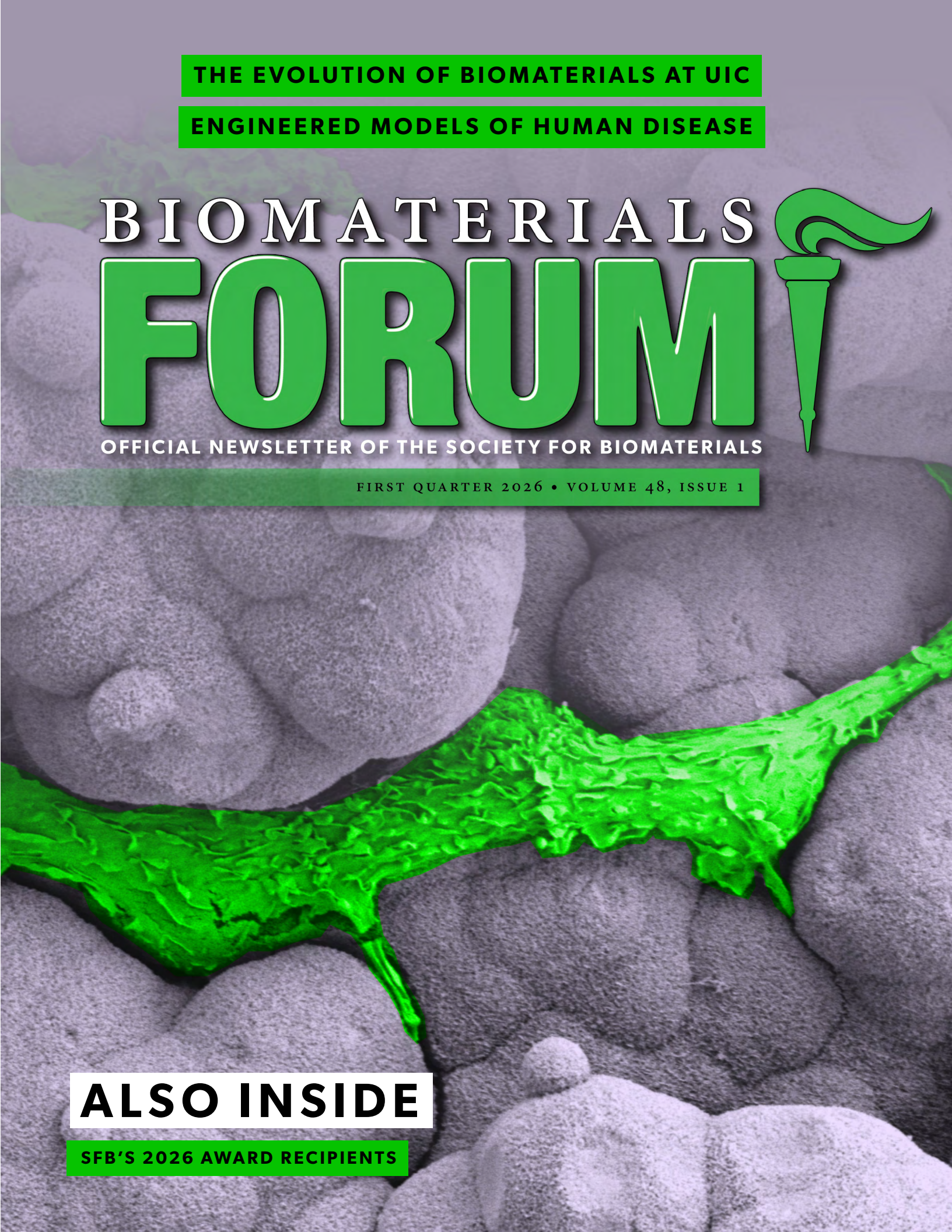
THE EVOLUTION OF BIOMATERIALS AT UIC

ENGINEERED MODELS OF HUMAN DISEASE

BIOMATERIALS FORUM

OFFICIAL NEWSLETTER OF THE SOCIETY FOR BIOMATERIALS

FIRST QUARTER 2026 • VOLUME 48, ISSUE 1

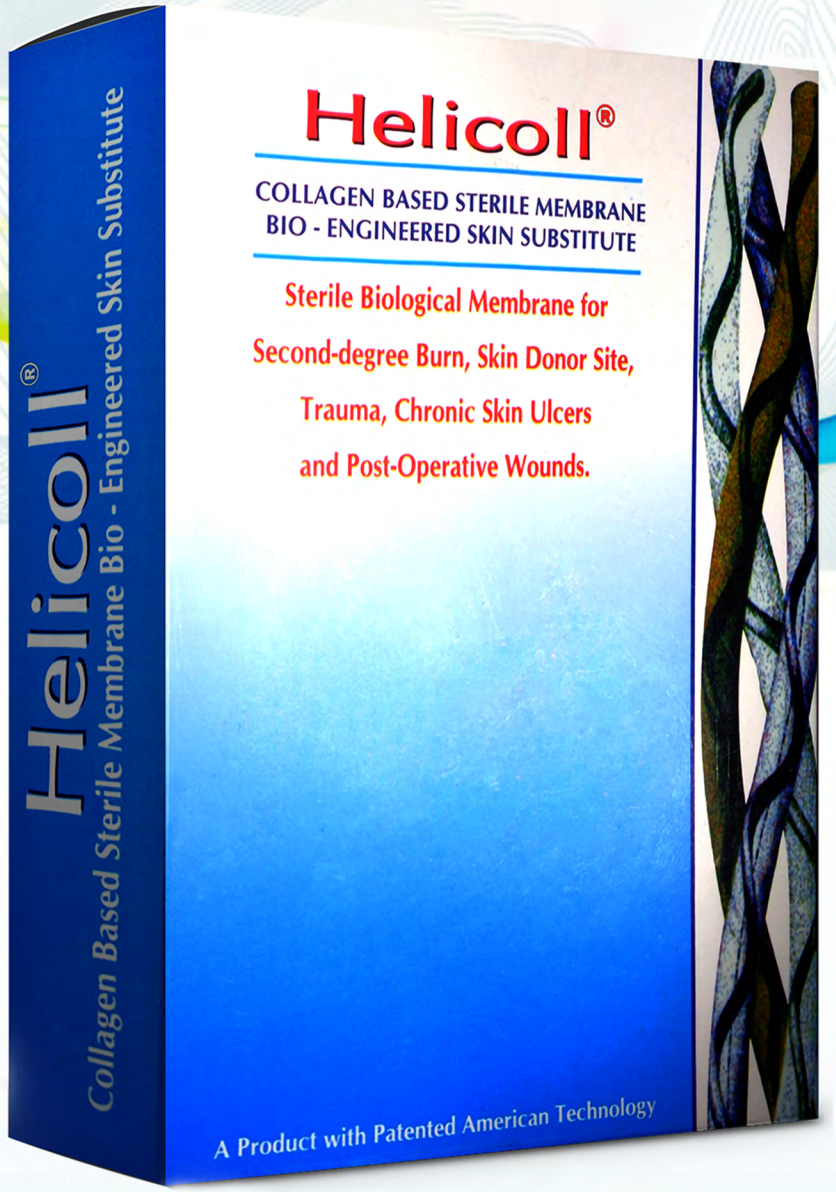


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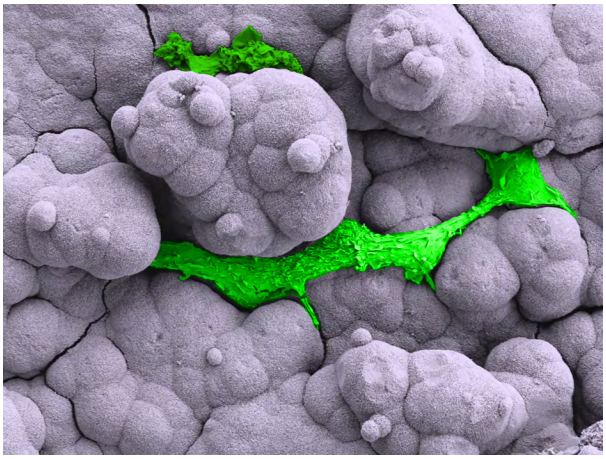
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Dental/Craniofacial Biomaterials	TBD
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Orthopaedic Biomaterials	TBD
Surface Characterization & Modification	Jessica M. Gluck • jmgluck@ncsu.edu
Tissue Engineering	

If interested in filling a vacancy above, please reach out to your SIG Chair.
Contact information can be found on individual SIG pages as found **here**.



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ON THE COVER

This scanning electron microscopy image shows two aged macrophages derived from mouse bone marrow (pseudo-colored green) cultured on an immunomodulatory biomimetic calcium phosphate coating delivering the antiaging drug ABT-263. The lower cell has an elongated morphology characteristic of a pro-reparative "M2-like" phenotype. The upper cell has a more rounded appearance, indicating it is less polarized toward the M2-like phenotype. The biomimetic calcium phosphate coating was created by immersing the material in simulated body fluid solutions as described in our previously published article: Jacobs EE, Gronowicz G, Hurley MM, Kuhn LT. Biomimetic calcium phosphate/polyelectrolyte multilayer coatings for sequential delivery of multiple biological factors. *J Biomed Mater Res A*. 2017;105(5):1500–1509. https://doi.org/10.1002/jbm.a.35985.

We acknowledge the University of Connecticut Health Center Microscopy Core facility for the use of the ZEISS Gemini 1 Scanning Electron Microscope, Sigma 360 VP.

Credit: Govindaraj Perumal, PhD, postdoctoral research associate, and Liisa Kuhn, PhD, professor, Department of Biomedical Engineering, University of Connecticut Health.

From the Editor

By Roger Narayan, MD, PhD, Biomaterials Forum Executive Editor



Welcome to the First Quarter 2026 issue of *Biomaterials Forum*! I would like to start by thanking the contributors to this issue. The cover image, provided by Dr. Govindaraj Perumal and professor Liisa Kuhn from the University of Connecticut, shows cell interactions with an immunomodulatory biomimetic calcium phosphate coating for the delivery of the antiaging drug ABT-263. This image demonstrates biomaterials' potential to modulate cellular phenotypes for applications related to antiaging and tissue regeneration.

Joyce Wong's From the President letter looks ahead to the Annual Meeting in Atlanta, "Biomaterials at the Crossroads: Connecting Science, Industry, and Innovation," organized by co-chairs Dr. Angela Throm and Dr. Susan Thomas. It also highlights the strength and resilience of the SFB community. The AIMBE Updates announce that the 2026 Annual Event will be held April 11–13. This event will mark AIMBE's 35th anniversary and includes expanded opportunities at Capitol Hill Day. The updates also describe AIMBE's response to a request for information from the White House Office of Science and Technology Policy on Accelerating the American Scientific Enterprise, outlining efforts to speed the translation of scientific research and public–private partnerships. We also announce the launch of AIMBE's Impact Page, which showcases advocacy and engagement outcomes. The Government News and Policy Updates consider the National Institutes of Health's new framework for international research collaborations, which requires separate awards for foreign components.

