

Professor Samir Mitragotri
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HARVARD
John A. Paulson
School of Engineering
and Applied Sciences

Positions Held

7/17-present	Hiller Professor of Bioengineering, Wyss Professor, Harvard University,
7/17-present	Core faculty member, Wyss Institute
01/00-6/17	Department of Chemical Eng., University of California, Santa Barbara

Education

Ph.D., Chemical Engineering, Massachusetts Institute of Technology, 1996
B.S., Chemical Engineering, Institute of Chemical Technology, Mumbai, 1992

Research Field: Drug Delivery

Prof. Mitragotri's research is focused on drug delivery, a field that provides fundamental understanding and technological solutions to extract the full therapeutic potential of a drug candidate. A potential drug candidate cannot become an effective drug product in the absence of delivery considerations.

Prof. Mitragotri's research in drug delivery comprises of two parts: (i) advancing fundamental understanding of biological barriers that limit drug delivery such as skin (transdermal delivery), mucosal membranes (oral delivery), blood-brain barrier (CNS delivery) and the immune system (clearance of drug carriers in the blood) and (ii) invention of materials (biocompatible ionic liquids & in situ crosslinked hyaluronic acid hydrogels) and technologies (low-frequency ultrasound, pulsed microjet injectors and cellular backpacks) to overcome these barriers. Prof. Mitragotri's inventions have paved the way for treating diabetes, obesity, cancer, dermatological diseases, neurological disorders, hemorrhage and infections. He has made a particular impact on the following areas:

Needle-free Drug Delivery Systems (Delivery of drugs for diabetes, dermatological diseases and obesity through transdermal or oral route as an alternative to injection): Prof. Mitragotri has developed biophysical insights and mathematical models of skin and intestinal epithelium. He was first to demonstrate transdermal protein delivery using low-frequency ultrasound (*Science* 1995) and transdermal glucose monitoring using ultrasound (*Nature Medicine* 2000). He was first to report a high throughput screening methodology for transdermal formulations (*Nature Biotechnology* 2004, *PNAS* 2005) and liquid microjet injectors for skin delivery (*PNAS* 2007). He invented an ionic liquid CAGE (*PNAS* 2014) which became the first drug delivery ionic liquid to enter the clinic. He has also invented technologies for oral delivery of biologics including intestinal patches (first intestinal patch demonstration, *J. Control. Rel.* 2004) and first ionic liquid-based oral protein delivery (*PNAS* 2018). His technologies for transdermal delivery have advanced into the clinic and commercial products (Clinical Trials: NCT00126932, NCT00126919, NCT01119898, NCT04886739, NCT05202366, NCT06923228, NCT06810050, NCT05487963, NCT04498676, NCT04495920, NCT04886739, NCT04508660, NCT04508205, NCT05367908, NCT06613581, NCT02045758, NCT06761703).

Nanomedicine (The use of body's own cells to deliver nanoparticles to treat autoimmune diseases, cancer and trauma): Prof. Mitragotri was first to demonstrate that the shape of polymer particles impacts their biological outcome (*PNAS* 2006, 2007, 2010, 2013a,b) which led to his invention of backpacking, that is, the use of nano/microparticles that hitch a ride on macrophages (*Sciences Advances* 2019, *PNAS* 2023, *Sci Trans. Med*, 2024)), NK cells (*ACS Nano* 2023), neutrophils (*Nature BME* 2024), and T cells for drug and cell delivery. Prof. Mitragotri was also first to report hitchhiking

on red blood cells for drug delivery (*JCR* 2004, *Nature Comm* 2018, *Nature BME*, 2020, *PNAS*, 2020).

Polymer Therapeutics (Development of novel hyaluronic acid materials for cancer, hemorrhage and ophthalmic diseases): Prof. Mitragotri developed the first hyaluronic acid-based in situ cross-linkable hydrogel using bio-orthogonal click-chemistry that has advanced to the clinic (*Adv. Health. Mater.* 2015), and polymer conjugates for oncology (*Science Advances* 2021) and hemostasis (*Science Advances* 2020).

