

Director's Report to the National Advisory Dental and Craniofacial Research Council September 2023

NIH/HHS UPDATE

[NIH Launches Build UP Trust Challenge — Register by November 14.](#) The NIH Build UP Trust Challenge is seeking solutions to build trust and improve engagement with historically underserved communities. NIH will award a total of up to \$1.25 million. To submit an idea, participants must register by Tuesday, November 14, 2023. All submissions are due Tuesday, December 5, 2023.

[Study Provides Deeper Insight into Long COVID.](#) Initial findings from an NIH-funded study of 9,764 Americans have revealed new details about Long COVID, the post-infection set of conditions that can last for months or years. The researchers identified common symptoms, including fatigue, brain fog, and loss of smell or taste, and developed a symptom-based scoring system that could improve future diagnostics and treatments. The team also found that Long COVID was more common and severe in study participants infected before the Omicron variant emerged in 2021.

[NIH Program to Investigate Genetic Variation in Normal Human Cells and Tissues.](#) To discover and catalog the breadth of genetic variation in the cells and tissues throughout our bodies, the NIH Common Fund launched the Somatic Mosaicism across Human Tissues ([SMaHT](#)) Network. Somatic mosaicism is a type of genetic variation that arises when an organism's non-reproductive cells differ from each other genetically. This can alter how cells function and may influence human development, disease, and aging. NIH has issued 22 awards totaling \$140 million over five years to establish the SMaHT Network.

[Scientists Release a New Human "Pangenome" Reference.](#) Researchers have released a new high-quality collection of reference human genome sequences that captures substantially more diversity from different human populations than what was previously available. The new "pangenome" reference includes genome sequences of 47 people, with the researchers pursuing the goal of increasing that number to 350 by mid-2024. The work was led by the international Human Pangenome Reference Consortium, which is supported by the National Human Genome Research Institute.

[More Early Stage Investigators Supported in 2022.](#) A recent analysis of NIH's efforts to promote the growth and diversity of the next generation of biomedical researchers showed that in 2022, the number of NIH-supported first-time principal investigators increased by 6.3% compared to 2021. Also, more Black early stage investigators received funding in 2022 than in previous years. However, the overall number of Black applicants and awardees remained markedly lower than those of their White and Asian counterparts.

[Funding Opportunity Announcements Get a New Name.](#) Funding opportunity announcements, or FOAs, which advertise available research grant support, have undergone a name change. The announcements formerly known as FOAs are now called "notices of funding opportunities," or "NOFOs." NIH is joining other federal agencies in using the term "NOFO" in an effort to standardize terminology across the government. Both terms will be in use while NIH works to update websites and resources.

NIDCR UPDATE

Institute News

[Celebrating NIDCR Trainees: Past, Present, and Future — October 10-11, 2023](#). Prospective and current NIDCR-supported trainees from all career stages are invited to attend the NIDCR 75th Anniversary Trainee Symposium: Celebrating NIDCR Trainees: Past, Present, and Future, on Tuesday, October 10 and Wednesday, October 11, 2023. This virtual, free event will offer professional development and networking with peers, NIDCR staff, and leadership, and will feature Nobel laureate [Ardem Patapoutian, Ph.D.](#), as the keynote speaker. To register, access the agenda, and more, visit the [event page](#).

[Celebrate 25 Years of Fibrous Dysplasia/McCune-Albright Research](#). On September 11, NIDCR held a symposium to celebrate NIDCR's 25-year legacy of research to understand and treat fibrous dysplasia/McCune-Albright syndrome (FD/MAS). Among the speakers were Brian Kobilka, M.D., who won the 2012 Nobel Prize in Chemistry for his work on G-protein-coupled receptors. A reception and historical poster session followed the symposium. For more details, including a video recording of the event, visit the [symposium webpage](#).

[NIDCR Seeks Input on Data Storage and Sharing by September 25](#). NIDCR invites recommendations from the research community on the needs and best practices for dental, oral, and craniofacial data storage, management, infrastructure, sustainability, and tools. The goal is to build and support a data ecosystem that better enables investigators and clinicians to extract insights from datasets to improve oral and overall health. [Respond](#) by Monday, September 25, 2023.

[Intramural Training and Career Opportunities Webinar — September 26](#). Join NIDCR Training Director Belinda Hauser, Ph.D., and NIDCR Deputy Director Jennifer Webster-Cyriaque, D.D.S., Ph.D., on Tuesday, September 26 from 1:00 p.m.–2:45 p.m. for a webinar about dental, oral, and craniofacial research training opportunities in NIDCR labs on the NIH campus. Attendees will learn how to apply for these opportunities and will hear from a former NIDCR trainee about their experiences. Registration is required. To sign up, visit the [registration page](#).

[NIDCR Celebrated the Past and Charted the Future at Anniversary Events](#). NIDCR kicked off its yearlong anniversary celebration with symposia in March and June. On March 17, former NIDCR directors, current leaders, and investigators gathered at the AADOCR 2023 Annual Meeting to reflect on the institute's accomplishments and scientific advances that have shaped dentistry and medicine. On June 27, leaders from NIH, the scientific community, and professional society and federal partners convened at NIH to highlight NIDCR's efforts to improve the nation's oral health and well-being, drive health policy, foster new generations of researchers, and more. For event recordings, photos, and more, visit [NIDCR's 75th anniversary webpage](#).

[NIDCR Director and Scientists Recognized for Distinguished Careers](#). On June 21, NIDCR Director Rena D'Souza, D.D.S., Ph.D., and NIDCR investigators John Chiorini, Ph.D., and Niki Moutsopolous, D.D.S., Ph.D., received International Association for Dental Research (IADR) Distinguished Scientist Awards, among the highest honors bestowed by the organization. Dr. D'Souza was recognized for her contributions to craniofacial biology research. The award is her second, a rare feat. Drs. Chiorini and Moutsopolous were honored for their research on salivary gland biology and periodontitis, respectively.

