Future Faculty Workshop Participant Information
July 30, 2020

Kolade Adebowale (kaa@stanford.edu/@KoladeAdebowal1) is currently pursuing a Ph.D. at Stanford University in Chemical Engineering. He is interested in how mechanical input from the extracellular environment impacts cellular behavior. His current research focuses on how biomaterial viscoelasticity impacts cancer cell migration. He is extending this work to investigate the impact of biomaterial viscoelasticity on macrophage phenotype/behavior and macrophage-tumor interactions. Kolade holds a B.Sc. from Illinois Institute of Technology and a M.S. in Chemical Engineering from Columbia University.

Archita Agarwal (archita_agarwal@brown.edu) is a Ph.D. Student in the Computer Science department at Brown University. She works in the area of applied cryptography with Seny Kamara. Prior to this, she worked with Maurice Herlihy on concurrent algorithms. Her current research addresses problems at the intersection of distributed systems and applied cryptography. With the growth of the internet and the explosion of data, distributed systems are becoming widely used but they often lack security and privacy guarantees. Her work addresses this, using techniques from differential privacy, encrypted search, probability theory, and distributed algorithms. Archita holds a B.Sc. and M.Sc from the University of New Delhi in India and a M.S. in Computer Science from Brown University.

Rishi Agarwal (rishi.agarwal@yale.edu) is a fourth-year Ph.D. Student in Chemistry at Yale University studying proton-coupled electron transfer reactions involving metal oxide nanoparticles. He is originally from the San Francisco Bay Area and enjoys cooking delicious meals, watching/playing soccer and other sports, and being outdoors. Rishi holds a B.A. from Cornell University and a M.S. from Yale University.

Dr. Samiya Alkhairy (samiya@alum.mit.edu) is a Postdoctoral Fellow in Earth and Planetary Sciences at MIT working primarily on modeling scattering off finite objects. She is also a Technical Communications Fellow in the electrical engineering and computer science Communications Lab at MIT. She is researching analytic modeling of distributed and lumped dynamic systems, particularly those involving wave propagation and fluid flows; analytical determination of latent variables, and noninvasive characterization of systems including geophysical, biomedical and device systems. She employs significant extensions of methods in analytic continuous applied mathematics, and approaches for modeling that are guided and tested by the physics and data of specific systems. Samiya holds a B.S., M.Eng., M.S., and Ph.D. from MIT.

Dr. Bethany Almeida (Bethany.almeida.ctr@nrl.navy.mil) is an American Society for Engineering Education Postdoctoral Fellow at the U.S. Naval Research Laboratory Center for Bio/Molecular Science and Engineering in Dr. James B. Delehanty's laboratory. Her expertise lies at the intersection of nano/biomaterials (e.g. hydrogels, biofunctional surfaces, inorganic/organic nanoparticles) for modulating stem cell behavior, and she is also passionate

about scientific communication. Bethany holds a Ph.D. in Biomedical Engineering from Brown University.

Dr. Eva Alonso Ortiz (eva.alonso.ortiz@gmail.com/www.evaalonsoortiz.com) is a Postdoctoral Scholar at Ecole Polytechnique Montreal. During her graduate studies she developed advanced brain imaging methods using MRI. She spent a couple of years working in radiation oncology before going back to full-time research. She is now conducting research in MRI of the spinal cord. Eva holds a Ph.D. from McGill University

Dr. Juan R. Alvarez (juanralvarez@fas.harvard.edu) is a HHMI LSRF Fellow in the laboratory of Doug Melton at Harvard University. During his graduate career he studied the modulation of lineage-specific cell differentiation by long non-coding RNAs. Currently, he uses human pancreatic islet organoids to study islet development, model physiology during health and disease, and develop diabetes therapies. Juan received his A.B. in Molecular Biology from Princeton University and a Ph.D. in Biology from MIT.

Brendan Anzures (brendan_anzures@brown.edu) is a fifth-year NASA Earth and Space Sciences Graduate Fellow pursuing his Ph.D. in the Department of Earth, Environmental, and Planetary Sciences at Brown University. His research focuses on the chemical and physical evolution of Mercury, meteorites, and their parent body asteroids. He studies synthetic rocks created through high-pressure and high-temperature experiments and meteorites using various laboratory spectroscopy techniques, with a special focus on the behavior of volatiles (S, C, F, Cl, and H2O). Brendan holds a B.S. in Geology from Rensselaer Polytechnic Institute.

