RUSH UNIVERSITY

# 2022 RUSH Mentoring Programs

# Eighth Annual Symposium

**Sept. 29, 2022**

**In-Person Podium Presentations**

Noon to 3 p.m.

Searle Conference Center: Brainard (Professional Building, Room 542)

**Virtual Poster Session**

From Sept. 29 at 3 p.m. to Sept. 30 at 5 p.m.

VoiceThread (Asynchronous)

Office of Faculty Affairs

Office of Mentoring Programs

**2022 RUSH Mentoring Programs**

# Eighth Annual Symposium | Sept. 29, 2022

**Noon - 12:05 p.m.** **Introductory Remarks**

Susan Chubinskaya, PhD
*Vice Provost, Office of Faculty Affairs*

Larry J. Goodman, MD
*Interim President, RUSH University*
*The James A. Campbell, MD, Distinguished Service Professor*
*Department of Internal Medicine*
*RUSH Medical College*

**12:05 - 12:35 p.m.** **Keynote Speaker**

Christine M. Kennedy, RN, PhD, FAAN
*John L. & Helen Kellogg Dean, College of Nursing*
*Professor, Department of Women, Children and Family Nursing, College of Nursing*
*Associate Chief Nursing Officer, RUSH University Medical Center*
*Professor, Department of Pediatrics, RUSH Medical College*

## 2022 Cohn Fellow Presentations

**12:35 - 12:50 p.m.** **Diet, Cognition, and Neuroimaging in African American Older Adults**

Puja Agarwal, PhD
*Assistant Professor*
*RUSH Alzheimer's Disease Center*
*Department of Internal Medicine*
*Department of Clinical Nutrition*
*RUSH Medical College*

**12:50 - 1:05 p.m.** **Associations Between Eating Behavior and Internal States in Individuals Who Have Undergone Bariatric Surgery**

Lauren E. Bradley, PhD
*Assistant Professor*
*Department of Psychiatry and Behavioral Sciences*
*RUSH Medical College*

**1:05 - 1:20 p.m.** **Drug-Tolerant Cancer Persister Cells Can Develop a Variety of Drug-Resistance Mechanisms in ER- Positive Breast Cancer Populations**

Kajal Gupta, MS, PhD
*Assistant Professor*
*Department of Surgery*
*RUSH Medical College*

**1:20 - 1:35 p.m.** **Deep Brain Stimulation of the Subthalamic Nucleus Using Optogenetics**

Alana E. Kirby, MD, PhD
*Assistant Professor*
*Department of Neurological Sciences*
*RUSH Medical College*

**1:35 - 1:50 p.m.** **Mechanistic Studies of Calcinosis in a Bleomycin Mouse Model of Scleroderma**

Carrie Richardson, MD, MHS
*Assistant Professor*
*Department of Medicine (Rheumatology)*
*Northwestern University*

**1:50 - 2:05 p.m.** **Award Announcements**
**2022 Mentee, Mentor and Postdoctoral Mentor of the Year**

**2:05 - 2:15 p.m.** **Break**

## 2022 Abstract Winner Presentations

**2:15 - 2:30 p.m.**

**(2R,6R)-HNK Increases Activation of AMPA Receptors and Reduces BDNF Activity in a Murine Model of Low Back Pain**

**Vaskar Das, PhD**
*Assistant Professor*
*Department of Anesthesiology*
*RUSH Medical College*

**2:30 - 2:45 p.m.**

**Macrophage Depletion Alleviates Pain-Like Behaviors in Osteoarthritic Mice of Both Sexes**

**Terese Geraghty, PhD**
*Postdoctoral Fellow*
*Department of Internal Medicine*
*Section of Rheumatology*
*RUSH Medical College*

**2:45 - 3:00 p.m.**

**Tracking Fluorescently Labeled Anti-HIV IgG in the Brain to Enhance CNS-Specific Cure Strategy**

**Jeffrey Schneider, PhD**
*Assistant Professor*
*Department of Microbial Pathogens and Immunity*
*RUSH Medical College*

**Starts at 3 p.m.** **Virtual Poster Session – VoiceThread (Asynchronous)**

**From Sept. 29 at 3 p.m. to Sept. 30 at 5 p.m.**

**RUSH Mentoring Programs**

# Class of 2022 Cohn Fellows

**Puja Agarwal, PhD**
Assistant Professor
RUSH Alzheimer's Disease Center
Department of Internal Medicine
Department of Clinical Nutrition
RUSH Medical College

