James E. Dahlman, Ph.D. | james.dahlman@bme.gatech.edu | www.dahlmanlab.org

Appointments

2016 – Assistant Professor, Department of Biomedical Engineering, Georgia Institute of Technology / Emory
Member, Parker H. Petit Institute for Bioengineering and Biosciences, Georgia Institute of Technology
2015 – LSRF post-doctoral fellow, Genome Engineering, Broad Institute of Harvard and MIT
Advisor: Feng Zhang
2015 – Ph.D., Medical Engineering / Medical Physics, MIT and Harvard Medical School HST Program
Advisors: Robert Langer and Daniel Anderson
Committee Members: Robert Langer, Daniel Anderson, Philip Sharp, Sangeeta Bhatia
2009 – B.S. Biomedical Engineering, Wright State University

Summary

(1) Pioneering DNA barcoded nanoparticles to quantify how thousands of nanoparticles deliver drugs *in vivo*. Created DNA barcodes that (i) quantify nanoparticle delivery at doses 10^9x lower than fluorescence and (ii) screen for functional mRNA (i.e., protein production) or siRNA (i.e., protein silencing) delivery *in vivo*. (2) Currently developing novel omics-based methods to track delivery of nucleic acids in rare cells *in vivo* at single cell resolution. (3) 'dead' sgRNAs that activate gene A and delete gene B in a single cell. (4) Designed multiple nanoparticles that deliver RNA to new cell types in non-human primates and are licensed for clinical development.

In 2018, named to Technology Review TR35. In 2019, DahlmanLab DNA barcoding mentioned by the World Economic Forum and Scientific American in an article describing Top 10 Emerging Technologies. Young faculty recognitions from Bayer, Parkinson's Disease Foundation, Journal of Materials Chemistry B, SERLC, Cell / Molecular Bioengineering (CMBE), Bioengineering and Translational Medicine, Biomedical Engineering Society, American Society of Gene and Cell Therapy, and Controlled Release Society. As a trainee: NSF, NDSEG, MIT Presidential, Whitaker, NIH Oxford Cambridge, and LSRF fellowships. One of 13 US / UK students to receive Weintraub for Ph.D. thesis work.

Seven department-, university, and college-wide Georgia Tech teaching awards since starting to teach in 2017; perfect (5.0 / 5.0) teaching scores for core genetics / cell biology course with 55 students in the section. Active advocate of mental health; Chair, Georgia Tech BME Mental Health Subcommittee.

Founder and former Board Chairman of Guide Therapeutics (biotech company based on our DNA barcoding). Experienced in raising VC money, deal structure analyses, and partnership negotiations. Strong ties to leading venture capital firms, gene therapy biotechs, and pharma.

Scientific Vision

My vision is to apply systems biology and 'big data' approaches to nanomedicine in order to create targeted gene therapies in 'second generation' tissues such as lung, spleen, bone marrow, muscle, and heart. I do this by combining high throughput chemical engineering, nanotechnology, and genomics. My background is in Materials Science (Ph.D., MIT, Nanoparticles for non-liver siRNA delivery), Medicine (Harvard), and Cas9 (Post-doc, Broad Institute, CRISPR-Cas9). I have three long-term goals. (1) Fundamentally improve how nanomedicines are studied *in vivo*, in order to identify promising gene therapies more efficiently. E.g., we combined high throughput chemistry and genomics to track thousands of nanoparticles *in vivo*. (2) Elucidate the biology of drug delivery. Pathways that affect nanoparticles *in vivo* are poorly understood. Using small molecules, knockout mice, and CRISPR, we perturb genes to study how pathways affect nanoparticle targeting *in vivo*. We are also developing novel methods to study how cellular heterogeneity affects nanoparticle delivery at the single cell level *in vivo*, with the goal of applying 'multi-omic' readouts to nanomedicine. (3) Design practical high throughput *in vivo* biological assays. We develop systems to perform cell type-specific high throughput (i) knockout and (ii) gene upregulation studies *in vivo*.

