

Keynote Speaker

Ali Ellebedy, PhD



SCHOOL OF MEDICINE

Thurston Arthritis
Research Center

*Associate Professor of
Pathology and Immunology*

*Co-Director, Center for Vaccines
and Immunity to Microbial Pathogens*

Washington University School of Medicine



FIFTH ANNUAL RESEARCH DAY

Friday, October 14, 2022
8:00am-2:30pm

The UNC Friday Center
100 Friday Center Drive
Chapel Hill, NC 27517

Ali Ellebedy is a viral immunologist. He was born in Egypt and graduated with a B.S. in pharmaceutical sciences from Cairo University in 2004. It was during his time at pharmacy school that he was first exposed to and became fascinated with immunology. In 2006, he moved to the US where he studied influenza virus vaccines at St Jude Children's Research Hospital in Memphis, TN for his Ph.D. He then moved to Emory University in Atlanta, GA, where he was a postdoctoral fellow in the laboratory of Rafi Ahmed studying human B cell responses to viruses. In 2017, Ali joined the Department of Pathology and Immunology at Washington University School of Medicine in St. Louis as an Assistant Professor. His team studies the factors determining the ultimate fate of B cells once they are engaged via virus infection or vaccination. He is a tenured associate professor and co-director of the Center for Vaccines and Immunity to Microbial Pathogens at Washington University School of Medicine.

TARC Research Day Program

7:30-8:00am Breakfast

Blueberry Hill Room & Atrium Center

8:00-8:20am Welcome Remarks

Sunflower room

Dr. Beth Jonas, Division Chief,
Rheumatology, Allergy & Immunology
Dr. Richard F. Loeser Jr., Director,
Thurston Arthritis Research Center

8:20-9:20am Short Talks

Sunflower Room

Moderated by:

Kelli Allen, PhD & Scott Commins, MD, PhD

Underlined names indicate the speaker for each presentation

- 8:20 Eliza Thulson, Eric S. Davis, Susan D'Costa, Philip R. Coryell, Nicole E. Kramer, Karen L. Mohlke, Richard F. Loeser, Brian O. Diekman, Douglas H. Phanstiel. ***3D Chromatin Structure in Chondrocytes Identifies Putative Osteoarthritis Risk Genes.***
- 8:35 Cortney Armitano-Lago, Alyssa Evans-Pickett, Hope Davis-Wilson, Amanda Munsch, Lara Longobardi, Helen Willcockson, Todd Schwartz, Jason Franz, Brian Pietrosimone. ***Gait Biofeedback Elicits Biochemical Changes in Cartilage Oligomeric Matrix Protein Over Time.***
- 8:50 Stephen A. Schworer, K. Okuda, H. Dang, R.C. Gilmore, W.K. O'Neal, S.H. Randell, S.E. Wenzel, R.C. Boucher. ***Mucus Plugging and Regional Heterogeneity are Features of Asthmatic Small Airways.***

- 9:05 Becki Cleveland, Todd A. Schwartz, Jordan B. Renner, Yvonne M. Golightly, Amanda E. Nelson, Leigh F. Callahan. ***Physical Function is Independently Associated with Mortality Among Individuals with Knee and/or Hip OA: The Johnston County Osteoarthritis Project.***

