

SIMB News

**A Scientific
Breakthrough for
Global Health:**

**Dr. Moupali Das
on the Innovation
Journey of
Lenacapavir**



Journal of Industrial Microbiology and Biotechnology

A journal for the industrial
microbiology and biotechnology
communities

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Join Yi Tang for an informal Q&A
and networking opportunity,
open to all



Monday, 3 August



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Featured SIMB Corporate Member Profiles

SIMB Corporate Members represent the core of our community and provide key support, research, and applications in industrial microbiology and biotechnology. Check out the latest announcements or company introductions to get the latest information from SIMB Corporate Members.

DCI, Inc.

DCI, Inc. has strengthened its Life Science division with the additions of Joe Abitz and Brad Stasny as National Account Managers, reinforcing the company's commitment to long-term customer partnerships and end-to-end process system solutions. With over 15 years of capital equipment and process solutions sales experience, Abitz brings technical expertise and consultative insight. Stasny adds more than 20 years of bioprocess and capital equipment sales experience, including system installation and validation know-how. Their combined expertise enhances DCI's ability to support complex, compliant projects across the life science sector.



Kerry

Kerry delivers advanced fermentation media solutions built on decades of process expertise and a unique dual strength in yeast extracts and plant peptones. Designed to optimize microbial growth, vitality, and functional performance, Kerry ingredients can drive improved yields and consistency across markets, including but not limited to, probiotics, starter cultures, bioingredients, and biobased chemicals. With an integrated portfolio that includes enzymes and tailored fermentation supplements, and a deeply collaborative approach, Kerry serves as a trusted partner to industrial bioprocessors seeking to solve complex challenges with a reliable provider.



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2024–2027 SIMB Strategic Plan

1

Scientific Excellence and Leadership

SIMB will identify the technical needs of our community to advance the industry and facilitate solutions

- Continue to foster collaboration and knowledge sharing between academic, industrial, and government stakeholders
- Offer educational opportunities and programs that focus on current and future trends with input and support from industry partners
- Elevate the Journal of Industrial Microbiology and Biotechnology to be a key information source for the SIMB community
- Recognize and promote the current leaders, future leaders, and scientific excellence of our community

2

Communication and Outreach

SIMB will connect and advocate for our community to internal and external stakeholders

- Increase capacity and opportunities for the SIMB community to advocate for industrial microbiology and biotechnology, the Society and the field's impact
- Partner with organizations to introduce SIMB to new audiences
- Provide tools to help the community develop and promote the industrial microbiology and biotechnology workforce
- Conduct, support, and/or amplify information gathering activities relevant to the SIMB community

3

Inclusion and Responsibility

SIMB will promote and maintain a responsible community that is welcoming to all

- Provide activities and communication that ensure a sense of belonging amongst members and the community
- Enable our community to work toward relevant sustainable development goals for a positive global impact
- Maintain an inclusive community supported by an enforceable Code of Conduct
- Foster a governance structure that embodies transparency and accountability

4

Value and Function

SIMB will enhance membership value and maintain its financial and operational viability

- Provide products and services to meet the needs of the SIMB individual membership
- Understand and answer the needs of SIMB corporate members
- Maintain product and service costs at sustainable levels while expanding or enhancing services to membership
- Strengthen stable, long-term revenue streams that work to support the Society's mission and vision



Letter from the Editor-in-Chief

This issue of SIMB News brings together a remarkable group of leaders whose work spans public health, biodefense, microbiology, education, and emerging technology. Their collective insights remind us that progress in our field is never the result of one discipline or one perspective—it is the product of experience, collaboration, and a shared commitment to strengthening the systems that support global resilience. Across their stories, we see how frontline emergency response informs clearer approaches to preparedness, how advances in artificial intelligence and biotechnology are reshaping national security and biomanufacturing, how decades of teaching and mentorship continue to shape the next generation, and how global health leadership depends as much on courage and community engagement as it does on technical expertise.

The voices featured in this issue—including John Knox, Bharat Patel, Dr. Elisabeth Elder, Dr. Nikki Romanik, Dr. Palani Palaniappan, Dr. Sarah Wallace, Dr. Nidhi Rawatt, Vishal Mehta, and Joe Buccina—offer a broad view of the challenges and opportunities shaping microbial sciences today. Their experiences highlight the importance of adaptability, scientific rigor, and values-driven leadership at a time when the pace of change across our field continues to accelerate.

This issue also marks an important expansion of our commitment to students and early-career scientists. We are introducing a new section dedicated to scholarships and postdoctoral fellowships, providing a curated set of opportunities across academia, government, and industry to help emerging researchers navigate the next steps in their scientific development. Alongside it, our new SIMB Student & Early Career Outreach section offers internships, research experiences, career resources, and practical insights from professionals across sectors. These additions reflect SIMB's ongoing effort to strengthen pathways into the microbial sciences and support the next generation of biomanufacturing leaders.

As you explore this issue, I hope you find inspiration in the work, clarity in the perspectives shared, and renewed appreciation for the community that makes SIMB such a vital home for scientists, educators, innovators, and students. Thank you for your continued engagement and for the contributions you make every day to advance our field.

Warm regards,

Kris Rath

Editor-in-Chief, *SIMB News*

Opportunities, Insights, and Connections for the Next Generation of Biomanufacturing Leaders

The Society for Industrial Microbiology and Biotechnology (SIMB) is committed to supporting students, postdoctoral researchers, and early-career scientists as they explore career pathways and build professional networks in industrial microbiology, biotechnology, and biomanufacturing. This outreach section highlights practical opportunities, career resources, and insights from professionals across academia, industry, and government.

Internships & Research Experiences

Hands-on research and training opportunities are critical steppingstones toward careers in science, engineering, and biomanufacturing. Some resources to consider are:

Resource	Category	Best for	Source
SIMB Career Center	Society job/internship board	Industry internships + early-career roles specific to industrial microbiology/biotech	https://careers.simbhq.org/
SIMB Career Information / Placement Services	Society career support	Resume review, interview prep, career guidance	https://www.simbhq.org/career-information/
DOE Science Undergraduate Laboratory Internships (SULI)	National lab research internship (paid)	Undergrad/Recent grad research at DOE labs; biosciences & sustainability projects	https://science.osti.gov/wdts/suli
DOE Community College Internships (CCI)	National lab internship (paid; community college)	Community college students seeking applied lab experience at DOE labs	https://science.osti.gov/wdts/cci
ORISE Internships & Fellowships (Zintellect search)	Federal agency internships/fellowships aggregator	Paid opportunities across DOE/NIH/FDA/USDA/DoD; research & regulatory science	https://orise.orau.gov/internships-fellowships/index.html

continued >>

Research	Category	Best for	Source
NSF Research Experiences for Undergraduates (REU) + REU Directory	Academic summer research (paid)	Undergrad research across NSF-funded sites; stipends often include housing/travel	https://www.nsf.gov/funding/initiatives/reu
Pathways To Science – Microbiology internships directory	Opportunity directory	Finding internships/REUs/summer programs by discipline (microbiology)	https://www.pathwaystoscience.org/discipline.aspx?sort=MED-Microbio_Microbiology
Pharma Pay Watch – Pharma & Biotech internships	Industry internship aggregator	Internships/co-ops in pharma/biotech incl. process development & data science	https://pharmapaywatch.com/internships/
Bristol Myers Squibb (BMS) Research Internships	Company early-career portal	Structured 2026 internships & co-ops in R&D at a major biopharma	https://careers.bms.com/internships-co-ops/research-internships/
LinkedIn – Summer internships search (Biology/Biotech)	General job board	Broad search across companies & locations; good for networking with recruiters	https://www.linkedin.com/jobs/summer-2026-internship-biology-jobs
Indeed – Biotech internships search	General job board	High-volume listings; useful for regional searches	https://www.indeed.com/q-biotech-internships-2026-jobs.html

Fellowship Opportunities

Below is a list of active fellowship opportunities (2025–2027 cycles) that are highly relevant to members of SIMB. These fellowships support industrial microbiology, biotechnology, bioprocessing, sustainability, policy, and translational research, and span graduate, postdoctoral, and midcareer stages.

continued >>

Fellowship / Program	Fellowship / Program
NSF PRFB (Postdoctoral Research Fellowships in Biology)	Current solicitation emphasizes AI + biology for biotech innovation, which often maps strongly to engineering biology/metabolic engineering; can support other areas depending on project. [nsf.gov], [nsf.gov]
NIH NRSA F32 (Postdoctoral Individual Fellowship)	Broad biomedical scope; best fit when industrial micro intersects health (e.g., microbial therapeutics, biologics production, enzyme engineering with health relevance). [grants.nih.gov], [grants.nih.gov]
DOE SCGSR (Graduate Student Research at DOE National Labs)	Strong fit for biosciences (non-medical), bioenergy, environment/sustainability, and systems/engineering work at national labs. [science.osti.gov], [energy.gov]
USDA NIFA AFRI Predoctoral/Postdoctoral Fellowships	Especially relevant for food/ag biotech, applied microbiology, and bioproducts; strong fit when fermentation/production is central. [montana.edu], [federalgrants.com]
Novo Nordisk Foundation: Industrial & Environmental Biotechnology Postdoctoral Fellowships	One of the best-aligned programs for SIMB broadly: explicitly funds industrial & environmental biotechnology with scale-up/sustainability outlook. [novonordiskfonden.dk]
Fulbright Postdoctoral Awards (U.S. Scholar Program)	Topic-agnostic; alignment depends on host/lab and proposal. Useful for global collaboration in any SIMB focus area. [fulbrights...holars.org]
TUM Global Postdoc Fellowship (Technical University of Munich)	All topics eligible; strong potential alignment via host lab (many TUM groups in bioprocessing, synbio, enzyme engineering). [tum.de]
AAAS Science & Technology Policy Fellowships (STPF)	Not research-focused; best for members interested in biotech policy, bioeconomy, regulation, funding, and national strategy that can touch multiple SIMB areas. [aaas.org], [AAAS S&T Fellowship]
ASM Future Leaders Mentorship Fellowship (FLMF)	Career/leadership mentoring across microbial sciences; alignment depends on fellow's technical area; broadly applicable. [asm.org], [mongoscholar.com]

Get Involved

Know of an internship, job opening, or event that would benefit students and early-career scientists? Interested in contributing a career spotlight or mentoring perspective? Contact *SIMB News* to share opportunities or submit ideas for future issues.

Regulations Raises Significant Concerns for the Research Enterprise

On May 29, 2026, the Office of Management and Budget released a proposed rule that would substantially revise federal financial assistance regulations, marking the most consequential update to the grants framework in several decades. For the scientific community—including microbiologists, bioprocess engineers, biotechnologists, and the broader SIMB membership—the proposal carries far reaching implications for how research is funded, managed, communicated, and evaluated across the United States.

