

DANIEL GALLEGO-PEREZ

501 Davis Heart and Lung Research Institute
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EDUCATION

The Ohio State University, Ph.D., Biomedical Engineering, June 2011 (Thesis title: Micro/nanoscale Engineering of the Cell Microenvironment, Advisor: Dr. Derek Hansford)

Antioquia School of Engineering, B.S., Biomedical Engineering, December 2003

PROFESSIONAL, RESEARCH AND TEACHING/MENTORING EXPERIENCES

The Ohio State University Wexner Medical Center, Department of Surgery, Columbus (OH)
Assistant Professor, September 2015-present

The Ohio State University, Nanoscale Science and Engineering Center, Center for Regenerative Medicine and Cell-Based Therapies, Columbus (OH)
Postdoctoral Researcher, July 2011-August 2015

Ohio Nanotech West Laboratory, Columbus (OH)
Associate Staff, September 2011-August 2015

The Ohio State University, Biomedical Engineering, Columbus (OH)
Graduate Research Associate, January 2006-June 2011
Graduate Teaching Associate, winter quarter of 2007 and 2009

Antioquia School of Engineering, Biomedical Engineering, Antioquia (Colombia)
Research Associate, May 2004-December 2005

PROFESSIONAL SERVICES

- **Journal Reviewer:** Lab on a Chip, Tissue Engineering C, Military Medicine, Hellion, Colloids and Surfaces B – Biointerfaces, Annals of Biomedical Engineering, Coatings
- **Editorial Board Member:** Coatings

RESEARCH FUNDING

Funded:

- Nanotechnology-based solutions for diabetic peripheral arterial disease
P.I.: Daniel Gallego-Perez
Co-P.I.s: Savita Khanna
DiaComp-NIH/NIDDK; 11/01/16-10/31/17

- Interpenetrating Nanochannels for Deep-Topical Tissue Nanoelectroinjection (DTN)
P.I.: Daniel Gallego-Perez
Co-P.I.s: Chandan K. Sen
TCO Accelerator Award (OSU); 12/01/16-05/31/17

- Nanotechnology-based non-viral derivation of induced endothelium for ischemic disorders
P.I.: Daniel Gallego-Perez
Co-P.I.s: Savita Khanna, Cameron Rink
Co-I: Chandan K. Sen, L. James Lee
NIH/NINDS; 09/01/16-08/31/18

- Pro-angiogenic cell therapies for stroke recovery: Nanoengineering blood vessels through direct reprogramming.
P.I.: Daniel Gallego-Perez
Co-Is.: Cameron Rink, Savita Khanna, L. James Lee
Discovery Theme Chronic Brain Injury Pilot Project Program (OSU); 03/01/16-03/01/17

- A micro/nanofabricated platform for enhanced gene delivery: applications in cell-based therapies.
P.I.: Daniel Gallego-Perez
Co-Is.: Savita Khanna
Institute for Materials Research (OSU); 01/01/16-01/01/17

- Potential applications of Portland cement as load bearing bone substitute material.
P.I.: Daniel Gallego-Perez.
Co-P.I.s: Derek Hansford (The Ohio State University), and Ernesto Lopez (Antioquia School of Engineering).
Colombian Institute for the Development of Science and Technology; 01/01/06 – 01/01/08.

HONORS AND AWARDS

1. William G. Lowrie Department of Chemical and Biomolecular Engineering, Outstanding Post-Doc Award for Research Excellence, 2014.
2. CWRU Society for Biomaterials – Biomaterials Day, Student Presentation Award, 2010.
3. Ohio State Biomedical Engineering Conference, Best Presentation in Micro/Nanotechnology, 2009.
4. Society for Biomaterials Meeting, Student Travel Achievement Recognition, 2009.
5. Biomedical Engineering Society Meeting, Student Travel Award, 2008.
6. Ohio State Biomedical Engineering Conference, Best Presentation in Micro/Nanotechnology, 2008.
7. The 8th New Jersey Symposium on Biomaterials Science, Student Travel Scholarship, 2006.

8. Second Colombian Congress of Bioengineering and Biomedical Engineering, First Place Award – poster presentation, 2005.

