Erik C Dreaden, PhD

Coulter Department of Biomedical Engineering
Georgia Institute of Technology and Emory University
Department of Pediatrics
Children's Healthcare of Atlanta and Emory School of Medicine

Email: e.dreaden@gatech.edu
e.dreaden@emory.edu
Office: HSRB E108
Tel: 404.778.3033

updated 01 Jan, 2022

PROFESSIONAL APPOINTMENTS

Assistant Professor, Department of Biomedical Engineering 2017 –
Georgia Institute of Technology and Emory University

Assistant Professor, Department of Pediatrics 2017 –
Emory University, Aflac Cancer and Blood Disorders Center, Children's Healthcare of Atlanta

Faculty, Winship Cancer Institute 2017 –
Emory University

Faculty, Petit Institute for Bioengineering and Bioscience 2017 –
Georgia Institute of Technology

Faculty, Pediatric Research Alliance 2018 –
Emory University, Children's Healthcare of Atlanta, Georgia Institute of Technology

Faculty, Bioengineering 2018 –
Georgia Institute of Technology

Faculty, Cancer Biology 2018 –
Emory University

Pediatric Research Scholar 2018 –
Children's Healthcare of Atlanta

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA 2012 – 2017
Ruth L Kirschstein Postdoctoral Fellow, Koch Institute for Integrative Cancer Research

Georgia Institute of Technology, Atlanta, GA 2006 – 2012
PhD, Chemistry and Biochemistry
Dissertation: "Chemistry, Photophysics, and Biomedical Applications of Gold Nanotechnologies"

University of Georgia, Athens, GA 2002 – 2006
BS, Chemistry

AWARDS

Careers in Immunology Fellowship, American Association of Immunologists	2019
Millipub Award, Emory School of Medicine	2018
Koch Institute IMAGE Award, Massachusetts Institute of Technology	2014 – 2015, 2017 – 2018
NIH Ruth L Kirschstein Postdoctoral Fellowship (F32)	2013 – 2015
Graduate Student Award, 60th Meeting of Nobel Laureates; Lindau, Germany	2010
Predoctoral Fellowship, Center for Drug Design, Development, and Delivery (CD4)	2010 – 2011
Anthony Shuker Research Award, Georgia Research Alliance	2010
Robert Bosch Foundation Fellowship	2010
GAANN Predoctoral Fellowship	2006 – 2008
William H. Emerson Fellowship	2006 – 2007

PUBLICATIONS

Google Scholar:
https://scholar.google.com/citations?hl=en&user=Loy7OC4AAAAJ&view_op=list_works&sortby=pubdate&inst=15365353816232672843

Pubmed: https://www.ncbi.nlm.nih.gov/myncbi/erik.dreaden.3/bibliography/public/

In Preparation:

Kelvin JM, Stout ML, Williams EK, Zhang DY, Baxter TA, Zecca H, Birnbaum LA, Jain J, Qui M, Jui NT, Du Y, Kemp ML, Lam WA, DeRyckere D, Graham DK, **Dreaden EC,*** Discovery and Development of Constitutively Synergistic Combination Drug Formulations for Leukemia, 2022, *in preparation*.

Submitted:

Kong YW, **Dreaden EC,*** PEG: Will it come back to you? Polyethelyne glycol immunogenicity, COVID vaccines, and the case for new PEG alternatives. *Front. Bioeng. Biotechnol.*, 2022, submitted.

Hunter R, Imbach K, Dougan J, Do P, Townsel A, Zhou C, Gibson G, **Dreaden EC**, Haynes K, Henry CJ, Porter CC, B-cell acute lymphoblastic leukemia promotes an immune suppressive microenvironment that can be overcome by IL-12. *Sci. Rep.*, 2022, submitted.

Published / In Press:

44. Uricoli B, Birnbaum LA, Do P, Kelvin JM, Jain J, Costanza E, Chyong A, Porter CC, Rafiq S, **Dreaden EC**,* Engineered Cytokines for Cancer and Autoimmune Disease Therapy, *Advanced Healthcare Materials*, 2021, 2002214. PMCID: PMC8651077.

43. Do P, Perdue LA, Chyong A, Hunter R, Dougan J, Henry CJ, Porter CC,* Dreaden EC,* Rapid Assembly and Screening of Multivalent Immune Cell-Redirecting Therapies for Leukemia. *ACS Combinatorial Science,* **2020**: 22: 533-541. PMCID: PMC8496977.

42. Perdue, LA, Do, P, David, C, Chyong, A, Kellner, AV, Ruggieri, A, Kim, HR, Salaita, K, Lesinski, GB, Porter, CC, Dreaden, EC,* Optical Control of Cytokine Signaling via Bioinspired, Polymer-Induced Latency. *Biomacromolecules,* **2020**: 21: 2635-2644. PMCID: PMC8496955.

41. Silva AS, Shopsowitz KE, Correa S, Morton SW, Dreaden EC, Casimiro T, Aguiar-Ricardo A, Hammond PT, Rational Design of Multistage Drug Delivery Vehicles for Pulmonary RNA Interference Therapy. *Int. J. Pharm.,* **2020**: 119989. PMCID: PMC7970503.

40. Kong YW,† Dreaden EC,† Morandell S, Zhou W, Dhara SS, Sriram G, Lam FC, Patterson JC, Quadir M, Dinh A, Shopsowitz KE, Varmeh S, Yilmaz ÖH, Lippard SJ, Reinhardt HC, Hemann MT, Hammond PT, Yaffe MB, Enhancing chemotherapy response through augmented synthetic lethality by co-targeting nucleotide excision repair and cell-cycle checkpoints. *Nature Communications,* **2020** 11: 4124. PMCID: PMC7431578.

