Li AV, Suh H, and Irvine DJ. Robust IgG responses to nanograms of antigen using a biomimetic lipid-coated particle vaccine, 157, 354-65, 2011, **Journal of Controlled Release**.
59. Stephan MT, **Moon JJ**, Um SH, Bershteyn A, and Irvine DJ. Therapeutic cell engineering with surface-conjugated synthetic nanoparticles, 16, 1035-41, 2010, **Nature Medicine**.
60. **Moon JJ**, Saik JE, Poche RA, Leslie-Barbick JE, Lee SH, Smith AA, Dickinson ME, and West JL. Biomimetic hydrogels with pro-angiogenic properties, 31, 3840-3847, 2010, **Biomaterials**.
61. Hu Y, Atukorale PU, Lu JJ, **Moon JJ**, Um SH, Cho EC, Wang Y, Chen J, and Irvine DJ. Cytosolic delivery mediated via electrostatic surface binding of protein, virus, or siRNA cargos to pH-responsive core-shell gel particles, 10, 756-765, 2009, **Biomacromolecules**.
62. **Moon JJ**, Hahn MS, Kim I, Nsiah BA, and West JL. Micropatterning of poly(ethylene glycol) diacrylate hydrogels with biomolecules to regulate and guide endothelial morphogenesis, 15, 579-585, 2009, **Tissue engineering - Part A**.
63. Leslie-Barbick JE, **Moon JJ**, and West JL. Covalently-Immobilized Vascular Endothelial Growth Factor Promotes Endothelial Cell Tubulogenesis in Poly(ethylene glycol) Diacrylate Hydrogels, 20, 1763-1779, 2009, **Journal of biomaterials science – Polymer Edition**
64. **Moon JJ**, and West JL. Vascularization of engineered tissues: approaches to promote angiogenesis in biomaterials, 8, 300-310, 2008, **Current topics in medicinal chemistry**.
65. Lee SH*, **Moon JJ***, and West JL. Three-dimensional micropatterning of bioactive hydrogels via two-photon laser scanning photolithography for guided 3D cell migration, 29, 2962-2968, 2008, **Biomaterials**. * Authors contributed

equally.

66. Gobin AM*, **Moon JJ***, and West JL. EphrinA I-targeted nanoshells for photothermal ablation of prostate cancer cells, 3, 351-358, 2008, **International journal of nanomedicine**. *Authors contributed equally.
67. **Moon JJ**, Lee SH, and West JL. Synthetic biomimetic hydrogels incorporated with ephrin-A1 for therapeutic angiogenesis, 8, 42-49, 2007, **Biomacromolecules**.
68. Lee SH, **Moon JJ**, Miller JS, and West JL. Poly(ethylene glycol) hydrogels conjugated with a collagenase-sensitive fluorogenic substrate to visualize collagenase activity during three-dimensional cell migration, 28, 3163-3170, 2007, **Biomaterials**.
69. Hahn MS, Taite LJ, **Moon JJ**, Rowland MC, Ruffino KA, and West JL. Photolithographic patterning of polyethylene glycol hydrogels, 27, 2519-2524, 2006, **Biomaterials**.
70. Lee P, Lin R, **Moon J**, and Lee LP. Microfluidic alignment of collagen fibers for in vitro cell culture, 8, 35-41, 2006, **Biomedical microdevices. (Undergraduate publication)**
71. DeLong SA, **Moon JJ**, and West JL. Covalently immobilized gradients of bFGF on hydrogel scaffolds for directed cell migration, 26, 3227-3234, 2005, **Biomaterials**.
72. Lee SH, Miller JS, **Moon JJ**, and West JL. Proteolytically degradable hydrogels with a fluorogenic substrate for studies of cellular proteolytic activity and migration, 21, 1736-1741, 2005, **Biotechnology Progress**
73. **Moon JJ**, Matsumoto M, Patel S, Lee L, Guan JL, and Li S. Role of cell surface heparan sulfate proteoglycans in endothelial cell migration and mechanotransduction, 203, 166-176, 2005, **J Cell Physiol. (selected as a cover, Undergraduate publication)**
74. Li S, **Moon JJ**, Miao H, Jin G, Chen BP, Yuan S, Hu Y, Usami S, and Chien S. Signal transduction in matrix contraction and the migration of vascular smooth muscle cells in three-dimensional matrix, 40, 378-388, 2003, **J Vasc Res. (Undergraduate publication)**