Our feature articles examine advances in biomaterials research and clinical applications. The first feature traces the evolution of biomaterials at the University of Illinois Chicago, from the department's establishment in 1965 to current efforts to study real-time atomic-scale interactions between biomaterials and living systems using in situ liquid-cell transmission electron microscopy and electron energy-loss spectroscopy. In our second feature, Donghui Zhu describes efforts at Stony Brook University to develop engineered models of human disease, including the use of cerebral organoids to develop new therapies for Alzheimer's disease and promote regeneration of the nervous system.

Member News recognizes achievements from Frederick Schoen, who stepped down after 45 years as a cardiovascular pathologist at Brigham and Women's Hospital and Harvard Medical School to the status of Professor of Pathology and Health Sciences and Technology, Emeritus, at Harvard Medical School; Chelsea Magin, who launched the Quality Assurance and Regulatory Affairs Certificate Program at the University of Colorado Denver | Anschutz; Hossein Ravanbakhsh, who received a $200,000 grant from the American Heart Association for tissue-engineered cardiovascular constructs; Shaochen Chen, who leads a team at University of California San Diego awarded up to $25.8 million by the Advanced Research Projects Agency for Health (ARPA-H) to bioprint a human liver; Akhilesh Gaharwar, whose *PNAS* research on molybdenum disulfide nanoflowers for increasing the number of mitochondria in cells attracted coverage in *The Washington Post* and *Smithsonian Magazine*; and Nicholas Peppas, who was elected IEEE Fellow and received the 2025 Lifetime Achievement Award from the Tissue Engineering and Regenerative Medicine International Society-Americas (TERMIS-AM).

This issue celebrates the Society's 2026 Award Recipients, including Founders Award recipient Martine LaBerge for pioneering contributions to the field of orthopaedic tribology, C. William Hall Award recipient Vincent Ling for transforming laboratory innovations into commercial platforms, Service Award recipient David Kohn for distinguished leadership in support of SFB's mission, Technology Innovation Award recipient Shaochen Chen for his work on microscale and nanoscale 3D printing, and Clemson Awards recipients Jordan Green (Applied Research), Omid Veiseh (Basic Research), and Jian Yang (Contributions to Literature). Mid-Career Award recipient Katelyn Swindle-Reilly was recognized for her innovative work in ocular drug delivery, and Young Investigator Award recipient Claudia Loebel was honored for her research on mechanobiology and mechanosensing. Rameshwar Rao was recognized for Outstanding Research by a Hospital Intern, Resident or Clinical Fellow. Student awardees included Thalma Orado and Katherine Meinhold (Student Awards for Outstanding Research – PhD Category), Aiden Walter (Student Award for Outstanding Research – Undergraduate Category), and travel fellowship recipients Zhiyuan Chen, Isaiah Williams, and Joshua Wilkins.

Industry News includes a discussion of the Biomaterials & Medical Products Commercialization Special Interest Group, which addresses barriers in medical device commercialization and aims to develop multi-stakeholder panels that will create appropriate reimbursement frameworks for medical devices.

Please feel free to reach out to me at roger_narayan@ncsu.edu if you and your group would like to share biomaterials research, education, translation, and outreach activities that may be of interest to the Society For Biomaterials community. The submission of news items, updates, images, and artwork is always welcome.

From the President

By Joyce Wong, SFB President



Dear SFB Members,

Soon we will convene in Atlanta for our Annual Meeting, "Biomaterials at the Crossroads: Connecting Science, Industry, and Innovation," organized by co-chairs Dr. Angela Throm and Dr. Susan Thomas. This meeting provides an invaluable opportunity to celebrate our collective accomplishments, exchange ideas and strengthen the partnerships that continue to advance our field.

As we gather, we do so in a period of continuing uncertainty in federal research funding. While recent congressional actions have sustained important programs, administrative challenges within the Executive Branch have delayed the disbursement of funds. These complexities underscore the importance of clear communication—within our community and with our partners in government—to ensure continuity and progress in our work.

I look forward to seeing you in Atlanta and to discussing how, together, we can continue to uphold the strength and resilience of our community in the face of these rapidly evolving circumstances.

Yours in solidarity and with gratitude,

Joyce Y. Wong, PhD
Inaugural Term Distinguished Professor of Engineering
Professor of Biomedical Engineering and Materials Science & Engineering, Boston University
President of Society for Biomaterials

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WE WANT TO FEATURE YOUR EXCITING BIOMATERIALS ARTWORK ON THE COVER OF *BIOMATERIALS FORUM!*

Deadline: Accepted on a rolling basis.

Instructions: Please email artwork (digital images, artistic creations, etc.) to info@biomaterials.org, to the attention of the Executive Editor of the *Biomaterials Forum*. All artwork with biomaterials relevance that have not appeared as a *Forum* cover are welcome. Multiple submissions are permissible.

Description: Selected artwork will appear as the cover of a future issue of *Biomaterials Forum* along with a brief "On the Cover" description of the subject and name/affiliation of the creator.

Format: High-resolution electronic version in .gif, .tiff or .jpeg file format.

2026 SFB Elections: Meet the Officer Candidates

The biographies and vision statements of each of our 2026 officer candidates highlight their commitment and contributions to the field.

PRESIDENT-ELECT

The president-elect shall become familiar with the duties of the president and shall, at all times, cooperate and assist with the duties of that office. In the absence of the president, the president-elect shall preside at the meetings of the Society, the Council and the Board of Directors, and perform the duties and exercise the powers of president. The term of office is for a period of one year without succession. The president-elect shall coordinate the duties of council regarding the long-range direction and future of the Society.

MEET THE PRESIDENT-ELECT CANDIDATES



John Fisher, PhD
University of Maryland

John P. Fisher is a Distinguished University Professor, MPower Professor, Distinguished-Scholar Teacher, Fischell Family Distinguished Professor, and chair of the Fischell Department of Bioengineering at the University of Maryland. Fisher is also the director of the Center for Engineering Complex Tissue, which aims to create a broad community focusing on 3D printing and bioprinting for regenerative medicine applications. As the director of the Tissue Engineering and Biomaterials Laboratory, Fisher leads a group that investigates biomaterials, stem cells, bioprinting and bioreactors to regenerate lost tissues, particularly orthopedic and soft tissues. Fisher's lab team has published more than 250 works (books, book chapters, articles, proceedings, and editorials) associated with over 20,000 citations (80 h-index), and delivered more than 450 invited and contributed presentations with financial support from the National Institutes of Health (NIH), the National Science Foundation (NSF), the U.S. Food and Drug Administration, the National Institute of Standards and Technology, the U.S. Department of Defense (DOD), the Advanced Research Projects Agency for Health, and other institutions.

As chair of the University of Maryland's Fischell Department of Bioengineering since January 2016, Fisher leads approximately 25 tenured and tenure-track faculty, 35 professional-track faculty, 15 staff members, 450 undergraduate students and 125 graduate students. Fisher's term as chair includes a range of key accomplishments, including increasing the department's research expenditures from $8 million in fiscal year 2015 to $22 million in fiscal year 2025; establishing a 20-member external advisory board with key corporate partners; and securing a top ranking in *U.S. News & World Report*, with undergraduate programs ranked 25th overall and 10th among public universities in 2026 and graduate programs ranked 28th overall and 12th among public universities in 2025. In 2025, Fisher led the establishment of the Center for Translational Engineering & Medicine, a joint research partnership with the University of Maryland School of Medicine. He also secured a $10 million gift from the Edward St. John Foundation and a $12.5 million grant from the University of Maryland Strategic Partnership's MPower Initiative to support the center.

Fisher has been elected fellow of the American Institute for Medical and Biological Engineering (AIMBE; 2012), the Biomedical Engineering Society (2016), and the International Academy of Medical and Biological Engineering (2020). In 2025, Fisher served as the chair of the Council of Chairs, an assembly of more than 150 biomedical engineering and bioengineering department chairs around the world. From 2018 to 2020, Fisher was president of the Tissue Engineering and Regenerative Medicine International Society-Americas (TERMIS-AM). He is currently editor-in-chief of *Tissue Engineering*.

Fisher has been committed to SFB since joining in 2003. He and his lab team have delivered more than 50 presentations at the Society's annual meetings, where he has also served as an abstract reviewer, session chair and keynote speaker. Fisher has served on the SFB Finance Committee and was elected as the SFB Member-at-Large in 2021. In 2024, Fisher was named a fellow of Biomaterials Science and Engineering in the International Union of Societies for Biomaterials Science and Engineering.

John Fisher's Vision Statement: *I am honored to be nominated for president of the Society For Biomaterials at a moment of both challenge and opportunity for the biomedical and bioengineering communities. In these dynamic times, SFB must play a decisive leadership role in advancing interdisciplinary science, strengthening the biomedical workforce and clearly articulating the profound impact of our field on society. With the support of the SFB membership and leadership, I hope to bring a vibrant vision to guide SFB forward.*

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Biomaterials research touches nearly every aspect of modern life, from therapeutics to interventional platforms and diagnostics. Yet the value of this work is not always fully recognized outside our immediate community. As president, I would prioritize clear, sustained communication with the public, policymakers and funding agencies, working alongside partners in industry and government to demonstrate how biomaterials research directly improves human health, drives innovation and strengthens economic resilience. This outward-facing engagement is essential to ensuring continued investment in biomaterial education and research that will fuel tomorrow's discoveries.

Central to SFB's mission is a deep commitment to students, trainees and early-career investigators. At a time when financial pressures, uncertainty and rapid change impact the next generation of researchers, SFB must serve as both an advocate and an anchor. In my previous roles, I have championed initiatives that reduce financial barriers, expand access and create meaningful research opportunities for young scientists and engineers. [My leadership] would position SFB to further strengthen programming that supports career development, interdisciplinary collaboration and participation across all career stages.

Equally important is SFB's relationship with industry. As the translation of biomaterial-based technologies from the bench to commercialization advances, I suggest that SFB can serve as a trusted partner that bridges academia, start-ups and established companies. By building stronger, more intentional partnerships, SFB can help secure internships, training opportunities and career pathways for trainees while accelerating the translation of emerging technologies from the laboratory to real-world impact.

I have been fortunate to have accumulated two decades of sustained service and leadership across the biomedical engineering ecosystem – as a researcher, academic leader, societal member and leader, and journal editor. At SFB, I have acted as a member, fellow, abstract reviewer, session chair, keynote speaker, committee member and elected official. Leveraging this experience, I envision [growing] SFB…as a national and international force in biomedical education and research – a society that drives innovation through strategic partnerships, elevates the voices of its members and engages in continuous, thoughtful dialogue with the broader public. For these reasons, I am honored to be nominated and hope to serve as president of SFB.



Kent Leach, PhD
University of California, Davis

Kent Leach is a professor of orthopaedic surgery and biomedical engineering, vice chair of research in orthopaedic surgery, and the Lawrence Ellison Professor of Musculoskeletal Research at the University of California, Davis (UC Davis). He began his career at UC Davis in 2005 after completing his postdoctoral training at the University of Michigan and Harvard University. He earned his PhD in chemical engineering from the University of Oklahoma and his undergraduate degree in chemistry from the University of Arkansas. His research interests are the application of biomaterials for delivery of cells and inductive cues to guide tissue regeneration and repair, as well as the development of model systems of tissue growth and disease.