39. Correa, S.; Boehnke, N.; Barberio, A.E.; Deiss-Yehiely E.; Shi, A.; Oberlton, B.; Smith, S.G.; Zervantonakis, I.A.; Dreaden, E.C.; Hammond, P.T.; Tuning Nanoparticle Interactions with Ovarian Cancer through Layer by Layer Modification of Surface Chemistry, *ACS Nano*, **2020***,* 14 (2), 2224-2237. PMCID: PMC7062411

38. Choi, K.Y.; Correa, S.; Min, J.; Li, J.; Roy, S.; Laccetti, K.H.; Dreaden, E.C.; Kong, S.; Roun, H.; Roh, Y.H.; Lawson, E.C.; Palmer, P.A.; Hammond, P.T.; Binary Targeting of siRNA to Hematologic Cancer Cells In Vivo using Layer-by-Layer Nanoparticles, *Advanced Functional Materials*, **2019**, 29 (20), 1900018. PMCID: PMC6910249

37. Dreaden, E.C.; Kong, Y.W.; Quadir, M.A.; Correa, S.; Suárez-López, L.; Barberio, A.E.; Hwang, M.K.; Shi, A.C.; Olberton, B.J.; Gallagher, P.N.; Shopsowitz, K.E.; Elias, K.M.; Yaffe, M.B.; Hammond, P.T., RNA-Peptide nanoplexes drug DNA damage pathways in high-grade serous ovarian tumors, *Bioengineering and Translational Medicine*, **2018**, 3, 26-36. PMCID: PMC5773954

36. Saei, A.A.; Yazdani, M.; Lohse, S.E.; Bakhtiary, Z.; Serpooshan, V.; Ghavami, M.; Asadian, M.; Mashaghi, S.; Dreaden, E.C.; Mashaghi, A.; Mahmoudi; M., Nanoparticle Surface Functionality Dictates Cellular and Systemic Toxicity, *Chemistry of Materials*, **2017**, 29 (16), 6578-6595.

35. Behzadi, S.; Serpooshan, V.; Tao, W.; Hamaly, M.A.; Alkawareek, M.Y.; Dreaden, E.C.; Brown, D.; Alkilany, A.M.; Farokhzad, O.C.; Mahmoudi, M., Cellular uptake of nanoparticles: journey inside the cell, *Chemical Society Reviews*, **2017**, 46, 4218-4244. PMCID: PMC5593313

34. Correa, S;† Dreaden, E.C.;† Gu, L.; Hammond, P.T., Engineering Nanolayered Particles for Modular Drug Delivery, *Journal of Controlled Release*, **2016**, 240, 364–386. PMCID: PMC6450096

33. Min, J.; Choi; K.Y.; Dreaden, E.C.; Padera, R.F.; Braatz, R.D.; Spector, M.; Hammond, P.T., Designer Dual Therapy Nanolayered Implant Coatings Eradicate Biofilms and Accelerate Bone Tissue Repair, *ACS Nano*, **2016**, 10(4), 4441–4450. PMID: 26923427

32. Shopsowitz KE, Wu C, Liu G, Dreaden EC, Hammond PT, Periodic-shRNA Molecules are Capable of Gene Silencing, Cytotoxicity and Innate Immune Activation in Cancer Cells, *Nucleic Acid Research*, **2016**, 44(2), 545-557. PMCID: PMC4737167

31. Kong YW,† Dreaden EC, † Hammond PT, Yaffe MB, Exploiting Nanocarriers for Combination Cancer Therapy. In *Intracellular Delivery III*; 1st Ed. Prokop, A.; Weissig, V., Eds.; Springer International: Switzerland, **2016**. ISBN: 978-3-319-43525-1.

30. Roh, Y.H; Deng, J.Z.; Dreaden, E.C.; Park, J.H.; Yun, D.S.; Shopsowitz, K.E.; Hammond, P.T., A Multi-RNAi Microsponge Platform for Simultaneous Controlled Delivery of Multiple Small Interfering RNAs, *Angewandte Chemie International Edition*, **2016**, 55, 3347–3351. PMCID: PMC4768639

29. Correa, S; Choi; K.Y.; Dreaden, E.C.; Renggli, K.; Shi, A.; Gu, L.; Shopsowitz, K.E.; Quadir, M.; Ben-Akiva, E.; Hammond, P.T., Highly scalable, closed-loop synthesis of drug-loaded, layer-by-layer nanoparticles, *Advanced Functional Materials*, **2016**, 26, 991–1003. PMCID: PMC4847955

28. Dreaden, E.C.; Kong, Y.W.; Morton, S.W.; Correa, S.; Choi; K.Y.; Shopsowitz, K.E.; Renggli, K.; Drapkin, R.; Yaffe; M.B.; Hammond, P.T., Tumor-Targeted Synergistic Blockade of MAPK and PI3K from a Layer-by-Layer Nanoparticle, *Clinical Cancer Research*, **2015**, 21(19), 4410-4419. PMCID: PMC4624301

27. Choi, J.H.; Kim, S.-O.; Linardy, E.; Dreaden, E.C.; Zhdanov, V.P.; Hammond, P.T.; Cho, N.-J., Influence of pH and Surface Chemistry on Poly-L-Lysine Adsorption onto Solid Supports Investigated by Quartz Crystal Microbalance with Dissipation Monitoring, *Journal of Physical Chemistry B*, **2015**, 119(33), 10554–10565.

26. Choi, J.H.; Kim, S.-O.; Linardy, E.; Dreaden, E.C.; Zhdanov, V.P.; Hammond, P.T.; Cho, N.-J., Adsorption of Hyaluronic Acid on Solid Supports: Role of pH and Surface Chemistry in Thin Film Self-Assembly, **2015**, *Journal of Colloid & Interface Science*, **2015**, 448, 197-207.

25. Dreaden, E.C., Morton, S.W.; Shopsowitz, K.E., Choi, J.H.; Deng, Z.J.; Cho, N.-J.; Hammond, P.T., Bimodal Tumor-Targeting From Microenvironment Responsive Hyaluronan Layer-by-Layer (LbL) Nanoparticles. *ACS Nano,* **2014**, 8 (8), 8374-8382. PMCID: PMC4148172

24. Sowers, M.A.; McCombs, J.R.; Wang, Y.; Paletta, J.T.; Morton, S.W.; Dreaden, E.C.; Boska, M.; Ottaviani, F.; Hammond, P.T.; Rajca, A.; Jeremiah, J.A., Redox responsive branched-bottlebrush polymers for in vivo MRI and fluorescence imaging. *Nature Communications*, **2014**, 5, 5460. PMCID: PMC4269368

23. Roh, Y.H.; Lee, J.B.; Shopsowitz, K.E.; Dreaden, E.C.; Morton, S.W.; Poon, Z.; Hong, J.; Yamin, I.; Bonner, D.K.; Hammond, P.T., Layer-by-Layer Assembled Anti-Sense DNA Microsponge Particles for Efficient Delivery of Cancer Therapeutics. *ACS Nano*, **2014**, 8(10), 9767-9780. PMCID: PMC4148172

22. Shah, N.J.; Hsu, B.B.; Dreaden, E.C.; Hammond, P.T., Engineering Layer-by-Layer Thin Films for Multiscale and Multidrug Delivery Applications. In *Layer-by-Layer Films for Biomedical Applications*; 1st Ed. Picart, C.; Caruso, F., Voegel, J.-C., Eds.; Wiley-VCH: Weinheim, **2014**. ISBN: 978-3-527-33589-3.