Translational Activities

Prof. Mitragotri has co-founded 16 companies (select few are listed below) and has served as a founding advisor for an additional 10 companies.

Sontra Medical, Inc. (Founder) developed and launched first ultrasonic transdermal drug delivery system invented by Mitragotri (*Science* 1995, SonoPrep™, Popular Science best product award in 2004) (NCT00126932, NCT00126919). Sontra made a debut on NASDAQ, merged with Echo Therapeutics and advanced the technology for glucose monitoring into clinical trials (Prelude™, Symphony™) and Tufts Medical Center trial, *J Diabetes Sci Technol.*, 2014).

Fqubed Inc. (Founder) developed Prof. Mitragotri's high throughput screening platform INSIGHT™ for commercial applications (*Nature Biotech* 2004, Edison award 2009). Fqubed was acquired by Nuvo Research Inc. (public company on TSX) whose key product is Pennsaid™ 2%. Nuvo spun off Tioga Research (now a wholly owned subsidiary of Encube Ethicals) which developed additional platforms for topical drug delivery including STORM™, SPATE™, SPLASH™, and TORNADO™, among others. These are now common tools for topical formulation design. Nuvo (acquired by Searchlight Pharma) and its spin-off Crescita Therapeutics currently sell about 20 products for various dermatological conditions.

Stratagent Lifesciences (Founder) advanced Prof. Mitragotri's liquid microjet injectors (*PNAS* 2007). Stratagent merged with Corium International, which was subsequently publicly traded on NASDAQ and it launched several transdermal products including, recently, Adlarity™ for Alzheimer's Disease. Corium was acquired by Gurnet Point Capital and was spun off as Corium Innovations in 2023.

DX Biosciences (Founder) developed Prof. Mitragotri's tissue dissolution surfactants (*PNAS* 2010) for a skin care product Clearista™ which is currently marketed, and it was tested in a clinical study for skin-based diagnosis (Moffit Cancer Center, *J. Invest. Dermatol.*, 2021).

Seventh Sense Biosystems (Founder) has launched world's first touch activated phlebotomy (TAP II™) for COVID-19 antibody measurements and an at-home test product for women's health. Seventh Sense was funded by Flagship Ventures and Polaris Partners, among others. TAP micro™ received FDA 510K clearance in 2023. The company is renamed YourBio Health. TAP is incorporated in several products/studies including SneakPeek® by Myriad Genetics, PROOF™ by RecoveryTrek, and COVID-19 antibody studies by Moderna, among others. YourBio Health was acquired by Hims & Hers (NYSE: HIMS).

Cage Bio (Founder) advanced Prof. Mitragotri's ionic liquid-based technology (*PNAS* 2014) into the clinic for multiple dermatological indications including atopic dermatitis, rosacea, alopecia and vitiligo. The company announced successful Phase 2b clinical trial for atopic dermatitis in 2023. Cage Bio launched a consumer product ionSURE™ for long-lasting hand wash and protectant. The ionic liquid CAGE became the first drug delivery ionic liquid to advance to the clinic and has been tested in over 200 patients in multiple studies.

i2o Therapeutics (Founder) was founded based on Prof. Mitragotri's drug delivery technology (*PNAS* 2018). The company is funded by Sanofi ventures JDRF, and Morningside ventures, among others, and has completed a \$46M series A.

Fount Bio (Founder) has advanced Prof. Mitragotri's hyaluronic acid-based gels (*Adv. Healthcare Mat* 2015, first in situ forming crosslinked hyaluronic acid hydrogel to advance to clinic) for applications in aesthetics and other indications. Fount has completed series A from Morningside ventures, and announced a successful human clinical study.

inTumo Therapeutics (Founder) is advancing Prof. Mitragotri's ionic liquid-based tumor ablation technology (*Science Trans Med*, 2021). inTumo Therapeutics licensed this technology and advanced it to clinic (NCT06689670). inTumo was acquired in 2024.

