



SCHOOL OF MEDICINE

Thurston Arthritis Research Center

Core Center for Clinical Research (CCCR)

CCCR Catch Up

January 2022

Funding provided by the NIH/NIAMS P30AR072580

2021 Pilot & Feasibility Awards

In 2021, the Thurston Arthritis Research Center funded three one-year CCCR pilot and feasibility projects, each for \$25,000.

The objective of this research grant program is to provide seed money to initiate new and innovative projects in the areas of phenotyping and precision medicine that will enhance work being done in the UNC CCCR, and generate preliminary data needed to develop projects that will successfully compete for extramural support.

Grants Included:

Limb Underloading post-ACL Reconstruction and Increased Cartilage Strain: Identifying Biomechanical Phenotypes at Risk for Posttraumatic Osteoarthritis and the Potential for Precision Gait Retraining in Posttraumatic Osteoarthritis Prevention

Principal Investigators: Brian Pietrosimone, Associate Professor, Exercise & Sports Science; and David Lalush, Professor, Biomedical Engineering

Co-Investigators: Caroline Lisee, Jason Franz and Jeff Spang

Pain-mediated effects of quadriceps muscle dysfunction on inflammation and cartilage loading in individuals with OA

Principal Investigator: Jason Franz, Associate Professor, Biomedical Engineering

Co-Investigators: Brian Pietrosimone, Lara Longobardi and David Berkoff

Machine Learning Approaches to Inform Biomechanical Subtypes of Knee Osteoarthritis

Principal Investigator: Yvonne Golightly, Associate Professor, Department of Epidemiology

Co-Investigators: Amanda Nelson and J. Steve Marron



Dr. Brian Pietrosimone



Dr. David Lalush



Dr. Jason Franz



Dr. Yvonne Golightly

Upcoming Events

CCCR Events

1/26 at 10:30am: UNC CCCR Speaker Series—[Dr. Katherine Liao; Applications of bioinformatics for clinical research in rheumatology](#)

2/16 at 10:30am: UNC CCCR Speaker Series—[Dr. Todd Schwartz; Topic and Title TBD](#)

3/2 at 10:30am: UNC CCCR Speaker Series—[Dr. Kaleb Michaud; Topic and Title TBD](#)

3/11 at 10:00am: Collaborative CCCR Speaker Series Presentation—[Dr. Jean Liew; COVID Impacts on Persons with Rheumatic Conditions](#)

3/16 at 9:30am: UNC CCCR Speaker Series Presentation—[Dr. Tamra Huff; Topic and Title TBD](#)

Other Events

1/19 at 12pm: OA Action Alliance Lunch & Learn Webinar—[Ellen Schneider, MBA; Expanding the Arthritis Appropriate Evidence-Based Intervention \(AAEBI\) Menu](#)

Reminders

Utilizing CCCR Statisticians

The CCCR's statisticians are here to assist with your statistical issues- planning, collection, analysis, interpretation, and dissemination.

Requesting CCCR Help/Services

To initiate the process of requesting information, data, and/or collaboration from UNC's CCCR, please click [here](#).

Joining the CCCR Listserv

Interested in getting the most up-to-date information about what is going on at the CCCR, including presentations, activities, conferences, etc.? Join the listserv by emailing us [here!](#)

Stakeholder Advisory Board (SAB)

Would you like to get feedback from patients about your project proposal, patient documents/resources, etc.? Meet with the SAB by emailing us [here!](#)

Member Spotlight

In each newsletter, we highlight key CCCR members and collaborators. A major goal of the CCCR is to further expand our research community, and to connect members from various departments together to foster collaboration.



J. Steve Marron, PhD

Distinguished Professor of Biostatistics, Gillings School of Public Health

Dr. Marron is Associate Director of the CCCR's Phenotyping & Precision Medicine Resource Core, a Professor in the Department of Biostatistics, and the Amos Hawley Distinguished Professor in the Department of Statistics & Operations Research.