Dr. Md Arifuzzaman (md.arifuzzaman@uconn.edu) is a Postdoctoral Scholar in the Department of Chemistry at the University of Connecticut.

Dr. Fatemeh Bahari (fbahari@mgh.harvard.edu) is a Postdoctoral Fellow at Massachusetts General Hospital and Harvard Medical School. Her main focus has been on epilepsy and its underlying mechanisms and comorbidities. She is interested in identifying the underlying mechanisms by which brain transitions from normal to seizing states. Her work has already resulted in a new mechanistic biomarker for epileptogenesis to identify patients at risk of epilepsy and determine the efficacy of proposed treatments. She has also identified a linkage between seizures and spreading depression. She has a strong background in in vivo electrophysiology in freely behaving animals and signal processing of neural data. In her current postdoctoral position, she is learning in vitro electrophysiology techniques including multi-photon microscopy imaging, immunohistochemistry, viral labeling, pharmacology, and extracellular and patch-clamp recordings. She holds two B.S. degrees from Amirkabir University of Technology in Iran, and an M.S. and Ph.D. from Pennsylvania State University.

Dr. Camille Bilodeau (cbilod@mit.edu) is a first-year Postdoctoral Researcher in Klavs Jensen's group at MIT and she is interested in pursuing a chemical engineering faculty position after her postdoc. Her graduate research focused on using molecular dynamics simulations to study how proteins adsorb to multimodal surfaces with applications in protein separations. In her postdoc,

she is developing new deep learning approaches to predict the properties of chemicals, chemical mixtures, and peptides. Camille holds a Ph.D. from Rensselaer Polytechnic Institute.

Dr. Corinna Breusing (cbreusing@uri.edu) is a Postdoctoral Researcher at the University of Rhode Island in the laboratory of Professor Roxanne Beinart, where she studies the evolutionary biology of animal-microbe symbioses at deep-sea hydrothermal vents. She previously completed a postdoctoral fellowship at the Monterey Bay Aquarium Research Institute with Dr. Bob Vrijenhoek, for which she received a grant from the German Research Foundation. During her graduate studies she was awarded one out of six nationwide doctoral prizes from the Helmholtz Association, Germany's largest scientific organization. She recently received an award from the Schmidt Ocean Institute to conduct a research cruise as Chief Scientist in the North Fiji Back-Arc Basin (Southwest Pacific) in 2021. Corinna holds a Ph.D. from Kiel University / GEOMAR Helmholtz Institute for Ocean Research in Germany.

Dr. Anya Brown (brown.anya@gmail.com) is currently the Ewel Postdoctoral Fellow at the University of Florida, and will be a Woods Hole Postdoctoral Scholar starting in Fall 2020. received her Ph.D. from the Odum School of Ecology at the University of Georgia. Her dissertation, titled *Trait-mediated effects and the extended phenotype: community interactions on coral reefs* focused on microbially-mediated interactions between corals, algae and mucus-net producing snails called vermetids. Anya holds a Sci.B. from Brown University, a M.S. from California State University, Northridge, and a Ph.D. from University of Georgia.

Dr. Alice L. Burghard (burghard@uchc.edu) is a Postdoctoral Scholar in an auditory neuroscience lab at University of Connecticut Health. Her passion for everything auditory started after she finished veterinary school and started her graduate school career in a cochlear implant lab. Her current focus is plasticity in the auditory midbrain and its role in tinnitus development. For that she is recording neuronal activity in the inferior colliculus of sound exposed and behaviorally trained animals with and without signs of tinnitus. She holds a DVM from Freie Universität Berlin and a Ph.D. from Hannover Graduate School for Veterinary Pathobiology, Neuroinfectiology, and Translational Medicine in Germany.

Shiya Cao (scao2@wpi.edu) is a Ph.D. Candidate in Information Technology Worcester Polytechnic Institute. Her research interests are in technology enabled social inclusion, human-computer interaction, user experience, and gender equity in IT. She has teaching assistant experiences in both graduate and undergraduate courses, such as Introduction to Data Science, Information Technology Policy and Strategy, Telecommunications Management. She received her bachelor's degree in Management from North China Electric Power University, and her M.S. degree in System Dynamics and Innovation Management at Worcester Polytechnic Institute.