Trillion Bio (Founder) is advancing Prof. Mitragotri's technologies for subcutaneous administration of biologics (*Adv Mat* 2026).

Mentoring

Prof. Mitragotri's laboratory has a strong record of training graduate students and postdocs. He has trained ~150 graduate students/postdocs in his lab and trainees from his lab have been successful in launching independent careers in industry. His graduate student and postdoctoral trainees are listed below. Those who are currently in academia are underlined.

Jagannathan Sundaram (2002), Ahmet Tezel (2004), Joy Schramm (2004), Pankaj Karande (2005), Elizabeth Chambers (2006), Anh-Tuan Dinh (2006), Chinmay Pangarkar (2006), Julie Champion (2007), Kathryn Whitehead (2007), Sejal Hall (2008), Anubhav Arora (2009), Sumit Paliwal (2009), Nishit Doshi (2010), Tracy Hsu (2011), Poornima Kolhar (2012), Chris Brunquell (2012), Aaron Anselmo (2015), Kathryn Camacho (2015), Michael Zakrewsky (2016), Douglas Vogus (2017), Anusha Pusuluri (2018), Mengwen Zhang (2018), David Smith (2018), Maria Jarvis (2017), Kelly Ibsen (2018), Vimisha Dharmadasani (2019), Christine Hamadani (2020), Alexandra Fehnel (2019), Anshuman Dasgupta (2019), Fariha Khan (2020), Amogh Vaidya (2020), Isabella Suzuki (2019), Maximilian Nowak (2019), Tyler Brown (2019), Apoorva Sarode (2019), Michael Evans (2019), Katharina Cu (2019), Debra Wu (2020), Kevin Peng (2020), Anvay Ukidwe (2020), Alexander Curreri (2023), Lily Wang (2023), Morgan Goetz (2024), Ninad Kumbhojkar (2023), Neha Kapate (2023), Supriya Prakash (2023), Morgan Janes (2024), Danika Rodrigues (current), Suyog Shaha (2025), Alex Gottlieb (2023), Candice Hureaux-Perron (2025), Maithili Joshi (2025), Srinivas Acharya (current), Malini Mukerjee (current), Griff Bibbey (current), Regan Ellis (2023), Yu Xing Teo (current), Xin Yi Thanh (current), Sai Nehete (current), Ana Sofia Marques (2025), Dr. Elisabeth Kaltonbock (2002), Dr. Zancong Shen (2003), Dr. Amit Jain (2005), Dr. Yogesh Katare (2006), Dr. Eiichi Torisaka (2008), Dr. Alisar Zahr (2008), Dr. Linden Bolisay (2010), Dr. Yasunari Michinaka (2010), Dr. Monica James-Smith (2010), Dr. Makoto Ogura (2010), Dr. Jinwook Yoo (2010), Rikke Benjamensen (2010), Dr. Zhimin Zhou (2011), Maarten Bakker (2013), Dr. Paul Tumeh (2012), Sunali Bhatnagar (2013), Dr. Vivek Gupta (2013), Tomoyuki Mitoma (2014), Dr. Byeonghee Hwang (2013), Francesca Cavaliere (2014), Dr. Sutapa Barua (2014), Dr. Ming Chen (2014), Dr. Sunny Kumar (2014), Dr. Stefano Menegatti (2015), Dr. Amrita Banerjee (2017), Dr. Christian Agatemor (2018), Kazuhiro Ayogi (2014), Dr. Renwei Chen (2017), Dr. Jianping Qi (2016), Dr. Yasunori Iwao (2016), Dr. Marta Broto (2016), Dr. Andres Da Silva (2016), Dr. Naoya Ohmori (2018), Yosuke Tanagida (2018), Dr. Eden Tanner (2020), Dr. Zongmin Zhao (2021), Dr. Yongsheng Gao (2022), Dr. Daniel Pan (2019), Dr. Bijay Singh (current), Dr. Maggie Qi (2021), Dr. Tao Sun (2022), Dr. Nurunnabi Md (2019), Dr. Abhirup Mandal