At its core, the rule would introduce a fundamental shift in the federal government’s approach to grant selection. Under the proposed framework, all programs must demonstrate alignment with administration defined “national interest” priorities, and every discretionary award would require approval from a senior political appointee. While the provision is formally titled “Federal Agency Review of Merit of Proposals,” it would, in practice, allow political leadership to supersede independent peer review and, in some cases, exempt competitions from public notice. Such changes raise concerns about transparency, predictability, and the preservation of scientific merit as the primary basis for award decisions.

The proposal also expands agencies’ authority to modify or terminate awards after they have been issued. Grants could be suspended or ended if they are deemed inconsistent with evolving agency priorities or the “national interest,” a term left undefined in the rule. This codification of broad termination authority formalizes the stop work orders and abrupt disruptions that many researchers have encountered over the past year.

Several provisions introduce content based restrictions on the types of research that may be supported with federal funds. Projects grounded in disparate impact frameworks, activities related to diversity, equity, and inclusion, and work associated with “gender ideology” would become unallowable. These categories are broadly framed, creating uncertainty for investigators working in public health, environmental microbiology, epidemiology, and social behavioral science.

International collaboration—an essential component of microbial ecology, bioprocessing, infectious disease surveillance, and global biotechnology—would also face new constraints. Federal funds could not be used for partnerships with researchers or institutions in certain foreign countries, potentially limiting participation in multinational consortia and long standing scientific networks.

The rule further proposes substantial increases in compliance obligations. Fixed amount subawards would be eliminated, and all subrecipients would be required to track and report expenditures in detail. For smaller institutions, field stations, and collaborating laboratories, these requirements could introduce significant administrative burden and delay project execution.

Regulations Raises Significant Concerns for the Research Enterprise

Continued

Additional provisions would restrict how researchers communicate their work. Most advertising and public relations costs would become unallowable, and conference attendance would require explicit prior approval. New prohibitions on “issue advocacy or public messaging” are written broadly, raising questions about their potential impact on science communication, public engagement, and dissemination of federally funded findings.

Perhaps most consequential for academic researchers, the proposal would prohibit the use of federal funds for professional society memberships, journal subscriptions, and publication costs—including open access fees. This stands in direct tension with existing federal open access mandates and would significantly affect early career scientists, who rely on society membership, conference participation, and publication visibility for professional advancement.

Taken together, the proposed changes represent a structural redefinition of the federal research ecosystem. They raise foundational questions about how the scientific community can maintain the principles of independence, transparency, global collaboration, and open dissemination that underpin modern research.

For SIMB members—faculty, postdoctoral researchers, and scientific leaders across academia, industry, and federal laboratories—the coming months will be critical. The public comment period provides an opportunity for scientific societies to articulate the operational, ethical, and scientific implications of the proposed rule and to underscore the importance of a research environment grounded in merit review, stability, and open scientific exchange.

Source: [Federal Register :: Regulation for Federal Financial Assistance](#)



**A Scientific
Breakthrough for
Global Health:**

**Dr. Moupali Das
on the Innovation
Journey of
Lenacapavir**

This innovation stands as a landmark achievement in modern biotech, proving that long-acting, equitable prevention is not just possible but transformative.

Bio:

Dr. Moupali Das, MD, MPH, is a globally recognized infectious diseases (ID)/ Human Immunodeficiency Virus (HIV) physician and public health leader whose career has been defined by her commitment to ending the HIV epidemic. As Vice President of Clinical Development, HIV Prevention and Virology Pediatrics, Head, HIV Prevention at Gilead Sciences, she has leveraged her clinical HIV and ID expertise, clinical trial design and epidemiology skills, and passion for coaching and mentoring to build and lead high-performing cross-functional teams in HIV treatment and prevention. She is accountable for the overall development strategy and the conception, design and execution of HIV prevention clinical trials from Phase 1 through Phase 4. She played a pivotal role in the development, evaluation and global rollout of Lenacapavir, the first and only twice-yearly injectable HIV prevention medication, a breakthrough that has reshaped the landscape of PrEP (pre-exposure prophylaxis, a strategy that uses medication to prevent HIV infection). Her leadership helped guide Lenacapavir from early clinical development through regulatory approvals and global implementation, including rapid access across sub-Saharan Africa. Dr. Das's work is rooted in both scientific rigor and a deep commitment to equity, reflected in her long-standing focus on ensuring historically underrepresented communities are included in clinical research. As she notes, expanding HIV prevention requires "thinking creatively—from the start—about how to include" communities most affected by HIV. Dr. Das also oversees the pediatrics team which is deeply committed to ensuring the development of pediatric formulations for Gilead's transformational virology medications. She is dedicated to innovation in science, health equity and access: ensuring efficient

clinical development and global regulatory approvals to support rapid access to innovative products to help treat, prevent and, where possible, cure viral diseases.

Dr. Das received the 2025 Mani L. Bhaumik Breakthrough of the Year Prize on behalf of Gilead Sciences team members working on Lenacapavir, along with basic scientist Wes Sundquist and global advocate Yvette Raphael, who led the PURPOSE 1 global community advisory and accountability group. Two recent articles about her contributions to the development of Lenacapavir are

["The road to lenacapavir, a breakthrough HIV treatment" \(Science, May 29, 2025\)](#) and ["The Drug That Could Revolutionize the Fight Against HIV" \(The New Yorker, June 24, 2025\)](#)

A physician-scientist trained at Harvard, Columbia, UCSF and UC Berkeley, Dr. Das has authored more than 70 publications and pioneered influential approaches such as community viral load, which informed the U.S. National HIV/AIDS Strategy. A brief profile of her pre-Gilead career is ["Out of India" \(Science, July 13, 2012\)](#)

At Gilead, Dr. Das has led the PURPOSE program and championed innovative, person-centered clinical trial designs that elevate community voices. Her leadership has contributed to securing enough Lenacapavir doses for up to three million people in sub-Saharan Africa over three years, accelerating access on an unprecedented timeline. Today, she continues to blaze a new path for HIV prevention by integrating cutting-edge science including developing the once-yearly formulation of Lenacapavir, compassionate storytelling, and person-centric and community-driven science and implementation.

Education, Early Career, and the Origins of a Dual Lens:

I often describe my career as sitting at the intersection of science and humanity. I studied biochemistry and trained in internal medicine and in infectious diseases/HIV prevention, and epidemiology at Harvard College, Columbia University, UCSF and UC Berkeley, respectively. From very early on, as HIV was the first pandemic I experienced—through both taking care of patients and studying infectious disease epidemiology—I saw how HIV is not just a virus, but a reflection of inequities in our systems. [As one of my mentors, the late Paul Farmer, said](#), infectious diseases track along the fault lines of social inequality. That's especially true for HIV.

Caring for people living with HIV, as well as working on population-level HIV epidemic monitoring tools like community viral load, gave me a dual lens: one grounded in the individual patient experience and one focused on public health impact. That shaped how I think about my work today. I've always been driven not just to advance science, but to ensure that science translates into something meaningful for the communities we serve.

And so, what I would add in follow up to Paul's thesis is that innovation without intention can unintentionally exacerbate existing social disparities. Therefore, it is critical that when we develop new, potentially transformative medicines, we carefully consider how, where, with whom and for whom we are developing the product to ensure that the science translates into something meaningful for those most disproportionately affected by the disease.

Motivation for a Career in HIV Prevention:

My interest in HIV began very early, driven by a

sense of injustice around stigma and exclusion. I remember being deeply affected by [stories like Ryan White's](#) and what they represented about inequity in healthcare. Over time, my motivation has evolved from focusing on developing next-generation HIV treatment regimens to reimagining prevention. Today, it's about ensuring that the current and future prevention tools we are working on are not only scientifically efficacious and safe but also designed to be accessible, acceptable and relevant to the people who need them most, to have the greatest possible impact on trying to end the HIV epidemic.

Engineering a Twice-Yearly Injectable PrEP Option:

With lenacapavir, we started with a unique molecule and asked an important question: could we align pharmacology with how people actually live their lives? The drug's potency and long half-life allowed us to think beyond traditional dosing paradigms. From there, it was a highly integrated effort—linking medicinal chemistry, formulation science, pharmacokinetics and clinical design—to create a regimen that could sustain protective drug levels over six months (or even longer) while remaining practical for use in diverse real-world settings.

Scientific Innovations Behind Lenacapavir:

The HIV capsid is essential to the HIV virus lifecycle. The key innovation is targeting the capsid mechanism, which disrupts HIV viral replication at multiple stages of its lifecycle. This is fundamentally different from prior classes of HIV medications and is actually a novel approach, as it was long thought that the capsid was “undruggable.” Starting with our first-generation lead in 2006, 1500 molecules were screened. The initial plan was to inhibit the assembly of the capsid (a fullerene cone composed of 1500 capsid monomers, which assemble into ~250 capsid hexamer and exactly 12 pentamers).

However, those candidates had challenges. Undaunted, the team switched their focus to the second-generation lead, developing an accelerator of capsid assembly, and screened 4000 compounds to optimize antiviral potency, safety and duration of action. In 2015, [this ultimately led to lenacapavir](#). But also important were advances in formulation and delivery, which enable a very small, highly potent, relatively insoluble molecule to provide durable exposure with infrequent dosing. It's the combination of mechanism, potency and pharmacologic durability that made this possible.

And in 2018, I was fortunate to be the medical monitor for the first study where humans received lenacapavir and we began to understand how long acting lenacapavir could actually be. We first studied lenacapavir in people living with HIV who were highly treatment-experienced and had multidrug resistance, demonstrating that lenacapavir, in combination with an optimized background regimen, was safe and effective for this population, leading to approvals of the first twice-yearly HIV treatment product in the EU, UK and US in 2022. We initiated and ran the most globally, age, race, ethnic, and gender-diverse HIV prevention trial program evaluating lenacapavir for HIV pre-exposure prophylaxis (PrEP), showing in 2024 that 100% of participants in the PURPOSE 1 study and 99.9% of participants in the PURPOSE 2 study did not acquire HIV. These results (published in The New England Journal of Medicine) are truly transformational, and we have moved with incredible urgency to achieve regulatory approvals globally and pave pathways for access for the most disproportionately HIV-affected communities globally. I am personally most proud that lenacapavir was approved and available in the US and in sub-Saharan Africa within the same year (more information via [Gilead's lenacapavir access page](#) and [AVAC](#)).

Long-Acting Agents and the Future of Prevention Platforms:

Long-acting agents like lenacapavir are moving us toward a platform-based approach to prevention and HIV treatment. One molecule can support multiple formulations, dosing intervals and potentially two-drug combinations for HIV treatment. That flexibility is critical; we can start to match prevention options to people's preferences and needs, rather than expecting people to adapt to a single model of care. This can help increase the number of people on effective HIV prevention and treatment, allowing us to be closer to helping end new HIV infections globally and improve the quality of life of those living with HIV.

Biomanufacturing and Global Scalability:

From the outset, we thought about Lenacapavir not just as a scientific breakthrough, but as a medication that would need to work across diverse populations globally. That includes considerations around manufacturing scalability, stability, storage and delivery in a wide range of healthcare systems. The goal is to ensure that innovation doesn't stop at approval—that it can be reliably produced and delivered at the scale required to make a population-level impact (see [Gilead's lenacapavir access page](#)).