21. Dreaden, E.C.; El-Sayed, I.H.; El-Sayed, M.A. Structure-Activity Relationships For Tumor-Targeting Gold nanoparticles. In *Frontiers of Nanobiomedical Research*; 1st Ed. Torchilin, V.P., Ed.; World Scientific: Hackensack, NJ, **2014**. ISBN: 978-981-4520-64-5.

20. Morton, S.W.; Lee, M.J.; Deng, Z.J.; Dreaden, E.C.; Siouve, E.; Shopsowitz, K.E.; Shah, N.J.; Yaffe, M.B., Hammond, P.T. A Nanoparticle-Based Combination Chemotherapy Delivery System for Enhanced Tumor Killing by Dynamic Rewiring of Signaling Pathways. *Science Signaling*, **2014**, 7 (325), ra44. PMCID: PMC4138219

19. Austin, L.A.; Mackey, M.A.; Dreaden, E.C.; El-Sayed, M.A.; The optical, photothermal, and facile surface chemical properties of gold and silver nanoparticles in biodiagnostics, therapy, and drug delivery. *Archives in Toxicology*, **2014**, 88 (7), 1391-417. PMCID: PMC4136654

18. Liao, L.; Liu, J.; Dreaden, E.C.; Morton, S.; Shopsowitz, K.E.; Hammond, P.T.; Johnson, J.A., A convergent synthetic platform for single-nanoparticle triplex combination cancer therapy: ratiometric loading and release of cisplatin, doxorubicin, and camptothecin. *Journal of the American Chemical Society*, **2014**, 136 (16), 5896–5899. PMCID: PMC4105175

17. Dreaden, E.C.; Raji, I.O.; Austin, L.A.; Fathi, S.; Mwakwari, S.C.; Humphries IV, W.H.; Kang, B.; Oyelere, A.K.; El-Sayed, M.A. P-glycoprotein-Dependent Trafficking of Nanoparticle-Drug Conjugates. *Small*, **2014**, 10 (9), 1719–1723. PMCID: PMC4136971

16. Deng, Z.J.; Morton, S.W.; Ben-Akiva, E.; Dreaden, E.C.; Shopsowitz, K.E.; Hammond, P.T., Layer-by-Layer Nanoparticles for Systemic Codelivery of an Anticancer Drug and siRNA for Potential Triple-Negative Breast Cancer Treatment. *ACS Nano*, **2013**, 7 (11), 9571–9584. PMCID: PMC3870477

15. Dreaden, E.C.; Gryder, B.G.; Austin, L.A.; Tene Defo, B.A.; Hayden, S.C.; Pi, M.; Quarles, L.D.; Oyelere, A.K.; El-Sayed, M.A., Antiandrogen Gold Nanoparticles Dual-Target and Overcome Treatment Resistance in Hormone-Insensitive Prostate Cancer Cells. *Bioconjugate Chemistry*, **2012**, 23 (8), 1507-1512. PMCID: PMC3434689

14. Dreaden, E.C.; Mwakwari, S.C.; Austin, L.A.; Kieffer, M.J.; Oyelere, A.K.; El-Sayed, M.A. Small Molecule-Gold Nanorod Conjugates Selectively Target and Induce Macrophage Cytotoxicity Towards Breast Cancer Cells. *Small,* **2012**, 8 (18), 2819-2822. PMCID: PMC3459581

13. Dreaden, E.C.; El-Sayed, M.A.; Detecting and Destroying Cancer Cells in More than One Way with Noble Metals and Different Confinement Properties on the Nanoscale. *Accounts of Chemical Research*, **2012**, 45 (11), 1854–1865. PMCID: PMC4706153

12. Dreaden, E.C.; Austin, L.A.; Mackey, M.A.; El-Sayed, M.A.; Size Matters: Gold Nanoparticles in Targeted Cancer Drug Delivery. *Therapeutic Delivery,* **2012**, 3, 457-478. PMCID: PMC3596176

11. Dreaden EC, Alkilany A, Huang X, Murphy CJ, El-Sayed MA, The Golden Age: Gold Nanoparticles for Biomedicine. *Chemical Society Reviews*, **2012**, 41, 2740-2779. PMCID: PMC5876014

10. Dreaden, E.C.; Near, R.D.; Abdallah, T.; Talaat, M.H.; El-Sayed, M.A., Multimodal Plasmon Coupling in Low Symmetry Gold Nanoparticle Pairs Detected in Surface-Enhanced Raman Scattering (SERS). *Applied Physics Letters*, **2011**, 98, 183115.

9. Dreaden, E.C.; El-Sayed, M.A.; El-Sayed, I.H., Nanotechnology and Nanostructures Applied in Head and Neck Cancer. In *Nanomedicine and Cancer*; 1st Ed. Preedy, V.R., Srirajaskanthan, R., Eds.; Nanoscience Applied to Health and Medicine Series; Science Publishers: Enfield, NH, **2011**, 373-395; ISBN 978-1-57808-727-3.

8. Yen, C.-W.; Hayden, S.C.; Dreaden, E.C.; Szymanski, P.; El-Sayed, M.A., Tailoring Plasmonic and Electrostatic Field Effects to Maximize Solar Energy Conversion by Bacteriorhodopsin, the Other Natural Photosynthetic System. *Nano Letters*, **2011**, 11 (9), 3821–3826.

7. Dreaden, E.C.; Mackey, M.A.; Huang, X.; Kang, B.; El-Sayed, M.A., Beating Cancer in Multiple Ways Using Nanogold. *Chemical Society Reviews*, **2011**, 40 (7), 3391–3404. PMCID: PMC5875987

6. Dreaden, E.C.; Neretina, S.; Qian, W.; Hughes, R.A.; Preston, J.S.; Mascher, P; El-Sayed, M.A., Plasmonic Enhancement of Nonradiative Charge Carrier Relaxation and Proposed Effects from Enhanced Radiative Electronic Processes in Semiconductor-Gold Core-Shell Nanorod Arrays. *Journal of Physical Chemistry C*, **2011**, 115, 5578–5583.

