Rush Mentoring Programs
Sixth Annual Symposium

Sept. 9-10, 2020
Virtual Podium Presentations (Zoom): Noon to 3:30 p.m.
Virtual Poster Session (VoiceThread - Asynchronous): Sept. 9 at 3:30 p.m. to Sept. 10 at 5 p.m.

Office of Faculty Affairs
Office of Mentoring Programs
# Rush Mentoring Programs

## Sixth Annual Symposium  |  Sept. 9, 2020

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<tr>
<th>Time</th>
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| Noon - 12:05 p.m. | Introductory Remarks               | Susan Chubinskaya, PhD  
Vice Provost  
Office of Faculty Affairs |
| 12:05 - 12:35 p.m. | Keynote Speaker                     | Joshua J. Jacobs, MD  
William A. Hark, MD/Susanne G. Swift Professor and Chairman  
Department of Orthopedic Surgery  
Vice Dean for Research  
Rush Medical College |
| 12:35 - 12:50 p.m. | 2020 Cohn Fellow Presentations     | Faraz Bishehsari, MD, PhD  
Associate Professor of Medicine and the Graduate College  
Director, GI Translational Unit  
Division of Digestive Diseases  
Rush University Medical Center |
| 12:50 - 1:05 p.m. | Secretion of the Epithelial Sodium Channel Chaperone PCSK9 From the Cortical Collecting Duct Links Sodium Retention With Hypercholesterolemia in Nephrotic Syndrome | Lionel C. Clement, PhD  
Assistant Professor  
Department of Internal Medicine  
Rush Medical College |
| 1:05 - 1:20 p.m. | Computerized Cognitive Training for Individuals At Risk for Psychosis | Kristen Haut, PhD  
Assistant Professor  
Department of Psychiatry and Behavioral Sciences  
Rush Medical College |
| 1:20 - 1:35 p.m. | A Photon Scatter Imaging System to Guide Radiation Therapy of Lung Cancer | Kevin C. Jones, PhD  
Assistant Professor  
Department of Radiation Oncology  
Rush Medical College |
| 1:35 - 1:50 p.m. | A Telehealth Delivered Intervention to Influence Adaptive Behavior Among Children with Autism | Lauren M. Little, PhD, OTR/L  
Associate Professor  
Department of Occupational Therapy  
College of Health Sciences |
| 1:50 - 2:05 p.m. | Identifying and Addressing Mental Health Disparities in the Era of COVID-19 | Dominika A. Winiarski, PhD  
Assistant Professor  
Department of Psychiatry and Behavioral Sciences  
Rush Medical College |
<p>| 2:05 - 2:20 p.m. | Award Announcements (2020 Mentee, Mentor and Postdoctoral Mentor of the Year) |  |
| 2:20 - 2:30 p.m. | Break |  |</p>
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<th>Presenter</th>
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<tr>
<td>2:30 - 2:45 p.m.</td>
<td>Brain and Dietary Copper, Cognitive Decline and Alzheimer’s Disease Neuropathology: A Community-Based Study</td>
<td>Puja Agarwal, PhD</td>
<td>Department of Internal Medicine Rush Medical College</td>
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<td>2:45 - 3 p.m.</td>
<td>Diabetes Alters Trabecular Bone Structure In A Rat Femoral Implant Model</td>
<td>Kyle D. Anderson, MS</td>
<td>Department of Cell and Molecular Medicine Rush Medical College</td>
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<td>3 - 3:15 p.m.</td>
<td>Intramembranous Bone Regeneration is Accelerated in Constitutively Active LRP5 Mutant Mice</td>
<td>Frank C. Ko, PhD</td>
<td>Department of Cell and Molecular Medicine Rush Medical College</td>
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<tr>
<td>3:15 - 3:30 p.m.</td>
<td>Accelerated suPAR Mediated Kidney Disease in the Solitary Functioning Kidney</td>
<td>Xuexiang Wang, MD, PhD</td>
<td>Department of Internal Medicine Rush Medical College</td>
</tr>
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**Virtual Poster Session – VoiceThread (Asynchronous)**