Honors and Awards

2020 GaTech BME Department Outstanding Teaching Recognition for Remote Instruction
Controlled Release Society Gene Delivery and Gene Editing Young Investigator Award
Georgia Tech Thank A Teacher Certificate
ASGCT Outstanding New Investigator Award
Georgia Tech Outstanding Achievement in Early Career Research Award - One GT Professor / Year
Student Recognition of Excellence in Teaching: Class of 1934 Award
Georgia Bio 'Deals of the Year' Award
Invited: Special 'Futures' Issue of Bioengineering and Translational Medicine (BioTM)

2019 Parker H. Petit Institute for Bioengineering and Biosciences Entrepreneurship Award
BMES Rita Schaffer Young Investigator Award
Barcoding mentioned by World Economic Forum in Top 10 Emerging Technologies of 2019
Above and Beyond Award, Georgia Tech Biomedical Engineering Students
Invited: Young Investigator – Cellular and Molecular Bioengineering (CMBE) Journal

2018 **MIT Tech Review TR35** – 35 innovative people in world <35 years old
Drug delivery co-chair for Robert Langer birthday symposium
Invited: Emerging Investigator Issue – Journal of Materials Chemistry B
Women In Engineering Teaching Award - only 2 faculty members GaTech College of Engineering
Named 1 of 6 'Transcendent Teachers' for Georgia Tech
Class of 1940 Course Teaching Effectiveness Award (12 courses awarded each year across GaTech)
Excellence in Teaching Award – Georgia Tech Biomedical Engineering

2017 Georgia Tech Teaching Award
Young Investigator Keynote, SERLC Conference

2016 Bayer Young Investigator Award
Parkinson's Disease Foundation Stanley Fahn Jr. Faculty Award

2015 **Weintraub PhD Award in Biological Sciences** – only 13 Ph.D. theses from entire US / UK selected
LSRF Postdoctoral Fellowship

2014 Excellence in Science Award - North American Vascular Biology Inflammation Meeting
Excellence in Applied Cellular and Molecular Biology Award - *Nature Biotech* Symposium

2012 Travel Grant Awardee, Gordon Research Conference on Vascular Biology

2011 Finalist, MIT IDEA^2 Grant Writing Competition

2009 NDSEG Graduate Fellowship
NSF GRFP Graduate Fellowship
NIH Oxford-Cambridge Graduate Fellowship
Whitaker International Research Fellowship
MIT Presidential Graduate Fellowship

2008 NSF REU Fellowship
Wright State Presidential Commendation for Excellence

2007 Barry M. Goldwater Fellowship

DahlmanLab Publications (1st Ph.D. students joined in the fall of 2016)

Research highlighted by STAT News, Scientific American, GQ Brazil, @StartupSpeed, MIT Technology Review, MIT Technology Review, O Globo, ASME, Georgia Tech, MIT, and others.

[&&]Co-corresponding, *Co-first. **DahlmanLab members are bolded.**

1. **Hatit MZC*, Lokugamage MP*, Dobrowolski CN*, Paunovska K,** Vanover D, Beyersdorf J, Peck HE, **Loughrey D, Sato M, Cristian A,** Santangelo PJ, **Dahlman JE.** Under Review, **Nature Nanotechnology.**

2. **Sago CD, Lokugamage MP,** Lindsay KE, **Loughrey D,** Hincapie R, **Krupczak BR, Kalathoor S, Sato M, Fitzgerald JP, Gan Z,** Castro MG, **Paunovska K,** Sanhueza CA, Finn MG, Santangelo PJ, **Dahlman JE.** Reviews received; to be resubmitted, **Nature BME.**

3. **Lokugamage MP*,** Vanover D*, Beyersdorf J*, **Hatit MZC**, Rotolo L, Peck HE, Santangelo PJ[&&], **Dahlman JE[&&].** Reviews received; to be resubmitted, **Nature BME.**

4. Culley MK. Reviews received; to be resubmitted, **Journal of Clinical Investigation.**

5. **Paunovska K, Da Silva Sanchez AJ, Cristian A, Dahlman JE.** Reviews received; resubmitted, **Human Gene Therapy. Invited.**

6. **Paunovska K*, Da Silva Sanchez AJ*,** Foster MT, Loughrey D, Blanchard EL, **Islam FZ, Gan Z,** Mantalaris A, Santangelo PJ, **Dahlman JE**. Increased PIP3 activity blocks nanoparticle mRNA delivery. **Science Advances**, 2020.

