

CURRICULUM VITAE

Hyunah Cho, Ph.D.

Assistant Professor
Pharmaceutical Sciences
College of Pharmacy and Health Sciences
St. John's University
Queens, NY 11439

E-mail: choh@stjohns.edu
Mobile: 608-338-6606

POSITIONS

2021-present Chief Scientific Officer, Spill (trademark pending)
2020-present Chief Scientific Officer /Consultant, OncoGone
2018-2022 Associate Professor, Pharmaceutical Sciences, School of Pharmacy and Health Sciences, Fairleigh Dickinson University
2014-2017 Assistant Professor, Pharmaceutical and Administrative Sciences, St. Louis College of Pharmacy

EDUCATION

2022 M.A., Higher Education Administration, Fairleigh Dickinson University
2013-2014 Postdoctoral Training, Pharmaceutical Sciences, University of Wisconsin-Madison
Advisor: Glen S. Kwon, Ph.D, Project: Thermosensitive nanogels for multi-drug delivery
2013 Ph.D., Pharmaceutical Sciences, University of Wisconsin-Madison
Advisor: Glen S. Kwon, Ph.D., Thesis: Polymeric micelles for multi-drug delivery and optical imaging in surgical oncology
2008 M.S., Pharmaceutical Sciences, Sookmyung Women's University, Seoul, South Korea
Advisor: Jin-Seok Kim, Ph.D., Thesis: Effects of HBV-specific siRNA on NIK suppression in HBV-derived human hepatocellular carcinoma by beta-sitosterol glucoside-containing cationic liposomes
2006 B.S., Pharmacy, Sookmyung Women's University, Seoul, South Korea

RESEARCH INTEREST

2018-present 3D printing of flexible, reusable, and eco-friendly blister packets
3D printing of personalized gummy cady medications for pediatric patients
Nanogel-based pellets for brain cancer treatment
Thermosensitive nanogels for melanoma treatment
Diseases-specific delivery systems for image-guided surgery
Personal care and cosmetic products utilizing pharmaceutical platforms
2016-present 3D printing of thermosensitive nanogels, films, and suppositories
2015 Theranostic (therapeutic & diagnostic) nanogels in surgical gynecology
2013-2014 Thermosensitive nanogels for multi-drug delivery
2009-2016 Polymeric micelles for multi-drug delivery
2006-2008 Liposomal siRNA delivery

PATENTS

- 2022** Locally administered compositions and methods of use thereof (Provisional patent)
2020 Thermogel formulation for combination drug delivery (US10682415B2)
2012 Micelles for the solubilization of gossypol (US8945627B2)
2010 Therapeutic agent for liver disease comprising siRNA of NIK gene (No:10-2007-011431, Registered in 2010, South Korea)
2009 siRNA of NIK gene and therapeutic agent for liver diseases comprising thereof (No:10-0930282, Registered in 2009, South Korea)

GRANTS

- 2021-2022** Maryland Technology Development Corporation (TEDCO) (Characterization of thermosensitive hydrogel formulations)
2019-2021 Maryland Technology Development Corporation (TEDCO) (Optimization of Thermosensitive hydrogel formulations)
2018-2019 University Provost Seed Grant (Development of 3D Printed Nanofilms for Long Lasting Analgesia)
2018 *Honorable mention* (selected as an alternative). PhRMA Foundation Research Starter Grant (3D-printed triple-layered films for long-lasting pain relief)
2015 *Honorable mention* (selected as an alternative). PhRMA Foundation Research Starter Grant (A Theranostic Approach using Thermo-responsive Hydrogels in Ovarian Cancer)