(2019), Dr. Yujie Shi (2019), Dr. Jeymeysson Viera (2019), Dr. Wei He (2020), Dr. Vinu Krishnan (2020), Dr. Jayoung Kim (2022), Dr. Shirin Mesbah (2019), Dr. Wyatt Shields (2019), Dr. Kelly Ibsen (2020), Dr. Junling Guo (2020), Dr. John Clegg (2021), Dr. Nao Nakajima (2021), Dr. Mayuki Nakajima (2022), Dr. Marwa Sallam (2020), Dr. Mayumi Ikeda (2022), Dr. Vinny Suja (2025), Dr. Rick Liao (2024), Dr. Omokolade Adebawale (2025), Dr. Chang Hyung Lee (2025), Dr. Anujan Ramesh (2026), Dr. Shuyang Zhang (2025), Dr. Metecan Erdi (current), Dr. Masaki Yukuhiro (current), Dr. Yao Yao (current), Dr. Jeong-won Choi (current), Dr. Zerin Khan (current), Gal Chen (current).

Publications and Patents

- 400+ publications in scientific journals including *Science*, *Nature Medicine*, *Nature Biotechnology*, *Nature Materials*, *Nature Chemistry*, *PNAS*, *ACS Nano*, *Journal of Controlled Release* and *Advanced Materials*.
- Over 1000 lectures in various conferences and universities.
- Inventor on over 300 pending or issued patents.
- Research funded by 50+ funding agencies, research foundations and companies.

Select Awards

- 2026 Sukant Tripathy Memorial Lecture, University of Massachusetts, Lowell
- 2026 Hamilton Medal, Queens University, Belfast
- 2025 Bharat Ratna CNR Rao Award for Leadership in Chemical Science & Engineering
- 2025 Elected member, The World Academy of Science (TWAS)**
- 2025 Talbot Lecturer, University of California, San Diego
- 2025 Founders Award, Controlled Release Society (highest recognition by CRS)
- 2025 Elected Foreign Fellow, Indian Chemical Society
- 2025 Elected member, American Academy of Arts & Sciences (AAA&S)**
- 2025 Reilly Lectures, University of Notre Dame
- 2024 AAPS Distinguished Scientist Award (highest recognition by AAPS)
- 2024 Kam Family Lecture, UT Southwestern
- 2024 Michael Abbott Lecture, Rensselaer Polytechnic Institute
- 2024 Tommy Hewett Lecture, Oklahoma University Health Science Center
- 2024 Golden Jubilee Endowment Lecture, Institute of Chemical Technology, Mumbai, India
- 2023 Friedrich Merz Guest Professor, Goethe University, Germany
- 2023 Doing a World of Good Medal, AIChE
- 2023 Dr. Marie Wooten Lecture, Auburn University
- 2023 Louise W Busse Lecture, University of Wisconsin, Madison
- 2023 Samyang award, Controlled Release Society
- 2022 BIOS- top 50 Life Science Entrepreneur list
- 2022 Robert L Pigford Memorial Lecture, University of Delaware
- 2021 Mrs Sandra Shroff Chemcon Distinguished Speaker Medal and Award
- 2021 AAISCR Outstanding Scientist Award
- 2020 National Academy of Sciences Committee on Chemical Engineering in the 21st Century
- 2020 AIChE Food, Pharmaceutical and Bioengineering Division award
- 2020 CRS Kydonieus Transdermal Research award
- 2019 Tis Lahiri Lecture, Vanderbilt University
- 2019 Humphrey Lecture, Lehigh University
- 2018 Tommy Hewitt Lecture, University of Oklahoma
- 2018 Ashland Lecture, University of Kentucky
- 2016 Elected Member, National Academy of Medicine (NAM)**
- 2015 Elected Fellow, American Association of Pharmaceutical Scientists (AAPS)