The PURPOSE Program: A Model for Inclusive Research:

The PURPOSE program was intentionally designed at the intersection of clinical science, data science and implementation research. We didn't just ask, "Does this work?" We asked, "Does this work for everyone who could benefit, especially those who are not currently benefiting from existing options?"

We started back in 2019 with our first stakeholder meeting in Kigali, Rwanda, with HIV scientists and providers, clinical trial design experts, governments, ethics experts, regulatory officials, and those taking PrEP and who could benefit from PrEP. We continued to engage with key stakeholders and set up [global community advisory and accountability groups](#), or G-CAGs (see [PLoS ONE article](#) about them). The insights and wisdom gained allowed us to center the participant and community voice to not only optimize recruitment and retention, but to also innovate within a biopharma clinical trial by embedding qualitative research, participant-reported outcomes and preference studies directly into Phase 3 trials—helping us understand not just efficacy, but real-world usability and acceptability. Moreover, we were able to harness the advice from these key stakeholders to convince regulators and ethics committees for our inclusive approach towards integrating pregnant and lactating women in Phase 3 clinical trials, demonstrating safe use of lenacapavir in women and babies and setting a new standard for inclusion (see [Lancet](#) and [New England Journal of Medicine](#) articles).

Ensuring Equitable Participation in Future Pipelines:

We need to design trials differently, starting with epidemiology and working backward—alongside communities—to ensure that study populations reflect the people most affected by HIV and we shared our approach prior to the trials results (see [PLoS ONE article](#)). That includes operational innovations with partners, including site selection and recruitment strategies, as well as regulatory foresight. This community-focused approach helps us generate label-relevant data in populations often excluded, such as adolescents and pregnant and lactating people. Critically, we don't need to conduct follow-up studies down the line to ensure these kinds of populations can benefit—improving time to

access by 5-10 years for adolescent and pregnant populations.

Scientific Frontiers: Long-Acting, Novel Mechanisms, Multi-Pathogen Platforms:

What excites me most is the convergence of long-acting delivery, novel mechanisms and potentially multi-pathogen platforms. We are beginning to see the possibility of prevention technologies that are not only longer acting, but also more integrated and adaptable. That opens the door to fundamentally rethinking how prevention is delivered, moving toward systems that are simpler, more durable and more aligned with people's lives—and ultimately allowing us to treat, prevent and cure (when we can) viral diseases globally.

Accelerating Global Access: Lessons for Biotech:

One of the biggest lessons is that you have to design the clinical trial program for widespread access, alongside the communities who could most benefit, from day one. That means aligning clinical development, regulatory strategy and global access planning early, in parallel—not sequentially. It also means ensuring your trials generate the evidence needed for broad policy adoption and guideline inclusion, so that once a product is approved, it can move quickly into real-world use.

The Power of Strategic Partnerships:

Lenacapavir is a clear example of how no single group can deliver a breakthrough alone. It required deep collaboration—from basic science to clinical investigators, to community organizations, to regulatory agencies, and global health partners. The record-breaking speed of approvals and subsequent access is a testament to this pioneering level of

partnerships, as highlighted by regulators at the European Medicines Agency (EMA) discussing how Lenacapavir for PrEP was the first medicine evaluated under EMA for accelerated assessment and use outside of the EU by the European Union Medicines for All (EUM4all) procedure (see [Frontiers in Public Health article](#)). Whether it was trial design, regulatory approach or global implementation planning, we worked incredibly hard to ensure that innovation is both scientifically rigorous and grounded in the realities of implementation, which is essential for achieving impact at scale.

Cultivating Interdisciplinary Collaboration:

We intentionally build teams that span disciplines—including clinical, pharmacologic, epidemiologic, regulatory and implementation science—and we integrate stakeholder and community perspectives throughout. Importantly, we center participant voice. The most meaningful innovations come when scientific excellence is paired with an understanding of lived experience and real-world barriers.

A Message to the Biotechnology Community:

If I had one message for SIMB members, it's that the future of biotechnology will be defined not just by what we discover, but by who benefits from those discoveries.

We are at a moment where the science, from molecular design to long-acting delivery, is advancing incredibly quickly. But the real opportunity, and the responsibility, is to ensure that these innovations are developed with intention: that they are inclusive, scalable and grounded in the lives of the people who need them most.

From my perspective, the most meaningful breakthroughs happen when scientific excellence is paired with humility and partnership with communities, with global health systems and across

disciplines. If we do that well, we won't just create new technologies. We'll fundamentally change what's possible in HIV prevention and global health. ●



Dr. Moupali Das and PURPOSE 1 G-CAG member Yvette Raphael at the awards ceremony Mani L. Bhaumik Breakthrough of the Year Award (for Lenacapavir) in 2025



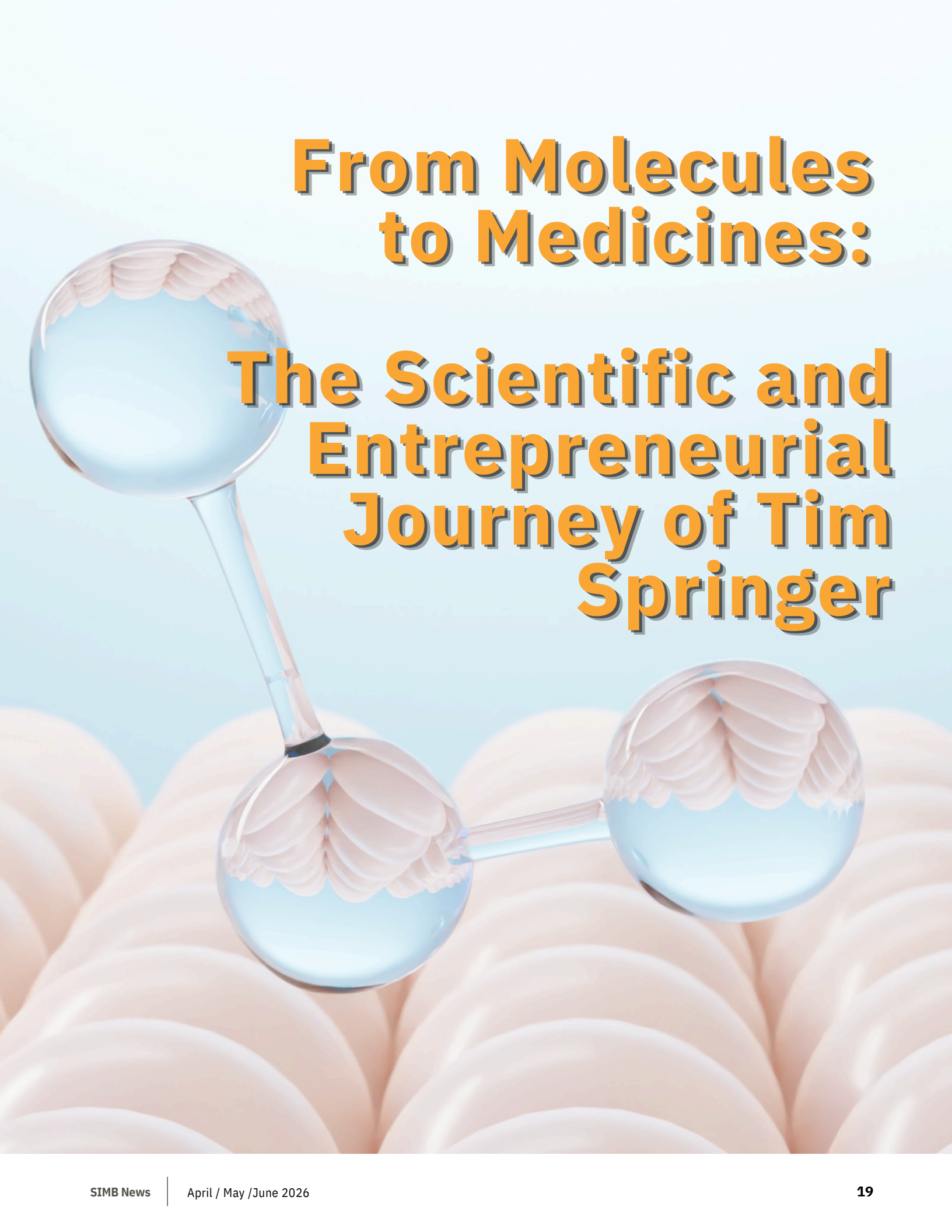
Dr. Moupali Das with her first patient with HIV at Columbia Medical School in 1997



Dr. Moupali Das at the initial meeting in Rwanda she mentions in the piece.



Dr. Moupali Das with members of the PURPOSE 2 G-CAG



**From Molecules
to Medicines:**

**The Scientific and
Entrepreneurial
Journey of Tim
Springer**

Bio:

Timothy A. Springer, Ph.D., is the Latham Family Professor of Biological Chemistry and Molecular Pharmacology at Harvard Medical School, where he has been a faculty member since 1977. He is renowned for discovering and characterizing many of the immune system's key adhesion receptors, including Lymphocyte Function–Associated (LFA) molecules, Intercellular Adhesion Molecules (ICAMs), and the first integrin subfamily. His early work demonstrated how blocking LFA 1/ICAM 1 and CD2 (Cluster of Differentiation 2) / LFA-3 (Lymphocyte Function–Associated Antigen-3) interactions could inhibit T cell antigen recognition—findings that directly enabled FDA approved therapies such as efalizumab, a monoclonal antibody targeting LFA-1, and alefacept, an LFA-3–Ig fusion protein used to modulate T-cell activity. Springer also defined the three step paradigm of leukocyte diapedesis, work that led to the founding of LeukoSite and ultimately to the development of vedolizumab for inflammatory bowel disease.

His research integrates structural biology, mechanobiology, and single molecule biophysics to understand how force and conformational change regulate integrins, von Willebrand factor, Transforming Growth Factor-Beta (TGF β) family proteins, and malaria parasite adhesins. He has authored more than 500 publications, holds over 30 patents, and is a member of the National Academy of Sciences, with honors including the Crafoord Prize, the American Association of Immunologists (AAI) Meritorious Career Award, and the Stratton Medal. Beyond academia, Springer is a founding investor in Moderna and an investor or founder in multiple biotechnology companies, including Selecta Biosciences, Cartesian Therapeutic, Scholar Rock, Morphic Therapeutic, Tectonic Therapeutic, and Seismic Therapeutic.

Today, his work spans open source therapeutics, integrin targeted antibodies for autoimmune disease,

and the development of a dual acting malaria vaccine designed both to protect humans and block mosquito transmission. His career reflects a rare combination of fundamental discovery, translational impact, and entrepreneurial leadership in immunology, structural biology, and protein therapeutics.