Leach has been an active member of SFB for nearly two decades. His contributions range from service as the UC Davis student chapter advisor, and multiple terms on the Membership, Finance, and Education & Professional Development committees, to session organizer and chair, and membership on the Governing Council. Since 2021, Leach has served SFB as editor-in-chief of its flagship *Journal of Biomedical Materials Research Part A*. In this role, he has overseen a 60 percent increase in manuscripts submitted since 2022, continued to reduce publication time, created the Early Career Editorial Board to engage early career faculty in the publication process and moderated several Meet the Editors sessions at SFB annual meetings. He is proud of the results achieved with his outstanding associate editors and editorial board to advance the journal's visibility and reputation.

Beyond service to SFB, Leach has held numerous leadership roles in other professional societies. He served on the Board of Directors of the Biomedical Engineering Society (BMES), where he also recently completed a two-year term as treasurer. He served as abstract reviewer, track chair and program co-chair for BMES's 2020 annual meeting and mentored the UC

2026 SFB Elections: Meet the Officer Candidates

Davis undergraduate BMES chapter. He was an associate editor for the *Annals of Biomedical Engineering* for 11 years and held membership on numerous BMES committees including those overseeing awards, membership and national meetings. In addition, he served on the Americas Council of TERMIS and as a section member-at-large of the International Society of Fracture Repair within the Orthopedic Research Society. Each society boasts strong content ties with the biomaterials field and enjoys support from many of the same investigators.

Leach is a committed mentor to students and faculty alike. To date, he has trained nearly 30 PhD students and 10 postdoctoral fellows, all of whom have gone on to successful careers in academia or industry. He proudly mentors early-career faculty at UC Davis and beyond and was recognized in 2021 with a Dean's Award for Excellence in Mentoring. He also received the College of Engineering Outstanding Mid-Career Faculty for Excellence in Research Award in 2021. He joined the College of Fellows for AIMBE in 2017 and was inducted as a BMES fellow in 2018.

Kent Leach's Vision Statement: *I am honored to be nominated for president-elect of SFB. For nearly two decades, I have witnessed our Society elevating scientific quality, advocacy and member engagement while creating opportunities for every contributor to advance our mission. Today, SFB faces a pivotal moment: We have emerged from the pandemic into a new era that is reshaping how science is conducted, funded, disseminated and valued. As resources tighten, SFB must deliver unmistakable value to students, faculty and industry professionals and grow stronger by doing so.*

SFB is where high-quality science meets translation, and innovation thrives when academia, industry and regulators collaborate. The annual meeting represents the union of high-quality science, the chance to readily interact with thought leaders and countless opportunities to contribute to SFB. The most recent survey reveals the greatest number of members have interests in tissue engineering, while "biomaterials" is consistently well-represented at other annual scientific meetings. I will deepen partnerships with TERMIS, BMES, and Materials Research Society (MRS) through co-sponsored symposia, shared workshops and joint promotion of science, [drawing on]…my leadership roles with TERMIS and BMES….We will host Translation & Standards Days, industry showcases and regulatory roundtables to accelerate the journey from concept to clinic and to clarify pathways for scale-up, manufacturing and quality systems. We will continue to embed equity and inclusion in governance, awards and programming, ensuring a breadth of voices shape our priorities. These activities will keep SFB top of mind throughout the year and not only during our annual meeting.

Trainees are the lifeblood of our future. I will re-energize student chapters and expand Biomaterials Days into year-round engagement via the special interests groups (SIGs). This includes student-led programming; co-developed webinar topics; career panels across academia, industry and government; and expanded mentorship that connects trainees with faculty and innovators. My experience as an SFB chapter advisor and chair of several graduate education programs will facilitate this goal. By highlighting pathways to leadership in diverse careers, providing micro-grants for chapter activities and recognizing student impact, we will establish the value of membership early and sustain it as careers evolve, keeping trainees engaged in SFB.

Long-term stability of our mission priorities requires a stable funding stream independent of membership dues, meeting registration and royalties from our publications. It is imperative to grow our endowments to insulate SFB and plan for our long-term growth. My membership on SFB's Finance Committee of and as treasurer of BMES will support this effort. I will strategize and work with the council to build our endowment funds by engaging philanthropic members of our Society. These resources can be leveraged to expand our mission and invest in the activities our Society values.

SFB is the trusted home for biomaterials scientists, engineers, clinicians, entrepreneurs and regulators. If elected, I will work tirelessly to connect insight to impact, elevate every member's contribution and ensure SFB remains the world's preeminent community advancing biomaterials for human health and well-being.



Roger Narayan, MD, PhD
University of North Carolina

Roger Narayan serves as Distinguished Professor in the Lampe Joint Department of Biomedical Engineering at the University of North Carolina (UNC) and North Carolina State University

2026 SFB Elections: Meet the Officer Candidates

(NC State). His career has focused on developing advanced manufacturing techniques for medical devices, with an emphasis on laser-based processing as well as microneedle technologies for drug delivery and biosensing applications. Narayan's research group has pioneered the use of two-photon polymerization and other advanced manufacturing techniques for fabricating microscale medical devices, including microneedles for transdermal drug delivery and biosensing.

Education and international collaboration have been central to Narayan's career. He established graduate certificate programs in nanobiotechnology at UNC and NC State that provide interdisciplinary training at the interface of nanoscale science and biotechnology. Narayan has mentored 18 PhD students and numerous postdoctoral researchers who now hold positions in industry, government and academia. His Fulbright appointments have taken him to the University of São Paulo in Brazil, the University of Otago in New Zealand, the Instituto Politécnico Nacional in Mexico and most recently to RMIT University in Australia as Distinguished Chair in Entrepreneurship and Innovation. Through funding from NSF's International Research Experiences for Students, he has built student exchange programs with institutions in Austria, Germany, South Korea and New Zealand. As a 2016–2017 American Society of Mechanical Engineers (ASME) Swanson Fellow, Narayan worked with America Makes, the national additive manufacturing institute, to develop workforce development strategies and educational road maps for additive manufacturing.

As executive editor of *Biomaterials Forum*, Narayan has shaped the publication's role in strengthening community-building activities within the biomaterials field. Under his leadership, *Biomaterials Forum* has featured in-depth institutional spotlights on major research centers in the U.S. biomaterials field. The magazine has honored foundational contributors to the field with articles that provide current and next-generation members with information about the pioneers who helped develop the field. Each issue also showcases emerging research areas associated with the Society's SIGs. This editorial approach has reinforced *Biomaterials Forum's* mission to (a) share timely updates on developments in the biomaterials field and (b) connect researchers across academia, industry and government.

Narayan has contributed to university governance as faculty senator representing the College of Engineering at NC State, where he served on the Faculty Senate Executive Committee and currently serves as co-chair of the Faculty Senate Resources & Environment Committee. In these roles, he has worked across disciplines to address campus-wide issues, including sustainability, resource allocation and research policy. As chair-elect of the NC State University Research Committee, he supports the development of new initiatives that span the university's diverse research activities.

Narayan has held leadership positions in multiple professional societies, including as director of the Minerals, Metals & Materials Society (TMS) Functional Materials Division, chair of the ASM International Emerging Technologies Awareness Committee and chair of the American Ceramic Society (ACerS) Bioceramics Division. Through these roles, he has worked to strengthen interdisciplinary connections by organizing symposia at Materials Science & Technology conferences that bring together the TMS, ACerS, and SFB communities. These events have supported cross-disciplinary dialogue related to biomaterials innovation.

Roger Narayan's Vision Statement: *Since its founding in 1974, SFB has grown into the leading international organization for biomaterials research, education and translation. Today, the Society faces both challenges and exceptional opportunities to advance its mission of improving our quality of life through innovations in biomaterials. The growth of artificial intelligence, regenerative medicine and advanced manufacturing technologies is changing how we conduct biomaterials research. Moreover, we are navigating broader changes to federal funding priorities and regulatory frameworks. My priority is that SFB continues to offer unique opportunities for students, trainees, academic researchers, industry scientists, government researchers and clinicians to advance their careers. My vision for SFB includes four interconnected priorities:*

1. Strengthening partnerships with peer societies

Deepening collaborations with peer organizations such as ACerS, the American Institute of Chemical Engineers, the American Chemical Society, ASME, MRS, TERMIS and TMS will provide the Society with opportunities to increase its membership and address cross-disciplinary topics. I will work with members to:

- *Develop co-branded symposia and virtual workshops with peer societies to cover cross-disciplinary topics such as advanced manufacturing, artificial intelligence and regenerative medicine*
- *Strengthen international activities with overseas institutions and funding agencies, including virtual workshops that (a) support research collaborations as well as (b) disseminate information on student internships and postdoctoral training opportunities*

2. Accelerating translation from discovery to clinical impact

The biomaterials ecosystem includes preclinical testing, regulatory consulting, biocompatibility testing, sterilization and quality systems activities. I will work with members to develop:

- *Resources for members to improve their understanding of standards and interactions with regulatory agencies*
- *In-person and virtual activities that consider medical device testing, regulatory activities and interactions with contract research organizations*
- *Mentorship programs that connect academic inventors with entrepreneurs to support start-up formation, licensing and venture funding activities*

2026 SFB Elections: Meet the Officer Candidates

3. Investing in members at every career stage

As president, I will work with members to champion the following objectives:

- *Increase support to strengthen Biomaterials Day as a premier venue for the dissemination of biomaterials research, education and outreach activities*
- *Bolster virtual and in-person mentoring and leadership development activities*
- *Expand recognition for outstanding biomaterials teaching innovations, student research and outreach activities*

4. Cultivating a year-round community

The Society's strengths include relationship-building and knowledge-sharing. I will work with members to:

- *Expand virtual engagement via webinars, volunteering opportunities and online events to reduce barriers related to travel and institutional resources*
- *Enhance* Biomaterials Forum *as a platform for information sharing and career development*
- *Build year-round technical communities around growing research areas to support research collaborations and provide opportunities for student and trainee presentations*

As president, I would be honored to work alongside the Society's members, committees, student leaders and international partners to ensure that SFB remains the leading community for advancing biomaterials research. Together, we will support breakthroughs in biomaterials research and accelerate clinical impact while remaining true to the Society's founding mission: improving human health through biomaterials innovation. I look forward to building the future of the biomaterials field with you.

MEMBER-AT-LARGE

The Member-at-Large shall serve as an unencumbered representative of the membership at meetings of both the Board of Directors and the Council. The Member-at-Large shall serve for a period of one year.

MEET THE MEMBER-AT-LARGE CANDIDATES



Ashutosh Chilkoti, PhD
Duke University

Ashutosh Chilkoti is the Alan L. Kaganov Professor of Biomedical Engineering at Duke University. His areas of research include genetically encoded biomaterials, the development of synthetic biomolecular condensates for synthetic biology and point-of-care clinical diagnostics. He has published about 370 papers, has been cited 52,000 times, has a Google Scholar H-index of 121 and has 171 patents and patent applications. Chilkoti was awarded the Clemson Award for Contributions to the Literature by SFB in 2011; was awarded the Robert A. Pritzker Distinguished Lecture award by BMES in 2013; was elected to the National Academy of Inventors in 2014; and received the Distinguished Alumni award from the Indian Institute of Technology, Delhi in 2015, the Diamond award from the College of Engineering at the University of Washington in 2017 and the Technology Innovation and Development Award from the SFB in 2025. He is a fellow of the American Association for the Advancement of Science. He is the founder of six start-up companies, one of which went public, and two that were acquired.

