Curriculum Vitae

Anthony J. Kim, Ph.D.

Professor
University of Maryland School of Medicine
655 West Baltimore Street
Bressler Research Building, Room 8-029
Baltimore, MD 21201
Tel: (410) 706-3255
E-mail: akim@som.umaryland.edu or akim@smail.umaryland.edu

I. EDUCATION

2006 Ph.D., Chemical and Biomolecular Engineering, University of Pennsylvania

2004 M.S., Chemical and Biomolecular Engineering, University of Pennsylvania

2001 B.S., Chemical Engineering, Pennsylvania State University

II. PROFESSIONAL EXPERIENCE

2023–present	Professor (Tenured), Departments of Neurosurgery and Pharmacology University of Maryland School of Medicine
2023–present	Research Health Scientist, VA Maryland Health Care System United States Department of Veterans Affairs
2021–present	Adjunct Professor, Fischell Department of Bioengineering A. James Clark School of Engineering, University of Maryland, College Park (UMCP)
2019–2023	Associate Professor, Departments of Neurosurgery and Pharmacology University of Maryland School of Medicine
2018–2019	Adjunct Assistant Professor, Department of Chemical, Biochemical, and Environmental Engineering University of Maryland, Baltimore County (UMBC)
2016–2019	Assistant Professor (Secondary), Department of Pharmacology University of Maryland School of Medicine
2015–present	Associate Member, Center for Biomedical Engineering and Technology (BioMET) University of Maryland School of Medicine
2014–present	Member, Experimental Therapeutics Program in Oncology University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center
2014–2019	Adjunct Assistant Professor, Department of Pharmaceutical Sciences University of Maryland School of Pharmacy
2013–present	Co-director, Translational Therapeutics Research Group

	University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center
2013–2019	Assistant Professor (Tenure-track), Department of Neurosurgery University of Maryland School of Medicine
2009-2013	Postdoctoral Fellow; Advisor: Justin Hanes Johns Hopkins University
2007-2009	Postdoctoral Fellow; Advisor: Daniel A. Hammer University of Pennsylvania
2001-2007	Graduate Research Assistant; Advisor: John C. Crocker University of Pennsylvania
2000-2001	Co-op Scientist Cabot Performance Materials
1999	Co-op Scientist E.I. DuPont Nemours
1998-2000	Research Assistant Pennsylvania State University
1995 – 1996	Summer Intern Pennsylvania Department of Transportation (PennDOT)

III. HONORS AND AWARDS

2022	VA Merit Review Award, United States Department of Veterans Affairs, BLR&D Service
2022	Neuro-Link Research Award, UMB/UMCP Collaborative Research Program in Neuro-engineering, University of Maryland College Park/University of Maryland School of Medicine
2021	Guest Editor, *Advanced Drug Delivery Reviews*
2019	Maryland Innovation Initiative Award, TEDCO
2019	Collaborative MPI Program Award, University of Maryland Greenebaum Comprehensive Cancer Center
2019	ATIP Innovative Collaborative Project Award, Institute for Clinical and Translational Research
2018	NIH Merit Award (R37)
2018	Cigarette Restitution Fund (CRF) Pilot Grant Award, University of Maryland Greenebaum Comprehensive Cancer Center
2017	Selected as University of Maryland nominee, 2017 V Scholar National Competition (1 per institution)
2017	Collaborative MPI Program Award, University of Maryland Greenebaum Comprehensive Cancer Center
2017	Guest Editor, *Journal of Controlled Release*
2016	Selected as University of Maryland nominee, 2016 Pew Scholars National Competition (1 per institution)
2016	Pilot Research Grant Award, University of Maryland Greenebaum Comprehensive Cancer Center

2016	Selected as University of Maryland nominee, 2016 Beckman Young Investigator National Competition (1 per institution)
2015	AAPS New Investigator Award, American Association of Pharmaceutical Scientists
2015	Finalist (top 20%), NIH Director's New Innovator Award (DP2)
2015	AAPS Innovation in Biotechnology Award (Sponsored by Genentech), American Association of Pharmaceutical Scientists
2014–2017	NIH Mentored Quantitative Research Career Development Award (K25)
2014	PhRMA Foundation Research Starter Grant in Pharmaceutics
2014	American Cancer Society (ACS) Institutional Research Grant
2012	Wilmer Research Award, Johns Hopkins University School of Medicine
2011–2013	NIH Ruth L. Kirschstein National Research Service Award (F32) Individual Postdoctoral Fellowship
2009	Johns Hopkins University Postdoctoral Fellowship
2001	University of Pennsylvania Graduate Fellowship
1997–2000	Radnor Scholarship

IV. PUBLICATIONS (Citations: 3693, H-index: 30, i10-index: 45)
[#]Corresponding author; *Co-first author

Journal Articles

1. Carney CP, Pandey N, Kapur A, Saadi H, Ong HL, Chen C, Winkles JA, Woodworth GF, Kim AJ[#]. (2023) Impact of targeting moiety type and protein corona formation on the uptake of Fn14-targeted nanoparticles by cancer cells. ***ACS Nano*** (In Press).
2. Carney CP, Kapur A, Anastasiadis P, Ritzel R, Chen C, Woodworth GF, Winkles JA, Kim AJ[#]. (2023) Fn14-directed DART nanoparticles selectively target neoplastic cells in preclinical models of triple negative breast cancer brain metastasis. ***Molecular Pharmaceutics*** 20, 314
3. Kim AJ[#], Winkles JA, and Woodworth GF. (2022) Emerging translational approaches for brain cancer therapeutics. ***Advanced Drug Delivery Reviews.*** 189, 114522
4. Pandey N, Anastasiadisa P, Carney CP, Kanvinde P, Woodworth GF, Winkles JA, Kim AJ[#]. (2022) Nanotherapeutic treatment of the invasive glioblastoma tumor microenvironment. ***Advanced Drug Delivery Reviews.*** 188, 114415
5. Pang S, Kapur A, Zhou K, Anastasiadis P, Ballirano N, Kim AJ, Winkles J, Woodworth G, Huang HC. (2022) Nanoparticle-assisted, image-guided laser interstitial thermal therapy for cancer treatment. ***WIREs Nanomedicine & Nanobiotechnology***. e1826
6. Kim, N, Kwak G, Rodriguez J, Livraghi-Butrico A, Zuo X, Simon V, Han E, Shenoy SK, Pandey N, Mazur M, Birket SE, Kim AJ, Rowe SM, Boucher R, Hanes J, Suk JS. (2022) Inhaled gene therapy of preclinical muco-obstructive lung diseases by nanoparticles capable of breaching the airway mucus barrier. ***Thorax.*** 77, 812
7. Carney C, Pandey N, Kapur A, Woodworth GF, Winkles JA[#], Kim AJ[#]. (2021) Harnessing Nanomedicine for Enhanced Immunotherapy for Breast Cancer Brain Metastases. ***Drug Delivery and Translational Research****. 11, 2344*.
8. Connolly N, Galisteo R, Xu S, Bar E, Peng S, Tran N, Ames H, Kim AJ, Woodworth GF, and Winkles JA. (2021) Elevated fibroblast growth factor-inducible 14 (Fn14) expression transforms proneural-like brain tumors into aggressive high-grade gliomas. ***Glia***. 69, 2199.
9. Kanvinde P, Mall A, Connolly NP, Szulzewsky F, Anastasiadis P, Ames H, Kim AJ, Winkles JA, Woodworth GF. (2021) Leveraging the replication-competent avian-like sarcoma virus/tumor virus receptor-A system for modeling human gliomas. ***Glia***. 69, 2059.
10. Dancy JG, Wadajkar AS, Connolly NP, Galisteo R, Ames HM, Peng S, Tran NL, Goloubeva OG, Woodworth GF, Winkles JA, Kim AJ[#]. (2020) Decreased nonspecific adhesivity, receptor-targeted therapeutic nanoparticles for primary and metastatic breast cancer. ***Science Advances***. 6, eaax3931.

11. Mohammadabadi A, Huynh RN, Wadajkar AS, Lapidus RG, Kim AJ, Raub CB, Frenkel V. (2020) Pulsed focused ultrasound lowers interstitial fluid pressure and increases nanoparticle delivery and penetration in head and neck squamous cell carcinoma xenograft tumors. ***Physics in Medicine & Biology***. 65, 125017.
12. Wadajkar AS, Dancy JG, Carney CC, Hampton B, Ames H, Winkles JA, Woodworth GF, Kim AJ[#]. (2019) Leveraging Surface Plasmon Resonance to Dissect the Interfacial Properties of Nanoparticles: Implications for tissue binding and tumor penetration. ***Nanomedicine: Nanotechnology, Biology, and Medicine***. 20, 102024.
13. Majumdar S, Wadajkar A, Reynolds MA, Aljohani H, Kim AJ, Chellaiah MA (2019) Engineering of L-Plastin Peptide-Loaded Biodegradable Nanoparticles for Sustained Delivery and Suppression of Osteoclast Function In vitro. ***International Journal of Cell Biology***. May 5;2019:6943986.
14. Roberts NB, Alqazzaz A, Hwang JR, Qi X, Keegan, AD, Kim AJ, Winkles JA, Woodworth G. (2018) Oxaliplatin disrupts pathological features of glioma cells and associated macrophages independent of apoptosis induction. ***Journal of Neuro-Oncology.*** 140, 497.
15. Hersh DS, Harder BG, Roos A, Peng S, Heath JE, Legesse T, Kim AJ, Woodworth GF, Tran NL, Winkles JA. (2018) The TNF Receptor Family Member Fn14 is Highly Expressed in Recurrent Glioblastoma (GBM) and in GBM Patient-Derived Xenografts With Acquired Temozolomide Resistance. ***Neuro-Oncology.*** 20, 1321.
16. Harder BG, Blomquist MR, Wang J, Kim AJ, Woodworth GF, Winkles JA, Loftus JC and Tran NL. (2018). Developments in blood-brain barrier penetrance and drug repurposing for improved treatment of glioblastoma. ***Frontiers in Oncology.*** 8,462.
17. Hersh D, Peng S, Dancy J, Galisteo R, Eschbacher J, Castellani R, Heath J, Legesse T, Kim AJ, Woodworth G, Tran N, Winkles JA. (2018) Differential Expression of the TWEAK Receptor Fn14 in IDH1 Wild-Type and Mutant Gliomas. ***Journal of Neuro-Oncology.*** 138, 241.
18. Hersh D, Anastasiadis P, Mohammadabadi A, Nguyen BA, Guo S, Winkles JA, Kim AJ, Gullapalli RP, Keller A, Frenkel V, Woodworth GF. (2018) MR-guided transcranial focused ultrasound safely enhances interstitial dispersion of large polymeric nanoparticles in the living brain. ***PLoS ONE.*** 13, e0192240.
19. Connolly N, Shetty A, Stokum J, Hoeschele I, Siegel M, Miller CR, Kim AJ, Ho C, Davila E, Simard JM, Devine S, Rossmeisl J, Holland E, Winkles J, Woodworth GF. (2018) Cross-species transcriptional analysis reveals conserved and host-specific neoplastic processes in mammalian glioma. ***Scientific Reports.*** 8, 1180.
20. Wadajkar AS, Dancy JG, Roberts NR, Connolly N, Strickland DK, Winkles JA, Woodworth GF, Kim AJ[#]. (2017) Decreased non-specific adhesivity, receptor targeted (DART) nanoparticles exhibit improved dispersion, cellular uptake, and tumor retention in invasive gliomas. ***Journal of Controlled Release.*** 267, 144.
21. Connolly N, Stokum JA, Schneider CS, Ozawa T, Xu S, Galisteo R, Castellani RJ, Kim AJ, Simard JM, Winkles JA, Holland EC, Woodworth GF. (2017) Genetically engineered rat gliomas: PDGF-driven tumor initiation and progression in tv-a transgenic rats recreate key features of human brain cancer. ***PLoS ONE.*** 12, e0174557.
22. Wadajkar AS, Dancy JG, Hersh DS, Tran NL, Woodworth GF, Winkles JA[#], Kim AJ[#]. (2017) Tumor-targeted Nanotherapeutics for Glioblastoma. ***WIREs Nanomedicine & Nanobiotechnology.*** 9, e1439. (Invited Review).
23. Dancy JG, Wadajkar AS, Schneider CS, Mauban JRH, Woodworth GF, Winkles JA[#], Kim AJ[#]. (2016) Non-specific binding and steric hindrance thresholds for penetration of particulate drug carriers within tumor tissue. ***Journal of Controlled Release***. 238, 139.
24. Hersh DS, Nguyen BA, Dancy JG, Adapa AR, Winkles JA, Woodworth GF, Kim AJ[#], Frenkel V[#]. (2016) Pulsed ultrasound non-destructively expands the extracellular and perivascular spaces of the brain. ***Brain Research***. 1646, 543.
25. Roberts NB, Wadajkar AS, Winkles JA, Davila E, Kim AJ, Woodworth GF. (2016) Repurposing platinum-based chemotherapies for multi-modal treatment of glioblastoma. ***OncoImmunology***. 5, e1208876.