3:30 p.m. (Sept. 9) to 5 p.m. (Sept. 10)
2020 Mentee of the Year

Shannon Halloway, PhD, RN
Assistant Professor
Department of Community Systems and Mental Health Nursing
College of Nursing

Awarded by the Rush Research Mentoring Program in recognition of excellence in scholarly work, leadership and involvement in the Mentoring Program

From nominator JoEllen Wilbur, PhD, APN, FAAN:
It is my pleasure to very highly recommend Dr. Shannon Halloway for the Mentee of the Year. Shannon's outstanding scholarly accomplishments as a young scholar make her an ideal candidate for this award.

Dr. Halloway has been incredibly committed to Rush University, starting from her doctoral studies as a BSN-to-PhD student in the College of Nursing, where she served as a research and teaching assistant. She has shown enormous contributions to the University as a postdoctoral fellow and now as an assistant professor. Dr. Halloway's commitment to Rush goes beyond her scholarly efforts, with involvement in many levels of service. She is an effective leader and successfully manages her growing research team to implement her studies. She brings commitment to the health of older women, excellent writing and organizational skills, and in-depth knowledge of integrative reviews, community-based research and lifestyle health behaviors in older women.

Her impressive trajectory so far can truly be complemented by additional education, experience, and networking focused on conducting research with the older adult population, in particular as a way to establish relations with the National Institute on Aging and aging experts. Thus, she is well-suited to receive the Mentee of the Year Award. She is truly a rising star destined to be a leader in health behavior change of older women, shaping practice, research and policy.

2020 Mentor of the Year

Ali Keshavarzian, MD, FRCP, FACP, MACG, AGAF
Josephine M. Dyrenforth Chair of Gastroenterology
Professor of Medicine and the Graduate College
Director, Division of Digestive Diseases and Nutrition
Director, Institute for Advanced Study of the Gut, Chronobiology and Inflammation Interim Section Chief of the Section of Community Epidemiology
Physician-Scientist, Section of Gastroenterology

Awarded by the Rush Research Mentoring Program in recognition of outstanding contributions to mentees success, commitment and involvement in the Mentoring Program

From nominator Niranjan S. Karnik, MD, PhD:
Dr. Keshavarzian or Kesh, as many of his mentees refer to him, is an outstanding example of an excellent mentor. In addition to being an excellent clinician, he has been funded by the NIH since 1987 (some of his trainees hadn't even been born). He juggles his roles as clinician, scientist and mentor with humor and great energy. At a time in his life when he could easily retire to a life of comfort, he recently said, “Oh, no. I could not do that — I still have another R01 in me,” and on he goes. I always marvel at the way that he can give critical feedback while making the trainee feel supported and cared for. This is an incredibly important skill. I have learned and am continuing to learn from Kesh on how to be a successful mentor and to help my trainees achieve success.

His trainees have gone on to academic careers at Rush and other peer institutions. This is perhaps his greatest achievement. One of his recent trainees, who is doing a collaborative project with myself and Kesh, told me that it is impossible to say no to him because he is truly such a nice person.
From nominator Mahboobeh Mahdavinia, MD, PhD, FAAAAI:

Dr. Keshavarzian is a passionate researcher and mentor. He gets excited about any scientific phenomenon and makes me feel the same. This has been the key in my continuous scientific and academic endeavors. He has introduced me to all my other mentors, collaborators and consultants. He read all the 20 plus research proposals I have written in past few years meticulously.

2020 Postdoctoral Mentor of the Year
Vineet Gupta, PhD
The Charles Arthur Weaver Chair of Cancer Research
Vice Chair for Innovation, Department of Internal Medicine
Director, Drug Discovery Center

Awarded by the Rush Postdoctoral Mentoring Program in recognition of outstanding contributions to the postdoctoral fellow’s success, commitment and involvement in the Mentoring Program

From nominator Anugraha Rajagopalan, PhD:

Dr. Gupta has a unique style of mentorship. He motivates his lab members by empowering them and letting us own our projects. Dr. Gupta’s mentorship is helping me write a full-fledged grant based on my project. He fosters work-life balance, offering support as I juggle work and raising a baby son.

