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Citizenship: United States of America

EDUCATION

1997 University of California, Berkeley, CA
2005 The Ohio State University, Columbus, OH

B.S. (Materials Science & Engineering)
Ph.D (Biomedical Engineering)

PROFESSIONAL APPOINTMENTS

2025-Present Visiting Professor of the Practice, Engineering Medicine, Texas A&M, Houston, Texas
2023-Present Associate Director, Center for Device Innovation, TMC Innovation, Houston, Texas
2022-Present Board Observer, Ictero Medical, Houston, Texas
2020-Present Adjunct Professor, Texas A&M, College Station, Texas
2020-Present Head of TMCi Biodesign Program, TMC Innovation, Houston, Texas
2014-Present Sole Proprietor, Minus Nine Consulting, Houston, Texas
2015-2020 Adjunct Professor, Houston Methodist Research Institute, Houston, Texas
2018-2020 Consultant, Johnson & Johnson Center of Device Innovation, Houston, Texas
2016-2018 VP Development, NanoMedical Systems, Austin, Texas
2015-2016 Consultant, NanoMedical Systems, Austin, Texas
2015-2017 Consultant: Operations, Corneal Cystinosis Inc., Pasadena, California
2011-2015 Adjunct Professor, School of Medicine and Health Sciences, Tecnológico de Monterrey, Mexico
2010-2015 Co-Chair, Department of Nanomedicine, Houston Methodist Research Institute, Houston, Texas
2010-2015 Assistant Professor, Houston Methodist Research Institute, Houston, Texas
2010-2013 Consultant: Business Development, Leonardo Biosystems Inc., Houston, Texas
2008-2010 Consultant: Business Development Arrowhead Research Corporation, Pasadena, California
2006-2015 Chief Operating Officer, Alliance for NanoHealth, Houston, Texas
2006-2010 Engineering Scientist, The University of Texas Health Science Center at Houston, Texas
2005-2006 Consultant: Business Development, Valentis, Inc (VLTS) Burlingame, California
2005-2006 Post-Doctoral Research Scientist, Ohio State University- Biomedical Engineering Center, Columbus, Ohio
2004-2005 Consultant: Business Development, NanoMed Technologies LLC, Bozeman, Montana
2000-2005 Graduate Research Assistant, Ohio State University- Biomedical Engineering Center, Columbus, Ohio
1999-2000 Stent Process Engineer: Level II, Guidant Corporation- Vascular Intervention Department, Santa Clara, California
1998-1999 Stent Manufacturing Engineer: Level I, Guidant Corporation-Vascular Intervention Department, Santa Clara, California
1997-1998 R&D Prototyping Engineer, Soletron Corporation, Milpitas, California

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

2021-2022 Member, National Society of Black Engineers
2017-2018 Member, American Society for Mass Spectroscopy
2017-2018 Member, American Association of Pharmaceutical Scientists
2013-2015 Member, American Heart Association
2013-2015 Member, ASM International
2013-2015 Materials Properties Database Committee Member, ASM International
2013-2015 Medical Materials Database Steering Committee, ASM International
2012-2015 Member, Materials Research Society
2011-2015 Member, American Chemical Society
2010-2015 Member, BioMedical Engineering Society
2004-2006 Acting President of the International Society of BioMEMS and Biomedical Nanotechnology

ISSUED PATENTS & PENDING

Sakamoto, J.H., E. Tasciotti, and M. Ferrari "Multistage Delivery of Active Agents"
 Issued: Dec 4 2018 (US10,143,658 B2)

Cortiella, J, J. Nichols, J.E. Niles, S. LaFrancesca, and J. Sakamoto "Production of a Bioengineered Lung" PENDING (US20210155904A1, WO 2019/204631A1)

