
NAME: **Fan Zhang**

Email: fzhang1@cop.ufl.edu

POSITION TITLE: Assistant Professor, Department of Pharmaceutics, University of Florida

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Donghua University, Shanghai, China	BENG	07/2010	Polymer Engineering
Johns Hopkins University, Baltimore, MD	PhD	06/2016	Materials Science & Engineering
Fred Hutchinson Cancer Research Center, Seattle, WA	Postdoctoral	12/2020	Immunotherapy/ Immuno-Oncology

Positions and Scientific Appointments

01/2021 – present	Assistant Professor, Department of Pharmaceutics, College of Pharmacy, University of Florida Health
03/2021 – present	Affiliate Faculty, Department of Pharmacology and Therapeutics, Department of Chemical Engineering, University of Florida Member, University of Florida Health Cancer Center
09/2016 – 12/2020	Postdoctoral Research Fellow, Clinical Research Division, Fred Hutchinson Cancer Research Center, Seattle, WA
01/2012 – 05/2016	Research Assistant/Ph.D. Candidate, Center for Nanomedicine, Johns Hopkins University, BALTIMORE, MD

Honors

2023	Outstanding Teaching Team Award, UF College of Pharmacy
2023	CTSI KL2 Career Development Award, NIH through UF CTSI
2021	Sparkathon Accelerator Award, Society for Immunotherapy of Cancer
2020	AAPS Best Abstract Awards, American Association of Pharmaceutical Scientists
2020	Selected Talk, Immune Modulation & Engineering Symposium
2019	Young Investigator Award, Society for Immunotherapy of Cancer 34th Annual Meeting
2019	BEST POSTER AWARD, Gordon Research Conference on Cancer Nanotechnology
2019	Young Investigator Research Award, 5nd Annual Immuno-Oncology Young Investigators' Forum
2019	AACR Scholar-in-training Award, American Association for Cancer Research
2019	Fred Hutch Student/Postdoc Advisory Committee Travel Award, Fred Hutch Cancer Center
2018-2020	ABTA Basic Research Fellowships Award, American Brain Tumor Association
2009	Outstanding Technological Innovation Research, Shanghai City Government

Teaching/Mentoring

Teaching

College of Pharmacy University of Florida

Course Contact	PHA6935	Nanomedicine-based Immunotherapy
Course Contact	PHA7900	Drug and Gene Delivery Journal Club
Course Contact	PHA6938	Research Seminar
Lecturer	PHA6416	Pharmaceutical Analysis I
Lecturer	PHA6740	Fundamentals of Grant Writing in the Pharmaceutical Sciences
Lecturer	PHA5561	Pathophysiology and Patient Assessment II
Lecturer	PHA6183	Pharmaceutical Gene Delivery
Lecturer	GMS6065	Fundamentals of Cancer Biology

Mentoring (Committee Chair)

10/2022 – present	Chenikkayala Siva Sankara (Postdoctoral Researcher)
08/2022 – present	Kevon Jolly (Ph.D. candidate in Pharmaceutical Sciences, UF Pharmacy)
01/2022 – present	Tejashwini LNU (M.S. candidate in Chemical Engineering, UF)
10/2021 – 05/2022	Sofia Alemar (M.S. candidate in Biomedical Engineering, UF)
09/2021-present	Chad Littrell (Ph.D. candidate in Biomedical Sciences, UF Medicine)
08/2021-present	Zijing Xu (Ph.D. candidate in Pharmaceutical Sciences, UF Pharmacy)

Graduate Committee Member

01/2023 – present	Brian Diaz (Ph.D. candidate in Pharmaceutical Sciences, UF Pharmacy)
08/2021 – present	Nina Erwin (Ph.D. candidate in Pharmaceutical Sciences, UF Pharmacy)
08/2021 – present	Andrew Broke (Ph.D. candidate in Pharmaceutical Sciences, UF Pharmacy)
08/2022 – present	Yi-Hua Chiang (Ph.D. candidate in Pharmaceutical Sciences, UF Pharmacy)

Publications (* Equal contribution) (#Corresponding author)

Complete List of Published Work in My Bibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/fan.zhang.16/bibliography/public/>