7. **Gan Z*, Lokugamage MP*, Hatit MZC, Loughrey D, Paunovska K, Sato M, Cristian A, Dahlman JE.** Nanoparticles containing constrained phospholipids deliver mRNA to immune cells *in vivo* without targeting ligands. **Bioengineering and Translational Medicine**, 2020. **Invited for 'Futures' Issue.**

8. **Lokugamage MP, Gan Z,** Zurla C, **Levin J, Islam FZ, Kalathoor S, Sato M, Sago CD,** Santangelo PJ, **Dahlman JE.** Mild innate immune activation overrides efficient nanoparticle-mediated RNA delivery. **Advanced Materials**, 2019.

   Highlighted by Oligotherapeutics Society.

9. Chen PY, Qin L, Li G, Wang Z, **Dahlman JE** et al. Endothelial TGF-ß signaling drives vascular inflammation and atherosclerosis. **Nature Metabolism**, 2019.

   Highlighted by Nature Metabolism, Genetic Engineering News, Science Daily, MedicalXPress, and others.

10. **Paunovska K, Loughrey D, Sago CD,** Langer R, **Dahlman JE.** Using large datasets to understand nanotechnology. **Advanced Materials**, 2019.

    Highlighted by Journal of Controlled Release.

11. **Lokugamage MP*, Sago CD*, Gan Z, Krupczak BR, Dahlman JE**. Constrained nanoparticles deliver siRNA and sgRNA to T cells *in vivo* without targeting ligands. **Advanced Materials,** 2019.

    Highlighted by Oligotherapeutics Society.

12. Brown JM, **Dahlman JE**, Neuman K, Prata C, Krampert M, Hadwiger P, Vornlocher HP. Ligand conjugated multimeric siRNAs enable multiplexed gene silencing. **Nucleic Acid Therapeutics,** 2019.

13. **Dahlman JE.** How DNA is used to store – and generate – information at extreme scales. Invited, **Scientific American**, 2019.

14. **Sago CD, Krupczak BR, Lokugamage MP, Gan Z, Dahlman JE.** Cell types within the liver microenvironment differentially interact with lipid nanoparticles. **Cell and Molecular Bioengineering**, 2019. **Invited, CMBE 2019 Young Investigators.**

15. Yu Q et al. BOLA3 deficiency controls endothelial metabolism and glycine homeostasis in pulmonary hypertension. **Circulation**, 2019.

16. **Paunovska K, Da Silva Sanchez AJ, Sago CD, Gan Z, Lokugamage MP, Islam FZ, Krupczak BR, Dahlman JE.** Nanoparticles containing oxidized cholesterol deliver mRNA to the liver microenvironment at clinically relevant doses. **Advanced Materials**, 2019.

17. Kofler N, Collins JP, Kuzma J, Marris E, Esvelt K, Nelson MP, Newhouse A, Rothschild LJ, Vigliotti VS, Semenov M, Jacobsen R, **Dahlman JE**, Prince S, Caccone A, Brown T, Schmitz OJ. Editing Nature: Local roots of global governance. **Science**, 2018.

18. **Sago CD*, Lokugamage M*, Islam FZ, Krupczak BR, Sato M, Dahlman JE.** Nanoparticles that deliver RNA to bone marrow identified by *in vivo* directed evolution. **JACS**, 2018.

    Featured on JACS cover.
    Highlighted by Chemistry News.

19. **Sago CD, Lokugamage MP, Paunovska K,** Vanover DA, **Monaco CM, Castro MG,** Anderson S, **Rudoltz TR, Lando G,** Kirschman JL, Willet N, Jang Y, Santangelo PJ, Bryksin AV, **Dahlman JE.** A high throughput *in vivo* screen of functional mRNA delivery identifies nanoparticles for endothelial cell gene editing. **PNAS**, 2018**.**

    Highlighted by GaTech, Scientific American, STAT News, Journal of Controlled Release, Phys.org, GenEng News, Futurity, and others.

20. **Sago CD*, Lokugamage MP*, Lando GN,** Djeddar N, **Shan NN,** Bryksin AV, **Dahlman JE.** Modifying a commonly expressed endocytic receptor retargets nanoparticles *in vivo*. **Nano Letters**, 2018.

    Featured on Nano Letters cover.