Dr. Lisa Cervia (lcervia@broadinstitute.org/www.linkedin.com/in/lisa-cervia/@lisacervia) is a Postdoctoral Fellow at Dana-Farber Cancer Institute and the Broad Institute of MIT and Harvard. She is currently working to understand how cooperating mutations lead to cancer and how best to identify combination therapies rationally. Her research interests include drug delivery, biological transport, genetic engineering and cancer diagnostics and therapy. She has

worked on several projects with applications to cancer diagnostics and therapy including a global health project for the spectroscopic detection of oral cancer and a clinical breast cancer study utilizing spectroscopy to aid surgeons in detection of tumor margins. She holds a B.S. in Biomedical Engineering from Boston University and a Ph.D. in Biomedical Engineering from Duke University.

Dr. Ibrahim Chamseddine (ichamseddine@mgh.harvard.edu) is a Postdoctoral Researcher at Harvard Medical School and Massachusetts General Hospital. Heinterested in performing early prediction of treatment outcomes, and redesigning therapies for high risk patients. Ibrahim received the 2018 Best Thesis Award from GERAD (Group for Research in Decision Analysis). Ibrahim has multiple journal publications and many conference participations, all applying machine learning, design optimization, and mathematical modeling to facilitate the understanding and treatment of cancer. He holds a Ph.D. in Mechanical Engineering at McGill University.

Dr. Lesley Chapman (Lesley.chapman@nih.gov) is a postdoctoral fellow at the NIH National Cancer Institute where she is both completing a pancancer study of viruses and is evaluating the role of structural variants within cancer. During her graduate training, she helped define the role of a specific microRNA in regulating the host immune response during malaria infection. To gain a more foundational understanding of how to study large genomic changes within the genome, she completed a National Institute Council Postdoctoral Fellowship at the National Institute of Standards and Technology where she used computational tools and machine learning to characterize structural variants within the human genome. Now, in her current postdoctoral fellowship, she is investigating the role that structural variants have in determining disease outcome in a specific type of cancer at NCI. She completed her Ph.D. in Translational Biomedical Science at the University of Rochester Medical Center.

Dr. Fabrizio Colosimo (Fabrizio.Colosimo@unh.edu) is a Postdoctoral Research Associate at the University of New Hampshire in the Department of Civil and Environmental Engineering.) Prior to joining the University of New Hampshire, he was a Postdoc and then a Laboratory Director in a private biotech company in Barcelona, Spain. His research at the university of New Hampshire in the lab of Professor Paula Mouser involves the integration of microbiological technologies and ecological principles into the realm of environmental protection and sustainability. His general research interests extend the development of pro-microbial, bio-enhanced mineral treatments to improve plant performance, phyto- and bioremediation, capturing and immobilizing pollutants through bacterially generated minerals and improvements towards the production of renewable biofuels. He received his Ph.D. in Civil and Environmental Engineering from the University of Strathclyde in the UK.

Sophie Coulson (slcoulson@g.harvard.edu) is a fifth-year Ph.D. Student at Harvard University's Department of Earth and Planetary Sciences. Her research focuses on flow and deformation in the Earth's interior and the effect this has on surface processes. Specifically, she uses theory and numerical modelling to understand and predict the impact of mantle flow on topography and sea-level change. Her work demonstrates that including mantle processes can dramatically

alter the dynamics of regional and global climate systems. She holds a MESci in Geophysics from the University of Liverpool in the UK.

Dr. Alexis Courtney (alexiscourtney63@gmail.com) is a Postdoctoral Fellow at Smith College, working with Professor David Gorin on the use of nucleic acid catalysts as enzyme mimics. Her graduate studies focused on using flow chemistry for synthetic, biological, and educational applications. In the future, she would like to focus on chemistry education research to aid student learning. Alexis holds a Ph.D. from Boston University.

Dr. Holger Dannenberg (hdannenb@gmail.com) is a Postdoctoral Research Fellow at Dr. Michael Hasselmo's laboratory at Boston University. He hopes to become an independent researcher performing basic neuroscience research on neural circuit mechanisms of cognitive processes relevant to learning and memory. He is particularly interested in understanding the mechanistic role of septo-hippocampal circuits in encoding and retrieval of memory in support of changing behavioral demands. During his graduate studies in Dr. Heinz Beck's laboratory in Bonn, Germany, he performed in-vivo experiments on rodents using electrophysiology, optogenetics, and signal analysis techniques. As part of his Ph.D. research, he investigated the septo-hippocampal system to dissect the specific contribution of cholinergic as opposed to GABAergic septal neurons on encoding and retrieval dynamics in the hippocampus. Holger holds a Ph.D. from Rheinische Friedrich-Wilhelms-Universität Bonn in Germany.