26. Hersh DS, Kim AJ, Winkles JA, Eisenberg HM, Woodworth GF, Frenkel V. (2016) Emerging applications of therapeutic ultrasound in neuro-oncology: Moving beyond tumor ablation. ***Neurosurgery***. 79, 643.
27. Perez JG, Tran NL, Rosenblum MG, Schneider CS, Connolly NP, Kim AJ, Woodworth GF, Winkles JA. (2016) The TWEAK Receptor Fn14 is a Potential Cell Surface Portal for Targeted Delivery of Glioblastoma Therapeutics. ***Oncogene***. 35, 2145.
28. Hersh DS, Wadajkar AS, Roberts NB, Perez JG, Connolly NP, Frenkel V, Winkles JA, Woodworth GF[#], Kim AJ[#]. (2016) Evolving Drug Delivery Strategies to Overcome the Blood Brain Barrier. ***Current Pharmaceutical Design***. 22, 1177 (Invited Review).
29. Schneider CS, Bhargav A, Perez JG, Wadajkar A, Winkles JA, Woodworth GF[#], Kim AJ[#]. (2015) Surface plasmon resonance as a high throughput method to evaluate specific and nonspecific binding of nanotherapeutics. ***Journal of Controlled Release***. 219, 331.
30. Schneider CS, Perez JG, Cheng E, Zhang C, Panagiotis M, Hanes J, Winkles JA, Woodworth GF[#], Kim AJ[#]. (2015) Minimizing the Non-specific Binding of Nanoparticles to the Brain Enables Active Targeting of Fn14-positive Glioblastoma Cells. ***Biomaterials***. 42, 42.
31. Pan-in P, Wanichwecharungruang S, Hanes J, Kim AJ[#]. (2014) Cellular trafficking and anticancer activity of Garcinia mangostana extract-encapsulated polymeric nanoparticles. ***International Journal of Nanomedicine***. 9, 3677.
32. Kim AJ*, Woodworth GF*, Boylan NJ, Suk JS, Hanes J. (2014) Highly compacted pH-responsive DNA nanoparticles mediate transgene silencing in experimental glioma. ***Journal of Materials Chemistry B***. 2, 8165.
33. Schuster BS, Kim AJ, Kays JC, Kanzawa MM, Suk JS, Hanes J. (2014) The cystic fibrosis sputum barrier to adeno-associated virus gene therapy. ***Molecular Therapy***. 22, 1484.
34. Pease M, Oglesby EN, Cone-Kimball E, Jefferys JL, Steinhart MR, Kim AJ, Hanes J, Quigley HS. (2014) Scleral Permeability Varies by Mouse Strain and Is Decreased by Chronic Experimental Glaucoma. ***Investigative Ophthalmology & Visual Science***. 55, 2564.
35. Suk JS*, Kim AJ*, Trehan K, Schneider CS, Cebotaru L, Woodward OM, Boylan NJ, Boyle MP, Lai SK, Guggino WB, Hanes J. (2014) Lung Gene Therapy with Highly Compacted DNA Nanoparticles that Overcome the Mucus Barrier. ***Journal of Controlled Release.*** 178, 8.
36. Kim AJ*, Boylan NJ*, Suk JS, Hwangbo M, Yu T, Schuster BS, Cebotaru L, Lesniak, WG, Oh JS, Adstamongkonkul P, Choi AY, Kannan RM, Hanes J. (2013) Use of Single-Site Functional PEG-Dendrons to Prepare Gene Vectors that Penetrate Human Mucus Barriers. ***Angewandte Chemie Int Ed***. 52, 3985.
37. Burke CW, Suk JS, Kim AJ, Hsiang YJ, Klibanov AL, Hanes J, Price RJ. (2012) Markedly Enhanced Skeletal Muscle Transfection Achieved by the Delivery of Non-Viral Gene Nanocarriers with Small Microbubbles and Pulsed 1 MHz Ultrasound. ***Journal of Controlled Release***. 162, 414.
38. Kim AJ[#], Hanes J[#]. (2012) The emergence of multiple particle tracking in intracellular trafficking of nanomedicines. ***Biophysical Reviews***. 4, 83.
39. Kim AJ*, Boylan NJ*, Suk JS, Lai SK, Hanes J. (2012) Non-degradative Intracellular Trafficking of Highly Compacted Polymeric DNA Nanoparticles. ***Journal of Controlled Release***. 158, 102.
40. Boylan NJ*, Kim AJ*, Suk JS, Adstamongkonkul P, Simons BW, Lai SK, Cooper MJ, Hanes J. (2012) Enhancement of airway gene transfer by DNA Nanoparticles using a pH-Responsive block copolymer of polyethylene glycol and poly-l-lysine. ***Biomaterials***. 33, 2361.
41. Percec V, Wilson DA, Leowanawat P, Wilson CJ, Hughes AD, Kaucher MS, Hammer DA, Levine DH, Kim AJ, Bates FS, Davis KP, Lodge TP, Klein ML, DeVane RH, Aqad E, Rosen BM, Argintaru AO, Sienkowska MJ, Rissanen K, Nummelin S, Ropponen J. (2010) Self-Assembly of Janus-Dendrimers into Monodisperse Dendrosomes and other Complex Architectures. ***Science***. 328, 1009.
42. Kim AJ, Kaucher MS, Davis KP, Peterca M, Iman MR, Christian NA, Levine DH, Bates FS, Percec V, Hammer DA. (2009) Proton Transport through Dendritic Helical Pore incorporated Polymersomes. ***Advanced Functional Materials***. 19, 2930.

43. Kim AJ*, Scarlett R*, Biancaniello PL, Sinno TR, Crocker JC. (2009) Probing interfacial equilibration in microsphere crystals formed by DNA-directed assembly. ***Nature Materials***. 8, 52.
44. Biancaniello PL, Kim AJ, Crocker JC. (2008) Long-time stretched exponential kinetics in the single DNA duplex dissociation. ***Biophysical Journal***. 94, 891.
45. Kaucher MS, Dulcey AE, Peterca M, Kim AJ, Vinogradov SA, Hammer DA, Heiney PA, Percec V. (2007) Selective Transport of Water Mediated by Porous Dendritic Dipeptide. ***Journal of the American Chemical Society***. 129, 11698.
46. Moon JH, Kim AJ, Crocker JC, Yang S. (2007) High-throughput synthesis of anisotropic colloids via holographic lithography. ***Advanced Materials***. 19, 2508.
47. Kim AJ, Biancaniello PL, Crocker JC. (2006) Engineering DNA-mediated Colloidal Crystallization. ***Langmuir***. 22, 1991.
48. Biancaniello PL, Kim AJ, Crocker JC. (2005) Colloidal Interactions and Self-Assembly Using DNA Hybridization. ***Physical Review Letters***. 94, 58302.
49. Kim AJ, Manoharan VN, Crocker JC. (2005) Swelling-Based Method for Preparing Stable, Functionalized Polymer Colloids. ***Journal of the American Chemical Society***. 127, 1592.

Book Chapters

1. Wadajkar AS, Connolly NP, Carney CP, Kanvinde PP, Winkles JA, Woodworth GF, and Kim AJ[#]. (2020) Surface-modified nano-drug carriers for brain cancer treatment. In: "*Neuromethods Book Series-Advanced Nanotherapy for Brain Tumor Drug Delivery*", (V. Agrahari and A. Kim, eds.), Springer Nature Publishing, Basingstoke, United Kingdom.
2. Anastasiadis P, Winkles JA, Kim AJ, and Woodworth GF. (2020) Focused ultrasound mediated blood-brain barrier disruption for enhanced drug delivery to brain tumors. In: "*Neuromethods Book Series-Advanced Nanotherapy for Brain Tumor Drug Delivery*", (V. Agrahari and A. Kim, eds.), Springer Nature Publishing, Basingstoke, United Kingdom.

V. PATENTS

1. Woodworth GF, Winkles JA, Kim AJ, Wadajkar AS, "Decreased Adhesivity Receptor-targeted Nanoparticles for Fn14-Positive Tumors". USA Patent Application 16/949,198. Issued on 03/28/23.
2. Kim AJ, Woodworth GF, Winkles JA, Wadajkar AS, "Decreased Adhesivity Receptor-targeted Nanoparticles for Fn14-Positive Tumors". USA Patent Application 16/289,424. Issued on 06/29/21.
3. Woodworth GF, Kim AJ, Schneider CS, Hanes J, Winkles JA, "Targeted Structure-Specific Particulate Delivery Systems". USA Patent Application 15/528,555. Issued on 06/15/21.
4. Woodworth GF, Kim AJ, Schneider CS, Hanes J, Winkles JA, "Targeted Structure-Specific Particulate Delivery Systems". European Patent #EP3-220-900B1. Issued 09/23/20.
5. Kim AJ, Woodworth GF, Winkles JA, Wadajkar AS, Simard JM, "Polymeric formulations of glibenclamide". (Provisional Patent; 2017).
6. Woodworth GF, Winkles JA, Simard JM, Gerzanich V, and Kim AJ, "Fn14-targeted therapeutics and diagnostics for central and peripheral nervous system disorders" (Provisional Patent: 2020).