2015 Elected Fellow, Biomedical Engineering Society (BMES)
 2015 Elected Fellow, Controlled Release Society (CRS)
2015 Member, National Academy of Engineering (NAE)
2014 Elected Fellow, National Academy of Inventors (NAI)
 2013 Distinguished alumnus award, Institute of Chemical Technology
 2012 Elected Fellow, American Association of Advancement of Science (AAAS)
 2011 Edison award for innovation, Gold Medal
 2010 Edison award for Innovation, Silver Medal
 2009 Elected Fellow, American Inst. of Medical and Biological Engineering (AIMBE)
 2009 Edison award for Innovation, Bronze Medal
 2008 Controlled Release Society Young Investigator Award
 2005 Allan P. Colburn Award by American Institute of Chemical Engineers
 2004 Controlled Release Society Outstanding Pharmaceutical Research Award
 2004 Hendrick C. Van Ness Award Lecturer, Rensselaer Polytechnic Institute
 2001 3M Young faculty award
 1999 Technology Review Young Innovator Award (TR100)
 1995 Ebert Prize by the American Pharmaceutical Association

Select Publications (select multidisciplinary 50 publications from a total of 400+)

Full list at: https://scholar.google.com/citations?user=3_77zesAAAAJ&hl=en

1. Kumbhojkar, N., Prakash, S., Adu-Berchie, K., Kapate, N., An, R., Darko, S., Chandran Suja, V., Park, KS., Gottlieb, A., Fukuta, T., Wang, LLW, Mooney, DJ, Mitragotri, S., Cyto-Adhesive Micro-Platforms for Neutrophil-Based Immunotherapy, **Nature BME**, 8: 579–592, 2024.
2. Kapate, N., Liao, R., Sodemann, L., Stinson, T., Prakash, S., Kumbhojkar, N., Chandran Suja, V., Wang, LLW., Flanz, M., Rajeev, R., Villafuerte, D., Shaha, S., Janes, M., Park, KS., Dunne, M., Golemb, B., Hone, A., Adebawale, K., Clegg, J., Slate, A., McGuone, D., Costine-Bartell, B., and Mitragotri, S., Backpack-mediated anti-inflammatory macrophage cell therapy for the treatment of traumatic brain injury, **PNAS Nexus**, Volume 3, Issue 1, pgad434, 2024.
3. Goetz, MJ, Park, KS, Joshi, M., Gottlieb, AP, Dowling, DJ and Mitragotri, Samir, An Ionic Liquid-Based Adjuvant for Modulating Cellular and Humoral Immune Responses, **Journal of Controlled Release**, 376, 632-645, 2024.
4. Wang, LLW, Gao, Y., Feng, Z., Mooney DJ., and Mitragotri, S., Designing drug delivery systems for cell therapy, **Nature Reviews Bioengineering**, 2: 944–959 2024.
5. Wang, LLW., Gao, Y., Chandran Suja, V., Boucher, ML., Shaha, S., Kapate, N., Liao, R., Sun, T., Kumbhojkar, N., Prakash, S., Warren, K., Janes, ME., Park, KS., Dunne, M., Illelboy, B., Lu, A. Jaimes, C., Mannix, R., and Mitragotri, S., Macrophage-Hitchhiking Gadolinium Micro-patches: A Living Contrast Agent for Diagnosis of Traumatic Brain Injury, **Science Translational Medicine**, Vol 16, Issue 728, 2024.
6. Chandran Suja, V., Qi. Q., Halloran, K., Zhang, J., Shaha, S., Prakash, S., Kumbhojkar, N., Deslandes, A., Huille, S., Gokarn YR, and Mitragotri, S., A Standard Microfluidic Device for Mimicking and Quantitatively Assessing Subcutaneous Injection, **PNAS Nexus**, Volume 2, Issue 10, October 2023, pgad317, 2023.
7. Park, SK, Suja VC, Kim, J., Rodrigues, D., Mukherji, M., Joshi, M., Gao, Y., Bibbey, MG, Choi, JW, Liao, R., Janes, ME, Erdi, M., Candal, ADS, Cameron, DL, Halmai, ANHM, Fink, KD, Mitragotri, S., and Singh, B., Multiscale Red Blood Cell Hitchhiking for Targeted Deep Tissue Gene Delivery in Lungs, **Nature Communications**, in press.
8. Yadav, S., Kajale, S., Joy, B., Airaghi, M., Desbiolles, B., Mitragotri, S., Bono, D., and Sarkar, D., Non-surgical Bioelectronic Implant for Targeted Focal Brain Stimulation, **Nature Biotechnology**, in press, 2025.