Dr. Nicole "Nikki" DeVille (nhnvd@channing.harvard.edu) is a Postdoctoral Research Fellow in The Spatial and Contextual Exposomics and Epidemiology Laboratory at Harvard T.H. Chan School of Public Health and Brigham and Women's Hospital. Her current projects focus on the impact of location-based exposures (e.g., air pollution, greenspace, neighborhood socioeconomic status) on health. Her broad research interests include epidemiology, environmental health, maternal and child health, mental health and wellness, health disparities in Pacific Islander and Indigenous populations, and public health education. Nicole holds a Ph.D. in Public Health from University of California, Irvine.

Dr. Neel Doshi (nddoshi@mit.edu/nddoshi9@gmail.com) is an Intelligence Community Postdoctoral Fellow in the Department of Mechanical Engineering at MIT. His research focuses on improving the capabilities of robotic systems that interact with the world through frictional contact (e.g., robotic manipulators and legged robots). He takes an integrated approach to this problem, looking at design, control, and planning. Currently, he is working with Professor Alberto Rodriguez on developing a controller for contact-rich robotic manipulation. He holds a Ph.D. from Harvard University.

Dr. Hannah Fazekas (Hannah.fazekas@unh.edu) is a Postdoctoral Scholar in the Department of Natural Resources and the Environment at the University of New Hampshire.

Dr. Dongmei Feng (dmei.feng@gmail.com) is a hydrologist and currently a Postdoctoral Scholar in the Department of Civil and Environmental Engineering at the University of Massachusetts, Amherst. Her primary research interest is in terrestrial hydrology. She leverages resources from

remote sensing, numeric models, big data, and state-of-the-art computational techniques to advance our understanding of global hydrology. Before joining University of Massachusetts, Amherst, she received a Ph.D. degree from Northeastern University and Bachelor's and Master's degrees from Tongji University, China.

Dr. Lori Ferrins (l.ferrins@northeastern.edu) is a Research Assistant Professor at Northeastern University. Her research has largely been centered around drug discovery for neglected tropical diseases like human African trypanosomiasis, leishmaniasis and Chagas disease, but she is looking to broaden her focus into infectious diseases. She has also been involved with the International Younger Chemists Network (IYCN) since 2017 and was elected Chair in 2019. IYCN is aimed at connecting early-career chemists with a goal to reach like-minded scientists and create a platform for scientific exchange. Lori holds a Ph.D. from the Monash Institute of Pharmaceutical Sciences at Monash University in Australia.

Dr. Elizabeth Fine (efine@whoi.edu) is a Postdoctoral Scholar in the Department of Physical Oceanography at Woods Hole Oceanographic Institution.

Dr. Emily First (emily.c.first@gmail.com) is a Postdoctoral Research Associate in the Department of Earth, Environmental and Planetary Sciences at Brown University. She studies volcanoes on Earth, the Moon, and Mars, using laboratory analog experiments at high temperature and pressure ("cooking lava"). She is heavily involved in teaching-related outreach, as one of the coordinators for the department program that develops science curricula for local elementary schools. Science policy and the global need to address DEI in STEM is another budding interest of hers, and she has participated in Congressional visits organized by geoscience groups. At the end of the year, she will move to Cornell University to begin a postdoctoral fellowship in planetary astronomy (51 Pegasi b Fellowship). Emily holds B.S. and a B.A. from the University of Georgia and a Ph.D. in Geology and Geophysics from the University of Hawaii.

Dr. Krista Fleck (krista.fleck@unh.edu/@kristafleck) is a Postdoctoral Scholar in the lab of Dr. Vicki Jeffers at the University of New Hampshire. During her graduate program she studied lysine acetyltransferases in the eukaryotic parasite *Toxoplasma gondii* under the mentorship of Dr. Bill Sullivan. She then went on to study HIV genomic RNA packaging as a postdoc at the University of Michigan with Dr. Alice Telesnitsky. Her research focuses on the regulators of transcription that are critical for parasite differentiation and survival in the human and animal pathogen *Toxoplasma gondii*. Krista received her Ph.D. in 2013 from Indiana University School of Medicine

Adrian Mikhail P. Garcia (garciaap@mit.edu) is pursuing his Ph.D. in the MIT-WHOI Joint Program in Applied Ocean Science & Engineering. His research in environmental fluid mechanics is focused on understanding transport processes in estuaries. While he was an undergraduate at Pittsburgh, his mentors inspired him to pursue a Ph.D. to become a professor so that he could combine his technical aptitude with his passion for teaching and mentoring others. Adrian received his B.S. in Civil Engineering from the University of Pittsburgh.