VI. RESEARCH SUPPORT

(Dollar amounts are total value of grants unless otherwise noted)

R01 CA269995 (Woodworth, Kim, Winkles, & Huang) 12/01/22 - 11/31/27
NIH/NCI $3,820,691
Nanotherapeutic enhancement of interstitial thermal therapy for glioblastoma
The major goal of this project is to test if gold DART nanoparticles can enhance LITT for GBM.

Role: PI (MPI)

I01 BX004908 (Kim) 07/01/22 – 06/28/26
VA/BLRD $1,109,041
Novel drug delivery strategies for treatment of breast cancer brain metastases
The major goal of this project is to determine if paclitaxel-loaded, Fn14-targeted nanoparticles can prevent brain metastasis and/or inhibit the growth of established breast cancer lesions in the brain.
Role: PI

R37 CA218617 (Kim) 03/01/18 – 02/28/25
NIH/NCI $2,473,933
Impact of Fn14-targeted Nanoparticles for Triple-Negative Breast Cancer
The main goal of this project is to develop tumor-penetrating drug delivery systems that can target invading Fn14+ breast cancer cells for metastatic triple-negative breast cancer.
Role: PI

Neuro-Link Research Project (Huang, Kim, Winkles, & Woodworth) 01/15/22 – 01/15/25
UMB/UMCP Collaborative Research Program in Neuro-engineering $300,000
Advancing Laser Interstitial Thermal Therapy for Glioblastoma using Plasmonic Nanoparticles
The major goal of this project is to test if gold DART nanoparticles can enhance LITT for GBM
Role: PI (MPI)

Pilot Grant Program (Kim) 09/01/23 – 09/01/24
UMB ICTR $5,000
Development of clinical-grade nanotherapeutic strategies for treatment of breast and lung cancer
The major goal of this project is to develop high-throughput clinical-grade nanotherapeutics for treatment of breast and lung cancers.
Role: PI

R01 NS107813 (Woodworth) 04/01/19 – 12/31/23
NIH/NINDS $2,062,191
Nanotherapeutic treatment of the invasive glioblastoma microenvironment
The main goal of this project is to develop interstitial delivery systems for glioblastoma.
Role: Co-investigator

Research Project (Woodworth) 06/01/22 – 05/31/23
Focused Ultrasound Foundation $200,000
PET-labeling and Testing of Paclitaxel Nanoformulations with MB-FUS
The main goal of this project is to PET-based image-guided delivery systems for glioblastoma
Role: Co-investigator

Completed

Pilot Grant Program (Kim) 02/25/21 – 02/24/22
UMB ICTR $5,000
Pulsed focused ultrasound and targeted nanoparticles for enhancing immunotherapy to treat head and neck squamous cell carcinoma
The major goal of this project is to test if pulsed focused ultrasound and targeted nanoparticles can enhance immunotherapy for head and neck cancers.
Role: PI

ATIP Innovative Collaborative Project Award (Schneider, Kim, & Winkles) 07/01/19 – 09/01/21
UMB ICTR $50,000
Repurposing Metformin using DART Nanoparticle Technology for Treatment of Head and Neck Squamous Cell Carcinoma
The main goal of this project is to repurpose metformin using DART Nanoparticles for Head and Neck cancer.
Role: PI (MPI)

Collaborative MPI Program Award (Kim) 07/01/19 – 6/31/21
University of Maryland Comprehensive Cancer Center $120,000
Enhancing immunotherapy of metastatic triple negative breast cancer using tumor/macrophage targeting nanoparticles
The main goal of this project is to enhance immunotherapy using tumor/macrophage targeting DART nanoparticles for metastatic TNBC.
Role: PI

F30 CA216970 (Roberts) 01/01/18 – 01/01/21
NIH/NCI $179,192
Improving CNS Delivery of Chemotherapeutic to invasive Brain Cancer
This is a NRSA F30 training grant supporting MD/PhD student Nathan Roberts.
Role: Co-Sponsor

Maryland Innovation Initiative Award (Kim) 09/01/19 – 12/31/20
TEDCO $115,000
Development of the DART Therapeutic Nanoparticle Platform for Fn14-Positive Cancers
The main goal of this project is to scale-up DART nanoparticles platform for commercialization.
Role: PI

Research Scholar Grant (Woodworth) 07/01/16 – 06/31/20
American Cancer Society $757,852
Fn14-targeted Biodegradable BCNU Nanoparticles for Invasive Brain Tumors
The main goal of this project is to develop BCNU nanoparticle systems for glioblastoma.
Role: Co-investigator

Pilot Grant Program (Kim) 02/01/19 – 02/01/20
UMB ICTR $5,000
Investigation of DART Nano-Drug Formulation Strategy for Improved Treatment of Breast Cancer Brain Metastases
The major goal of this project is to determine if paclitaxel-loaded, Fn14-targeted nanoparticles can prevent brain metastasis and/or inhibit the growth of established breast cancer lesions in the brain.
Role: PI

K08 NS090430 (Woodworth) 09/15/14-08/31/19
NIH/NINDS $810,000
Brain-penetrating nanoparticle therapeutics for invasive brain cancer
The main goal of this project is to develop brain-penetrating nanoparticle systems for glioblastoma.
Role: Co-investigator

CRF Pilot Grant (Winkles, Woodworth, Devine, & Kim) 07/01/18 – 6/31/19
University of Maryland Comprehensive Cancer Center $75,000
Identification of TWEAK/Fn14 signaling nodes of vulnerability for improved treatment of glioblastoma
The main goal of this project is to identify vulnerable signaling nodes for therapeutic targeting for glioblastoma.

Role: PI (MPI)

Collaborative MPI Program Award (Frenkel, Kim, Winkles, & Schneider) 07/01/17 – 6/31/19
University of Maryland Comprehensive Cancer Center $150,000
Pulsed Focused Ultrasound and Tumor-penetrating, Fn14-targeted Nanotherapeutics for the Treatment of Head and Neck Squamous Cell Carcinoma
The main goal of this project is to investigate the effect of pulsed focused ultrasound on tissue microstructures to enhance distribution of nanoparticles in Head and Neck cancers.
Role: PI (MPI)

T32 CA154274 (Antalis & Civin) 11/10/16 – 04/01/19
NIH/NCI $249,000
Training Grant in Cancer Biology
This is a training grant currently supporting post-doctoral fellow Aniket Wadajkar, Ph.D.
Role: Sponsor

K25EB018370 (Kim) 09/01/14 – 08/31/17
NIH/NIBIB $390,393
Fn14-targeted Therapeutics for Invasive Brain Cancer
The main goal of this project is to develop gene delivery systems that can target invading Fn14+ glioma cells for brain cancer.
Role: PI

EAGER CBET - 1557922 (Frenkel, Kim, & Woodworth) 07/01/16 – 06/31/17
NSF/CBET $154,000
Effect of pulsed focused ultrasound on microstructures in the brain
The main goal of this project is to investigate the effect of pulsed focused ultrasound on tissue microstructures to enhance distribution of nanoparticles in the brain.
Role: Co-PI

Pilot Research Grant (Woodworth, Kim, Winkles & Frenkel) 07/01/16 – 6/31/17
University of Maryland Comprehensive Cancer Center $60,000
Focused-Ultrasound Mediated Blood Brain Barrier Disruption for Improved Therapeutic Delivery to Invasive Brain Cancer
The main goal of this project is to study the effect of blood brain disruption for improved therapeutic delivery for brain cancer.
Role: PI (MPI)

Cancer Research Grant (Kim) 07/01/15 – 07/01/16
Elsa U. Pardee Foundation $100,721
Fn14-targeted Brain Penetrating Nanotherapeutics for Glioblastoma
The main goal of this project is to develop drug delivery systems that can target invading Fn14+ glioma cells for brain cancer.
Role: PI

New Investigator Grant Award (Kim) 07/01/15 – 07/01/16
American Association of Pharmaceutical Scientists Foundation $40,000
Novel Therapeutic Strategies to Target Invasive Brain Cancer
The main goal of this project is to develop drug delivery systems that can target invading Fn14+ glioma cells for brain cancer.
Role: PI

Institutional Research Grant (Kim) 01/01/15 – 01/01/16

American Cancer Society $30,000
Fn14-targeted Nanotherapeutics for Glioblastoma: Distribution, Pharmacokinetics, and Efficacy Studies
The main goal of this project is to study particle distribution, drug pharmacokinetics, and in vivo efficacy of Fn14-targeted therapeutic nanoparticles for glioblastoma.
Role: PI

Research Starter Grant in Pharmaceutics (Kim) 01/15/14 – 01/15/15
PhRMA Foundation $100,000
Fn14-targeted Therapeutics for Invasive Brain Cancer
The main goal of this project is to develop gene delivery systems that can target invading Fn14+ glioma cells for brain cancer.
Role: PI

K12NS080223 (Woodworth) 01/01/13-12/31/15
NIH/NINDS $248,400
Targeted brain-penetrating nanoparticle gene delivery for glioblastoma
The main goal of this project is to develop brain-penetrating nanoparticle systems for glioblastoma.
Role: Co-investigator

F32HL103137 (Kim) 08/29/11 – 08/29/13
NIH/NHLBI $119,044
Design of Non-Viral Gene Carriers that Overcome Extra- and Intracellular Barriers
The main goal of this project is to develop gene delivery systems that can overcome rate-limiting biological barriers that are critical for lung gene therapy.
Role: PI

Wilmer Research Grant (Kim) 10/01/12 – 10/01/13
Johns Hopkins School of Medicine $2,000
Intracellular Fate of Nanoparticles Designed for Gene Therapy
The major goal of this project was to investigate intracellular trafficking of the most promising viral and non-viral vectors used in human gene therapy clinical trials.
Role: PI

VII. SERVICE TO THE PROFESSION

Editorial Activity:
1. Guest Editor in the special issue of *Advanced Drug Delivery Reviews*, 2022
2. Editor for *Neuromethods Book Series - Advanced Nanotherapy for Brain Tumor Drug Delivery, Springer Nature Publishing*, 2020
3. Guest Editor in the special issue of *Journal of Controlled Release,* Korean Academy of Science and Technology Symposium for Young Scientists in Drug Delivery, 2017

Editorial Boards:
1. Associate Editor, *Frontiers in Medical Technology,* 2021-present
2. Editorial Board, *Biomedicines,* 2021-present
3. Editorial Board, *Pharmaceutics,* 2020-present
4. Consulting Editor, *International Journal of Nanomedicine,* 2015-present