**Lauren E. Bradley, PhD**
Assistant Professor
Department of Psychiatry and Behavioral Sciences
RUSH Medical College

**Kajal Gupta, MS, PhD**
Assistant Professor
Department of Surgery
RUSH Medical College

**Alana E. Kirby, MD, PhD**
Assistant Professor
Department of Neurological Sciences
RUSH Medical College

**Carrie Richardson, MD, MHS**
Assistant Professor
Department of Medicine (Rheumatology)
Northwestern University

**RUSH Mentoring Programs**

# 2022 Award Winners

## 2022 Mentee of the Year

**Jori Fleisher, MD, MSCE**
*Associate Professor*
*Department of Neurological Sciences*
*RUSH Medical College*

**Awarded by the RUSH Mentoring Programs in recognition of excellence in scholarly work, leadership and involvement in the Mentoring Program.**

**From nominator Deborah Hall, MD, PhD:**
*"I have been meeting with Jori weekly since her arrival at RUSH, and she has transitioned from a K awardee to R applicant for NIH grants. I am so impressed with her progress and proud of the increased recognition she has created for RUSH in association with the many foundations we work with (Parkinson's Foundation, Lewy Body Association, etc.). In fact, RUSH is the No. 1 site in the country for Lewy body disease care because of her efforts. Jori has been diligently working in the research realm at RUSH and has accomplishments across research, clinical, education and advocacy spheres, with increasing national and international recognition. She has a growing cadre of successful mentees of her own who have been accepted to medical school or other programs. She also has shown increasing leadership positions within the institution and in national/international organizations.*

*Jori has had increasing responsibilities and leadership opportunities within the clinical realm; has been broadening collaborations within the institution (Center for Excellence in Aging, Supportive Oncology/Chaplaincy, ADRC) and beyond the institution (New York University, University of Rochester, University of Florida, and foundation collaborations); has a growing network of career and research mentees, including Rush medical students, residents, fellows and junior faculty; and has done self-directed learning on leadership and time management through Resilient Leadership training and outside reading. She is true to RUSH's I CARE values and a great example of RUSH excellence."*

**RUSH Mentoring Programs**

# Award Winners

## 2022 Mentor of the Year

### Latha Soorya, PhD

*Associate Professor, Department of Psychiatry and Behavioral Sciences, RUSH Medical College*
*Director, Autism Assessment, Research, Treatment and Services (AARTS) Center*
*Adjunct Assistant Professor, Seaver Autism Center, Icahn School of Medicine at Mount Sinai*

**Awarded by the RUSH Mentoring Programs in recognition of outstanding contributions to mentees success, commitment and involvement in the Mentoring Program.**

**From nominator Emily Dillon, PhD:**
*"Dr. Soorya should be recognized as Mentor of the Year, as she mentors all the staff within her autism center while maintaining a rigorous clinic, grant and research agenda. As the head of the AARTS (Autism Assessment, Research and Treatment and Services) Center, Dr. Soorya has grown the research and clinical program. She has done this despite the COVID-19 pandemic and while maintaining an open and fostering culture at the AARTS Center. She responds to the needs of the staff. For example, under her guidance, the AARTS Center developed an antiracism committee to lead discussions and training on topics related to diversity, antiracism, and our professional practice in response to the growing awareness of police brutality. The antiracism committee has since expanded to talk and discuss a wide range of inequalities and has hosted experts from RUSH to continue the conversation.*

*Dr. Soorya is quick to acknowledge others from the team who have contributed to advancing the work of the center. She helps others in the center to grow in their roles by including them in major discussions with collaborators other professional groups, or even the media. She will ask for their opinions and allow them to become more comfortable in these high-stakes conversations. In this way, her mentoring is very tangible. However, there are also the intangible benefits of being recognized and having your work acknowledged by Dr. Soorya- a respected and established giant in the field- which is an important aspect of the mentoring relationship."*