21. **Sago CD, Kalathoor S, Islam FZ, Krupczak BR, Dahlman JE**. Barcoding chemical modifications into nucleic acids improves drug stability *in vivo*. **Journal of Materials Chemistry B**, 2018. **Invited, Emerging Investigator Issue.**

    Featured on journal cover.

22. **Lokugamage M, Sago CD, Dahlman JE.** Testing thousands of nanoparticles *in vivo* using DNA barcodes. **Current Opinion in Biomedical Engineering**, 2018.

23. **Paunovska K, Gil CG, Lokugamage M, Sago CD, Sato M, Lando GN, Castro MG,** Bryksin AV, **Dahlman JE.** Analyzing 2,000 *in vivo* drug delivery data points reveals cholesterol structure impacts nanoparticle delivery. **ACS Nano**, 2018**.**

    Highlighted by Journal of Controlled Release, ASME and others.

24. **Paunovska K*, Sago CD*, Monaco CM,** Hudson WH, Castro MG, **Rudoltz T, Kalathoor S,** Vanover DA, Santangelo PJ, Ahmed R, Bryksin AV, **Dahlman JE**. A direct comparison of *in vitro* nanoparticle delivery and *in vivo* nanoparticle delivery using hundreds of nanoparticles reveals a weak correlation. **Nano Letters**, 2018.

    Highlighted by Nature Biotech, Georgia Tech, UPenn, Phys.org, Science Daily, ASME, and others.

25. **Dahlman JE[&&]**, Kauffman KJ*, Xing Y, Shaw TE, Dlott C, Mir Faryal F, Langer R, Anderson DG, Wang E[&&]**.** High throughput *in vivo* therapeutic discovery. **PNAS,** 2017.

Highlighted by MIT, Georgia Tech, University of Florida, Phys.org, and others

Publications from PhD (2009-2015, Robert Langer) and post-doc (2015-2016, Feng Zhang)

26. Tibbitt MW, **Dahlman JE**, Langer R. Emerging frontiers in drug delivery. **JACS**, 2016.

27. Sager HB*, Dutta P*, **Dahlman JE***, Borodovsky A, Fitzgerald K, Heidt T, Courties G, Wojtkiewicz GR, Iwamoto Y, Sebas Y, Khan OF, Xing Y, Shaw TE, Libby P, Swirski FK, Langer R, Weissleder R, Anderson, DG, Nahrendorf M. Five gene RNAi therapy targeted to endothelial cells reduces post-MI vascular inflammation. **Science Translational Medicine,** 2016

    Featured on cover.
    Image named top 10 science images of 2016 by NSF.
    Highlighted by Science, Nature Reviews Cardiology, and Mass General Hospital.

28. Yun S, Budatha M, **Dahlman JE**, Coon BG, Langer R, Anderson DG, Baillie G, Schwartz MA. Integrin alpha5-PDE4D interaction regulates endothelial inflammatory signaling. **Nature Cell Biology,** 2016.

29. **Dahlman JE[&&]**, Abudayyeh OA*, Gootenberg JS, Joung J, Zhang F, Konermann S. Orthogonal gene knockout and activation with a catalytically active Cas9 nuclease. **Nature Biotechnology,** 2015.

    Featured on Nature Biotech cover.
    Highlighted by Nature Methods.

30. **Dahlman, JE***, Barnes C* et al. *In vivo* endothelial siRNA delivery using polymeric nanoparticles with low molecular weight. **Nature Nanotechnology,** 2014.

    Highlighted by MIT, MIT Tech Review, Nature Materials, Nature Medicine, and others.
    Cover Feature.

31. Platt RJ, Chen S, Zhou Y, Yim M, Swiech L, Kempton HR, **Dahlman JE**, Parnas O, Eisenhaure TM, Jovanovico M, Jhunjhunwala S, Graham D., Xavier RJ, Langer R, Anderson DG, Hacohen N, Regev A, Feng G, Zhang F. A Cre-Dependent CRISPR-Cas9 knockin transgenic mouse for efficient *ex vivo* and *in vivo* genome editing. **Cell,** 2014.

32. Xue W*, **Dahlman JE***, Tammela T, Khan OF, Sood S, Dave A, Cai W, Chirino L, Yang GR, Bronson R, Crowley DG, Sahay G, Schroeder A, Langer R, Anderson DG, Jacks T. Small RNA combination therapy for lung cancer. **PNAS,** 2014.