Grant Review Panels:
1. Mail Reviewer, NIH Director's Pioneer Awards (DP1) Stage 1, Center for Scientific Review (CSR), National Institutes of Health (NIH), 2023

2. Florida Department of Health (FL DOH) Biomedical Research Programs 2023-2024, Oak Ridge Associated Universities (ORAU), 2023
3. NIH Study Section: ZRG1 CTH-E (11), " Radiation Therapy, Radiation Biology & Nanoparticle-based Therapeutics (RTBN) SBIR/STTR", Center for Scientific Review (CSR), National Institutes of Health (NIH), July 12, 2023
4. NIH Study Section: ZCA1 TCRB-J (M1), "Innovative Biospecimen Science Technologies", Center for Scientific Review (CSR), National Institutes of Health (NIH), February 01, 2023
5. CDMRP Breast Cancer Research Program (BCRP) Review Panel: Clinical and Experimental Therapeutics 13 (CET-13), Department of Defense (DOD), December 15-16, 2022
6. NIH Study Section: ZRG1 IMST-U (56) R, "Innovative Research in Cancer Nanotechnology (IRCN)", Center for Scientific Review (CSR), National Institutes of Health (NIH), November 18, 2022
7. Mail Reviewer, NIH Director's Pioneer Awards (DP1) Stage 1, Center for Scientific Review (CSR), National Institutes of Health (NIH), 2022
8. Florida Department of Health (FL DOH) Biomedical Research Programs 2021-2022: “Bankhead-Coley Cancer Research Program”, Oak Ridge Associated Universities (ORAU), December 07-16, 2021
9. NIH Study Section: ZRG1 F03B-L (20) L, “Fellowships: Biophysical, Physiological, Pharmacological and Bioengineering Neuroscience”, Center for Scientific Review (CSR), National Institutes of Health (NIH), October 28-29, 2021
10. NIH Study Section: ZRG1 OTC-A (80), “A Special Emphasis Panel: NIH Research Enhancement Award (R15) in Oncological Sciences”, Center for Scientific Review (CSR), National Institutes of Health (NIH), September 22, 2021
11. NIH Study Section: ZRG1 F03B-R (20) L, “Fellowships: Biophysical, Physiological, Pharmacological and Bioengineering Neuroscience”, Center for Scientific Review (CSR), National Institutes of Health (NIH), June 24-25, 2021
12. CDMRP Breast Cancer Research Program (BCRP) Review Panel: Clinical and Experimental Therapeutics 2 (CET-2), Department of Defense (DOD), June 10-11, 2021
13. NIH Study Section: ZRG1 BST-M (50), “Topics in Bioengineering”, Center for Scientific Review (CSR), National Institutes of Health (NIH), March 18-19, 2021
14. Mail Reviewer, NIH Director's Pioneer Awards (DP1) Stage 1, Center for Scientific Review (CSR), National Institutes of Health (NIH), 2021
15. NIH Study Section: ZCA1 TCRB-J (M1), “NCI’s Innovative Molecular Analysis Technologies (IMAT) program”, Center for Scientific Review (CSR), National Institutes of Health (NIH), February 4-5, 2021
16. NIH Study Section: ZRG1 IMST-H (55), "Innovative Research in Cancer Nanotechnology (IRCN)", Center for Scientific Review (CSR), National Institutes of Health (NIH), February 25, 2020
17. NIH Study Section: Gene and Drug Delivery Systems (GDD), Center for Scientific Review (CSR), National Institutes of Health (NIH), October 29-30, 2019
18. Mail Reviewer, Human Frontier Science Program (HFSP) Research Grant Awards, 2017
19. Special Emphasis Panel, ZRG1 OBT-K (55), Center for Scientific Review (CSR), National Institutes of Health (NIH), 2015
20. Special Emphasis Panel, ZRG1 OBT-K (50), Center for Scientific Review (CSR), National Institutes of Health (NIH), 2015
21. Early Career Reviewer (ECR) program at the Center for Scientific Review (CSR), National Institutes of Health (NIH), 2014-2016

Sessions Chaired at Conferences:

1. “Rapid Fire: Formulation and Quality – Chemical”, 2019 American Association of Pharmaceutical Scientists (AAPS) Pharmsci 360 Annual Meeting. San Antonio, TX.

2. "Micro and Nano-Fluidic Engineering and Bioinspired Nano Devices", 2018 Biomedical Engineering Society (BMES) Annual Meeting. Atlanta, GA.
3. "Biologically Active Excipients & Carriers", 44rd Annual Meeting & Exposition of the Controlled Release Society (CRS). Boston, MA.
4. "Medical Devices", 44rd Annual Meeting & Exposition of the Controlled Release Society (CRS). Boston, MA.
5. 14th International Nanomedicine & Drug Delivery Symposium (NanoDDS16). Baltimore, MD
6. "Research Highlight Talks - Oligonucleotide Delivery: New Applications and Opportunities, Peptides, Proteins, and Vaccines, Overcoming Biological Barriers in Drug Delivery", 43rd Annual Meeting & Exposition of the Controlled Release Society (CRS). Seattle, WA.
7. "Drug Delivery to the Brain," 42nd Annual Meeting & Exposition of the Controlled Release Society (CRS). Edinburgh, Scotland.
8. "Overcoming Biological Barriers," 41th Annual Meeting & Exposition of the Controlled Release Society (CRS). Chicago, IL.
9. "Bioactive Materials: Intracellular Processes," 39th Annual Meeting & Exposition of the Controlled Release Society (CRS). Québec City, Canada.

Professional Society Memberships:

1. American Association of Pharmaceutical Scientists (AAPS)
2. Controlled Release Society (CRS)
3. American Association of Cancer Research (AACR)
4. Biomedical Engineering Society (BMES)
5. American Institute of Chemical Engineers (AICHE)

Service to Professional Societies:

1. Steering Committee, Nanotechnology Focus Group, American Association of Pharmaceutical Scientists (AAPS), 2016-2019
2. Abstract Reviewer, American Association Pharmaceutical Scientists (AAPS), 2015, 2016
3. Abstract Reviewer, Controlled Release Society (CRS), 2015, 2016, 2017

Peer-reviewed manuscripts for journals:

1. *Advanced Drug Delivery Reviews*
2. *Biomaterials*
3. *Journal of Controlled Release*
4. *Molecular Pharmaceutics*
5. *Scientific Reports*
6. *Oncotarget*
7. *Drug Delivery and Translational Research*
8. *Journal of Biomedical Materials Research: Part A*
9. *Journal of Materials Chemistry B*
10. *International Journal of Nanomedicine*
11. *Nanomedicine: Nanotechnology, Biology, Medicine*
12. *Anti-Cancer Drugs*
13. *Nanoscale*
14. *Medicinal Chemical Communications*
15. *ACS Applied Materials & Interfaces*
16. *Colloids and Surfaces B: Biointerfaces*
17. *Gene Therapy*
18. *Theranostics*
19. *Oncogene*
20. *AAPS PharmSciTech*
21. *ACS Nano*
22. *Science Advances*

23. *Nature Nanotechnology*
24. *Journal of Molecular Medicine*
25. *Journal of Neuro-Oncology*
26. *Acta Biomaterialia*
27. *Pharmaceutical Research*
28. *Bioengineering & Translational Medicine*
29. *Military Medical Research*
30. *Molecular Cancer Research*

VIII. INVITED PRESENTATIONS

1. *Development of Advanced Nanotherapeutics for Neuro-Oncology.* Department of Neurosurgery Grant Rounds, Baltimore, MD, August 2023
2. *Impact of Fn14-targeted nanotherapeutics for breast cancer brain metastasis.* Experimental Therapeutics (ET) Program in Oncology, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Baltimore, MD, September 2022
3. *Development of Therapeutic DART Nanoparticles for Brain Tumors.* Experimental Therapeutics (ET) Program in Oncology, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Baltimore, MD, September 2021
4. *Translational Nanomedicine Research Program at UMSOM.* Department of Bioengineering, University of Maryland College Park, College Park, MD, April 2021
5. *Clinical Translation of Decreased nonspecific adhesivity, receptor-targeted (DART) Nanoparticles.* Experimental Therapeutics Program in Oncology, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Baltimore, MD, October 2020
6. *Development of DART Drug Delivery Platform for Solid Tumors.* Oncology and Diagnostic Sciences Seminar Series, University of Maryland School of Dentistry, Baltimore, MD, December 2019
7. *Development of DART Drug Delivery Platform for Solid Tumors.* Advances in Drug Delivery and Device Technologies, 2019 American Association of Pharmaceutical Scientists (AAPS) Pharmsci 360 Annual Meeting, San Antonio, TX, November 2019
8. *Therapeutic Nanoparticles for Cancer Therapies.* 2019 UMSOM-UMCP Surgery-Bioengineering Symposium, University of Maryland School of Medicine, Baltimore, MD, October 2019
9. *Development of Therapeutic DART Nanoparticle Platform for Fn14-Positive Cancers.* Experimental Therapeutics (ET) Program in Oncology, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Baltimore, MD, September 2019
10. *Development of Therapeutic DART Nanoparticle Platform for Fn14-Positive Cancers.* Center for Advanced Imaging Research (CAIR) Imaging Science, University of Maryland School of Medicine, Baltimore, MD, August 2019
11. *Development of Therapeutic DART Nanoparticle Platform for Fn14-Positive Cancers.* The Center for Nanomedicine Seminar Series, Johns Hopkins University School of Medicine, Baltimore, MD, July 2019
12. *Development of the PLGA-based DART Therapeutic Nanoparticle Platform for Fn14-Positive Cancers.* 2019 AAPS Northeast Regional Discussion Group (NERDG) Annual Meeting, Farmington, CT, April 2019
13. *Overview of Nanomedicine and Therapeutic Bioengineering Research Program at UMGCC*. Experimental Therapeutics Program in Oncology, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Baltimore, MD, June 2018
14. *Leveraging decreased non-specific adhesivity, receptor-targeted (DART) nanoparticle technology for treatment of primary and metastatic tumors*. 2018 Center for Biomedical Engineering and Technology (BioMET) Annual Retreat, University of Maryland Baltimore County (UMBC), MD, April 2018.