Questions:

1. How did your early life and education shape your scientific path?

My interest in science began with a fascination for how living systems work at the molecular level. That curiosity led me to pursue formal training that would give me the tools to explore those questions rigorously. I received my B.A. in Biochemistry from the University of California, Berkeley in 1971, and my Ph.D. in Molecular Biology and Biochemistry from Harvard University in 1976. Those years taught me to think deeply about how structure determines function, and how small molecular changes can have profound biological consequences. My education also exposed me to the power of interdisciplinary thinking, which became a defining feature of my career. I learned early on that the most interesting problems often sit at the boundaries between fields. That mindset shaped the way I approached research and the kinds of questions I felt compelled to pursue.

2. What impact did your fellowship with César Milstein have on your development as a scientist?

My fellowship with César Milstein at Cambridge, England, was transformative because it placed me at the center of monoclonal antibody technology just as it was reshaping immunology. Working in that environment taught me the importance of precision, creativity, and intellectual courage. Milstein encouraged bold thinking and rigorous experimentation, and that combination left a lasting imprint on how I approached scientific problems.

The experience also gave me technical tools that later became essential for identifying immune adhesion receptors. It was a period of intense learning and discovery that helped define my scientific identity. The lessons from that fellowship stayed with me throughout my career.

3. What were your early years like after joining Harvard Medical School (HMS)?

Joining Harvard Medical School at a young age gave me the freedom to explore questions that were not yet well defined. I began as Assistant Professor on the Quad at HMS in 1977 and have been here ever since. Those early years were filled with excitement, uncertainty, and the thrill of building something from scratch. I had the opportunity to assemble a team, create a research vision, and pursue ideas that were unconventional at the time. The environment encouraged independence and rewarded curiosity, which allowed me to take risks that ultimately paid off. Being surrounded by exceptional colleagues pushed me to refine my thinking and sharpen my scientific instincts. Those foundational years shaped the trajectory of my entire career.

4. You were the first to identify adhesion receptors on immune cells. How did that discovery unfold?

The discovery began with a simple question: how do immune cells physically interact with each other and with their environment? Using monoclonal antibodies, we identified molecules on lymphocytes and leukocytes that mediated adhesion. I discovered with monoclonal antibodies, then cloned and functionally and structurally characterized many of the adhesion receptors in the immune system. I was the first to demonstrate that lymphocytes and leukocytes had adhesion molecules. This finding opened an entirely new field

and changed how we understand immune recognition. It led to the identification of LFA molecules, ICAMs, and the first integrin subfamily. That work laid the foundation for decades of research into immune cell trafficking and communication.

5. What was the significance of uncovering the LFA 1 and ICAM 1 interaction?

Identifying the LFA 1 and ICAM 1 interaction revealed a central mechanism by which T cells form stable contacts and recognize antigens. Blocking either of these adhesion pathways could block antigen recognition by T lymphocytes. This insight showed that adhesion was not just mechanical but deeply integrated into immune activation. Understanding this mechanism allowed us to design therapies that could modulate immune responses by targeting adhesion pathways. It also demonstrated how structural changes in integrins regulate their affinity and function. This discovery bridged basic science and translational medicine in a way that was rare at the time. It ultimately led to the development of the first adhesion targeted immunotherapies.

6. What motivated you to find LeukoSite and enter biotechnology entrepreneurship?

Entrepreneurship became a natural extension of my scientific work when it became clear that our discoveries had direct therapeutic potential. We had uncovered the three step paradigm of leukocyte trafficking, and blocking any of these steps could completely block emigration. That insight created a clear path toward drug development. Founding LeukoSite allowed us to translate mechanistic discoveries into clinical candidates. I believed that scientists should play an active role in ensuring their discoveries reach patients. Building a company also gave me a new appreciation for the interplay between science, strategy, and execution.

It was an opportunity to create an environment where bold ideas could become real therapies.

7. LeukoSite produced several major therapeutics. What enabled that success?

LeukoSite succeeded because it was built on strong mechanistic science and a clear therapeutic vision. An antibody to integrin $\alpha 4\beta 7$, a lymphocyte homing receptor for mucosal tissues, rapidly resolved colitis in non-human primates. That work led to vedolizumab, which became a major therapy for inflammatory bowel disease. The company also licensed CAMPATH 1, which became an important treatment for leukemia and later multiple sclerosis. These successes were possible because we understood the biology deeply enough to identify the right targets. LeukoSite fostered a culture that valued rigorous science and entrepreneurial agility. The company's achievements demonstrated how basic research can lead directly to impactful medicines.

8. How did LeukoSite become involved in the development of Velcade, the proteasome-inhibitor drug used to treat multiple myeloma?

LeukoSite's involvement in Velcade came through a strategic acquisition that expanded our scientific capabilities. LeukoSite acquired ProScript and with it the proteasome inhibitor bortezomib, which was approved for multiple myeloma in 2003. This acquisition brought a groundbreaking molecule into our pipeline and demonstrated the value of integrating complementary scientific programs. Velcade became one of the first successful proteasome inhibitors and transformed the treatment of multiple myeloma. The experience taught me that innovation often requires both internal discovery and external collaboration. It also reinforced the importance of recognizing

promising science early. Velcade's success remains one of the most meaningful examples of how strategic decisions can accelerate therapeutic impact.

9. What drew you to become a founding investor in Moderna?

My background in protein structure and receptor biology made the mRNA platform immediately compelling. I am a founding investor in Moderna Therapeutics. I saw mRNA as a programmable, flexible way to deliver therapeutic proteins, one that could dramatically accelerate the development of vaccines and biologics. The platform aligned with my long standing interest in how proteins fold, activate, and signal. I believed that mRNA could overcome many limitations of traditional protein therapeutics. Moderna represented a bold vision for the future of medicine, and I wanted to help support that vision from the beginning. The company's later achievements validated the potential I saw in the platform.

10. You've helped launch several biotech companies. What unites these ventures?

Each company I've helped build is rooted in a deep mechanistic understanding of protein biology. I am a founder and investor in Scholar Rock and Morphic Rock Therapeutics, and previously served as a board member and lead angel for Ab Initio Biotherapeutics. These ventures share a commitment to translating structural and mechanobiological insights into targeted therapies. They reflect my belief that innovation happens at the intersection of disciplines. I've always been drawn to problems where understanding protein conformation can unlock new therapeutic strategies. These companies were created to pursue those opportunities with the speed and focus that industry allows. They represent a continuation of my scientific mission through entrepreneurial channels.

11. Your research spans integrins, the cell-adhesion receptors that mediate immune and tissue interactions; von Willebrand factor, the multimeric blood-clotting protein essential for platelet adhesion; TGF- β (Transforming Growth Factor-Beta), a master immunoregulatory cytokine; and malaria. What connects these diverse areas?

The unifying theme is the relationship between protein conformation, mechanical force, and biological function. A common theme throughout my research is how force interacts with protein conformational change to activate integrins, von Willebrand factor, proteins of the transforming growth factor beta family, and adhesins on malaria sporozoites. Whether studying immune cell adhesion, hemostasis, cytokine activation, or parasite invasion, the same principles apply. I'm fascinated by how proteins act as molecular machines that respond to physical forces. These systems reveal how evolution has engineered elegant solutions to complex biological challenges. Studying them requires integrating structural biology, single molecule biophysics, and cell biology. That interdisciplinary approach keeps the research exciting and continually opens new avenues for discovery.

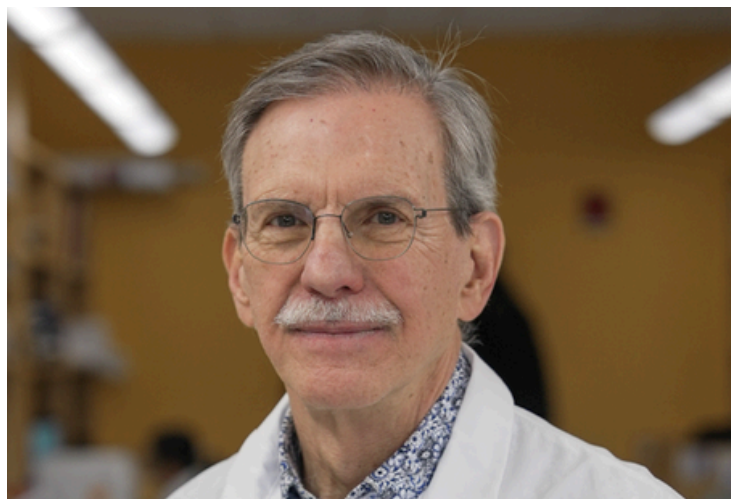
12. What has your structural work revealed about TGF β activation?

My teams work uncovered how the latent TGF β complex is held in an inactive state and how mechanical forces activate it. Latency-Associated Peptide (LAP) forms a ring that shields the 110 residue growth factor from receptor binding and participates in its activation through interactions with integrins.

This architecture explains why integrins such as $\alpha V\beta 6$ (alpha-V beta-6) and $\alpha V\beta 8$ (alpha-V beta-8) are essential for activating TGF- β (Transforming Growth Factor-Beta) in specific tissue contexts. We also discovered how different family members adopt distinct conformations that reflect their unique regulatory mechanisms. These insights have broad implications for development, immunity, fibrosis, and cancer. Understanding TGF β activation at the structural level opens the door to designing more precise therapeutics. It is an area where basic science and translational potential are deeply intertwined.

13. What message would you like to share with students, postdocs, and early career faculty?

My message is to stay curious and stay bold. The most impactful discoveries often come from asking simple questions very deeply. Build a strong foundation in rigorous experimental design, because good science begins with clarity and discipline. Don't be afraid to cross disciplinary boundaries; many breakthroughs happen where fields intersect. Seek mentors who challenge you and colleagues who inspire you. Remember that science is a long game, and persistence often matters as much as brilliance. Most importantly, pursue questions that genuinely excite you, because passion is the fuel that sustains a scientist through the long, winding journey of discovery. ●



Timothy A. Springer, Ph.D.,

SIMB Interview Series

Featuring **Arda Ural**
Scott Hutchins



From Blockbusters to Breakthroughs:

Arda Ural on Biotech Innovation, Mergers and Acquisitions (M&A) Strategy, and the Future of AI Driven Discovery



AN INTERVIEW WITH Arda Ural, a senior life sciences executive whose serves as the Americas Life Sciences Leader at Ernst & Young (EY)

Bio:

Arda Ural, PhD, MBA, MSc, is a senior life sciences executive whose career spans more than three decades across biotechnology, biopharmaceuticals, medtech, and global advisory leadership. He currently serves as the Americas Life Sciences Leader at Ernst & Young (EY), where he oversees a \$2B+ practice supporting biotech and biopharma organizations across the full innovation lifecycle—from early stage Research and Development (R&D) and clinical development to commercialization, supply chain strategy, and market access. His work emphasizes how emerging technologies, including artificial intelligence and advanced analytics, can accelerate therapeutic development, lower cost of doing business, strengthen biomanufacturing, and improve patient outcomes in an increasingly complex scientific and regulatory environment.