PATENTS

1. Hansford D, Schley J, Gallego-Perez D. “Electroosmotic devices for fluid handling” US Patent #61/883,592. 9/27/13.

PEER-REVIEWED PUBLICATIONS

Book Chapters

1. Wu Y, Gallego-Perez D, Lee LJ. Microwell Array-Mediated Delivery of Lipoplexes Containing Nucleic Acids for Enhanced Therapeutic Efficacy. In: RNA Interference - Challenges and Therapeutic Opportunities. Edited by Mouldy S. Springer. 2014.
2. Gallego-Perez D, Pelaez-Vargas A, Gomez D, Fernandes MH, Hansford D, Monteiro FJ. Proliferation of Human Bone Marrow Stem Cells for Craniofacial applications. In: Stem Cells and Cancer Stem Cells: Therapeutic Applications in Disease and Injury. Edited by Hayat MA. Springer. 2012.
3. Pelaez-Vargas A, Gallego-Perez D, Higuera-Castro N, Carvalho A, Grenho L, Arismendi JA, Fernandes MH, Ferraz MP, Hansford DJ, Monteiro FJ. Micropatterned Coatings for Guided Tissue Regeneration in Dental Implantology. In: Cell Interaction. Edited by Gowder S. InTech. 2012.

Journals

1. Kuang T, Chang L, Peng X, Hu X, **Gallego-Perez D**. Molecular Beacon Nano-Sensors for Probing Living Cancer Cells. Trends in Biotechnology 2016. doi:10.1016/j.tibtech.2016.09.003.
2. Chang L, Li L, Shi J, Shen Y, Lu W, **Gallego-Perez D**, Lee LJ. Micro-/nanoscale electroporation. Lab on a Chip 2016. doi:10.1039/C6LC00840B
3. **Gallego-Perez D**, Chang L, Chiang CL, Bertani P, Kuang T, Sheng Y, Chen F, Chen Z, Shi J, Yang H, Huang X, Malkoc V, Lu W, Lee LJ. Controllable Large-Scale Transfection of Primary Mammalian Cardiomyocytes on a Nanochannel Array Platform. Small 2016. doi:10.1002/smll.201601465
4. **Gallego-Perez D**, Chang L, Shi J, Ma J, Kim S-H, Zhao X, Malkoc V, Wang X, Minata M, Kwak KJ, Wu Y, Lafyatis G, Lu W, Hansford DJ, Nakano I, Lee LJ. On-chip clonal analysis of glioma stem cell motility and therapy resistance. Nano Letters 2016. DOI: 10.1021/acs.nanolett.6b00902.
5. Gu S-Q, **Gallego-Perez D**, McClory S, Shi J, Han J, Lee LJ, Schoenberg D. The human PMR1 endonuclease stimulates cell motility by down regulating miR-200 family microRNAs. Nucleic Acids Research 2016. DOI: 10.1093/nar/gkw497.
6. Kim S-H, Ezhilarasan R, Phillips E, **Gallego-Perez D**, Sparks A, Taylor D, Ladner K, Furuta T, Sabit H, Chhipa R, Cho J-H, Mohyeldin A, Beck S, Kurozumi K, Kuroiwa T, Iwata R, Asai A, Kim J, Sulman EP, Cheng S-Y, Lee LJ, Nakada M, Guttridge D, DasGupta B, Goidts V, Bhat KP, Nakano I. Serine/Threonine Kinase MLK4 Determines Mesenchymal Identity in Glioma Stem Cells in an NF- κ B-dependent Manner. Cancer Cell 2016; 29:201-213.
7. **Gallego-Perez D**, Otero JJ, Czeisler C, Ma J, Ortiz C, Gygli P, Catacutan F, Gokozan H, Cowgill A, Sherwood T, Ghatak S, Malkoc V, Zhao Z, Liao W-C, Gnyawali S, Wang X, Adler AF, Leong K, Wulff B, Wilgus TA, Askwith C, Khanna S, Rink C, Sen CK, Lee LJ. Deterministic Transfection Drives Efficient Nonviral Reprogramming and Uncovers Reprogramming Barriers. Nanomedicine 2015. DOI: <http://dx.doi.org/10.1016/j.nano.2015.11.015>.
8. Malkoc V, **Gallego-Perez D**, Nelson T, Lannutti JJ, Hansford DJ. Controlled neuronal cell patterning and guided neurite growth on micropatterned nanofiber platforms. Journal of Micromechanics and Microengineering 2015. 25: 125001.