**From nominator Allison Wainer, PhD:**
*"It is my absolute pleasure to nominate Dr. Latha Valluripalli Soorya for Mentor of the Year. I have had the opportunity to work closely with Dr. Valluripalli Soorya for the last seven years and consider her both a mentor and a role model as she so successfully navigates her roles as clinician scientist and director of the Autism Assessment, Research, Treatment and Services (AARTS) Center. I believe her leadership, scientific productivity, and dedication to the development of the next generation of clinician scientists at RUSH indicate just how deserving she is of this award. Dr. Valluripalli Soorya has played a critical role in the development of a robust clinical research team focused on delivering the highest quality care for individuals with autism spectrum disorder across the lifespan.*

*She has taken initiative, time and again, to provide opportunities for trainees and junior faculty to become involved in research; encouraged and supported others in applying for funding to support their research ideas; and created spaces that foster growth, innovation, and team science. Under her leadership, the AARTS Center has seen over 100 graduate and postgraduate trainees with backgrounds in counseling, social work, clinical psychology and child and adolescent psychiatry. Every one of these trainees has had the opportunity to personally learn about clinical research from Dr. Valluripalli Soorya. Thanks to Dr. Valluripalli Soorya, many of these alumni are now autism spectrum disorder experts in the community and across the country.*

*While Dr. Valluripalli Soorya has been a consistent source of mentorship and support for years, her leadership has never been more clear or impactful than over the last two years during the COVID-19 pandemic. Our trainees and early career investigators found themselves navigating unfamiliar and overwhelming clinical and research landscapes, and Dr. Soorya was there to provide hands-on guidance and mentorship every step of the way. She made time to meet with our team members individually and as a group, and she ensured that each person had the resources and guidance needed to continue their professional development. What is remarkable is that since the COVID-19 pandemic began, Dr. Soorya's mentorship has led to over $4 million of external research funding on federally funded grants submitted by her mentees."*

**RUSH Mentoring Programs**

# 2022 Award Winners

## 2022 Postdoctoral Mentor of the Year

**Anna Spagnoli, MD**
*John W. and Helen H. Watzek Professor, Department of Orthopedic Surgery (Director - Section of Molecular Medicine) and Department of Pediatrics*
*RUSH Medical College*

**Awarded by the RUSH Postdoctoral Society in recognition of outstanding contributions to the postdoctoral fellow's success, commitment and involvement in the Mentoring Program.**

**From nominator Pranav Mishra, MD:**
*"Throughout this year, I have been thinking about this award and how there is no professor I have worked with — from my undergraduate years through medical school and beyond — who is more deserving than Dr. Anna Spagnoli. As trainees, we observe a professor's strength in four possible roles: educator, researcher, clinician and administrator. While all professors have clearly demonstrated excellence in one of these domains, it is uncommon to find a professor who excels in two. It often appears that abilities as an educator and researcher are diametrically opposed. Faculty who are strong in three domains are rare, and trainees naturally cherish moments spent with them. A professor who is strong in all four domains is exceptional in the truest sense of the word. It is a privilege to train under someone who has substantially contributed to their field and has created a foundation for a generation of new minds. Dr. Spagnoli is in this exceptionally small group of professors who excel in all four domains.*

*The most striking thing about Dr. Spagnoli is the amount of one-on-one time she will dedicate to you. I have worked on multiple projects over the last year. For each one, Dr. Spagnoli and I spend hours in her office every few weeks. These are not mere progress updates and planning sessions. Rather, she wishes to truly ensure that we are focused on producing good science and not merely a rapid publication. Professors have a multitude of challenging commitments beyond research output, including grant submission, peer review, NIH study sections, university roles, etc. that typically occupy the majority of their time. Knowing this, it is remarkable how Dr. Spagnoli will personally train you, at the bench, for even the simplest techniques you are unfamiliar with. It is here you can clearly see her strength as an educator and her passion for research.*

