Seungpyo Hong, Ph.D.
Pharmaceutical Sciences Division, School of Pharmacy
The University of Wisconsin-Madison
777 Highland Ave., Madison, WI 53705
Phone: 608) 890-0699
E-mail: seungpyo.hong@wisc.edu
Web: apps.pharamcy.wisc.edu/sopdir/seungpyo_hong

EDUCATION AND TRAINING

2006 – 2008	**Postdoctoral**, Chemical Engineering (Advisor: Prof. Robert Langer), Massachusetts Institute of Technology (MIT), Cambridge, MA
2002 – 2006	**Ph.D.**, Macromolecular Science and Engineering (Advisors: Profs. Mark M. Banaszak Holl and James R. Baker, Jr.), University of Michigan, Ann Arbor, MI Dissertation: "Interactions of Synthetic Polymers with Cell Membranes: Cell penetration of polycationic polymers and multivalent effects of targeted nanodevices"
1999 – 2001	**M.S.**, Polymer Engineering, Hanyang University/Korea Institute of Science and Technology (KIST), Seoul, KOREA Dissertation: "Synthesis and Physical Properties of Novel Poly(methylphenylsilsesquioxane)s with Highly Regulated Structure"
1993 – 1999*	**B.S.**, Fiber and Polymer Engineering, Hanyang University, Seoul, KOREA *1994 – 96, Korean Military Service (Mandatory)

PROFESSIONAL EXPERIENCE

2018 – Present	**Director**, Wisconsin Center for NanoBioSystems (WisCNano), University of Wisconsin, Madison, WI
2016 – Present	**Professor**, Pharmaceutical Sciences Division, School of Pharmacy, University of Wisconsin, Madison, WI
2017 – Present	**Faculty Affiliate**, Carbone Cancer Center, School of Medicine and Public Health, University of Wisconsin, Madison, WI
2018 – Present	**Adjunct Professor**, Department of Biomedical Engineering, College of Engineering, University of Wisconsin, Madison, WI
2015 – Present	**Cofounder and President**, Capio Biosciences, Inc., Madison, WI
2018 – Present	**Adjunct Professor**, Yonsei Frontier Lab and Department of Pharmacy, Yonsei University, Seoul/Incheon, KOREA
2017 – Present	**Adjunct Professor**, Department of Biopharmaceutical Sciences, College of Pharmacy, University of Illinois, Chicago, IL
2016 – Present	**Associate Editor**, Nanomedicine: Nanotechnology, Biology and Medicine, Elsevier
2015 – 2018	**Associate Professor** (w/ joint appointment), Division of Integrated Science and Engineering, Underwood International College, Yonsei University, Seoul/Incheon, KOREA
2014 – 2016	**Associate Professor**, Department of Biopharmaceutical Sciences, College of Pharmacy, University of Illinois, Chicago, IL
2014 – 2016	**Director of Graduate Education for the College of Pharmacy**, University of Illinois College of Pharmacy, Chicago, IL
2014 – 2016	**Adjunct Associate Professor**, Department of Bioengineering, College of Engineering, University of Illinois at Chicago, Chicago, IL
2008 – 2016	**Member**, University of Illinois Cancer Center, Chicago, IL
2008 – 2014	**Assistant Professor**, Department of Biopharmaceutical Sciences, College of Pharmacy, University of Illinois, Chicago, IL
2008 – 2014	**Adjunct Assistant Professor**, Department of Bioengineering, College of Engineering, University of Illinois at Chicago, Chicago, IL

2012 – 2013 **Associate Editor**, Journal of Nanopharmaceutics and Drug Delivery, American Scientific Publishers

2001 – 2002 **Research Assistant**, Polymer Hybrids Research Center, KIST, Seoul, KOREA

AWARDS AND HONORS

- Invited Participant, EU-US Frontiers of Engineering Symposium (Chantilly, France), National Academy of Engineering (NAE) (2013)
- 2012 Researcher of the Year – Rising Star Award, University of Illinois, Chicago, IL (2013)
- New Investigator Award in Pharmaceutics and Pharmaceutical Technologies, American Association of Pharmaceutical Scientists (AAPS) (2012)
- NSF Fellowship, The Cancer Nanotechnology Summer Institute, Houston, TX (2011)
- Vahlteich Research Award, University of Illinois College of Pharmacy, Chicago, IL (2009)
- A 2006 Most-cited ACS Journal Article - S. Hong *et al*., *Bioconjugate Chem.* **2006**, 17, 728-734. (2006)
- Best Poster Award, 2005 Materials Research Society (MRS) National Fall Meeting in Boston, MA (2005)
- Charles G. Overberger Award, Macromolecular Science and Engineering, University of Michigan, Ann Arbor, MI (2004)
- Dwight F. Benton Fellowship, Dean's Named Fellowship, College of Engineering, University of Michigan, Ann Arbor, MI (2002)
- Summa Cum Laude, Fiber and Polymer Engineering, Hanyang University, Seoul, Korea (1999)
- Merit-based Scholarship (Tuition waivers), Fiber and Polymer Engineering, Hanyang University, Seoul, Korea (1996-99)

PROFESSIONAL EXPERIENCE

- Professional Membership: ACS, AAPS, AIChE, BMES, and AACR
- Journal Review: Ad-hoc reviewer for over 80 research journals including *Accounts of Chemical Research*, *ACS Nano*, *Advanced Materials*, *Advanced Functional Materials*, *Angewandte Chemie*, *Biomaterials*, *Cancer Research*, *JACS*, *Nature Nanotechnology*, and *PNAS*
- Grant Review: Panel reviewer for NSF CMMI and CBET, CAREER panel for NSF CBET BME program, Ad-hoc Reviewer for NIH OTC CSR, NIH SBIR, and NICHD, Ad-hoc Reviewer for DOD CDMRP Brest and Ovarian Cancer Programs, Reviewer for American Association of Colleges of Pharmacy (AACP), China-Hong Kong Joint Research Program (NSFC/RSG), The Netherlands Organization for Health R&D, Singapore A*STAR Grants, and Kentucky Science & Engineering Foundation (KSEF)
- Editorial Board: *Nanomedicine: NBM*, *Frontiers in Chemistry*, *Molecules*, *Journal of Nanopharmaceutics and Drug Delivery*
- Guest Editor: Special theme on "Nanotechnology and Circulating Tumor Cells", *Advanced Drug Delivery Reviews (2018, volume 125)*
- Session Chair/Co-chair/Organizer: ASME2010, Houston, TX; 2010 AIChE Aunnual Meeting, Salt Lake City, UT; 2012 AIChE Annual Meeting, Pittsburgh, PA; 2012 IEEE EMBS Annual Meeting, San Diego, CA; 2013 ICMAT, SINGAPORE; IEEE EMBS 2014, Chicago, IL; ASME 2015, Minneapolis, MN.
- Recent Invited Talks (selected from over 100): 2016 BMES, 2015 IEEE EMBS, 2013 Gordon Research Conference on Cancer Nanotechnology; 2013 NanoDDS; 2013 ICMAT-Singapore; 2013 ACS Natl Mtg; 2012 IEEE EMBC; 2012 IPTS-Turkey; 2012 IPSF African Mtg-Algeria; Departmental Seminars at UNC, NCSU, UW-Madison, UCSD, Natl Univ. Singapore, Yonsei Univ., Korea Univ., Univ. Kentucky, UIUC, Northwestern Univ., Purdue Univ., Univ. Chicago, Oklahoma State Univ., Oak Ridge Natl Lab, Argonne Natl Lab
- High School Students/Undergraduate Research: Actively involved in the research opportunity program by Illinois Mathematics and Science Academy (IMSA) and have advised 15 high school students and 3 high school teachers. Have supervised over 50 undergraduate students.