Dr. Alexander Gates (a.gates@northeastern.edu) is an Associate Research Scientist at the Network Science Institute at Northeastern University. His academic research fuses mathematical and computational methods to study complex systems in sociology, biology, and neuroscience. Some of his recent contributions include mapping out the landscape of interdisciplinary collaborations, a systematic quantification of control in gene regulatory networks, and a novel framework for comparing overlapping and hierarchical clusters and network communities. Before arriving at Northeastern, Alex received a joint Ph.D. degree in Informatics (complex systems track) and Cognitive Science from Indiana University, Bloomington, an M.Sc. from Kings College London in complex systems modeling and a B.A. in mathematics from Cornell University.

Kelsea Gildawie (gildawie.k@northeastern.edu/@kelsearian) is a fifth-year Ph.D. Candidate in the Developmental Neuropsychobiology Laboratory at Northeastern University. Her research involves the neurobiological underpinnings of sex-specific behavioral dysfunction following early life adversity in rats. Specifically, she studies how adversity affects microglia morphological activation states and degrades extracellular structures throughout development. She is currently looking for a postdoctoral position in the Boston area where she can continue to investigate the sex-dependent consequences of stress. Kelsea received her B.S. in Neuroscience and Behavior (with a minor Biostatistics) from Simmons University.

Leilani H. Gilpin (lgilpin@mit.edu) is a Ph.D. Candidate in Electrical Engineering and Computer Science at MIT, supervised by Professor Gerald Jay Sussman and funded by the Toyota Research Institute. She works on enabling autonomous vehicles, and other autonomous machines, to explain themselves. Before MIT, Leilani worked as a research engineer at Palo Alto Research Center (PARC) focusing on anomaly detection in healthcare. Leilani earned a M.S. in Computational Mathematical and Engineering from Stanford University in 2013, and a B.S. in Mathematics (with honors), B.S. in Computer Science (with highest honors), and a music minor from University of California, San Diego.

Cammie Gray (clg2001@wildcats.unh.edu) is a Ph.D. candidate in Mathematics Education at the University of New Hampshire. Her research interests in mathematics education include both the learning and teaching of tertiary mathematics and the preparation and professional development of secondary mathematics teachers. Cammie has held a teaching assistantship in the Department of Mathematics and Statistics at the University of New Hampshire for the last four years and has had the opportunity to teach a variety of courses as both a teaching assistant and instructor of record. Prior to beginning her Ph.D. studies, Cammie was a middle and high school mathematics teacher for four years in the Templeton Unified School District in Templeton, California. She earned her M.S. and MST in Mathematics from the University of New Hampshire and has a Bachelor of Science in Mathematics from California Polytechnic State University, San Luis Obispo.

Dr. Bentolhoda "Hoda" Heli (bentolhoda.heli@polymtl.ca) has worked in research as a postdoctoral fellow at Polytechnique Montreal. Her studies have been focused on developing

antibacterial and smart food packaging in collaboration with food packaging industries. She graduated from Polytechnique Montreal with a Ph.D. in Chemical Engineering.

Jack Hensley (jhensley@g.harvard.edu) is a third-year Environmental Science and Engineering Ph.D. student at Harvard University. He is interested in the chemistry that we think happens in particles in the atmosphere. He holds a B.S. from the University of California, Berkeley and a M.S. in Environmental Engineering from ETH Zürich.

Jaileene Hernandez Escalante (jaileenehernandez@gmail.com) is currently a Ph.D. Candidate in the Dooms lab at Boston University School of Medicine studying Type 1 Diabetes and how dietary environmental factors contribute to T cell autoreactivity. Her research interests include immune based therapeutics, immune dysfunction/regulation, and microbiology. She has taught courses in the topics of Infectious Disease and Public Heath, Medical Microbiology, and Medical Terminology. She holds a B.S. in Biology from Temple University.

