Kim A. Woodrow
Department of Bioengineering
University of Washington
Seattle, Washington 98195-5061

Phone: 206 685 6831 fax: 206 658 3300
Email: woodrow@uw.edu
Website: http://faculty.washington.edu/woodrow/

Education

Ph.D. in Chemical Engineering, Stanford University, June 2005
M.S. in Chemical Engineering, Stanford University, May 2001
B.A. in Biochemistry & Molecular Biology (with Highest Distinction), Wells College, May 1998

Professional Experience

Associate Professor, Bioengineering, University of Washington, Seattle, WA; 2016 to current
Assistant Professor, Bioengineering, University of Washington, Seattle, WA; 2010 to 2015
Research Affiliate, Washington National Primate Research Center, Seattle, WA; Sept 2011 to current
Postdoctoral Fellow, Biomedical Engineering, Yale University, New Haven, CT; Feb 2006 to Dec 2009

Honors and Awards:

2018	University of Utah, Bioengineering – Distinguished Seminar Series
2016	UC Berkeley, Bioengineering - Rising Star Lecture
2015	Science in Medicine – New Investigator Lecture (UW, School of Medicine)
2015	University of Washington Undergraduate Research Mentor Award
2013	Newsweek: 125 Women of Impact
2012 - 2017	NIH Director's New Innovator Award
2010 - 2012	Creative and Novel Ideas in HIV Research
2008 - 2009	National Institute of Health Vascular Research Postdoctoral Training Fellowship
2007 - 2009	L'Oreal USA Fellowship for Women in Science
2006 - 2007	National Institute of Health Genomics Postdoctoral Training Fellowship
2003	Centennial Teaching Assistant Award, Stanford University
1999 - 2002	National Science Foundation Graduate Research Fellowship
1998	General Electric REU Fellowship, Cornell University
1998	Phi Beta Kappa, Wells College
1998	Summa cum laude, Wells College
1998	Koch Prize for best senior research paper (honorable mention), Wells College
1998	Nancy A. Reed Chemistry Prize, Wells College
1997	National Science Foundation REU Fellowship, Roswell Park Cancer Institute
1994 - 1998	Henry Wells Scholar, Wells College

Member of Federal Review Panels and Invited Meeting Participant

21. NIH Nanotechnology (NANO) Study Section; (Member, 2017-2021)
20. NIH Nanotechnology (NANO) Study Section; Washington D.C.; October 2015 (Reviewer, Ad hoc).
19. The Bill and Melinda Gates Foundation, Product Development Challenge Workshop, April 2016 (Invited participant).
18. HIV Research for Prevention Conference (HIVR4P 2016: Partnering for Prevention), Program Organizing Committee; October, 2016 (Committee Member).
17. NIH AIDS Discovery and Development of Therapeutics (ADDT) Study Section; Seattle, WA; November 2015 (Reviewer, Ad hoc).
16. Biomedical Engineering Society, Drug Delivery Track Co-Chair, October 2015 (Track Co-Chair).
15. NIH/NIAID Special Emphasis Panel (2015/10 ZRG1 AARR-D (02) M): AIDS Vaccine (Vacc) and AIDS Immunology (AIP) study sections. August 2015 (Reviewer, Ad hoc).
14. The Bill and Melinda Gates Foundation, Contraceptive Technology Blue-Sky Partner Brainstorm Session, May 2015 (Invited participant).
13. Kentucky Science and Engineering Foundation (KSEF), KSEF-14-RDE-018, May 2015 (Reviewer).
12. The Bill and Melinda Gates Foundation, Global Health Product Development Forum, April 2015, 2014 2015 (Invited participant).
11. NSF: Graduate Research Fellowship Program Applications, January 2015, 2014 (Reviewer).

10. L'Oréal USA For Women in Science (FWIS) Fellowship Program, June 2015, 2014 (Reviewer).
09. The Bill and Melinda Gates Foundation Annual Meeting, May 2014 (Invited participant).
08. NIH/NIAID Special Emphasis Panel (ZAI1 ESB-A (J1)): Delivering Therapeutics to Residual Active HIV Reservoirs. November 2013 (Reviewer, Ad hoc).
07. NIH/NIAID Special Emphasis Panel (ZAI1LG-M (C2)): Small Business Innovation Research Contract Proposals – Development of long-acting formulations of HIV anti-retrovirals. April 2013 (Reviewer, Ad hoc).
06. NIH/NIAID & The Bill and Melinda Gates Foundation, Drug Delivery System Think Tank, Washington D.C., February 2012 (Invited participant).
05. NIH/NIAID: PA12-088 - Omnibus Solicitation of the NIH, CDC, FDA and ACF for Small Business Innovation Research Grant Applications (Parent SBIR [R43/R44]), June 2012 (Reviewer, Ad hoc).
04. Thiel Foundation: Breakout Labs Grant Applications, September 2012 (Reviewer, Ad hoc).
03. NIH/NIAID: PA11-096 - Omnibus Solicitation of the NIH, CDC, FDA and ACF for Small Business Innovation Research Grant Applications (Parent SBIR [R43/R44]), October 2011 (Reviewer, Ad hoc).
02. NIH/NIAID: Nano and Emerging Technologies for HIV Workshop; Potomac, MD; October 2010 (Invited participant).
01. Idaho State Board of Education, Research Center Grant Program, February 2010 (Reviewer).

Editorial Responsibilities:
Molecular Systems Design & Engineering, *Advisory Board* (2017 – current)
Frontiers in Materials: Biomaterials (ISSN 2296-8016), *Editorial Board* (2014 – current)
Bioengineering (ISSN 2306-5354), *Editorial Board* (2013 - current)

Referee for the following peer-reviewed journals (since 2010): ACS Chemical Review, ACS Nano, Acta Biomaterialia, Advanced Materials, AIDS Research and Human Retroviruses, Colloids & Surfaces – B, International Journal of Pharmaceutics, Journal of Antimicrobial Chemotherapy, Journal of Biomedical Nanotechnology, Journal of Controlled Release, Micro & Nano Letters, Molecular and Cellular Endocrinology, Nanomedicine, Nanoscale Research Letters, Nature – Scientific Reports, Nanomedicine: Nanotechnology, Biology, and Medicine, PlosONE