*Unlike many full professors, her lab coat and presence in the lab are not only for the occasional press photo or managerial check. In fact, as I write this, Dr. Spagnoli is working in the biosafety hood on a cell culture after every other lab member has left for the evening. My colleagues at RUSH and in other institutions have found it rare and remarkable to have this level of interaction with a professor of her seniority. Dr. Spagnoli empowers her team to be successful by clearing barriers inside and outside the lab. From a research standpoint, there is no technique or protocol that she has restricted due to past experience in the lab, financial constraints or novelty of a new approach. When I came to Dr. Spagnoli with little more than a shot-in-the-dark hunch on a few target genes of interest to examine on our post-traumatic osteoarthritis experiment, she encouraged me to proceed, running time consuming and expensive experiments to build my confidence as a researcher.*

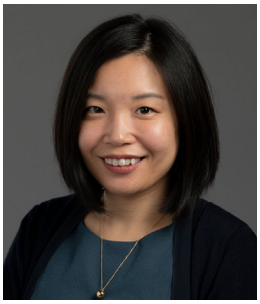
*Beyond our in-house work, our lab is working with core facilities at RUSH and University of Illinois at Chicago, costing thousands of dollars per run. We do not hesitate to re-run or conduct further trials. For Dr. Spagnoli, improving our technique and producing good science is more critical than pushing a manuscript out because of the time and resources invested. To enable our best work in the lab, Dr. Spagnoli personally assists us with things impacting our lives. As COVID-19 cases surged again, she physically helped move things around the lab so that we had adequate social distancing and provided everything required to feel safe. At different points in the year when some fell ill with the omicron variant, Dr. Spagnoli checked in to see what she could do to help. She answers our team's messages and emails while on vacation. She has helped our lab members with immigration correspondence and health insurance issues, and coordinated staff across departments to expedite necessary paperwork. We have happily welcomed the newest member of our extended laboratory family, Dr. Meka's first child, Vishwat Srivachan. Dr. Spagnoli has been accommodating to not only our newest dad, but to all of us as we navigate our personal and professional lives."*

**RUSH Mentoring Programs**

# Class of 2023 Cohn Fellows

**Every year the Cohn Family Foundation provides grant funding to support junior faculty at RUSH University who are mentees in the RUSH Research Mentoring Program. The Cohn Fellowship allows mentees to gather preliminary data for research proposals and continue their research activities.**

**The following faculty members were selected as the Class of 2023 Cohn Fellows after a very competitive process.**



**Xioaran Liu, MSc, PhD, FAHA**, is an assistant professor in the Department of Internal Medicine. She is also a nutritional epidemiologist and clinical trialist at the RUSH Institute for Healthy Aging. Her research focuses on diet and lifestyle intervention to prevent cardiometabolic diseases, Alzheimer's disease, dementia, and cognitive decline. She received this year's Alzheimer's Association Research Grant. Her current research investigates the link between dietary antioxidants and risk of cognitive decline among population with varying genetic risk profiles. Her Cohn Fellowship research will investigate the impact of nutrients in modifying the relation of blood biomarkers of neurodegeneration and risk of Alzheimer's disease. The investigation will facilitate in informing when to introduce dietary intervention for the prevention of Alzheimer's disease.

**Adrienn Markovics, MD, PhD**, is an assistant professor in the Department of Orthopedic Surgery, RUSH Medical College. Her research focuses on inflammatory joint disease and newly orthopedic implant-associated infection. She is particularly interested in investigating if activation of a protein tyrosine phosphatase can be exploited to the treatment of inflammatory arthritis and in the development of local drug delivery systems to fight periprosthetic infection. Her Cohn Research Fellowship will investigate the electrochemical deposition of pharmacological agents onto metal implants to treat and eradicate peri-prosthetic infection.

**Amanda L. Marzo, PhD**, is an assistant professor in the Department of Internal Medicine (Division of Hematology, Oncology and Cell Therapy) in RUSH Medical College. Her research focuses on immune oncology with an emphasis on metastatic breast cancer. Her most recent work uses a combination of agents including the seasonal influenza vaccine in combination with immunostimulatory agents to potentiate the effectiveness of immune checkpoint inhibition therapy in metastatic triple negative breast cancers that are resistant to current therapies. Her overall goal is to overcome the resistance and promote the rapid restimulation and generation of tumor-killing immune cells capable of driving tumor clearance and durable antitumor immunity to improve the outcomes of patients with metastatic breast cancer. Her Cohn Fellowship research will determine the impact of tumor growth and breast cancer metastasis has on atrial fibrillation, the most common cardiac arrhythmia. She will also quantify the impact immunotherapies have on atrial pathophysiological remodeling.