Shayan Hojabri (hojabri.s@northeastern.edu) is a fourth-year Ph.D. Candidate in Civil and Environmental Engineering at Northeastern University. His research interest is fluid flow and mass/heat transfer. As part of Puerto Rico Testsite for Exploring Contamination Threats (PROTECT) center, his doctoral research focuses on development of a green in situ groundwater remediation technology, where he uses theoretical modeling to evaluate the removal efficiency of organic and inorganic contaminants. He was awarded the College of Engineering Outstanding Graduate Teaching Assistant Award in 2020. Shayan holds a B.Sc. in Civil Engineering and an M.Sc. in Environmental Engineering from the University of Tehran and a M.Sc. in Geoenvironmental Engineering at Northeastern University.

Dr. Rachel Hopman (r.hopman@northeastern.edu) is a Postdoctoral Scholar at the Center for Cognitive and Brain Health at Northeastern University. She studies the relationship between physical fitness, physical activity, and cognitive health across the lifespan. Her research focuses on cognitive outcomes related to virtual environmental exposures during exercise, as well as applied learning methods in virtual reality. Rachel's participants range in age from 8 to 80 years old in order to understand cognitive abilities in relation to a broad age spectrum. She holds a Ph.D. from the University of Utah.

Lydia Horne (Lydia.horne@maine.edu) is a Ph.D. Student in the Department of Ecology and Environmental Sciences at the University of Maine.

Dr. Serena Houghton (Shoughto@umass.edu) is a Postdoctoral Fellow at the University of Massachusetts Amherst. A nutritional epidemiologist, her long-term research interests lie in investigating how dietary factors or nutritional status impact women's health, particularly breast cancer. She is conducting research within the Nurses' Health Study Cohorts evaluating dietary factors and nutritional status as they relate to breast cancer risk and survival, with the goal of finding ways to reduce breast cancer incidence and mortality. More specifically, her current research focuses on the relation between central adiposity and breast cancer, and

elucidating the potential biological mechanisms underpinning this relationship. Serena holds a Ph.D. from the University of Massachusetts Amherst.

Dr. Jingjie Hu (Hu.Jingjie@mayo.edu) is a Postdoctoral Fellow at the Mayo Clinic, where she is performing research in translational bioengineering in the Minimally Invasive Therapeutics Laboratory. Her current work uses mechanics, material science, and in vivo studies to design and develop next-generation embolic agents, aiming to bridge the gap between engineering and medicine for translational applications in endovascular embolization. Her broad research interests include materials, nanotechnology, and mechanical properties of biological materials and devices. Jingjie holds a Ph.D. from Princeton University.

Dr. Zoë L Hutchison (zoe_hutchison@uri.edu) is a Postdoctoral Fellow in the Graduate School of Oceanography at the University of Rhode Island. Zoë is an applied behavioral ecologist and her research focuses on understanding how human activities that change the physical marine environment, influence the behavior and physiology of marine organisms. She holds a B.Sc. in Marine Biology at the University of Plymouth, a M.Sc. in Aquatic Resource Management at King's College London in 2010, and Ph.D. in Marine Science from the Scottish Association for Marine Science in conjunction with the University of Aberdeen.

Dr. Maria Eugenia Inda (inda@mit.edu) is a Biomedical Pew Postdoctoral Fellow in the Synthetic Biology Center at the Massachusetts Institute of Technology. In Timothy Lu's lab, she is investigating the bacteria dwelling in our intestines. Specifically, she's working to commandeer some of these microbes for use as "sentinels" that could be engineered to patrol the gut and recognize the molecular markers of inflammatory disease. She also serves as a Comm Lab Advisor, where she helps colleagues develop their communication skills. Outside her research, she loves capturing the beauty of everyday life with her Nikon D3400 camera. She holds a Ph.D. in Microbiology from the National University of Rosario in Argentina.

Dr. Corine Jackman (cjackman@andrew.cmu.edu) is a Presidential Postdoctoral Fellow at Carnegie Mellon University, working with Professor Shelley Anna in the department of Chemical Engineering in collaboration with Professor Luisa Hiller in the department of Biological Sciences. Corine's current research investigates microbial interactions that are representative of the human microbiome while employing a microfluidic platform. More specifically, she investigates cell-cell and cell-host interactions relating to pathogenic and commensal bacteria that colonize the upper and lower respiratory tract. Corine is a recipient of several awards including the Pre-Doctoral Ford Foundation Fellowship and the National Science Foundation – Graduate Research Fellowship. Corine holds a B.S. in Chemical Engineering from Howard University and a Ph.D. in Chemical Engineering from the University of Michigan.