Publications:
38. Cao, S., Slack, S.D., Levy, C.N., Hughes, S.M., Jiang, Y., Yogodzinski, C., Roychoudhury, P., Jerome, K.R., Schiffer, J.T., Hladik, F., and Woodrow, K.A. *Scientific Advances*, 2019 (In Press).
37. Creighton, R.L. and Woodrow, K.A. Microneedle-mediated vaccine delivery to the oral mucosa. *Advanced Healthcare Materials*, 2018, e1801180.
36. Golan-Paz, S., Frizzell, H. and Woodrow, K.A. Cross-platform comparison of therapeutic delivery from multilamellar lipid-coated polymer nanoparticles. *Macromolecular Biosciences*, 2018, e1800362.
35. Cao, S.J., Jiang, Y.H., Zhang, H.Y., Kondza, N. and Woodrow, K.A. Core-shell nanoparticles for targeted and combination antiretroviral activity in gut-homing T cells. *Nanomedicine-Nanotechnology* 2018, 14, 2143-2153.
34. Cao, S. and Woodrow, K.A. Nanotechnology approaches to eradicating HIV reservoirs. *European Journal of Pharmaceutics and Biopharmaceutics*, 2018, 10.1016/j.ejpb.2018.06.002.
33. Cao, S., Jiang, Y., Levy, C.N., Hughes, S.M., Zhang, H., Hladik, F. and Woodrow, K.A. Optimization and comparison of CD4-targeting lipid-polymer hybrid nanoparticles using different binding ligands. *Journal of Biomedical Materials Research Part A*, 2018, 106, 1177-1188. PMID 29271128
32. Frizzell, H. and Woodrow, K.A. Protein-loaded emulsion electrospun fibers optimized for bioactivity retention and pH-controlled release for oral administration of biologic therapeutics. *International Journal of Pharmaceutics*, 2017, 533, 99-110.
31. Krogstad, E.A., Ramanathan, R., Nhan, C., Kraft, J.C., Blakney, A.K., Cao, S., Ho, R.J.Y., and Woodrow, K.A. Nanoparticle-releasing nanofiber composites for enhanced in vivo vaginal retention. *Biomaterials* 2017, 144, 1-16. PMID 28802690
30. Park, J., Ramanthan, R., Pham, L., and Woodrow, K.A. Chitosan enhances nanoparticle delivery from the reproductive tract to target draining lymphoid organs. *Nanomedicine-Nanotechnology,* 2017, 13, 2015-2025.
29. Zhang, H., Park, J., Jiang, Y., and Woodrow, K.A. Rational design of charged peptides that self-assemble into robust nanofibers as immune-functional scaffolds. *Acta Biomaterialia,* 2017, 55, 183-193.

28. Frizzell, H., Park, J., Lou Comandante, N., and Woodrow, K.A. Role of heterogeneous cell population on modulation of dendritic cell phenotype and activation of CD8 T cells for use in cell-based immunotherapies. *Cellular Immunology*, 2017, 311, 54-62.
27. Blakney, A.K., Little, A.B, Jiang, Y., and Woodrow, K.A. In vitro-ex vivo correlations between a cell-laden hydrogel and mucosal tissue for screening composite delivery systems. *Drug Delivery*, 2017, 24, 582-590.
26. Chou, S.F. and Woodrow, K.A. Relationships between mechanical properties and drug release from electrospun fibers of PCL and PLGA blends. *Journal of the Mechanical Behavior of Biomedical Materials*, 2016, 65, 724-733.
25. Blakney, A.K., Simonovsky, F.I., Sudyam, I.T., Ratner, B.D. and Woodrow, K.A. Rapidly biodegrading PLGA-polyurethane fibers for sustained release of physicochemically diverse drugs. *ACS Biomaterials Science & Engineering, 2016, 2, 1595-1607*.
24. Phan, J.C., Nehilla, B.J., Srinivasan, S., Coombs, R.W., Woodrow K.A. and Lai, J.J. Human immunodeficiency virus (HIV) separation and enrichment via the combination of antiviral lectin recognition and a thermoresponsive reagent system. *Pharmaceutical Research, 2016, 33, 2411-2420*.
23. Stoddard, R.J., Steger, A., Blakney, A.K., and Woodrow, K.A. In pursuit of functional electrospun materials for clinical applications in humans. *Therapeutic Delivery, 2016, 7, 387-409*.
22. Blakney, A.K., Jiang, Y., Whittington, D. and Woodrow, K.A. Simultaneous measurement of etravirine, maraviroc and raltegravir in pigtail macaque plasma, vaginal secretions and vaginal tissue using a LC-MS/MS assay. *Journal of Chromatography B*, 2016, 1025, 110-118.
21. Ramanathan, R., Jiang, Y., Read, B.J., Paz, S.G., and Woodrow, K.A. Biophysical characterization of small molecule-antiviral loaded nanolipogels for HIV-1 chemoprophylaxis and topical mucosal application. *Acta Biomaterialia, 2016,* 36, 122-131.
20. Ball, C.B., Chou, S-F., Jiang, Y., and Woodrow, K.A. Combined rapid and sustained release of maraviroc from highly-loaded core-shell electrospun fiber composites. *Materials Science and Engineering C*, 2016, 63, 117-124.
19. Carson D., Jiang, Y.H. and Woodrow, K.A. Tunable release of multiclass anti-HIV drugs that are water-soluble and loaded at high drug content in polyester blended electrospun fibers. *Pharmaceutical Research,* 2016, 33, 125-136*.*
18. Ramanathan, R. and Woodrow K.A. Engineering immunity in the mucosal niche against sexually transmitted infections. *WIREs Nanomedicine & Nanobiotechnology,* 2016*,* 8, 107-122.
17. Jiang, Y., Cao, S. Bright, D. Suydam, I.T. and Woodrow K.A. Nanoparticle-based ARV drug combinations for synergistic inhibition of cell-free and cell-cell HIV transmission. *Molecular Pharmaceutics,* 2015, 12, 4363-4374.
16. Chou, S.F., Carson, D. and Woodrow, K.A. Current strategies for sustaining drug release from electrospun antiviral fibers. *Journal of Controlled Release, 2015*, 220, 584-591.
15. Ramanathan, R., Park, J., Hughes, S.M., Lykins, W.R., Bennett, H.R., Hladik, F., and Woodrow, K.A. Selective expansion of vaginal dendritic cells to support nanoparticle biodistribution for mucosal vaccination strategies. *American Journal of Reproductive Immunology,* 2015, 74, 333–344.
14. Krogstad, E.A. and Woodrow, K.A. Manufacturing scale-up potential of electrospun poly (vinyl alcohol) fibers containing tenofovir for vaginal drug delivery. *International Journal of Pharmaceutics,* 2014, 475, 282-291.
13. Ball, C.B. and Woodrow, K.A. Electrospun solid dispersions of maraviroc for rapid intravaginal pre-exposure prophylaxis of HIV. *Antimicrobial Agents and Chemotherapy*, 2014, 58 (8), 4855-4865.
12. Blakney, A.K., Krogstad, E.A., Jiang Y.H., and Woodrow, K.A. Delivery of multipurpose prevention drug combinations from electrospun nanofibers using composite microarchitectures. *International Journal of Nanomedicine*, 2014, 9, 2967–2978.
11. Blakney, A., Ball, C., Krogstad, E. and Woodrow, K.A. Electrospun fibers for vaginal anti-HIV drug delivery. *Antiviral Research*, 2013, 100 (6993), S9-S16.
10. Chaowanachan, T., Krogstand, E., Ball, C., Woodrow, K.A. Drug synergy of tenofovir and nanoparticle-based antiretrovirals for HIV prophylaxis. *PloS ONE*, 2013, 8(4), e61416.
09. Ball, C., Krogstad, E., Chaowanachan, T., and Woodrow, K.A. Drug-eluting fibers for HIV-1 inhibition and contraception. *PloS ONE*, 2012, 7(11), e49792.
08. Woodrow, K.A., Bennett, K., and Lo, D. Mucosal Vaccine Design and Delivery. *Annual Review of*

Biomedical Engineering, 2012, 14, 17-36.