15. *The TWEAK Receptor Fn14 as a Potential Portal for Mesothelioma Nanotherapeutics*. University of Maryland Mesothelioma Center Research Retreat, University of Maryland School of Medicine, Baltimore, MD, October 2017.
16. *Emerging Nanotherapeutic Strategies to Overcome Drug Delivery Barriers*. Department of Pharmaceutical Sciences, University of Maryland School of Pharmacy, Baltimore, MD, October 2017.
17. *Nanotherapeutic Strategies to Overcome Drug Delivery Barriers*. ExperimentalTherapeutics (ET) Program Annual Retreat, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Baltimore, MD, September 2017.
18. *Emerging Nanotherapeutic Strategies to Target Invasive Brain Cancer*. The Maryland Cancer Imaging Program Symposium, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Baltimore, MD, May 2017.
19. *Emerging Therapeutic Strategies to Target Invasive Brain Cancer*. The Surgical Neurological Branch, National Institute of Neurological Disorders and Stroke (NINDS), National Institutes of Health (NIH), Bethesda, MD, December 2016.
20. *Emerging Therapeutic Strategies to Target Invasive Brain Cancer*. Korean Academy of Science and Technology (KAST) Symposium for Young Scientists in Drug Delivery – Redirecting the Field, Korean Institute of Science and Technology (KIST), Seoul, South Korea, December 2016.
21. *Emerging Therapeutic Strategies to Target Invasive Brain Cancer*. 2016 International Conference and Exhibition on Nanomedicine and Nanotechnology, Baltimore, MD, October 2016.
22. *Emerging Therapeutic Strategies to Target Invasive Brain Cancer*. Department of Bioengineering, George Mason University, Fairfax, VA, March 2016.
23. *Minimizing the Non-specific Binding of Nanoparticles in the Brain Enables Active Targeting of Fn14-Positive Brain Tumors.* Innovation in Biotechnology Award, 2015 AAPS National Biotechnology Conference, San Francisco, CA, June 2015.
24. *Nanotherapeutic Strategies to Target Invasive Brain Cancer*. Experimental Therapeutics Program in Oncology, University of Maryland Marlene and Stewart Greenebaum Cancer Center, Baltimore, MD, May 2015.
25. *Nanotherapeutic Strategies to Target Invasive Brain Cancer*. Department of Chemical, Biochemical & Environmental Engineering, University of Maryland, Baltimore County (UMBC), Baltimore, MD, May 2015.
26. *Therapeutic Strategies to Target Invasive Brain Cancer*. 2015 Center for Biomedical Engineering and Technology (BioMET) Annual Retreat, University of Maryland School of Medicine, Baltimore, MD, April 2015.
27. *Therapeutic Nanoparticles that Overcome Biological Barriers*. Department of Chemical and Biomolecular Engineering, University of Maryland, College Park, MD, Sep 2014.
28. *Therapeutic Nanoparticles that Overcome Biological Barriers*. Oncology and Diagnostic Sciences Seminar Series, University of Maryland School of Dentistry, Baltimore, MD, Jan 2014.
29. *Therapeutic Nanoparticles that Overcome Biological Barriers*. The Center for Vascular and Inflammatory Disease (CVID), University of Maryland School of Medicine, Baltimore, MD, Oct 2013.
30. *Therapeutic Nanoparticles that Overcome Biological Barriers*. Department of Pharmaceutical Sciences, University of Maryland School of Pharmacy, Baltimore, MD, Dec 2012.
31. *Engineered Soft Matter: DNA-directed Self-Assembly and Multifunctional Vesicles*. Division of Bio/Molecular Science and Engineering, Naval Research Laboratory, Washington, DC, Jan 2009.
32. *Bio-molecular Recognition in Targeted Therapeutic Delivery and Directed Self-assembly, Department of Chemical Engineering, Illinois Institute of Technology, IL, 2009*
33. *Bio-molecular Recognition in Directed Self-assembly and Targeted Therapeutic Delivery, Department of Chemical Engineering, Texas Tech University, TX, 2009*

34. *Engineered Soft Matter: From DNA-Programmed Self-Assembly to Multifunctional Vesicles, Department of Chemical Engineering and Environmental Science, University of California-Riverside, Riverside, CA, March 2008*
35. *Engineered Soft Matter: From DNA-Programmed Self-Assembly to Multifunctional Vesicles, Department of Chemical Engineering and Materials Science, University of California-Davis, Davis, CA, February 2008*
36. *Engineering Novel Mesoscopic Structures Using DNA-Programmed Colloidal Self-Assembly. Center for Functional Nanomaterials, Brookhaven National Laboratory, Upton, NY, Dec 2006.*
37. *Engineering Novel Mesoscopic Structures Using DNA-Programmed Colloidal Self-Assembly, Department of Chemistry, University of California-Berkeley, Berkeley, CA, November 2006*
38. *Engineering Novel Colloidal Crystal Structures Using DNA-Mediated Self-Assembly, Department of Materials Science and Engineering, University of Illinois Urbana-Champaign, Urbana-Champaign, IL, May 2006*

IX. CONFERENCE ABSTRACTS AND PROCEEDINGS

1. Pandey N, Carney CP, Kapur A, Saadi H, Ong HL, Chen C, Winkles JA, Woodworth GF, Kim AJ (2023) Impact of protein corona on the molecular specificity and cellular uptake of decreased nonspecific adhesivity, receptor-targeted (DART) nanoparticles for clinical translation, *2023 Controlled Release Society (CRS) Annual Meeting & Expo, Las Vegas, NV.*
2. Carney CP, Kapur A, Anastasiadis P, Ritzel R, Chen C, Woodworth GF, Winkles JA, Kim AJ (2022) Fn14-targeted polymeric DART nanoparticles enable tumor cell-specific targeting in TNBC brain tumor microenvironment, *2022 Controlled Release Society (CRS) Annual Meeting & Expo, Le Palais des Congrès de Montréal (Montreal Congress Centre), Montreal, Canada.*
3. Carney CP, Kapur A, Woodworth GF, Winkles JA, Kim AJ. (2022) Nanotherapeutic targeting of the Fn14 receptor for TNBC brain metastases. *12th Annual Cancer Biology Research Retreat. June 9, 2022. University of Maryland School of Medicine, Baltimore, MD.*
4. Carney C, Kapur A, Woodworth GF, Winkles JA, Kim AJ. (2022) Nanotherapeutic targeting of the Fn14 receptor for TNBC brain metastases. *National Cancer Institute (NCI) Graduate Student Recruiting Program (GSRP) Retreat. May 11-12, 2022. Bethesda, Maryland.*
5. Kanvinde P, Connolly N, Ames H, Kim AJ, Winkles JA, Woodworth GF (2022) Murine glioma cells implanted into the brains of Fn14 wild-type and Fn14 knockout mice exhibit similar tumor growth kinetics and median survival times, *2022 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD.*
6. Carney C, Kapur A, Woodworth GF, Winkles JA, Kim AJ. (2022) Nanotherapeutic targeting of the Fn14 receptor for TNBC brain metastases. *44th Annual Graduate Research Conference. March 4, 2022. University of Maryland School of Medicine. Baltimore, MD.*
7. Kapur A, Carney C, Pandey N, Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2021) Ligand Mediated Differential Distribution of Decreased Nonspecific Adhesivity, Receptor-Targeted Nanoparticles in the Tumor Microenvironment, *2021 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD.*
8. Carney C, Kapur A, Pandey N, Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2021) Impact of protein coronas on the selectivity, mechanisms of uptake, and cytotoxicity of Fn14-targeted nanotherapeutics in TNBC, *2021 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD.*
9. Pandey N, Kapur A, Carney C, Connolly N, Winkles JA, Woodworth GF, Kim AJ (2021) High-Throughput, Reproducible Scale-Up Manufacturing of Decreased Nonspecific Adhesivity, Receptor-Targeted (DART) Nanoparticles for Clinical Translation, *2021 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD.*
10. Carney C, Kapur A, Pandey N, Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2021) Impact of protein coronas on the selectivity, mechanisms of uptake, and cytotoxicity of

Fn14-targeted nanotherapeutics in TNBC, *2021 AACR San Antonio Breast Cancer Symposium (Virtual).*

11. Pandey N, Kapur A, Carney C, Connolly N, Winkles JA, Woodworth GF, Kim AJ (2020) High-Throughput, Reproducible Scale-Up Manufacturing of Decreased Nonspecific Adhesivity, Receptor-Targeted (DART) Nanoparticles for Clinical Translation, *2020 American Association of Pharmaceutical Scientists (AAPS) Pharmsci 360 Annual Meeting (Virtual).*

12. Kapur A, Carney C, Pandey N, Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2020) Ligand Mediated Differential Distribution of Decreased Nonspecific Adhesivity, Receptor-Targeted Nanoparticles in the Tumor Microenvironment, *2020 American Association of Pharmaceutical Scientists (AAPS) Pharmsci 360 Annual Meeting (Virtual).*

13. Pandey N, Kapur A, Carney C, Connolly N, Winkles JA, Woodworth GF, Kim AJ (2020) High-throughput, Reproducible Scale-up Manufacturing of Decreased Nonspecific Adhesivity, Receptor-Targeted (DART) Nanoparticles for Clinical Translation, *2020 BMES Virtual Annual Meeting on October 14-17, 2020.*

14. Kapur A, Carney C, Pandey N, Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2020) Exploring Ligand- and Binding Affinity- Mediated Distribution of Decreased Nonspecific Adhesivity, Receptor-Targeted (DART) Nanoparticles in the Tumor Microenvironment, *2020 BMES Virtual Annual Meeting on October 14-17, 2020.*

15. Pandey N, Kapur A, Winkles JA, Woodworth GF, and Kim AJ (2020) Scale up of decreased non-specific adhesivity, receptor-targeted (DART) nanoparticlesnfor treatment of primary and metastatic triple negative breast cancers, *47th Annual Meeting & Exposition of the Controlled Release Society (CRS).* Las Vegas, NV
16. Kapur A, Carney C, Pandey N, Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ, (2020) Differential Cellular Distribution of Decreased Nonspecific Adhesivity, Receptor-Targeted (DART) Nanoparticles in the Tumor Microenvironment, *47th Annual Meeting & Exposition of the Controlled Release Society (CRS).* Las Vegas, NV
17. Anastasiadis P, Connolly NP, Ames HM, Kanvinde P, Malla A, Kim AJ, Winkles JA, Woodworth GF (2020) Spatial and temporal control of molecular transformations in glial and progenitor cells using the RCAS/tv-a system, *2020 Virtual Meeting on Glia in Health & Disease,* Cold Spring Harbor Laboratory.