PROFESSIONAL MEMBERSHIP

- American Chemical Society (ACS)
- Materials Research Society (MRS)
- Biomedical Engineering Society (BMES)
- American Association for Cancer Research (AACR)
- American Association for Pharmaceutical Scientists (AAPS)
- American Institute of Chemical Engineers (AIChE)
- Controlled Release Society (CRS)

CURRENT RESEARCH SUPPORT (In total of >$10 MM to date)

NSF Hong (PI) 07/01/18-07/30/21
DMR-1808251
Biomimetic Dendrimer-Exosome Hybrid Nanoparticles for Efficient Cancer Targeting
This project seeks to develop a novel hybrid nanoparticle system that integrate biologic exosomes and synthetic dendrimers multifunctionalized with various bioactive agents.
Role: PI

Industry Sponsored Research Hong (PI) 11/01/17-10/31/20
SRA/Capio Biosciences, Inc.
Development of Cancer Specific Chip Surfaces for Effective Capture of CTCs and Post-capture Analyses
This sponsored research focused on cancer type-tailored chip design and development as well as post-capture analysis of circulating tumor cells (CTCs).
Role: PI

DRP, UW Head & Neck SPORE, NIH Hong (PI) 10/01/18-09/31/20
Effective Detection and Monitoring of Circulating Tumor Cells (CTCs) from HNSCC Patients
The objective of this study is to develop a novel circulating tumor cell (CTC) assay tailored to detect the cells from HNSCC patients and use the information to correlate with the clinical outcomes.
Role: PI

NCI/NIH Miller (PI) 08/01/18-01/31/20
1R43CA232924 01
CapioCyte: Circulating Tumor Cell Assay as a Biomarker for Cancer Immunotherapy
The goal of this SBIR phase I grant is to develop a novel assay technology for detection of circulating tumor cells (CTCs) to correlate the CTC information to the clinical outcome of immunotherapy.
Role: subaward PI

NIBIB/NIH Gemeinhart (PI) 07/16/16-09/15/19
1R21EB022374
Activation of Monocytes and Macrophages by Polymeric Micelles
The goal of this project is to improve the design of nanoparticle drug delivery systems, particularly by controlling the monocyte/macrophage response to nanoparticles.
Role: subaward PI

NIAMS/NIH Moore (PI) 05/01/17-04/30/20
1R01AR069541
Non-covalent Nrf2 Activators for the Treatment of Chronic Wounds
The goal of this project is to develop Nrf2 activators that induce Nrf2 target genes to treat chronic wound healing.
Role: subaward PI

COMPLETE RESEARCH SUPPORT (selected)

NSF CBET-0931472 Hong (PI) 09/01/09-08/31/13
Biomimetic Multifunctional Device for Quantification and Analysis of Circulating Tumor Cells (CTCs)

The goal of this study is to develop a microfluidic device that can detect and isolate CTCs at enhanced sensitivity and specificity. The preliminary results in this current proposal were obtained using this fund.
Role: PI

Komen Foundation KG100713 Khan and Hong (co-PIs) 07/01/10-06/30/14
Topical Transdermal Therapy for Breast Cancer Prevention using Dendrimer Nanoparticles for Drug Delivery
The goal of this study is to achieve effective transdermal delivery of chemo-preventive medicine using novel nanomaterial-based formulations that enhances skin penetration of the drugs.
Role: co-PI

NCI/NIH Chen (PI) 01/01/14-12/31/18
1R01CA182528 01
Potential Therapeutic Implications of Targeting miR-150 in Acute Myeloid Leukemia
The goal of this study is to develop a novel dendrimer-based delivery system for selective targeting to miR to treat highly lethal acute myeloid leukemia.
Role: subaward PI

NSF Hong (PI) 08/01/14-07/31/18
DMR-1409161
Hybrid Nanoparticles for Kinetically Controlled Cancer Targeting Using Biomimetic Cell Rolling and Multivalent Binding
This study is to develop a novel hybrid nanoparticles system by combination of targeted dendrimers and polymeric nanoparticles. The targeting mechanism will utilize two biomimetic processes of cell rolling and multivalent binding, in order to significantly improve tumor targeting efficacy of this new nanocarrier.
Role: PI

COURSES TAUGHT

University of Wisconsin – Madison
- **Fall 2017-2019** PharmSci 540 Drug Delivery Systems
- **Fall 2016, 2017** PharmSci 780 Principles of Pharmaceutical Sciences

University of Illinois at Chicago
- **Spring 2014, 2016** BPS/BioE 522 Principles in Polymer Science
- **Fall 2013, 2014** BPS 501 Biopharmaceutical Science I, Course co-organizer
- **Spring 2013, 2014, 2015, 2016** PHAR 322 Drug Delivery System II: Pharmaceutical Dosage Forms and Drug Delivery Systems, Lecturer for Polymer Science and Controlled/Targeted Drug Delivery
- **Fall 2011** BPS 594 Industrial Biopharmaceutics
- **Spring 2011** BPS/BioE 522 Principles in Polymer Science
- **Fall 2010-2016** BPS 501 Biopharmaceutical Science I, Lecturer for Basic Organic Chemistry, Conjugation Chemistry
- **Fall 2008-2014** BPS 507 Drug Discovery, Lecturer for Controlled and Targeted Drug Delivery
- **Fall 2009, 2010** BioE 460 Materials in Bioengineering, Lecturer for Biofunctional Surfaces – Chemistries and Modification Methods

Yonsei University
- **Spring 2016, 2017** UBC3001-01 Industrial Bioconvergence
- **Fall 2015, 2016** NSE2002-01-00 Introduction to Nanotechnology and Laboratory
- **Fall 2015, 2016, 2017** SED2002-02-00 Organic Chemistry Laboratory
- **Spring 2015** BTE2200-03 Organic Chemistry I

PUBLICATIONS

Book Chapters

1. "Multifunctional Dendritic Nanoparticles as a Nanomedicine Platform"

H.-j. Hsu, R.M. Pearson, and S. Hong* in a book of "*Cancer Therapeutics and Imaging: Molecular and cellular engineering and nanobiomedicine*" edited by K. Rege, *World Scientific Publishing Co., Pte., Ptd.*, SINGAPORE, **2018**, ISBN: 978-981-3222-54-0. pp. 155-186.

2. "Dendritic Nanocarrier Platforms for Gene and Drug Delivery Applications"
H.Y. Cho, J. Bugno, and S. Hong* in a book of "*Perspectives in Micro and Nanotechnology for Biomedical Applications*" edited by C. Xu and J.M. Chan, *Imperical College Press*, UK, **2016**, ISBN: 978-1-78326-960-0. pp. 85-124.
3. "Dendritic Nanomaterials for Therapeutic and Diagnostic Applications"
J.H. Myung, K.A. Tam, and S. Hong* in a book of "*Biomedical Engineering: Frontier Research and Converging Technologies*" edited by H. Jo, H.-W. Jun, J. Shin, and S. Lee, *Springer*, Switzerland, **2015**, ISBN: 978-3-319-21812-0. pp. 41-75.
4. "Bioinspired Engineering of Multifunctional Devices"
R.M. Pearson, J.H. Myung, and S. Hong* in a book of "*Handbook of Biomimetics and Bioinspiration*" edited by E. Jabbari, A. Khademhosseini, L.P. Lee, D. Kim, and A. Ghaemmaghami, *World Scientific Publishing Co., Pte., Ptd.*, SINGAPORE, **2014**, ISBN: 978-981-4354-92-9. pp. 31-63.
5. "Multifunctional Architectures of Dendritic Nanocarriers and Their Promising Impact on Targeted Drug Delivery"
R.M. Pearson, J.W. Bae, and S. Hong* in a book of "*Nanoparticulate Drug Delivery Systems: Promises and Challenges*" edited by Y. Yeo, *John Wiley & Sons, Inc.*, Hoboken, NJ, **2013**, ISBN 978-1-118-14887-7. pp. 101-128.
6. "Microscale Approaches for Bone Tissue Engineering"
J.M. Karp, A. Mahdavi, S. Hong, A. Khademhosseini, and R. Langer in a book of "*Micro- and Nanoengineering of the Cell Microenvironment: Technologies and Applications*" co-edited by A. Khademhosseini, J. Borenstein, S. Takayama, M. Toner, *Artech House, Inc.*, Norwood, MA, **2008**, ISBN 978-1-59693-148-0.
7. "Nanoparticle Membrane Interactions: Mechanism form Enhanced Permeability"
S. Hong, A. Mecke, P. Leroueil, M.M. Banaszak Holl, and B.G. Orr in a book of "*Dendrimer Based Nanomedicine*" co-edited by I.J. Majoros and J.R. Baker, *Pan Stanford Publishing*, Hackensack, NJ, **2008**, ISBN 978-9-81424-104-5.