07. Woodrow, K.A., Cu, Y., Booth, C.J., Saucier-Sawyer, J.K., Wood, M.J., and Saltzman, W.M. Intravaginal gene silencing using biodegradable polymer nanoparticles densely loaded with small-interfering RNA. *Nature Materials*, 2009, 8(6), 526-533.
06. Woodrow, K.A., Wood, M.J., Saucier-Sawyer, J.K., and Saltzman, W.M. Biodegradable meshes printed with extracellular matrix proteins support micropatterned hepatocyte cultures. *Tissue Engineering Part A*, 2009, 15(5): p. 1169-79.
05. Woodrow, K.A. and Swartz J.R. A Sequential expression system for high-throughput functional genomic analysis. *Proteomics* 2007, 7, 3870-3879.
04. Woodrow, K.A., Airen, I.O., and Swartz, J.R. Rapid expression of functional genomic libraries. *Journal of Proteome Research*, 2006, 5, 3288-3300.
03. Michel-Reydellet, N., Woodrow, K.A., and Swartz, J.R. Increasing PCR fragments stability and protein yields in a cell-free system with genetically modified Escherichia coli extract. *Journal of Molecular Microbiology and Biotechnology*, 2005, 9, 26-34.
02. Belcheva, N., Woodrow, K., Mahoney, M.J., and Saltzman W.M. Synthesis and biological activity of polyethylene glycol-mouse nerve growth factor conjugate. *Bioconjugate Chemistry*, 1999, 10, 932-937.
01. Luo, D., Belcheva, N., Woodrow, K., and Saltzman, W.M. Controlled DNA delivery systems. *Pharmaceutical Research*, 1999, 16, 1300-1308.

Proceedings and Book Chapters

05. Ball, C. and Woodrow, K.A. (2014) "Electrospun fibers for microbicide drug delivery," in J. das Neves, B. Sarmento (Eds.), *Delivery Science and Technology,* Pan Stanford Publishing Pte. Ltd., Chapter 12, pp. 459-499.
04. Krogstad, E., Rathbone, M.J. and Woodrow, K.A. "Focal Controlled Drug Delivery," in A.J. Domb and W. Khan (Eds.), *Focal controlled drug delivery*, Springer (Controlled Release Society), Chapter 27, pp 607-653 (2014).
03. Bryers, J.D. and Woodrow, K.A. "Engineering Interfaces for Infection Immunity," in P. Ducheyne, K.E. Healy, D.W. Hutmacher, D.W. Grainger, C.J. Kirkpatrick (Eds.), *Comprehensive Biomaterials.* Saunders Elsevier, 4, 295-314 (2011).
02. Woodrow, K.A., Swartz, J.R. "Functional genomic analysis using sequential cell-free protein synthesis," in Spirin A.S. and Swartz, J.R. (Eds.), *Cell-Free Protein Synthesis: Methods and Protocols*. Wiley-VCH Verlag GmbH & Co., 3, 51-58 (2007).
01. Swartz, J.R., Jewett, M.C., and Woodrow, K.A. "Cell-free protein synthesis with coupled transcription and translation," in Balbas, P. and Lorence, A. (Eds.), *Recombinant Protein Protocols*: *Methods in Molecular Biology*. Humana Press, Inc. 267: 169 (2004).

Patents

02. K. A. Woodrow, C. Ball, A.K. Blakney, E.K. Krogstad, and H. Nie, "Vaginal Matrices: Nanofibers for Contraception and Prevention of HIV Infection," U.S. Pat. No. 9,393,216; July 19, 2016
01. W. M. Saltzman, D. Luo, N. Belcheva, K. A. Woodrow, "Controlled Nucleic Acid Delivery Systems," U.S. Pat. No. 7,030,097; April 6, 2006.

Invited Lectures (since 2010)

32. TBD, 2019, STI & HIV 2019 Symposium Speaker, July 2019, International Society for Sexually Transmitted Disease Research (ISSTDR) & the 20th International Union against Sexually Transmitted Infections (IUSTI) World Congress; Vancouver, Canada.
31. TBD, April 2019, Department of Oral Health Sciences, University of Washington.
30. "Polymeric Delivery Systems for the Combination Delivery of Antiretroviral Drugs against HIV," November 2018, Distinguished Seminar Series, Department of Bioengineering, University of Utah.
29. "Nanotechnologies for use against infectious diseases," June 2017, Fred Hutchinson Cancer Research Center - VIDD Faculty Retreat, Cle Elum, WA, USA.
28. "Coaxing dendritic cells into action in the mucosal niche," November 2016, Harvard University, Harvard SEAS Bioengineering, Boston, MA, USA.

27. “Engineering the mucosal microenvironment promotes targeting of particulate and cellular immunotherapies to lymphoid organs,” September 2016, UC Berkeley, Bioengineering, Berkeley, CA, USA.
26. “Engineering nanoscale systems for applications against HIV”, May 2016, Stanford University, Department of Chemical Engineering, Stanford, CA, USA
25. “Nanocarrier systems for realizing drug synergy and asynchronous release in applications targeting HIV,” November 2015, Inter-CFAR Working Group on HIV Research in Women, Seattle, WA, USA.
24. “Polymeric delivery systems for the combination delivery of antiretroviral drugs against HIV,” October 2015, Science in Medicine – New Investigator Lecture, University of Washington School of Medicine, Seattle, WA, USA.
23. “Drug-eluting fibers for multipurpose prevention of HIV-1, HPV and HSV-2”, September 2015, Polymers in Medicine and Biology, Santa Rosa, CA, USA.
22. “Drug-eluting fibers for on-demand vaginal drug delivery.” June 2015, Gordon Research Conference: Preclinical Form & Formulation in Drug Discovery, Waterville, NH, USA.
21. “Sustaining drug release from electrospun antiviral fibers.” June 2015, International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, USA.
20. “Sustaining drug release from electrospun antiviral fibers.” June 2015, Electrostatic Society of America (Keynote Speaker), California State Polytechnic University, Pomona, CA, USA.
19. “Nanotechnology for drug delivery.” October 2014, HIV Research for Prevention: AIDS Vaccine, Microbicide and ARV-based Prevention Science (HIV R4P) (Symposium Speaker), Cape Town, South Africa.
18. “Nanotechnology for HIV prevention, treatment and cure.” October 2014, Western Washington University, Department of Chemistry, Bellingham, WA, USA.
17. “Nanotechnology for HIV prevention, treatment and cure. ” September 2014, Yale University, Department of Biomedical Engineering, New Haven, CT, USA.
16. “Modulating innate immune responses in the genital mucosa to facilitate transport and biodistribution of nanoparticle vaccines.” March 2014, Wayne State, Nano@Wayne – Immunology Focus Group, Detroit, MI, USA.
15. “Modulating innate immune responses in the genital mucosa to facilitate transport and biodistribution of nanoparticle vaccines.” November 2013, NIH High Risk-High Reward Research Symposium, Washington D.C., USA.
14. “Multipurpose prevention technologies for global health.” October 2013, University of California, Berkeley and San Francisco Joint Graduate Research Retreat, Tahoe, CA, USA.
13. “BMES Career Panel: Perspectives from a junior faculty.” September 2013, Biomedical Engineering Society, Seattle, WA, USA.
12. “Multipurpose prevention technologies for global health.” July 2013, Controlled Release Society (Plenary Speaker: Drug Delivery for Developing Countries), Hawaii, USA.
11. “Polymeric delivery systems for combination drug delivery for HIV.” June 2013, Molecular and Engineering & Sciences Institute, Nanotechnology Seminar, University of Washington, Seattle, WA, USA.
10. “Fiber delivery systems: MIV-150, CG, Zinc Acetate, LNG.” May 2013, Population Council, New York, NY, USA.
09. “Polymeric delivery systems for combination drug delivery in HIV prevention.” April 2013, Department of Bioengineering, University of Washington, Seattle, WA, USA.
08. “Nanofibers”, February 2013, CONRAD: Product Development Workshop, Washington D.C., USA.
07. “Nanomaterials for reproductive health.” August 2012, Population Council, New York, USA.
06. “Evaluating drug synergy of tenofovir and nanoparticle-based antiretroviral microbicides.” July 2012, Creative and Novel Ideas in HIV Research Symposium, International AIDS Conference, Washington, D.C., USA.
05. “Multipurpose prevention technologies: Drug-eluting fibers for HIV prevention and contraception.” July 2012, The Bill and Melinda Gates Foundation, Seattle, Washington, USA.
04. “Drug-eluting nanofibers as a chemical and physical barrier for multipurpose prevention.” April 2012, International Microbicides Conference (Symposium Speaker), Sydney, N.S.W., AUS.