5. Dreaden, E.C.; Mwakwari, S. C.; Sodji, Q. H.; Oyelere, A. K.; El-Sayed, M. A., Tamoxifen-Poly(ethylene glycol)-Thiol Gold Nanoparticle Conjugates: Enhanced Potency and Selective Delivery for Breast Cancer Treatment. *Bioconjugate Chemistry*, **2009**, 20, 2247–2253. PMCID: PMC2839930

4. Neretina,S.; Dreaden,E.C.; Qian,W.; Hughes,R.A.; Preston,J.S.; Mascher, P.; El-Sayed, M.A., The Dependence of the Plasmon Field Induced Nonradiative Electronic Relaxation Mechanisms on the Gold Shell Thickness in Vertically Aligned CdTe–Au Core–Shell Nanorods. *Nano Letters*, **2009**, 9 (11), 3772–3779.

3. Neretina, S.; Qian, W.; Dreaden, E.C.; El-Sayed, M. A.; Hughes, R. A.; Preston, J. S.; Mascher, P., Exciton Lifetime Tuning by Changing the Plasmon Field Orientation with Respect to the Exciton Transition Moment Direction: CdTe-Au Core-Shell Nanorods. *Nano Letters*, **2009**, 9 (3), 1242-1248.

2. Dickerson, E. B.;† Dreaden, E.C.;† Huang, X.; El-Sayed, I. H.; Chu, H.; Pushpanketh, S.; McDonald, J. F.; El-Sayed, M. A., Gold nanorod assisted near-infrared plasmonic photothermal therapy (PPTT) of squamous cell carcinoma in mice. *Cancer Letters*, **2008**, 269 (1), 57-66. PMCID: PMC3413727

1. Neretina, S.; Qian, W.; Dreaden, E.C.; El-Sayed, M. A.; Hughes, R. A.; Preston, J. S.; Mascher, P., Plasmon field effects on the nonradiative relaxation of hot electrons in an electronically quantized system: CdTe-Au core-shell nanowires. *Nano Letters*, **2008**, 8 (8), 2410-2418.

PATENTS

Rafiq, S.; Dreaden, E.C.; Nawshad, A.K.M.; Uricoli, B.; 2021 Nov. Improving Manufacturing of Therapeutic Immune Cell with cytokine-loaded microparticles, U.S., Patent Appl. #63/264,727, 2021.

Dreaden, E.C.; Kelvin, J.M.; Perdue, L.A.; DeRyckere, D.; Graham, D.K.; Jain, J.; 2021 December. Methods of Treating Cancer Using Liposomal Particles Comprising Anticancer Agents and Pharmaceutical Compositions Related Thereto. U.S., Patent Appl. #63/291,548 pending.

Dreaden, E.C.; Do, P.; Perdue, L.A.; 2020 June. Photolysis to Unlock Caged Protein Therapeutics. U.S., Patent Appl. #17/616,917, 2020.

Dreaden, E.C., Do, P., Henry, C.J., Porter, C.C., Immune Cell Redirecting Therapies. U.S., Patent Appl. #63/011,026, 2020.

Dreaden, E.C.; Kelvin, J.M.; Perdue, L.A.; DeRyckere, D.; Graham, D.K.; 2018 October. Combination Therapies for Leukemia. United States patent 62/747538 pending.

Dreaden, E.C.; Hammond, P.T.; Kong, Y.W.; Yaffe, M.B.; 2018 Feb. Polymer Blend-Nucleic Acid Complexes for RNA Interference Therapy. Pending.

Barbario, A.E.; Echavarria, S.C.; Melo, M.B.; Tokatlian, Talar; Dreaden, E.C.; Hammond, P.T.; Irvine, D.J; 2018 October. Layer-by-Layer nanoparticles for cytokine therapy in cancer treatment. United States patent 16/175311 pending.

Dreaden, E.C.; Hammond, P.T.; 2014 April. Nanotechnologies for Tumor-Targeted Horizontal Blockade of MAPK and PI3K. Pending.

Dreaden, E.C.; Hammond, P.T.; 2014 April. Multimodal Tumor-Targeting Polyelectrolyte Drug Carriers. Pending.

Dreaden, E.C.; Oyelere, A.K.; Gryder, B.; El-Sayed, M.A.; 2012 June. Nanotechnologies for Targeting and Immunomodulation of Breast and Brain Tumor-Associated Macrophages. 61/655,733 pending.

Dreaden, E.C.; Oyelere, A.K.; Gryder, B.; El-Sayed, M.A.; 2012 May. Endocrine Targeted Nanotechnologies for Breast, Prostate, Ovarian, and other Hormone-Associated Cancers. 61/652,576 pending.

Oyelere, A.K.; El-Sayed, M.A.; Dreaden, E.C.; 2010 Sept. 24, Targeted Cellular Delivery of Nanoparticles. United States patent appl 12/890,519.

TEACHING EXPERIENCE

Instructor, Georgia Institute of Technology and Emory University, Atlanta, GA
- Tissue Engineering, BMED 6794 — 2019 – 2020, 2020 – 2021

Teaching Assistant, Georgia Institute of Technology, Atlanta, GA
- General Chemistry Lecture — 2006
- General Chemistry Laboratory — 2006
- Organic Synthesis Laboratory — 2007

MENTORING

Undergraduate Research Mentor, Dhruv Miglani; Georgia Inst of Tech, Biomedical Engineering	2022 –
Research Fellow Mentor, Juhi Jain, MD; Emory University, Pediatric Hematology-Oncology	2019 – 2021
Graduate Research Mentor, Biaggio Uricoli; Georgia Tech and Emory University, Biomedical Engineering	2018 –
Undergraduate Research Mentor, Andy Chyong; Georgia Inst of Tech, Biomedical Engineering	2018 –
Undergraduate Research Mentor, Emma Costanza; Georgia Inst of Tech, Biomedical Engineering	2018 – 2021
High School Research Mentor, Centennial High School, GA; Isabelle Du Plessis	2018
Postdoctoral Research Mentor, Priscilla Do; Emory University, Biomedical Engineering	2018 –
Undergraduate Research Mentor, Hye Ryong Kim; Georgia Inst of Tech, Biomedical Engineering	2018
Undergraduate Research Mentor, Katherine Genty; Georgia Inst of Tech, Biomedical Engineering	2018