He is a leading researcher and educator in the statistical disciplines of high dimensional, functional and object oriented data analysis, as well as data visualization. He has been repeatedly recognized for his mentoring of graduate students, postdocs and junior faculty, in both statistics & related disciplinary fields. Dr. Marron organizes a free statistical consulting service at UNC-Chapel Hill. Graduate students receive real world training while providing helpful statistical guidance to members of the UNC community. [Learn more here.](#)



John Batsis, MD, FACP, AGSF, FTOS, FGSA

Associate Professor of Medicine in the Division of Geriatric Medicine and the Department of Nutrition in the Gillings School of Public Health

Dr. Batsis is a leading researcher and clinician in the field of geriatric medicine. His primary research interests include obesity and physical function in older adults; including the use of technologies such as telemedicine and remote monitoring to enhance health in older patients. He is a very active collaborator with the CCCR and the Osteoarthritis Action Alliance.

Dr. Batsis recently received a UNC Junior Faculty Development Award. Project Title: "A Precision Medicine Intervention in Older Adults with Frailty". He also received an Advanced Collaborative Team Research (ACTer) grant from NC TRaCS. Project Title: "Using multi-modal methods to advance translational geroscience in patients with sarcopenia." [Use this link for more info.](#)

Research Project Spotlight



In December 2021, Dr. Kelli Allen (UNC CCCR Methodology Core Co-Director) received funding for an NIH R21 project: "Optimizing Osteoarthritis Care through Clinical & Community Partnership."

The long-term research goal is to conduct a rigorous, multi-site randomized controlled trial of a guideline-concordant OA care model, built on clinic-community partnership and designed for wide-spread implementation/sustainability in the U.S.

The OA Clinic-Community CARE Model (OA CARE) will address all recommended components of knee/hip OA care, include interventions for patients/primary care providers & use a tailored approach to efficiently match treatments with patients' needs.

Recent Publications and Grants

CCCR members regularly publish new and exciting findings, and receive funding for new projects to continue research in areas of great promise. (Names in **bold** are CCCR members.)

Selected Recent Publications

- Gates, L.S., Perry, T.A., **Golightly, Y.M.**, **Nelson, A.E.**, **Callahan, L.F.**, **Felson, D.**, Nevitt, M., Jones, G., Cooper, C., Batt, M.E., Sanchez-Santos, M.T. and Arden, N.K. (2022), Recreational Physical Activity and Risk of Incident Knee Osteoarthritis: an international meta-analysis of individual participant-level data. *Arthritis Rheumatol.* Accepted Author Manuscript.
- Rushing BR, McRitchie S, **Arbeeva L**, **Nelson AE**, Azcarate-Peril MA, Li YY, Qian Y, Pathmasiri W, **Sumner SCJ**, **Loeser RF**. Fecal metabolomics reveals products of dysregulated proteolysis and altered microbial metabolism in obesity-related osteoarthritis. *Osteoarthritis Cartilage.* 2022 Jan;30(1):81-91. doi: 10.1016/j.joca.2021.10.006. Epub 2021 Oct 28. PMID: 34718137; PMCID: PMC8712415.
- **Loeser RF**, **Arbeeva L**, **Kelley K**, Fodor AA, Sun S, Ulici V, **Longobardi L**, **Cui Y**, Stewart DA, **Sumner SJ**, Azcarate-Peril MA, Sartor RB, Carroll IM, Renner JB, **Jordan JM**, **Nelson AE**. Association of Increased Serum Lipopolysaccharide, But Not Microbial Dysbiosis, With Obesity-Related Osteoarthritis. *Arthritis Rheumatol.* 2021 Aug 23. doi: 10.1002/art.41955. Epub ahead of print. PMID: 34423918.
- **Thoma LM**, **Cleveland RJ**, **Jonas BL**, Bridges SL Jr, **Callahan LF**. Association of Disease Activity and Disability With Rehabilitation Utilization in African American Adults With Rheumatoid Arthritis. *Arthritis Care Res (Hoboken).* 2022 Jan;74(1):16-21. doi: 10.1002/acr.24797. PMID: 34586720; PMCID: PMC8720062.

Recent Grants

- Optimizing Osteoarthritis Care through Clinical and Community Partnership (NIH R21)
 - PI: **Kelli Allen**
- Using multi-modal methods to advance translational geroscience in patients with sarcopenia (NC TraCS ACTer Program)
 - PI: **John Batsis**
- Advancing National Arthritis Public Health Priorities through the Osteoarthritis Action Alliance (CDC)
 - PI: **Leigh Callahan**
- Osteoarthritis Action Alliance Receives a \$100K/1-Year Grant from the NextFifty Initiative
 - PI: **Leigh Callahan**

Fun(knee) Corner



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For more information, please contact us!



Website: www.med.unc.edu/tarc/research/cccr/