Bryan D. James (bryan.james@ufl.edu/www.bryandjames.com/@bdbjames) is a Ph.D. Candidate and a National Heart, Lung, and Blood Institute Predoctoral Fellow at the University of Florida in the Department of Materials Science & Engineering. Currently, his work aims to understand the sex-specific cell-material interactions of vascular cells. Additionally, he has pioneered the use of nucleic acid-collagen complex (NACC) biomaterials for tissue engineering

and regenerative medicine. He loves cooking, photography, Gator football, and being outdoors. He holds a B.A.Sc. in Materials Engineering from the University of Toronto.

Dr. Evelyn Jensen (evelyn.jensen@yale.edu/@evie_jensen) is a Postdoctoral Fellow at Yale University in the Department of Ecology and Evolutionary Biology. Her research uses the tools of population genetics and phylogenetics to address critical questions in the evolution and conservation of wildlife species. Her current focus is on the Galapagos giant tortoises, a group of highly endangered species with several active conservation programs that we are informing using genetics. She holds a Ph.D. from the University of British Columbia Okanagan.

Dr. Judit Jimenez Sainz (judit.jimenezsainz@yale.edu) is an Associate Research Scientist at Yale Medical School in the Department of Therapeutic Radiology. A biochemist and geneticist, she is researching why certain women with BRCA2 mutations have higher risk to female cancers and how to prevent and cure it at the molecular level. She directs the E-visibility program in ECUSA, highlining novel research and researchers' endeavors. Judit is one of 75 women leaders selected for Homeward Bound Program 5 (#HB5). She gets energy from family, dance, nature, meditation and, spending time with others. She strongly values curiosity, creativity, critical thinking and exploring outside her comfort zone. Judit holds a Ph.D. from the Universidad de Valencia in Spain.

Dr. Wontae Joo (wjoo@mit.edu) is a Postdoctoral Fellow at MIT in the Olsen Research Group within the Department of Chemical Engineering. His graduate research was based on the development of new catalysts for polymerization, monomers and synthetic polymeric materials that respond efficiently to irradiation to produce products of value under the supervision of Professors Christopher W. Bielawski and C. Grant Willson. With his current research he aims to apply methods in polymer and biological synthesis to the design of new materials. He is currently working on advancing polymeric nanoparticles, engineered proteins and biohybrid materials to address challenges in hemostasis. His other research involves development of new sustainable polymeric materials to resolve rapidly growing global accumulation of plastic waste. Wontae holds a Ph.D. in Organic Chemistry from the University of Texas at Austin.

Dr. Bat-Erdene Jugder (bat-erdene.jugder@childrens.harvard.edu) is a Postdoctoral Research Fellow in Dr Paula Watnick's laboratory in the Division of Infectious Diseases at Boston Children's Hospital and a Research Fellow in Pediatrics at Harvard Medical School. In the Watnick lab, he wanted to further expand his existing expertise in bacterial anaerobic respiration to intestinal host microbe interactions, using *Drosophila* as a model organism. In his primary research project, he has been studying regulation of key host metabolic and immune responses by intestinal microbes. He has made the interesting discovery on how sensing of microbial acetate by enteroendocrine cells activates innate immune and metabolic responses in the gut. Bat-Erdene holds a Ph.D. from the University of New South Wales in Australia.

Dr. Dominik Juraschek (djuraschek@seas.harvard.edu) is a Postdoctoral Scholar in the Department of Engineering and Applied Sciences at Harvard University.

Dr. Alice Kane (alice_kane@hms.harvard.edu) Is a Postdoctoral Fellow in the Sinclair Lab at Harvard Medical School developing predictive models of biological age and lifespan in mice. Her graduate research examined the effect of aging on acetaminophen hepatotoxicity. She began her career in Dr. Susan Howlett's lab at Dalhousie University in Canada for her first fellowship exploring the effects of age and frailty on the heart, and developing tools to assess frailty in aging rodent models. Alice holds a Ph.D. at the University of Sydney in Australia.