Undergraduate Research Mentor, Kathleen Imbach; Georgia Institute of Technology, Biology	2018
Graduate Research Mentor, Lacey Perdue; Georgia Tech and Emory University, Biomedical Engineering	2017 –
Graduate Research Mentor, James Kelvin; Georgia Tech and Emory University, Biomedical Engineering	2017 –
High School Research Mentor, Oak Park and River Forest High School, IL; Paige Carroll	2017
High School Research Mentor, Massachusetts Institute of Technology; Paige Gallagher	2015
MIT-K12 Project Team Mentor, Massachusetts Institute of Technology	2012 – 2014
Youth Mentor, Big Brothers Big Sisters of Metro Atlanta; Atlanta, GA	2008 – 2012
Graduate Mentor, Georgia Institute of Technology, D. Snare, S. Hayden, P. Bagchi, C. Ruschman, S. Lee	2007 – 2012
Undergraduate Research Mentor, Georgia Institute of Technology, L. Romero	2011 – 2011
Undergraduate Research Mentor, NNIN-REU, F. O'Connell	2010 – 2010
Undergraduate Research Mentor, Georgia Institute of Technology, M. Kieffer	2009 – 2010
Undergraduate Research Mentor, Georgia Institute of Technology, L. Tankesley	2008 – 2008
Undergraduate Research Mentor, Georgia Institute of Technology, N. Bloodworth	2008 – 2009
Undergraduate Research Mentor, NSF-REU, O. Dellanoy-Bruno	2008 – 2008
Youth Mentor, Big Brothers Big Sisters of Metro Atlanta; Stockbridge, GA	2000 – 2002

LEADERSHIP

Committees and Appointments:

Member, Imagine, Innovate, and Impact (I3) Award Committee, Emory School of Medicine	2022 –
Chair, Program Faculty Subcommittee, Biomedical Engineering, GT/Emory	2021 –
Chair, Society for Biomaterials Annual Meeting Symposium: 'Immune Cell Interfaces'	2022
Chair, Biomedical Engineering Society 2021 Symposium: 'Cancer Immunotherapy'	2021
Vice-Chair, BioInterfaces Special Interest Group (SIG), Society for Biomaterials	2021 –
Member, ACS IRG Executive Committee, Winship Cancer Institute	2020 – 2022
Member, Woodruff Fellowship Committee, Emory University	2019 – 2020
Co-Chair, Society for Biomaterials 2019 Symposium: 'Immunomodulatory Biomaterials'	2019
Member, Graduate Committee, Biomedical Engineering, GT/Emory 2018 – 2019, 2019 – 2020, 2020 – 2021,	2021 – 2022
Co-Chair, BMES 2018 Symposium: 'Cancer Immunoengineering'	2018
Co-Chair, BMES 2018 Symposium: 'Photoresponsive Nanomedicines and Immunotherapies for Cancer'	2018
Co-Chair, Society for Biomaterials Annual Meeting Symposium: 'Cancer Nanotechnologies'	2018
Member, Graduate Recruitment and Admissions Committee, Biomedical Engineering, GT/Emory	2017 – 2019
Chair, American Chemical Society Annual Meeting, 'Biological and Biomedical Polymers'	2015
Departmental Review (Visiting) Committee, MIT Corporation	2015 – 2016
Co-Chair, BMES 2013 Symposiump: 'Nanotechnologies for Cancer Detection and Treatment'	2013
Chemistry in Cancer Research (CICR) Working Group (AACR)	2013 –
MIT Presidential Advisory Committee, Toxic Chemicals	2012 – 2013

Grant Review:

Ad Hoc, NCI Clinical and Translational Cancer Research Special Emphasis Study Section, NIH NCI	2022
Ad Hoc, Biomedical Engineering 2 Study Section, NSF GRFP	2022
Ad Hoc, Pilot Grant Study Section, Aflac Cancer and Blood Disorders Center	2022
Ad Hoc, ACS Pilot Grant Study Section, Winship Cancer Institute	2022
Ad Hoc, SOM I^3 Wow! Research Grants, Emory School of Medicine	2022
Ad Hoc, Biological Discoveries Through Chemical Innovation (BDCI) Accelerator Study Section, Emory University	2021
Ad Hoc, Immuno-Oncology Research Special Emphasis Study Section, NIH DTCS	2020
Ad Hoc, Therapeutic Development Branch Study Section, NIH NCATS	2020
Ad Hoc, US/Egypt Joint Fund Study Section, National Academies of Sciences, Engineering, & Medicine (NASEM)	2020
Ad Hoc, Lung SPORE Pilot Grant Study Section, Winship Cancer Institute, Emory University	2020
Ad Hoc, OPUS Study Section, Poland National Science Center	2019, 2021
Ad Hoc, ITF Study Section, Hong Kong Innovation & Technology Commission	2018
Ad Hoc, Petit Scholars Study Section, Georgia Institute of Technology	2018
Ad Hoc, President's Undergraduate Research Awards (PURA) Study Section, Georgia Inst of Technol	2018Sp, 2018F
Ad Hoc, Winship Invest$ Study Section, Winship Cancer Institute, Emory University	2018, 2020, 2021

Journal Peer Review:

Nature Medicine (NPG)
Bioconjugate Chemistry (ACS)
Nature Communications (NPG)
Cancer Research (AACR)
Biomaterials (Elsevier)
ACS Nano (ACS)

Chemical Society Reviews (RSC)
Nano Today (Elsevier)
Small (Wiley)
Acta Biomateriala (Elsevier)
Applied Physics Letters (AIP)
IEEE Selected Topics in Quantum Electronics (IEEE)
Biomacromolecules (ACS)
Journal of Materials Chemistry A/B/C (RSC)
New Journal of Chemistry (RSC)
AIP Advances (AIP)
Eur. J. Pharm. Biopharm. (Elsevier)
Langmuir (ACS)
Dalton Transactions (RSC)
Scientific Reports (NPG)
Nanomedicine (Future Science)
Macromolecules (ACS)
Science Immunology (AAAS)
Frontiers in Bioengineering and Biotechnology (Frontiers)
ACS Applied Materials & Interfaces (ACS)
Science Advances (AAAS)
Acta Biomaterialia (Elsevier)
Nanotheranostics (Iveyspring)
Journal of Applied Physics (AIP)
Journal of Moelcular Biology (Elsevier)
Polymer Chemistry (RSC)
Chemical Communications (RSC)
Colloids and Surfaces (Elsevier)
Materials Horizons (RSC)
Therapeutic Delivery (Future Science)
Medicinal Chemical Communications (RSC)
ACS Biomaterials Science and Engineering (ACS)
Journal of Nanomaterials (Hindawi)
Analyst (RSC)
Journal of Physical Chemistry B/C (ACS)
ACS Applied Bio Materials (ACS)
RSC Advances (RSC)
Chemical Research in Toxicology (ACS)
Metallomics (RSC)
Nanoscale (RSC)
Bioengineering and Translational Medicine (AIChE)
J Biomedical Materials Research: Part A (Wiley)

