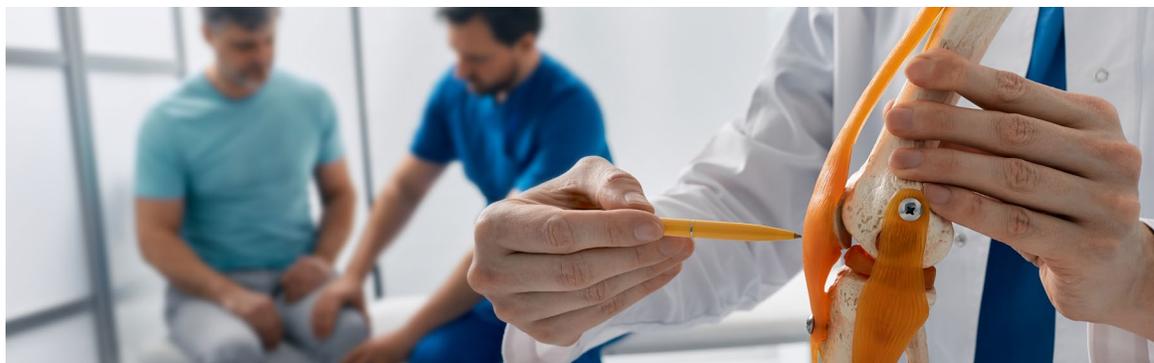


JOINT *Matters*



Science Highlights 2023

The Arthritis Foundation is committed to supporting endeavors to help people with arthritis live a better quality of life. In 2023, the Foundation led several research and education initiatives that are essential to finding potential treatments for arthritis, addressing the existing health inequities across people living with arthritis and reducing the shortage in the rheumatology workforce.

On World Arthritis Day, October 12, the Arthritis Foundation announced the launch of the first-ever clinical trial directed and sponsored by the Foundation. It will focus on patients at high risk for post-traumatic osteoarthritis in the knee. The [Post-Injury Knee Arthritis Severity Outcomes \(PIKASO\)](#) trial is a multi-year, \$20 million investment in creating an infrastructure to allow leading research centers to execute randomized clinical trials to test the efficacy of metformin in delaying the onset of osteoarthritis. In addition, the Foundation, with the [American Orthopaedic Foot & Ankle Society](#), awarded the first-ever [Ankle Arthritis Think Tank Research Grants](#). The three grants, totaling almost \$200,000 over two years, will support innovative clinical research to stop or slow ankle osteoarthritis.

Advancing the Foundation's academic presence in the field of osteoarthritis, Arthritis Foundation's Jason Kim, PhD, vice president of osteoarthritis programs, and Mathias Bostrom, MD, associate surgeon-in-chief at

the Hospital for Special Surgery, guest-edited a series of research articles in [The Musculoskeletal Journal of Hospital for Special Surgery](#) on important topics covered in the 2023 Hip Osteoarthritis Clinical Studies Conference, including the epidemiology, detection and rehabilitation of people with hip osteoarthritis. Of the 15 articles, four were authored by Foundation staff.

Focusing on research gaps in juvenile arthritis and other childhood rheumatic diseases, the Arthritis Foundation partnered with the [Childhood Arthritis and Rheumatology Research Alliance \(CARRA\)](#) to award 10 grants, amounting to almost \$1.2 million, to investigators who will probe into topics ranging from developing strategies to improve pediatric rheumatology care to understanding patterns for tapering off arthritis medications in children. The Foundation also identified three investigators for research awards whose work will provide a better understanding of the biological mechanisms underlying the development of rheumatoid arthritis and patients' medication-induced side effects.

Addressing the rheumatology workforce deficit, the Arthritis Foundation dedicated three clinical rheumatology [fellowship awards](#) to increase the number of rheumatologists in the health care workforce and support physicians committed to providing rheumatology care to historically underserved populations. Each 2023

Clinical Rheumatology Fellowship award, made possible by the generous contributions of donors to the Arthritis Foundation, is a \$150,000 grant disbursed over three years.

To cultivate the next generation of health care professionals that reflects the diversity of arthritis patients, the Foundation's diversity, equity and inclusion planning grants this year, totaling almost \$850,000, will help in exposing more undergraduates, medical students, pediatric and internal medicine residents and rheumatology fellows from groups historically underrepresented in medicine to rheumatology and provide continued mentoring to these trainees from

collaborating Divisions of Rheumatology across institutions.

Looking ahead to 2024, the Arthritis Foundation will extend its portfolio to include a research summit for its Rheumatoid Arthritis Research Program. In addition, the Foundation will expand its clinical fellowship program to support orthopedic surgical fellows from diverse backgrounds. Further, the PIKASO trial will include more sites for patient recruitment.

To read more about the Arthritis Foundation's science programs and activities, please visit arthritis.org/science.

Hidden Figures

By 2040, the number of adults in the United States who are 65 and older is projected to be 22% of the population compared to 16.8% today. The growing percentage of older people increases the impact of diseases that rise in prevalence with age, such as osteoarthritis. However, the reported number of individuals living with this disease might be the tip of the iceberg.