PATENTS AND INTELLECTUAL PROPERTY FILINGS

1. **Moon JJ**, Han K, Xu J. Compositions and methods for increasing the efficacy of immunotherapies and vaccines. U.S. Provisional Patent Application. #62/904,395, 9/23/2019.
2. **Moon JJ**, Schwendeman A, Hassani AS. Compositions and methods for treating or preventing autoimmune conditions. U.S. Provisional Patent Application. #62/876,419, UM-37921.101. 7/19/2019.
3. **Moon JJ**, Lee Y, and Han K. Compositions and methods for systemic delivery of hydrophilic polymer/bile acid derivative conjugates. U.S. Provisional Patent Application. #UM-36743/US-1/PRO, 6271616, 8/8/2018.
4. **Moon JJ**, and Sun X. Compositions and methods for systemic delivery of STING agonists. U.S. Provisional Patent Application. #UM-36440/US-1/PRO, 62/697,092, 7/12/2018.
5. **Moon JJ**, and Fan Y. Compositions and methods for delivery of polymer/biomacromolecule conjugates. U.S. Provisional Patent Application. #UM-35170/US-1/PRO, 3/22/2017.
6. **Moon JJ**, Schwendeman A, Kuai R, and Nam J. Composition and methods for delivery of biomacromolecules agents. U.S. Patent Application. #62/248,908, 3/25/2016.
7. Peters-Golden M, **Moon JJ**. Vesicle-encapsulated signaling (SOCS) molecules. U.S. Patent Application. #62/280,418 #62/286,135, 2/29/2016.
8. Takayama S, Louttit C, **Moon JJ**, Kojima T, Weerappuli P. Macromolecular structures and uses thereof. U.S. Provisional Patent Application. #62/256,321, 11/17/2015.
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10. Schwendeman AS, Cohen MS, **Moon JJ**, Kuai R, Subramanian C. Compositions and methods for disease treatment using nanoparticle delivered compounds. U.S. Patent Application. PCT/US2015/040404.
11. Irvine DJ and **Moon JJ**. Lipid compositions and method of use, US Patent 8747869 B2.
12. Irvine, DJ, Bershteyn A, and **Moon JJ**. Lipid-coated polymer particles for immune stimulation. U.S. Patent Application. US13053101.
13. Irvine DJ, Stephan MT, **Moon JJ**, and Bershteyn A. Methods and compositions for localized agent delivery. U.S. Patent US9283184B2.

INVITED SEMINARS/PRESENTATIONS

1. Engineering Strategies for Modulating the Gut Microbiome, T32 Gastrointestinal Basic and Translational Research Conference, University of Michigan, MI, 2019.
2. Engineered Nanomaterials for Combination Cancer Immunotherapy, Bioengineering & Translational Medicine Conference, Durham, NC, 2019.
3. Nanomaterials for Combination Cancer Immunotherapy, Gordon Research Conference: Cancer Nanotechnology, Dover, VT, 2019.
4. Nanomaterials for Combination Cancer Immunotherapy, Department of Biomedical Engineering, Michigan State University, Lansing, MI, 2019.