OUTREACH

Scientific Collaborator, Science.Art.Wonder Annual Exhibition	2020
Exhibitor, Laboratory for Molecular Immunoengineering, Atlanta Science Festival	2019
"The Engineer Will See You Now" *Southeastern Pediatric Research Conference* (Pediatric Res Alliance)	2018
FOCUS (URM) Winter Program, BME Panelist	2018 – 2019
"Light-Activated Therapy Kills Cancer Cells" *Cancer Discovery* (Sept 2015, AACR)	2015
"Tiny Technologies" *NBC Learn* (NBC Universal)	2015
"Bridging the Gap: Science With/IN/Sight" (MIT, Dana-Farber, MGH)	2014
"Cell Picture Show" *Cell* (Cell Press)	2014
"The Art of Science" MIT Technology Review	2014
"Fighting Cancer" WCVB Chronicle (ABC)	2012
Consultant, MIT+Kahn Academy Educational Outreach	2012 – 2014
Cambridge Science Festival Volunteer	2012 – 2017
STEM Youth Outreach Program, National Nanotechnology Infrastructure Network (NNIN)	2007 – 2012
Georgia Tech Future Faculty Jobs Group	2009 – 2010
US Representative, Euroscience Forum; Torino, Italy	2010
US Representative, NSF US-Egypt Advanced Studies Institute (ASI) Workshop, Cairo, Egypt	2010 – 2010

PROFESSIONAL MEMBERSHIPS

American Association of Immunologists (AAI) 2019 –
Society for Biomaterials (SFB) 2018 –
American Institute of Chemical Engineers (AIChE) 2014 –
- Pharmaceutical and Bioengineering Division
- Materials Engineering and Sciences Division

American Association of Cancer Research (AACR) 2013 –
- Chemistry in Cancer Research (CICR) Division
- Cancer Immunology (CIMM) Division

Materials Research Society (MRS) 2013 –
Biomedical Engineering Society (BMES) 2013 –
American Association for the Advancement of Science (AAAS) 2011 –
American Chemical Society (ACS) 2006 –
- Nanoscience Division
- Medicinal Chemistry Division
- Physical Chemistry Division
- Inorganic Chemistry Division

PRESENTATIONS

58. Dreaden EC, Re-engineering Cytokines for Cancer Immunotherapy. **AiR Advances in Research Meeting**, Aflac Cancer and Blood Disorders Center, Atlanta, GA, 2022.

57. Dreaden EC, Multivalent, T Cell-Engaging Cytokines for Leukemia Immunotherapy. **Annual Meeting of the Society for Biomaterials**, Baltimore, MD, 2022.

56. Dreaden EC, Combination Nanomedicines for Acute Leukemia. **Annual Meeting of the Society for Biomaterials**, Baltimore, MD, 2022.

55. Dreaden EC, Light-Guided Immunotherapy via Cytokine-Polymer Conjugates. **Annual Meeting of the Institute of Biological Engineering**, Athens, GA, 2022.

54. Dreaden EC, Multivalent, T Cell-Engaging Cytokines for Leukemia Immunotherapy. **Annual Meeting of the Institute of Biological Engineering**, Athens, GA, 2022.

53. Dreaden, E.C.; Self-Assembled Antibody Suprastructures as Combination Cancer Immunotherapy. **BMES 2021 National Meeting**, 2021 Oct 22-26, Orlando, FL.

52. Dreaden, E.C.; Hacking Immune Cell Signaling Networks with Light-Activated Cytokines. **BMES 2021 National Meeting**, 2021 Oct 22-26, Orlando, FL.

51. Dreaden, E.C.; Coöpting T Cell-Dependent Immunity with Modular Immunotherapies. **ACS 2021 National Meeting**, 2021 Aug 22-26, Atlanta, GA.

50. Dreaden, E.C.; Activating and Reprogramming Cytokine Signaling Networks with Light. **ACS 2021 National Meeting**, 2021 Aug 22-26, Atlanta, GA.

49. Dreaden, E.C.; Nanometer-Scale Assembly and High-Throughput Screening of Bispecific T Cell Engaging Cytokine (BiTEokine) Immunotherapies. **Society for Biomaterials 2021 National Meeting**, 2021 Apr 20-23, Chicago, IL.

49. Dreaden, E.C.; Light-Triggered Immune Activation by Photolabile PEG-Modified Cytokines. **Society for Biomaterials 2021 National Meeting**, 2021 Apr 20-23, Chicago, IL.

47. Dreaden, E.C.; Photo-regulated control of cytokine signaling via bioinspired, polymer-induced latency. **ACS 2020 National Meeting**, 2020 Aug 17-20, San Francisco, CA.

46. Dreaden, E.C.; Rapid discovery of multivalent T cell-redirecting immunotherapies for leukemia. **ACS 2020 National Meeting**, 2020 Aug 17-20, San Francisco, CA.

45. Dreaden, E.C.; Reprogramming Cytokine Therapies via Macromolecular Engineering (or A Tale of Two Immunotherapies), **Emory University**, Biological Discovery through Chemical Innovation (BDCI) Meeting, 2020 Jun 12, Atlanta, GA.

44. Dreaden, E.C.; Bioinspired Optical Control of Cytokine Signaling via Polymer-Induced Latency, **Winship Cancer Institute**, Cancer Immunology Retreat, 2020 Jan 10, Atlanta, GA.

43. Dreaden, E.C.; Immune Modulation via Engineered Macromolecules. Invited Seminar, **Winship Cancer Institute**, DDT Retreat. 2019 Aug 16, Atlanta, GA.

42. Dreaden, E.C.; Precision Nanomedicines for Synergistic Combination Therapy of Pediatric Leukemia. Invited Seminar, **Aflac Center for Cancer and Blood Disorders, Children's Healthcare of Atlanta**, Fall Retreat. 2018 Sept 25, Atlanta, GA.