03. “Drug-eluting nanofibers as a dual-protection contraceptive microbicide.” November 2011, Multipurpose Prevention Technologies for Reproductive Health, Coalition Advancing Multipurpose Innovations Symposium, Washington D.C., USA.
02. “Nanoparticle-based combination microbicides to prevent mucosal transmission of HIV.” July 2011, Creative and Novel Ideas in HIV Research Symposium, International AIDS Conference, Rome, Italy.
01. “Multifunctional nanoparticles as a combination microbicide to prevent mucosal transmission of HIV.” July 2010, Creative and Novel Ideas in HIV Research Symposium, International AIDS Conference, Vienna, Austria.

Presentations at National and International Meetings

44. Jiang, Y., Patton, D., Cosgrove-Sweeney, Y., Hajheidari, A., Beyene, A., Stoddard, R., Blakney, A.K., Roberts, E., Phan, J.C., Edmark, R., and Woodrow, K.A. (poster) Vaginal safety evaluation of a triple antiretroviral drug-loaded elecctrospun fiber microbicide in nonhuman primates. HIV Research for Prevention 2016: AIDS Vaccine, Microbicide and ARV-based Prevention Science, Chicago, IL, USA, October 2016.
43. Krogstad, E.A., Kraft, J.C., Blakney, A.K., Ramanathan, R., Nhan, C., Cao, S., Ho, R.J.Y., and Woodrow, K.A. Sustained delivery of etravirine from nanoparticle-releasing nanofiber composites after vaginal administration in mice. HIV Research for Prevention 2016: AIDS Vaccine, Microbicide and ARV-based Prevention Science, Chicago, IL, USA, October 2016.
42. Blakney, A.K., Jiang, Y., Cosgrove-Sweeney, Y., Stoddard, R., Roberts, E., Phan, J.C., Edmark, R., Patton, D., and Woodrow, K.A. (poster) Rapid and sustained release combination drug-eluting fibers for vaginal HIV prevention result in high, lasting ARV concentrations in pigtail macaques. HIV Research for Prevention 2016: AIDS Vaccine, Microbicide and ARV-based Prevention Science, Chicago, IL, USA, October 2016.
41. Phan, J.C., Roberts, E., Blakney, A.K., Stoddard, R., Ebner, M., Bever, A., Edmark, R., Suydam, I.T., and Woodrow, K.A. (poster) Electrospinning process considerations to formulate a triple drug microbicide for rapid and asynchronous release. HIV Research for Prevention 2016: AIDS Vaccine, Microbicide and ARV-based Prevention Science, Chicago, IL, USA, October 2016.
40. Cao, S., Jiang, Y.H., and Woodrow, K.A. (poster) Targeted co-delivery of dual-function monoclonal antibody and tipranavir to gut-homing T cells using lipid-coated PLGA nanoparticles. Controlled Release Society, Seattle, WA, USA, July 2016.
39. Blakney A.K., Little, A., Jiang, Y.H., and Woodrow, K.A. (oral) In vitro-ex vivo correlations between a novel cell-laden hydrogel and mucosal tissue for screening composite delivery systems. Controlled Release Society, Seattle, WA, USA, July 2016.
38. Blakney A.K., Siminovsky, F.I., Suydam, I.T., Ratner, B.D., and Woodrow, K.A. (oral) A new class of biodegradable polyurethanes with PLGA moieties for sustained release of physicochemically diverse drugs from electrospun fibers with biologically relevant degradation rate. World Biomaterials Conference, Montreal, QC, Canada, May 2016.
37. Stoddard, R. and Woodrow, K.A. (oral) Pharmaceutical production of drug-eluting nanofibers by precise engineering of needleless electrospinning with an oscillating carriage. American Institute of Chemical Engineers Annual Meeting, Salt Lake City, UT, November 2015.
36. Krogstad, E., Ramanathan, R., Nhan, C., Thoreson, K. and Woodrow, K.A. (oral) Nanoparticle-releasing nanofiber composites for enhanced in vivo vaginal retention. Biomedical Engineering Society Annual Meeting, Tampa, FL, October 2015.
36. Cao, S., Jiang, Y.H. and Woodrow, K.A. (poster) Lipid-coated PLGA nanoparticles conjugated with a dual-function antibody for targeted delivery of ARVs to α4β7 expressing T cells. Nanomedicine and Drug Delivery Symposium, Seattle, WA, September 2015.
35. Suydam, I.T., Ebner, M.E., Afungo, W.E., Bever, A.M., Jiang, Y.J., Cao, S. and Woodrow, K.A. (oral) Raltegravir prodrugs for improved nanoparticle delivery. Controlled Release Society, Edinburgh, Scotland, July 2015.
34. Jiang, Y.H., Cao, S., Bright, D., Suydam, I.T. and Woodrow, K.A. (poster) Testing of nanoparticle-based ARV drug combinations for inhibiting cell-free and cell-cell HIV transmission. Annual Symposium on Nonhuman Primate Models for AIDS, Portland, OR, November 2014.
33. Ball, C., Chou, S.F., Jiang, Y.H., and Woodrow, K.A. (oral) A single dose novel formulation of maraviroc using electrospun fabrics designed for instant and multi-day HIV prevention. HIV Research for Prevention: AIDS Vaccine, Microbicide and ARV-based Prevention Science (HIV R4P), Cape Town, South Africa, October 2014.
32. Blakney, A.K., Jiang, Y.H., and Woodrow, K.A. (poster) A hydrogel tissue model for evaluation of triple-antiretroviral electrospun fibers as a microbicide. HIV Research for Prevention: AIDS Vaccine,

Microbicide and ARV-based Prevention Science (HIV R4P), Cape Town, South Africa, October 2014.