5. Novel Strategies for Combination Cancer Immunotherapy, University of Michigan Rogel Cancer Center Symposium, Ann Arbor, MI, 2019.
6. Nanodisc Platform Technology for Personalized Cancer Vaccination, CIMT: Cancer Immunotherapy Conference, Mainz, Germany, 2019.
7. Nanomaterials for Combination Cancer Immunotherapy, Center for Nanotechnology in Drug Delivery, Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, 2019.
8. Engineered Nanomaterials for Immunotherapy, Biomedical Engineering Symposium, US-Korea Conference, Chicago, IL, 2019.
9. Engineering Strategies to Modulate the Immune System, Korean-American Scientists and Engineers Association: Academic Career Seminar. Ann Arbor, MI, 2019.
10. Improving Immunotherapy with Engineered Nanomaterials, Cellular and Biotechnology Training Program Symposium, University of Michigan, Ann Arbor, 2019.
11. Engineered Nanomaterials for Cancer Immunotherapy, American Chemical Society Annual Meeting, Orlando, FL, 2019.
12. Engineered Nanomaterials for Cancer Immunotherapy, Department of Chemical Engineering, Wayne State University, Detroit, MI, 2019.
13. Combination Immunotherapy with Engineered Nanomaterials, Department of Bioengineering, Rice University, Houston, TX, 2018.
14. Nanotechnology for Improving Cancer Immunotherapy, School of Pharmacy, Seoul National University, Seoul, South Korea, 2018.
15. Combination Immunotherapy with Engineered Nanomaterials, KIST Immuno-Oncology Symposium, Seoul, South Korea, 2018.
16. Nanotechnology for Improving Cancer Immunotherapy, Applied Nanotechnology and Nanoscience International Conference, Berlin, Germany, 2018. **(Mid-Career Nanotechnology Scientific Award)**.
17. Towards Personalized Cancer Immunotherapy, Precision Medicine Initiative, University of Michigan, Ann Arbor, MI, 2018.
18. Nanodisc Platform Technology for Cancer Vaccination, CRI-CIMT-EATI-AACR International Cancer Immunotherapy Conference, NYC, NY, 2018.
19. Nanotechnology for vaccine applications. A Convergence Research Approach to an Effective HIV Vaccine: an NIAID/NIBIB Collaboration, Rockville, MD, 2018.
20. Engineered nanomaterials for vaccine applications. NanoEngineering for Medicine and Biology (NEMB), LA, CA, 2018.
21. Nanomaterials for combination cancer immunotherapy. Gordon Research Conference, Drug Carriers in Medicine and Biology, West Dover, VT, 2018.
22. Nanomaterials for cancer immunotherapy. US-Korea Conference on Science, Technology, and Entrepreneurship, Queens, NY, 2018.
23. Personalized cancer immunotherapy with nanovaccines. AKIA Symposium on Immunity, Infection, and Inflammation, Ann Arbor, MI, 2018.
24. Engineered nanomaterials for vaccine applications. NIH AIDS Vaccine Research Subcommittee, Rockville, MD, 2018.
25. New drug delivery strategies to improve cancer immunotherapy. The University of Michigan Board of Regents, MI, 2018. **(Selected as an exemplary faculty promotion/tenure case)**.
26. Nanodisc technology for personalized cancer vaccination. Vaccine World Congress, Washington DC, 2018.
27. Engineered nanomaterials for cancer immunotherapy. Icahn School of Medicine at Mount Sinai, NYC, NY, 2018.
28. Personalized cancer immunotherapy with nanomaterials. CHA University, Korea, 2018.
29. Nano-vaccines for personalized cancer immunotherapy. POSTECH, Korea, 2018.
30. Personalized cancer immunotherapy with engineered nanomaterials. SungKyunKwan University, Korea, 2018.
31. Personalized cancer immunotherapy with nanomaterials. Department of Pharmaceutical Sciences, Wayne State University, Detroit, MI, 2018.
32. Nano-vaccines for personalized cancer immunotherapy. END2Cancer: Emerging Nanotechnology and Drug Delivery Applications for Cancer Conference, Oklahoma City, OK, 2017.
33. Nano-vaccine platform technology for personalized cancer vaccination. Vaccines R&D, Washington DC, 2017.
34. Personalized cancer immunotherapy with engineered nanomaterials. Emory University, Atlanta, GA, 2017.
35. Nanomaterials for combination cancer immunotherapy. CMBE Young Innovator Symposium, Biomedical Engineering Society Annual Meeting, Phoenix, AZ, 2017.
36. Personalized cancer immunotherapy with engineered nanomaterials. US-Korea Joint Workshop in Biomedical Engineering, Biomedical Engineering Society Annual Meeting, Phoenix, AZ, 2017.
37. Nanomaterials for personalized cancer immunotherapy. Biomaterials Day 2017, Vanderbilt University, Nashville, TN, 2017. **(Keynote Speaker)**
38. Nano-vaccine delivery platform for personalized cancer vaccination. 15th Infectious Disease Summit Baltimore, GTC-Bio, MD, 2017.