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1. Argueta, LB, Niles, JA, **Sakamoto, J.**, Liu, X, Vega, SP, Frank, L., Paessler, M., Cortiella, J., Nichols, JE, Platforms to test the temporospatial capabilities of carrier systems in delivering growth factors to benefit vascular bioengineering; *Nanomedicine* 2021 Aug (36).
2. Pons-Faudoa, F.P, Ballerini, A., **Sakamoto, J.**, Grattoni, A, Advanced implantable drug delivery technologies: transforming the clinical landscape of therapeutics for chronic diseases; *Biomed Microdevices*. 2019 May 18;21(2):47.
3. Nichols, J. E. , La Francesca, S. , Niles, J. A. , Vega, S. P. , Argueta, L. B. , Frank, L. , Christiani, D. C. , Pyles, R. B. , Himes, B. E. , Zhang, R. , Li, S. , **Sakamoto, J.** , Rhudy, J. , Hendricks, G. , Begarani, F. , Liu, X. , Patrikeev, I. , Pal, R. , Usheva, E. , Vargas, G. & 7 others, Production and transplantation of bioengineered lung into a large-animal model Aug 1 2018, In : *Science Translational Medicine*. 10, 452
4. Fernandez-Moure, J. S., Van Eps, J. L., Rhudy, J. R., Cabrera, F. J., Acharya, G. S., Tasciotti, E., **Sakamoto, J.** & Nichols, J. E., Porcine acellular lung matrix for wound healing and abdominal wall reconstruction: A pilot study; *Journal of Tissue Engineering*. 7, p.; Mar 16 2016; 2041731415626018.
5. Nichols JE, La Francesca S, Vega SP, Niles JA, Argueta LB, Riddle M, **Sakamoto J.**, Vargas G, Pal R, Woodson L, Rhudy J, Lee D, Seanor D, Campbell G, Schnadig V, Cortiella J, Giving new life to old lungs: methods to produce and assess whole human paediatric bioengineered lungs; *J Tissue Eng Regen Med*. 2016 Jan 12. doi: 10.1002/term.2113.
6. Bai, L., Andersson, H. A., McConnell, K. I., Chan, D. L., Hernandez, M., Gonzalez, J., Liu, X., Francesca, S. L., **Sakamoto, J. H.** & Serda, R. E.; Silencing of tumor necrosis factor receptor-1 in human lung microvascular endothelial cells using particle platforms for siRNA delivery; *Current Drug Targets.*, 2015, 16, 13, p. 1531-1539.
7. McConnell, K. I., Rhudy, J., Yokoi, K., Gu, J., Mack, A., Suh, J., La Francesca, S., **Sakamoto, J.** & Serda, R. E. Enhanced gene delivery in porcine vasculature tissue following incorporation of adeno-associated virus nanoparticles into porous silicon microparticles; Nov 28 2014 In : *Journal of Controlled Release*. 194, p. 113-121.
8. La Francesca, S., Ting, A. E., **Sakamoto, J.**, Rhudy, J., Bonenfant, N. R., Borg, Z. D., Cruz, F. F., Goodwin, M., Lehman, N. A., Taggart, J. M., Deans, R. & Weiss, D. J. Multipotent adult progenitor cells decrease cold ischemic injury in ex vivo perfused human lungs: An initial pilot and feasibility study; Nov 1 2014 In : *Transplantation Research*. p. 19.
9. Nichols, J. E., Niles, J., Riddle, M., Vargas, G., Schilagard, T., Ma, L., Edward, K., La Francesca, S., **Sakamoto, J.**, Vega, S., Ogadegbe, M., Mlcak, R., Deyo, D., Woodson, L., Mcquitty, C., Lick, S., Beckles, D., Melo, E. & Cortiella, J.; Production and assessment of decellularized pig and human lung scaffolds; Sep 1 2013 In : *Tissue Engineering - Part A*. 19, 17-18, p. 2045-2062.
10. Shen, H., Rodriguez-Aguayo, C., Xu, R., Gonzalez-Villasana, V., Mai, J., Huang, Y., Zhang, G., Guo, X., Bai, L., Qin, G., Deng, X., Li, Q., Erm, D.R., Aslan, B., Liu, X., **Sakamoto, J.**, Chavez-Reyes, A., Han, HD., Sood, A.K., Ferrari, M., Lopez-Berestein, G., Enhancing Chemotherapy Response with Sustained EphA2 Silencing Using Multistage Vector Delivery. *Clin Cancer Res*. 2013 Apr 1;19(7):1806-15. doi: 10.1158/1078-0432.CCR-12-2764.
11. Fan, J., Gallagher, J.W., Landry, M.G., **Sakamoto, J.**, Ferrari, M., Hu, Y., Low molecular weight protein enrichment on mesoporous silica thin films for biomarker discovery. *J Vis Exp*, 2012. Apr. 17;(62) pii: 3876. doi: 10.3791/3876.
12. Mishra, D.K., **Sakamoto, J.H.**, Thrall, M.J., Baird, B.N., Blackmon, S.H., Ferrari, M., Kurie, J.M., Kim, M.P.. Human lung cancer cells grown in an ex vivo 3D lung model produce matrix

