APRIL 2024 HEALTH SECTOR ADVISORY COUNCIL

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Images: Smithsonian, Duke Medical Center Archives, Sanofi, Duke University.

Duke Fuqua School of Business Washington Duke Inn & Golf Club 3001 Cameron Blvd, Durham, NC 27705 April 5, 2024

8:30 a.m.	Light Breakfast
9:00 a.m.	Welcome and Updates Bill Boulding Dean The Fuqua School of Business
	David Ridley Faculty Director, Health Sector Management The Fuqua School of Business
9:10 a.m.	Introductions
9:30 a.m.	Council Member Show & Tell: "Implications of the Change Healthcare Cyberattack." Aaron McKethan (Aledade)
10:00 a.m.	Duke Student Innovation Jamie Jones (Duke I&E) & Runo Obafemi (Duke Student)
10:35 a.m.	Break
10:55 a.m.	Duke Research: "FDA is Not Inspecting Overseas. What Should We Do?" David Ridley
11:30 a.m.	Duke Research: "A Universal Vaccine" Kevin Saunders (Duke Vaccine Institute)
12:10 p.m.	Concluding comments David Ridley
12:20 p.m.	Adjourn Lunch Buffet in the Vista Center

Speakers In presentation order



Bill Boulding, PhD JB Fuqua Professor of Business Administration and Dean Duke Fuqua School of Business

Bill Boulding is the JB Fuqua Professor of Business Administration and Dean at The Fuqua School of Business, Duke University. William "Bill" Boulding is an accomplished scholar with a passion for helping advance business as a force for good.

He has advocated at the top levels of government, industry and academia for ways that enable business to improve society. Bill's strong belief in creating future business leaders who have the ability to bring people who are very different together to work toward a common goal led to the school's number-one ranking by *Bloomberg Businessweek* in 2014.

Bill served as a member of the World Economic Forum's Council on Values and the board of the Graduate Management Admission Council (GMAC[®]), which is the organization that administers the GMAT exam. He is currently chair of the Board of Directors of Duke Corporate Education, board member of The New York Climate Exchange, and serves on Swarthmore College's Board of Managers.

Bill received his BA in Economics from Swarthmore College and his PhD in Managerial Sciences and Applied Economics from the Wharton School, University of Pennsylvania.



Aaron McKethan, PhD CEO Aledade Plus

Aaron McKethan is the CEO of Aledade Plus, the company's health services unit. His prior roles in state and federal government, academia, and industry have centered on population health. Prior to joining Aledade, Aaron co-founded and led two health care data science and technology companies (NoviSci and RxAnte).

Aaron holds a PhD from the University of North Carolina at Chapel Hill, where he also received his undergraduate degree. He is an adjunct professor in population health at the Duke School of Medicine and Senior Policy Fellow at the Duke Margolis Center for Health Policy. He also serves on several non-profit boards, including the Samaritan Health Center in Durham, NC.

Speakers



Jamie N. Jones, PhD Director, Innovation & Entrepreneurship (I&E) Duke University

Jamie serves as Director for Duke Innovation & Entrepreneurship (I&E) and is an Associate Professor of the Practice of Management at the Fuqua School of Business.

Jamie previously served as Executive Director of the Fuqua Center for Entrepreneurship and Innovation (CEI) where she launched initiatives addressing

barriers to entrepreneurial action for historically marginalized communities, specifically *FoundHER* and *pitch: A competition for Black founders.* She teaches courses on new venture formation and execution: *New Venture Discovery, New Venture Development,* and *Entrepreneurial Execution,* and was honored with the Excellence in Teaching Award (elective course) by the Fuqua class of 2021.

Prior to joining Duke, Jamie served as the Executive Director of the Liu Idea Lab for Innovation & Entrepreneurship (Lilie) at Rice University where she focused on developing curricular and co-curricular programs for students and faculty across the university. She taught courses on *Financing the Startup Venture* and *Design Thinking*, as well as managed the student-led Rice Venture Fund.

Prior to joining Rice, Jamie was an Innovation Advisor at RTI International, a leading nonprofit research institute based in North Carolina, where she supported companies, governments, and non-governmental organizations in their quest to commercialize technology-driven new products.

Jamie has experience combining design thinking and Lean Startup practices to optimize business models. She has worked in India, East and West Africa, and Latin America on health, agriculture, education, and water-focused ventures. Her contributions have been recognized by the Triangle Business Journal 40 Under 40.