Ashutosh Chilkoti's Vision Statement: *I am a strong candidate for Member-at-Large of SFB as I bring a combination of scientific leadership, community building and entrepreneurial vision that aligns with the Society's mission. My career in biomaterials research has shaped multiple subfields and continues to influence how fundamental discoveries translate into clinical and commercial impact. As a pioneer in stimulus-responsive polymers, genetically encoded biomaterials, biointerface science and protein-polymer conjugates, I have developed innovative materials that address real biomedical challenges.*

My commitment to scientific community building is equally noteworthy. I played a central role in creating multiple Gordon Research Conferences – one on biointerface science (2006) and another on bioinspired materials (2012) – that have helped define emerging areas of biomaterials research. These conferences brought together diverse scientific voices spanning engineering, chemistry, biology and medicine, and I hope to do the same for the Society by helping recruit new members from diverse disciplines. These experiences have prepared me well to contribute strategically to the Society's programming, outreach and long-term planning.

As chair of the Department of Biomedical Engineering at Duke University (2014–2022), I recruited 23 faculty members, launched an incubator for companies from the department and created an entrepreneurial postdoctoral fellowship program to enable graduate students in the department to launch companies from their doctoral research. I championed faculty development and cultivated a culture of innovation and inclusion. My administrative experience equips me with the organizational insight and collaborative mindset essential for effective service on the SFB Council.

2026 SFB Elections: Meet the Officer Candidates

I am also a serial entrepreneur. As a founder of biotechnology start-ups PhaseBio Pharmaceuticals (NASDAQ IPO 2018), Isolere Bio (acquired by Donaldson Inc. in 2023), inSoma Bio (first-in-human trial in 2025) and Veil Therapeutics, I have first-hand experience navigating the path from academic discovery to commercial translation. This perspective is invaluable for a Society increasingly engaged with industry partners and committed to preparing trainees for diverse career trajectories.

If elected Member-at-Large, I will prioritize the professional development of graduate students and postdoctoral fellows – an area I have long championed. I propose establishing a structured mentorship program that pairs trainees with senior SFB members, creating sustained, meaningful relationships that extend beyond the annual meeting. This initiative will leverage the deep expertise within the Society to support career exploration, research development and leadership skills.

In addition, I envision a new workshop or mini-symposium at the annual meeting designed to bring start-ups and established companies into closer engagement with the SFB community. Companies will be invited to present their latest research and technology, followed by a dynamic "matchmaking game" in which students and postdocs meet prospective employers through rapid one-minute introductions. This format will foster networking and create a tangible pathway to internships and employment.

With my scientific excellence, proven leadership and commitment to nurturing the next generation, I believe I will serve SFB well as a Member-at-Large by strengthening the Society and expanding its impact.



Shreya Raghavan, PhD
Texas A&M University

Dr. Shreya Raghavan is an associate professor in the Department of Biomedical Engineering at Texas A&M University, where she leads a research program at the intersection of biomaterials and mechanobiology. Since assuming her role at Texas A&M in 2020, her lab has focused on leveraging engineered microenvironments to drive mechanistic discovery in cancer and women's health. Her research is supported by the NIH R37 MERIT Award, NSF, DOD and the Cancer Prevention and Research Institute of Texas. Her creative and impactful contributions have been recognized with the BMES Rita Schaffer Young Investigator Award, the NSF CAREER Award, and the BMES-Cellular and Molecular Bioengineering Young Innovator and Rising Star awards.

Beyond the bench, Raghavan is an advocate for the biomaterials community. She received the 2025 SFB Community Impact (DEI) Award for her role in establishing the UNITE Future Faculty Fellows program. Within SFB, a definitive mark of her leadership includes meeting members where they are, reflected in scientific and social programming at the annual meetings. Starting as program chair for the Immune Engineering SIG (2021–2023), she moved into Society-wide roles serving as the chair of the DEI Committee (2024–2025), Program Committee (2025, 2026) and Education & Professional Development Committee (2025–2026). In 2025, Raghavan co-founded and now chairs the Health Equity SIG, dedicated to integrating sex, age and other factors as essential biological variables in biomaterial design and response.

In these capacities, she has consistently translated member feedback into high-value scientific symposia and professional development opportunities, establishing a record of responsive leadership.

Shreya Raghavan's Vision Statement: *The Society For Biomaterials has been my professional home since 2020. Through my service across various committees and SIGs, I have witnessed the power of a community that truly listens to its members. As your Member-at-Large, I intend to translate your voice into structural progress that strengthens SFB's future. Building on my foundation of service at SFB, my vision focuses on two pillars:*

1. ***Driving value-added initiatives to support membership.*** *Now, more than ever, there is an urgent need to communicate the value of the scientific enterprise and the role of scientific societies to the public and key stakeholders. I will work to amplify your voice, creating feedback loops that ensure SFB's goals reflect our community's evolving needs. By collaborating with the Education & Professional Development; Membership; and Community, Opportunity, Outreach and Leadership committees, I will advocate for tailored resources that provide tangible value to SFB members at every career stage (students to senior member engagement).*
2. ***Increasing member citizenship via governance transparency.*** *I am committed to serving as a connective*

2026 SFB Elections: Meet the Officer Candidates

tissue between the membership and the board. My goal is to ensure that governance decisions align with member intent while holding our organizational structures accountable. I will proactively communicate board decisions and institutional processes, ensuring two-way transparency.

Together, we can ensure that SFB remains a responsive, transparent and significant home for all biomaterials professionals.



Tatiana Segura, PhD
Duke University

Tatiana Segura is a professor of biomedical engineering, neurology, and dermatology at Duke University. She received her BS in bioengineering from the University of California, Berkeley, and her PhD in chemical engineering from Northwestern University. She conducted her doctoral research with professor Lonnie Shea, beginning her work in biomaterials for nonviral gene delivery, and completed postdoctoral training with professor Jeffrey Hubbell focused on biomaterial design for therapeutic delivery and immune modulation. Before joining the faculty at Duke, Segura was at the University of California, Los Angeles, where she reached the rank of professor in the Department of Chemical and Biomolecular Engineering and served in multiple leadership roles, including vice chair and graduate program director. She has extensive experience in academic service and governance, including serving as chair of the Accreditation Board for Engineering and Technology (ABET) chair and leading continuous improvement initiatives following accreditation review. At Duke University, Segura serves as the director of the Center for Biotechnology and Tissue Engineering and is a multiple principal investigator of the NIH T32 Biotechnology Training Grant. She has been deeply engaged in departmental-, school- and university-level service and is actively involved in mentoring junior faculty. Her research program focuses on engineering interactions between biomaterials and tissues to promote repair and regeneration, with applications in ischemic stroke, wound healing, transplantation tolerance and immune-modulatory biomaterials. Her work has been funded by the NIH continuously since 2008. Segura has published over 100 peer-reviewed articles and reviews, with more than 15,000 citations. Her honors include the SFB Clemson Award for Contributions to the Literature, the Acta Biomaterialia Silver Medal, an NSF CAREER Award, an Outstanding Young Investigator Award from the American Society of Gene and Cell Therapy, an American Heart Association National Scientist Development Grant, Senior Membership in the National Academy of Inventors and election as an AIMBE fellow.

Tatiana Segura's Vision Statement: *It is an honor to be nominated for Member-at-Large of the Society For Biomaterials. SFB has been an important part of my career, and I value the relationships and sense of community that make this society special. I am a very social and outgoing person, and one of the ways I contribute to our community is by talking with many colleagues across the Society. I enjoy listening to people, offering advice when helpful and connecting ideas across different experiences and career stages. As Member-at-Large, I would continue doing what I already do, but with a clear purpose. I want to better understand what our members need – including students, trainees, early-career investigators and senior colleagues across academia, industry and clinical settings – and how SFB can serve them more effectively. I plan to stay closely connected to the membership by having conversations at meetings, events and informal settings. From these conversations, I often see patterns and connections that can help point toward solutions. I would bring these insights to the Board and Council to help the Society think clearly about how to support its members and how to remain strong and relevant during a time of change for science, funding and professional societies. I also see this role as an important step in preparing to serve SFB in future leadership roles. By staying engaged, listening carefully and helping connect ideas into action, I hope to contribute to the long-term health and sustainability of the Society. If elected, I would take this responsibility seriously and work with care, energy and openness to serve SFB and its members.*

SFB Announces Its 2026 Award Recipients

SFB is a multidisciplinary society of academic, healthcare, governmental and business professionals who are dedicated to promoting advancements in all aspects of biomaterials science, education and professional standards, to enhance human health and quality of life. SFB's prestigious industry awards recognize outstanding achievement and contributions to the biomaterials field. We are proud to present our 2026 award winners.

FOUNDERS AWARD



Martine LaBerge, PhD, Clemson University
This award honors an individual who has made a long-term, landmark contribution to the biomaterials discipline.

Dr. LaBerge has been a member of SFB and its community for over 40 years. She is internationally recognized for pioneering contributions to orthopaedic tribology and for advancing our understanding of lubrication and wear mechanisms in both natural and artificial joints. Her laboratory was among the first to characterize the phospholipid profile of articular cartilage boundary lubricant, and her group developed key models for wear mechanisms in total joint replacement, which has influenced implant design and improved patient outcomes. Beyond orthopaedics, her contributions to endovascular tribology have also informed device design and clinical practice.

—Delphine Dean, PhD, Clemson University

C. WILLIAM HALL AWARD



Vincent Ling, PhD, Morphocell Technologies
This award honors a member of SFB working in the industry or government sector who has made a significant contribution to the Society and has an outstanding record in establishing, developing, maintaining and promoting SFB's goals and objectives.

Dr. Ling's extensive background, experience in scientific and business development, unique ability to transform laboratory innovations into commercially viable platforms and substantial contributions to SFB make him a highly qualified candidate for the C. William Hall Award. His sustained impact on healthcare innovation, from regenerative medicine to biologics and drug delivery, exemplifies the purpose of this award and promises to inspire others in the field. I wholeheartedly recommend him for this award and am confident that his recognition would honor his remarkable contributions to our field.

—Ankur Singh, PhD, Georgia Institute of Technology

SOCIETY FOR BIOMATERIALS AWARD FOR SERVICE



David Kohn, PhD, University of Michigan
This award honors significant service to SFB in establishing, developing, maintaining and promoting its objectives and goals.

Throughout his distinguished career, Dr. Kohn has contributed meaningfully to every dimension of the Society For Biomaterials' mission. His leadership, commitment and unwavering dedication have helped shape the trajectory of the Society and the broader biomaterials community. From mentoring the next generation of scientists and engineers to spearheading initiatives that strengthen our professional standards, his impact has been both deep and wide-ranging. He has been actively involved in the Dental Biomaterials Special Interest Group (SIG), serving as SIG chair (1996–1999), and has organized numerous symposia (1997–1999, 2002, 2006). He has been an advocate for community building, serving on the Education & Professional Development Committee and serving [as a student chapter advisor at] the University of Michigan. Dr. Kohn has also played a major role in the leadership of the SFB serving as president, president-elect, and secretary-treasurer and as a member of the Long-Range Planning Committee, task forces, SFB Board and SFB Council.