"The prevalence of arthritis is underestimated," says David Felson, MD, MPH, professor of medicine at Boston University. "In big national surveys, people are asked if doctors have diagnosed them with arthritis, and the problem is that this process misses a lot of people who may not remember they have a diagnosis or who have arthritis and never sought a physician's diagnosis."

Using expanded surveillance and sophisticated mathematical modeling, Dr. Felson and his colleague S. Reza Jafarzadeh, DVM, MPVM, PhD, assistant professor of medicine at Boston University, showed that the [prevalence of arthritis](#) is likely to be 68% higher than that reported by the 2015 National Health Interview Survey, implying that osteoarthritis is a much bigger public health problem than previously recognized.

According to the Centers for Disease Control and Prevention (CDC), nearly 60 million adults in the U.S. have been diagnosed with arthritis. However, Dr. Felson notes that this prevalence will still be underestimated if a diagnosis is used as criterion. These figures can then impact national funding for arthritis research.

For comparison, despite having a comparable number of people living with osteoarthritis and diabetes in the U.S., the [2023 NIH annual funding](#) for diabetes research was \$1.281 billion, whereas that for osteoarthritis research was a mere \$130 million.



"The CDC's estimates influence how Congress distributes money to certain therapeutic research areas within the NIH. If the prevalence of arthritis were more accurate, it could mean that more government funding is set aside for arthritis research."

— David Felson, MD, MPH,
Boston University

ADVOCACY UPDATE

Arthritis Foundation Industry Reception

The Foundation's advocacy and science teams joined forces at the 2023 American College of Rheumatology Convergence conference to host a reception for our pharmaceutical industry partners. The event, attended by researchers, rheumatologists, patient advocates and corporate stakeholders, featured a discussion on "The Promise of Biomarkers in Helping Improve the Time to Diagnosis and Treatment for People with Arthritis." Some of the key topics that were deliberated upon include the ongoing research in developing a cellular map of the synovium, innovative clinical trial designs to identify predictive biomarkers for rheumatoid arthritis, and how biomarkers could improve patients' experience in the clinic.

Earlier diagnosis, treatment and better health outcomes for those with arthritis are essential to the Arthritis Foundation's [Ideal Model of Care](#). In 2024, the Foundation will continue to advocate for access to biomarker testing for patients and identify ways to get further involved in biomarkers policy and research.

2023 DEI Science Summit Speakers



Bringing Rheumatology to Center Stage

The Arthritis Foundation hosted the 2023 Diversity, Equity and Inclusion (DEI) Science Summit Oct. 20. The event brought together medical school educators, researchers, students, trainees and arthritis patients. It featured short talks and panel discussions from the 2022 DEI award recipients, who spoke about their work in health equity or rheumatology curriculum development.

In her talk, [Angela Chun, MD](#), of Lurie Children’s Hospital with Feinberg School of Medicine at Northwestern University (practicing at the time of the award at Texas Children’s Hospital with Baylor College of Medicine), presented her initiative to reduce health care disparities in rheumatology. Dr. Chun’s interactive online modules, meant for practitioners all over the U.S., focus on the appearance of rheumatic rashes in children with [different skin pigmentation](#) since these rashes can look very different depending on skin color.

To attract underrepresented residents and medical students, [Eugene Kissin, MD](#), of Boston University Medical Center, and his team have structured an intensive, month-long rheumatology elective featuring virtually-delivered training in complementary imaging modalities, including ultrasound and X-rays. [Candace Feldman, MD, MPH, ScD](#),

of Brigham and Women’s Hospital, and [Siobhan Case, MD, MHS](#), of Boston Children’s Hospital and Brigham and Women’s Hospital, have developed a curriculum that incorporates rheumatology-relevant health equity topics in clinical rotations.

Three speakers discussed their research on the social determinants of health. [Sheetal Vora, MD](#), of Atrium Health Levine Children’s Hospital, seeks to understand the care-seeking journeys of [children with rheumatic disease](#) living in Charlotte, NC, who visit safety-net clinics that are primary care delivery sites for Medicaid and non-insured minority and low-income populations. [Daphne Lew, PhD, MPH](#), instructor in biostatistics, and [Alfred Kim, MD, PhD](#), of Washington University in St. Louis, MO, will continue investigating the social and economic barriers people with [lupus](#) experience in accessing care. [Maureen Dubreuil, MD](#), of Boston University Medical Campus, will use her award to identify if race and ethnicity influence the time from onset of back pain symptoms to receiving an ankylosing spondylitis diagnosis.

Bristol Myers Squibb sponsored this virtual event. Watch a recording of the [summit](#).



“We hope that all people with arthritis live without limits. We work diligently day in and day out to ensure that we’re knocking down barriers to accessing care and empowering patients with solutions to live the life that they want to live.”

— Steven Taylor, President and CEO of the Arthritis Foundation

Announcements



Request for Proposals: FastOA Initiative, Hip Cohorts

Identifying patient groups with clearly defined clinical features and at high risk for developing osteoarthritis over a relatively short time can be a resource for successful future clinical trials. This request for proposals invites applications that seek to identify and define patient populations with risk of "FastOA" of the hip. Members of FastOA cohorts determined from these studies may be candidates for interventional clinical trials. This request for proposals invites applications for a budget of up to \$150,000 for one year.