Runo Obafemi Co-founder Betacare

Runo Obafemi, a Duke MBA student '25 (HSM), blends her expertise in technology and passion for healthcare to tackle social challenges.

With a background in Computer Science and prior experience in risk consulting at KPMG, she co-founded Betacare, a Nigerian-based telemedicine company.

Committed to democratizing healthcare access in sub-Saharan Africa, Runo will return to consulting and will join BCG this summer to deepen her business expertise. Ultimately, she aspires to become a social entrepreneur, scaling Betacare's impact globally and revolutionizing health care in developing countries.

Speakers



David Ridley, PhD Faculty Director, Center for Health Sector Management Duke Fuqua School of Business

David Ridley is the Faculty Director for the Center for Health Sector Management at Duke University's Fuqua School of Business. David is dedicated to creating innovative policy and business tools to address health care problems. He focuses on incentives for innovation and quality, as well as pricing.

David and his colleagues have published two papers that became law. In 2006, David (with Jeffrey Moe and Henry Grabowski) proposed the Food and Drug Administration's priority review voucher program. In 2017, David (with Jeffrey Moe and Nick Hamon) proposed the Environmental Protection Agency's vector expedited review voucher program. His research has been supported by the Bill & Melinda Gates Foundation and the National Institutes of Health.

David teaches courses on health care policy and business strategy to Duke University graduate students. He earned his doctorate in economics from Duke University.



Kevin O. Saunders, PhD Associate Director, Director of the Laboratory of Protein Expression, and Faculty Chairperson for Diversity, Equity, and Inclusion Duke Human Vaccine Institute

Dr. Kevin O. Saunders graduated from Davidson College in 2005 with a Bachelor of Science in Biology. At Davidson College, he performed research identifying the genetic basis of infertility. Dr. Saunders completed his doctoral research on CDS+ T cell immunity against HIV-1 infection with Dr. Georgia Tomaras at Duke

University in 2010. He subsequently trained as a postdoctoral fellow in the laboratories of Ors; Gary Nabel and John Mascola at the National Institutes of Health NIAID Vaccine Research Center.

In 2014, Dr. Saunders joined the faculty at the Duke Human Vaccine Institute as a medical instructor. In this role, he analyzed antibody responses in vaccinated macaques, which led to the identification of glycan-dependent HIV antibodies induced by vaccination. Dr. Saunders was appointed as a non-tenure track Assistant Professor of Surgery and the Director of the Laboratory of Protein Expression in the Duke Human Vaccine Institute in 2015. He successfully transitioned to a tenure-track appointment in 2018, and was later promoted to the rank of Associate Professor with tenure in Surgery in 2022.

In 2024, Dr. Saunders became the Norman L Letvin Professor in Immunology and Infectious Diseases Research in Surgery and the Duke Human Vaccine Institute. Dr. Saunders serves within the Duke Human Vaccine Institute as the institute's Associate Director, Director of the Laboratory of Protein Expression, and Faculty Chairperson for Diversity, Equity, and Inclusion. *(continue on next page)*

Speakers

His current research interests include vaccine and antibody development to combat viral infections. Dr. Saunders has given invited lectures on his research at international conferences including International Society for Vaccines Congress, International AIDS Society, HIVR4P, and IDWeek meetings. Dr. Saunders has appeared on local, national, and international television and radio programs to discuss vaccines. He has authored book chapters and numerous journal articles; holds patents on vaccine design concepts and antiviral antibodies; and has garnered awards such as the 2022 International Society for Vaccines Paper of the Year.

2024 HSAC Members

Adarsh Babu Worldwide Product Director DePuy Synthes

Charles Bass Senior Director Global Commercial Strategy Neuroscience Janssen Pharmaceutical

Durga Bobba Vice President, Vaccines Commercialization Lead *GSK*

Bradley Campbell President, & Chief Executive Officer *Amicus Therapeutics*

Brian Caveney President, LabCorp Diagnostics, & Chief Medical Officer *Laboratory Corporation of America*

Annette DuBard Senior Advisor & Vice President Aledade

Bill Gradison Former Representative *US Congress* Brad Hirsch Head of Product & Implementation *Verily*