—Lynne Jones, PhD, Johns Hopkins University School of Medicine

TECHNOLOGY INNOVATION AND DEVELOPMENT AWARD



Shaochen Chen, PhD, University of California San Diego
This award recognizes an individual's or team's successful application of basic and applied biomaterials research in the development of a novel medical product or technology that significantly benefits the health and well-being of medical and surgical patients.

Dr. Chen has transformed the field of biomaterials through innovations in microscale and nanoscale 3D printing. His early work established hydrogel-based microscale printing platforms (Adv. Drug Deliv. Rev., 2004; J. Biomed. Mater. Res., 2005) and projection-based printing methods (2006), enabling rapid, precise fabrication of biomaterials with superior integrity. He then invented Dynamic Optical Projection Stereolithography (DOPsL; Adv. Mater., 2012), a breakthrough that allows continuous 3D bioprinting at speeds 1,000 times faster and with 100-fold higher resolution than extrusion-based methods. This technology eliminated interlayer defects and was later patented and licensed to CELLINK.

—Kam W. Leong, PhD, Columbia University

SFB Announces Its 2026 Award Recipients

CLEMSON AWARD FOR APPLIED RESEARCH



Jordan Green, PhD, Johns Hopkins University

This award recognizes an individual whose accomplishments include significant utilization or application of basic knowledge in science to achieve a specific goal in the field of biomaterials.

Dr. Green has built an interdisciplinary lab that is well known for innovation in biomaterials and drug delivery, especially for polymeric nanoparticles for gene delivery. In parallel, he has patented technology at MIT and at JHU, [contributed to] 134 publications, written nine book chapters and holds 86 patents and pending patents. He started AsclepiX Therapeutics and currently serves as [its chief technology officer].... AsclepiX Therapeutics...specializes in delivery of novel antiangiogenic peptides. He has been awarded numerous awards including being elected Fellow to the Biomedical Society [in] 2019, Fellow [to the] Controlled Release Society [in] 2021 [and] Fellow [to the] National Academy of Inventors [in] 2021.

—Robert Langer, PhD, Massachusetts Institute of Technology

CLEMSON AWARD FOR BASIC RESEARCH



Omid Veiseh, PhD, Rice University

This award recognizes an individual who has made an original contribution to the basic knowledge and understanding of the interaction between materials and tissue.

Dr. Veiseh's lab has pioneered innovative approaches to synthesizing and screening large libraries of biomaterial formulations for tailored applications in immunology and medicine. He is recognized for his seminal work in discovering immunomodulatory biomaterials that can interact appropriately with the host immune system for use in the development of chronic implants. These technologies have successfully been deployed for applications in drug delivery, regenerative medicine and continuous disease monitoring. Over the course of his career, he has authored and coauthored more than 80 peer-reviewed publications, including those in Nature, Nature Biotechnology, Nature Materials, Nature Medicine *and* Nature Biomedical Engineering, *and is an inventor on more than 80 pending or awarded patents.*

—Robert Langer, PhD, Massachusetts Institute of Technology

CLEMSON AWARD FOR CONTRIBUTIONS TO THE LITERATURE



Jian Yang, PhD, Westlake University

This award recognizes an individual who has made a significant contribution to the literature on the science or technology of biomaterials.

Most notable is Dr. Yang's pioneering work on citrate-based polymers as metabolism-regulating biomaterials and photoluminescent and photoacoustic citrate-containing polymers for imaging, diagnostics and tissue stimulation. The former was the basis for his leadership in establishing new research directions for the design and fabrication of scaffolds for tissue and regenerative engineering applications – metabonegenesis, which spawned research in citrate biology for bone regeneration and became the basis for the growing area of bioenergetic biomaterials, and metabotissuegenesis, which emphasizes the metabolic role of citrate for the regeneration of all tissues (Adv. Sci., 2019; Adv. Mater., 2024). Without a doubt, Dr. Yang is the leading scientist for the field of metabolism-regulating biomaterials for tissue engineering, regenerative engineering and regenerative medicine applications.

—Guillermo Ameer, ScD, Northwestern University

MID-CAREER AWARD



Katelyn E. Swindle-Reilly, PhD, Ohio State University

This award recognizes an individual SFB member who has demonstrated outstanding achievements in or contributions to the field of biomaterials research at the mid-career stage.

Dr. Swindle-Reilly has secured funding from the National Institutes of Health (NIH), [U.S. Department of Defense and] Ohio Lions Foundation, and state-level translational initiatives. Her recent work on ocular drug delivery and rheology of the vitreous humor has generated more than 100 citations. However, her most significant scholarly contributions are in the patent literature. She has more than 70 issued or pending patents. Her innovations resulted in the founding of Vitranu, a start-up at which she serves as chief technical officer. Vitranu is commercializing her ocular drug delivery technologies, including a tunable release capsule for age-related macular degeneration. This breakthrough addresses the burden of frequent intraocular injections, enhancing patient compliance.

—Jessica O. Winter, PhD, Ohio State University

YOUNG INVESTIGATOR AWARD



Claudia Loebel, MD, PhD, University of Pennsylvania

This award recognizes an individual who has demonstrated outstanding achievements in the field of biomaterials research at the early career stage.

[Loebel] is a brilliant and innovative scientist that has accomplished much during her training and in her independent faculty position. I firmly believe that the work that [Loebel]'s group is doing will push our understanding of mechanobiology and mechanosensing within the field of fibrosis and tissue injury. She has received a number of grants and awards such as the highly competitive David and Lucile Packard Foundation Fellowship, which is only given to a small group of researchers each year across all disciplines, the Macromolecular Rapid Communications

SFB Announces Its 2026 Award Recipients

Junior Researcher Award, the Cell and Molecular Bioengineering Rising Star Award and the Cell and Molecular Bioengineering Young Innovator Award. Other grants include the NIH R35 MIRA Award, the American Lung Association Innovation Award and the Biological Sciences Scholarship Program. [Loebel] has also been dedicated to the advancement of SFB for many years – I think it would be hard to find a young faculty member that has contributed more to the Society at this stage. As a postdoctoral fellow, [Loebel] was vice chair (2020–2021) and then chair (2021–2022) of the SFB Young Scientist Group and was co-chair of the SFB Mental Health Workshop. She is also a founder of the Biomaterials Postdoctoral Recognition Award program, which she has now chaired [since 2026]. As a young faculty member, she has already become an associate editor for [the Society's] Journal of Biomedical Materials Research A (JBMRA). *More recently, she has been the chair of the SFB Symposium at MS&T in Columbus Ohio in 2023 and… program chair of the BioInterfaces Special Interest Group (2024–2025).*

—Jason Burdick, PhD, University of Colorado

OUTSTANDING RESEARCH BY A HOSPITAL INTERN, RESIDENT OR CLINICAL FELLOW AWARD



Rameshwar Rao, Seattle Children's Research Institute

This award recognizes a hospital intern, resident, clinical fellow, medical student or individual in an equivalent position who has demonstrated outstanding achievement in biomaterials research.

When Dr. Rao joined my lab early in his fellowship, his objective was to merge his clinical focus on pediatric solid tumors with biomaterials research. His work was funded by the highly competitive national Pediatric Scientist Development Program (PSDP), an NIH K12 that selects seven pediatric fellows nationally. He designed a study that defined the impact of the extracellular matrix on osteosarcoma chemoresistance. Dr. Rao's clinical insight led him to develop a metronomic treatment regimen combining regorafenib, a tyrosine kinase inhibitor used in metastatic and relapsed osteosarcoma patients, with standard chemotherapy to overcome cell-matrix-induced chemoresistance. This work has been widely recognized, earning the Society for Pediatric Research Fellow's Basic Science Award (2023), the Connective Tissue Oncology Society Best Poster Award (2023) and the prestigious Society for Pediatric Research David G. Nathan Award for Basic Research (2024), which is awarded to one pediatric fellow nationally.

—Sarah Heilshorn, PhD, Stanford University

STUDENT AWARD FOR OUTSTANDING RESEARCH | PHD CATEGORY



Thalma Orado, Texas A&M University

This award recognizes a PhD student who has shown outstanding achievement in biomaterials research.

Thalma Orado coordinated our group's collaborations with two other labs [led by] Xiaocun Lu at Clarkson University and Pranav Soman at Syracuse University to ensure successful completion of the work. Her exciting and promising results will ultimately result in wound dressings with easy-to-use infection surveillance capabilities. In the manuscript's acceptance letter, JBMRA's *editor, Dr. Kent Leach, wrote "Congratulations on this interesting study. I enjoyed reading it!" I have published in* JBMRA *multiple times, and this was the first time that I received a personalized note from the editor about the work upon acceptance. [Orado's] current research is building on this technology to enhance the sensitivity and specificity of these materials toward pathogenic bacteria. I anticipate that her second, first-author manuscript will be submitted this fall and she will complete one to two additional manuscripts before defending her dissertation next summer. These are in addition to her four coauthored manuscripts (two from her former lab and two from my lab).*

—Mary Beth Browning Monroe, PhD, Texas A&M University

STUDENT AWARD FOR OUTSTANDING RESEARCH | PHD CATEGORY



Katherine Meinhold, University of Washington

This award recognizes a PhD student who has shown outstanding achievement in biomaterials research.

Katherine Meinhold uses her biomaterials training and materials science knowledge to the benefit of multiple collaborators here at UW and beyond. She is actively working on three collaborative projects ranging from using her fibers to support human inducted pluripotent stem cells (iPSC) differentiation to osteoblasts with a drug of interest for long bone repair, to establish an in vitro model of anisotropy necessary for human iPSC derived cardiomyocyte pulsing behavior to probe a question about a key myosin-supporting protein, and as a substrate for beta zeolite incorporation to be used for PFAS adsorption and quantification.

—Jenny Robinson, PhD, University of Washington

SFB Announces Its 2026 Award Recipients

STUDENT AWARD FOR OUTSTANDING RESEARCH | UNDERGRADUATE CATEGORY



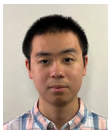
Aiden Walter, Rose Hulman Institute of Technology

This award recognizes an undergraduate student who has shown outstanding achievement in biomaterials research.

Aiden Walter is truly remarkable. He is a fast learner and quickly became independent in the lab. I would often walk into the lab throughout the summer, and [Walter] was always busy doing an experiment in the lab on his own. The work that will be presented in the manuscript is largely what he accomplished over the summer – which is truly amazing for an undergraduate. [Walter's] mentor described him as "curious, committed and organized" and…highly engaged in the research. Toward the end of the summer, [Walter] presented to our research group. He [delivered] one of the best [presentations], if not the best…I have ever seen from an undergraduate researcher in my lab, [and] I have mentored nearly 90 undergraduates over my 20 years. He articulated the motivation of his research and research hypothesis clearly, he demonstrated that he had developed a strong fundamental understanding of his project and did an excellent job answering questions. He went on to present his poster to the department and received second place. In addition, he also received the Albert Einstein Award, which is given to [a] student who [demonstrates] strong leadership, integrity and solid laboratory skills. This award exemplifies what I saw in [Walter] during his time in my lab.

—Stephanie Bryant, PhD, University of Colorado

C. WILLIAM HALL – UNDERGRADUATE TRAVEL SCHOLARSHIP



Zhiyuan Chen, Purdue University

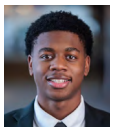
This award honors the memory of the Society's first president, Dr. C. William Hall. This student scholarship is awarded to a junior or senior undergraduate pursuing a bachelor's degree in bioengineering or a related discipline.