Peer-Reviewed Articles (total combined citation: >11,800 times)

During Independent Career

1. "Surface Engineering for Efficient Capture of Circualting Tumor Cells in Renal Cell Carcinoma: From nanoscale analysis to clinical application"
J. Bu, A. Nair, L.J. Kubiatowicz, M.J. Poellmann, W.-j. Jeong, M. Reyes-Martinez, A.J. Armstrong, D.J. George, A.Z. Wang, T. Zhang, and S. Hong*, Submitted.
2. "Tumor Penetration of Sub-10 nm Nanoparticles: Effect of dendrimer properties on their penetration in multicellular tumor spheroids"
J. Bugno, M. Poellmann, K. Sokolowski, H.-j. Hsu, D.H. Kim*, and S. Hong*, Submitted.
3. "A Dendrimer-based Platform for Effective Capture of Tumor Cells after TGFβ_1-induced Epithelial-Mesenchymal Transition"
J.H. Myung, A. Cha, K.A. Tam, M. Peollmann, A. Borgeat, R. Sharifi, R.E. Molokie, G. Votta-Velis, and S. Hong*, *Analytical Chemistry*, In Revision.
4. "Enhanced Detection of Cell-free DNA Enables Its Use as a Reliable Biomarker for Diagnosis and Prognosis of Advanced Gastric Cancer"
T.H. Lee, J. Bu, W.-j. Jeong, B.H. Mim, K. Mudd, S.H. Hyun*, and S. Hong*, Submitted.
J. Lee, S.J. Kim, S. Hong, Y. Kim*, *Experimental & Molecular Medicine* **2019**, 51(5), 53.
5. "Sub-lethal Hyperthermia Promotes Epithelial-to-mesenchymal-like Transition of Breast Cancer Cells: Implication of the synergy between hyperthermia and chemotherapy"
T.H. Lee, J. Bu, B.H. Kim, M.J. Poellmann, S. Hong*, and S.H. Hyun*, *RSC Advances* **2019**, 9, 52-57.
6. "Peptide-nanoparticle Conjugates: A next generation of diagnostic and therapeutic platforms?"
W.J. Jeong, J. Bu, L.J. Kubiatowicz, S.S. Chen, Y. Kim, and S. Hong*, *Nano Convergence* **2018**, 5(1), 38.
7. "Would Antioxidant-loaded Nanoparticles Present an Effective Treatment for Ischemic Stroke?"

M.J. Poellmann, J. Bu, and S. Hong*, *Nanomedicine* **2018**, 13(18), 2327-2340.

8. "Dendritic PEG Outer Shells Enhance Serum Stability of Polymeric Micelles"
H.-j. Hsu, Y. Han, M. Cheong, P. Kral, and S. Hong*, *Nanomedicine: Nanotechnology, Biology and Medicine*, **2018**, 14(6), 1879-1889.
9. "Non-catalytic Endosialidase Enables Surface Capture of Small-cell Lung Cancer Cells Utilizing Strong Dendrimer-mediated Enzyme-Glycoprotein Interactions"
H.-j. Hsu, H. Palka-Hamblin, G.P. Bhide, J.H. Myung, M. Cheong, K.J. Colley, and S. Hong*, *Analytical Chemistry* **2018**, 90(6), 3670-3675.
10. "Bespoke Pretargeted Nano-Radioimmunotherapy for the Treatment of Non-Hodgkin Lymphoma"
K.M. Au, A. Tripathy, C. P.-I. Lin, K. Wagner, S. Hong, A.Z. Wang, and S. Park*, *ACS Nano* **2018**, 12(2), 1544-1563.
11. "Nanotechnology Enabling the Use of Circulating Tumor Cells (CTCs) as Reliable Cancer Biomarkers"
S. Hong* and A.Z. Wang*, *Advanced Drug Delivery Reviews* **2018**, 125, 1-2.
12. "Integration of Biomimicry and Nanotechnology for Significantly Improved Detection of Circulating Tumor Cells"
J.H. Myung, S-j. Park, A.Z. Wang, and S. Hong*, *Advanced Drug Delivery Reviews* **2018**, 125, 36-47.
13. "Clinical Indications for, and the Future of, Circulating Tumor Cells"
D. Moon, S. Hong, and A.Z. Wang*, *Advanced Drug Delivery Reviews* **2018**, 125, 143-150.
14. "Multivalent Binding and Biomimetic Cell Roling Improves the Sensitivity and Specificity of Circulating Tumor Cell (CTC) Capture"
J.H. Myung, M.J. Eblan, J.M. Caster, K. Wang, S.-j. Park, K.A. Tam, S.M. Miller, R.L. Green, R.C. Chen, J.E. Tepper, B.S. Chera, A.Z. Wang*, and S. Hong*, *Clinical Cancer Research*, **2018**, 24(11), 2539-2547.
15. "Next-Generation CDK2/9 Inhibitors and Anaphase Catastrophe in Lung Cancer "
M. Kawakami, L.M. Mustachio, J. Rodriguez-Canales, B. Mino, J. Roszik, P. Tong, J. Wang, J.J. Lee, J.H. Myung, J.V. Heymach, F.M. Johnson, S. Hong, L. Zheng, S. Hu, P.A. Villalobos, C. Behrens, I. Wistuba, S. Freemantle, X. Liu, and E. Dmitrovsky*, *Journal of the National Cancer Institute* **2017**, 109(6), djw297.
16. "Dendrimer-based Nanocarriers: A versatile platform for drug delivery"
H.-j. Hsu, J. Bugno, S.-r. Lee, and S. Hong*,*WIREs Nanomedicine & Nanobiotechnology* **2017**, 9, e1409.
17. “Chemical Structure and Surface Modification of Dendritic Nanomaterials Tailored for Therapeutic and Diagnostic Applications”
J.H. Myung, H.-j. Hsu, J. Bugno, K.A. Tam, and S. Hong*, *Current Topics in Medicinal Chemistry* **2017**, 17(13), 1542-1554.
18. “Tuning Selectivity of Dendron Micelles through Variations of the PEG Corona”
R.M. Pearson, S. Sen, H.-j. Hsu, M. Pasko, M. Gaske, P. Kral, and S. Hong*, *ACS Nano* **2016**, 10(7), 6905-6914.
19. “Targeted Treatment of FLT3-Overexpressing Acute Myelid Leukoemia with miR-150 Nanoparticles Guided by FLT3 Ligand Peptides”
X. Jiang, J. Bugno, C. Hu, Y. Yang, T. Herold, J. Qi, P. Chen, S. Gurbuxani, S. Arnovitz, B. Ulrich, H. Weng, Y. W. Wang, H. Huang, S. Li, J. Strong, M.B. Neilly, R.A. Larson, M.M. Le Beau, S.K. Bohlander, J. Jin, Z. Li, J.E. Bradner, S. Hong*, and J. Chen*, *Cancer Reserach* **2016**, 76(15), 4470-4480.
20. “miR-22 Plays a Potent Anti-tumor Role with Therapeutic Potential in Acute Myeloid Leukemia”
X. Jiang, C. Hu, S. Arnovitz, J. Bugno, M. Yu, Z. Zuo, P. Chen, H. Huang, B. Ulrich, C. Hu, S. Gurbuxani, H. Weng, J. Strong, Y. Wang, Y. Li, J. Salat, S. Li, A.G. Elkahloun, Y. Yang, M.B. Neilly, R.A. Larson, M.M. Le Beau, T. Herold, S.K. Bohlander, P.P. Liu, J. Zhang, Z. Li, C. He, J. Jin, S. Hong, and J. Chen*, *Nature Communications* **2016**, 7, 11452.
21. "Biomimetic 3D Clusters using Human Adipose Derived Mesenchymal Stem Cells and Breast Cancer Cells: A study on migration and invasion of breast cancer cells"
M.H. Park, B. Song, S. Hong, K. Lee*, and S.-H. Kim*, *Molecular Pharmaceutics* **2016**, 13(7), 2204-2213.
22. “Size and Surface Charge of Engineered Poly(amidoamine) Dendrimers Modulate Tumor Accumulation and Penetration: A model study using multicellular tumor spheroids”
J. Bugno, H.-j. Hsu, R.M. Pearson, H. Noh, and S. Hong*, *Molecular Pharmaceutics* **2016**, 13(7), 2155-2163.