Jim Kinser Assistant Vice President, Strategy & Innovation *HCA Healthcare*

Christopher Martin President American Health Associates

Aaron McKethan CEO, Aledade Plus; GM, New Ventures *Aledade*

David Price Former Representative US Congress

Bernie Tobin General Manager *Natera*

Duke University Affiliates

George Abercrombie

Adjunct Professor Duke Fuqua School of Business Former CEO, Roche HSAC Co-Founder

Bill Boulding Dean J.B. Fuqua Professor of Marketing *Duke Fuqua School of Business*

Henry Eyring Assistant Professor *Duke Fuqua School of Business*

Mary Frances Luce

Associate Faculty Director Center for Health Sector Management Robert A. Ingram Professor of Business Duke Fugua School of Business

Mark McClellan

Director, Duke-Margolis Center for Health Policy Professor of Business, Medicine and Policy *Duke University*

Jeffrey Moe

Professor of the Practice of Global Health Duke Global Health Institute HSAC Co-Founder

David Ridley

Faculty Director Center for Health Sector Management Dr. and Mrs. Frank A. Riddick Fellow Duke Fuqua School of Business

Devdutta Sangvai

Associate Chief Medical Officer Professor, Family Medicine and Community Health Duke University Health System

Erica Taylor

Associate Chief Medical Officer, Private Diagnostic Clinic Chief of Surgery, *Duke Raleigh*

Krishna Udayakumar

Associate Professor, Global Health and Medicine Director, Global Health Innovation Center *Duke Global Health Institute*

Charlene Wong

Assistant Secretary for Children and Families, NCDHHS Associate Professor, Pediatrics Duke University Health System

Gift Guide: All products were developed by Duke entrepreneurs

AHAV COOKIE DOUGH BITES

AHAV (Founder and CEO Liam Frumkin '25)



AHAV is all about healthy snacks with recognizable ingredients that actually satisfy your cravings! AHAV cookie dough bites are vegan, gluten free, high protein, high fiber, have healthy fats, and are made with only 5-6 ingredients. Inspired by founder Liam Frumkin's journey with an eating disorder, AHAV donates a portion of all proceeds to the National Eating Disorder Association. Life is complicated—our food shouldn't be!

BIENA SNACKS TASTY THINS

Biena Snacks (Founder and CEO Poorvi Patodia MBA '05)



Biena Snacks are the perfect combination of healthy and delicious snacking. Tasty Thins are crispy veggie chips with 35 chips per serving so you can snack more and enjoy more. For a satisfying and nutritious snack, try the Roasted Chickpeas, packed with protein and fiber, and crafted with flavorful seasonings. Biena is distributed in 15,000 stores around the country!

BIG SPOON ROASTERS NUT BUTTERS

Big Spoon Roasters (Co-Founder and COO Megan Lynam Overbay MBA '03)



Big Spoon Roasters makes handcrafted nut butters and snack bars made from scratch with world-class ingredients sourced directly from local and like-minded vendors who share a dedication to authentic quality and sustainability.

YITTO PAWS ORGANIC DOG TREATS

Yitto Paws (Founder <u>Bruce Von Stein</u> MBA '93)



Founded with a mission to prioritize the health and happiness of dogs, Yitto Paws uses the safest, most delicious, most nutritious human-grade ingredients. Explore popular granola-based dog treats, gear, safety products, apparel, books, and greeting cards from Yitto Paws.

THE WOOBLES PENGUIN CROCHET KIT

The Woobles (Co-Founders Justine Tiu BSE '11 and Adrian Zhang BSE '11)



Pierre the Penguin and his buddies have come to life in the hands of 400,000+ crochet beginners. And with the help of step-by-step video instructions, he'll soon be sliding his way straight into yours as well! The Woobles is about more than just learning to crochet. It's about proving to yourself that you can always learn something new.



Duke 1924-2024

A Century of Innovation at DUKE University

Duke University has always been known as a place of high-quality education and research, but perhaps less known is the impact Duke innovators and their innovations have had in the marketplace and for public benefit. From new therapies to engineering marvels and everything in between, Duke inventions – and more recently start-ups created to commercialize these inventions – are making a positive impact on society.

This physical exhibit is intended to highlight a variety of inventions and inventors from across Duke. Even more innovations, products, and start-ups can be found on our digital timeline by scanning the QR code below.



$\mathrm{Duke}|_{\&\ \mathrm{commercialization}}^{\mathrm{translation}}$

Learn more about how OTC supports Duke inventors on our website: **otc.duke.edu**

1924 Duke University established James B. Duke highlights his wish for an engineerin



Chronophone An automated approach to reading out the time to callers

Pernicious Anemia book Duke University researchers focus on studying pernicious anemia after the disease killed James B. Duke, discovering a new treatment a diet of calf liver.



