31st ANNUAL RUSH FORUM FOR RESEARCH AND CLINICAL INVESTIGATION

PROGRAM

WEDNESDAY, April 2, 2014

Claude H. Searle Conference Center Professional Building, 5th Floor Rush University Medical Center

All talks and award presentations in Fenger/Sippy, Rooms 530-538 unless otherwise noted Posters located in: Brainard, Room 542 & Billings/Herrick, Rooms 531-543

8 a.m. – 6 p.m.

Sigma Xi Poster Session – Open Viewing

7 – 8:30 a.m. – Room 539 Armour Academic Center Department of Surgery Resident Research Competition Presentations

 27^{th} Annual Frederick A. dePeyster Memorial Lecture for the Rush Surgical Society

USING GEOGRAPHIC INFORMATION SYSTEMS IN TRAUMA RESEARCH

Dr. Marie Crandall Associate Professor of Surgery Division of Trauma and Surgical Care Center Northwestern University

9 – 9:05 a.m. **WELCOME**

Matt Raymond
Director of Intellectual Property
Forum Program Chair

9:05 – 9:20 a.m. RESEARCH UPDATE AT RUSH

James L. Mulshine, MD Professor of Internal Medicine Associate Provost for Research and Vice President

9:20 – 10:25 a.m. COLLEGE FACULTY PRESENTATIONS

Moderator: Jochen Reiser, MD, PhD

The Ralph C. Brown MD Professor

Chairman of Medicine Internal Medicine

REGULATION OF THYROID HORMONE SIGNALING IN HEALTH AND DISEASE

Antonio Bianco, MD, PhD

Division Chief, Endocrinology & Sr. Vice Chair, Internal Medicine Rush University College of Medicine

WOMEN'S WALKING PROGRAM: 24 AND 48 WEEK OUTCOMES

JoEllen Wilbur, PhD, RN, CS, FAAN

Professor and Associate Dean Rush University College of Nursing

MODULATION OF INTESTINAL MICROBIOTA AND PERMEABILITY THROUGH DIETARY INTERVENTION

Heather Rasmussen, PhD, RD, LDN

Assistant Professor Rush University College of Health Sciences

MECHANISMS OF VIRAL FUSION

Fredric Cohen, PhD

Professor

Rush University Graduate College

10:30 – 11:55 a.m. COHN SYMPOSIUM DISTINGUISHED LECTURE

NOVEL THERAPIES FOR ACQUIRED AND GENETIC CARDIAC DISORDERS: AN ODYSSEY IN TRANSLATIONAL MEDICINE

R. JOHN SOLARO, PHD

Distinguished University Professor and Head Department of Physiology and Biophysics College of Medicine University of Illinois at Chicago Introduction: Bob Eisenberg, PhD

11:55 – 12:30 p.m. BREAK

12:30 – 3 p.m. RUSH UNIVERSITY STUDENT PRESENTATIONS

GROUP I: 12:30 - 1:45

Moderator: Meghan Moran, PhD

Instructor

Anatomy and Cell Biology

ADOLESCENTS' PERSPECTIVES FOLLOWING OSTOMY SURGERY

Lynn Mohr

CON

IMPACT OF AN ENHANCED MEDICAL SCREENING EXAM ON EMERGENCY DEPARTMENT OPERATIONAL METRICS

Rachel Mills

CHS

AFRICAN-AMERICAN YOUTH PERSPECTIVES ON HEALTHY FOOD CHOICES: A PHOTOVOICE PROJECT

Saria Lofton

CON

PROTEIN ADMINISTRATION AND LINEAR GROWTH IN NEONATAL INTENSIVE CARE PATIENTS

Monica Bojko

CHS

GROUP II: 1:45 – 3:00

Moderator: Animesh Barua, PhD

Assistant Professor

Pharmacology, Obstetrics & Gynecology and Pathology

NEUROLOGICAL AND ENDOCRINE INVOLVEMENT IN WOMEN WITHOUT FXTAS WITH THE FMR1 PREMUTATION

Maura Walsh

Medical College

PROOF OF CONCEPT FOR A METAL-ION ELECTROCHEMICAL BIOSENSOR (MIEB) FOR EARLY DIAGNOSTIC DETECTION OF METAL ION RELEASE IN ORTHOPEDIC PATIENTS

Thymur Chaudhry

Medical College

MEDIALIZING CENTER OF PRESSURE REDUCES PEAK KNEE ADDUCTION MOMENT

Christopher Ferrigno

Graduate College

SIVCPZ TRANSMISSION FROM CHIMPANZEE TO HUMANS RESULTED IN LOSS OF NEF UTILIZATION AND A GAIN IN VPU'S UTILIZATION IN ORDER TO EVADE NATURAL KILLER CELLS.