*continued*

**Chundo Oh, PhD**, is an assistant professor in the Department of Orthopedic Surgery, RUSH Medical College. She received a PhD in Life Science from GIST in Korea and completed her postdoctoral fellowship in the Department of Genetics at the University of Texas MD Anderson Cancer Center. Her postdoctoral training with Dr. Benoit de Crombrugghe, MD identified important genome-wide transcriptional regulation during bone development. Currently, she is a member of International Spine Research & Innovation Initiative, which is an interdisciplinary team of clinicians and scientist whose goal is to understand and treat spine related disorders and its associated pain. She is a member of the Orthopaedic Research Society and the American Society for Bone and Mineral Research. She received the 2022 Cohn Fellowship Award for her studies to help to determine the regulatory mechanisms of beta-catenin and CCL2 in disc degeneration and back pain to develop biological strategies in these animal models that can ultimately be translated to benefit patients with back pain.

**RUSH Mentoring Programs**

# 2022 Graduating Mentees

**Mentees graduate from the Rush Research Mentoring Program and becomes junior mentors after they have been in the program for five years.**

### Mary Heitschmidt, PhD, APRN, CCRN-K

*Associate Professor*
*Department of Women, Children and Family Nursing*
*Co-Director, Center for Clinical Research & Scholarship*
*RUSH University College of Nursing*

### Hoang Nguyen, MD

*Assistant Professor*
*Department of Pediatrics*
*RUSH Medical College*

### Ben Inventor, PhD, APN/CNP

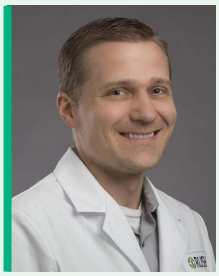
*Director, Adult-Gerontology Primary Care Nurse Practitioner Program*
*Assistant Professor, Adult Health and Gerontological Nursing*
*RUSH University College of Nursing*

### Robin Pourzal, PhD

*Associate Professor*
*Director of Implant Materials Analysis*
*Department of Orthopedic Surgery*
*RUSH Medical College*

### Chien-Ching Li, PhD, MPH

*Associate Professor*
*Department of Health Systems Management*
*RUSH Medical College*

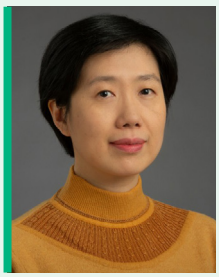


### Ryan Ross, PhD

*Associate Professor*
*Department of Anatomy and Cell Biology*
*RUSH Medical College*

### Amanda Marzo, PhD

*Assistant Professor*
*Department of Internal Medicine*
*RUSH Medical College*



### Lai Wang, MD, PhD

*Assistant Professor*
*Department of Internal Medicine (Division of Rheumatology)*
*RUSH Medical College*

### Lynn Mohr, PhD, APRN, PCNS-BC, CPN, FCNS

*Associate Professor and Chairperson*
*Director, Pediatric & Neonatal CNS Programs*
*Department of Women, Children, and Family Nursing*
*RUSH University College of Nursing*