9. Bertani P, Lu W, Chang L, **Gallego-Perez D**, Lee LJ, Chiang C, Muthusamy N. Bosch etching for the creation of a 3D nanoelectroporation system for high throughput gene delivery. *JVSTB* 2015/ 33: 06F903.
10. Zhao X, Huang X, Wang X, Wu Y, Eisfeld A-K, Schwind S, **Gallego-Perez D**, Boukany PE, Marcucci GI, Lee LJ. Nanochannel Electroporation as a Platform for Living Cell Interrogation in Acute Myeloid Leukemia. *Advanced Science* 2015. DOI: 10.1002/advs.201500111.
11. Chang L, Bertani P, **Gallego-Perez D**, Yang Z, Chen F, Chang C, Malkoc V, Kuang T, Gao K, Lee LJ, Lu W. 3D Nanochannel Electroporation for High-throughput Cell Transfection with High Uniformity and Dosage Control. *Nanoscale* 2015; 8:243-252.
12. **Gallego-Perez D**, Chang L, Zhao X, Bertani P, Yang Z, Chiang C-L, Malkoc V, Shi J, Sen CK, Odonnell L, Yu J, Lu W, Lee LJ. Dielectrophoresis-assisted 3D nanoelectroporation for non-viral cell transfection in adoptive immunotherapy. *Lab Chip* 2015. 15: 3147-3153.
13. Holfinger SJ, Reinhardt JW, Reen R, Schultz KM, Passino KM, Ackerman WE, Kniss DA, Sander LM, **Gallego-Perez D**, Gooch KJ. Pancreatic Epithelial Cells Form Islet-Like Clusters in the Absence of Directed Migration. *Cellular and Molecular Bioengineering* 2015; 8:496-506.
14. Zhao X, Wu Y, **Gallego-Perez D**, Kwak K, Gupta C, Ouyang X, Lee LJ. Effect of Non-Endocytic Uptake of Nanoparticles on Human Bronchial Epithelial Cells. *Anal Chem* 2015. 17: 3208-3215.
15. Wang X, Huang X, Yang Z, **Gallego-Perez D**, Ma J, Zhao X, Xie J, Nakano I, Lee LJ. Targeted Delivery of Tumor Suppressor MicroRNA-1 by Transferrin-Conjugated Lipopolyplex Nanoparticles to Patient-Derived Glioblastoma Stem Cells. *Curr Pharm Biotechnol* 2014; 15:839-846
16. Chang L, Howdyshell M, Liao W-C, Chiang C-L, **Gallego-Perez D**, Yang Z, Lu W, Byrd JC, Muthusamy N, Lee LJ, Sooryakumar R. Magnetic Tweezers-based 3D Microchannel Electroporation for High-Throughput Gene Transfection in Living Cells. *Small* 2014. 11: 1818-1828.
17. Xie P, He P, Yen Y-C, Kwak K, **Gallego-Perez D**, Chang L, Liao W-C, Yi A, Lee LJ. Rapid hot embossing of polymer microstructures using carbide-bonded graphene coating on silicon stampers. *Surface and Coatings Technology* 2014. 15:174-180.
18. Benavente-Babace A, **Gallego-Perez D**, Hansford DJ, Arana S, Perez-Lorenzo E, Mujika M. Single-cell trapping and selective treatment via co-flow within a microfluidic platform. *Biosensors and Bioelectronics* 2014; 61:298–305.