39. Designer vaccine nanodiscs for personalized cancer immunotherapy. US-Korea Conference on Science, Technology, and Entrepreneurship, Washington DC, 2017.
40. EVOQ Therapeutics: A Breakthrough Technology for Cancer Immunotherapy. MTRAC Innovation Cup, Ypsilanti, MI, 2017.
41. Nano-vaccines for personalized cancer immunotherapy. Graduate Immunology Program Retreat, Ann Arbor, MI, 2017.
42. Nanomaterials for priming immunity. Biointerfaces Institute Annual Symposium, Ann Arbor, MI, 2017.
43. Nano-vaccine delivery platform for personalized cancer vaccination. Vaccine World Congress, Washington DC, 2017.
44. Designer vaccine nanodiscs for personalized cancer immunotherapy. American Chemical Society Annual Conference, San Francisco, CA, 2017.
45. Vaccine nanodiscs for personalized cancer immunotherapy. Melanoma Research Alliance Annual Retreat, Washington DC, 2017.
46. Engineered nano-vaccines for personalized cancer immunotherapy. Medical College of Wisconsin Cancer Center, Milwaukee, WI, 2016.
47. Personalized nanomedicine for cancer vaccination. Vaccine Antigen Delivery: New Approaches to Vaccine Development. EuroSciCon, 2016.
48. Lipid-based nanoparticles for vaccine delivery. Nanotechnology for HIV, RNA and Vaccine Delivery Workshop. NIH NIAID, Rockville, MD, 2016.
49. Nanomedicine for personalized cancer immunotherapy. Department of Pharmaceutics and Pharmaceutical Chemistry, The University of Utah, Salt Lake, Utah, 2016.
50. Engineered nanoparticles for personalized cancer immunotherapy. Henry Ford Cancer Institute, Detroit, MI, 2016.
51. Engineered nanoparticles for cancer immunotherapy. The Korean Biochip Society Annual Conference, Korea, 2016.
52. Nanodisc-based peptide vaccines for personalized cancer immunotherapy. Keystone Symposium on Cancer Vaccines, Whistler, Canada, 2016.
53. Engineered nanoparticles for personalized cancer vaccines. Translational Research Cancer Centers Consortium, Seven Springs, PA, 2016.
54. Elicitation of robust adaptive immune responses with lipid-based nanoparticles. US-Korea Conference on Science, Technology, and Entrepreneurship, Atlanta, GA, 2015.
55. Modulation of immunity with designer nanomaterials. Department of Integrative Biosciences & Biotechnology, POSTECH, Korea, 2015.
56. Engineering immunity with nanomaterials. Department of Biotechnology, Yonsei University, Korea, 2015.
57. Designer nanomaterials for modulating immunity. Department of Materials Science & Engineering, KAIST, Korea, 2015.
58. Improving cancer immunotherapy with nanomaterials. Department of Hematology & Oncology, Samsung Medical Center, SungKyunKwan University, Korea, 2015.
59. Engineering immunity with nanomaterials. Department of Integrative Engineering, Chung-Ang University, Korea, 2015.
60. Development of lipid-based vaccine nanoparticles for cancer immunotherapy. Department of Biomedical Science, CHA University, Korea, 2015.
61. Designing vaccine nanoparticles for cancer immunotherapy. Department of Chemical Engineering, SungKyunKwan University, Korea, 2015.
62. Engineering immunity with nanomaterials. Department of Chemical and Biological Engineering, Korea University, Korea, 2015.
63. Designing vaccine nanoparticles for cancer immunotherapy. University of Michigan Cancer Center, Ann Arbor, MI, 2015.
64. Engineering lipid-based nanoparticles for elicitation of cytotoxic CD8+ T cell responses. American Chemical Society National Meeting, Denver, CO, 2015.
65. Elicitation of robust cellular and humoral immunity with vaccine nanoparticles. Nanomedicine and Drug Delivery Symposium (NanoDDS'14), Chapel Hill, NC, 2014.
66. Nanotechnology for modulation of immune responses. IEEE-EMBS Annual Conference Pre-workshop on the topic of "Regenerative Nanomedicine", Chicago, IL, 2014.
67. Navigating Faculty Job Search. American Association of Pharmaceutical Sciences Student Chapter, Ann Arbor, MI, 2014.
68. Engineering approaches to regulate immune responses. Korean-American Scientists and Engineers Association, Ann Arbor, MI, 2014.
69. Nanoparticles for induction of immune responses. Biointerfaces Institute Nanomedicine Grand Challenge, University of Michigan, Ann Arbor, MI, 2014.
70. Regulation of immune responses with nanoparticle drug delivery platforms. Division of Thoracic Surgery, University of Michigan, Ann Arbor, MI, 2014.
71. Lipid-based vaccine nanoparticles for elicitation of potent cellular and humoral immune responses. Department of Pharmacology and Toxicology, University of Texas Medical Branch, TX, 2013.
72. Regulation of immune responses with nanoparticle drug delivery platforms. Biointerfaces Institute Nanomedicine Challenge, University of Michigan, Ann Arbor, MI, 2013.