As a research advisor, I have had several highly driven undergraduate students who have contributed to publications. It is a very elite group of intelligent, technically proficient, and creative students to be part of. In my view, [Chen] not only belongs in this elite group but also raises its bar in terms of academic achievement and professional accomplishments.

—Taimoor Qazi, PhD, Purdue University

CATO T. LAURENCIN, MD, PHD – UNDERGRADUATE TRAVEL FELLOWSHIP





Isaiah Williams, University of Connecticut

Joshua Wilkins, North Carolina A&T State University

Named in honor of a distinguished member of the Society For Biomaterials, the travel fellowship will provide support for undergraduate students from underrepresented minorities in the field of biomaterials to attend the 2026 Annual Meeting & Exposition.

[Williams] worked closely with my [master's students] to learn the challenging technique of 3D printing silicone. [The] 3D printing of elastomers doesn't always go according to plans, but he persisted and successfully produced test squares in order to evaluate the compressive strength, the heat transfer and moisture transfer of the materials.

—Liisa Kuhn, PhD, University of Connecticut Health Center

Currently, [Wilkins] is conducting an exciting research project focused on the fabrication and characterization of curcumin-loaded polycaprolactone (PCL) nanofibers for biomedical applications. This work represents an important contribution to the field of biomaterials, combining innovation in drug delivery systems with practical applications in wound healing and inflammation management.

—Narayan Bhattarai, PhD, North Carolina A&T State University

AIMBE Updates

By Dawn Beraud, PhD

2026 AIMBE ANNUAL EVENT

The 2026 AIMBE Annual Event will be held April 11–13, 2026, marking the institute's 35th anniversary. Chair of the College of Fellows Stuart Cooper serves as program chair for the 2026 Annual Event. The AIMBE Earl Bakken lecture will be delivered by Dr. Alfredo Quinones-Hinojosa of the Mayo Clinic in Florida. The meeting will include concurrent technical and policy sessions focused on the following topic areas: AI and drug targets for therapeutics, MRNA and cell and gene therapies, and non-animal models (NAMs). AIMBE has expanded opportunities for participants to take part in the event's Capitol Hill Day and expects record attendance. For the first time, AIMBE will be incorporating science communication training for attendees into the program.

AIMBE RELEASES 2025 ANNUAL REPORT

This past year was pivotal for AIMBE. Amid 2025's significant changes across the scientific, policy and funding landscapes, AIMBE continued to advance the goals of its 2024–2027 Strategic Plan and strengthen its role as the collective voice of medical and biological engineering. With the support of its community, AIMBE expanded the value it delivers to members, increased its advocacy impact and enhanced localized support. We invite you to review AIMBE's 2025 accomplishments in its Annual Report and learn more about the progress made across the organization.

AIMBE RESPONDS TO OSTP RFI ON ACCELERATING THE AMERICAN SCIENTIFIC ENTERPRISE

On December 23, 2025, AIMBE submitted a letter in response to a request for information (RFI) issued by the White House Office of Science and Technology Policy (OSTP) on Accelerating the American Scientific Enterprise.

AIMBE appreciates the thoughtful input we received from its fellows and broader community. We have synthesized these insights into the following key policy opportunities, aimed at strengthening public – private partnerships and accelerating the translation of scientific discoveries into meaningful societal benefit:

1. Expanding proof-of-concept and gap funding to bridge research and commercialization
2. Streamlining and modernizing technology transfer policies
3. Addressing misalignment between academic and industry incentives
4. Strengthening public–private partnerships and regional innovation ecosystems
5. Investing in workforce development for translation and emerging technologies
6. Building artificial intelligence–enabled, distributed research infrastructure
7. Ensuring broad and equitable societal benefit from federally funded research

Read AIMBE's full response here.

AIMBE LAUNCHES IMPACT PAGE

AIMBE is pleased to launch its new Impact Page, a dedicated space highlighting the tangible outcomes of the organization's advocacy, engagement and leadership on behalf of medical and biological engineering. As public trust in science faces increasing challenges, this page showcases how AIMBE and its community are advancing innovation, informing policy and translating research into societal benefit. The Impact Page also underscores the importance of sustained investment to expand these efforts and meet the demands of a rapidly evolving research landscape.

From Atoms to Healing: The Evolution of Biomaterials at UIC

By Tolou Shokuhfar, Biomedical Engineering, University of Illinois Chicago

At the University of Illinois Chicago (UIC), biomaterials research has flourished in tandem with the city's robust medical and scientific ecosystem, seamlessly bridging engineering and medicine to address critical challenges in human health. From early implant and surface-engineering work to today's real-time visualization of living systems at the nanoscale, UIC's journey reflects one clear principle: When engineers, clinicians and scientists collaborate deeply, innovation and impact accelerate.

UIC's biomedical engineering program established its footing in the mid-1960s, placing it among the nation's earliest. In 2025, the department celebrated its 60-year milestone, acknowledging sustained growth since 1965. Now known as the Richard and Loan Hill Department of Biomedical Engineering, it spans both the College of Engineering and the College of Medicine and is structurally designed to enable interdisciplinary discovery. Under the leadership of Thomas J. Royston, the department has expanded its faculty, external funding and global reach, while strengthening its translational and entrepreneurial focus. At the same time, the College of Engineering, led by Dean Lola Eniola-Adefeso — a chemical and biomedical engineer recognized internationally for her pioneering work in nanotechnology and particle transport — has reinforced the department's mission to translate breakthrough materials research into real-world healthcare solutions. Together, these leaders have positioned UIC as a national model for biomaterials innovation grounded in cross-disciplinary teamwork and scientific rigor.

Over the decades, UIC's biomaterials efforts have matured around several enduring themes: designing implant interfaces that last and integrate with tissue, engineering polymer systems for both health and sustainability, developing bionanomaterials that communicate with living cells and advancing regenerative biomaterials designed to heal rather than simply repair. The department's proximity to Chicago's hospitals and health-science centers ensures that every discovery remains connected to clinical applications.

In recent years, UIC's biomaterials community has gained distinction for pioneering how biology and materials interact in real time. My research has focused on pushing the boundaries of what can be seen at the atomic scale. I have led pioneering work integrating in situ liquid-cell transmission electron microscopy (TEM) and electron energy-loss spectroscopy (EELS) of biomaterials and living systems, a capability that was once thought impossible, as earlier high-resolution microscopy of biomaterials was limited to cryopreserved or fixed specimens (Figure 1). My goal has been to uncover first-principles mechanisms in nanomedicine and biomineralization that remain invisible to static methods. Through this work, we have revealed new pathways of protein-driven mineral formation — from ferritin and insulin secretions to cholesterol and kidney-stone precursors — fundamentally reshaping our understanding of how minerals emerge in both healthy and pathological tissues.

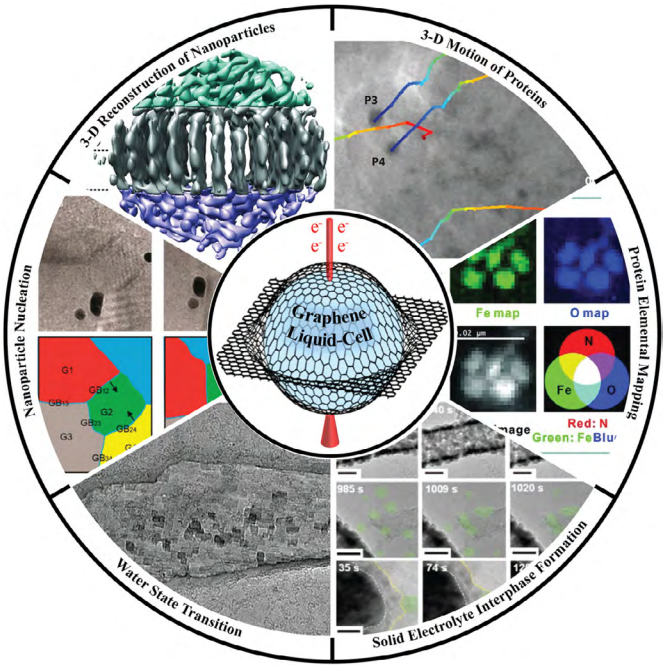


Figure 1. A graphene liquid-cell transmission electron microscope captures nanoscale interactions between materials and living systems in real time, revealing how biomaterials grow, transform and heal. ***See page 20 for references related to this figure.***

Our studies on bionanomaterials have shown how specific two-dimensional systems can physically disable antibiotic-resistant bacteria without the use of chemical agents, opening a path toward drug-free antimicrobial coatings for implants and wound care. Parallel investigations into polymer biodegradation and fiber network miscibility explore sustainable nonwovens and medical fibers where nanoscale chemistry meets macroscopic performance. These directions bridge deep physical science with public health and environmental responsibility.

Supported by the National Science Foundation, including earning a CAREER Award, this body of work has produced more than 200 peer-reviewed publications, books and chapters, and has trained a new generation of researchers who view biomaterials as active participants in biology rather than passive scaffolds. More than 30 graduate students and numerous undergraduates have completed research under my mentorship, many continuing into academic, industrial and clinical careers that extend UIC's influence worldwide.

From Atoms to Healing: The Evolution of Biomaterials at the University of Illinois Chicago

Collaboration and mentorship are central to UIC's ethos. The department thrives on exchange across disciplines, hosting visiting scholars and international fellows who contribute to projects ranging from advanced microscopy to sustainable polymer design. Through initiatives supported by the Italian Ministry of Foreign Affairs and collaborations throughout Europe, UIC has become a recognized bridge between American engineering and global biomedical innovation.

Beyond the laboratory, I have worked to strengthen the international biomaterials community through sustained leadership and service. For more than a decade, I have organized and chaired symposia at the World Biomaterials Congress, the Society For Biomaterials, and the Minerals, Metals & Materials Society (TMS), creating forums that unite academic researchers, industry leaders and clinicians. Through officer and editorial roles across professional societies, I have helped define emerging directions in nanoscale and translational biomaterials research and raised the visibility of young investigators worldwide.

Looking ahead, biomaterials research at UIC is entering a transformative phase. Artificial intelligence and guided materials design, coupled with in situ validation, promise to accelerate discovery cycles. Stimuli-responsive and electroceutical biomaterials will introduce new modes of therapeutic modulation, while next-generation sustainable polymers will align human health with environmental responsibility. With its dual-college structure, deep integration with medical sciences and vibrant culture of collaboration, UIC's biomedical engineering program is uniquely positioned to lead these frontiers.

From the atomic scale to the patient bedside, UIC continues to exemplify how engineering and medicine converge, not only to treat disease but to redefine healing in the nanoscale age.