ACHIEVEMENTS & AWARDS

- 2017** Joe E. Haberle Outstanding Educator Award -Finalist, St. Louis College of Pharmacy
2016 2016 American Association of Pharmaceutical Scientists (AAPS) Outstand Manuscript Award (PharmSciTech, AAPS)
2016 Innovative Poster Award, St. Louis Area Undergraduate Research Symposium
2015 Bright Spot Award, St. Louis College of Pharmacy
2012 Oscar Rennebohm Teaching Assistant Award
2012 Lachman Travel Award
2012 Baxter Young Investigator Award
2008 Young Investigator Award (1st Prize), 11th Liposome Research Days
2006 National License of Pharmacist in South Korea

PUBLICATIONS

1. Stawicki B, Schacher T, **Cho H***. Nanogels as a Versatile Drug Delivery System for Brain Cancer. *Gels*. 2021; 7(2):63. <https://doi.org/10.3390/gels7020063> (IF 4.702)
2. Serris I, Serris P, Frey KM, **Cho H***. Development of 3D-Printed Layered PLGA Films for Drug Delivery and Evaluation of Drug Release Behaviors. *AAPS PharmSciTech*. 2020;21(7):256. Published 2020 Sep 4. doi:10.1208/s12249-020-01790-1 (IF 3.246)
3. Persaud S, Eid S, Swiderski N, Serris I, **Cho H***. Preparations of Rectal Suppositories Containing Artesunate. *Pharmaceutics*. 2020;12(3):222. Published 2020 Mar 2. doi:10.3390/pharmaceutics12030222 (IF 6.321)
4. **Cho H***, Jammalamadaka U, Tappa K, et al. 3D Printing of Poloxamer 407 Nanogel Discs and Their Applications in Adjuvant Ovarian Cancer Therapy. *Mol Pharm*. 2019;16(2):552-560. doi:10.1021/acs.molpharmaceut.8b00836 (IF 4.939)
5. **Cho H***, Jammalamadaka U, Tappa K. Nanogels for Pharmaceutical and Biomedical Applications and Their Fabrication Using 3D Printing Technologies. *Materials (Basel)*. 2018;11(2):302. Published 2018 Feb 16. doi:10.3390/ma11020302 (IF 3.623)