73. Vaccine nanoparticles for elicitation of potent cellular and humoral immune responses. Tumor Immunology and Host Response Program, University of Michigan, Ann Arbor, MI, 2013.
74. Vaccine nanoparticles for elicitation of potent cellular and humoral immune responses. Division of Hematology and Oncology, University of Michigan, Ann Arbor, MI, 2013.
75. Drug delivery platforms to modulate immunity. Department of Pharmacology, College of Pharmacy, University of Toledo, Toledo, OH, 2013.
76. Elicitation of cellular and humoral immunity with vaccine nanoparticles. Michigan Nanotechnology Institute of Medicine and Biological Sciences, University of Michigan, Ann Arbor, MI, 2013.
77. Drug delivery platforms to modulate immunity. Department of Biomedical Science, CHA University, Republic of Korea, 2013.
78. Engineering approaches to regulate immunity. Department of Biomedical Engineering, University of Michigan, 2012.
79. Engineering approaches to regulate immunity. Microfluidics Biomedical Sciences Training Program, University of Michigan, Ann Arbor, MI, 2012.
80. Vascularization of synthetic, biomimetic hydrogels. IEEE-Engineering in Medicine & Biology Society, Boston, MA, 2011.
81. Novel lipid-based nanoparticles for antigen delivery and vaccine applications. Department of Biomedical Engineering, Ohio State University, Columbus, OH, 2011.
82. Novel lipid-based nanoparticles for antigen delivery and vaccine applications. Department of Bioengineering, University of Pennsylvania, Philadelphia, PA, 2010.

CONFERENCE PROCEEDINGS AND PRESENTATIONS IN SCIENTIFIC MEETINGS

1. 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)
2. 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)
3. 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)
4. 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)
5. 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)
6. Han K, and **Moon JJ**. "Peptide self-assembly for combined photodynamic therapy and immunotherapy." Gordon Research Conference: Cancer Nanotechnology, Dover, VT, 2019 (poster).
7. 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).
8. 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).
9. 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**)
10. Park C and **Moon JJ**. "Delivery of STING agonist for augmenting adoptive T cell therapy." Society for Biomaterials, Seattle, WA, 2019. (poster)
11. 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)
12. 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)
13. 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).
14. 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).
15. 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).

16. 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).
17. 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).
18. Son S, Farokhzad OC, and **Moon JJ**. "Self-adjuvanting polysaccharide nanocapsules for mRNA vaccination against cancer." NANO Korea, 2018 (oral).
19. Nam J, Son S, Ochyl LJ, Kuai R, and **Moon JJ**. "Combinational chemo-photothermal therapy using a novel nanopatform elicits potent anti-tumor immunity against advanced metastatic cancer." NANO Korea, 2018 (oral).
20. 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)
21. 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)
22. Park C, and **Moon JJ**. "Targeted Immunomodulation of CD8+ T cells with F(ab')₂-conjugated liposomes." Society for Biomaterials, Atlanta, GA, 2018 (poster)
23. 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)
24. Kuai R, Schwendeman A, and **Moon JJ**. "Personalized vaccine nanodiscs for elimination of established tumors" Keystone Conference, Cancer Immunotherapy: Combinations, Montreal, Canada, 2018 (poster)
25. 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)
26. 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)
27. 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)
28. 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)
29. 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)
30. 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)
31. Fan Y and **Moon JJ**. "Engineering immunogenically dying tumor cells for whole-cell cancer vaccination" Biomedical Engineering Society Annual Meeting, Phoenix, AZ, 2017. (oral)
32. 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)
33. 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)
34. 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)
35. 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)
36. 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)**
37. Fan Y and **Moon JJ**. "Exploiting immunogenic cell death for cancer immunotherapy." Gordon Research Conference, Cancer Nanotechnology, West Dover, VT, 2017. (poster)
38. 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)
39. 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)
40. 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)
41. 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)