References for Figure 1

The application of GLC–TEM in areas such as materials science, life sciences, electrochemistry, and environmental sciences. 3D reconstruction of nanoparticles: Platinum nanoparticle assembly and transient morphology in solution: *Reproduced with permission. Copyright 2015, AAAS.* 3D Motion of Proteins: TEM observation of gold-conjugated DNA molecules in water: *Reproduced with permission. Copyright 2013, American Chemical Society.* Protein elemental mapping: EELS maps of oxygen, iron, and nitrogen of ferritin suspension in GLC: *Reproduced with permission. Copyright 2014, Wiley-VCH.* Solid–electrolyte interphase formation: SEI layer formation in Li-ion batteries: *Reproduced with permission. Copyright 2016, Elsevier.* Water state transition: Observation of water crystal formation upon entrapment in capillaries: *Reproduced with permission. Copyright 2015, Nature Publishing Group.* Nanoparticle nucleation: Nucleation, precipitation, and grain boundary formation of thenardite in aqueous phase: ***Reproduced with permission. Copyright 2016, American Chemical Society.***

Society For Biomaterials

SFB National Student Section Officer Positions – Call for Nominations

The Society For Biomaterials will be accepting nominations for volunteers to run for the following 2026–2027 officer roles within the SFB National Student Section: President-Elect, Secretary/Treasurer-Elect, and By-Laws Chair. As student officers, elected members gain hands-on experience planning student-focused events, interacting closely with industry members and engaging with the Society's leadership and Board, making these roles a valuable professional development opportunity.

No experience is needed, and you do not need to be a member of a current student chapter to serve in these positions, but your SFB student membership must be current (paid through December 31, 2026). All office positions are held for a one-year term, with the exception of President-Elect and Secretary/Treasurer-Elect, whose terms are then followed by a one-year term as President and Secretary/Treasurer.

Duties of Student Section officers are available upon request from info@biomaterials.org.

Deadline for nominations: April 1, 2026

For more information, please contact SFB Headquarters at info@biomaterials.org.

Engineered Models of Human Disease

By Donghui Zhu, Department of Biomedical Engineering, Stony Brook University

Engineered models of human disease use human-derived cells, tissues or bioengineered platforms such as organoids, organs-on-chips or stem-cell–derived constructs to recreate aspects of human physiology and pathology. Their main advantage over animal models is greater human relevance: Built from human cells, they capture disease pathways, drug responses and molecular mechanisms often poorly represented in animals. They also allow precise control over genetics, microenvironmental factors and chemical or mechanical cues, making them powerful for mechanistic studies and drug screening. Another strength is the ability to create patient-specific models for exploring personalized therapies. In addition, they reduce reliance on animal testing and support ethical goals of minimizing animal use.

Yet, engineered models also face important limitations. They usually capture only part of an organ or system and cannot yet reproduce the complexity of whole-body physiology, such as immune interactions, endocrine signaling or multi-organ crosstalk. Many resemble immature or fetal stages, limiting studies of aging or late-onset disease. Incorporating functional immune components remains difficult, restricting use for infections or immunotherapies. Practically, these models often require advanced technology, expertise and costs beyond standard animal studies.

At Stony Brook University, we are exploring and establishing organ-on-chip and organoid models for various diseases, such as neurological diseases and skeletal disorders. Cerebral organoids (COs) are self-organizing 3D cell cultures generated from human pluripotent stem cells (hPSCs) that recapitulate the development, physiology and functional activity of the human brain alongside the complex organization of natural tissue architecture.[1] As in vitro models, COs are able to help probe the pathogenesis of neurological diseases or the potential of new pharmacological interventions. COs can offer greater human relevance than animal models, but they have limitations, such as limited maturation and lack of sophisticated vasculature. COs transplanted in vivo have effectively addressed these limitations as they become vascularized by the host tissue and subsequently exhibit expedited maturation compared to the in vitro culture counterparts.[2] Further organoid transplantation studies have demonstrated that organoids transplanted in settings of localized brain injury (e.g., stroke) are able to lead to functional recovery as a result of the functional integration of the organoids with host tissue. Our group is investigating these therapeutic capabilities of organoids by assessing additional mechanisms of therapeutic effects and studying them as transplants in settings of neurodegenerative diseases, such as Alzheimer's disease (AD). For example, stem-cell therapies have shown great promise as a treatment for AD, and a key mechanism by which stem cells promote tissue regeneration and recovery of cognitive function in AD is through their secretome, the collection of factors they release. Notably, the role of the CO secretome in promoting neuroregeneration has not been studied. Our data suggest CO transplantation not only alters the host brain microenvironment but also holds promise as a novel therapeutic strategy for Alzheimer's disease and may elucidate novel mechanisms through which COs promote neuroregeneration (Figures 1a and 1b).

Additionally, our group is developing a novel bone organoid platform using mesenchymal stem cells (MSCs). Bone organoids are a relatively new research field, and since there are varying phases and anatomical forms of bone tissue, a range of strategies are being explored to recreate its structure and function.[3] We are particularly interested in modeling woven bone, a precursor to lamellar bone that develops during embryogenesis and the early stages of fracture healing. Woven bone naturally develops from clusters of MSCs, known as ossification centers.[4] To mirror this process, we generate MSC spheroids embedded in Matrigel (Figure 1c). As these spheroids extend outward, they unify to form a spherical organoid structure. Afterward, we continue to culture them in osteogenic medium to encourage differentiation into osteoblasts, the primary cell phenotype for new bone formation. This design captures woven bone's key feature of high osteoblast populations and rapid matrix deposition (Figure 1d).

Developing a woven bone–mimicking organoid has several advantages as it can serve as a platform to study skeletal development, disease progression and evaluate new therapeutics for early bone regeneration. We are also examining the organoids as potential grafts for addressing critical-size defects which are unable to heal without an implant. Currently, the gold standard treatment for these defects is autografting, which is limited by donor site morbidity and tissue availability. Organoids that mimic woven bone may provide an alternative material capable of integrating with host tissue and supporting regeneration. Our findings suggest that these organoids display developmental features similar to native woven bone and may positively influence repair in critical-size defect environments. This work highlights their promise as both research tools and potential therapeutic constructs.

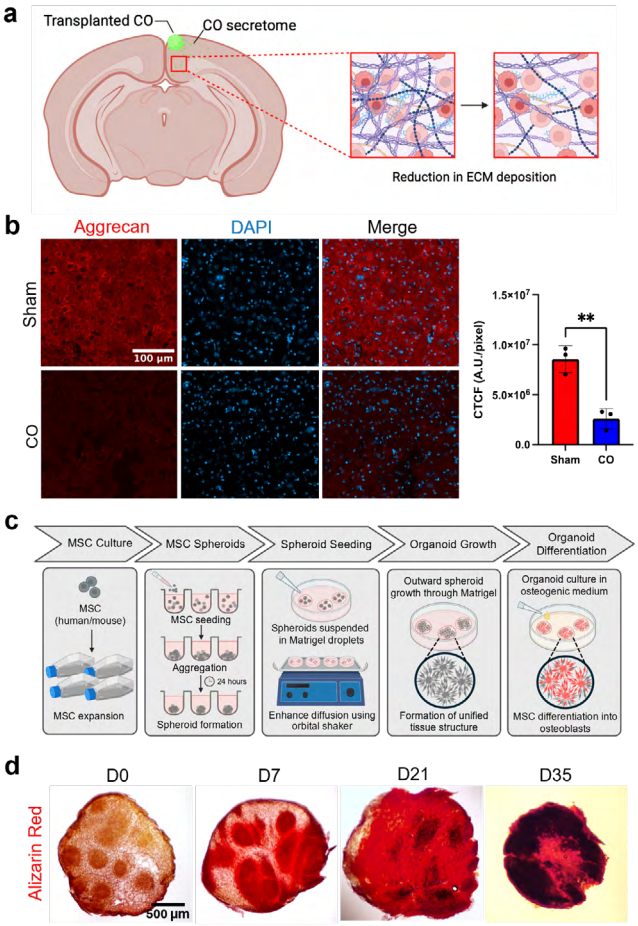


*Figure 1. Methods and characterization of brain and bone organoid development. a. Schematic depicting the effects of the CO secretome on the host tissue extracellular matrix (ECM) as a result of CO transplantation in an AD mouse model. b. Immunofluorescence of the predominant proteoglycan of the brain ECM aggrecan in host tissue adjacent to site of surgery in sham and CO transplanted 5xFAD mice at one month post transplantation. Quantification of aggrecan fluorescence intensity. *p<0.05, **p<0.01. c. Schematic depicting woven bone-mimicking organoid formation using MSC spheroids and culture in osteogenic medium after formation of unified organoid structure. d. Alizarin red staining through woven bone-mimicking organoid culture in osteogenic medium, displaying rapid calcification over 35 days post differentiation.*

REFERENCES

1. Lancaster, M. A. *et al.* Cerebral organoids model human brain development and microcephaly. *Nature 501,* 373-379 (2013).
2. Mansour, A. A. *et al.* An in vivo model of functional and vascularized human brain organoids. *Nat Biotechnol 36,* 432-441 (2018).
3. Chen, S., Chen, X., Geng, Z. & Su, J. The horizon of bone organoid: A perspective on construction and application. *Bioact Mater 18,* 15-25 (2022).
4. Shapiro, F. & Wu, J. Y. Woven bone overview: structural classification based on its integral role in developmental, repair and pathological bone formation throughout vertebrate groups. *Eur Cell Mater 38,* 137-167 (2019).

ATTENTION MEMBERS!

WE WOULD LOVE TO HEAR FROM YOU.

IF YOU HAVE NEWS TO SHARE WITH FORUM READERS, LET US KNOW. EMAIL YOUR NEWS AND ANY PHOTOS TO INFO@BIOMATERIALS.ORG AND YOU COULD BE FEATURED IN THE NEXT ISSUE.

Member News

By Guillermo Antonio Ameer, ScD



Frederick Schoen, Harvard Medical School and Brigham and Women's Hospital

After a fulfilling 45-year career as cardiovascular pathologist at Brigham and Women's Hospital and Harvard Medical School, **Frederick J. Schoen**, MD, PhD, recently stepped down to the status of Professor of Pathology and Health Sciences and Technology, Emeritus, at Harvard Medical School. He will retain an affiliation with the Department of Pathology at the hospital, with some teaching and mentoring responsibilities, and consult with medical device developers. Schoen leaves a strong imprint on the biomaterials field, with broad basic and clinical research on several aspects of medical device pathology, especially heart valves. He has maintained a strong relationship with SFB throughout his career, having served in multiple leadership roles, including president. He received SFB's Founders Award, the Clemson Award for Applied Research, the Technology and Development Award and the Acta Biomaterialia Gold Medal. Schoen was a founding co-editor (with Buddy Ratner, Allan Hoffman and Jack Lemons) of the first three editions of *Biomaterials Science: An Introduction to Materials in Medicine*. Schoen continues to live in Brookline, Massachusetts, with his wife of 50 years, Angie Warner, and spends active winters kayaking and hiking in Bonita Springs, Florida.



Chelsea Magin, Associate Professor, Department of Bioengineering, University of Colorado, Denver | Anschutz

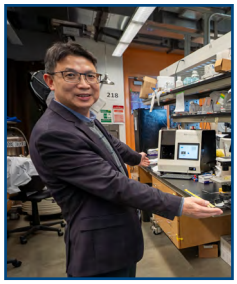
Dr. Chelsea Magin is excited to announce the launch of the Quality Assurance and Regulatory Affairs (QA/RA) Certificate Program at the University of Colorado, Denver | Anschutz developed in partnership with the Colorado BioScience Institute and more than 40 industry representatives. This new program is designed to provide accessible, workforce-relevant training in regulatory science, quality systems and compliance.