Before joining EY, Ural led Accenture's Life Sciences M&A practice, advising on transactions that shaped the competitive landscape. His earlier operating roles include Vice President of Strategic Marketing and Business Unit Leader at Becton Dickinson, and Senior Vice President of Marketing & Sales at Eyetech Pharmaceuticals, where he built commercial capabilities ahead of the company's Initial Public Offering (IPO) and subsequent acquisition by Astellas. He began his career at Pfizer in Istanbul and later in New York, contributing to global product development and commercialization efforts, including the worldwide launch of Viagra and leadership of the \$2B Celebrex franchise. Ural's contributions to the biotechnology ecosystem extend to his roles as Chair of the BioNJ C Suite Summit, judge for BioNJ's BioPartnering Program, member of BIO's BD & Finance, Emerging Therapeutics and AI/Digital Health Committees, and mentor for NYU Stern's Endless Frontier Labs. He also serves on advisory boards for New Jersey Institute of Technology (NJIT) Biomedical Engineering and In Vivo, and authored the foreword to *No Fear, No Failure*, published by Columbia Business School in

2026. He was honored as an Innovator 100 by the New Jersey Business and Industry Association in 2026 and also as a Standout Leader by PharmaVoice in 2024.

Interview Questions:

1. You've built a career at the intersection of pharma, biotechnology, commercialization, and strategic leadership. What early experiences shaped your understanding of how scientific innovation becomes a scalable therapeutic business?

Starting with my first job at Pfizer in the field in Istanbul, where I could see the end of the pharmaceutical value chain and how the technologies were reaching the patients, was an invaluable firsthand experience. I interacted with physicians who were curious about the effects of new medications, which enabled me to learn and communicate the science and benefits of these medications so they could use them appropriately to treat their patients and report back how it worked in their clinical experience. I felt a part of being something much bigger early on in my career. Those early experiences grounded me about the end-to-end value chain pharmaceutical products from a concept at the bench to patients' bedside.

2. Your decade at Pfizer included work on global product development and commercialization. How did leading the worldwide launch of Viagra influence your approach to building and positioning breakthrough therapies?

After Pfizer relocated me to New York, I was fortunate to be placed with the global product development team to work on the late-stage clinical development, regulatory readiness and submission, and notably, the worldwide launch of Viagra. Developing the commercialization plan of this novel and unique first-in-class medicine did not fit any existing launch playbooks. It had broad range of stakeholders to serve from reimbursement to

professional and consumer positioning and anything in between. That experience had a lasting impact on my professional development to be able to think outside of the box and challenge the status quo.

3. You later built commercial capabilities at Eyetech Pharmaceuticals ahead of its IPO and ultimate acquisition. What capabilities do emerging biotech companies need to establish earlier in their development journey to be “commercialization ready”?

Start-up years correspond to ‘dog years’ in pharmaceutical development in terms of intensity and speed. You and your team’s thinking and execution is front and center to value creation with no safety net to recover from mistakes. I was fortunate to work on another novel treatment which pioneered a new era in ophthalmology to treat back of the eye diseases. The remarkable transition from a 125,000-person company to 60 people start-up was an outstanding learning experience to be able to operate regardless of the size and resources of the organization.

4. The biotech capital environment has shifted dramatically. What strategic patterns are you seeing in M&A, partnerships, and platform consolidation across the sector?

The biotech industry had been functioning under a relatively stable environment prior to the COVID-19 pandemic. The risk profile was well understood and priced in, and although fund raising was always challenging it was manageable with a high-risk and high-reward dynamic which, generally speaking, benefited biotech start-ups whose technologies targeted unmet medical needs. The exits were either through an IPO or a strategic acquisition. The pandemic threw off that established balance and led to the infusion of an incredible amount of - unconventional capital in a zero-interest rate environment which the industry was not ready to absorb. There were more than 100 IPOs in 2021 compared to a typical year that experiences about

40-50 IPOs on average. This ‘sugar-high’ singularity disrupted the industry’s dynamics and took several years for normalization which we are on the tail end in early 2026. Juxtapose this dynamic with the biopharma industry’s ongoing era of loss of exclusivity. There was almost \$370B worth of products to be replenished in the course of a five-year period that created a demand for late-stage assets by biopharma companies and posed an existentially challenging environment for early stage biotechs. As a result, the number of public biotechs shrank by 20% in that timeframe, the financing almost shut down, and the limited financing available either was directed to massive AI-drug discovery platforms or to founders with prior track-record with the same investors. The promising news is that innovation in medicine is continuing at an accelerating pace with about 38-51% of global launches that took place in the two year were first-in-class medications, comparing favorably to 35-40% about eight to ten years ago.

The promising news is that innovation in medicine is continuing at an accelerating pace with about 38-51% of global launches that took place in the two year were first-in-class medications, comparing favorably to 35-40% about eight to ten years ago.

5. For industry executives, why is a deep understanding of M&A dynamics now essential—not just for transactions, but for shaping scientific strategy, portfolio design, and competitive positioning?

A key consideration—alongside profitably growing your business and creating value—is expanding through strategic moves such as partnerships, acquisitions, or entering new markets. As the business environment changes, no single company can possess all the relevant skills and technologies under its own roof.

Moving beyond the ‘not invented here’ mindset to a growth mindset is a key survival skill. Scanning the horizon for accretive businesses or new and emerging technologies is parts and parcel of growing any business. The median number of years to stay in S&P 500 is 15, down from 18 only a few years ago. Also, about half of S&P500 is changed within a 20-year period between 2000 and 2020. In a constantly evolving environment, the companies that can adjust their business models and products or services portfolios will be fit to survive, if not thrive.

6. AI is reshaping drug discovery, clinical development, and biomanufacturing. Where do you believe AI will have the most immediate and measurable impact for biotechnology organizations?

AI is offering us one of the most consequential singularities in our lifetime, and its impact is wide-ranging from every aspect of our civilization including drug discovery and development. I believe we are in the early stages of understanding its potential for identifying new approaches that were once deemed to be impossible.,

There are a few front-runners that all industry observers and investors are closely watching. However, biology, unlike other more deterministic sciences, is highly uncertain with numerous unforeseen and not fully vetted interactions at the molecular and cellular levels.

Immediate use cases are already enabling commercialization with faster return on investment (ROI), but the full impact on discovery will unfold over time as product candidates developed through artificial intelligence move into animal and human testing. AI modeling of drug development may even obviate the need for animal testing down the road.

Remember, all products that failed in human trials worked in animal testing. So, technology may offer a more viable alternative to the current IND readiness studies.

There are a few front-runners that all industry observers and investors are closely watching. However, biology, unlike other more deterministic sciences, is highly uncertain with numerous unforeseen and not fully vetted interactions at the molecular and cellular levels. Until that moment, there are incredible opportunities to lower the cost of running clinical trials and accelerating them by simply addressing very doable, dare I say, mundane processes that are overdue for disruption. It should not take 11 years from filing the intellectual property to getting the medicine to patients’ use at roughly 7-8% chance of getting the medicine approved.

7. You’ve described AI as operating in three layers: personal productivity, enterprise level workflow integration, and emergence of AI-native companies. How do you see these layers transforming scientific organizations over the next five years?

AI has a transformative potential of any industry. I see it evolving in three phases. We are currently undergoing the first phase where it is all about personal productivity. Rapid increased time spent per user per day using large language model (LLMs) demonstrates a sustainable usage of AI tools for personal productivity gains. The next phase will require adjusting and aligning existing enterprise levels or institutional workflows to accommodate the agentic AI-led tool sets, and a heavy realignment of human engagement and change management to attain aspired outcomes. Finally, within the next three to five years, if not sooner, we will start the emergence of very lean AI-native organizations that utilize autonomous processes run at a fraction of the cost of conventional businesses and will have the potential to transform current business practices to a level that has not yet been imagined.

Of course, these predictions are at the mercy of the speed of innovation and human capacity to enable **change**.

8. You recently wrote the foreword for No Fear, No Failure. Which themes from that book resonate most strongly with your own leadership philosophy in the life sciences sector?

The primary theme I underscored in the foreword of No Fear, No Failure was the relationship between the risk appetite and the scale of the organizations that I called 'risk asymmetry'.

The risk–reward incentives for innovation are asymmetric, with start-ups offering higher potential returns than large companies due to their inherently riskier technology bets.

Success and failure will be treated materially differently in either of those environments, and as a result the executives who own the accountability of running that business need to create a culture to foster innovation which comes with the reward system of learning from attempts even when they fail. As Nelson Mandela called it, “I never lose, I either win or learn.” Those companies that can institutionalize the innovation with that self-correcting risk and reward system will continue to thrive in an ever-changing world.

9. Many researchers are developing breakthrough technologies but struggle with the transition from discovery to commercialization. What guidance would you offer to scientists who want to translate their innovations into viable biotech products or companies?

This will probably not be an earth-shattering revelation, so here we go. The science itself is not the answer many investors are looking for but what the science does to address unmet problems is what matters.

Those scientists who can connect the dots from the “Eureka moment” to solving a problem that is not adequately met by other inventions will have a starting advantage.

Unfortunately, this requirement is necessary but not sufficient. The scientists must protect their invention with defensible intellectual property and partner with those who can identify the right stakeholders in the ecosystem and execute on a path to monetization for the final commercialized product. Importantly, as challenges will emerge -as they inherently will- the ability to swiftly pivot or workaround the challenge is also a key survival skill. It is an incredible and arduous journey, and once complete, a rewarding one.

10. Looking ahead, what gives you the most optimism about the future of biotechnology, and where do you believe the industry must reinvent itself to meet the next decade’s scientific and societal challenges?

The speed of innovation, ingenuity of human beings and the tools that are becoming available to humanity to enable this incredible vision are what I am most optimistic. It took 80 years for the iteration of the steam engine to be available for human use in 1776. That innovation cycle is now happening in days and weeks, and I am excited about what the future may bring.

As Nelson Mandela called it, “I never lose, I either win or learn.” Those companies that can institutionalize the innovation with that self-correcting risk and reward system will continue to thrive in an ever-changing world.

Building the Next Era of Agricultural Innovation:

Scott Hutchins on Science, Strategy, and Impact



AN INTERVIEW WITH Scott Hutchins, the Under Secretary of Agriculture for Research, Education, and Economics (REE) and the Chief Scientist of the United States Department of Agriculture

Bio:

Scott Hutchins, Ph.D., is the Under Secretary of Agriculture for Research, Education, and Economics (REE) and the Chief Scientist of the United States Department of Agriculture, where he leads the Department's scientific mission and oversees one of the world's largest agricultural research portfolios. He brings more than three decades of experience spanning agricultural research, product development, and enterprise-level strategy across both the public and private sectors.

Dr. Hutchins spent over 31 years at Dow AgroSciences (now Corteva Agriscience), where he held a series of technical and executive leadership roles guiding global R&D programs in crop protection, traits, and seeds. His work there included oversight of major research portfolios, long-term innovation strategy, and the development of technologies that advanced agricultural productivity and sustainability.