31. Lykins, W., Ramanthan, R., Jiang, Y.H., and Woodrow K.A. (poster) Cross-linked lipid particles for delivery of antiretroviral combinations to inhibit HIV infection. Biomedical Engineering Society Annual Meeting, San Antonio, TX, October 2014.
30. Carson, D., Jiang, Y.H., and Woodrow, K.A. (oral) Programmable release of a water-soluble drug from electrospun nanofibers for HIV inhibition. Controlled Release Society, Chicago, IL, July 2014.
29. Ball, C., Chou, S.F., Jiang, Y.H., and Woodrow, K.A. (poster) Core-shell fibers for zero-order intravaginal drug delivery of hydrophilic antiretrovirals. Controlled Release Society, Chicago, IL, July 2014.
28. Park, J., Ramanathan, R., Pham, L., and Woodrow, K.A. (poster) Nanoparticle delivery to intravaginal mucosal tissue and target lymphoid organs using chitosan as a mucosal adjuvant. Controlled Release Society, Chicago, IL, July 2014.
27. Steger, A., Hathi, D., and Woodrow, K.A. (poster) Needle and wire electrospinning of a shear-thinning polysaccharide for biomedical applications. Society for Biomaterials, Denver, CO, April 2014.
26. Blakney, A.K., Krogstad, E.A., Jiang Y.H. and Woodrow, K.A. (poster) Role of microarchitecture in co-delivery of drug combinations from medical fabrics. Society for Biomaterials, Denver, CO, April 2014.
25. Nie, H and Woodrow, K.A. (poster) Burst and sustained release of dapivirine from pH-sensitive nanocarriers for HIV prevention. Society for Biomaterials, Denver, CO, April 2014.
24. Ramanathan, R., Park, J., Lykins W., Bennett, H., and Woodrow, K.A. (oral) Chemokine and growth factor mediated expansion of vaginal antigen presenting cells. Biomedical Engineering Society Annual Meeting, Seattle, WA, September 2013.
23. Phan, J.C., Tillman, A.R., and Woodrow, K.A., (oral) “Hydrophobic nanofibers with silver nanoparticles as a surface enhanced raman spectroscopy substrate”. American Institute of Chemical Engineers Annual Meeting, San Francisco, CA, November 2013.
22. Jiang, Y.H., Cao, S., Bright, D., Do Eric., Suydam, I.T. and Woodrow, K.A. (poster) Evaluation of nanoparticle-mediated delivery of ARV drug combinations. Annual Symposium on Nonhuman Primate Models for AIDS, Atlanta, Georgia. October 2013.
21. Phan, J.T., Woodrow, K.A., and Lai, J. (oral) A thermoresponsive magnetic nanoparticle system for HIV separation and concentration. Biomedical Engineering Society Annual Meeting, Seattle, WA, September 2013.
20. Bright, D., Jiang, Y.H., Do, E., Suydam, I.T., and Woodrow, K.A. (poster) Developing nanoparticle-based combination ARVs for HIV inhibition. Biomedical Engineering Society Annual Meeting, Seattle, WA, September 2013.
19. Blakney, A.K., Krogstad, E.A., Jiang Y.H. and Woodrow, K.A. (poster) Levonorgestrel and tenofovir composite fibers for dual prevention of HIV-1 and pregnancy. Biomedical Engineering Society Annual Meeting, Seattle, WA, September 2013.
18. Ball, C.B. and Woodrow, K.A. (poster) Electrospun solid dispersions of maraviroc for rapid intravaginal pre-exposure prophylaxis of HIV. Biomedical Engineering Society Annual Meeting, Seattle, WA, September 2013.
17. Krogstad, E. and Woodrow, K.A. (poster) “Manufacturing scale-up potential of electrospun poly(vinyl alcohol) fibers containing tenofovir for vaginal drug delivery.” Controlled Release Society Annual Meeting, Honolulu, HI, July 2013.
16. Hathi, D., Ball, C., and Woodrow, K.A. (poster) “Strategies for electrospinning carrageenan-based nanofibers.” Controlled Release Society Annual Meeting, Honolulu, HI, July 2013.
15. Ramanathan, R., Mahadevan, R., Iadanza, M., and Woodrow, K.A. (poster) “Biophysical characterization of hydrogel-core, lipid-shell nanolipogels for HIV chemoprophylaxis.” Controlled Release Society Annual Meeting, Honolulu, HI, July 2013.
14. Ball, C., Krogstad, E., and Woodrow, K.A. (oral) “Drug-eluting fibers for STI inhibition and contraception”, Biomedical Engineering Society Annual Meeting, Atlanta, GA, October 2012.
13. Krogstad, E., Chaowanachan, T., Ball, C. and Woodrow, K.A. (poster) “Drug synergy of tenofovir and nanoparticle-based antiretroviral drugs for prophylaxis”, Biomedical Engineering Society Annual Meeting, Atlanta, GA, October 2012.
12. Ball, C., Krogstad, E., and Woodrow, K.A. (oral) “Drug-eluting nanofibers for multipurpose prevention of sexually-transmitted infections and unintended pregnancy”, International Microbicides Conference, Sydney, NSW, AUS, April 2012.
11. Chaowanachan, T., Krogstad, E., Ball, C., and Woodrow, K.A. (poster) “Evaluating drug synergy of tenofovir and nanoparticle-based antiretroviral microbicides”, International Microbicides Conference, Sydney, NSW, AUS, April 2012.
10. Ramanathan, R., Mahadevan, R., Iadanza, M., Choawanachan, T., and Woodrow, K.A. (poster) “Biophysical characterization of hydrogel-core, lipid-shell nanolipogels for HIV chemoprophylaxis”,

International Microbicides Conference, Sydney, NSW, AUS, April 2012.
09. Krogstad, E., Chaowanachan, T., Ball, C., and Woodrow, K.A. (poster) "Nanomaterials for combination chemo-prophylaxis against sexual HIV transmission", Conference on Retroviruses and Opportunistic Infections, Seattle, WA, March, 2012.
08. Woodrow, K.A., Cu, Y., Booth, C.J., Saucier-Sawyer, J.K., Wood, M.J., and Saltzman, W.M. "Intravaginal gene silencing using biodegradable polymer nanoparticles densely loaded with small-interfering RNA" (speaker), Microbicdes Conference, Pittsburgh, PA, May, 2010.
07. A. T. Sin, K. A. Woodrow, W. M. Saltzman, "Peptide functionalization to improve cellular delivery of poly (D,Llactide-co-glycolide) nanoparticles" (poster), Biomedical Engineering Society Annual Meeting, St. Louis, MO, October, 2008.
06. K. A. Woodrow, Y. Cu, J. K. Saucier-Sawyer, M. J. Wood, A. T. Sin, W. M. Saltzman, "Intravaginal gene silencing using biodegradable nanoparticles densely loaded with small-interfering RNA" (poster), Gordon Conference: Drug Carriers in Medicine and Biology, Big Sky, MT, August, 2008.
05. K. A. Woodrow, Y. Cu, J. K. Saucier-Sawyer, M. J. Wood, W. M. Saltzman, "Sustained and localized gene silencing *in vitro* and *in vivo* using PLGA nanoparticles densely loaded with small-interfering RNA" (poster), American Chemical Society Annual Meeting, Philadelphia, PA, August, 2008.
04. Woodrow, K. A.(speaker), Wood, M. J., Saucier-Sawyer, J. K., Solbrig, C., Saltzman, W. M. "Patterning the hepatocellular microenvironment" Yale Liver Center Retreat, Danbury, CT, November 2006.
03. Wood, M. J., Woodrow, K. A., Saltzman, W. M. "Protein microarrays for hepatocyte co-cultures with liver-derived cell types" (poster), Biomedical Engineering Society Annual Meeting, Chicago, IL, October 2006.
02. K. A. Woodrow (speaker), J. R. Swartz, "Functional genomic analysis using *in vitro* protein expression and folding", American Chemical Society Annual Meeting, San Diego, CA, March, 2005.
01. J. R. Swartz (speaker), K. A. Woodrow, "Empowering cell-free technology for expressing protein libraries", AIChE, Annual Meeting, Austin, TX, November, 2004.