The QA/RA Program is offered in an online, fully asynchronous format, making it accessible to participants across the country and compatible with full-time professional schedules. Scholarships will be available for the Fall 2026 cohort. The program encourages interested students, trainees and professionals nationwide to apply. Candidates can apply to the program here.



Hossein Ravanbakhsh, Assistant Professor of Biomedical Engineering, University of Akron

Hossein Ravanbakhsh, assistant professor of biomedical engineering at the University of Akron, has been awarded a $200,000 grant from the American Heart Association to support research on tissue-engineered cardiovascular constructs. The award represents his first external research grant since joining the University of Akron and reflects an early milestone in establishing his independent research program.



Shaochen Chen, Zable Endowed Chair Professor, Department of Chemical and Nano Engineering, University of California San Diego

Shaochen Chen is leading a team from the University of California San Diego in bioprinting a human liver, with as much as $25.8 million in funding from the Advanced Research Projects Agency for Health (ARPA-H).

Member News

Akhilesh Gaharwar, a professor in the Department of Biomedical Engineering at Texas A&M University, contributed to a recent article identifying a promising technique that may help combat aging and degenerative diseases by increasing the number of mitochondria (the energy-producing organelles in cells). In this study, published in *PNAS*, scientists used microscopic molybdenum disulfide "nanoflowers" to stimulate donor stem cells to produce nearly twice as many mitochondria as usual and share them with nearby damaged cells, rejuvenating their function in vitro. Although still in early stages, the approach could open the door to new regenerative medicine therapies for conditions tied to mitochondrial decline.

The Washington Post and *Smithsonian Magazine* have reported on the study's findings.



Nicholas Peppas, Director, Institute of Biomaterials, Drug Delivery and Regenerative Medicine, Depts of Biomedical and Chemical Engineering, The University of Texas at Austin

Nicholas Peppas has been elected IEEE Fellow, the highest-level membership grade in the Institute of Electrical and Electronics Engineers (IEEE). The prestigious title is awarded through nomination by peers for extraordinary accomplishments in any field of electrical engineering, electronics and computing, recognizing significant contributions to the profession and society. Fewer than 0.1 percent of IEEE members achieve this distinction annually.

Peppas was also recently honored with a 2025 TERMIS-AM Lifetime Achievement Award. The Tissue Engineering and Regenerative Medicine International Society (TERMIS) established this award to recognize an individual who has contributed immensely to the fields of tissue engineering and regenerative medicine. Each recipient's work has impacted the field and helped lay the foundation for advancement. TERMIS recognized Peppas for his foundational contributions to drug delivery and biomaterials, including the well-known "Peppas equation." The achievement also highlighted Peppas's significant advancement of controlled release systems, smart biomaterials and oral drug delivery for proteins.

UPCOMING CONFERENCE NEWS

The Gordon Research Seminar (GRS) on Signal Transduction by Engineered Extracellular Matrices will feature abstracts from graduate students and postdoctoral researchers interested in presenting unpublished, cutting-edge research.

Dates: May 30–31, 2026
Location: Les Diablerets, Switzerland

The GRS will immediately precede the associated Gordon Research Conference (GRC), which features an outstanding lineup of leading faculty speakers. Together, the GRS and GRC provide an exceptional opportunity for trainees to present their work, engage in in-depth scientific discussion and network with peers and leaders in biomaterials, engineered extracellular matrices, organoids, bioprinting, tissue engineering and disease modeling.

Details on the conference are available here.

Industry News

THE SIGNIFICANCE OF BMPC SIG

The Biomaterials & Medical Products Commercialization (BMPC) Special Interest Group (SIG) reaffirms its mission to advance the successful translation of biomaterials-based innovations into clinically adopted, economically viable and reimbursed medical products. As the biomaterials field continues to generate transformative technologies, the challenges associated with commercialization, regulatory navigation, reimbursement alignment, valuation and market adoption have become increasingly complex. The BMPC SIG was established to address these challenges through structured dialogue, education and cross-sector collaboration.

MISSION AND PURPOSE

The BMPC SIG exists to provide an open and collaborative forum where members of the Society for Biomaterials, ranging from students and early-career researchers to seasoned industry and academic professionals, can exchange ideas, insights and real-world experiences related to commercializing biomaterials-dependent medical products.

Through interactive discussions, educational programming and expert panels, the SIG aims to address real-world commercialization challenges, including regulatory pathways, intellectual property strategy, litigation risk, reimbursement planning, manufacturing scale-up and distribution within modern hospital purchasing and supply-chain systems. The SIG welcomes participants from academia, industry, start-ups, clinical practice and policy environments.

STRENGTHENING TRANSLATION FROM INNOVATION TO ADOPTION

A central objective of the BMPC SIG is to strengthen the transition from laboratory innovation to routine clinical adoption. While biomaterials research has advanced rapidly, translation is often hindered by insufficient alignment between scientific evidence, clinical decision-making and reimbursement frameworks.

The SIG promotes rigorous, science-based commercial valuation of biomaterials by translating biological and biochemical principles into clinically meaningful and economically credible evidence.

Education and engagement with clinicians and hospital value analysis teams are core to this mission, enabling multidisciplinary stakeholders to jointly advocate for appropriate valuation of biomaterial-based medical devices.

LONG-TERM VISION

Over the next three to five years, the BMPC SIG aims to become a trusted authority in the commercialization of biomaterials-based medical products. The long-term vision includes:

- Improving reimbursement success and coverage consistency for biomaterials-based devices
- Elevating the role of biomaterials scientists in regulatory and payer-facing discussions
- Strengthening collaboration across scientific, clinical, regulatory and commercial stakeholders
- Developing shared language and frameworks that bridge science, medicine and health economics

By achieving these objectives, the SIG seeks to enhance both the clinical impact of biomaterials innovation and the broader standing of the biomaterials community within healthcare decision-making systems.

SCOPE AND STRATEGIC RATIONALE

A persistent barrier to successful medical device commercialization lies in limited understanding of market valuation, supply-chain dynamics and reimbursement mechanisms, particularly within Medicare and government payer systems. Historically, reimbursement and coverage decisions have relied heavily on clinical input, with minimal direct involvement from biomaterials scientists, who possess deep insight into material behavior, biological interaction and long-term performance. This imbalance may lead to the mispricing and misclassifying of devices, which can restrict clinical access, discourage innovation and undervalue scientifically advanced technologies. The BMPC SIG asserts that biomaterials scientists must play a more prominent role alongside clinicians in shaping regulatory and reimbursement policy to ensure fair and accurate valuation.

To address this gap, the SIG will convene open panel discussions and structured forums aimed at identifying and analyzing key challenges developers of biomaterials-based medical devices face. A particular emphasis will be improving communication of advanced scientific concepts to payers such as the Centers for Medicare & Medicaid Services (CMS), which often employs decision-making processes that are operational rather than academic.

MULTI-STAKEHOLDER ENGAGEMENT AND POLICY DIALOGUE

A key strategic initiative of the BMPC SIG is to form a multi-stakeholder dialogue platform that brings together representatives from regulatory agencies, payer organizations,

scientific societies and clinical groups. The long-term goal is to establish panels that include voices from the U.S. Food and Drug Administration; CMS; scientific organizations, such as SFB; and clinical societies operating under the American Medical Association.

These panels will work toward developing more appropriate and scientifically informed reimbursement frameworks for medical devices regulated by the U.S. Department of Health and Human Services. By integrating clinical evidence with cutting-edge biomaterials science, the SIG seeks to improve the quality, transparency and consistency of reimbursement decisions.

EDUCATIONAL FOCUS AREAS

Education is a cornerstone of the BMPC SIG's strategy. Key focus areas include:

- Fundamentals of biomaterials commercialization
- Regulatory and reimbursement pathways for medical devices
- Structures and decision-making processes for hospital value analysis committees
- Principles of health economics and value demonstration
- Cross-functional collaboration between scientists, clinicians and commercial teams

Our educational efforts are designed to equip members with practical knowledge and decision-making skills that extend beyond the laboratory and into real-world healthcare environments.

ENGAGEMENT AND COLLABORATION

The BMPC SIG will actively engage a broad range of stakeholders, including clinicians, hospital administrators, payers, industry partners, start-ups and academic technology transfer offices. In parallel, the SIG will collaborate with related SIGs within SFB and with external professional organizations to amplify impact and avoid duplication of effort.

Through sustained engagement, structured education and policy-oriented dialogue, the BMPC SIG aims to foster a more integrated, scientifically grounded approach to commercializing medical products, one that ensures biomaterials innovation achieves its full clinical and societal potential.

If you have any questions,

require any information or have suggestions for improved services, please feel free to contact the Society's Headquarters office:

SOCIETY FOR BIOMATERIALS

1120 Route 73, Suite 200 • Mount Laurel, NJ 08054
Phone: 856-439-0826 • Fax: 856-439-0525
Email: info@biomaterials.org

Government News and Policy Updates

By Dawn Beraud, PhD

NIH UPDATES FRAMEWORK FOR INTERNATIONAL RESEARCH COLLABORATIONS

The National Institutes of Health (NIH) has announced changes to the structure of funding for international research collaborations. Under the new guidance (NOT-OD-25-104), applications requesting funds for foreign components can no longer use traditional subaward or consortium arrangements. This change aims to improve oversight and reporting for projects involving international collaborators.

NIH has introduced new activity codes, PF5 for grants and UF5 for cooperative agreements, requiring a multicomponent application structure. Each submission must include an overall project, a research project and at least one international project component. Foreign collaborators will receive separate, linked awards, while the primary applicant must be based in the United States.

On January 20, 2026, NIH released its Collaborative International Research Project (Parent Announcement), which outlines these requirements. This funding opportunity is designed for collaborations between a domestic prime organization and foreign institutions. Each international subproject must align with the scientific mission of participating NIH institutes, centers or offices and will be evaluated for its unique scientific contribution, including access to resources, populations or expertise not readily available in the U.S., and its relevance to advancing U.S. health research. Projects for the purpose of foreign consultants, equipment purchases or other collaborations without NIH-funded foreign components are not eligible under this program.

If an applicant is selected for funding, NIH will issue separate awards to the domestic and foreign organizations. Each recipient is responsible for its own compliance and reporting. Further guidance, FAQs and training materials are expected to be released in the coming months.

SBIR/STTR REAUTHORIZATION

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs officially expired on September 30, 2025, after Congress failed to pass reauthorization before the fiscal year deadline. As of January 2026, this lapse remains in effect, halting new solicitations and awards at key agencies, including NIH and the National Science Foundation (NSF). Even active Phase I awardees face challenges in transitioning to Phase II or accessing noncompeting continuation funds, as agencies currently lack the legal authority to obligate program-specific funding. Although some Phase III activities may continue using non-SBIR resources, the primary pipeline for early-stage commercialization has largely paused, creating a capital gap for deep-tech and biotech innovators. Legislative proposals to address the lapse are currently divided between the SBIR/STTR Reauthorization Act, which would provide a permanent extension, and the reform-focused INNOVATE Act, which would impose stricter lifetime caps on awardees to curb so-called "SBIR mills." Congress continues to debate these proposals, and there is some promise that the bills could advance to reauthorize these important programs.

Society For Biomaterials

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