In 2019, Dr. Hutchins joined USDA as Deputy Under Secretary for REE, where he played a central role in developing the USDA Science Blueprint and the national Agricultural Innovation Strategy. These efforts helped articulate a forward-looking vision for U.S. agricultural science, emphasizing innovation, data-driven research, and cross-sector collaboration. Confirmed in 2025 as Under Secretary and Chief Scientist, he now leads USDA's scientific agencies—including the Agricultural Research Service, the National Institute of Food and Agriculture, the Economic Research Service, and the National Agricultural Statistics Service—ensuring that federal research investments strengthen food security, climate resilience, and economic opportunity for American agriculture.

Before entering federal service, Dr. Hutchins also worked as an independent consultant, advising organizations on research strategy, innovation pathways, and scientific leadership.

He holds a Ph.D. in Entomology from Iowa State University and an M.S. in Entomology from Mississippi State University, grounding his career in a deep understanding of pest biology, integrated management, and agricultural systems.

Across his career, Dr. Hutchins has been recognized for his commitment to advancing agricultural science, fostering innovation ecosystems, and strengthening the connection between research and real-world impact. His leadership continues to shape the future of U.S. agricultural research and the scientific foundations that support a resilient, productive, and sustainable food system.

Interview Questions:

1. Your 31-year career at Dow AgroSciences placed you at the center of major advances in crop protection and trait development. What were some of the most transformative scientific or technological shifts you witnessed during that time?

There was a major transformation in the agricultural science and products industry between the time I started employment as a Field Scientist for the original Dow Agricultural Products organization in 1987, to the time I retired from Dow AgroSciences just prior to the completed merger of Dow DuPont to create Corteva in 2018. Some of the first products I evaluated were granular insecticides for corn rootworm management, and by the end of the decade the entire market and research focus had shifted to genetically modified crops and incorporated *Bacillus thuringiensis* (Bt) toxins for nearly complete control.

Of course, all emerging technology has issues – there are no silver bullets in biology. It's also important to consider that at the time, the development of resistance management schemes was a primary focus for using a combination of refugia and secondary control measures. Curative products experienced a radical transition as well, based primarily on a direct shift away from broad spectrum

insecticides to a narrower spectrum with fewer adverse effects. I was fortunate to have worked with and ultimately led the global development of spinosad, which is a naturally produced product of *S. spinosa* that was extremely successful in multiple markets, and still is today.

Finally, I would say that the transformation of weed management through herbicide tolerance traits with flexibly timed oversprays has been a tremendous advancement for farmers due to its ability to reduce complexity while also providing flexibility with weed control. Again, issues related to resistance and off-target impacts dominated a lot of the post-launch research.

The lesson is that biology always finds a way, and there is no method that will last forever, meaning we need to always be planning and developing the next generation of weed, disease, and insect management – Digital Ag is, in my view, the next generation, and the public and private sector should be moving with haste to seize the opportunities ahead to benefit U.S. Agriculture.

2. You oversaw large, complex R&D portfolios in the private sector. How did you approach prioritizing research investments across chemistry, biology, and trait innovation to ensure long-term impact?

Our approach was business-project focused, meaning that three R&D functions (biology, regulatory, supply) were aligned with a project manager and multiple local commercial representatives. So, for example, if it was a Pipeline project new fungicide, there would be a global project manager, a global biology leader, a global regulatory leader, and a global supply leader working with local business unit teams for commercial assumptions, forecasts, etc. The R&D budget was the sum of the time and contract funds required to work on the approved projects.

The projects themselves were created as a business case, and the portfolio management forum, which I

chaired for many years, was charged with rating and ranking the projects to provide the most value back to the company. Different criteria were used for discovery projects vs. pipeline projects vs. line extensions, but generally a productivity index (10 Net Present Value / Research and Development costs for the project) was used for the first sorting activities. The Discovery organization had clear Discovery Goals, with known value if we successfully met the goal.

The pipeline had multiple product concepts that were refined and validated globally to build up the total case. Line extensions were typically new formulations or new uses, so they were quicker and easier. In addition, a large portion of Research and Development in crop protection was used to manage the existing business by keeping registrations, re-registrations, and other paperwork.

3. Transitioning from industry to USDA leadership is a significant shift. What motivated you to move into public service, and how did your industry experience prepare you for national-scale scientific decision-making?

It is significant, and I think I'm correct in saying that I am the first and only Under Secretary for REE to come from the private sector. I loved every minute, and every role, during my almost 32 years in the private sector, but I always had a desire to serve in the public sector. So, when the nomination came my way in late 2018, it was just too good to be true!

Frankly the transition has been easy because the private sector and the public sector are both focused on successful farming and successful farmers and ranchers. There are so many similarities in goals, management expectations, and project initiatives – but tools, techniques, and approaches used in managing a portfolio of business projects has been particularly useful.

For example, we used an investment matrix to develop priority research areas and we wrote discovery goals for these projects. The approach is not identical, but

the discipline to define the anticipated value and impact is certainly relevant. Moreover, what I quickly learned is how eager, and even excited, my USDA leadership was to explore and apply these techniques and to provide constructive feedback on what could work and what might not apply as readily.

As for decision-making, it starts with priorities, whether they be corporate or USDA Departmental--then initiatives to support the priorities, then a plan of work to execute the initiatives, followed by an objective assessment of progress/impact. Truly, there are very few substantive differences, and I have felt very comfortable in the public sector.

4. The Agricultural Innovation Strategy emphasized accelerating innovation across the entire food and agriculture system. What scientific capabilities or research areas do you believe are most critical for meeting future agricultural challenges?

The strategy itself defined these areas, which were derived from a National Academy of Sciences study focused on compelling Ag technologies for 2030. The four science/technology themes we held up were: Genome Design, Digital and Automation, Prescriptive Intervention, and Systems-based Farm Management. Each of these are still quite relevant today and will be included in the next version of the Ag Innovation Strategy – but they now will be supercharged with AI and other tools that were not really well developed in 2020.

In terms of capabilities, and having been in the private sector, I'm always trying to get clear in my mind what the USDA role is in Agricultural Innovation – clearly we have a track record for innovation and impact, but more and more of the innovation is packaged in a product or service to a farmer or rancher. That's when we recognized a critical gap in the public-private ecosystem: there was no consistent, objective, repeatable, or reliable way to assess new technologies—or to help USDA and land

grant institutions partner effectively with start-ups and companies that have strong ideas and promising technology but limited understanding of how they might be applied to or improve agriculture. That was the genesis for the USDA National Proving Grounds™ for AgTech.

5. You've led teams responsible for both discovery science and product development. How do you balance long-term exploratory research with the need for near-term, deployable agricultural solutions?

As with all things, it is, as you suggest, a balance. If you are an R&D based company, the investment in Discovery research is mandatory. It's a high risk: high reward venture, which is why so many companies these days focus on incremental improvements or generic models.

In the public sector, it also is a balance – farmers and ranchers need innovations and technology today, but they also rely on us to imagine and create entirely new paradigms to address opportunities in the future. We are, right now, at the base of what will be a rapidly changing agricultural innovation revolution with digital and ag tech. The last big “leap” was over 30 years ago with herbicide-tolerant traits and insect control traits in row crops. And, while these still hold value, it's time to begin the transformation to more efficient and reliable technologies.

The private sector will play the key role with creating the digital and autonomous technologies, but the public-sector will provide the direction and testing to ensure they are effective and aligned with the goals of the U.S. farmer and rancher. The recently created USDA National Proving Ground Network™ for AgTech will play that role and work hand in hand with tech companies AND farmers/ranchers to support development of effective tools that provide value for the investment.

6. As Chief Scientist for USDA, you oversee four agencies (ARS, NIFA, NASS, and ERS). What do you see as the most important opportunities for strengthening coordination across these research entities?

The REE Mission Area agencies are incredible in their scope and reach to support U.S. Agriculture. Our goal in REE is to ensure a single-coordinated focus on the problem at hand. The impact and the solutions matters most--not how we got there. So, for example, if we are focused on an invasive species in Florida, REE's agencies need to contribute to the research strategy and then consider which tactics of that multi-pronged strategy is best for each organization. In many times, some tactics are best addressed with in house research, in others, a university will have a unique talent, skill, facility, or approach. All effort is important and need to be brought to the table in a seamless way so only achieving the solution matters.

7. Public-private partnerships are increasingly essential in agricultural innovation. From your perspective, what models of collaboration are most effective for translating research into real-world impact?

Those whereby both parties agree on the customer--which should be easy in agriculture since both are primarily focused on the farmer or rancher. Beyond that, the best models have fair and agreeable terms for licensing, publishing, IP, and other considerations that could either enhance the partnership or prevent it from forming.

Finally, collaborations that focus on the solution first and the "money" second are very effective for translating research into real-world impact. Institutions that approach a private company seeking money without a value-based proposal on the investment that impacts our mutual customer will likely fail. Similarly, companies that approach a public entity but don't set clear project deliverables and timelines upfront also are likely to fail.

8. Looking back across your career, what accomplishment or initiative--whether at Dow, USDA, or in your consulting work--stands out as particularly meaningful to you?

I loved every minute at Dow AgroSciences and I am especially proud of the contributions I made with my teams on developing spinosad (a natural product insecticide) and SentriconTM Termite Colony Elimination System. As an entomologist, to have fingerprints on these advanced and revolutionary technologies is very rewarding.

But, at USDA, it is rewarding to see how we can serve the U.S. farmers and ranchers by creating the first ever U.S. Ag Innovation Strategy and expanding it with transformational goals to create the USDA National Proving Grounds NetworkTM for AgTech to drive the strategy. I fully appreciate and recognize the teams that ultimately made these achievements a reality.



48th Symposium on Biomaterials, Fuels and Chemicals

May 3–6, 2026
Astor Crowne Plaza Hotel
New Orleans, LA
www.simbhq.org/sbfc



Registration and Housing Information

Registration: Register online by April 20, 2026

Housing: Reserve your room now! Rate of \$199 plus taxes per night

2026 Program Chair:

Rebecca Ong, Michigan Technological University

Program Co-chair:

Charles Foster, dsm-firmenich

Past Program Chair:

Ben Woolston, Northeastern University

Keynote Speaker

Gregg Beckham, Senior Research Fellow and Group Leader, National Laboratory of the Rockies

2026 Program Highlights

This year our program covers 16 technical sessions on biofuels, products, and synthetic biology; feedstock processing and valorization; and complex integrated systems related to biomanufacturing. We are also excited to introduce multiple new and redesigned sessions that focus on the integration between bioprocessing and artificial intelligence, aerobic/oxidative and anaerobic/reductive bioprocessing, complex microbial interactions, bioprocessing scale-up, and critical mineral recovery.