9:20-9:40am Poster Pitches – Session 1 Sunflower Room

- #8 Alexander Gilmore, Donna Krzastek, Julia Fabricio, Lindsey Gouker, Ganesh Kamath, Renae Boerneke, Mildred Kwan. ***Utilizing Perioperative Cefazolin Safely in Setting of Penicillin Allergy.***
- #9 Elizabeth Bjornsen, Caroline Lisee, David Berkoff, Karen Blake, Cassidy Kershner, Erica Kurbach, Brian Pietrosimone. ***Changes in Gait Biomechanics, Strength, Physical Function and Daily Steps Following an Extended-Release, Intra-Articular Corticosteroid Injection in Individuals with Knee Osteoarthritis.***
- #10 Jessica Macdougall, Claire Amelio, Carolina Alvarez, Steven Takacs, Mildred Kwan, Onyinye Iweala. ***Tolerability of Covid-19 Vaccination in Patients with Mast Cell Activation.***
- #11 Astia Allenzara, Nakisa Sadeghi, Carolina Alvarez, Steve Maczuga, Matthew Helm, Amanda E. Nelson, Galen Foulke. ***Obesity is Associated with Higher Odds of Malignancy Development Among Dermatomyositis Patients.***
- #12 Jada Suber, Yugen Zhang, Ping Ye, Rishu Guo, A. Wesley Burks, Michael D. Kulis, Scott A. Smith, Onyinye I. Iweala. ***Novel Peanut-Specific Human IgE Monoclonal Antibodies Enable Screens for Inhibitors of the Effector Phase in Food Allergy.***

9:40-10:40am Poster Viewing – Session A

Willow Lounge

- #1 Kelli D. Allen, Leigh F. Callahan, Katie Huffman, Abigail Gilbert, Yvonne M. Golightly, Kimberlea Grimm, Amanda E. Nelson, Chase Wooley, Rebecca Cleveland. ***Associations of Demographic and Clinical Characteristics with Sleep Problems Among Patients with Knee and Hip Osteoarthritis.***
- #2 Jeannette Delva-Wiley, Allison Leclerc, Morika Williams. ***Filling in Pre-Clinical Gaps: How Does Early Life Injury Reflect Behavioral Changes Seen Following Two-Hit Model.***
- #3 Amanda E. Munsch, Alyssa Evans-Pickett, Hope Davis-Wilson, Brian Pietrosimone, Joshua D. Roth, Jason R. Franz. ***Limb Underloading Transmits Less Dynamic Tibiofemoral Cartilage Contact Forces in Individuals with ACLR.***
- #4 Erin C. Steinbach, Johanna M. Smeekens, Satyaki Roy, Takahiko Toyonaga, Caleb Cornaby, Layna Perini, Ana Berglind, Michael D. Kulis, Edwin H. Kim, Martin T. Ferris, Terrence S. Furey, A. Wesley Burks, Shehzad Z. Sheikh. ***Revealing Mechanisms of Intestinal Epithelial Cell Barrier Dysfunction in Peanut Allergy.***
- #5 Cara Murphy, Rebecca J. Cleveland, Amanda E. Nelson, Yvonne M. Golightly, Leigh F. Callahan. ***Twenty-five Years of Mortality Data in those with Lower Extremity Osteoarthritis: The Role of Socioeconomic Status.***
- #6 Tessa R. Englund, Emily M. McCormick, Saira Z. Sheikh. ***Stakeholder Advisory Board for Patient Engagement in Lupus Research – Patient Perspectives and Opportunities Identified for the ACT for Lupus Program.***

- #7 Seyoun Byun, Nicole E. Kramer, Eliza Thulson, Susan D’Costa, Eric S. Davis, Philip R. Coryell, Karen L. Mohlke, Brian O. Diekman, Richard F. Loeser, Douglas H. Phanstiel. ***Fibronectin Fragment Induces Alternative Splicing of Rho GTPase Pathways in Human Articular Chondrocytes.***
- #8 Alexander Gilmore, Donna Krzastek, Julia Fabricio, Lindsey Gouker, Ganesh Kamath, Renae Boerneke, Mildred Kwan. ***Utilizing Perioperative Cefazolin Safely in Setting of Penicillin Allergy.***
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10:40-11:00am Break