42. 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)
43. 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)
44. 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)
45. 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)
46. 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)
47. 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)
48. 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)
49. 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)
50. 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)
51. 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)
52. 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)
53. Nam J and **Moon JJ**. "Tuning Immune Activation with Adjuvant-Loaded Spiky Gold Nanoparticles." Biomedical Engineering Society Annual Meeting, Tampa, FL, 2015. (poster)
54. 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)
55. **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**)
56. **Moon JJ**. "Engineering lipid-based nanoparticles for elicitation of cytotoxic CD8+ T cell responses." American Chemical Society National Meeting, Denver, CO, 2015. (**Invited talk**)
57. Ochyl LJ, Bazzill J, and **Moon JJ**. "Engineered vaccine nanoparticles for induction of potent immune responses." Keystone Symposium, Tumor Immunology, Banff, Canada, 2015. (poster)
58. **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)
59. **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**)
60. **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**)
61. Nam J, Monroe CJ, **Moon JJ**. "Development of photothermally-active gold shell-coated lipid nanoparticles." Controlled Release Society Annual Meeting, Chicago, IL, 2014. (poster)
62. 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)
63. 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)
64. **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**)
65. **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)
66. 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)
67. 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)

68. 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)
69. 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)
70. **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**)
71. **Moon JJ**. "Nanoparticles for modulation of immune responses." Gordon Conference, Environmental Nanotechnology, Stowe, VT, 2013. (**Invited talk**)
72. **Moon JJ**. "Nanoparticle Vaccines for induction of cellular and humoral immune responses." Autumn Immunology Conference, Chicago, IL, 2012. (oral)
73. **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)
74. 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)
75. **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**)
76. **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)
77. **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)
78. **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)
79. **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**)
80. **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)
81. **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)
82. **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)
83. **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)
84. **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)
85. **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)
86. **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)
87. **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)
88. **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)
89. **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)
90. **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**)
91. **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)

92. **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)
93. **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)
94. **Moon JJ**, and West JL. "Immobilized ephrin-A1 and EphB4 on PEG hydrogel for angiogenic applications." Experimental Biology, San Francisco, CA, 2006. (oral)
95. **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)
96. **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)
97. **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)
98. **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)
99. **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**)
100. **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)
101. **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)

TEACHING

University of Michigan, Ann Arbor

- 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

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:

2018-present Kai Han, PhD, Polymer Chemistry and Physics, Wuhan University, China.
2017-present Emeka Okeke, PhD, Immunology, University of Manitoba, Canada
2017-present Yonghyun Lee, PhD, Pharmaceuticals, Busan National University, Korea
2017-present Sejin Son, PhD, Chemistry, POSTECH, Korea
2017-present Cheng Xu, PhD, Chemistry, Hunan University, China
2013-present Jutaek Nam, PhD, Chemistry, POSTECH, Korea
2012-2013 Preeti Sahdev, PhD, Pharmaceutical Sciences, South Dakota State University
(Current: research scientist in Allergan, Irvine, CA)

Graduate Students (PhD):

2019-present Jin Xu, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
2018-present Marisa Aikins, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
Topic: Cancer immunotherapy against acute myeloid leukemia.
2017-present Lindsay Scheetz, co-advised with Prof. Anna Schwendeman, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
Topic: Cancer immunotherapy against glioblastoma multiforme.
2017-present Xiaoqi Sun, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
Topic: Antibody-drug conjugates for cancer immunotherapy.
2016-present Alireza Hassani, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.

- 2015-present Topic: Immune modulation with engineering nanomaterials.
Charles Park, Department of Biomedical Engineering, University of Michigan, Ann Arbor.
- 2014-2019 Topic: 3D DNA hydrogels for modulation of immune responses.
Cameron Louttit, Department of Biomedical Engineering, University of Michigan, Ann Arbor.
- 2014-2019 Topic: Reprogramming neutrophils for targeted drug delivery.
Yuchen Fan, Department of Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2014-2018 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: postdoc fellow at Harvard Medical School)

Visiting Scholar:

- 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):

- 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-present 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:

- 2018-present Tianrui Wang, Pharmaceutical Sciences, University of Michigan, Ann Arbor.
- 2018-present 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 Sani, 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.