23. "Single Plasmonic Nanoparticles for Ultrasensitive DNA Sensing: From invisible to visible"
L. Guo, L. Chen, S. Hong*, and D.-H. Kim*, *Biosensors and Bioelectronics* **2016**, 79, 266-272.
24. "Recent Advances in Nanotechnology-based Detection and Separation of Circulating Tumor Cells"
J.H. Myung, K.A. Tam, S.-j. Park, A. Cha, and S. Hong*, *WIREs Nanomedicine and Nanobiotechnology* **201**6, 8(2), 223-239. *Highlighted as Cover of the issue.*
25. "Microfluidic Devices to Enrich and Isolate Circualting Tumor Cells"
J.H. Myung and S. Hong*, *Lab on a Chip*, **2015**, 15, 4500-4511.
26. "Effective Capture of Circulating Tumor Cells from a Transgenic Mouse Lung Cancer Model using Dendrimer Surfaces Immobilized with anti-EGFR"
J.H. Myung, M. Roengvoraphoj, K.A. Tam, T. Ma, V.A. Memoli, E. Dmitrovsky, S.J. Freemantle, and S. Hong*, *Analytical Chemistry* **2015**, 87(19), 10096-10102.
27. "Tweaking Dendrimers and Dendritic Nanoparticles for Controlled Nano-bio Interactions: Potential Nanocarriers for Improved Cancer Targeting"
J. Bugno, H.-J. Hsu, and S. Hong*, *Journal of Drug Targeting* **2015**, 23(7-8), 642-650. *Invited Review for a special issue honoring Robert Langer.*
28. "The Cyclic Peptide Ecumicin Targeting ClpC1 Is Active Against Mycobacterium Tuberculosis In Vivo"
W. Gao, J.-Y. Kim, J. Anderson, T. Akopian, S. Hong, Y.-Y. Jin, O. Kandror, J.-W. Kim, I.-He. Lee, S. Lee, J. McAlpine, S. Mulugeta, S. Sunoqrot, Y. Wang, S. Yang, T. Yoon, A. Goldberg, G. Pauli, J. Suh, S. Ranzblau, and S. Cho, *Antimicrobial Agents and Chemotherapy* **2015**, 59(2), 880-889.
29. "Recent Advances in Targeted Drug Delivery Approaches using Dendritic Polymers"
J. Bugno, H.-J. Hsu, and S. Hong*, *Biomaterials Science* **2015**, 3(7), 1025-1034.
30. "Nanoparticle Protein Corona: A survey of recent literature and its implications in targeted drug delivery"
R.M. Pearson, V.V. Juettner, and S. Hong*, *Frontiers in Chemistry* **2014**, 2, 108.
31. "Poly(ethylene glycol) Corona Chain Length Controls End-group-dependent Cell Interactions of Dendron Micelles"
H.-J. Hsu, S. Sen, R.M. Pearson, P. Kral, and S. Hong*, *Macromolecules* **2014**, 47, 6911-6918.
32. "Differential Detection of Tumor Cells using a Combination of Cell Rolling, Multivalent Binding, and Multiple Antibodies"
J.H. Myung, K.A. Gajjar, J. Chen, R.E. Molokie, and S. Hong*, *Analytical Chemisty* **2014**, 86(12), 6088-6094.
33. "Prolonged Blood Circulation and Enhanced Tumor Accumulation of Folate-targeted Dendrimer-Polymer Hybrid Nanoparticles"
S. Sunoqrot, J. Bugno, D. Lantvit, J.E. Burdette, and S. Hong*, *Journal of Controlled Release* **2014**, 191, 115-122.
34. "Understanding Nano-bio Interactions to Improve Nanocarriers for Drug Delivery"
R.M. Pearson, H.-J. Hsu, J. Bugno, and S. Hong*, *MRS Bulletin* **2014**, 39(3), 227-237.
35. "Dendron-based Micelles for Topical Delivery of Endoxifen: A potential chemo-preventive medicine for breast cancer"
Y. Yang, R.M. Pearson, O. Lee, R.T. Chatterton, S.A. Khan, and S. Hong*, *Advanced Functional Materials* **2014**, 24(17), 2441-2449. *Highlighted by the journal as Frontispiece.*
36. "Follicle Stimulating Hormone Peptide-conjugated Dendrimers for Targeted Delivery to Overain Cancer Cells"
D. Modi, S, Sunoqrot, S. Hong*, and J. Burdette*, *Nanoscale* **2014**, 6(5), 2812-2820.
37. "Epithelial-Mesenchymal Transition Enhances Nano-scale Actin Filament Dynamics of Ovarian Cancer Cells: Implication for a mechanism of ovarian cancer metastasis"
S. Lee, Y. Yang, D. Fishman, M.M. Banaszak Holl, and S. Hong*, *Journal of Physical Chemistry B* **2013**, 117(31), 9233-9240.
38. "Sustained Release of Matrix Metalloproteinase-3 to Trabecular Meshwork Cells using Biodegradable PLGA Microparticles"
S. Turturro, S. Sunoqrot, H. Ying, S. Hong*, and B. Yue*, *Molecular Pharmaceutics* **2013**, 10(8), 3023-2032.
39. "Enhanced Oral Bioavailability of the Hydrophobic Chemopreventive Agent (SR13668) in Beagle Dogs"
A.A. Banerjee, H. Shen, M. Hautman, J. Anwer, S. Hong, I.M. Kapetanovic, A.V. Lyubimov, and Y. Liu*,

Current Pharmaceutical Biotechnology **2013**, 14(4), 464-469.