18. Mohammadabadi A, Huynh RN, Wadajkar AS, Lapidus RG, Kim AJ, Raub CB, Frenkel V (2020) Lower interstitial fluid pressure and enhanced delivery and penetration of nanoparticles in solid tumors using nondestructive pulsed focused ultrasound, *7th International Symposium on Focused Ultrasound 2020 (Virtual).*

19. Wadajkar AS, Dancy JG, Woodworth GF, Winkles JA, Kim AJ (2019) Harnessing Fibroblast Growth Factor-inducible 14 (Fn14) For Targeting Primary and Metastatic Triple Negative Breast Cancer, *46th Annual Meeting & Exposition of the Controlled Release Society (CRS).* Valencia, Spain.
20. Wadajkar AS, Dancy JG, Winkles JA, Woodworth GF, Kim AJ (2019) Leveraging Surface Plasmon Resonance to Dissect the Interfacial Properties Of Nanoparticles: Implications For Tissue Binding And Tumor Penetration, *46th Annual Meeting & Exposition of the Controlled Release Society (CRS).* Valencia, Spain.
21. Wadajkar AS, Dancy JG, Connolly NP, Tyler B, Winkles JA, Woodworth GF, Kim AJ (2018) Leveraging Decreased Non-specific Adhesivity, Receptor-targeted (DART) Nanoparticles For Treatment Of Invasive Brain Tumors, *2018 American Association Pharmaceutical Scientists (AAPS) Annual Meeting*. Washington, DC.
22. Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2018) Harnessing Fibroblast Growth Factor-indicible 14 (fn14) For Targeting Metastatic Triple Negative Breast Cancer, *2018 American Association Pharmaceutical Scientists (AAPS) Annual Meeting*. Washington, DC.
23. Wadajkar AS, Dancy JG, Winkles JA, Woodworth GF, Kim AJ (2018) Leveraging Surface Plasmon Resonance to Dissect the Interfacial Properties of Nanoparticles for Tumor Penetration, *2018 American Association Pharmaceutical Scientists (AAPS) Annual Meeting*. Washington, DC.

24. Majumdar S, Wadajkar AS, Kim AJ, Chellaiah MA (2018) Biodegradable Polymeric Nanoparticles Encapsulated with Small Molecular Weight L-Plastin Peptides Reduces Resorption Activity of Osteoclasts, 2018 American Society for Bone and Mineral Research (ASBMR) Meeting, Québec, Canada
25. Wadajkar AS, Dancy JG, Connolly NP, Tyler B, Winkles JA, Woodworth GF, Kim AJ (2018) Leveraging Decreased Non-specific Adhesivity, Receptor-targeted (DART) Nanoparticles For Treatment Of Invasive Brain Tumors, *2018 BMES Annual Meeting.* Atlanta, GA
26. Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2018) Harnessing Fibroblast Growth Factor-indicible 14 (fn14) For Targeting Metastatic Triple Negative Breast Cancer, *2018 BMES Annual Meeting.* Atlanta, GA
27. Wadajkar AS, Dancy JG, Winkles JA, Woodworth GF, Kim AJ (2018) Leveraging Surface Plasmon Resonance to Dissect the Interfacial Properties of Nanoparticles for Tumor Penetration, *2018 BMES Annual Meeting.* Atlanta, GA
28. Mohammadabadi A, Anastasiadis P, Dancy J, Winkles JA, Kim AJ, Frenkel V. (2018) Focused ultrasound-mediated delivery of therapeutic agents for the treatment of head and neck cancer. 2018 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD
29. Wadajkar AS, Dancy JG, Winkles JA, Woodworth GF, Kim AJ (2018) Leveraging surface plasmon resonance to dissect the interfacial properties of nanoparticles for tumor penetration, 2018 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD
30. Connolly NP, Schneider CS, Shetty A, Xu S, Ozawa T, Kim AJ, Winkles JA, Holland E, Woodworth GF (2018) Increased Fn14 expression in RCAS/tv-a gliomas decreases survival and alters morphology of tumor, 2018 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD
31. Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2018) Harnessing Fibroblast Growth Factor-inducible 14 (Fn14) for targeting metastatic Triple Negative Breast Cancer, 2018 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD
32. Roberts N, Winkles JA, Kim AJ, Woodworth GF (2018) Repurposing oxaliplatin for the treatment of glioblastoma, 2018 GPILS Annual Cancer Biology Research Retreat, University of Maryland School of Medicine, Baltimore, MD
33. Wadajkar AS, Dancy JG, Connolly NP, Tyler B, Winkles JA, Woodworth GF, Kim AJ (2018) Leveraging Decreased Non-specific Adhesivity, Receptor-targeted (dart) Nanoparticles For Treatment Of Invasive Brain Tumors, *45th Annual Meeting & Exposition of the Controlled Release Society (CRS).* New York, NY.
34. Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2018) Harnessing Fibroblast Growth Factor-indicible 14 (Fn14) For Targeting Metastatic Triple Negative Breast Cancer, *45th Annual Meeting & Exposition of the Controlled Release Society (CRS).* New York, NY.
35. Wadajkar AS, Dancy JG, Connolly NP, Winkles JA, Woodworth GF, Kim AJ (2017) Directing biodegradable nanotherapeutics to invasive glioma cells improves intracranial tumor retention, *2017 American Association Pharmaceutical Scientists (AAPS) Annual Meeting*. San Diego, CA.
36. Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2017) Optimizing Nanoparticle Surface Properties for Improved Therapeutic Efficacy Against Triple-negative Breast Cancer Tumors, *2017 American Association Pharmaceutical Scientists (AAPS) Annual Meeting*. San Diego, CA.
37. Wadajkar AS, Dancy JG, Connolly NP, Winkles JA, Woodworth GF, Kim AJ (2017) Targeting Nanotherapeutics to the Invasive Glioblastoma Margin via the Cell Surface Receptor Fn14, *2017 BMES Annual Meeting.* Phoenix, AZ
38. Frenkel V, Hersh D, Anastasiadis P, Mohammadabadi A, Dancy J, Winkles JA, Keller A, Woodworth GF, Kim AJ (2017) Pulsed focused ultrasound effects on the brain interstitium, *2017 IEEE International Ultrasonics Symposium,* Washington, D.C., USA

39. Wadajkar AS, Dancy JG, Connolly NP, Winkles JA, Woodworth GF, Kim AJ (2017) Targeting Nanotherapeutics to the Invasive Glioblastoma Margin via the Cell Surface Receptor Fn14, *44th Annual Meeting & Exposition of the Controlled Release Society (CRS).* Boston, MA
40. Mohammadabadi A, Hersh D, Anastasiadis P, Smith P, Woodworth GF, Kim AJ, Frenkel V (2017) Focus ultrasound for augmenting convection-enhanced delivery of nanoparticles in the brain, 2017 Acoustical Society of America Annual Meeting (w/ the European Acoustics Association), Boston, MA
41. Connolly NP, Schneider CS, Shetty A, Xu S, Ozawa T, Kim AJ, Winkles JA, Holland E, Woodworth GF (2017) PDGF-A overexpression and p53 depletion in rat neural precursor cells induces large brain tumors that resemble human glioblastoma, *2017 GPILS Annual Cancer Biology Research Retreat*, University of Maryland School of Medicine*,* Baltimore, MD
42. Wadajkar AS, Dancy JG, Connolly NP, Winkles JA, Woodworth GF, Kim AJ (2017) Directing biodegradable nanotherapeutics to invasive glioma cells improves intracranial tumor retention, *2017 GPILS Annual Cancer Biology Research Retreat*, University of Maryland School of Medicine*,* Baltimore, MD
43. Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2017) Optimizing Nanoparticle Surface Properties for Improved Therapeutic Efficacy Against Triple-negative Breast Cancer Tumors, *2017 GPILS Annual Cancer Biology Research Retreat*, University of Maryland School of Medicine*,* Baltimore, MD
44. Roberts N, Winkles JA, Kim AJ, Woodworth GF (2017) Repurposing oxaliplatin for the treatment of glioblastoma, *2017 GPILS Annual Cancer Biology Research Retreat*, University of Maryland School of Medicine*,* Baltimore, MD
45. Wadajkar AS, Dancy JG, Connolly NP, Winkles JA, Woodworth GF, Kim AJ (2017) Targeting Nanotherapeutics to the Invasive Glioblastoma Margin via the Cell Surface Receptor Fn14, *American Association of Cancer Research (AACR) Annual Meeting 2017,* Washington, D.C., USA
46. Dancy JG, Wadajkar AS, Woodworth GF, Winkles JA, Kim AJ (2017) Optimizing Nanoparticle Surface Properties Using SPR for Improved Therapeutic Efficacy Against Triple-negative Breast Cancer Tumors, *American Association of Cancer Research (AACR) Annual Meeting 2017,* Washington, D.C., USA
47. Connolly NP, Schneider CS, Shetty A, Xu S, Ozawa T, Kim AJ, Winkles JA, Holland E, Woodworth GF (2017) PDGF-A overexpression and p53 depletion in rat neural precursor cells induces large brain tumors that resemble human glioblastoma, *American Association of Cancer Research (AACR) Annual Meeting 2017,* Washington, D.C., USA
48. Hersh DS, Adapa A, Perez JG, Kim AJ, Winkles JA, Frenkel V, Woodworth GF. Investigating the use of pulsed ultrasound to nondestructively expand the brain extracellular space. *2016 AANS Annual Scientific Meeting*. Chicago, IL.
49. Perez J, Wadajkar AS, Schneider CS, Mauban JRH, Woodworth GF, Winkles JA, Kim AJ (2016) Non-specific binding and steric hindrance thresholds for penetration of particulate drug carriers within tumor tissue. *2016 American Association Pharmaceutical Scientists (AAPS) Annual Meeting*. Denver, CO.
50. Dancy J, Wadajkar AS, Schneider CS, Mauban JRH, Woodworth GF, Winkles JA, Kim AJ (2016) Non-specific binding and steric hindrance thresholds for penetration of particulate drug carriers within tumor tissue. *2016 Molecular Medicine Annual Research Retreat*, University of Maryland, Baltimore*,* Baltimore, MD
51. Hersh DS, Nguyen BA, Perez J, Adapa AR, Winkles JA, Woodworth GF, Kim AJ, Frenkel V (2016) Pulsed Ultrasound Non-destructively Expands the Extracellular and Perivascular Spaces of the Brain. *5th International Symposium on Focused Ultrasound. Focused Ultrasound Foundation*. Bethesda, MD.
52. Perez J, Wadajkar AS, Schneider CS, Mauban JRH, Woodworth GF, Winkles JA, Kim AJ (2016) Non-specific binding and steric hindrance thresholds for penetration of particulate drug carriers within tumor tissue. *43rd Annual Meeting & Exposition of the Controlled Release Society (CRS).* Seattle, WA