**RUSH Mentoring Programs**

# Poster Presentations

1. **Aboushaala, K. et al.** Impact of Obesity in Children With Low Back Pain: Associations With Imaging Phenotypes and Pain Management
2. **AbuAlia, M. et al.** Articular Cartilage Shear Properties Change With Compression and are Dependent on an Intact Superficial Zone
3. **Akhtar, U. et al.** Biomarkers of Early Onset Age-Related Hearing Loss
4. **Andy-Nweye, A.B. et al.** Children With Shellfish Allergy Have Higher Risk of Cockroach Sensitization.
5. **Espinoza, A. et al.** Hip Joint Contact Forces in Patients with FAI Syndrome Differ From Both Healthy Controls and the Uninvolved Limb During Single-Leg Squat
6. **David, B. et al.** Microscaffolds for the Mitigation of Secondary Injury Following Spinal Cord Injury
7. **Das, V. et al.** (2R,6R)-HNK Increases Activation of AMPA Receptors and Reduces BDNF Activity in a Murine Model of Low Back Pain
8. **Geraghty, T. et al.** Macrophage Depletion Alleviates Pain-Like Behaviors in Osteoarthritic Mice of Both Sexes
9. **Gustafson, J. et al.** Characterizing Differences in Shoulder Joint Motion Between Responders and Non-Responders Following Reverse Total Shoulder Arthroplasty
10. **Ishihara, S. et al.** Development of an Assay to Assess Anxiety-Related Behavior in an Experimental Model of Osteoarthritis
11. **Jones, K. et al.** Development of a Gamma Camera to Image High-Dose-Rate Brachytherapy Sources
12. **Mahmud, K.A.F. et al.** Reduced Bioavailable Microbial Products (PAMPs) Contribute to Impaired Healing in Infected Diabetic Wound
13. **Mell, S. et al.** An In-Silico Method of Evaluating the Effect of Tibial Tubercle Osteotomy on Patellofemoral Cartilage Pressure
14. **Molina Jijon, E. et al.** Differential Expression of Renal and Hepatic PCSK9 During Development of Hypercholesterolemia in the Puromycin Aminonucleoside Nephrosis Rat Model of Nephrotic Syndrome.
15. **Neto, M. et al.** Retrieval and Metallurgical Analysis of the Gross Trunnion Failure of TMZF Implant Alloy
16. **Nweke, U.C. et al.** Can Our Patients Read and Understand the Patient Educational Materials Developed to Educate Them?
17. **Obeidat, A. et al.** Effect of Repeated Injections of Intra-Articular Nerve Growth Factor in the Naïve Murine Knee Joint
18. **Romanova, L. et al.** Mapping Meningeal Vasculature in Non-Human Primates.
19. **Schneider, J. et al.** Tracking Fluorescently Labeled Anti-HIV IgG in the Brain to Enhance CNS-Specific Cure Strategy.
20. **Wood, M. et al.** Identification of GPRs in the Dorsal Root Ganglia as Novel Druggable Targets for Osteoarthritis Pain
21. **Yuh, C. et al.** The Relationship Between Disease Severity and Tissue Expression in the Cam Lesion and Capsule Tissues Retrieved From Patients' Hips With Cam-Type Femoroacetabular Impingement Syndrome

**RUSH Mentoring Programs**

# Special Thanks

**The Cohn Family**

**Susan Chubinskaya, PhD**
(Vice Provost, Office of Faculty Affairs)

**RUSH Mentoring Programs Symposium Steering Committee**

**Mentors, Mentees and Postdoctoral Fellows**

**RUSH Creative Media**

**Marketing and Communications**

**Symposium Abstract Reviewers**

Alejandro Espinoza, PhD
Sharon Foley, PhD
Christopher Forsyth, PhD
Masako Mayahara, PhD, RN
Robert McCarthy, PharmD
Joan O'Keefe, PhD
Tochi Okwuosa, DO
Sasha Shafikhani, PhD
Julius Turian, PhD
Markus Wimmer, PhD

**Symposium Poster Reviewers**

Sharon Foley, PhD
Christopher Forsyth, PhD
John Sayona, MD
Masako Mayahara, PhD, RN
John Turian, PhD
Markus Wimmer, PhD

RUSH UNIVERSITY

## Office of Faculty Affairs

Armour Academic Center
600 S. Paulina St., Suite 1044
Chicago, IL 60612

faculty_affairs@rush.edu
www.rushu.rush.edu/about/faculty-affairs

## Office of Mentoring Programs

Armour Academic Center
600 S. Paulina St., Suite 1037
Chicago, IL 60612

mentoringprograms@rush.edu
www.rushu.rush.edu/mentoringprogram

**Susan Chubinskaya, PhD**
**Vice Provost**
Office of Faculty Affairs
(312) 942-6306
susanna_chubinskaya@rush.edu

**Amarjit S. Virdi, PhD**
**Director**
Office of Mentoring Programs
(312) 563-3146
amarjit_virdi@rush.edu

**Meghana Atre, MPH**
**Academic Program Coordinator**
Office of Mentoring Programs
(312) 563-3130
meghana_s_atre@rush.edu