40. "Solid-Phase Colorimetric Sensor Based on Gold Nanoparticle-Loaded Polymer Brushes: Lead detection as a case study"
A.R. Ferhan, L. Guo, X. Zhou, P. Chen, S. Hong, and D.H. Kim*, *Analytical Chemistry* **2013**, 85(8), 4094-4099.
41. "Nanoscale Polymeric Penetration Enhancers in Topical Drug Delivery"
Y. Yang, J. Bugno, and S. Hong*, *Polymer Chemistry* **2013**, 4, 2651-2657.
42. "Positively Charged Dendron Micelles Display Negligible Cellular Interactions"
R.M. Pearson, P. Niladri, H.-J. Hsu, S. Uddin, P. Kral, and S. Hong*, *ACS Macro Letters* **2013**, 2(1), 77-81.
43. "In Vitro Evaluation of Dendrimer-Polymer Hybrid Nanoparticles on Their Controlled Cellular Targeting Kinetics" S. Sunoqrot, Y. Liu, D.-H. Kim, and S. Hong*, *Molecular Pharmaceutics* **2013**, 10(6), 2157-2166.
44. "Distance-mediated Plasmonic Dimers for Reusable Colorimetric Switches: A measurable peak shift of over 60 nm"
L. Guo, A.R. Ferhan, H. Chen, C. Li, G. Chen, S. Hong, and D.H. Kim*, *Small* **2013**, 9(2), 234-240. *Highlighted by the journal as Frontispiece.*
45. "Nanotechnology in Corneal Neovascularization Therapy - a review"
L. Gonzalez, R.J. Loza, K.-Y. Hang, S. Sunoqrot, C. Cunningham, P. Purta, J. Drake, S. Jain, S. Hong, and J.-H. Chang*, *Journal of Ocular Pharmacology and Therapeutics* **2013**, 29(2), 124-134.
46. "Enhanced Oral Bioavailability of a Cancer Preventive Agent (SR13668) by Employing Polymerica Nanoparticles with High Drug Loading"
H. Shen, A.A. Banerjee, P. Mlynarska, M. Hautman, S. Hong, I.M. Kapetanovic, A.V. Lyubimov, and Y. Liu*, *Journal of Pharmaceutical Sciences* **2012**, 101(10), 3877-3885.
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Before Independent Career

60. "The Role of Gaglioside GM1 in Cellular Internalization Mechanisms of Poly(amidoamine) Dendrimers"
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US/World Patents

1. "Dendritic Polymers Complexed with Immune Checkpoint Inhibitors for Enhanced Cancer Immunotherapy" S. Hong and J. Bu, **2018**, filed to WARF.
2. "Exosome Capture using Engineered Surfaces using Poly(amidoamine) Dendrimers" S. Hong and M. Poellmann, **2017**, patent provision, P18015 (WARF).
3. "Dendrimer-Exosome Hybrid Nanoparticles as a Delivery Platform" S. Hong and S.-j. Park, **2017**, patent provisional, P170201 (WARF).
4. "BBB-Permeable LDL Mimicking Dendron-lipid Hybrid Nanoparticles for Gene/Drug Delivery" S. Hong and S.-j. Park, **2015**, filed to OTM at UIC.
5. "Circulating Tumor Cells as Predicative Biomarker for Response to Radiation with or without Chemotherapy" A.Z. Wang, S. Hong, and J.H. Myung, **2015**, filed to OTM at UIC/Univ of North Carolina.
6. "Precise Engineering Technology of Lipid Nanoparticles Using Dendrimer Templates" S. Hong, S. Sunoqrot, J. Bugno, and E. Iwasaki, **2012**, filed to OTM at UIC.
7. "A Dendron-based Platform for Gene Delivery" S. Hong and R. Pearson, **2011**, filed to OTM at UIC.
8. "Transdermal Drug Delivery Using Amphiphilic Dendron-Coil Micelles"

S. Hong and Y. Yang, **WO/2014/130846 (2014), US2014/017762 (2014)**.

9. "Amphiphilic Dendron-coils, Micelles Thereof and Uses"
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10. "Transdermal Delivery of Chemo-Preventive Medicine for Breast Cancer Prevention using Poly(amidoamine) Dendrimers as a Penetration Enhancer"
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11. "A Nano-Hybrid Delivery System for sequential utilization of passive and active targeting"
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12. "Methods and Devices for Capturing Circulating Tumor"
S. Hong, D.T. Eddington, J.H. Myung, and C.A. Launiere, **US 9,964,541 (2018)**.

13. "Cell Rolling Separation"
R. Karnik, S. Hong, Y. Mei, D. Anderson, J. Karp, and R. Langer, **US 8,986,988 (2015), EP 2,205,725 (2010).**

14. "Surfaces, Methods, and Devices Employing Cell Rolling"
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15. "Polyalkylaromaticsilsesquioxane and Preparation Method Thereof"
S.S. Hwang, S.M. Hong, E.C. Lee, and S. Hong, **US 6,599,995 (2003), US 7,056,989 (2006).**

16. "Polyaliphaticaromaticsilsesquioxane and Process for Producing the Same"
S. Hong, S.M. Hong, S.S. Hwang, and E.C. Lee **KR2001053844 (2001).**

Invited Talks

1. "Versatile Dendritic Nanoparticles for Immunotherapy and Liquid Biopsy", Invited Plenary Talk, MedTex 2019, Shanghai, CHINA, 05/17/19
2. "Versatile Dendritic Nanoparticles for Immunotherapy, Gene Delivery, and CTC Capture", Invited Departmental Seminar, Chung-Ang University, Seoul, KOREA, 04/29/19
3. "Versatile Dendritic Nanoparticles for Immunotherapy, Gene Delivery, and Controlled Tumor Penetration", Invited Departmental Seminar, Seoul National University of Science and Technology, Seoul, KOREA, 04/25/19
4. "Versatile Dendritic Nanoparticles for Immunotherapy, Gene Delivery, and CTC Capture", Keynote Lecture, 2019 NanoDelivery Meeting, London, UK, 03/18/19
5. "Versatile Dendritic Nanoparticles for Immunotherapy, Gene Delivery, and CTC Capture", Invited Talk, Translational Biomarkers in Immuno-Oncology, WPC Europe, Lisbon, PORTUGAL, 11/30/18
6. "Versatile Dendritic Nanoparticles for Immunotherapy, Gene Delivery, and Contorlled Tumor Penetration", Invited Talk, The 1st International Symposium on Immuno-Oncology, Korea Institute of Science and Technology (KIST), Seoul, KOREA, 10/30/18
7. "Dendritic Nanoparticles for Improved Cancer Targeting and Therapeutic Delivery", Invited Talk, Center for Nanoparticle Research, Seoul National University, Seoul, KOREA, 10/24/18
8. "Dendritic Nanoparticles for Improved Cancer Targeting and Therapeutic Delivery", Invited Talk, Bioengineering Department, Hanyang University, Seoul, KOREA, 10/23/18
9. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment", Invited talk, Department of Human Oncology, University of Wisconsin, Madison, WI, 09/20/18
10. "Biomimetic Nanotechnology for Enhanced Detection and Monitoring of Circulating Tumor Cells from HNSCC Patients", Invited Talk, Head & Neck Cancer SPORE Meeting, University of Wisconsin, Madison, WI, 09/13/18
11. "Dendritic Nanoparticles for Improved Cancer Targeting and Therapeutic Delivery", Invited Talk, Drug Delivery Forum Summit, San Francisco, CA, 09/11/18
12. "Biomimetic Nanotechnology for Enhanced Surface Detection of Circulating Tumor Cells", Keynote Presentation, NanoEngineering for Medicine and Biology (NEMB), ASME, Los Angeles, CA, 08/21/18
13. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment", Invited talk,

Department of Chemistry, Hanyang University – ERICA campus, Ansan, KOREA, 08/08/18

14. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment", Invited talk, School of Chemistry and Chemical Engineering, Shanghai Jiatong University, Shanghai, CHINA, 07/10/18
15. "Developing Cutting Edge CTC Biopsy-Free Technology to Enhance Cancer Patient Care and Improve Outcomes", Invited talk, China-America Bio-Partnering Forum, Chicago, IL, 05/31/18
16. "Biomimetic Nanotechnology for Enhanced Surface Detection of Circulating Tumor Cells", Invited talk, PEGS-Nanotech in Medicine, Boston, MA, 05/03/18
17. "Clinical Impact and Transaltion of Cancer Nanotechnology", Invited talk, Department of Pharmacy/ISED Co-Colloquium Series, Yonsei University, Incheon, KOREA, 03/28/18
18. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment", Invited talk, Optics Engineering Dept, SeoulTech, Seoul, KOREA, 03/27/18
19. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment", Invited talk, Mechanical Engineering Dept, KAIST, Daejeon, KOREA, 03/22/18
20. "Biomimetic Nanotechnology for Enhanced Surface Detection of Circulating Tumor Cells", Invited talk, Carbone Comprehensive Cancer Center, University of Wisconsin, Madison, WI, 12/13/17
21. "Biomimetic Nanotechnology for Improved Targeting and Capturing of Cancer Cells", Invited Department Seminar, Chemistry Department, University of Michigan, Ann Arbor, MI, 11/02/17
22. "Biomimetic Nanotechnology for Improved Targeting and Capturing of Cancer Cells", Invited talk, Korea Institute of Science and Technology (KIST), Seoul, KOREA, 10/26/17
23. "Biomimetic Nanotechnology Enabling Cancer Prognosis: On the road to bench-to-bedside translation", Invited talk, Global leader coloquium series, Sunkyunkwan University, Suwon, KOREA, 10/20/17
24. "Biomimetic Nanotechnology Enhances Surface Detection of Circulating Tumor Cells in Peripheral Blood from Head and Neck Cancer Patients", Invited talk, KJF-ICOMEP 2017, Gwangju, KOREA, 08/31/17
25. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment", Invited talk, The 1st EUMC Cardiovascular Research Center Seminar, Ewha Woman's University, Seoul, KOREA, 06/28/17
26. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment", Invited talk, ICMAT 2017, Singapore, SINGAPORE, 06/22/17
27. "Biomimetic Nanotechnology Enabling Cancer Prognosis: On the road to bench-to-bedside translation", Invited talk, Global leader coloquium series, Sunkyunkwan University, Suwon, KOREA, 04/21/17
28. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment", Invited talk, Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, KOREA, 03/15/17
29. "Biomimetic Nanotechnology for Enhanced Circulating Tumor Cell Detection for Clinical Monitoring of Radiotherapy Responses", Invited talk, Chunnam National University Medical School, Hwasun, KOREA, 03/13/17
30. "Biomimetic Nanotechnology for Improved Cancer Diagnosis, Prognosis, and Treatment: Targeted delivery platforms and cancer cell capture devices", Invited talk, Department of Pharmacy, National Univeristy of Singapore, SINGAPORE, 03/08/17
31. "Biomimetic Nanotechnology Enabling Cancer Prognosis", Invited talk, 5th Anniversary of Betta Pharma Conference, Beijing, CHINA, 10/29/16
32. "Biomimetic Nanotechnology for Improved Detection of Circulating Tumor Cells", Invited talk, K-BMES Workshop, BMES Annual Meeting, Minneapolis, MN, 10/07/16
33. "Dendritic-Linear Polymer Hybrid Nanoparticles for Improved Drug Delivery", Invited talk, 2016 US-Korea Conference (UKC), Dallas, TX, 08/13/16
34. "Dendritic-linear Polymer Hybrid Nanomaterials for Drug Delivery and Tumor Cell Capture", Invited Departmental Seminar, College of Pharmacy, Ewha Women's University, Seoul, KOREA, 05/30/16
35. "Dendritic-linear Polymer Hybrid Nanomaterials for Drug Delivery and Tumor Cell Capture", Invited Departmental Seminar, College of Pharmacy, Seoul National University, Seoul, KOREA, 05/26/16

36. “Dendritic Nanomaterials for Targeting and Capturing Tumor Cells”, Invited Departmental Seminar, School of Pharmacy, University of Wisconsin – Madison, Madison, WI, 02/04/16
37. “Dendritic Nanomaterials for Targeting and Capturing Tumor Cells”, Invited Departmental Seminar, Department of Biomedical Engineering, Univ. of North Carolina/NC State U, Raleigh, NC, 01/22/16
38. “Pursue Your Dream and Be Bold”, Plenary Talk, The Annual Cotton Festival, Department of Organic Nanoengineering, Hanyang University, Seoul, KOREA, 12/07/15
39. “Dendritic Nanomaterials for Targeting and Capturing Tumor Cells”, Invited Departmental Seminar, NanoBio Science Program, Incheon National University, Incheon, KOREA, 11/23/15
40. “Dendritic Nanomaterials for Targeting and Capturing Tumor Cells”, Invited Talk, Annual International Meeting of Korean Society of Pharmaceutical Science and Technology, CHA BioComplex, Sungnam, KOREA, 11/19/15
41. “Modular Dendron Micelles for Controlled Cell Interactions”, Invited Talk, The 9th IEEE International Conference on Nano/Molecular Medicine and Engineering, Honolulu, HI, 11/16/15
42. “Modular Dendron Micelles for Controlled Cell Interactions”, Invited Talk, The Fall National Meeting of Polymer Society of Korea, Daegu, KOREA, 10/07/15
43. “Biomimetic Nanotechnology for Enhanced Detection of Circulating Tumor Cells”, Invited Talk, IEEE Nanotechnology Materials and Devices Conference (NMDC), Anchorage, AL, 09/14/15
44. “Biomimetic Nanotechnology to Tackle Cancer: Targeted Drug Delivery and Tumor Cell Isolation”, Special Seminar, CHA Bio Complex, CHA University, Seongnam, KOREA, 07/02/15
45. “Biomimetic Nanotechnology to Tackle Cancer: Targeted Drug Delivery and Tumor Cell Isolation”, Special Seminar, Department of Biotechnology, The Catholic Univeristy of Korea, Bucheon, KOREA, 06/05/15
46. “Biomimetic Nanotechnology to Tackle Cancer: Targeted Drug Delivery and Tumor Cell Isolation”, Special Seminar, Advanced Materials Division, Korea Research Institute of Chemical Technology, Daejeon, KOREA, 06/02/15
47. “Tweaking Dendrimers for Enhanced Cancer Targeting and Tumor Cell Isolation”, Special Seminar, Department of Integrated OMICS for Biomedical Science, Yonsei Univeristy, Seoul, KOREA, 06/01/15
48. “Enhanced Surface Detection of Circulating Tumor Cells using Biomimetic Nanotechnology”, Invited Talk, ASME 2015 4th Global Conference on Nanoengineering for Medicine and Biology, Minneapolis, MN, 04/21/15
49. “Dendritic Nanomaterials for Targeting and Capturing Tumor Cells”, Center Seminar, Center for Drug Delivery and Nanomedicine, University of Nebraska Medical Center, Omaha, NE, 01/16/15
50. “Dendritic Nanomaterials for Targeting and Capturing Tumor Cells”, Special Seminar, University of Illinois at Chicago College of Pharmacy, Rockford, IL, 01/12/15
51. “Biomimetic Nanotechnology to Tackle Cancer: Targeted Drug Delivery and Tumor Cell Isolation”, Invited Talk, One Day Conclave on NanoBioTechnology, Institute of NanoScience and Technology (INST), Mohali, INDIA, 12/22/14
52. “Biomimetic Nanotechnology to Tackle Cancer: Targeted Drug Delivery and Tumor Cell Isolation”, Invited Talk, Indo-US Workshop on Nanoengineering in Medicine, New Dehli, INDIA, 12/18/14
53. “Dendritic Nanomaterials for Targeting and Capturing Tumor Cells”, Special Seminar, Center for BioMedical Technology, KIST, Seoul, KOREA, 11/27/14
54. “Biomimetic Nanotechnology to Tackle Cancer: Targeted Drug Delivery and Tumor Cell Isolation”, Special Seminar, Department of Mechanical Engineering, KAIST, Daejeon, KOREA, 11/26/14
55. “Tweaking Dendrimers for Topical Drug Delivery and Tumor Cell Capture”, Special Seminar, Amway China Headquarter, Shanghai, CHINA, 11/25/14
56. “Tweaking Dendrimers for Topical Drug Delivery and Tumor Cell Capture”, Departmental Seminar, Department of Chemical Engineering, Donghua Univeristy, Shanghai, CHINA, 11/24/14
57. “Dendritic Nanomaterials for Enhanced Detection of Circulating Tumor Cells”, Invited Talk, International BioMedical Engioneering Conference (IBEC2014), Gwangju, KOREA, 11/21/14
58. “Biomimetic Nanotechnology to Tackle Cancer: Targeted Drug Delivery and Tumor Cell Isolation”,