41. Dreaden, E.C.; Engineered Combination Therapies and Immunotherapies for Cancer. Invited Seminar, **Emory University,** Cancer Biology. 2018 Sept 10, Atlanta, GA.

40. Dreaden, E.C.; Chemosensitizing Solid Tumors to DNA Damaging Chemotherapy via Polymer-Mediated RNA Interference. Invited Seminar, Pediatric Research Alliance. **Southeastern Pediatric Research Conference**. 2018 June 8, Atlanta, GA.

39. Dreaden, E.C.; Engineering Tools for Combination Cancer Therapy and Immunotherapy. Invited Seminar, Winship Cancer Institute. **Emory University**. 2018 April 5, Atlanta, GA.

38. Dreaden, E.C.; Drugging DNA Damage Response in Advanced Solid Tumors via Peptide-Mediated RNA Interference. Invited Seminar, **Georgia Institute of Technology and Emory University**. 2017 Sept 15, Atlanta, GA.

37. Dreaden, E.C.; Molecular and Nanoscale Tools for Rational Combination and Immune Modulatory Cancer Therapy. Invited Seminar, **Aflac Center for Cancer and Blood Disorders, Children's Healthcare of Atlanta**. 2017 Sept 5, Atlanta, GA.

36. Dreaden, E.C.; Chemically Tailoring Rational Combination Therapies against Metastatic Tumors. Invited Seminar, **University of Michigan Medical Schoo**l. 2017 Feb 16, Ann Arbor, MI.

35. Dreaden, E.C.; Polymer and Peptide Nanotechnologies for Rational Combination Therapy of Tumors Metastases. Invited Seminar, **University of Illinois at Urbana-Champaign**, Department of Chemistry. 2017 Feb 7, Champaign, IL.

34. Dreaden, E.C.; Engineering Peptide and Polymer Nanotechnologies for Rational Combination Therapy of Tumors Metastases. Invited Seminar, **Washington University in St. Louis**, Department of Biomedical Engineering. 2017 Jan 31, St. Louis, MO.

33. Dreaden, E.C.; A Tale of Two Particles: Engineering Rational Combination Therapies against Metastatic Tumors. Invited Seminar, **University of Wisconsin-Madison**, School of Pharmacy. 2016 May 19, Madison, WI.

32. Dreaden, E.C.; Kong, Y.W.; Yaffe, M.B.; Hammond, P.T.; A tale of two particles: Polymer nanotechnologies for rational combination therapies against metastatic tumors. **251st ACS National Meeting**. 2016 Mar 14-16, San Diego, CA.

31. Dreaden, E.C.; Engineering Rational Combination Therapies against Metastatic Tumors. Invited Seminar, **Boston University**, Department of Biomedical Engineering. 2016 Jan 21, Boston, MA.

30. Dreaden, E.C.; Nanoscale Precision Medicines: Gold Colloids and Engineered Polymers in Translational Cancer Therapeutics. Invited Seminar, **ETH Zurich**, Institute for Chemical and Bioengineering. 2015 Aug 24, Zurich, Switzerland.

29. Dreaden, E.C.; Kong, Y.W.; Yaffe, M.B.; Hammond, P.T.; Self-Assembled Peptide Amphiphile Nanoparticles for Rational Combination Therapies against Metastatic Solid Tumors. **250th ACS National Meeting**. 2015 Aug 16-20, Boston, MA.

28. Dreaden, E.C.; Kong, Y.W.; Yaffe, M.B.; Hammond, P.T.; Chemosensitizing Metastatic Tumors with Peptide Amphiphile-Mediated Silencing of p38/MK2 Pathway Signaling. **Gordon Research Conference** on Cancer Nanotechnology. 2015 July 28 – June 3, West Dover, VT.

27. Dreaden, E.C.; Turning the pepTide on Cancer: Chemosensitizing Metastatic Tumors with Peptide Amphiphile-Mediated Silencing of MK2. **MIT-Koch Institute FOCUS Seminar**. 2015 June 5, Cambridge, MA.

26. Dreaden, E.C.; Nanoscale Biomaterials for Rational Combination Therapies against Metastatic Solid Tumors. Invited Seminar, **University of Southern California**, Department of Chemical Engineering and Materials Science. 2015 April 23, Los Angeles, CA.

25. Dreaden, E.C.; Nanoscale Biomaterials for Rational Combination Therapies against Metastatic Solid Tumors. Invited Seminar, **Ecole Polytechnique Fédérale de Lausanne**, Institute of Materials. 2015 Mar 17, Lausanne, Switzerland.

24. Dreaden, E.C.; Nanoscale Biomaterials for Rational Combination Therapies against Metastatic Solid Tumors. Invited Seminar, **University of Washington**, Department of Bioengineering. 2015 April 2, Seattle, WA.

23. Dreaden, E.C.; Drugging Tumors on the Nanoscale: Rational Combination and RNA Interference Therapy. Invited Seminar, **Imperial College London**, Department of Bioengineering. 2015 Jan 15, London, UK.

22. Dreaden, E.C.; Kong, Y.W.; Yaffe, M.B.; Hammond, P.T.; Self-Assembled Polymer Nanomedicines for Synergistic and Synthetic Lethal Drugging of Breast and Ovarian Tumors. Annual Meeting of the **American Institute of Chemical Engineers**. 2014 Nov 16-21, Atlanta, GA.

21. Dreaden, E.C.; Kong, Y.W.; Yaffe, M.B.; Hammond, P.T.; Drugging Metastatic and Locally-Disseminated Solid Tumors Using RNAi Combination Chemotherapy. Annual Meeting of the **Biomedical Engineering Society**. 2014 Oct 22-25, San Antonio, TX.

20. Dreaden, E.C.; A Tale of Two Particles: Drugging Solid Tumors with Smart Polymer Nanotechnologies, **Google[x]**, Google Life Sciences Division. 2014 Sept 24, Mountain View, CA.

19. Dreaden, E.C.; Kong, Y.W.; Yaffe, M.B.; Hammond, P.T.; Synergistic and Synthetic Lethal Drugging of Breast and Ovarian Tumors Using Self-Assembled Polymer Nanomedicines. **Gordon Research Conference** on Drug Carriers in Medicine & Biology. 2014 Aug 17-22, Waterville Valley, NH.

18. Dreaden, E.C.; Morton, S.W.; Deng, J.; Yaffe, M.B.; Hammond, P.T.; Self-Assembled Polymer Drug Carriers for Rational Combination and RNA Interference Therapy of Solid Tumors. 248th **ACS National Meeting**. 2014 Aug 10-14, San Francisco, CA.