Leading the conference off this year will be our keynote speaker, Dr. Gregg Beckham from the National Laboratory of the Rockies, whose extensive research on metabolic engineering, bioprocess development and modeling, lignin and biomass utilization, and plastics upcycling, spans the core topic areas of the SBFC. With an eye toward the future of the bioeconomy, we are also holding two special sessions, the first a panel discussion by industry and government leaders on the Future of Biomanufacturing, and the second a series of presentations by the six Virtual Institute on Feedstocks of the Future (VIFF) research projects funded by Schmidt Sciences.

TOPIC AREA 1: Biofuels, Products, and Synthetic Biology

Topic Area Chairs:

Rebecca Mickol – US Naval Research Laboratory

Dan Olson – Dartmouth College

Rajib Sahan – University of Nebraska-Lincoln

Sessions:

Bio X AI, convened by Emme Burgin and Ratul Chowdhury

Enzymes and cell-free systems, convened by Bernd Nidetzky and Quentin Dudley

Living and performance-advantaged bio-based materials, convened by Sara Molinari and Susie Dai

Finding the (redox) balance, convened by Saad Imran and Bishal Dev Sharma

Metabolic engineering to overcome product titer limitations, convened by Julia Leonard and Gustav Sjöberg

Biomanufacturing with extremophiles and exobiology, convened by Una Nattermann and Frances Donovan

TOPIC AREA 2: Feedstock Processing and Valorization

Topic Area Chairs:

Chuck Smallwood – Sandia National Laboratories

Jian Shi – University of Kentucky

Ning Sun – Lawrence Berkeley National Laboratory

Sessions:

C1 metabolism, convened by Eric Sundstrom and Michael Guarnieri

Plant and algal biomass and organic feedstocks, convened by Xiaowen Chen and Stephen Chmely

Plastics and alternative feedstocks, convened by Cynthia Ni and Adam Guss

Aerobic and oxidative bioprocessing and biomanufacturing, convened by Kyle Pomraning and Di Liu

Anaerobic and reductive bioprocessing and biomanufacturing, convened by Kyle Pomraning and Di Liu

TOPIC AREA 3: The Big Picture: Complex Integrated Systems

Topic Area Chairs:

Lynn Wendt – Idaho National Laboratory

Stephen Techtmann – Ohio State University

Juliana Vasco-Correa – Pennsylvania State University

Sessions:

System optimization and integration for bioconversion, convened by Joe Sagues and Corinne Scown

Complex microbial interactions for improved performance from the field to products, convened by Ting Lu and David Reed

Harnessing biology for critical mineral recovery, convened by Brad Wahlen and Kung-Hui (Bella) Chu

Integrated chemical and biological processing for AI-enabled biomanufacturing, convened by Ramkrishna Singh

Biomanufacturing and bioprocessing scale-up, convened by Ramkrishna Singh

Presentations include an introduction to VIFF and research presentations from each of its six funded projects.

Convener: Genevieve Croft, Schmidt Sciences

Call for Industry Support:

Your help is needed! SIMB is actively seeking sponsors or tabletop exhibitors to support this year's SBFC.

Reach out to SIMB's Executive Director, Haley Cox, at haley.cox@simbhq.org to learn more about new and existing opportunities to achieve your goals while giving much needed support for the 48th SBFC meeting.

SPECIAL SESSIONS

The Future of American Biomanufacturing

Curated panel discussion with prominent figures from industry and government discussing their views on how industry, academia, and policymakers can come together to both retain the existing American-based bioindustries that are under intense economic pressure from abroad and lower the barrier for rapid development, scale-up and expansion of new solutions to meet a growing demand and secure America's domestic supply chain.

Convener: Charles Foster, dsm-firmenich

Virtual Institute on Feedstocks of the Future (VIFF)

This session highlights Schmidt Sciences' Virtual Institute on Feedstocks of the Future (VIFF), with support from the Foundation for Food & Agriculture Research. VIFF is a multi-year research funding program aimed at developing the science, technology, and engineering research necessary to increase the use of underutilized biomass in bioproduction. Now in its third year, VIFF is building a multidisciplinary community of researchers simultaneously pursuing independent research aims and also collaborating across projects.



ALL CONTENT AS OF JUNE 30, 2026 - FOR 77TH ANNUAL MEETING DATES, VISIT WWW.SIMBHQ.ORG/ANNUAL

76th SIMB Annual Meeting and Exhibition

» Biopro

August 2–5, 2026
Marriott Austin Downtown Austin, Texas
www.simbhq.org/annual

Important Deadlines

- **Awards:** Nomination deadlines are April 10, 2026.
- **Registration:** Register at the early registration rates by April 13, 2026
- **Abstracts:** Submissions now open, due May 13, 2026
- **Housing:** Room block open! Reserve your room early. Rate of \$229 plus taxes per night

Premeeting Workshops

Sunday, August 2, 2026

- Fermentation Basics
- Estimating Metric Tons from Microtiter Plates
- How to Build a Flowsheet-based TEA to Support Early Phase R&D

2026 Program Chair:

Jennifer Headman • POET

“On behalf of the entire organizing committee, I welcome and invite you to attend the 76th SIMB Annual Meeting. This year’s meeting will take place August 2nd – 5th at the Austin Marriott Downtown. In honor of the unofficial motto of our host city of Austin, “Keep Austin Weird”, we will delve into many aspects of the wonderful and sometimes weird world of Microbiology. Building on the first 75 years of SIMB, we now look to the future.”

www.simbhq.org/annual/welcome

2026 Keynote:

Irmantas Rokaities • CTO and co-founder, Biomatter

“Reimagine enzymes for biomanufacturing with Intelligent Architecture™”

2026 Program

The technical program highlights our five core (and updated for 2026!) topic areas of Biocatalysis and Protein Engineering, Fermentation and Biomanufacturing, Microbiomes and Environmental Microbiology, Metabolic Engineering, and Natural Products. We will also have special sessions on the use of AI in the biological sciences, a session highlighting our partner organizations, and a session on taking bench top research to commercialization. The working titles of sessions available for submissions are below.

Biocatalysis & Protein Engineering Sessions:

- Alternative Feedstocks
- Frontier Strategies in Enzyme Engineering Biocatalysis at Scale
- Frontiers of Chemistry (cell free combined) Fermentation & Biomanufacturing Sessions: Valorizing C1/ C2 Feedstocks Biomanufacturing for Food Security and
- Resilience
- DoD/DoW Research Projects
- Fermentation & Biomanufacturing

Microbiomes & Environmental Microbiology Sessions:

- Engineered Microbes in the Wild: From Gut to Field
- Microbial Recovery of Critical Minerals and Valuable Metals
- Microbial Nutrient Cycling in Agriculture and Anthropogenic Waste Processing
- Extreme-Environment Microbiomes as Engines for New Materials and Chemistries

Metabolic Engineering (Half) Sessions:

- Accelerating metabolic engineering with automation: physical tools and applications
- Accelerating metabolic engineering with AI/ML: digital tools and applications
- Informing metabolic engineering with metabolic modeling, fluxomics, and analysis
- Metabolic engineering for alternative feedstocks & critical materials recovery
- Genetic tool development for Metabolic Engineering in non-traditional hosts: Bacteria
- Genetic tool development for Metabolic Engineering in non-traditional hosts: Fungi
- Metabolic Engineering for Environmental and Agricultural Applications
- Metabolic Engineering for biosynthesis at scale

Natural Products Sessions:

- Genome-Guided Discovery & Synthetic Biology for Natural Products
- Chemical Ecology & Mechanisms of Natural Product Function
- Enzymatic Innovation & Unusual Chemistry in Biosynthesis
- Computational Innovation & AI for Natural Products

Special Sessions:

- Harnessing AI to Accelerate Industrial Microbiology: Driving Discovery, Optimization, and Scale-Up
 - SIMB Partner Organizations
 - Bench Top Research to Commercialization
- Student Oral & Rapid Fire

Honors and Awards Open for Applications/Nominations

Open Now – All deadlines April 10, 2026.

For full details, go to:

www.simbhq.org/annual/awards

- Charles Porter Award: This award recognizes
- Charles Thom Award: Honors researchers for their exceptional merit in their field
- Early Career Award: Distinguish and encourage young investigators
- SIMB Fellowship Status: Special grade of SIMB membership
- Student Diversity Travel Award: Apply for yourself for the chance to be recognized
- Waksman Outstanding Teaching Award: Recognize the important role of educators and allow SIMB to help support their endeavors

Industry Support and Engagement

Exhibiting and sponsoring the SIMB Annual Meeting is a one-of-a-kind opportunity to support and engage with those on the cutting edge in the field of industrial microbiology and biotechnology. With an average attendance of 500 attendees, 48% of which identify as part of the industry/private sector, and an average of 30 booths, this provides the avenue for direct and purposeful connections to be made by all in attendance.

Book Review

by Elisabeth D. Elder, PhD

The Ecology of Soil: From Communities to Ecosystems

Richard D. Bardgett

2025

ISBN 97801988170489 (paperback)

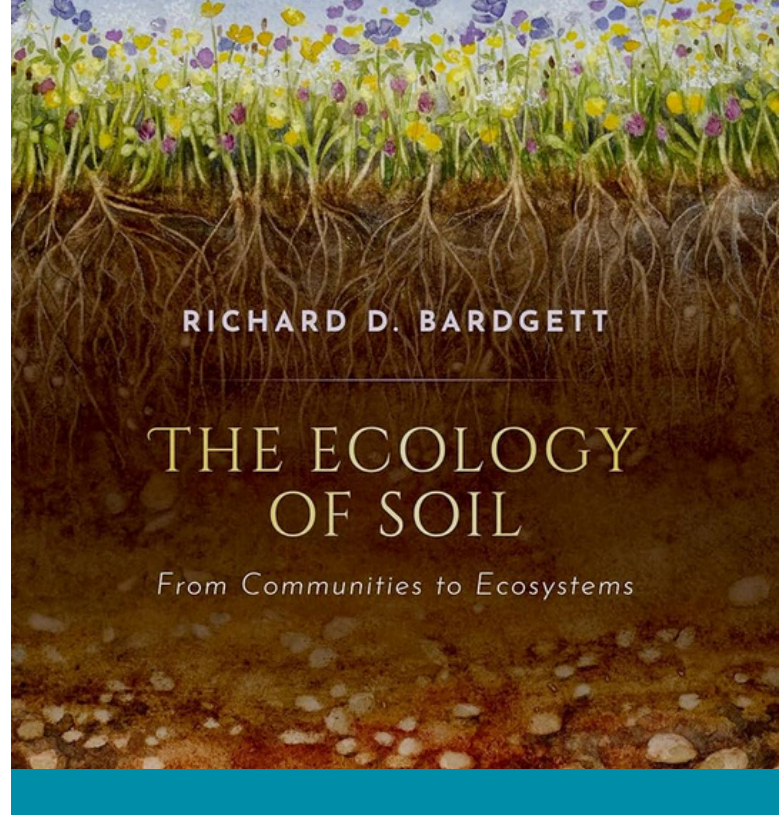
Oxford University Press

New York, New York

In 2005, Richard D. Bardgett wrote *The Biology of Soil*, which provided detailed and up-to-date coverage of soil biodiversity and control of organismal distribution. It focused on the diversity of soil biota and the various special and temporal variations.