Special Seminar, College of Medicien, Chonnam National Univeristy, Hwasoon, KOREA, 11/19/14

59. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Special Seminar, Underwood International College, Yonsei University, Seoul, KOREA, 11/19/14

60. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Lineberger Comprehensive Cancer Center, University of North Carolina, Chapel Hill, NC, 09/23/14

61. "Modular Dendron Micelles for Controlled Cell Interactions", 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, IL, 08/29/14

62. "A Biomimetic Platform for Effective Detection and Sepearation of Circualting Tumor Cells", 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, IL, 08/26/14

63. "Dendritic Nanomaterials as Modular Nanocarriers: From topical delivery to injectable systems", 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, IL, 08/26/14

64. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", College of Pharmacy Seminar, Midwestern University, Downers Grove, IL, 08/04/14

65. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Featured Lecture, The 46th Annual Pharmaceutics Graduate Student Research Meeting (PGSRM), Chicago, IL, 06/27/14

66. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Departmental Seminar, Bioengineering, National University of Singapore, Singapore, SINGAPORE, 04/15/14

67. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Departmental Seminar, Biomedical Engineering, Nanyang Technological University, Singapore, SINGAPORE, 04/14/14

68. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Keynote Speech, International Conference on Mechanics and Materials Engineering, Xi'an, CHINA, 04/12/14

69. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Departmental Seminar, Chemistry, Shanghai, CHINA, 04/10/14

70. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", IBS Special Seminar, Chemistry, Pohang Institute of Science and Technology (Postech), Pohang, KOREA, 04/07/14

71. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Alchemy Special Seminar, Chemistry, University of Illinois at Chicago, Chicago, IL, 03/18/14

72. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Departmental Seminar, Cancer Center/Department of Biochemistry and Molecular Biology, Loyola University Medical Center, Maywood, IL, 11/05/13

73. "Novel Dendritic Nanocarriers: Dendron micelles and dendrimer-polymer hybrid nanoparticles", Invited Talk, NanoDDS, La Jolla, CA, 10/26/13

74. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Keynote Speech, Annual NanoSymposium, University of Wisconsin-Whitewater, Whitewater, WI, 10/18/13

75. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Keynote Speech, Annual Meeting of Korean Society of Biomaterials, Seoul, KOREA, 09/26/13

76. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Departmental Seminar, Department of BioNanoEngineering, Hanyang University, Ansan, KOREA, 09/23/13

77. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Departmental Seminar, Department of Physical Pharmacy, Yonsei Univerisity International Campus, Songdo, KOREA, 09/24/13

78. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Departmental Seminar, Department of Chemical Engineering, Seoul National University, Seoul, KOREA, 09/25/13

79. "Dendritic Nanomaterials for Targeting and Capturing Tumor Cells", Departmental Seminar, Department of Applied Chemistry and Biotechnology, Ajou Univerisity, Suwon, KOREA, 09/25/13

80. "Novel Dendritic Nanocarriers: Dendron micelles and dendrimer-polymer hybrid nanoparticles", Invited Oral Presentation, Division of Polymer Chemistry, 246th ACS National Meeting, Indianapolis, IN, 09/10/13

81. "Biomimetic Combination of Cell Rolling and Dendrimer-mediated Multivalent Binding for Enhanced Detection of Tumor Cells", Invited Talk, 2013 Gordon Research Conference - Cancer Nanotechnology,

West Dover, VT, 07/16/13

82. "Biomimetic Nanotechnology for Enhanced Detection of Tumor Cells", Invited Talk, GSA Symposium 2013, National University of Singapore, SINGAPORE, 07/03/13

83. "Biomimetic Nanotechnology for Enhanced Detection of Tumor Cells", Invited Talk, 7th International Conference on Materials for Advanced Technologies (ICMAT), Suntec, SINGAPORE, 07/02/13

84. "The Development of a CTC Detection Device Based on Biomimetic Nanotechnology", Special Seminar, Cancer Center, Asan Medican Center, Seoul, KOREA, 06/28/13

85. "Biomimetic Nanotechnology for Targeted Drug Delivery and Surface Detection of Tumor Cells", Departmental Special Seminar, College of Pharmacy, Korea University, Sejong City, KOREA, 06/27/13

86. "Biomimetic Nanotechnology for Targeted Drug Delivery and Surface Detection of Tumor Cells", Departmental Special Seminar, Department of Biotechnology, Yonsei University, Seoul, KOREA, 06/26/13

87. "Nanoscale Evaluation of Novel Dendritic Nanocarriers for Cancer Targeting", Accelerating Development of Difficult-to-deliver Drugs, 12th Annual World Pharma Congress Meeting, Philadelphia, PA 06/05/13

88. "Development of Nanotechnology Application into Innovative Therapies", Short Courses, 12th Annual World Pharma Congress Meeting, Philadelphia, PA 06/03/13

89. "Nanotechnology for Targeting and Capturing Tumor Cells" Seminar Series in Advances in Biotechnology, Department of Chemical and Biological Engineering, Northwestern University, Evanston, IL, 05/15/2013

90. "Dendron-based Micelles: A potential nanocarrier platform", Invited Talk, 3rd International Conference and Exhibition on Pharmaceutics & Novel Drug Delivery Systems, Northbrook, IL, 04/08/13

91. "Biomimetic Nanotechnology for Targeted drug delivery and Tumor cell isolation", Departmental Seminar, Department of Chemical Engineering, Oklahoma State University, Stillwater, OK, 04/02/13

92. "Biomimetic Nanotechnology for Targeted drug delivery and Tumor cell isolation", Departmental Seminar, Department of Pharmacology, University of Illinois College of Medicine, Chicago, IL, 02/18/13

93. "Biomimetic Nanotechnology to Tackle Cancer: Targeted drug delivery and tumor cell isolation", Departmental Seminar, Department of Pharmaceutical Sciences, University of Kentucky, Lexington, KY, 01/11/13

94. "Biomimetic Nanotechnology to Tackle Cancer: Targeted drug delivery and tumor cell isolation", Departmental Seminar, Department of Nanoengineering, University of California-San Diego, La Jolla, CA, 12/12/12

95. "Biomimetic Nanotechnology to Tackle Cancer: Targeted drug delivery and tumor cell isolation", Special Seminar, University of Illinois College of Pharmacy at Rockford, Rockford, IL, 11/29/12