17. Dreaden, E.C.; Morton, S.W.; Deng, J.; Hammond, P.T.; Layer-by-Layer Nanoparticles: Rational Delivery of Rational Drug Combinations. Fall Meeting of the **Materials Research Society**. 2013 Dec 1-6, Boston, MA.

16. Dreaden, E.C.; Morton, S.W.; Deng, J.; Hammond, P.T.; LbL Nanoparticles for Combination Cancer Therapies: Receptor Targeting and Microenvironment Response. Annual Meeting of **Biomedical Engineering Society**. 2013 Sept 25-28, Seattle, WA.

15. Dreaden, E.C.; Morton, S.W.; Deng, J.; Shopsowitz, K.E., Hammond, P.T.; Layer-by-Layer (LbL) Nanoparticles for Active Targeting of Tumor-Initiating and Drug-Resistant Breast Carcinoma. 2013 **Harvard Dana-Farber** Cancer Biology Departmental Retreat. 2013 July 26, Boston, MA.

14. Dreaden, E.C.; Morton, S.W.; Deng, J.; Shopsowitz, K.E., Hammond, P.T.; Active Targeting of Triple-Negative Breast Tumors Using Hypoxia-Responsive Layer-by-Layer Nanoparticles. **Gordon Research Conference** on Cancer Nanotechnology. 2013 July 14-19, West Dover, VT.

13. Dreaden, E.C.; Self-Assembled Polymer Nanotechnologies for Multimodal Drug Delivery. Invited Seminar, **Servier Pharmaceutical Laboratories**. 2013 May 28-29, Boston, MA.

12. Dreaden, E.C.; Morton, S.W.; Deng, J.; Hammond, P.T.; LbL Nanoparticles for Combination Cancer Therapies: Receptor Targeting and Microenvironment Response. 245th **ACS National Meeting**. 2013 April 7-11, New Orleans, LA.

11. Dreaden, E.C.; Morton, S.W.; Deng, J.; Hammond, P.T.; Integrated Polymer Cancer Nanotechnologies. 2012 **Koch Institute Fall Retreat**. 2012 Oct 15-16, Hyannis, MA.

10. Dreaden, E.C.; Beyond Gilding the Lily: Leveraging Gold Nanotechnologies in Cancer Diagnostics and Therapeutics. 2011 **Graduate Awards Symposium**. 2011 Oct 28, Atlanta, GA.

9. Dreaden, E.C.; Gryder, B.G.; Austin, L.A.; Mwakwari, S. C.; Sodji, Q. H.; Tene Defo, B.A.; Hayden, S.C.; Oyelere, A.K.; El-Sayed, M.A., Hormone Receptor Targeted Nanotechnologies for Breast and Prostate Cancer Treatment. Second Annual Investigators Meeting of the Phase II **NCI Alliance for Nanotechnology in Cancer** (ANC). 2011 Sept 31-23, Boston, MA.

8. Dreaden, E.C.; Dickerson, E.B.; El-Sayed, I.H.; Huang, X.; McDonald, J.F.; Oyelere, A.K.; El-Sayed, M.A., Anti-Cancer Gold Nanoparticle Conjugates: Endocrine Targeted Treatment Strategies and Laser Photothermal Therapy. **NSTI Nanotech 2011** Conference and Expo. 2011 Jun 13-16, Boston, MA.

7. Dreaden, E. C.; Gold Nanoparticles in Cancer Diagnostics and Therapeutics. Invited Seminar, 2011 Fellows of the **Center for Drug Design, Development, and Delivery** (CD4) Meeting. 2011 Feb 8, Atlanta, GA.

6. Dreaden, E. C.; Neretina, S.; Qian, W.; Hughes, R.A.; Preston, J.S.; Mascher, P; El-Sayed, M.A., Plasmonic Enhancement of Nonradiative Charge Carrier Relaxation in Vertically Aligned Semiconductor-Metal Core-Shell Nanorod Arrays. 2011 **Georgia Tech Research Innovation Conference** (gtRIC). 2011 Feb 8, Atlanta, GA.

5. Dreaden, E. C.; Mwakwari, S.C.; Sodji, Q.H.; Oyelere, A.K.; Dickerson, E.B.; Huang, X.; Chu, H.; Pushpanketh, S.; El-Sayed, I.H.; McDonald, J.F.; El-Sayed, M.A. , Multimodal Cancer Treatment Strategies Using Small-Molecule Targeted Gold Nanoparticles. **Georgia Life Sciences Summit** 2010. 2010 Oct 28, Atlanta, GA.

4. Dreaden, E. C.; Neretina, S.; Qian, W.; Hughes, R.A.; Preston, J.S.; Mascher, P; El-Sayed, M.A., Plasmon-Exciton Coupling in Vertically Aligned Core-Shell CdTe-Au Nanorod Arrays. The **US-Egypt Advanced Studies Institute** (ASI) on "Nanomaterials and Nanocatalysis for Energy, Petrochemicals and Environmental Applications". 2010 Mar 27 – April 5, Cairo, Egypt.

3. Dreaden, E. C.; Mwakwari, S. C.; Sodji, Q. H.; Oyelere, A. K.; El-Sayed, M. A., Enhancing Breast Cancer Drug Potency Via Nanoparticle Ligation. 2010 Meeting of the **Integrative BioSystems Institute** (IBSI). 2010 Mar 3, Atlanta, GA.

2. Dreaden, E. C.; Mwakwari, S. C.; Sodji, Q. H.; Dickerson, E. B.; Huang, X.; Chu, H.; Pushpanketh, S.; El-Sayed, I. H.; Oyelere, A. K.; McDonald, J. F.; El-Sayed, M. A., Gold Nanoparticles in Cancer Drug Delivery and Photothermal Therapeutics. 2010 **Georgia Tech Research Innovation Conference** (gtRIC). 2010 Feb 8, Atlanta, GA.

1. Dreaden, E. C.; Mwakwari, S. C.; Sodji, Q. H.; Dickerson, E. B.; Huang, X.; Chu, H.; Pushpanketh, S.; El-Sayed, I. H.; Oyelere, A. K.; McDonald, J. F.; El-Sayed, M. A., Gold Nanoparticles in Cancer Drug Delivery and Photothermal Therapeutics. **Research in Cancer Biology and Technology**. 2009 Nov 19, Atlanta, GA.