1. **Zhang F[#]**, Xu Z, Jolly KJ. Myeloid cell-mediated drug delivery: From nanomedicine to cell therapy. Adv Drug Deliv Rev. 2023 Jun;197:114827. Epub 2023 Apr 15. Review. PubMed PMID: 37068659.
2. Anderson KG, Braun DA, Buqué A, Gitto SB, Guerriero JL, Horton B, Keenan BP, Kim TS, Overacre-Delgoffe A, Ruella M, Triplett TA, Veeranki O, Verma V, **Zhang F**. Leveraging immune resistance archetypes in solid cancer to inform next-generation anticancer therapies. J Immunother Cancer. 2023 Jun;11(6). PubMed PMID: 37399356
3. **Zhang F**, Zhang Z, Alt J, Kambhampati SP, Sharma A, Singh S, Nance E, Thomas AG, Rojas C, Rais R, Slusher BS, Kannan RM, Kannan S. Dendrimer-enabled targeted delivery attenuates glutamate excitotoxicity and improves motor function in a rabbit model of cerebral palsy. J Control Release. 2023 Apr 26;358:27-42.
4. Hao S, Inamdar VV, Sigmund EC, **Zhang F**, Stephan SB, Watson C, Weaver SJ, Nielsen UB, Stephan MT. [BiTE secretion from in situ-programmed myeloid cells results in tumor-retained pharmacology.](#) J Control Release. 2022 Feb;342:14-25.
5. Arteaga Cabeza O, Zhang Z, Smith Khoury E, Sheldon RA, Sharma A, **Zhang F**, Slusher BS, Kannan RM, Kannan S, Ferriero DM. [Neuroprotective effects of a dendrimer-based glutamate carboxypeptidase inhibitor on superoxide dismutase transgenic mice after neonatal hypoxic-ischemic brain injury.](#) Neurobiol Dis. 2021 Jan;148:105201.
6. Liaw K*, **Zhang F***, Mangraviti A, Kannan S, Tyler B, Kannan RM. [Dendrimer size effects on the selective brain tumor targeting in orthotopic tumor models upon systemic administration.](#) Bioeng Transl Med. 2020 May;5(2):e10160.
7. **Zhang F**, Parayath NN, Ene CI, Stephan SB, Koehne AL, Coon ME, Holland EC, Stephan MT. [Genetic programming of macrophages to perform anti-tumor functions using targeted mRNA nanocarriers.](#) Nat Commun. 2019 Sep 3;10(1):3974.
8. Niño DF, Zhou Q, Yamaguchi Y, Martin LY, Wang S, Fulton WB, Jia H, Lu P, Prindle T Jr, **Zhang F**, Crawford J, Hou Z, Mori S, Chen LL, Guajardo A, Fatemi A, Pletnikov M, Kannan RM, Kannan S, Sodhi CP, Hackam DJ. [Cognitive impairments induced by necrotizing enterocolitis can be prevented by inhibiting microglial activation in mouse brain.](#) Sci Transl Med. 2018 Dec 12;10(471).
9. **Zhang F**, Stephan SB, Ene CI, Smith TT, Holland EC, Stephan MT. [Nanoparticles That Reshape the Tumor Milieu Create a Therapeutic Window for Effective T-cell Therapy in Solid Malignancies.](#) Cancer Res. 2018 Jul 1;78(13):3718-3730.
10. Nance E, Kambhampati SP, Smith ES, Zhang Z, **Zhang F**, Singh S, Johnston MV, Kannan RM, Blue ME, Kannan S. [Correction to: Dendrimer-mediated delivery of N-acetyl cysteine to microglia in a mouse model of Rett syndrome.](#) J Neuroinflammation. 2018 Jan 12;15(1):14.
11. Nance E, Kambhampati SP, Smith ES, Zhang Z, **Zhang F**, Singh S, Johnston MV, Kannan RM, Blue ME, Kannan S. [Dendrimer-mediated delivery of N-acetyl cysteine to microglia in a mouse model of Rett syndrome.](#) J Neuroinflammation. 2017 Dec 19;14(1):252.