96. "Biomimetic Nanotechnology to Tackle Cancer", Medical Scientist Training Program Lunch Semiar, University of Illinois College of Medicine, Chicago, IL, 11/6/12

97. "Biomimetic Nanotechnology to Tackle Cancer: Targeted drug delivery and tumor cell isolation", Drug Delivery for Cancer using Smart Technology, 16th International Pharmaceutical Technology Symposium (IPTS), Antalya, TURKEY, 09/11/12

98. "Biomimetic Nanotechnology to Tackle Cancer: Targeted drug delivery and tumor cell isolation", Department of Physical Pharmacy, Purdue University, West Lafayette, IN, 09/06/12

99. "Dendrimer-mediated Multivalent Binding Enhances the Specificity and Sensitivity of Tumor Cell Detection.", Invited Lecture Series on Biomaterials for Sensing and Actuation, IEEE Engineering in Medicine and Biology Society (EMBC '12), San Diego, CA, 09/01/12

100. "Dendron-based Micelles: A potential nanocarrier platform", Invited Lecture Series on Gene and Drug Delivery, IEEE Engineering in Medicine and Biology Society (EMBC '12), San Diego, CA, 08/30/12

101. "Biomimetic Nanotechnology to Tackle Cancer: The future of pharmaceutics?", 1st IPSF African Pharmaceutical Symposium, Algiers, ALGERIA, 07/17/12

102. "Biomimetic Nanotechnology to Tackle Cancer: Targeted drug delivery and tumor cell capturing", MiniSymposium on Drug Delivery and Nanomaterials, Northwestern University, Chicago, IL, 01/30/12

103. "Biomimetic Nanotechnology to Tackle Cancer: Targeted drug delivery and tumor cell capturing",

Center Seminar Series, Center of Nanophase Materials Science, Oak Ridge National Laboratory, Oak Ridge, TN, 01/24/12

104. "Biomimetic Nanotechnology to Tackle Cancer: Targeted drug delivery and tumor cell capturing", Cancer Center, University of Chicago, Chicago, IL, 11/08/11

105. "Facilitated Self-Assembly of Novel Dendron-Based Copolymers", Invited Lecture Series on Gene and Drug Delivery, IEEE Engineering in Medicine and Biology Society (EMBC '11), Boston, MA, 09/01/11

106. "Biomimetic Nanotechnology to Tackle Cancer: Targeted Drug Delivery and Tumor Cell Isolation", Invited Talk, The 3rd Annual Symposium of Controlled Release Society (CRS) Illinois Student Chapter, Chicago, IL, 08/12/11

107. "Polymeric Nanodevices for Targeted Drug Delivery and Tumor Cell Isolation", Department Workshop Series, Department of Ophthalmology and Visual Sciences, University of Illinois Eye and Ear Infirmary, Chicago, IL, 06/17/11

108. "Bio-inspired Drug Delivery Systems Based on Dendrons", Vahlteich Awards Research Talk, University of Illinois College of Pharmacy Faculty Retreat, Fontana, WI, 05/12/11

109. "Polymeric Nanodevices for Targeted Drug Delivery and Tumor Cell Isolation", Departmental Seminar, Department of Bioengineering, University of Illinois, Urbana, IL, 03/31/11

110. "Novel Nanocarriers for Targeting and Capturing Tumor Cells" Center Seminar Series, Center for Pharmaceutical Biotechnology, University of Illinois, Chicago, IL, 03/03/11

111. "Polymeric Nanodevices for Targeted Drug Delivery and Tumor Cell Isolation" Special Seminar, College of Pharmacy, Chungnam National University, Daejeon, KOREA, 12/06/10

112. "Polymeric Nanodevices to Tackle Cancer: From Prevention to Treatments" Invited Session on Pharmaceutics and Formulations, The International Conference of the Korean Society of Pharmaceutical Sciences and Technology, Jeju Island, KOREA, 12/03/10

113. "Polymeric Nanodevices for Targeted Drug Delivery and Tumor Cell Isolation" Special Seminar, College of Pharmacy, Seoul National University, Seoul, KOREA, 11/30/10

114. "Polymeric Nanodevices for Targeted Drug Delivery and Tumor Cell Isolation" Department of Chemistry, University of Illinois, Chicago, IL, 10/05/10

115. "Polymeric Nanodevices to Tackle Cancers: From Prevention to Treatments" Department Seminar, The Department of Physiology and Biophysics, University of Illinois Medical Center, Chicago, IL, 09/10/10

116. "Polymeric Nanodevices to Tackle Cancers: From Prevention to Treatments" The 2nd KSEA Midwest Regional Conference, Iowa City, IA, 03/21/10

117. "Enhanced Tumor Cell Separation by Surfaces Functionalized with Combinations of Bioadhesive Proteins" Proceeding of ASME 2010 First Global Congress on NanoEngineering for Medicine and Biology (NEMB 2010), Houston, TX, 02/08/10

118. "Dendrimer-based Targeted Drug Delivery and Biomimetic Cell-specific Separation Device" Special Seminar, Central R&D Center, Amore-Pacific Co., Ltd., Yong-in, KOREA, 10/14/2009

119. "Dendrimer-based Targeted Drug Delivery and Biomimetic Cell-specific Separation Device" Departmental Seminar, Department of Molecular Systems, Hanyang University, Seoul, KOREA, 10/13/2009

120. "Dendrimer-based Targeted Drug Delivery and Biomimetic Cell-specific Separation Device" Special Seminar, Polymer Hybrids Research Division, Korea Institute of Science and Technology (KIST), Seoul, KOREA, 10/8/2009

121. "Polymeric Nanocarriers for Targeted Drug Delivery" Invited session on Drug delivery, Fall National Meeting of Polymer Society of Korea, Gwangju, KOREA, 10/7/2009

122. "Dendrimer-based Targeted Drug Delivery and Biomimetic Cell-specific Separation Device" College of Pharmacy Seminar Series, College of Pharmacy, Sookmyung Women's University, Seoul, KOREA, 10/5/2009

123. "Bio-device for Capturing Circulating Tumor Cells" Seminar Series in Advances in Biotechnology, Department of Chemical and Biological Engineering, Northwestern University, Evanston, IL, 05/26/2009

124. "Multivalent Targeting using Dendrimer-Based Nanomedicine" University of Illinois Cancer Center Seminar Series, Chicago, IL, 05/12/2009

125. “Polymer-based Nanomedicine: Multivalent Targeting and Rolling-based Cell Capturing” Special Seminar, Center for Nanoscale Materials Seminar, Argonne National Laboratory, Argonne, IL, 03/27/2009

126. “Biomimetic Device for Separation of Circulating Tumor Cells” Korean Scientists and Engineers in America (KSEA) Midwest Regional Meeting, Oakbrook Terrace, IL, 02/28/2009

127. “Polymer-based Nanomedicine for Anti-cancer Treatment: Multivalent targeting and rolling-based cell capturing” Department Seminar, Bioengineering, University of Illinois, Chicago, IL, 01/30/2009

128. “Polymer-based Nanomedicine: Multivalent Targeting and Cell Rolling-based Capturing of Cancer Cells” 2nd COE-COM Research Seminar, University of Illinois, Chicago, IL, 10/03/2008

129. “Polymer-based Nanomedicine for Targeting and Capturing Cancer Cells” Department Seminar, Biopharmaceutical Sciences, University of Illinois, Chicago, IL, 09/17/2008

130. “Interactions of Synthetic Polymers with Cell Membranes: Cell Penetration of Polycationic Polymers and Multivalent Effects of Targeted Nanodevices” Langer Lab Special Seminar, Department of Chemical Engineering, Massachusetts Institute of Technology (MIT), 09/06/2006