Dr. Utkarsh Kapoor (utkarsk@udel.edu) is a Postdoctoral Fellow at University of Delaware working with Professor Arthi Jayaraman where he is studying development of coarse-grained models for polymeric materials. His graduate work focused on molecular design of novel non-ideal ionic liquid solvents with tunable phase equilibria properties for improving gas separation processes. He has received multiple awards and fellowships for his research including the OSU Graduate Research Excellence Award in 2019 and OSU Foundation Distinguished Graduate Fellowship from 2017-2019. His research vision at the interface of engineering, material science and medicine focuses on applying fundamental engineering principles to design targeted materials and address challenges in the clean-energy – health nexus, primarily in the areas of polymer electrolyte batteries and ophthalmology. Utkarsh holds a Ph.D. in Chemical Engineering from Oklahoma State University.

Dr. Kazuyuki Kasahara (kasahara2@wisc.edu) is a Postdoctoral Fellow in Rey's Lab at the University of Wisconsin-Madison. His research interest is host-microbiome interactions in cardiovascular diseases. He earned his undergraduate degree from Kobe University in Japan, and his MD from the same university. After completing his residency and fellowship in Cardiology, he completed a Ph.D. in Vascular Biology at Kobe Graduate School of Medicine in Japan.

Dr. Lauren Kennedy-Metz (lrkennedy.metz@gmail.com) is a Postdoctoral Fellow affiliated with the Department of Surgery at Harvard Medical School, and working with Dr. Marco A. Zenati, Chief of Cardiothoracic Surgery in the Division of Cardiac Surgery at the VA Boston Healthcare System in West Roxbury. Her research is ultimately focused on enhancing patient safety by introducing and evaluating cognitive aids aimed at enhancing surgical teams' cognitive and non-technical performance. The primary project in the multi-institutional research group at the VA focuses on an adaptive intra-operative procedural checklist designed to provide guidance to the cardiac surgery team during cardiac surgery operations including aortic valve replacement and coronary artery bypass graft surgery. They are interested in the team dynamics, including physiological measures of cognitive workload, communication patterns, situational awareness, and patient outcomes. Lauren holds a Ph.D. from Virginia Polytechnic Institute and State University.

Dr. Kenry (kenry@dfci.harvard.edu) is a Research Fellow at the Department of Imaging at the Dana-Farber Cancer Institute and Harvard Medical School. His research focuses on the understanding and engineering of nano-bio interactions for functional disease theranostics. He holds a B.Eng. in Electrical and Electronic Engineering from Nanyang Technological University in Singapore and a Ph.D. in Biomedical Engineering from the National University of Singapore.

Dr. Megan E. Kizer (mkizer@mit.edu) is a Postdoctoral Fellow in Barbara Imperiali's Lab at the Massachusetts Institute of Technology, where her research focuses on the development of chemical and biochemical tools to detect elusive pathogenic glycans. Her graduate research focused on the use of nucleic acids as biosensors and biotechnological tools. Megan holds a Ph.D. from Rensselaer Polytechnic Institute.

Anna Marie LaChance (anna.marie@uconn.edu/@ThatAnnaMarie) is a third-year Ph.D. Student in Chemical Engineering at the University of Connecticut. She is studying polymer nanocomposite materials for vapor barrier applications. She is also interested in engineering education and how students make connections between what they're studying in class and the real-world applications in which that material is used. She holds a B.S. in Chemical Engineering from the University of Connecticut.

Dr. Kai Lang (kai.lang@bc.edu/kailangphd.com) is a Research Associate in Prof. X. Peter Zhang's group at Boston College. The major research direction he feels enthusiastic about is the development of the novel, biomimetic catalysts, which provides one of the ultimate solutions to many long-lasting challenges encountered by small molecule catalysis. To this end, his research experience is highlighted in the development of this class of catalysts as well as the demonstration of their unique catalytic properties in synthetic chemistry applications involving both ionic and radical processes. Kai holds a Ph.D. at the University of Florida.

Benjamin Lienhard (blienhar@mit.edu) is a Ph.D. student in the Engineering Quantum Systems group at the Massachusetts Institute of Technology. His research interests are in quantum applications and control with a focus on quantum computing. He received his B.S. and M.S. from the department of Information Technology and Electrical Engineering at ETH Zurich in Switzerland.

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CoV2 by traptamer technology. He has already published 10 first-authored papers and has extensive teaching and tutoring experience for undergraduate and graduate students. He serves as the Guest Editor of the *Journal of Visualized Experiments*, and referee for several international scientific journals. Jian received his Ph.D. from the Biochemistry and Biophysics Graduate Program at Rensselaer Polytechnic Institute.

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