The funding for this initiative is provided through the Arthritis Foundation FastOA initiative and osteoarthritis clinical trial network. For application and instructions, please visit [Proposal Central](#) and search for Arthritis Foundation. The due date for applications is Feb. 22, 2024. All applications are due by 5:00 p.m. ET.



Request for Proposals: Rheumatoid Arthritis Research Program

Based on the recommendations of the expert working group of academic and government rheumatoid arthritis experts formed by the Arthritis Foundation Medical and Scientific Advisory Committee, the Arthritis Foundation will be releasing a Request for Proposals on Feb. 21, 2024. It is open to early- and mid-career investigators affiliated with U.S. academic institutions and hospitals who are committed to improving the outcomes of rheumatoid arthritis patients through biomedical and/or health outcomes research.



2023 Diversity, Equity and Inclusion Awards

The Foundation presented DEI awards to Candace H. Feldman, MD, MPH, ScD, of Brigham and Women's Hospital, and James N. Jarvis, MD, of the University of Washington. This funding opportunity aims to support the first part of a two-phase process to increase the overall number of individuals underrepresented in medicine (URiM), including rheumatology fellows and allied health professionals (AHPs). The first phase of the proposed work focuses on building infrastructure, relationships and processes. The second phase (to be funded later) is intended to deliver a more diversified pathway of URiM fellows and/or AHPs to the rheumatology workforce by year 5. The DEI award will provide Drs. Feldman and Jarvis with funding for two years.

Are you interested in applying for a DEI award? Visit our [Workforce DEI](#) page or email afscience@arthritis.org to get information on our initiatives, requests for proposals and deadlines.



New Approach to Testing Treatments for Osteoarthritis: FastOA

Published in the high-impact journal *Annals of Rheumatic Diseases*, this [manuscript](#) describes a new approach to enrich clinical trials with enrollees likely to develop post-traumatic OA quickly. This project was led by the chair of the Arthritis Foundation's osteoarthritis clinical trial network, David Felson, MD, MPH, professor of medicine at Boston University. The Arthritis Foundation funded this project and members of the Arthritis Foundation staff contributed to this manuscript. A few news outlets, including [Medscape](#), [Head Topics](#) and [ScienceDaily](#), have subsequently covered this work.

Patient-Centered Biosimilars Communication Resources

Biosimilars hold enormous promise to deliver cost-effective treatments indistinguishable from their reference biologics. However, patients may be unaware of how biosimilars will be administered, their cost impacts and formulation. To help health care providers discuss biosimilars with their patients, the Arthritis Foundation has developed resources, including a [guidance document](#) and videos on [what biosimilars are and why patients might take them](#), [biosimilars' safety and effectiveness](#), and [navigating insurance](#).

To view our other resources, please visit our [health care provider webpage](#).



The 2024 Pathways Conference, March 7-9, 2024

The annual Pathways Conference brings together people living with arthritis and the Foundation's volunteers and staff. This event will include inspiring talks from speakers sharing their secrets of success, the latest tools, resources and programs available to the arthritis community, and recognition awards for the Foundation's leading volunteers.

This year's conference will be held at the Hilton McLean Tysons Corner in the Washington, DC, Metro Area and is free to attend. For more information and to register, please visit joinus.arthritis.org/pathways



COMMUNITY IN ACTION

Make an impact! Join the Arthritis Foundation's signature events happening at a location near you. To learn more about our events and participate, visit arthritis.org/events.

LET'S CONNECT!

To ensure you are receiving our most up-to-date communication from *Joint Matters*, [please visit our website](https://arthritis.org) to confirm your subscription.

You can also email us at afscience@arthritis.org.

2023 Lee C. Howley Sr. Prize

The Arthritis Foundation announced Emily von Scheven, MD, MAS, as the 2023 Lee C. Howley Sr. Award recipient for her dedication to her pediatric patients, scientific research and several Arthritis Foundation events, including [JA camps](#) and [JA Family Summits](#). Dr. von Scheven is an active member of the Northern California Arthritis Foundation Board and serves on the board of directors for the Childhood Arthritis and Rheumatology Research Alliance (CARRA). Dr. von Scheven is founding and program director for the Wellness Center for Youth with Chronic Conditions and for the Lupus Program at the University of California, San Francisco, Benioff Children's Hospitals. Her research focuses on understanding and improving the outcomes of children with rheumatic diseases, including their outcomes during adulthood.



"Whether with my UCSF team or CARRA by my side for many years, all the accomplishments I'm proud of are made possible because of all these people I collaborate with. This recognition goes to them as well."

— Emily von Scheven, MD, MAS,
University of California,
San Francisco

The Arthritis Foundation presents the Howley Prize to an investigator who has performed innovative arthritis-related research and demonstrated an exceptional commitment to volunteer work through the Foundation. Learn more about our past [Howley award winners](#).