12. Nemeth CL, Drummond GT, Mishra MK, **Zhang F**, Carr P, Garcia MS, Doman S, Fatemi A, Johnston MV, Kannan RM, Kannan S, Wilson MA. [Uptake of dendrimer-drug by different cell types in the hippocampus after hypoxic-ischemic insult in neonatal mice: Effects of injury, microglial activation and hypothermia](#). Nanomedicine. 2017 Oct;13(7):2359-2369.
13. Magruder JT, Crawford TC, Lin YA, **Zhang F**, Grimm JC, Kannan RM, Kannan S, Sciortino CM. [Selective Localization of a Novel Dendrimer Nanoparticle in Myocardial Ischemia-Reperfusion Injury](#). Ann Thorac Surg. 2017 Sep;104(3):891-898.
14. **Zhang F**, Trent Magruder J, Lin YA, Crawford TC, Grimm JC, Sciortino CM, Wilson MA, Blue ME, Kannan S, Johnston MV, Baumgartner WA, Kannan RM. [Generation-6 hydroxyl PAMAM dendrimers improve CNS penetration from intravenous administration in a large animal brain injury model](#). J Control Release. 2017 Mar 10;249:173-182.
15. **Zhang F**, Lin YA, Kannan S, Kannan RM. [Targeting specific cells in the brain with nanomedicines for CNS therapies](#). J Control Release. 2016 Oct 28;240:212-226.
16. **Zhang F**, Nance E, Zhang Z, Jasty V, Kambhampati SP, Mishra MK, Burd I, Romero R, Kannan S, Kannan RM. [Surface functionality affects the biodistribution and microglia-targeting of intra-amniotically delivered dendrimers](#). J Control Release. 2016 Sep 10;237:61-70.
17. Nance E, **Zhang F**, Mishra MK, Zhang Z, Kambhampati SP, Kannan RM, Kannan S. [Nanoscale effects in dendrimer-mediated targeting of neuroinflammation](#). Biomaterials. 2016 Sep;101:96-107.
18. Grimm JC, Magruder JT, Wilson MA, Blue ME, Crawford TC, Troncoso JC, **Zhang F**, Kannan S, Sciortino CM, Johnston MV, Kannan RM, Baumgartner WA. [Nanotechnology Approaches to Targeting Inflammation and Excitotoxicity in a Canine Model of Hypothermic Circulatory Arrest-Induced Brain Injury](#). Ann Thorac Surg. 2016 Sep;102(3):743-750.
19. **Zhang F**, Nance E, Alnasser Y, Kannan R, Kannan S. [Microglial migration and interactions with dendrimer nanoparticles are altered in the presence of neuroinflammation](#). J Neuroinflammation. 2016 Mar 22;13(1):65.
20. Nance E, Porambo M, **Zhang F**, Mishra MK, Buelow M, Getzenberg R, Johnston M, Kannan RM, Fatemi A, Kannan S. [Systemic dendrimer-drug treatment of ischemia-induced neonatal white matter injury](#). J Control Release. 2015 Sep 28;214:112-20.
21. **Zhang F***, Mastorakos P*, Mishra MK, Mangraviti A, Hwang L, Zhou J, Hanes J, Brem H, Olivi A, Tyler B, Kannan RM. [Uniform brain tumor distribution and tumor associated macrophage targeting of systemically administered dendrimers](#). Biomaterials. 2015 Jun;52:507-16.
22. Burd I*, **Zhang F***, Dada T, Mishra MK, Borbiev T, Lesniak WG, Baghla H, Kannan S, Kannan RM. [Fetal uptake of intra-amniotically delivered dendrimers in a mouse model of intrauterine inflammation and preterm birth](#). Nanomedicine. 2014 Aug;10(6):1343-51.
23. Mishra MK, Beaty CA, Lesniak WG, Kambhampati SP, **Zhang F**, Wilson MA, Blue ME, Troncoso JC, Kannan S, Johnston MV, Baumgartner WA, Kannan RM. [Dendrimer brain uptake and targeted therapy for brain injury in a large animal model of hypothermic circulatory arrest](#). ACS Nano. 2014 Mar 25;8(3):2134-47.
24. Lesniak WG, Mishra MK, Jyoti A, Balakrishnan B, **Zhang F**, Nance E, Romero R, Kannan S, Kannan RM. [Biodistribution of fluorescently labeled PAMAM dendrimers in neonatal rabbits: effect of neuroinflammation](#). Mol Pharm. 2013 Dec 2;10(12):4560-71.
25. Sk UH, Kambhampati SP, Mishra MK, Lesniak WG, **Zhang F**, Kannan RM. [Enhancing the efficacy of Ara-C through conjugation with PAMAM dendrimer and linear PEG: a comparative study](#). Biomacromolecules. 2013 Mar 11;14(3):801-10.