Bharatwaj Sowrirajan

Graduate College

3 – 5 p.m. VENDOR SHOW AND HOR'S DOEUVRES

3 – 5 p.m. SIGMA XI POSTER COMPETITION

Poster oral presentations by students and fellows/residents are reviewed and judged by Rush faculty for Sigma Xi Poster Awards

Coordinator:

Alejandro A. Espinoza Orias, PhD President, Rush Chapter of Sigma Xi

Competition Categories

- Student awards by college
- Fellow awards (either basic or clinical research)
- Graduate Student Council awards
- John E. Ware Award for Research on the Patient Experience.

Announcement of winners will be made Thursday at 3:00 PM

THURSDAY, April 3, 2014

8 a.m. – 5:30 p.m. POSTERS – Open Viewing

9:30 WELCOME

9:35 – 11 a.m. MENTORING PANEL

Moderator: Giselle Sandi, PhD Director, Research and Teaching Mentoring Programs Office of the Associate Provost for Academic Affairs

TORSIONAL BIOMECHANICS OF LUMBAR SEGMENTAL MOTION IN CASES OF LUMBOSACRAL TRANSITIONAL VERTEBRAE

Alejandro Espinoza-Orias, PhD

RELATIONSHIP BETWEEN GRAY MATTER ATROPHY AND APOE GENOTYPE AND PARKINSON'S DISEASE COGNITIVE DYSFUNCTION

Jennifer G. Goldman, MD, MS

MEDULLARY CANAL SIZE DOES NOT AFFECT BONE REGENERATION RESPONSE IN FOUR DIFFERENT MOUSE STRAINS AFTER MARROW ABLATION

Meghan Moran, PhD

CATHEPSIN K IS A NOVEL AND ACCURATE BIOMARKER FOR PARTICLE INDUCED OSTEOLYSIS

Ryan Ross

RUNX2/BETA-ARRESTIN AXIS FUNCTIONS IN BONE METASTASIS OF BREAST CANCER VIA IGF-1R/AKT/ERK SIGNALING CROSSTALK

Manish Tandon

11:00 – 11:30 a.m. BREAK

11:30 a.m. – 1:30 p.m. RUSH UNIVERSITY COLLEGE AWARDS

Moderator: Ryan Nagdeman

Director, University Relations

Office of the Vice Provost, University Affairs

Awards will be presented by:

Judy Luborsky, PhD Associate Dean for Research, College of Health Sciences

Mark Foreman, PhD, RN, FAAN Acting Dean, College of Nursing

Thomas Deutsch, MD, Dean, Rush Medical College

James Mulshine, MD, Acting Dean, Rush Graduate College

REPRODUCING FRAMINGHAM CVD RISK PROFILES IN HISPANIC MEN AND WOMEN

Tanya Cohn

College of Nursing

BODY COMPOSITION ASSESSMENT IN PATIENTS ON LONG TERM PARENTERAL NUTRITION (PN) UTILIZING DIAGNOSTIC COMPUTED TOMOGRAPHY (CT) SCANS OF THE THIRD LUMBAR AREA

Kaitlyn Nowacki

College of Health Sciences

THE SONIC HEDGEHOG SIGNALING PATHWAY MAINTAINS THYROID CANCER STEM CELL SELF-RENEWAL BY SNAIL AND STIMULATES THYROID TUMOR CELL INVASIVENESS BY ACTIVATING AKT AND C-MET

Ashley Williamson

Medical College

A NOVEL P38 MITOGEN-ACTIVATED PROTEIN KINASE/ELK-1 TRANSCRIPTION FACTOR-DEPENDENT MOLECULAR MECHANISM UNDERLYING ABNORMAL ENDOTHELIAL CELL PROLIFERATION IN PLEXOGENIC PULMONARY ARTERIAL HYPERTENSION

Monal Patel

Graduate College

1:30 – 3:00 p.m. DEMONSTRATION: PROPER PIPETTING TECHNIQUE

3:00 – 3:30 p.m. ANNOUNCEMENT OF WINNERS OF THE SIGMA XI POSTER COMPETITION

Moderator: Alejandro A Espinoza Orias, PhD

Department of Orthopedics

President, Rush Chapter of Sigma Xi

Dr. Espinoza Orias will announce winners for the monetary awards and certificates of recognition in the following categories:

- Graduate Student from each college
- Fellow/Resident (in either basic or clinical research)
- Graduate Student Council Awards
- John E. Ware Award for Research on the Patient Experience

3:30 – 5:00 p.m. SOCIAL FOR POSTER SESSION

Vendor Product Show

Poster viewing and discussion with authors

Poster authors should attend their posters according to the following schedule

3:30 – 4:15 Odd Numbered Posters 4:15 – 5:00 Even Numbered Posters

5:00 p.m. CLOSE OF FORUM