Others:

2017-2018 Ishina Balwani, Research Technician, University of Michigan, Ann Arbor.
 2016-present Yao Xu, Laboratory manager, University of Michigan, Ann Arbor.

Dissertation committee member for:

2019-present Harkamal Jhajj, Biomedical Engineering, (Advisor: Dr. Pete Tessier), UM, Ann Arbor.
 2019-present Duy Luong, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.
 2019-present Ravi Raghani, Biomedical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.
 2019-present Zeqi Niu, Chemical Engineering, (Advisor: Dr. Sunitha Nagrath), UM, Ann Arbor.
 2019-present Jennifer Diaz, Pharmaceutical Sciences, (Advisor: Dr. Gus Rosania), UM, Ann Arbor.
 2019-present Richard Schutzman, Pharmaceutical Sciences, (Advisor: Dr. Steve Schwendeman), UM, Ann Arbor.
 2018-present Hongxiang Hu, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), 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-present Daniel Quevedo, Biomedical Engineering, (Advisor: Dr. Joerg Lahann), UM, Ann Arbor.
 2017-present Catherine Snyder, Materials Science and Engineering, (Advisor: Drs. Geeta Mehta and Anish Tuteja), UM, Ann Arbor.
 2017-present Nahal Habibi, Chemical Engineering, (Advisor: Dr. Joerg Lahann), UM, Ann Arbor.
 2017-present Jenna Walker, Pharmaceutical Sciences, (Advisor: Dr. Steve Schwendeman), UM, Ann Arbor.
 2017-present Yining Zhang, Chemical Engineering, (Advisor: Dr. Lonnie Shea), UM, Ann Arbor.
 2016-2017 Angela Yang Wang, Chemical Engineering (Advisor: Dr. Sunitha Nagrath), UM, Ann Arbor.
 2016-present 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-present Ahmet Emrehan Emre, Biomedical Engineering, (Advisor: Dr. Nick Kotov), UM, Ann Arbor.
 2016-present Nathan Truchan, Pharmaceutical Sciences, (Advisor: Dr. Duxin Sun), UM, Ann Arbor.
 2016-present 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 Bustamente, 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

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 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. September 22-24, 2017.
2013-present Board Member, Korean-American Biomedical Engineering Society.
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 244 journal manuscripts, as of 10/2019)

<i>AAPS Journal</i>	<i>Langmuir</i>
<i>ACS Applied Mat & Interfaces</i>	<i>Molecular Biotechnology</i>
<i>ACS Biomaterials Science & Engineering</i>	<i>Molecular Pharmaceutics</i>
<i>ACS Central Science</i>	<i>Molecular Therapy</i>
<i>ACS Nano</i>	<i>Nano Letters</i>
<i>Acta Biomaterialia</i>	<i>Nanomedicine</i>
<i>Advanced Materials</i>	<i>Nanomedicine and Nanotechnology</i>
<i>Advanced Drug Delivery Systems</i>	<i>Nanoscale</i>
<i>Annals of Biomedical Engineering</i>	<i>Nature Biomedical Engineering</i>
<i>Bioconjugate Chemistry</i>	<i>Nature Biotechnology</i>
<i>Bioengineering & Translational Medicine</i>	<i>Nature Communications</i>
<i>Biomaterials</i>	<i>Nature Materials</i>
<i>Biomaterials Research</i>	<i>Nature Nanotechnology</i>
<i>BioMed Res International</i>	<i>Oncotarget</i>
<i>Cancer Immunology, Immunotherapy</i>	<i>PLoS ONE</i>
<i>ChemMedChem</i>	<i>Regenerative Medicine</i>
<i>Current Drug Therapy</i>	<i>Science Advances</i>
<i>Integrative Biology</i>	<i>Science Immunology</i>
<i>JACS</i>	<i>Scientific Reports</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>

Vaccine

Services as Editorial Board Member

2018 Special Themed Issue Editor for Advanced Drug Delivery Systems: Nanomedicine
2018 Special Themed Issue Editor for Journal of Controlled Release: Nanomedicine
2014-2018 Associate Editor for Annals of Biomedical Engineering

Services for the University of Michigan, Ann Arbor

2018-present Microscopy Core Facility Committee
2018-present BioMedical Innovation Council