6. Tomoda K, Tam YT, **Cho H**, Buehler D, Kozak KR, Kwon GS. Triolimus: A Multi-Drug Loaded Polymeric Micelle Containing Paclitaxel, 17-AAG, and Rapamycin as a Novel Radiosensitizer. *Macromol Biosci*. 2017;17(1):10.1002/mabi.201600194. doi:10.1002/mabi.201600194 (IF 4.979)
7. **Cho H***, McKenzie M, Betts D, Suh A, et al. Proof-of-Concept of Polymeric Sol-Gels in Multi-Drug Delivery and Intraoperative Image-Guided Surgery for Peritoneal Ovarian Cancer. *Pharm Res*. 2016;33(9):2298-2306. doi:10.1007/s11095-016-1968-3 (IF 4.200)
8. **Cho H**, Gao J, Kwon GS. PEG-b-PLA micelles and PLGA-b-PEG-b-PLGA sol-gels for drug delivery. *J Control Release*. 2016;240:191-201. doi:10.1016/j.jconrel.2015.12.015 (IF 9.776)
9. McKenzie M, Betts D, Suh A, Bui K, Kim LD, **Cho H***. Hydrogel-Based Drug Delivery Systems for Poorly Water-Soluble Drugs. *Molecules*. 2015;20(11):20397-20408. Published 2015 Nov 13. doi:10.3390/molecules201119705 (IF 4.411)
10. **Cho H**, Lai TC, Tomoda K, Kwon GS. Polymeric micelles for multi-drug delivery in cancer. *AAPS PharmSciTech*. 2015;16(1):10-20. doi:10.1208/s12249-014-0251-3 (IF 3.246)
11. Wyche TP, Dammalapati A, **Cho H**, et al. Thiocaraline activates the Notch pathway in carcinoids and reduces tumor progression in vivo. *Cancer Gene Ther*. 2014;21(12):518-525. doi:10.1038/cgt.2014.57 (IF 4.534)
12. **Cho H**, Kwon GS. Thermosensitive poly-(d,l-lactide-co-glycolide)-block-poly(ethylene glycol)-block-poly-(d,l-lactide-co-glycolide) hydrogels for multi-drug delivery. *J Drug Target*. 2014;22(7):669-677. doi:10.3109/1061186X.2014.931406 (IF 3.380)
13. **Cho H**, Cho CS, Indig GL, Lavasanifar A, Vakili MR, et al. (2014) Polymeric Micelles for Apoptosis-Targeted Optical Imaging of Cancer and Intraoperative Surgical Guidance. *PLOS ONE* 9(2): e89968. <https://doi.org/10.1371/journal.pone.0089968> (IF 3.240)
14. Lai TC, **Cho H**, Kwon GS. Reversibly core cross-linked polymeric micelles with pH- and reduction-sensitivities: The effects of cross-linking degree on particle stability, drug release kinetics, and anti-tumor efficacy. *Polym Chem*. 2014;5:1650-1661. doi: 10.1039/C3PY01112G (IF 5.342)
15. **Cho H**, Lai TC, Kwon GS. Poly(ethylene glycol)-block-poly(ϵ -caprolactone) micelles for combination drug delivery: evaluation of paclitaxel, cyclophosphamide and gossypol in intraperitoneal xenograft models of ovarian cancer. *J Control Release*. 2013;166(1):1-9. doi:10.1016/j.jconrel.2012.12.005 (IF 9.776)
16. Wyche TP, Jaskula-Sztul R, Dammalapati A, **Cho H**, Kwon GS, Chen H, Bungni TS. Thiocaraline activates transcription of notch and inhibits the proliferation of carcinoid tumor cells. *Planta Med*. 2012;78:PI127. Doi: 10.1055/s-0032-1320714 (IF 3.352)
17. Shin HC, **Cho H**, Lai TC, Kozak KR, Kolesar JM, Kwon GS. Pharmacokinetic study of 3-in-1 poly(ethylene glycol)-block-poly(D, L-lactic acid) micelles carrying paclitaxel, 17-allylamino-17- demethoxygeldanamycin, and rapamycin. *J Control Release*. 2012;163(1):93-99. doi:10.1016/j.jconrel.2012.04.024 (IF 9.776)
18. **Cho H**, Indig GL, Weichert J, Shin HC, Kwon GS. In vivo cancer imaging by poly(ethylene glycol)-b-poly(ϵ -caprolactone) micelles containing a near-infrared probe. *Nanomedicine*. 2012;8(2):228-236. doi:10.1016/j.nano.2011.06.009 (IF 6.458)
19. **Cho H**, Kwon GS. Polymeric micelles for neoadjuvant cancer therapy and tumor-primed optical imaging. *ACS Nano*. 2011;5(11):8721-8729. doi:10.1021/nn202676u (IF 15.881)
20. Shin HC, Alani AW, **Cho H**, Bae Y, Kolesar JM, Kwon GS. A 3-in-1 polymeric micelle nanocontainer for poorly water-soluble drugs. *Mol Pharm*. 2011;8(4):1257-1265. doi:10.1021/mp2000549 (IF 4.939)
21. Kang SS, **Cho H**, Kim JS. Biodistribution and improved anticancer effect of NIK-siRNA in combination with 5-FU for hepatocellular carcinoma. *Arch Pharm Res*. 2011;34(1):79-86. doi:10.1007/s12272- 011-0109-0 (IF 4.946)
22. **Cho H**, Park IS, Kim TW, Oh YK, Yang KS, Kim JS. Suppression of hepatitis B virus-derived human hepatocellular carcinoma by NF-kappaB-inducing kinase-specific siRNA using liver-targeting liposomes. *Arch Pharm Res*. 2009;32(7):1077-1086. doi:10.1007/s12272-009-1714-z (IF 4.946)
23. Kim MJ, Lee HJ, Lee IA, Kim IY, Lim SK, **Cho H**, Kim JS. Preparation of pH-sensitive, long-circulating and EGFR-targeted immunoliposomes. *Arch Pharm Res*. 2008;31(4):539-546. doi:10.1007/s12272- 001-1190-9 (IF 4.946)