33. Schroeder A, Heller DA, Winslow MM, **Dahlman JE***, Pratt GW, Langer R, Jacks T, Anderson DG. Treating metastatic cancer with nanotechnology. **Nature Reviews Cancer** 2012.

34. Sager HB, Hulsmans M, Lavin KJ, Moreira MB, Courties G, Sun Y, Iwamoto Y, Heidt T, Tricot B, Khan OF, **Dahlman JE**, Borodovsky A, Fitzgerald K, Anderson DG, Weissleder R, Libby P, Swirski FK, Nahrendorf M. Proliferation and recruitment contribute to myocardial macrophage expansion in chronic heart failure. **Circulation Research,** 2016.

35. Koga J, Figueiredo J, **Dahlman JE**, Niida T, Iwata H, Aster JC, Yagita H, Anderson DG, Ozaki CK, Aikawa M. Macrophage Notch ligand Delta-like 4 promotes the lesion development of vein grafts: implications for the treatment of vein graft failure. **Arteriosclerosis, Thrombosis, and Vascular Biology**, 2015.

Featured on cover.
Awarded cover of the year by ATVB.

36. Khan OF, Zaia E, Jhunjhunwala S, Xue W, Wenxin C, Dong YS, Barnes C, **Dahlman JE**, Dong Y, Pelet J, Webber M, Tsosie J, Jacks T, Langer R, Anderson DG. Dendrimer-inspired nanomaterials for the *in vivo* delivery of siRNA to lung vasculature. **Nano Letters**, 2015.

37. White K, Lu Y, Annis S, Hale AE, Chau N, **Dahlman JE**, Hemann C, Opotowsky AR, Vargas SO, Rosas I, Perrella MA, Osorio JC, Haley KJ, Graham BR, Kumar R, Saggar R, Wallace WD, Ross DJ, Khan OF, Bader A, Gochuico BR, Matar M, Polach K, Anderson DG, Langer R, Zweier JL, Bindoff LA, Systrom D, Waxman AB, Jin RC, Chan SY. Genetic and hypoxic alterations of the miR-210-ISCU1/2 axis promote iron-sulfate deficiency and pulmonary hypertension. **EMBO Molecular Medicine**, 2015.

38. Khan OF, Zaia E, Yin H, Bororad R, Pelet JM, Webber MJ, Zhuang I, **Dahlman JE**, Langer R, Anderson DG. Chemically modified dendrimers with alkyl chain-substituted amines for siRNA delivery to the liver endothelium *in vivo*. **Angewandte Chemie**, 2014.

39. Stewart MP, Lorenz A, **Dahlman JE**, and Sahay G. Challenges in carrier mediated intracellular delivery: Lessons from cell biology to trigger endosomal escape. **WIRES Nanomedicine and Nanobiotechnology.**

40. Herr KJ, Tsang YN, En JO, Qiushi L, Yap LL Yu W, Yin H, Bogorad R, **Dahlman JE**, Chan YG, Bay BH, Singaraja R, Anderson DG, Kotelianky V, Viasnoff V. Alpha-catenin elicits a cholestatic response and impairs liver regeneration. **Scientific Reports,** 2014.

41. **Dahlman JE**, Kauffman K, Langer R, Anderson DG. Nanotechnology for *in vivo* targeted siRNA Delivery. **Advances in Genetics,** 2014.

42. **Dahlman JE**. A lesson in communication. **Nature Nanotechnology** 2014.

43. **Dahlman JE**, Langer R, Goldberg M. Lipid-like delivery materials for efficient siRNA delivery. **Nanotechnology for the delivery of therapeutic nucleic acids** 2013.

44. Schroeder A, **Dahlman JE***, Sahay G, Love KT, Jiang S, Eltouhky AA, Levins CG, Wang Y, Anderson DG. Alkane-modified short polyethyleneimine for siRNA delivery. **Journal of Controlled Release** 2012.

45. Whitehead K, **Dahlman JE**, Langer R, Anderson DG. Silencing or stimulation? siRNA delivery and the immune system. **Annual Reviews of Chemical and Biomolecular Engineering,** 2011.