19. Gupta C, Liao W-C, **Gallego-Perez D**, Castro CE, Lee LJ. DNA translocation through short nanofluidic channels under asymmetric pulsed electric field. *Biomicrofluidics* 2014; 8:024114.
20. Gao K, Li L, He L, Hinkle K, Wu Y, Ma J, Chang L, Zhao X, **Gallego-Perez D**, Eckardt S, Mclaughlin J, Liu B, Farson DF, Lee LJ. Design of a Microchannel-Nanochannel-Microchannel Array Based Nanoelectroporation System for Precise Gene Transfection. *Small* 2014; 10:1015–1023.
21. Huang W, Yu J, Kwak KJ, **Gallego-Perez D**, Liao W, Yang H, Ouyang X, Li L, Lu W, Lafyatis GP, Lee LJ. Atomic Carbide Bonding Leading to Superior Graphene Networks. *Advanced Materials* 2013; 25: 4668-4672.
22. **Gallego-Perez D**, Pelaez-Vargas A, Carvalho A, Fernandes MH, Hansford DJ, Monteiro FJ. Effects of density of anisotropic micro-stamped silica thin films on guided bone tissue regeneration – in vitro study. *J Biomed Mater Res B Appl Biomater* 2013; 101:762-769.
23. Wu Y, Cavanaugh-Terp M, Kwak KJ, **Gallego-Perez D**, Nana-Sinkam SP, Lee LJ. Surface-Mediated Nucleic Acid Delivery by Lipoplexes Prepared in Microwell Arrays. *Small* 2013; 9:2358-2367.
24. Fei Z, Wu Y, Sharma S, **Gallego-Perez D**, Higueta-Castro N, Hansford DJ, Lannutti J, Lee LJ. Gene Delivery to Cultured Embryonic Stem Cells Using Nanofiber-Based Sandwich Electroporation. *Anal Chem* 2013; 85:1401–1407.
25. Dinan B, **Gallego-Perez D**, Lee H, Hansford DJ, Akbar SA. Thermally Grown TiO₂ Nanowires for Improving Cell Growth and Proliferation on Titanium Based Materials. *Ceram Int* 2012; 39: 5949–5954.
26. Higueta-Castro N, **Gallego-Perez D**, Love K, Sands MR, Kaletunc G, Hansford DJ. Soft Lithography-Based Fabrication of Biopolymer Microparticles for Nutrient Microencapsulation. *Ind. Biotechnol* 2012; 8: 365-371.
27. **Gallego-Perez D**, Higueta-Castro N, Denning L, DeJesus J, Dahl K, Sarkar A, Hansford DJ. Microfabricated mimics of in vivo structural cues for the study of guided tumor cell migration. *Lab Chip* 2012; 12: 4424-4432.
28. Carvalho A, Pelaez-Vargas A, **Gallego-Perez D**, Grenho L, Fernandes MH, De Aza AH, Ferraz MP, Hansford DJ, Monteiro FJ. Micropatterned silica thin films with nanohydroxyapatite micro-aggregates for guided tissue regeneration. *Dent Mater* 2012; 28:1250-1260.