Class of 2020 Cohn Fellows

From left: Lauren M. Little, PhD, OTR/L; Lionel C. Clement, PhD; Kristen Haut, PhD; Faraz Bishehsari, MD, PhD; Dominika A. Winiarski, PhD; and Kevin C. Jones, PhD
Cohn Fellowship Fosters Faculty Research

The Cohn Family Foundation provides grant funding every year to support junior faculty at Rush University who are mentees in the Rush Research Mentoring Program. The funding allows mentees to gather preliminary data for research proposals.

The following faculty were selected as 2021 Cohn Fellows after a competitive review process:

**Vaskar Das, PhD**, was recently promoted to assistant professor in the Department of Anesthesiology at Rush Medical College and is participating in research with Asokumar Buvanendran, MD; Jeffrey Kroin, PhD; and Robert J. McCarthy, PharmD. He is currently working on National Institutes of Health-funded pain research as a co-investigator. His research has focused on new non-opioid treatments for acute and chronic pain by following the key energy sensor AMPK (adenosine mono-phosphate activated kinase) and the pain-relieving effect of the ketamine metabolite (2R,6R)-hydroxynorketamine. His Cohn research will expand to assess the pain-relieving efficiency and mechanisms of AMPK activators in peripheral tissue injury pain. One immediate outcome of this research will be much-needed pharmacological understanding of AMPK activators for low back pain and post-surgical pain.

**Klodian Dhana, MD, PhD**, is an assistant professor in the Department of Internal Medicine at Rush Medical College. He joined Rush University in July 2018 after completing his postdoctoral training at the Harvard T.H. Chan School of Public Health. His research focuses on epidemiology and the prevention of chronic diseases. Particularly, he investigates the role of clinical and lifestyle risk factors on cognitive health and Alzheimer’s disease. The Cohn Fellowship will allow him to develop a risk prediction model for identifying stroke patients at high risk of cognitive decline and Alzheimer’s dementia who can benefit from tailored preventive strategies.

**Frank C. Ko, PhD**, is an assistant professor in the Department of Cell and Molecular Medicine at Rush Medical College. His research interest is in the musculoskeletal system, with particular emphasis in determining the source and mechanisms of bone regeneration. He uses the state-of-the-art imaging and genetic approaches to trace several anatomically distinct skeletal stem cells during bone healing. His Cohn research will further expand on this work, which he hopes will enhance our understanding of bone regeneration and lead to the development of novel therapies to improve orthopedic care, such as joint replacement or fracture healing.

**Colleen Stiles-Shields, PhD**, is an assistant professor in the Section of Community Behavioral Health and the Department of Psychiatry and Behavioral Sciences at Rush Medical College. Her research focuses on using digital mental health technology to improve mental and behavioral health for the pediatric population, particularly for those in underserved communities. Her Cohn research will focus on determining the unmet mental and behavioral health needs of teenagers living on the West Side of Chicago and assessing their use of smartphones and mobile health tools. The results of this research will inform clinical recommendations and research efforts focusing on adolescents from underserved populations.
Lai Wang, MD, PhD, is an assistant professor in the Division of Rheumatology in the Department of Internal Medicine at Rush Medical College. Her research interest focuses on combining genetic, biochemical, cell and molecular biology approaches to explore underlying mechanisms and innovative interventions in musculoskeletal disorders and injuries. Her current research in the Laboratory for Translational Research in Osteoarthritis focuses on molecular pathways osteoarthritis pain, as well as the role of intra-articular sensory innervation in onset and progression of osteoarthritis. Her Cohn research project will investigate whether peripheral neuronal Notch signaling contributes to joint pain in a murine surgical model of osteoarthritis.