53. Perez J, Wadajkar AS, Schneider CS, Mauban JRH, Woodworth GF, Winkles JA, Kim AJ (2016) Non-specific binding and steric hindrance thresholds for penetration of particulate drug carriers within tumor tissue. *2016 GPILS Annual Cancer Biology Research Retreat*, University of Maryland School of Medicine*,* Baltimore, MD
54. Perez J, Wadajkar AS, Schneider CS, Mauban JRH, Woodworth GF, Winkles JA, Kim AJ (2016) Non-specific binding and steric hindrance thresholds for penetration of particulate drug carriers within tumor tissue. *American Association of Cancer Research (AACR) Annual Meeting 2016*, New Orleans, LA
55. Schneider CS, Perez, J, Zhang C, Mastorakos P, Hanes J, Winkles JA, Woodworth GF, Kim AJ (2015) Minimizing the Non-specific Binding of Nanoparticles in the Brain Enables Active Targeting of Fn14-Positive Brain Tumors. *13th US-Japan Symposium on Drug Delivery Systems,* Lahaina, Maui, HI.
56. Schneider CS, Perez, J, Cheng E, Zhang C, Mastorakos P, Hanes J, Winkles JA, Woodworth GF, Kim AJ (2015) Minimizing the Non-specific Binding of Nanoparticles in the Brain Enables Active Targeting of Fn14-Positive Brain Tumors. *42nd Annual Meeting & Exposition of the Controlled Release Society (CRS)*. Edinburgh, Scotland.
57. Schneider CS, Perez, J, Cheng E, Zhang C, Mastorakos P, Hanes J, Winkles JA, Woodworth GF, Kim AJ (2015) Minimizing the Non-specific Binding of Nanoparticles in the Brain Enables Active Targeting of Fn14-Positive Brain Tumors. *2015 American Association Pharmaceutical Scientists (AAPS) National Biotechnology Conference*. San Francisco, CA.
58. Perez J, Schneider CS, Connolly N, Winkles JA, Woodworth GF, Kim AJ (2015) Development of Biodegradable Fn14-targeted Nanoparticles for Controlled Drug Delivery for Invasive Brain Tumors. *2015 American Association of Cancer Research (AACR) Advances in Brain Cancer Research*, Washington, D.C.
59. Perez J, Schneider CS, Connolly N, Winkles JA, Woodworth GF, Kim AJ (2015) Development of Biodegradable Fn14-targeted Nanoparticles for Controlled Drug Delivery for Invasive Brain Tumors. *2015 GPILS Cancer Biology Research Retreat,* University of Maryland School of Medicine, Baltimore, MD
60. Kim AJ, Boylan NJ, Suk JS, Hanes J, Woodworth GW (2014) Highly compacted pH-responsive DNA nanoparticles mediate efficient transgene silencing in experimental glioma. *41th Annual Meeting & Exposition of the Controlled Release Society (CRS)*. Chicago, IL.
61. Mastorakos P, Zhang C, Berry S, Kim AJ, Woodworth GW, Suk JS, Hanes J (2014) Brain penetrating gene vectors for efficient gene transfer to the CNS. *41th Annual Meeting & Exposition of the Controlled Release Society (CRS)*. Chicago, IL.
62. Mastorakos P, Zhang C, Berry S, Kim AJ, Woodworth GW, Suk JS, Hanes J (2014) Brain penetrating gene vectors for efficient gene transfer to the CNS. *17th Annual Meeting of American Society of Gene and Cell Therapy (ASGCT)*, Washington, DC.
63. Kim AJ, Woodworth GW, Boylan NJ, Suk JS, Hanes J (2014) Highly compacted pH-responsive DNA nanoparticles mediate efficient transgene silencing in experimental glioma. *17th Annual Meeting of American Society of Gene and Cell Therapy (ASGCT)*, Washington, DC.
64. Schuster BS, Kim AJ, Kays JC, Kanzawa MM, Suk JS, Hanes J. (2013) The cystic fibrosis sputum barrier to adeno-associated virus gene therapy. *12th US-Japan Symposium on Drug Delivery Systems*, Lahaina, Maui, HI.
65. Suk JS, Kim AJ, Schneider CS, Cebotaru L, Boyle MP, Guggino W, Hanes J. (2013) Mucus-penetrating Nanoparticles for Inhaled Gene Therapy for Cystic Fibrosis. *27th Annual North American Cystic Fibrosis Conference*, Salt Lake City, UT.
66. Pan-in P, Kim AJ, Hanes J. (2012) Cellulose derivative-based polymeric nanoparticles for Garciniamangostana extract delivery and cancer therapy. *International Conference of Nanotek*, Philadelphia, PA.
67. Kim AJ. (2012) Nanomedicines that Overcome Extra- and Intracellular Barriers. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Pittsburg, PA.

68. Kim AJ, Boylan NB, Suk JS, Hanes J. (2012) Airway Gene Transfer and Intracellular Trafficking of Highly Compacted DNA Nanoparticles. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Pittsburg, PA.
69. Kim AJ, Suk JS, Boylan NB, Hanes J. (2012) Sputum Penetration and Enhanced Airway Gene Transfer by Mucus Penetrating Synthetic Gene Nanocarriers. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Pittsburg, PA.
70. Kim AJ. (2012) Nanomedicines that Overcome Extra- and Intracellular Barriers. Bi*omedical Engineering Society (BMES) Annual Meeting*, Atlanta, GA.
71. Kim AJ, Suk JS, Boylan NB, Hanes J. (2012) Sputum Penetration and Enhanced Airway Gene Transfer by Mucus Penetrating Synthetic Gene Nanocarriers. *Biomedical Engineering Society (BMES) Annual Meeting*, Atlanta, GA.
72. Nguyen C, Cone F, Hanes J, Kim AJ, Nguyen T, Tezel G, Pease ME, Steinhart M, Quigley H. (2012) Studies of scleral microstructure, proteomic analysis, and biomechanical behavior suggest mechanisms of susceptibility to experimental glaucoma in mice. *The Association of Research in Vision and Ophthalmology (ARVO) Annual Meeting*, Fort Lauderdale, FL.
73. Kim AJ, Suk JS, Schneider C, Hanes J. (2011) Sputum Penetration and Enhanced Airway Gene Transfer by Mucus Penetrating Synthetic Gene Nanocarriers. *11th US-Japan Symposium on Drug Delivery Systems,* Maui, HI
74. Boylan NJ, Kim AJ, Suk JS, Hanes J. (2011) The effect of PEG molecular architecture on the morphology and transport of DNA nanoparticles. *11th US-Japan Symposium on Drug Delivery Systems,* Maui, HI
75. Suk JS, Kim AJ, Trehan K, Schneider CS, Boyle MP, Zeitlin PL, Lai SK, Hanes J. (2011) Sputum Penetration and Airway Gene Transfer by Nanoparticles. *Gordon Research Conference – Cilia, Mucus and Mucociliary Interactions,* Ventura, CA.
76. Percec V, Wilson DA, Leowanawat P, Wilson CJ, Hughes AD, Kaucher MS, Hammer DA, Levine DH, Kim AJ, Bates FS, Davis KP, Lodge TP, Klein ML, DeVane RH, Aqad E, Rosen BM, Argintaru AO, Sienkowska MJ, Rissanen K, Nummelin S, Ropponen J. (2011) Self-Assembly of Janus-Dendrimers into Monodisperse Dendrosomes and other Complex Architectures. *241st American Chemical Society (ACS) National Meeting*, Anaheim, CA.
77. Woodworth G, Nance E, Boylan NB, Kim AJ, Breem H, Hanes J. (2011) Highly-Compacted DNA Nanoparticles Mediate Efficient Transgene Silencing in Brain Tumors. *Johns Hopkins University INBT Symposium,* Baltimore, MD.
78. Kim AJ, Christian NA, Therien MJ, Hammer DA. (2007) Targeted Adhesion of Multiplexed Near-infrared (NIR) Emissive Polymersomes by DNA Hybridization. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Salt Lake City, UT.
79. Kim AJ. (2007) Engineered Polymer Vesicles for Targeted Adhesion, Bioimaging, and Controlled Delivery. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Salt Lake City, UT.
80. Ung MT, Kim AJ, Crocker JC. (2007) Dynamic Binding in a Tethered-Particle Study of DNA Hybridization. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Salt Lake City, UT.
81. Scarlett R, Kim AJ, Crocker JC, Sinno T. (2007) A Monte Carlo Analysis Of Interfacial Dynamics During The Growth Of Binary Colloidal Crystals. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Salt Lake City, UT.
82. Moon JH, Kim AJ, Crocker JC, Yang S. (2007) High-throughput synthesis of colloidal particles with anisotropic properties and their DNA directed assembly. *American Chemical Society (ACS) National Meeting*, Chicago, IL.
83. Dreyfus R, Bischofberger I, Sha R, Kim AJ, Crocker JC, Seeman N, Pine D, Chaikin P. (2007) Specific and Reversible Assembly of DNA Coated Colloids. *American Physical Society (APS) March Meeting*, Denver, CO.
84. Kim AJ, Biancaniello PL, Crocker JC. (2006) Engineering Novel Colloidal Crystal Structures Using DNA-Mediated Self-Assembly. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, San Francisco, CA.

85. Crocker JC, Biancaniello PL, Kim AJ. (2006) Single Molecule Measurements of Non-Exponential DNA Hybridization Kinetics. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, San Francisco, CA.
86. Kim AJ, Biancaniello PL, Crocker JC. (2006) Engineering Novel Colloidal Crystal Structures Using DNA-Mediated Self-Assembly. *Penn Graduate Research Symposium,* Philadelphia, PA.
87. Moon JH, Kim AJ, Crocker JC, Yang S. (2005) Synthesis and self-assembly of anisotropic particles. *Soft Matter Workshop (NYU-Penn)*, Philadelphia, PA
88. Kim AJ, Biancaniello PL, Crocker JC. (2005) Engineering DNA-mediated Colloidal Self-assembly: Preparing Sterically Stable Particles and Assembling Them into Ordered Crystal Structures. *Materials Research Society (MRS) Fall Meeting*, Boston, MA.
89. Kim AJ, Biancaniello PL, Crocker JC. (2005) Engineering DNA-mediated Colloidal Self-assembly: Preparing Sterically Stable Particles and Assembling Them into Ordered Crystal Structures, *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Cincinnati, OH.
90. Kim AJ, Biancaniello PL, Crocker JC. (2005) Engineering DNA-mediated Colloidal Self-assembly. *PARTICLES 2005*, San Francisco, CA.
91. Kim AJ, Crocker JC. (2005) Engineering DNA-mediated Colloidal Self-assembly. *Bristol Myers Squibb Seminar Series*, Philadelphia, PA.
92. Biancaniello PL, Kim AJ, Crocker JC. (2005) Colloidal interactions and self-assembly using DNA hybridization. *American Physical Society (APS) March Meeting,* Los Angeles, CA.
93. Kim AJ, Biancaniello, Crocker JC. (2004) Phase Behavior and Pair Interaction Measurements in DNA-Programmed Colloidal Self-assembly System. *AICHE 2004 Annual Meeting*, Austin, TX.
94. Kim AJ, Crocker JC. (2004) Colloidal Self-Assembly Using DNA-Programmed Interactions. *MRSEC Soft Matter Seminar*, Philadelphia, PA.
95. Biancaniello PL, Kim AJ, Crocker JC. (2003) Direct Measurement of DNA Induced Colloidal Interactions. *American Physical Society (APS) March Meeting, Austin, TX.*
96. Crocker JC, Kim AJ. (2002) DNA-Programmed Colloidal Self-Assembly. *American Institute of Chemical Engineers (AICHE) Annual Meeting*, Indianapolis, IN.