29. Wang F, He H, Wang X, Li Z, **Gallego-Perez D**, Guan J, James Lee LJ. Micropatterned Thermoresponsive Surfaces by Polymerization of Monomer Crystals: Modulating Cellular Morphology and Cell–Substrate Interactions. *Anal Chem* 2012; 84:9439–9445.
30. **Gallego-Perez D**, Higueta-Castro N, Reen RK, Palacio-Ochoa M, Sharma S, Lee LJ, Lannutti JJ, Hansford DJ, Gooch KJ. Micro/nanoscale technologies for the development of hormone-expressing islet-like cell clusters. *Biomed Microdevices* 2012; 14:779-789.
31. Carvalho A, Pelaez-Vargas A, **Gallego-Perez D**, Fernandes MH, Hansford DJ, Monteiro FJ. Micropatterned bioactive thin films for guided bone regeneration. *Eur Cell Mater* 2012; 23 (Suppl 2): 13.
32. Pelaez-Vargas A, **Gallego-Perez D**, Fernandes MH, Hansford D, Monteiro FJ. Microstructured coatings to study the behavior of osteoblast-like cells on hard materials. *Bone* 2011; 48 (Suppl 2): S105-S106.
33. Carvalho A, Pelaez-Vargas A, **Gallego-Perez D**, Fernandes MH, Hansford D, Monteiro FJ. Adhesion and proliferation of mesenchymal stem cells on micropatterned thin films modified with nanohydroxyapatite particles. *Bone* 2011; 48 (Suppl 2): S106.
34. Higueta-Castro N, **Gallego-Perez D**, Pelaez-Vargas A, García Quiroz F, Posada OM, Lopez LE, Sarassa CA, Agudelo-Florez P, Monteiro FJ, Litsky AS, Hansford DJ. Reinforced Portland cement porous scaffolds for load-bearing bone tissue engineering applications. *J Biomed Mater Res B Appl Biomater* 2011; 100B:501-507.
35. **Gallego-Perez D**, Higueta-Castro N, Garcia Quiroz F, Posada OM, Lopez LE, Litsky AS, Hansford DJ. Portland cement for bone tissue engineering: effects of processing and metakaolin blends. *J Biomed Mater Res B Appl Biomater* 2011; 98B:308-315.
36. Pelaez-Vargas A, **Gallego-Perez D**, Magallanes-Perdomo M, Fernandes MH, Hansford DJ, De Aza AH, Pena P, Monteiro FJ. Isotropic micropatterned silica coatings on zirconia induce guided cell growth for dental implants. *Dent Mater* 2011; 27:581-589.
37. Pelaez-Vargas A, **Gallego-Perez D**, Ferrell N, Fernandes MH, Hansford D, Monteiro FJ. Early spreading and propagation of bone marrow stem cells on isotropic and anisotropic topographies of silica thin films produced via microstamping. *Microsc Microanal* 2010; 16:670-676.
38. **Gallego-Perez D**, Ferrell NJ, Higueta-Castro N, Hansford DJ. Versatile methods for the fabrication of polyvinylidene fluoride microstructures. *Biomed Microdevices* 2010; 12:1009-1017.
39. Sabbani S, **Gallego-Perez D**, Nagy A, Waldman WJ, Hansford D, Dutta PK. Synthesis of silver-zeolite films on micropatterned porous alumina and its application as an antimicrobial substrate. *Microporous Mesoporous Mater* 2010; 135:131-136.
40. Garcia Quiroz F, Posada OM, **Gallego-Perez D**, Higueta-Castro N, Sarassa C, Hansford DJ, Agudelo-Florez P, Lopez LE. Housekeeping gene stability influences the quantification of osteogenic markers during stem cell differentiation to the osteogenic lineage. *Cytotechnology* 2010; 62:109-120.
41. Ferrell N, **Gallego-Perez D**, Higueta-Castro N, Butler RT, Reen RK, Gooch KJ, Hansford DJ. Vacuum-assisted cell seeding in a microwell cell culture system. *Anal Chem* 2010; 82:2380-2386.
42. **Gallego-Perez D**, Higueta-Castro N, Sharma S, Reen RK, Palmer AF, Gooch KJ, Lee LJ, Lannutti JJ, Hansford DJ. High throughput assembly of spatially controlled 3D cell clusters on a micro/nanoplatfom. *Lab Chip* 2010; 10:775-782.
43. Pelaez-Vargas A, **Gallego-Perez D**, Higueta-Castro N, Hansford DJ, Monteiro FJ. Zirconia Microtextured Surfaces Using Soft Lithography. *Journal of Dental Research* 2010; 89 (Spec Iss B): 4004.
44. Pelaez-Vargas A, **Gallego-Perez D**, Higueta-Castro N, Hansford DJ, Monteiro FJ. Microstamped Silica Films on Curved Zirconia Surfaces. *Journal of Dental Research* 2010; 89 (Spec Iss B):4005.
45. Pelaez-Vargas A, **Gallego-Perez D**, Fernandes MH, Hansford DJ, Monteiro FJ. Anisotropic Microtextured Silica Thin Films on Zirconia. *Journal of Dental Research* 2010; 89 (Spec Iss B):1391.
46. Pelaez-Vargas A, Higueta-Castro N, **Gallego-Perez D**, Hansford DJ, Monteiro FJ. Portland Particulated Silica Coatings – Comparison between Two Coating Techniques. *Journal of Dental Research* 2010; 89 (Spec Iss B):4006.
47. Pelaez-Vargas A, **Gallego-Perez D**, Ferrell N, Fernandes MH, Hansford DJ, Magallanes-Perdomo M, De Aza A, Pena P, Monteiro FJ. Microfabricated SiO₂ Thin Films on Structural Dental Ceramics. *Bioceramics* 2009; 22:779.
48. Xu J, Dapino MJ, **Gallego-Perez D**, Hansford D. Microphone based on Polyvinylidene Fluoride (PVDF) micro-pillars and patterned electrodes. *Sens Actuators A* 2009; 153:24-32.
49. **Gallego D**, Higueta N, Garcia F, Ferrell N, Hansford DJ. Bioactive Coatings on Portland cement Substrates: Surface precipitation of Apatite-like Crystals. *Mater Sci Eng C* 2008; 28:353-358.