- metalloproteinases not produced in 2D culture. PLoS One. 2012;7(9):e45308. doi: 10.1371/journal.pone.0045308.
13. Grattoni, A., Tasciotti, E., Fine, D., Fernandez-Moure, J.S., **Sakamoto, J.**, Hu, Y., Weiner, B., Ferrari, M., Parazynski, S.. Nanotechnologies and regenerative medical approaches for space and terrestrial medicine. Aviat Space Environ Med. 2012 Nov;83(11):1025-36. Review. PMID: 23156089
 14. Morigi, V., Tocchio, A., Bellavite Pellegrini, C., **Sakamoto, J.H.**, Arnone, M., Tasciotti, E., Nanotechnology in medicine: from inception to market domination. J Drug Deliv. 2012;2012:389485. doi: 10.1155/2012/389485.
 15. Hu, T., Peng, Y., Lin, K., Shen, H., Brousseau, L., Sun, T., **Sakamoto, J.**, Ferrari, M. Surface Engineering on Mesoporous Silica Chips for Enriching Low Molecular Weight Phosphorylated Proteins. Nanoscale, 2011. 3(2): p. 421-428.
 16. **Sakamoto, J.H.**, van de Ven, A.L., Godin, B., Blanco, E., Serda, R.E., Grattoni, A., Ziemys, A., Bouamrani, A., Hu, T., Ranganathan, S.I., De Rosa, E., Martinez, J.O., Smid, C.A., Buchanan, R.M., Lee, S.Y., Srinivasan, S., Landry, M., Meyn, A., Tasciotti, E., Liu, X., Decuzzi, P., Ferrari, M., Enabling individualized therapy through nanotechnology. Pharmacological Research, 62 (2): pp 57-89 (2010)
 17. Godin B., **Sakamoto J.**, Serda R., Grattoni A., Bouamrani A., Ferrari M. Emerging applications of nanomedicine for therapy and diagnosis of cardiovascular diseases. Trends pharmacol Sci (TiPS), 31(5):pp. 199-205 (2010)
 18. Tasciotti, E., **Sakamoto J.** and Ferrari M, Conference scene: nanotechnology and medicine: the next big thing is really small. Nanomedicine (Lond), 2009. 4(6): p. 619-21.
 19. Tanaka, T., Decuzzi, P., Cristofanilli, M., **Sakamoto, J.H.**, Tasciotti, E., Robertson, F.M. & Ferrari, M. Nanotechnology for breast cancer therapy. Biomed Microdevices (2008).
 20. Sanhai, W. R., **Sakamoto, J. H.**, Canady, R. & Ferrari, M. Seven challenges for nanomedicine. Nature Nanotechnology 3, 242-244 (2008).
 21. Pope-Harman, A., Cheng, M. M., Robertson, F., **Sakamoto, J. H.** & Ferrari, M. Biomedical nanotechnology for cancer. Med Clin North Am 91, 899-927 (2007).
 22. **Sakamoto, J.H.**, Annapragada, A., Decuzzi, P. & Ferrari, M. Antibiological barrier nanovector technology for cancer applications. Expert Opin Drug Deliv 4, 359-69 (2007).
 23. **Sakamoto, J. H.** et al. The molecular analysis of breast cancer utilizing targeted nanoparticle based ultrasound contrast agents. Technol Cancer Res Treat 4, 627-36 (2005).

Book Chapters:

1. **Sakamoto, J. H.**, Godin, B., Hu, Y., Blanco, E., van de Ven, A. L., Vellaichamy, A., Murphy, M. B., La Francesca, S., Schuenemeyer, T., Given, B., Meyn, A. & Ferrari, M. (2016); Nanotechnology toward advancing personalized medicine: Handbook of Clinical Nanomedicine: Law, Business, Regulation, Safety, and Risk. Pan Stanford Publishing Pte. Ltd., Vol. 2, p. 1347-1411. 2.
2. **Sakamoto JH.**, Godin, B., Hu, Y., Blanco, E., van de Ven, A. L., Vellaichamy, A., Murphy, M. B., La Francesca, S., Schuenemeyer, T., Given, B., Meyn, A. & Ferrari, M. (2014) Nanotechnology toward advancing personalized medicine: Handbook of Personalized Medicine: Advances in Nanotechnology, Drug Delivery, and Therapy. Pan Stanford Publishing Pte. Ltd., p. 1-57.
3. Godin B., Serda R.E., **Sakamoto J.**, Decuzzi P., Ferrari M. Nanoparticles for Cancer Detection and Therapy, In: Vogel B. (Ed.) Nanotechnology. Volume 5: Nanomedicine and Nanobiotechnology, Wiley-VCH Verlag GmbH & Co. KGaA Weinheim, 2009, pp. 51-88
4. **Sakamoto, J. H.** & Ferrari, M. "Introduction" in SAGE Sourcebook of Modern Biomedical Devices (ed. Millennium Research Group, series ed. Alpern, T.) (SAGE Publications, Los Angeles, 2007) xix-xxxiii.
5. **Sakamoto, J. H.** et al. "Nanomechanics and Tissue Pathology" in Biological and Biomedical Nanotechnology (eds. Lee, A. P. & Lee, L. J., series ed. Ferrari, M.) (Springer, New York, 2006) 461-503.