Grants Received

Current external research funding:

CFAR Mucosal Immunology Group, A127659 (PI: Woodrow), A nonhuman primate polarized tissue explant model to evaluate HIV oral vaccination strategies, $54,839 (plus $30,161 indirect), 01/2018 – 12/2018.

amfAR – Investment Grants: Bringing Bioengineers to Cure HIV, 109541-61-RGRL (Bioengineer Collaborator), Targeted nanaocarriers to accelerate depletion of the HIV reservoir, $1,405,356 (plus $92,241), 02/2017 – 09/2021.

NIH/NIAID, R01 AI 112002 (PI: Woodrow), Combination HIV prevention in drug-eluting fibers: designing for efficacy and use, $1,600,000 (plus $706,270 indirect), 02/2014 – 01/2019.

Submitted:

NIH/NIAID, R01 AI145483 (PI: Woodrow) Drug-eluting fibers for on-demand and extended protection against HIV, $2,497,128 (plus $1,531,250 indirect), 04/01/18 – 03/31/24 (score: 14-percentile).

NIH/NIAID, R01 AI146788 (PI: Woodrow) Oral Models for Delivery of Adjuvanted Vaccine Biologics, $2,481,209 (plus $1,523,846 indirect), 07/01/18 – 06/30/24 (Under Review: 02/12/2019).

NIH/NIAID, R61/R33 AI147287 (MPI: Woodrow, Jensen) Drug-eluting intrauterine device for long-acting HIV prevention, $5,597,604 (plus $2,392,910 indirect), 07/01/18 – 06/30/24 (Under Review: 05/2019).

NIH/NIAID, R01 AI147715 (MPI: Woodrow, Villinger) Electrospun solid dispersion implants of small molecule and biologic antivirals for sustained HIV prevention, $2,498,473 (plus $1,347,577 indirect), 07/01/18 – 06/30/24 (Under Review: 05/2019).

Completed external research funding:

OPERM (The Bill and Melinda Gates Foundation), OPP1006248 (PI: Woodrow), Integration of electrospun fibers onto an intrauterine device for sustained and precise local delivery of sclerosing agents to induce fibrosis, $100,000 (plus $10,000 indirect), 01/2017 – 12/2018.

The Bill and Melinda Gates Foundation, OPP11110945 (PI: Woodrow), Continued assessment of nanofibers for multipurpose prevention development (invited submission), $1,731,930 (plus $259,790 indirect), 01/2015 – 12/2016.

USAID/PEPFAR, SH1425 (subaward PI: Woodrow, Prime: Population Council), Development of nanofiber delivery systems incorporating polymer and GRFT, $293,905 (plus $160,178), 10/2014 – 09/2018.

NIH/NIAID, R33 AI 094412 (PI: Woodrow), Nanoparticle microbicides for delivery of combination antiretroviral drugs (Microbicide Innovation Program), $908,472 (plus $516,089 indirect), 06/2013 – 05/2016.

NIH/NICHD, DP2 HD 075703 (PI: Woodrow), Nanomaterials for engineering protection in the genital mucosa, $1,500,000 (plus $817,500 indirect), 09/2012 – 08/2017.

NIH/NIAID, R21 AI 098648 (PI: Woodrow), A NanoGuard Vaginal Matrix as a Dual-Protection Contraceptive Microbicide (Combined Multipurpose Strategies for Sexual and Reproductive Health), $265,841 (plus $129,794 indirect), 07/2012 – 06/2014.

The Bill and Melinda Gates Foundation, OPP1067729 (PI: Woodrow), Drug-eluting fibers for HIV prevention (Accelerated Grant Pilot), $869,549 (plus $129,692 indirect), 10/2012 – 12/2014.

The Population Council, SH1211 (subaward PI: Woodrow, Prime: Population Council), Development of Nanofiber devices incorporating, MIV-150-Zinc-Carrageenan with and without contraception, 12/2012 – 06/2014.

NIH/NIAID, R21 AI 094412 (PI: Woodrow), Nanoparticle microbicides for delivery of combination antiretroviral drugs (Microbicide Innovation Program), $266,395 (plus $125,661), 06/2011 – 05/2013.

NIH/NIAID, Sub-award P30 AI 027767 (PI: Woodrow; OAR/ CFAR University of Alabama, Saag, PI), Multifunctional nanoparticles as a combination microbicide to prevent mucosal transmission of HIV (Creative and Novel Ideas in HIV Research), $283,067 (plus $143,202 indirect), 08/2010 - 05/2013.

Courses Taught

BIOEN 400, Principles of Bioengineering Design, 72 undergraduate students, lecture course (Primary Instructor, 27 hours in-class instruction): Spring 2018 (first offering).

BIOEN 401, Bioengineering Capstone Principles, 50 undergraduate students, lecture course (Primary Instructor, 27 hours in-class instruction): Spring 2012, Spring 2013, Spring 2014, Spring 2015.

BIOEN 474/574 (original 498/599) (new course), Immunoengineering, 30 undergraduate/graduate students, lecture course (Primary Instructor, 27 hours in-class instruction): Spring 2011, Winter 2012, Winter 2013, Winter 2014, Winter 2015, Winter 2016, Winter 2017, Winter 2019

BIOEN 509, Bioengineering Department Seminar, 40 graduate students, seminar course (Primary Instructor, 10 hours in-class instruction): Winter 2014, Spring 2014.

GH 490A/GH 590C, Bioengineering Solutions to Improve the Health of Women, Children & Adolescents, ~50 undergraduate and graduate students, lecture course (co-Instructor, 10 hours in-class instruction): Winter 2014.

COM 120, Engineering for Society, 90 undergraduate students, lecture course (Guest Lecturer: 1 lecture, 1 hour in-class instruction): Fall 2010.

NME 498, Nanoscience and Molecular Engineering, 20 undergraduate students, lecture and recitation (Section Lecturer: 2 lectures and 1 recitation, 4 hours in-class instruction): Fall 2010.

UWEB21, Introduction to Biomaterials Short-Course, ~20 industry affiliates, lecture course (Guest Lecturer: 1 lecture, 1 hour in-class instruction): Summer 2010, Spring 2010, Fall 2010, Winter 2011.