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

2015-present 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-present Chair, Graduate Admissions and Recruitment Committee, Pharmaceutical Sciences
2014 Fall Faculty Search Committee, Biomedical Engineering
2014-2015 Bachelor of Sciences in Pharmaceutical Sciences Advisory Committee, Pharmaceutical Sciences

RESEARCH SUPPORT

ACTIVE

PI: Moon 6/20/2016-8/31/2021

NIH R01 AI127070

Elicitation of mucosal immune responses against HIV

Role: Principal Investigator

PI: Moon

7/1/2016-6/30/2021

NSF 1553831

CAREER: Engineering multilamellar vaccine platforms for vaccination against HIV

Role: Principal Investigator

PI: Moon

7/1/2016 – 6/30/2020

NIH R01 EB022563

Tuning biomaterials-immune cell interactions for treatment of glioblastoma multiforme

Role: Principal Investigator

PI: Moon

12/15/2016 – 11/30/2021

NIH R01 CA210273

Engineering Nanomaterials to Prime Immunity

Role: Principal Investigator

PI: Moon

08/01/2019 – 07/30/2020

Michigan Drug Discovery

Novel strategy for drug discovery in cancer immunotherapy

Role: PI

PI: Li/Moon

02/01/2019 – 01/30/2020

MEDC Mi-TRAC

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

Role: Co-PI

PI: Luker

9/01/2016 - 8/31/2021

NIH U01 CA210152

Environmental Regulation of Cancer Stem Cell Plasticity in Metastasis

Role: Co-Investigator

PI: Peters-Golden

07/01/2015 – 06/30/2020

NIH R01HL125555

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

Role: Co-Investigator

PI: You

06/02/2017 – 11/30/2019

HHSN2612015000371: NIH/Medical College of Wisconsin

Effect of a Muropeptide KRAS Vaccine in the Prevention of Pancreatic Cancer Driven by KRAS Oncoprotein

Role: Co-Investigator

PI: You

06/07/2018 – 05/31/2023

NIH R01CA223804-01 FP11970 Medical College of Wisconsin

Chemoimmunoprevention of EGFR-Driven Non-Small Cell Lung Cancer

Role: Co-Investigator

COMPLETED

PI: James J. Moon

1/1/2013-12/31/2014

NIAD Research Scholar Development K22 Award AI097291

Delivery of Particle Vaccines to Control Trafficking Patterns of T Cells

Role: Principal Investigator

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

Role: Co-Principal Investigator

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

Role: Principal Investigator

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

Role: Co-Investigator

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

Role: Co-Investigator

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

Role: Co-Investigator

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

Role: Principal Investigator

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

Role: Co-Principal Investigator

PI: Moon

9/16/2016 – 12/15/2016

HHSN261201100046C

NCI Fee-for-service: proprietary lung cancer vaccine nanodiscs

Role: Principal Investigator

Co-PI: Wei Cheng, James Moon, and Irina Grigorova MCubed program - University of Michigan <i>Impact of Envelope Glycoprotein Density on B Cell Activation</i> Role: Co-Principal Investigator	4/29/2015-4/29/2016
PI: Lundy NIH R21 AI115117 <i>B Cell Exosome and Nanoparticle Treatment of Allergic Asthma</i> Role: co-Investigator	07/01/2015 – 06/30/2017
PI: Moon Melanoma Research Alliance Young Investigator Award (348774) <i>Novel approaches for immunotherapy against melanoma</i> Role: Principal Investigator	5/01/2015-4/30/2018
PI: Moon University of Michigan Forbes Institute for Cancer Discovery <i>Towards Precision Cancer Immunotherapy</i> Role: Principal Investigator	03/01/2017-02/28/2018
PI: Moon MTRAC Life Sciences Hub – State of Michigan <i>A novel nano-vaccine technology for cancer immunotherapy</i> Role: Principal Investigator	2/01/2017-1/31/2018
PI: Moon DoD CDMRP CA150068: Career Development Award <i>A New Vaccination Strategy for Treatment of Melanoma</i> Role: Principal Investigator	7/15/2016 – 7/14/2019
PI: Moon Emerald Foundation <i>Distinguished Investigator Award</i> Role: Principal Investigator	09/01/2017-08/31/2019