

catalyst conversations: Reimagining the Global Health Ecosystem in a Post-COVID World

Speaker Bios



Jim Collins, Ph.D., is the Termeer Professor of Medical Engineering & Science and Professor of Biological Engineering at MIT, as well as a Member of the Harvard-MIT Health Sciences & Technology Faculty. He is also a Core Founding Faculty member of the Wyss Institute for Biologically Inspired Engineering at Harvard University, and an Institute Member of the Broad Institute of MIT and Harvard.

He is one of the founders of the field of synthetic biology, and his research group is currently focused on using synthetic biology to create next-generation diagnostics and therapeutics. Professor Collins' patented technologies have been licensed by over 25 biotech, pharma and medical devices companies, and he has helped to launch a number of companies, including Synlogic (NASDAQ: SYBX). He has received numerous awards and honors, including a Rhodes Scholarship and a MacArthur "Genius" Award, and he is an elected member of all three national academies - the National Academy of Sciences, the National Academy of Engineering, and the National Academy of Medicine.



Elsie Effah Kaufmann, Ph.D., is a Visiting Scholar and Founding Head of the newly established Department of Orthotics and Prosthetics at the University of Health and Allied Sciences, Ghana. She is also an Associate Professor and Founding Head of the Department of Biomedical Engineering at the University of Ghana.

Elsie began her education in Ghana then proceeded on scholarship to the United World College of the Atlantic in Wales where she obtained an International Baccalaureate Diploma in 1988. She went on to earn a Bachelor of Science in Engineering (BSE, Cum Laude), Master of Science in Engineering (MSE) and PhD in Bioengineering all from the University of Pennsylvania. After her graduate studies she received her postdoctoral training at Rutgers University, serving also as founding Director of the Cell Biology Laboratory at the New Jersey Center for Biomaterials, and thereafter joined the University of Ghana in 2001.

Elsie has contributed immensely towards the development of Science education at all levels in Ghana and beyond. She is noted for her contribution to the establishment of the School of Engineering Sciences as well as the development of several other academic programmes (Physiotherapy, Radiography, Audiology and Medical Physics) at Ghana's premier university. She is probably best known for her role, since 2006, as Host and Quiz Mistress of the hugely popular Ghana National Science & Mathematics Quiz TV Programme for Senior High Schools. Her contributions to STEM education have been recognized with several national and international awards.



Megan J. Palmer, Ph.D., is the Executive Director of Bio Policy & Leadership Initiatives at Stanford University. In this role, Dr. Palmer leads integrated research, teaching and engagement programs to explore how biological science and engineering is shaping our societies, and to guide innovation to serve public interests. Based in the Department of Bioengineering, where she is also an Adjunct Professor, she works closely both with groups across the university and with stakeholders in academia, government, industry and civil society around the world. In addition to fostering broader efforts, Dr. Palmer leads biosecurity-related projects in partnership with the Freeman Spogli Institute for International Studies (FSI) at Stanford.

Dr. Palmer has created and led many programs to develop best practices and policies for the responsible development of bioengineering. She is currently co-chair of a World Economic Forum Global Future Council on Synthetic Biology and serves on the council of the Engineering Biology Research Consortium (EBRC). For ten years she led programs in safety, security and social responsibility for the international Genetically Engineered Machine (iGEM) competition. She also founded the Synthetic Biology Leadership Excellence Accelerator Program (LEAP), an international fellowship program in biotechnology leadership. Dr. Palmer advises and works with many other organizations on their strategies for the responsible development of bioengineering, including serving on the board of directors of Revive & Restore, a nonprofit organization advancing biotechnologies for conservation.

Previously, Dr. Palmer was a Senior Research Scholar and William J. Perry Fellow in International Security at the Center for International Security and Cooperation (CISAC), part of FSI, where she is now an affiliated researcher. She also spent five years as Deputy Director of Policy and Practices for the multi-university NSF Synthetic Biology Engineering Research Center (Synberc). She has previously held positions as a project scientist at the California Center for Quantitative Bioscience at the University of California Berkeley (where she was an affiliate of Lawrence Berkeley National Labs), and a postdoctoral scholar in the Bioengineering Department at Stanford University. Dr. Palmer received her Ph.D. in Biological Engineering from M.I.T. and a B.Sc.E. in Engineering Chemistry from Queen's University, Canada.



David Sun Kong, Ph.D., is a synthetic biologist, community organizer, musician, and photographer based in Lexington, MA. He is the director of the Massachusetts Institute of Technology Media Lab's new [Community Biotechnology Initiative](#). Their mission: empowering communities through biotechnology. David conducted his graduate studies at MIT's Media Lab, receiving a master's degree for developing technology for printing nanostructures with energetic beams and a Ph.D. for demonstrating the first gene synthesis in a microfluidic ("lab-on-a-chip") system. He was recognized as an emerging leader in synthetic biology as a "LEAP" fellow, served as a guest faculty member at the Marine Biology Lab in Woods Hole, MA, and is co-founder and managing faculty of "[How To Grow \(Almost\) Anything](#)," an international course on synthetic biology. He founded and chaired new Microfluidic and Hardware Tracks for the [International Genetically Engineered Machines Competition \(iGEM\)](#) and is the official iGEM DJ. He was technical staff in the Bioengineering

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Systems & Technologies group at MIT's Lincoln Laboratory and a founding member of the synthetic biology team.



Patrick Schneider, Ph.D., is Head of Strategy, Business Development and Innovation for the Research Solutions Business Unit, and Chair of the Life Science Innovation Board as well as Chair of the Connected Lab and Gene Editing and Novel Modalities Promise Ventures at MilliporeSigma. His teams develop a wide range of research reagents, specialty chemicals, analytical instruments and kits for protein detection and biomarker discovery, as well as disposable devices and kits for sample preparation and processing, while also helping the Business Unit develop its strategy. As Chairman of the Innovation Board and Promise Ventures, he leads the review of important scientific trends, oversees the performance of innovation across Life Science, and ensures cross-business collaboration.

Over 20 years of leadership experience with MilliporeSigma, he has held various leadership roles in R&D, business development, management of research reagents portfolio and new business initiatives. Prior to MilliporeSigma, Patrick was the Vice President of R&D and Business Development for Research Reagents at Serologicals. Past appointments include Chief Scientific Officer at Chemicon International and Vice President of Genome Biosciences.