Seminar: Immuno/Bioengineering Summer Seminar, Bioengineering, Summer 2010

Seminar: Bioengineering Solutions to Women's and Children's Health Seminar, Bioengineering, Winter 2012

Outreach Activities:

The Bill and Melinda Gates Take Action: 6th-8th grade high school-bound students; Pediatric HIV; July 2014.

UW Bioengineering Summer Camp: 9th-10th grade college-bound high school students; Pediatric HIV; July 2014.

Paws-on Science: Community members; science, engineering, technology, and math education outreach; Nanomaterials for HIV prevention. April 2011, April 2012, April 2013, April 2014.

University of Washington College of Engineering Discovery Days: Community members; science, engineering, technology, and math education outreach. April 2011, April 2012, April 2013, April 2014.

University of Washington Mathematics Academy: 28 college-bound high school students; science, engineering, technology, and math education outreach; Engineering Explorations: Nanomaterials for Applications in Medicine and Biology. August 2010.

Past and Present Students Supervised

Graduate Students Supervised: [Fellowships/Awards: [1]NSF Graduate Research Fellow, [2]Molecular Medicine Training Fellow, [3]CFAR STD/AIDS Training Fellow]

Rachel Creighton[1,3], Doctoral Candidate, Bioengineering, 2015-current
Hannah Frizzell[1], Doctoral Candidate, Bioengineering, 2014-current
Jamie Hernandez, Doctoral Candidate, Bioengineering, 2017-current

Completed:

Ph.D. Students Graduated

Shijie Cao, Doctoral Candidate, Bioengineering (2013-2018), graduated with Ph.D.; thesis: "*Targeted nanocarriers for HIV therapy.*" Upon graduation – Postdoctoral Fellow, Advisor: Jeffrey Hubbell, University of Chicago.

Anna Blakney[1,2], Doctoral Candidate, Bioengineering (2012-2016), graduated with Ph.D.; thesis: "*Electrospun fibers for HIV prevention: Translational design for in vivo efficacy*." Upon graduation – Whitaker International Scholar, Advisor: Robin Shattock, Imperial College London, United Kingdom.

Renuka Ramanathan[3] (2010-2015) Bioengineering, graduated with Ph.D.; thesis: "*Immunoengineering nanoparticles for mucosal drug and vaccine treatment of sexually transmitted infections*." Upon graduation – Patent Agent, Wilson Sonsini Goodrich.

Emily Krogstad[1] (2010-2015) Bioengineering, graduated with Ph.D.; thesis: "*Nanomaterial strategies to enhance antiretroviral efficacy for vaginal drug delivery*." Upon graduation – Whitaker International Scholar, University of Cape Town, South Africa.

Cameron Ball[1] (2010-2014) Bioengineering, graduated with Ph.D.; thesis: "*Electrospun fibers for prevention of human immunodeficiency virus*." Upon graduation – Postdoctoral Scientist, Sandia National Laboratories.

Masters Students Graduated

Joseph Phan[1] (2009-2015) Bioengineering, graduated with M.S. thesis "*Improving biomaterials for diagnostics.*" Upon graduation – Engineer, NanoString Technologies.

Reena Mahadevan (2012-2013) Bioengineering, graduated with B.S./M.S. thesis *"Biophysical characterization of hydrogel-core lipid-shell (nanolipogels) for HIV chemoprophylaxis."*

Postdoctoral and Research Scientists Supervised:

Dr. Jaehyung Park, Research Scientist, 2013-current

Completed:

Dr. Yonghou Jiang, Research Scientist, 2013-2018 – Research Scientist, Seattle Children's Hospital.

Dr. Hangyu Zhang, Postdoctoral Fellow, 2014-2017 – Assistant Professor, Research Center for the Control Engineering of Translational Precision Medicine at Dalian University of Technology

Dr. Shih-Feng Chou, Postdoctoral Fellow, 2014-2016 – Assistant Professor, Mechanical Engineering, UT Tyler.

Dr. Sharon Golan-Paz, Postdoctoral Fellow, 2014-2016

Dr. Huarong Nie, Postdoctoral Fellow, 2013-2015 – Associate Professor, School of Material Science and Engineering, Nanchang University.

Dr. Thanyanan Chaowanachan, Postdoctoral Fellow, 2010-2013 - Clinical Lecturer, Global Health, UW

Undergraduate Students Supervised: [Fellowships/Awards: [1]Bioengineering Capstone Scholarship, [2]College of Engineering Dean's Medal, [3]Levinson Emerging Scholar Award, [4]Mary Gates Research Fellow, [5]NSF Graduate Research Fellow, [6]Summer Research Education for Undergraduates (REU), [7]Washington Research Foundation Award, [8]Undergraduate Research Conference Travel Award]; **≤ 1 year

Nicole Lim, Bioengineering, Fall 2018-current
Mitchell Ekdahl, Bioengineering, Fall 2018-current
Hienschi Nguyen, Bioengineering, Fall 2018-current
Jolie Phan, Bioengineering, Fall 2017-current
Sarah Slack[4], Bioengineering, Fall 2016-current

Completed:

Alton Cao, Bioengineering, Fall 2016-2018
Nina Kondza, Bioengineering, Fall 2015-2017
Tiffany Ohlsen, Bioengineering, Fall 2015-2017
Adam Little, Bioengineering, Summer 2015-2017
Kevin Liu (MSE student), Winter 2015-2017

Namratha Potharag[4], Fall 2014-2017
Christina Nhan, Summer 2014-2017
Natasha Lou[4,6], Comandante, Winter 2014-2016
Holly Sullivan[4] (ChemE student), Winter 2015-2016
Jessica Hung, Bioengineering, Fall 2013-2015
Ben Read,[1,4] Bioengineering, Spring 2013-2015
Linchi Pham,[4] Bioengineering, Spring 2013-2015
William Lykins,[3,4,6,8] Bioengineering, Spring 2012-2015
Annie Wu, Bioengineering, Fall 2013-2014**
Alexander Tillman,[4] Bioengineering, Winter 2013-2014
Andrew Johnson, Bioengineering, Spring 2012-2014
Hunter Bennett,[1,2,3,4,6,7] Bioengineering, Fall 2010-2014
Oriana Xu, Bioengineering, Winter 2013-Fall 2013**
Rachel Lucero, Bioengineering, Winter 2012-Winter 2013**
Brinda Gokul, Bioengineering, Winter 2012-Spring 2012**
Eric Do,[3,4] Bioengineering, Spring 2012-2013
Adrienne Rothschilds,[5] Bioengineering, Spring 2012-2013
Deep Hathi,[4] Bioengineering, Summer 2010-2013
Reena Mahadevan, Bioengineering, Fall 2010-Spring 2012
Nathan Egge,[4] Bioengineering, Fall 2010-Spring 2012
Lauren Schergen,[1,4] Bioengineering, Winter 2010-Spring 2011