9. Neha Kapate, N., Dunne, M., Kumbhojkar, N., Prakash, S, Wang LLW., Graveline, A., Park, KS., Suja VC., Goyal, J., Clegg, J.R., Mitragotri, S., A backpack-based myeloid cell therapy for multiple sclerosis, ***PNAS***, 120 (17) e2221535120, 2023.
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15. Zhao Z., Ukidve, A., Krishnan, V., Fehnel A., Pan DC., Gao Y., Kim J., Evans MA, Mandal A., Guo, J., Muzykantov, V., and Mitragotri, S., Systemic tumour suppression via the preferential accumulation of erythrocyte-anchored chemokine-encapsulating nanoparticles in lung metastases, ***Nature BME***, 5, pages441–454, 2021.
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Select Patents (select 20 from 300+ issued/pending patents)

1. US. Patent 11,254,773, Nanoscale multiple emulsions and nanoparticles
2. U.S. Patent 11,197,932, Polymer-drug conjugates for combination anticancer therapy
3. U.S. Patent 11,191,774, Drug formulations for cancer treatment
4. U.S. Patent 11,123,441 Methods and compositions for drug delivery
5. U.S. Patent 11,254,773, Nanoscale multiple emulsions and nanoparticles
6. US Patent 10, 912, 834, Topical formulations based ionic species for skin treatment
7. US Patent 10,653, 789, Polymer-drug conjugates for combination anticancer therapy
8. US Patent 10,618,983, Hyaluronic acid-based hydrogels having medical applications
9. US Patent 10, 449,254, Ionic liquids for transdermal drug delivery
10. US Patent 9,328,324 System, method and devices for tissue-based diagnosis
11. US Patent 8,945,482, System, method and device for tissue-based diagnosis
12. US Patent 8,870,810, Method and apparatus for enhancement of transdermal transport
13. US Patent 8,791,062, Skin permeating and cell entering (SPACE) peptides and methods of use thereof
14. U.S. Patent, 8,518,871, Skin permeating and cell entering (SPACE) peptides and methods of use thereof
15. U.S. patent , 6,887,239, Preparation for transmission and reception of electrical signals.
16. U.S. patent, 6,620,123, Method and apparatus for producing homogenous cavitation to enhance transdermal transport
17. U.S. patent, 6,589,173, Ultrasound system for disease detection and patient treatment
18. U.S. patent, 6,491,657, Ultrasound enhancement of transdermal transport
19. U.S. patent, 5,947,921, Chemical and physical enhancers and ultrasound for transdermal drug delivery
20. U.S. patent, 5,814,599, Transdermal delivery of encapsulated drugs

Teaching

- Taught 62+ semester/quarter courses including (UCSB) ChE 1A-Engineering and the Scientific Methods, ChE 119-Current Events in Chemical Engineering, ChE 120A/B-Transport Processes, ChE 125-Principles of Bioengineering, ChE 180A/B-Chemical Engineering Laboratory, BMSE 252-Principles of Bioengineering and (Harvard) ES221 Drug Delivery, ES96 Engineering Design.
- Median teaching scores over ~80 semesters/quarters: 1.75 out of 5 at UCSB (1-Excellent, 5-Poor) and 4.05 out of 5 at Harvard (5-Excellent, 1 Poor).

- Research mentor of 250+ undergraduate students and high school students.
- Several former trainees as faculty members at universities including MIT, RPI, CMU, NCSU, UT Dallas, U Miami, U Mississippi, U Colorado, Northeastern U, U Illinois Chicago, and UCSD, among others.
- Several former trainees at senior leadership CTO/VP/Sr. VP positions in biotech companies.