Rush Mentoring Programs
2020 Graduating Mentees

Faraz Bishehsari, MD, PhD
Associate Professor of Medicine and the Graduate College
Director, GI Translational Unit
Division of Digestive Diseases
Rush University Medical Center

Amanda L. Persons, PhD
Associate Professor
Department of Physician Assistant Studies
College of Health Sciences
Director, Academic Education

Mahboobeh Mahdavinia, MD, PhD, FAAAAI
Associate Professor of Medicine and the Graduate College
Chief of the Allergy and Immunology Division
Department of Internal Medicine
Research Director, Rush Center for Sinusitis, Allergies and Asthma
Rush University Medical Center

Jitesh Pratap, PhD
Associate Professor
Department of Cell and Molecular Medicine
Rush Medical College
Rush Medical College

ANESTHESIOLOGY
1. Das, V. et al. Adenosine Mono-Phosphate Activated Kinase (AMPK) Activation as a Novel Analgesic Target for Chronic Low Back Pain

CELL AND MOLECULAR MEDICINE
2. Ferrigno, C. et al. Individuals With Medial Knee OA Can Improve Knee Loads With Gait Retraining Using Plantar Pressure Based Auditory Feedback — A Longitudinal Feasibility Study
5. Ross, R. et al. (#1) The Effect of Sclerostin-Antibody on Dental Pathologies in Hyp Mice
6. Ross, R. et al. (#2) Changes in Bone and Fat Derived Hormones Are Correlated With BMD and Body Fat at 12 Months After Initiation of Antiretroviral Therapy in Men With HIV
7. Wilson, B. et al. A Proteomic Approach to Identify Novel Serum Biomarkers of Peri-Implant Osteolysis in a Rat Model

INTERNAL MEDICINE
8. Clement, L. et al. Secretion of the Epithelial Sodium Channel Chaperone PCSK9 From the Cortical Collecting Duct Links Sodium Retention With Hypercholesterolemia in Nephrotic Syndrome

MICROBIAL PATHOGENS AND IMMUNITY
11. Schneider, J. et al. Enhanced Protection at the Site of Challenge of Rhesus Macaques That Receive PGT121 One Week Prior to Intravaginal Challenge With SHIV-SF162P3

NEUROLOGICAL SCIENCES
13. Oveisgharan, S. et al. (#1) Association of White Matter Hyperintensity With Late-Life Parkinsonism

NEUROSURGERY
16. David, B. et al. The Characterization of Age-Related Differences in Inflammatory and Behavioral Responses Following Spinal Cord Contusion in Rats

continued
ORTHOPEDIC SURGERY
17. **Gustafson, J. et al.** Is Assembly Technique or Implant Design Vital to Stability of Modern Total Hip Arthroplasty?


19. **Obeidat, A. et al.** Anatomical Distribution of Mrgprd-Expressing Nonpeptidergic C-Fibers in the Mouse Knee

20. **Pourzal, R. et al.** Speciation Analysis of Intra-cellular Metallic Implant Debris Using Synchrotron XRF-Imaging

21. **Radice, S. et al.** Tribocorrosion of a Nickel-Free High Nitrogen Steel vs. LC-CoCrMo in Simulated Synovial Fluids

22. **Samelko, L. et al.** Sex Differences Associated with Th17/IL-17 Serum Biomarker Expression in Orthopedic Populations

PREVENTIVE MEDICINE
23. **Lange-Maia, B. et al.** Impact of Chronic Condition Development on Physical Function Among Women From Mid- to Early Late-Life

PSYCHIATRY AND BEHAVIORAL SCIENCES
24. **Stiles-Shields, C. et al.** User Needs of Teens with Socially Complex Needs: mHealth Experiences of Teens and Caregivers From the West Side Communities of Chicago

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**Rush Mentoring Programs**

**Special Thanks**

**The Cohn Family**

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Vice Provost
Office of Faculty Affairs

**Rush Mentoring Programs**

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