Patents

The following international patents have been licensed under Ashvattha Therapeutics.

- [1] Mangraviti A, Mastorakos P, Mishra M, Kannan RM, Tyler B, **Zhang F**, SELECTIVE DENDRIMER DELIVERY TO BRAIN TUMORS. US Pub number: US20170173172A1, WO/2016/025741.
- [2] Kannan RM, Kannan, S, Nance E, Blue M, Johnston M, Baumgartner W, **Zhang F**, Wilson MA, Slusher B. DENDRIMER COMPOSITIONS AND USE IN TREATMENT OF NEUROLOGICAL AND CNS DISORDERS. US Pub number: US20170232120A1
- [3] Kannan RM, Kannan, S, Fatemi A, **Zhang F**, Turk B. COMPOSITIONS AND METHODS FOR TREATMENT OF PEROXISOMAL DISORDERS AND LEUKODYSTROPHIES, US Pub number: US20170119899A1,

- [4] Kannan RM, Hackam D, Kannan S, Nino DF, Zhang F. DENDRIMER COMPOSITIONS AND USE IN TREATMENT OF NECROTIZING ENTEROCOLITIS AND OTHER GASTROINTESTINAL DISORDERS, US Pub number: US20170119897A1.

Seminar/Conference Talks

02.2023 Department of Pharmacology and Molecular Sciences, Johns Hopkins Medical Institutions, MD
12.2022 Center for Nanomedicine, Johns Hopkins Medical Institutions, Baltimore, MD
10.2022 Dinesh O. Shah Annual Lecture in Surface Science, Gainesville, FL
08.2022 Gordon Research Conference Drug Carriers in Medicine and Biology, Mt Snow, VT
05.2022 Department of Chemical Engineering, University of Florida, FL
11.2021 Society for Immunotherapy of Cancer 2021 conference, Washington, D.C.
08.2021 Department of Biomedical Engineering, University of Florida, FL
02.2021 Department of Pharmaceutics, Virginia Commonwealth University, VA
05.2021 Pediatric Cancer Immunotherapy Initiative Meeting, University of Florida
11.2020 Selected Talk, Immune Modulation & Engineering Symposium, Philadelphia, PA
06.2019 5th Annual Immuno-Oncology Young Investigators' Forum. Houston, TX

Service

NIH Study Section

03.2023 Review Panel Member for NCI Cancer Nanotechnology Study Section

Editorial Responsibility

12.2021 – present Particuology, Young Professional Editorial Board
2021 FASEB BioAdvances, Editor Search Committee

Conference and Professional Society Organization

2023 Controlled Release Society Annual Conference, Las Vegas, Moderator for Nerve System Delivery Session
2023 – present AAPS Nanotechnology Community Leadership member
2022 American Brain Tumor Association Annual Meeting, Program Planning Committee
2020 American Institute of Chemical Engineers Annual Conference, Moderator

Conference Abstract/Poster Reviewer

2023 Controlled Release Society Annual Conference, Las Vegas, Poster Judge
2022 Drug Carrier in Biology and Medicine Gordon Research Conference, Poster Reviewer
2021 UF Cancer Center Research Day, Poster Reviewer

Journal Review

Science Advances, Journal of Controlled Release, Drug Delivery and Translational Research, Bioengineering & Translational Medicine, Neurotherapeutics

UF Pharmaceutics department service

2023 – present Host and Moderator, Pharmaceutics Department Seminar Series
2021 – present Organizer, Drug and Gene Delivery Journal Club
2022, 2023 Member, Faculty Search Committee

UF service

2023 UF ROSF Grant Review Committee, Reviewer
2021 PROSPER Award Review Committee, Reviewer
2021,2022 COP Annual Showcase, Judge
2021,2022 COP PharmD student recruitment, Interviewer

Professional Affiliations

American Association for Pharmaceutical Sciences (AAPS), 2020 – present
Controlled Release Society (CRS), 2020 – present
Society for Immunotherapy of Cancer (SITC), 2019 – present

American Institute of Chemical Engineers (AIChE), 2015 – present
Biomedical Engineering Society (BMES), 2014 – present
American Association for Cancer Research (AACR), 2018 – present