50. **Gallego D**, Ferrell N, Sun Y, Hansford DJ. Multilayer Micromolding of Degradable Polymer Tissue Engineering Scaffolds. *Mater Sci Eng C* 2008; 28:347-352.

CONFERENCE PRESENTATIONS (10 most recent)

1. Gallego-Perez D, Chang L, Shi J, Ma J, Kim S, Zhao X, Malkoc V, Wang X, Kwak K, Hansford D, Nakano I, Lee LJ. Probing interclonal heterogeneities in patient-derived glioma stem cell populations via micro/nanoscale technologies. Biomedical Engineering Society Meeting, Tampa (FL), October 2015.
2. Gallego-Perez D, Ghatak S, Pal D, Malkoc V, Gnyawali S, Chang L, Otero J, Lee LJ, Sen CK. Controlled tissue transdifferentiation by nanochannel electroporation. Biomedical Engineering Society Meeting, Tampa (FL), October 2015.
3. Gallego-Perez D, Ghatak S, Pal D, Malkoc V, Chang L, Gnyawali S, Otero J, Valerio I, Fleming M, Lee LJ, Sen CK. Nanotechnology-Based Approaches for Triggering and Controlling Skin Cell Reprogramming *In Vivo*. Military Health System Research Symposium, Fort Lauderdale (FL), August 2015.
4. Gallego-Perez D, Ghatak S, Pal D, Ahmed N, Malkoc V, Wang X, Gnyawali S, Khanna S, Rink C, Otero J, Lee LJ, Sen CK. Nanochannel-Based Electrotransfection of Skin Cells *In Vivo*. Biomedical Engineering Society Meeting, San Antonio (TX), October 2014.
5. Gallego-Perez D, Czeisler C, Gygli P, Ghatak S, Ma J, Sherwood T, Wang X, Askwith C, Khanna S, Rink C, Gnyawali S, Sen CK, Otero J, Lee LJ. Controlled Cell Transdifferentiation *In Vitro* by Nanochannel Electroporation. Biomedical Engineering Society Meeting, San Antonio (TX), October 2014.
6. Gallego-Perez D, Ma J, Sunghak K, Zhao X, Kwak K, Mao P, Wu Y, Hansford D, Nakano I, Lee LJ. Probing the migratory behavior of patient-derived glioma stem cells on a micro-engineered platform - a single cell analysis. Biomedical Engineering Society Meeting, Seattle (WA), September 2013.
7. Gallego-Perez D, Ma J, Czeisler C, Gygli P, Sherwood T, Wang X, Adler A, Wu Y, Leong K, Askwith C, Otero J, Lee LJ. Direct conversion of fibroblast to neurons via nanochannel electroporation. Biomedical Engineering Society Meeting, Seattle (WA), September 2013.
8. Kwak KJ, Wu Y, Ma J, Gallego-Perez D, Wang X, He H, Yu B, Lee A, Mao Y, Crawford M, Paulaitis ME, Vanderah DJ, Nana-Sinkam P, Lee LJ. Immuno-Lipoplex Nanoparticle Microarrays for Capture and Detection of Circulating Tumor Cells and Exosomes. Materials Research Society Meeting, Boston (MA), November 2012.
9. Gallego-Perez D, Wu Y, Wang X, Ma J, Boukany P, Gao K, Li L, Wang LJ, Kwak K, Eckardt S, Mclaughlin J, Lee LJ. Nanoelectroporation for safe and efficient cell reprogramming. Biomedical Engineering Society Meeting, Atlanta (GA), October 2012.
10. Gallego-Perez D, Kwak K, Wu Y, Wang X, Ma J, Boukany P, Yu B, Mao Y, Li L, Eubank T, Lafyatis G, Hansford D, Lannutti J, Lee LJ. On-chip capture/sorting and characterization of cancerous cells. Biomedical Engineering Society Meeting, Atlanta (GA), October 2012.

INVITED PRESENTATIONS

1. Nanotechnology-Enabled Regenerative Medicine. Merit-NIH National Veterinary Scholars Symposium. Columbus (OH), July 2016.
2. Non-Viral Gene and Biomolecule Delivery by Nanochannel Electroporation. AICHE meeting: AES Electrophoresis Society. Salt Lake City (UT), November 2015.
3. *In situ* transfection and reprogramming of skin cells via nanochannel electroporation. Center for Regenerative Medicine and Cell-Based Therapies Retreat, Perrysville (OH), August 2014.

4. Nanofluidics for medical applications: Nanochannel-based electroporation. Make@OSU, Columbus (OH), May 2014.
5. Nanochannel electroporation-based cell reprogramming. 7th Annual Translational to Clinical (T2C) Regenerative Medicine Wound Care Conference, Columbus (OH), March 2014.
6. Cell probing and engineering by nanochannel electroporation. OSU Materials Week, Columbus (OH), July 2013.
7. Micro-/Nanoscale Technologies for Cell Reprogramming and Tissue Culture. Center for Regenerative Medicine and Cell-Based Therapies Retreat, Perrysville (OH), August 2012.
8. Biomaterials and Microfabrication in Regenerative and Reparative Therapies. III Symposium about Biofactories, Medellin, Colombia, August 2007.
9. Portland cement for Bone Tissue Engineering Applications. 7th Annual TRENDS Workshop, Columbus (OH), December 2006.