***Other Students Supervised**:*
Supervisory Committee:
Jingyi Xie, Masters Candidate, Bioengineering, (Member, Advisor: S. Jiang), 2017-2018.
Samantha Byrnes, Doctoral Candidate, Bioengineering, Doctoral Supervisory Committee (Member, Advisor: P. Yager), 2013-2016.
Shawn Yu, MSTP Candidate, Bioengineering, Doctoral Supervisory Committee (Graduate Student Representative, Advisor: D. Baker), 2013-2016.
Ruying Chen, Doctoral Candidate, Bioengineering, Doctoral Supervisory Committee (Member, Advisor: J. Bryers), 2012-2017.
Samantha Townsley, Doctoral Candidate, Microbiology, Doctoral Supervisory Committee (Graduate Student Representative, Advisor: S-L. Hu), 2012-2016.
Ashleigh Cooper, Doctoral Candidate, Materials Science and Engineering, Doctoral Supervisory Committee (Graduate Student Representative, Advisor: M. Zhang), 2011.
Kristen Cohen, Doctoral Candidate, Pathobiology Group, Doctoral Supervisory Committee (Graduate Student Representative, Advisor: L. Stamatatos), 2010-2013.
Jing Shang, Doctoral Candidate, Bioengineering, Doctoral Supervisory Committee (Member, Advisor: D. Ratner), 2010-2012.
Brittany Lund, Doctoral Candidate, Bioengineering, Doctoral Supervisory Committee (Member, Advisor: P. Stayton), 2010-2013.
Salka Keller, Doctoral Candidate, Bioengineering, Doctoral Supervisory Committee (Member, Advisor: P. Stayton), 2010-2013.
Mathew Manganiello, Doctoral Candidate, Bioengineering, Doctoral Supervisory Committee (Member, Advisor: P. Stayton), 2010-2013.
Connie Cheng, Doctoral Candidate, Bioengineering, Doctoral Supervisory Committee (Member, Advisor: J. Bryers), 2010-2013.

Program Rotation:
Hannah Vanbenschoten, Bioengineering, Research Rotation, Winter 2019.
Ian Hull, Ph.D. Program, Bioengineering, Research Rotation, Winter 2018.
Kyunghoon Kim, Ph.D. Program, Bioengineering, Research Rotation, Winter 2018.
Jamie Hernandez, Ph.D. Program, Bioengineering, Research Rotation, Winter 2017.
Chris Saxby, Ph.D. Program, Bioengineering, Research Rotation, Winter 2017.
Dylan Gueling, Ph.D. Program, Bioengineering, Research Rotation, Winter 2017
Rachel Creighton, Ph.D. Program, Bioengineering, Research Rotation, Winter 2016.
Hannah Frizzell, Ph.D. Program, Bioengineering, Research Rotation, Winter 2015.
David Peeler, Ph.D. Program, Bioengineering, Research Rotation, Fall 2014.
Ian Blumenthal, Ph.D. Program, Bioengineering, Research Rotation, Fall 2014.
Shijie Cao, Ph.D. Program, Bioengineering, Research Rotation, Fall 2013.

Debobrato (Jojo) Das, Ph.D. Program, Bioengineering, Research Rotation, Fall 2013.
Anna Blakney, Ph.D. Program, Bioengineering, Research Rotation, Winter 2013.
Shivani Gupta, Ph.D. Program, Bioengineering, Research Rotation, Spring 2012.
Susan Liu, Ph.D. Program, Bioengineering, Research Rotation, Fall 2011.
Renuka Ramanathan, Ph.D. Program, Bioengineering, Research Rotation, Winter 2011.
Shefali Oza, Ph.D. Program (first-year advisor), Bioengineering, Research Rotation, Winter-Summer 2011.
Cameron Ball, Ph.D. Program, Bioengineering, Research Rotation, Winter 2011.
Emily Krogstad, Ph.D. Program (first-year advisor), Bioengineering, Research Rotation, Fall 2010.
Joseph Phan, Ph.D. Program, Bioengineering, Research Rotation, Winter 2010.
Hanna Kern, UW Medical Scientist Training Program (M.D./Ph.D. candidate), Research Rotation, Summer 2010.

Undergraduate REU Fellows:
Danielle Bright (Undergraduate, Seattle University), UW Amgen Scholars Program, Summer 2013.
Alexandra Long (Undergraduate, Carleton College), UW Amgen Scholars Program, Summer 2011.
David Murphy (Postbaccalaureate, Seattle Central Community College), UW/SCCC Building Bridges to Baccalaurate Program, REU, Summer 2010.

University and Department Service

University of Washington:
UW School of Medicine Faculty Council on Academic Affairs, 2015-current
UW Chemical Engineering Chair Search Advisory Committee, 2018
UW Bioengineering Chair Search Advisory Committee, 2013-2014
UW School of Medicine: The Council on Research and Graduate Education (CORGE), 2011-2014

Department of Bioengineering:
Graduate Admissions Committee, 2010-2017, 2019
Curriculum Committee, 2017
Bioengineering Faculty Search Committee, 2015
Faculty Retreat Committee 2015
Student Affairs Committee, 2010

Program Qualifying Examination Committee:
Thomas Hady, Bioengineering (Role: Member, Advisor: J. Bryers), 2018
Fang Yi Su, Doctoral Candidate, Bioengineering (Role: Member, Advisor: P. Stayton), 2015
Brynn Livesay, Doctoral Candidate, Bioengineering (Role: Chair, Advisor: S. Pun), 2015
Jared Shadish, Doctoral Candidate, Chemical Engineering (Role: Member, Advisor: C. DeForest), 2014
Marvin Mecwan, Doctoral Candidate, Bioengineering (Role: Member, Advisor: B. Ratner), 2014
Chayanon Ngambenjawong, Doctoral Candidate, Bioeng., (Role: Chair, Advisor: S. Pun), 2014
Jasmin Chen, Doctoral Candidate, Bioengineering (Role: Chair, Advisor: D. Ratner), 2014
Surya Kotha, Doctoral Candidate, Bioengineering (Role: Member, Advisor: Y. Zheng), 2014
Mallory Monahan, Doctoral Candidate, Bioengineering (Role: Chair, Advisor: P. Yager), 2014
Susan Liu, Doctoral Candidate, Bioengineering (Role: Member, Advisor: S. Jiang), 2013
Kevin Tan, Doctoral Candidate, Bioengineering (Role: Member, Advisor: S. Pun), 2013
Christine Wang, Doctoral Candidate, Bioengineering (Role: Chair, Advisor: S. Pun), 2013
Leslie Chan, Doctoral Candidate, Bioengineering (Role: Chair, Advisor: S. Pun), 2012
Carly Holstein, Doctroal Candidate, Bioengineering (Role: Member, Advisor: P. Yager), 2012
Christine Probst, Doctoral Candidate, Bioengineering (Role: Member, Advisor: X. Gao), 2012
David Chu, Doctoral Candidate, Bioengineering (Role: Member, Advisor: S. Pun), 2011
Gina Fridley, Doctoral Candidate, Bioengineering (Role: Chair, Advisor: P. Yager), 2011

Professional Societies:
American Association for the Advancement of Science (AAAS), American Institute of Chemical Engineers (AIChE), American Chemical Society (ACS), Biomedical Engineering Society (BMES), Controlled Release Society (CRS), Society for Biomaterials (SFB)