46. Miracle DB, Wilks G, Dahlman A, **Dahlman JE**. The strength of chemical bonds in solids and liquids. **Acta Materialia**, 2011.

47. **Dahlman J,** Senkov ON, Scott JM, Miracle DB. Corrosion Properties of Ca based bulk metallic glasses. **Materials Transactions**, 2007.

Professional Experience

Co-founder and Board Member. Guide Therapeutics. Experience funding and starting company, developing BD strategy. Extensive network of biotech VCs and leadership of biotech / pharma companies.

Teacher. BMED 2250; 32 student core course on engineering design. BMED 3600; 55 student core course on cell biology and genetics. While teaching a total of ~100 students between two sections of BMED3600 in the same

semester, achieved perfect (5.0 / 5.0) and near-perfect (4.9 / 5.0) teaching scores for the two sections, respectively. **Won eight Georgia Tech teaching awards or accolades since 2016.**

Consultant. MPEG LA; Aided experimental design, data analysis, IP strategy, and RNA therapeutics market analysis from 2015 - 2019. GLG; Regularly discuss RNA / gene editing landscape with investors. Warner Brothers; Genetics Lab Tech Advisor for *Rampage* (CRISPR movie starring Dwayne 'The Rock' Johnson).

Journal Reviewer. Nature Materials, Nature Nanotechnology, Nature Methods, Advanced Materials, Nature Communications, JACS, ACS Nano, PNAS, Nano Letters, Cell Reports, Biomaterials, Trends in Biotechnology, Advanced Healthcare Materials, Current Opinion in Biomedical Engineering, The CRISPR Journal, PLOS One, Scientific Reports, Journal of Controlled Release, Analytical Chemistry, FEBS Reports, Biomacromolecules, Journal of Colloids and Surfaces B, Biomaterial Science, Bioengineering and Translational Medicine, Acta Biomaterialia.

Grant Reviewer. NSF, NIH (National Cancer Institute), Israeli DOD, Georgia Regenerative Medicine, Georgia Clinical and Translational Science Alliance,

Moderator / Chair. 2020 ASGCT Early Career Development Award Symposium, 2019 First annual American Chemical Society 'Nanoinformatics' Session, 2018 Robert Langer 70th Birthday Conference, 2017 North American CF Conference, 2017 CF Research Foundation Conference.

Member. Petit Scholars Selection Committee, Stem Cell Faculty Search Committee, Faculty Search Committee, Graduate Student Admissions Committee, Director of Business Operations Search, Chair of BME Mental Health Subcommittee.

Funding

Since starting at Georgia Tech, over 20 grants as PI, Co-PI, or senior personnel obtained from the federal government, foundations, donors, and sponsored research.

Patents

Licensed to >35 companies to date.

Selected Invited Talks (From >80)

1. Nature Conference on Next-Generation Genomics, New York, NY, Summer 2021.
2. European Symposium on Controlled Drug Delivery, Egmond ann Zee, The Netherlands, April 2021. **Plenary.**
3. Keystone Symposium on Precision Engineering of the Genome, Epigenome, Transcriptome. British Columbia, Canada, March 2021.
4. TIDES, Boston, MA, September 2020. Online due to COVID.
5. Harvard School of Engineering and Applied Sciences, Boston, MA, September 2020. Online due to COVID.
6. Controlled Release Society, Las Vegas, NV, July 2020. Online due to COVID. **GDGE Young Investigator Award Lecture.**
7. Novartis, Boston, MA, July 2020. Online due to COVID.
8. ASGCT, Boston, MA, May 2020. Online due to COVID. **Outstanding New Investigator Award.**
9. ASGCT, Boston, MA, May 2020. Online due to COVID.
10. US / Japan Drug Delivery Symposium, Maui, HI, December 2019.
11. Rita Schaffer Lecture, BMES, Philadelphia, PA, October 2019. **Young Investigator Keynote.**
12. CMBE Young Investigator Lecture, BMES, Philadelphia, PA, October 2019. **Young Investigator Award.**
13. National Hemophilia Foundation, Washington, DC, September 2019.
14. American Chemical Society National Meeting, San Diego, CA, August 2019. **Co-chair.**
15. TIDES, San Diego, CA, May 2019.