KEY PODIUM PRESENTATIONS

1. Sol-gels and 3D-printed disk of nanogels for multi-drug delivery in ovarian cancer therapy January 7, 2019 Sookmyung Women's University, Seoul, South Korea
2. Polymeric Micelles, Nanogels, and Disks of Nanogels for Multi-Drug Delivery in Ovarian Cancer Therapy, 2018 US-Korea Conference on Science, Technology, and Entrepreneurship
3. Polymeric micelles and nanogels for multi-drug delivery in ovarian cancer, 2018 Irish Association for Cancer Research, Dublin, Ireland
4. Thermosensitive hydrogels for the localized delivery of multi-drugs in ovarian cancer, 2015, BIT's annual world cancer congress. Busan, South Korea
5. Polymeric micelles and sol-gels for multi-drug delivery in cancer, 2015, Southern Illinois University Edwardsville, Edwardsville, IL
6. Thermosensitive hydrogels for the localized delivery of multi-drugs in ovarian cancer, 2015, Sookmyung Women's University, South Korea
7. Polymeric micelles for combination chemotherapy and intraoperative surgical guidance, 2014, The Korean-American Scientists and Engineers Association. St. Louis, MO
8. Apoptosis-targeted optical imaging of cancer and intraoperative surgical guidance, 2014, The Fluobeam Use Day. Madison, WI
9. Polymeric micelles for intraperitoneal combination drug delivery: Evaluation of paclitaxel, cyclophosphamide and gossypol in metastatic xenograft models of ovarian cancer, 2013, Pharmaceutics Graduate Students Research Meeting. Iowa City, IA
10. Suppression of NIK with RNA interference using galactosyl sphingosine-containing cationic liposomes for HBV-derived HCC, 2008, The 11th Liposome Research Days Conference. Yokohama, Japan

PROFESSIONAL MEMBERSHIP

Member, American Association of Pharmaceutical Scientists (AAPS)

Member, Society of Cosmetic Chemists (SCC)

Member, American Association of Colleges of Pharmacy (AACP)

General Director of NJ Chapter, Korean American Scientists and Engineers Association (KSEA)

Secretary/Treasurer of NY/NJ Chapter, Korean Women in Science and Engineering (KWISE)

TEACHING EXPERIENCE

- 2018-2022** Pharmaceutical calculations I (PHRM 6211), pharmaceutical calculations II (PHRM 6212), dosage forms and drug delivery systems (with non-sterile compounding lab; PHRM 7201), sterile products and biopharmaceutics (with sterile compounding lab; PHRM 7202), physical pharmacy (PHRM 6201), oral dosage forms and biopharmaceutics (PHRM 6202)
- 2014-2017** Pharmaceutics I (PHRC 4401), pharmaceutics II (PHRC 402), advanced drug delivery systems-nanomedicine (research elective; PSEL 4401), non-sterile compounding (summer remedial course)

SERVICE FOR SCHOOL/UNIVERSITY

- 2022** STEM High School Summer Internship Program Lead
- 2021-2022** Research Council (chair, elected)
- 2021-2022** AAPS-FDU Chapter Advisor
- 2021-2022** FDU Strategic Planning and Implementation Committee (member)
- 2021** Renewal, Tenure, and Promotion Guideline Working Group (chair, elected)
- 2020** FDU Research Lab Re-opening Taskforce (member)
- 2019** School Goal Working Group (member)

2018-2022 FDU Institutional Review Board (IRB) (member)
2018-2022 Assessment Committee (member)
2018-2022 Co-curriculum Committee (member)
2018-2022 Student Pharmacist Association Faculty Advisor
2018-2020 Admissions Committee (member)