1925

1927

1930s

1936

1937

Annual Engineers' Show Student-organized displays showcasing technological marvels like television to the Duke and Durham community. These shows were put on annually for several decades.



UV for hospital room sterilization Pioneering the use of ultraviolet radiation to sterilize operating room



The Preston Robert Tisch Brain Tumor Center created One of the first brain tumor research and clinical programs in the United States, this center houses over 250 full-time employees dedicated to neuro-oncology research and care.

The Preston Robert Tisch Brain Tumor Center

1938 Equine encephalomyelitis vaccine A kiled-virus vaccine for "blind staggers," Saves hundreds of thousands of horses and heigs confirm that killed-virus vaccines are safe and effective. Dorothy Beard research fund is established with the royabilities from patent licensed to the manufacturer, Lederle Labs.



1942 **G-suit for pilots** 1970 Major contributions to the creation of suits that prevent pilot and astronaut blackouts during high g-force maneuvers. to nk Gregory Hall, acting Chair of Biology – 1945 1973 Dada Balantists Rid Ris Gauss Ry Caroline of Françoide Ballad **Frangible bullet for** 1943 aerial gunner practice A bullet that breaks upon impact, for use during training. Developed for WWI, this is still Duke's largest military research project – 13 million rounds are fired by student gunners without a single target plane pilot injury. Invented by Paul M. Gross, Char of Chemistry 1945 First patent assigned directly 1976 to Duke University This patent protects a novel way to extract gelose from seaweed. DUKE UNIVERSITY) MARINE LABORATORY -15 1982 1954 **The Duke Inhaler** Developed for handheld, self-administered delivery of the painkiller Trilene, manufactured by Ayerst Laboratories. Invented by C. Ronal Stephen, on early Chief of Anesthesiology *** 1957 **Blood heat exchanger** 1984 1968 **The Medical Record and** 1986 **Duke Hospital Information** and System (DHIS) Duke University is one of the first hospital systems to employ electronic medical record and also among the first to computerize its hospital management. Partners at IBM later commercialize DHIS for other hospital system 1976 1987 1969 **Duke Databank for Cardiovascular Disease** The world's oldest and largest cardiovascular database, DDCD introduces a novel, computer-assisted, data-driven approach to generating evidence ular clinical research stud

Foundational work in head trauma Starting with the cranial bone, Duke researchers describe the mechanical properties of the head, neck, and spinal cord. These models inform the design of modern protective equipment from football helmets to airbags. Let *by jums Killimer, Cher of Biometical Environment* **Discovery of G protein-coupled receptors** Develops the foundation for our understanding of how cell signaling functions, leading to a Nobel Prize and founding of two companies: Trevena (2007) and Septema (2022). G protein-coupled receptors are the target for over a third of all medications today. A STATE **M**Trevena septerna Phased-array imaging Foundational research that revolutionizes cardiac imaging and paves the way for future Duke ultrasound developments. PRODUCTS Grieshaber system surgical tools (Robert Machemer, Ophthalmology) (1979) Artificial gill system A BREATH OF Prototyped This sponge-like material includes hemoglobin to extract oxygen from water, for use by divers to breathe underwater. The technology is licensed to Aquianatics for \$11. 9 **Duke-RTI Cochlear Implant Program** Collaborative research improves implants for hearing - in particular, signal processing breakthroughs that have become standard in the industry. Office of Technology Transfer established Originally established on the medical side of Duke, the tech transfer office was revitalized several times and has been known by other names – like the Office of Science and Technology and the Office of Licensing and Ventures. Sphinx Pharmaceuticals Duke's first biotech spinout, Sphinx develops several potential cancer therapeutics. It has a \$75M IPO in 1991 - the biggest IPO in state history up to that point. It is then acquired by Eli Lilly in 1994. START-UPS Aquanatics (1983) Sphinx Pharmaceuticals (1987) IPO, 1991 – Acquired by Eli Lilly, 1994 PRODUCTS Household sponge infused with cleaner (Joseph and Celia Bonaventura, Cell Biology and Earth & Ocean Sciences) (1987) simple green



HSAC Fall 2023: Transforming Healthcare Payment



























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Center for Health Sector Management

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For more information, visit www.fuqua.duke.edu