16. Broad Institute of MIT and Harvard, Boston, MA, May 2019.
17. UCSF, San Francisco, CA, May 2019.
18. EPFL Bioengineering, Lausanne, Switzerland, April 2019.
19. ETH Zurich D-BSSE, Basel, Switzerland, April 2019.
20. FDA, Washington, D.C., March 2019.
21. Eli Lilly Corporate Headquarters, Indianapolis, IN, February 2019
22. Spark Therapeutics, Philadelphia, PA, February 2019.
23. University of Pennsylvania Medical School, Philadelphia, PA, February 2019.
24. Gordon Research Conference on Vascular Biology, Venture, CA, January 2019.
25. Children's Hospital of Philadelphia Center for Cellular / Molecular Therapies, December 2018.
26. WIRED Magazine Brazil, Rio de Janeiro, December 2018. **Keynote.**
27. Solid Biosciences, Boston, MA, September 2018.
28. MIT Tech Review TR35 EmTech, Boston, MA, September 2018.
29. Bob Langer 70th Birthday Symposium, Boston, MA, September 2018. **Co-chair, drug delivery session.**
30. Stanford Bio-X Institute, Palo Alto, CA, May 2018.
31. TIDES, Boston, MA, May 2018.
32. New Mexico IDeA Network for Biomedical Research Excellence Gene Editing Conference, 2018.
33. NIH / CF Foundation Gene Editing Symposium, 2018.
34. *The Scientist* CRISPR Webinar, 2018.
35. BioNTech Therapeutics, 2017.
36. SERLC, 2017. **Young Investigator Keynote.**
37. Intellia Therapeutics, 2017.
38. Cleveland Clinic, 2017.
39. University of Hong Kong, June 2017.
40. Sangamo Therapeutics, 2017.
41. American Society of Gene and Cell Therapy, 2017.

Mentoring at Georgia Tech

DahlmanLab Members

1. Cory Sago, Ph.D. GT / Emory Biomedical Engineering PhD Student. 2016-2019. NIH T32 Fellow.
2. Kalina Paunovska, GT / Emory Biomedical Engineering PhD Student. 2016-2020. NIH T32 Fellow.
3. Melissa Lokugamage, GT / Emory Biomedical Engineering PhD Student. 2017-2021. NIH T32 Fellow.
4. Alejandro Da Silva Sanchez, GT Chemical Engineering PhD Student. 2018-TBD.
5. Afsaneh Radmandaghkand, GT Chemical Engineering PhD Student. 2019-TBD.
6. Ada Del Cid Oseguera, GT Biomedical Engineering Masters Student. 2019.
7. Chris Monaco, GT Bioinformatics Masters Student. 2016-2018. Graduate Research Fellow.
8. Nirav Shaw. GT Bioinformatics Masters Student 2017-2018. Graduate Research Fellow.
9. Jacob Feldman. GT Bioinformatics Masters Student. 2018-2019.
10. Zubao Gan. Post-doctoral Fellow 2017-TBD.
11. Kun Zhao. Post-doctoral Fellow. 2018-TBD.
12. Marine Hatit. Post-doctoral Fellow. 2019-TBD.
13. David Loughrey. Post-doctoral Fellow. 2019-TBD.
14. Huanzhen Ni. Post-doctoral Fellow. 2019-TBD.
15. Curtis Dobrowolski. Post-doctoral Fellow. 2019.
16. Kshitiz Singh. Post-doctoral Fellow. 2016-2018. Now post-doc at CHOP.
17. Sujay Kalathoor, Research Technician. 2019. Now in medical school.
18. Fatima Islam, Technician. 2019-TBD. GaTech Outstanding Academic Service Award. Now in medical school.
19. Tobi Rudoltz. Lab Manager, 2016-2018. Now in medical school.

References

1. Robert Langer. Institute Professor, MIT.
2. Feng Zhang. Core Member, Broad Institute.
3. Sangeeta Bhatia. Professor, MIT.
4. Phillip A. Sharp. Nobel Prize Winner and Professor, MIT.
5. Julie Sunderland. Managing Partner, Biomatics Capital.
6. M.G. Finn. Professor / Chair, Chemistry and Biochemistry, Georgia Tech.
7. Eric Sorscher. GRA Eminent Scholar, Emory Medical School.