In 2010, he and David A. Wardle co-wrote *Aboveground-Belowground Linkages*, which covered biotic interactions between aboveground and belowground communities and how they regulate the structure and function of terrestrial ecosystems, ecosystem processes, and their responses to global change. It looks at the developing studies of ecological and biogeochemical significance of aboveground and belowground interactions.

In 2012, Diana H. Wall, Bardgett, Valerie Behan-Pelletier, Jeffrey E. Herrick, Hefin Jones, Karl Ritz, Johan Six, Donald R. Strong, and Wim H. van der Putten edited the book *Soil Ecology and Ecosystem Services*, which covered biotic interactions at microscale, regional scales, and global scales. It covers the importance of maintaining soil



sustainability, biodiversity, and ecosystem services and how humans, animals, and ecosystems are dependent on soils and ecosystem services.

In 2016 he wrote *Earth Matters* which focused on how soil underlies civilization. It investigated how soil and the organisms in it control biogeochemical cycles; the relationship between human civilization and soil; and the importance of soil in mitigation of climate change, food security, water quality, and restoration of biodiversity.

While these books showed the depth of his knowledge and his dedication, Bardgett set a goal of writing a second edition of the 2005 book mentioned previously. He ultimately determined a new book was in order – to provide a functional review of the changes that had occurred in soil ecology. The outcome was *The Ecology of Soil* which covered from communities to ecosystems which was published in 2025.

Chapter 1 The soil environment covers soil formation, soil-forming factors, and soil properties.

The range of soil types is dependent on soil-forming factors including parent material, climate, topography, time and biota which vary in importance. Soil-forming factors determine the chemical as well as physical nature of soils that shape the activities and structures of soil biota. Soil biota has impact on, and is impacted by, soil properties.

Chapter 2 The diversity of life in soil points to the breadth of organisms that compose the soil food web – essential in recycling organic matter from the plant-based food web. Microbes, microfauna, mesofauna, and macrofauna contribute to the diversity of the soil food web. Abiotic factors, biotic factors, and global change stressors must be considered in shaping soil diversity. Constant change is a definite fact.

Chapter 3 Soil biota and ecosystem functioning provides a review of the importance of soil microorganisms in regulation of decomposing organic matter and in making nutrients available for plants; in controlling energy and nutrient cycling through the food web; in modifying the physical structure of soil; and in regulating ecosystem functioning.

In **Chapter 4 Feedbacks between plants and soil biota** the plant species present and their shifts have been found to impact soil biota and ecosystem functioning. Both negative and positive feedbacks shape communities and their dynamics as do functional traits of dominant plant species and their roots.

Chapter 5 Above-ground consumers, soil biota, and ecosystem function provides a broad review of herbivores. How herbivores influence the soil biota as well as the quality and quantity of food resources entering the soil. What disturbances do herbivores cause? How do their behaviors vary? What wastes are deposited? How do C levels and their persistence change?

Chapter 6 Soil biota and climate change must be considered in terms of impacts on below-ground communities and the biogeochemical cycles they regulate; in terms of the direct effects of temperature, precipitation, and climate; in terms of indirect effects of changes in plant growth and community composition; and in interactive effects of global change factors.

Chapter 7 Soil biota and sustainability goals rely on sustainable agriculture, restoring ecosystems, and adapting/mitigating climate change. In addition, promoting soil biodiversity and sustainability goals depend on the exact conditions/contexts and depend on close attention to local soil and climatic conditions.

Chapter 8 Some conclusions and future perspectives covers:

- New and important advances are being made in soil ecology,
- Molecular techniques are enhancing quantification of soil biodiversity,
- Abiotic and biotic are shaping spatial and temporal scales of soil biodiversity,
- Roles and interactions of different taxonomic groups are important in regulating biogeochemical cycles,
- Diversity and soil food webs influence ecosystem functions and their stability while global changes are ongoing,
- Plants, and their rhizosphere communities, shape the structure and function of soil microbial communities,
- Impacts of herbivores on soil biota and ecosystem function vary greatly between locations with variations, and
- “Wild” microbial inoculants may speed up restoration of degraded ecosystems.

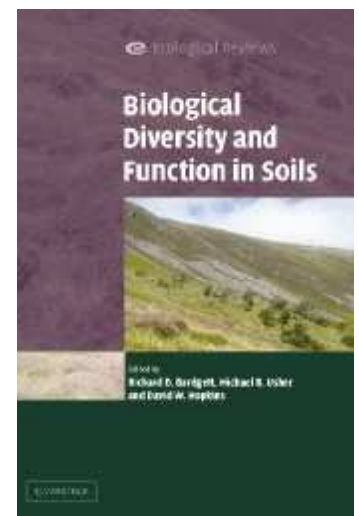
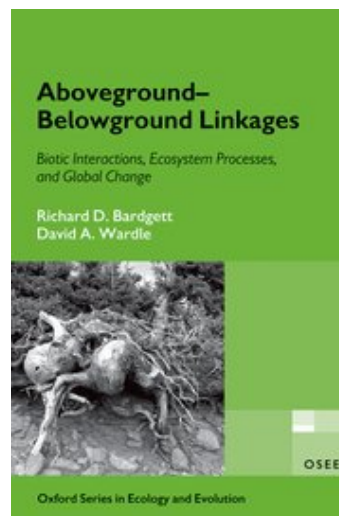
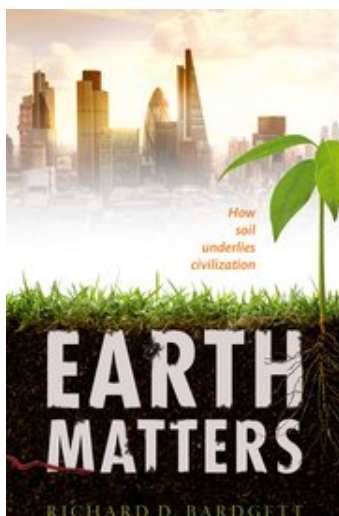
Challenges that emerge from this book include the need for understanding:

- Broadscale soil diversity patterns,
- The importance of samples collected over broader timescales,
- Biodiversity-function relationships in soils,
- The coordination of root traits and below-ground communities,
- The importance of above-ground consumers as drivers of below-ground communities,
- Impacts of climate change and other stressors impact below-ground communities,
- The importance of soil C storage,
- The application of theories applicable to above-ground ecology to below-ground ecology,
- The applications of new technologies to multiple communities,
- The importance of soil life for a healthy planet,
- The integration of soil ecology into sustainable land management decisions in agriculture, forestry, biodiversity restoration, and climate mitigation, and
- The development of collaborations to meet these challenges.

Richard Bardgett grew up in Cumbria, northern England. He graduated from the University of Newcastle-upon-Tyne in 1987 with a degree in Soil and Land Resource Science. His PhD was completed in 1991 at the Institute of Terrestrial Ecology and Lancaster University with a focus on how grazers impact soil biota.

He has held positions at the Nature Conservancy Council, followed by the Institute of Grassland and Environmental Research, the University of Manchester, and the University of Lancaster, where he is the Distinguished Professor of Ecology. In 2023, he was appointed Commander of the Order of the British Empire (CBE) for services in soil ecology and climate change science. He has authored many books and journal articles plus received multiple grants. His research and writing will be of interest to undergraduate as well as graduate students and professionals interested in broad aspects of ecology.

Submitted by,
Elisabeth D. Elder, PhD



Calendar of Events

Upcoming 2027 SIMB Meetings

January 17-21, 2027

Natural Product Discovery and Development in the Genomic Era

Hyatt Regency Long Beach – Long Beach, California

www.simbhq.org/natural

April 25-28, 2027

49th Symposium on Biomaterials, Fuels and Chemicals

Crowe Plaza Indianapolis Downtown Union Station - Indianapolis, Indiana

www.simbhq.org/sbfc

August 1-4, 2027

77th SIMB Annual Meeting and Exhibition

Sheraton Boston – Boston, Massachusetts

www.simbhq.org/annual

November 7-10, 2027

RAFT® 17- Recent Advances in Fermentation Technology

Naples Grand Beach Resort – Naples, Florida

www.simbhq.org/raft

Upcoming Industry Meetings

January 21-22, 2027

International Conference on Bioprocess and Fermentation Technology ICBFT

Amsterdam, Netherlands

<https://waset.org/bioprocess-and-fermentation-technology-conference-in-january-2027-in-amsterdam>

June 22-25-2027

ASM Microbe 2027 – Applied & Environmental Microbiology Meeting

Chicago, Illinois

<https://asm.org/events/asm-microbe/home>

July 25-30, 2027

Gordon Research Conference Natural Products and Bioactive Compounds

Proctor Academy – Andover, New Hampshire

<https://www.grc.org/natural-products-and-bioactive-compounds-conference>



SIMB Committees

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Nominations	Michael Resch	michaelgeorgesches@gmail.com	2026	TBD	Haley Cox
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Planning	Elisabeth Elder	elisabeth.elder@gsw.edu	2026	Scott Baker	Haley Cox
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SIMB News	Kris Rath	kris.rath.4.0@gmail.com	2027	Kristine Mortelmans, Elisabeth Elder, Stephanie Gleason	Katherine Devins
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Student/Postdoc/Early-Career	Allen Lee	allenlee3933@gmail.com	2028	Blake Rasor, Elise Phillips, Efrain Rodriguez-Ocasio, Soniya Quick, William Gasparrini, Amanda Andrade	Haley Cox
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Organizational Outreach	Kris Rath	kris.rath.4.0@gmail.com	2026	TBD	Haley Cox
Organizational Excellence	Ramon Gonzalez	rgdiaz2018@gmail.com	2026	Mike Resch, Brian Pfleger, Debbie Yaver, Rob Donofrio, Betty Elder	Haley Cox
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Past Chair	Rebecca Ong	rgong1@mtu.edu			
Natural Products 2027 Chair	Jaclyn Winter	jaclyn.winter@utah.edu	2027	Program Committee To Be Determined	Haley Cox
RAFT*17 Chair	Gisela Nadal Rey	GSNR@novonosis.com	2027		

NATURAL PRODUCT DISCOVERY and DEVELOPMENT in the Genomic Era

January 17-21, 2027

Hyatt Regency Long Beach
Long Beach, California



simbhq.org/np



SBFC

Symposium on Biomaterials,
Fuels and Chemicals

April 25-28, 2027

Crowne Plaza Indianapolis
Downtown Union Station
Indianapolis, Indiana



simbhq.org/sbfc

SIMB ANNUAL MEETING AND EXHIBITION

August 1-4, 2027

Sheraton Boston
Boston, MA



simbhq.org/annual

RAFT[®]17

Recent Advances in
Fermentation Technology

November 7-10, 2027

Naples, Florida
Naples Grande Beach Resort



simbhq.org/raft