Professional Service

- Founded and served as Editor-in-chief of *Bioengineering and Translational Medicine*, AIChE's 1st open access journal, which is now AIChE's flagship journal.
- Founded and directed UCSB's Center for Bioengineering (CBE), which is now UCSB's department of Biological Engineering
- Founded two outreach programs (BioSTAR and MediSTAR) at Harvard to educate high school students about opportunities in Bioengineering, which are now routinely run by Harvard's Active Learning Labs. BioSTAR provides the students with hands-on experience in bioengineering tools. MediSTAR provides students with familiarity to the process of drug development and clinical trials.
- Associate Editor, *Journal of Controlled Release*, which has grown to become the flagship journal in drug delivery.
- Co-chair of the area of Bionanotechnology at AIChE (2007-2010)
- Chair, Gordon Conference-Barrier function of Mammalian Skin (2017)
- Chair, Gordon Conference, Drug Carriers in Biology and Medicine (2022)
- National Academies: NAE/NRC Liaison (2017-2020), Author member, National Academy of Sciences Committee on Chemical Engineering in the 21st Century (2020-2022)

Institutional Service

At UCSB and at Harvard, Prof. Mitragotri has led/participated in institutional committees including undergraduate & graduate curriculum, admissions, junior and senior faculty recruitment, professional conduct, conflicts of interest, award nominations, IACUC, safety, core facility development, new building planning, development campaign, space, alumni relations, industry alliance, steering, and new program initiatives.

Leadership Experience

- Founding Director, Center for Bioengineering, UCSB (11/01-01/17)
- Chair, Bioengineering, Harvard University (2018-2021)
- Chair, Academic Advisory Group, Indian American Chamber of Commerce, Washington DC (2020-2022)
- Controlled Release Society (Treasurer, Board member, 2017-2019)
- Founding Editor-in-Chief, Bioengineering & Translational Medicine (2015-2022)
- Advisor/educator to entrepreneurs (member of the selection committee of LifeLab at Harvard University, founder BioTAP at UCSB (until 2017), director of Translational Medical Research Laboratory at UCSB (until 2017)
- Chair Gordon Conference on Barrier Function of Mammalian Skin (2017) and Drug Carriers in Medicine & Biology (2022)
- Board members on several companies

- Member of Liquideon LLC, Arona LLC and Catalio Nexus Ventures LLC, Axara Advisors LLC
- Scientific Advisory board member of several small and large companies including 3 public companies collectively marketing 1000+ brands/products, two of them with a market cap of \$100B+.
- Advisory board of several academic units (Biointerfaces Institute, University of Michigan, Koch Institute, MIT, Department of Bioengineering, Moffitt Cancer Center, Terasaki Institute, Oregon State Univ., Transformative Nanomedicine Center, University of Southern California, Chemical & Biological Eng, NYU, Dept. of Biomedical Eng, Tufts, and Dept. of Pharm., Div. of PE & MP, Univ. of North Carolina (former))
- Public educator on social media (LinkedIn)

Mitragotri Lab's Guiding Principles

We provide a platform and an opportunity to individuals to practice and preach a culture of scientific excellence and good values. Our core values:

- (i) **Integrity:** We apply ethical reasoning and decision making at personal and all professional scales, and strive for transparency in our scientific results.
- (ii) **Friendship:** We support each other unequivocally, both scientifically and personally.
- (iii) **Teamwork:** We work together within the lab, and we volunteer for service initiatives, to positively impact each other and our community.
- (iv) **Mentorship:** We share our experiences and expertise with each other, so that we can all learn and grow in both our scientific pursuits and our careers.
- (v) **Inclusivity:** We recruit new lab members to cultivate a well-rounded workforce.
- (vi) **Creativity and Innovation:** We think outside the box in order to push science forward. We commit to projects with all our excitement and dedication.
- (vii) **Scientific Approach:** We appreciate the fundamental aspects of biological sciences and quantitative reasoning. We apply fundamental discoveries to conduct translational research.