11:00am-12:00pm **Keynote Presentation**
Sunflower Room

Ali Ellebedy, PhD

B Cell Responses to Viral Infection and Vaccination

12:00-1:00pm **Lunch**
Trillium AB

1:10-1:30pm **Poster Pitches – Session 2**
Sunflower Room

- #20 Philip Coryell, Kenneth Pearce, Richard F. Loeser. **High-Throughput Kinase Inhibitor Screen Using Normal Human Chondrocytes for OA Drug Discovery.**
- #21 Skylar Harmon, Carolina Alvarez, M. Hannan, Leigh F. Callahan, L. Gates, C. Bowen, H. Menz, Amanda E. Nelson, Yvonne M. Golightly. **Foot Symptoms are Associated with Reduced Time to Mortality: the Johnston County Osteoarthritis Project.**
- #22 Shailesh K. Choudhary, Julia M. Vorobiov, Johanna Smeekens, Martin Ferris, Mike Kulis, Scott Commins. **Understanding Mechanisms of Food Allergy Using Genetically Diverse Collaborative Cross (CC) Mice.**
- #23 Huseyin Ozkan, Helen Wilcockson, Esra Mucahit, Layla Musawwir, Lara Longobardi. **Early Ablation of Chemokine Receptor-2 in Mouse Osteoblasts Decreases Cartilage Matrix Damage and Subchondral Bone Sclerosis During Injury-Induced Osteoarthritis.**
- #24 Emma Astrike-Davis, Carolina Alvarez, Nicole Orzechowski, Abigail Gilbert. **Race and Differences in Pain Management for Digital Ischemia in Systemic Sclerosis.**

1:30-2:30pm **Poster Viewing – Session B**
Willow Lounge

- #13 Yvonne M. Golightly, Siqi Xiang, Elyse Borgert, Liubov Arbeevea, Richard F. Loeser, Stephen P. Messier, Amanda E. Nelson, J.S. Marron. **Influence of Sociodemographic and Clinical Features on Ground Reaction Force Variability Among Individuals with Symptomatic Knee Osteoarthritis: A Novel Computational Approach.**
- #14 Christa Dudley, Audrey Carson, Yugen Zhang, Camille Kapita, Jada Suber, Dale O. Cowley, Onyinye I. Iweala. **Creating an in Vitro Model of the Alpha-Gal Syndrome Effector Phase.**
- #15 Caroline Lisee, Hope Davis-Wilson, Louise Thoma, David Lalush, Jeffrey T. Spang, Brian Pietrosimone. **Women Who Take Fewer Daily Steps Demonstrate Worse Medial Femoral Cartilage Composition 6 to 12 Months Following Anterior Cruciate Ligament Reconstruction.**
- #16 Luis A. Palomino, Carolina Alvarez, Todd A. Schwartz, Yvonne M. Golightly, Amanda E. Nelson. **Sex and Race/ethnicity Differences in Knee Symptoms, Function, and Radiographic Features: Preliminary Descriptive Data from the Johnston County Health Study.**
- #17 Nicole E. Kramer, Jess Byun, Eliza Thulson, Philip Coryell, Brian O. Diekman, Richard F. Loeser, Douglas H. Phanstiel. **Translating OA GWAS Loci Into Novel OA Risk Genes with QTL Analysis.**
- #18 Earnest L. Taylor, J.A. Collins, P. Gopalakrishnan, S. Chubinskaya, Richard F. Loeser. **Age and Oxidative Stress Regulate NRF2 Homeostasis in Human Articular Chondrocytes.**

- #19 Ashley Buck, Caroline Lisee, Elizabeth Bjornsen, Jeffrey Spang, Jason Franz, Troy Blackburn, Brian Pietrosimone. ***Slower Walking Speeds and Mid-to-Late Stance Vertical Ground Reaction Forces are Predictive of Osteoarthritis-Related Knee Symptoms 6 Months Post-ACL Reconstruction.***
- #20 Philip Coryell, Kenneth Pearce, Richard F. Loeser. ***High-Throughput Kinase Inhibitor Screen Using Normal Human Chondrocytes for OA Drug Discovery.***
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***Thank you for attending
TARC Research Day!***