NIDCR Supported Science Advances

[A Quarter-Century Quest to Treat a Rare Disease.](#) Little did NIDCR investigator Pamela Robey, Ph.D., know in 1993 that by opening a box full of bone samples collected from patients with a rare disease, she would spark a decades-long quest to understand and treat the condition at NIDCR. Called fibrous dysplasia/McCune-Albright syndrome, the rare disease affects the bones, skin, and endocrine system. For the past 25 years, NIDCR researchers have been untangling the underlying disease processes, testing potential treatments in clinical trials, and delivering hope to patients.

[Legacies of the Pandemic.](#) In early 2020, scientists around the globe raced to end the COVID-19 pandemic. Among them were NIDCR-supported researchers who pivoted from their regular work to study SARS-CoV-2 infection processes and invent new testing methods to monitor the spread of the virus. These studies are helping pave the way to better interventions, answers on long-COVID, ways to address COVID-related health disparities, and approaches for readying the world for future pandemics.

[Cracking the Code to the Human Face.](#) What shapes our faces? Six decades' worth of NIDCR research is helping scientists crack the code of facial appearance and craniofacial conditions such as cleft lip with or without cleft palate. From untangling the genetic and environmental factors underlying craniofacial anomalies to improving surgical interventions and outcomes, scientists are paving the way for tailored prevention, diagnosis, and treatment for dental, oral, and craniofacial disorders.

[Identifying a New Contributor to Tooth Decay.](#) In an NIDCR-supported study, researchers identified a bacterial duo — *Selenomonas sputigena* (*S. sputigena*) and *Streptococcus mutans* (*S. mutans*) — linked to tooth decay in children. They found that *S. sputigena* formed a honeycomb-like structure that encases *S. mutans* to increase and concentrate the production of tooth-damaging acid, which boosted tooth decay in mice. Breaking the relationship between the two bacteria could be a strategy for preventing dental cavities.

[Building Back Broken Bones.](#) Disrupting a sugar-laden protein called biglycan impaired bone growth and fracture healing in mice, according to a recent study led by former NIDCR investigator Marian Young, Ph.D., who retired in May. The findings point to biglycan's importance for building strong and healthy bones and could provide insight into better treatments for fractures and diseases marked by bone loss, such as osteoporosis. In an [I Am Intramural Blog](#) post, Dr. Young spoke about more about biglycan, which she and her colleagues discovered in the early 1980s.

Personnel Update

Indu Ambudkar, Ph.D., M.Sc., has been named acting director of NIDCR's Division of Intramural Research (DIR). She was appointed as deputy scientific director in June 2023. Dr. Ambudkar received her master's degree from Lucknow University and her doctorate from Madurai Kamaraj University in India. She joined NIDCR in 1985 as a tenure-track research fellow and is currently the chief of the Secretary Physiology Section. Her research focuses on the role of calcium signaling in salivary gland function and dysfunction. Dr. Ambudkar is a council member of the NIH Federation of Asian American, Native Hawaiian, and Pacific Islander Network and has served on the NIH-Diversity and Equity Committee and the NIH-women Scientific Advisory Committee.

Jay Chiorini, Ph.D., was tapped as acting deputy scientific director of DIR on September 1, 2023. He received his bachelor's degree from the University of California, Santa Cruz, and his doctorate from George Washington University. Dr. Chiorini joined NIDCR as a tenure-track investigator in 1999 and was named Chief of the Adeno-Associated Virus Biology Section in 2006. In 2022, he was appointed as associate scientific director for Scientific Resources. His research focuses on delivering therapeutic genes through adeno-associated virus-mediated gene therapy to treat dry mouth from radiation treatment for head and neck cancer and other salivary gland disorders.

Matthew Hoffman, B.D.S., Ph.D., stepped down as scientific director of DIR on August 31, 2023, returning to his laboratory to wrap up projects in anticipation of retiring in 2024. Dr. Hoffman joined NIDCR in 1994 as a postdoctoral fellow and established his laboratory in 2004 studying extracellular matrix and cell differentiation. He was appointed deputy scientific director in 2016 and then scientific director in 2018. During his tenure as scientific director, Dr. Hoffman strengthened the scientific program by supporting the hire of eight tenure-track investigators, including two Lasker Clinical Scholars and six Stadtman Investigators, as well as NIDCR's first Independent Research Scholar. He implemented the administrative reorganization of DIR and the creation of associate scientific director positions to provide NIDCR investigators leadership opportunities and administrative experience.

Yun Mei, M.D., is serving as acting chief of the Scientific Review Branch in the Division of Extramural Activities, overseeing the review of grant applications submitted to NIDCR. Dr. Mei first joined NIDCR as a technology transfer and patent specialist and then became a scientific review officer. She received her medical degree from Wannan Medical College, China, and worked as a clinical pathologist prior to coming to the United States and has performed biomedical research in a biotech company and several academic laboratories before joining NIDCR.

Zubaida Saifudeen, Ph.D., joined NIDCR as the director of the Developmental Biology and Genetics Program, Translational Genomic Research Branch, Division of Extramural Research. Dr. Saifudeen received her bachelor's degree from St. Xavier's College, University of Bombay, India, her master's degree from Northeastern University, and her doctorate from Tulane University. Dr. Saifudeen comes to NIDCR from the NIH Center for Scientific Review, where she was a scientific review officer. Prior to joining NIH, she was an associate professor of pediatrics at Tulane University, where she worked as a principal investigator studying kidney development.