X. RESEARCH SUPERVISION

Postdoctoral Fellows

1. Nikhil Pandey, Ph.D. (07/19-present) – *UMSOM CARTI Scholar*
2. Poornima Dubey, Ph.D. (06/22-06/23)
3. Anshika Kapur, Ph.D. (08/19-01/22)
4. Pavlos Anastasiadis, Ph.D. (05/19-07/21) – *NIH T32 Postdoctoral Fellow*
5. Nina Connolly, Ph.D. (12/14-04/21) – *NIH T32 Postdoctoral Fellow*
6. Aniket Wadajkar, Ph.D. (05/15-04/19) – *NIH T32 Postdoctoral Fellow, ACS-IRG Fellow*
7. Craig Schneider, Ph.D. (06/13-09/14)

Residents

1. David Hersh, M.D. (06/15-12/16); Neurosurgery Resident– *NIH T32 Postdoctoral Fellow*

Ph.D. Students

1. Hassan Saadi (07/22-present); M.D./Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
2. Musavvir Mahumd (06/22-present); Ph.D. Candidate in Bioengineering (UMCP) – *Clark School Future Faculty Program Scholar*
3. Pranjali Kanvinde (05/18-present); Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
4. Adarsha Malla (01/22-present); M.D./Ph.D. Candidate in Graduate Program in Life Sciences (GPILS) – *NIH T32 Predoctoral Fellow*

5. Anu Sunkara (01/23-03/23); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
6. Christine Carney (05/18-10/22); Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
7. Musavvir Mahumd (04/22-06/22); Rotation Student, Ph.D. Candidate in Bioengineering (UMCP)
8. Darin Gilchrist (06/21-09/21); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
9. Jacob Shaw (03/21-06/21); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
10. Blair Ptak (12/20-03/21); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
11. Chimdiya Onwukwe (09/20-01/21); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
12. Matthew Eason (08/20-11/20); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
13. Adarsha Malla (06/19-08/19); Rotation Student, M.D./Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
14. Mitasha Palha (04/19-06/19); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
15. Sarah Talamentez (04/19-06/19); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
16. Jennifer Mariano (01/19-04/19); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
17. Nathan Roberts (06/15-09/18); MSTP MD/PhD Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS) – *NIH F30 Predoctoral Fellow*
18. Jimena Perez-Dancy (03/14-06/18); Ph.D. Candidate in Graduate Program in Life Sciences (GPILS) –*NIH T32 Predoctoral Fellow, Meyerhoff Fellow*
19. Nicole Gould (10/17-01/18); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
20. Pranjali Kanvinde (10/17-01/18); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
21. Philip Smith (06/16-03/17); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)
22. Nicole Snell (01/15-04/15); Rotation Student, Ph.D. Candidate in Graduate Program in Life Sciences (GPILS)

Medical Students

1. Yamini Vyas (06/20-02/22)
2. Aymen Alqazzaz (05/17-02/22)
3. Neila Kline (06/18-03/20)
4. Lucy Wang (06/18-06/19)
5. Michaella Reif (05/17-06/17)
6. Craig Schneider, Ph.D. (05/16-09/16)

Master's Students

1. Anu Sunkara (01/23-03/23); Rotation Student, M.S. Candidate in Graduate Program in Life Sciences (GPILS)
2. Aditya Kavuturu (09/21-12/21); Rotation Student, M.S. Candidate in Graduate Program in Life Sciences (GPILS)
3. Ravina Pandita (12/17-05/18); Rotation Student, M.S. Candidate in Graduate Program in Life Sciences (GPILS)

4. Minyoung Hwangbo (2011-2013); M.S. in Chemical and Biomolecular Engineering, Johns Hopkins University

Visiting Professors/Scientists

1. Porntip Pan-in, Ph.D. (2012-2013); Visiting Graduate Student, Chulalongkorn University, Thailand

Postbaccalaureate Students

1. Cole Brown (07/22-07/23); University of North Carolina at Chapel Hill

Undergraduate Research Assistants

1. Lea Petratos (06/23-09/23), The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
2. Jennifer Yan (06/21-09/21), The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
3. Blair Landon (06/19-09/19), The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
4. Bruck Negash (06/19-09/19), The UM Scholars Summer Internship Program, University of Maryland School of Medicine
5. Jackline Hwang (06/18-09/18), The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
6. Sara Barlow (06/17-09/17), The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
7. Jay Swayambunathan (06/16-09/16), The UM Scholars Summer Internship Program, University of Maryland School of Medicine
8. Nathalie Chen (06/16-08/16), The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
9. Adip Bhargav (05/15-09/15), The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
10. Arjun Adapa (05/15-08/15), The UM Scholars Summer Internship Program, University of Maryland School of Medicine
11. Haelee Pettingill (06/14-08/14), The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
12. Connor Flemming (2012-2013), Department of Chemical and Biomolecular Engineering, Johns Hopkins University
13. Yujin Jang (2012-2013), Department of Biology, University of Maryland, Baltimore County (UMBC)
14. Ashley Choi (2009-2012), Department of Biology, Johns Hopkins University
15. Joon Seok Oh (2009-2012), Department of Biomedical Engineering, Johns Hopkins University

Thesis Project Committee Chair – Ph.D. Students

2019-2021 Jackline Lasola, GPLS Immunology and Molecular Biology

Thesis Project Committee Member – Ph.D. Students

2022-present Musavvir Mahumd, Department of Bioengineering (UMCP)
2022-present Hassan Saadi, GPLS Molecular Medicine
2022-present Matthew Eason, GPLS Molecular Medicine
2022-present Adarsha Malla, GPLS Molecular Medicine
2022-present Jacob Shaw, GPLS Molecular Medicine
2018-present Pranjali Kavinde, GPLS Molecular Medicine
2018-2022 Christine Carney, GPLS Molecular Medicine
2019-2021 Jackline Lasola, GPLS Immunology and Molecular Biology

2017-2020 Ali Mohammadabadi, Department of Mechanical Engineering, University of Maryland, Baltimore County (UMBC)
2015-2018 Nathan Roberts, GPLS Molecular Medicine
2014-2018 Jimena Dancy, GPLS Molecular Medicine

Thesis Qualifying Exam Committee Member – Ph.D. Students
2023 Julia Ju, GPLS Molecular Medicine
2022 Jacob Shaw, GPLS Molecular Medicine
2022 Blair Ptak, GPLS Molecular Medicine
2020 Katharina Chang, GPLS Molecular Medicine
2020 Mashood Wani, GPLS Molecular Medicine

XI. SERVICE TO THE UNIVERSITY

2023–present Institutional Biosafety Committee (IBC), VA Maryland Health Care System, United States Department of Veterans Affairs, Baltimore, MD
2022–present Faculty Advisor, Gemstone Research Program, The University of Maryland A. James Clark School of Engineering, College Park, MD
2022–present Leadership Team, American Cancer Society (ACS) Institutional Research Grant, The University of Maryland Marlene and Stewart Greenebaum Cancer, Baltimore, MD
2022–present Advisory Committee, Translational Laboratory Shared Services, University of Maryland School of Medicine, Baltimore, MD
2019–present Selection Committee, American Cancer Society Institutional Research Grant, The University of Maryland Marlene and Stewart Greenebaum Cancer, Baltimore, MD
2019–present Scientific Review Committee, Office of Technology Transfer, University of Maryland, Baltimore, MD
2019–present SOM Council Member (Alternate), Department of Neurosurgery, University of Maryland School of Medicine, Baltimore, MD
2018–present Roundtable Discussions Leader, 2018 Mid-Summer Research Retreat, Office of Student Research, University of Maryland School of Medicine, Baltimore, MD
2017–present Admissions Committee, The Graduate Program in Life Sciences (GPILS) Molecular Medicine Program (MMED), University of Maryland School of Medicine
2017–present Faculty Interviewer, The Graduate Program in Life Sciences (GPILS), University of Maryland School of Medicine
2019-2020 The Scientific Leadership Program, University of Maryland School of Medicine, Baltimore, MD
2018–2019 SOM Council Member, Department of Neurosurgery, University of Maryland School of Medicine, Baltimore, MD
2017 Faculty Advisor, The Science Training for Advancing Biomedical Research Post-baccalaureate Research Education Program (STAR-PREP), University of Maryland School of Medicine
2016, 2017 Faculty Judge, The Annual Cancer Biology Retreat, University of Maryland School of Medicine
2016–present Faculty Judge, The Graduate Research Conference (GRC) hosted by Graduate Student Association (GSA), University of Maryland, Baltimore
2016, 2017 Selection Committee, The University of Maryland (UM) Scholars Program, University of Maryland School of Medicine
2015–2018 SOM Council Member (Alternate), Department of Neurosurgery, University of Maryland School of Medicine

2015, 2016, 2018	Selection Committee, Cancer Biology T32 Training Program, University of Maryland School of Medicine
2014, 2015, 2016	Selection Committee, The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
2013–present	Co-director, Translational Therapeutics Research Group, University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center

XII. TEACHING EXPERIENCE

Spring 2023	Lecturer, *BIOE447: Clinical Experiences in Bioengineering Course,* University of Maryland College Park, Fischell Department of Bioengineering
Fall 2022	Lecturer, *Drug Delivery/Targeting*, GPLS 665 Cancer Biology: From Basic Research to the Clinic, University of Maryland Graduate School
Spring 2022	Lecturer, *BIOE447: Clinical Experiences in Bioengineering Course,* University of Maryland College Park, Fischell Department of Bioengineering
Fall 2021	Lecturer, *Drug Delivery/Targeting*, GPLS 665 Cancer Biology: From Basic Research to the Clinic, University of Maryland Graduate School
Fall 2021	Lecturer, *MSTP Molecules to Medicine (M2M) Course, Nanotechnology for Drug Delivery,* University of Maryland School of Medicine
Spring 2021	Lecturer, *BIOE489O: clinical experiences in biomedical engineering course,* University of Maryland College Park, Fischell Department of Bioengineering
Fall 2020	Lecturer, *Drug Delivery/Targeting*, GPLS 665 Cancer Biology: From Basic Research to the Clinic, University of Maryland Graduate School
2015–present	Discussion leader, Conflicts of Interest in Biomedical Research course, CIPP 907, University of Maryland Graduate School (2 hours/semester)
2015–present	Research Mentor, Cancer Biology T32 Training Program, University of Maryland School of Medicine
2015–present	Research Mentor, Summer BioScience Internship Program (SBIP), University of Maryland School of Medicine
2015–present	Research Mentor, The University of Maryland (UM) Scholars Program, University of Maryland School of Medicine
2014–present	Research Mentor, The Nathan Schnaper Summer Intern Program (NSIP) in Cancer Research, University of Maryland School of Medicine
2013–present	Faculty member in the Graduate Program in Life Sciences (GPILS), University of Maryland School of Medicine
2003	Teaching Assistant, *Separation Processes*, University of Pennsylvania
2002	Teaching Assistant, *Chemical Engineering Laboratory*, University of Pennsylvania