The Student Research Forum is an annual event that showcases the research accomplishments of SMPH students. The majority of students conducted research under the mentorship of UW faculty mentors during the summer between their first and second year of medical school. Today, more than 100 students will present their work through podium and poster presentations.

Noon- 1:00 PM  
Poster Session  
HSLC Atrium

1:15-1:30 PM  
Welcome and Opening Remarks  
Dean Robert N. Golden, MD  
Dean and Vice Chancellor for Medical Affairs  
1306 HSLC

1:30 - 2:10 PM  
SHAPIRO GUEST LECTURE  
1306 HSLC

The Art and Science of Implementation Research  
Nasia Safdar, MD, PhD  
Associate Chief of Staff for Research, Madison VAH  
Professor, Infectious Diseases  
Healthcare Epidemiologist, UW Health  
Vice-chair for Research, Department of Medicine  
UW-Madison School of Medicine and Public Health  

Dr. Safdar is a professor in the Department of Medicine, Section of Infectious Diseases, the associate chief of staff for research at the William S. Middleton Memorial Veterans (VA) Hospital, the vice-chair for research in the SMPH Department of Medicine, and the medical director for infection control at UW Health. She is the recipient of the 2018 Dean’s Award for Excellence in Medical Student Research Mentorship. Her highly productive research program focuses on preventing health care-associated infections. She is the principal investigator on 10 grants, including awards from the VA, NIH and the Agency for Healthcare Research and Quality. She earned her medical degree at Aga Khan University Medical College in Karachi, Pakistan. She also completed an internship at Sir Ganga Ram Hospital in Lahore, Pakistan; an internal medicine residency at UW Health in Madison; fellowships in infectious diseases and in women’s health and infectious diseases at UW Health; and a doctorate degree in clinical research from University of Wisconsin-Madison. Dr. Safdar follows a highly structured, goal-driven approach to mentoring, with a special emphasis on evidence-based research. Since 2006, she has mentored 26 medical students. Her medical student mentees have authored approximately 35 peer-reviewed manuscripts and presented their work at local, regional and national meetings. Many have been part of the Shapiro Summer Research Program, and — in part due to her efforts—the average number of Shapiro students in the Department of Medicine increased from 12 to 28 per year. Dr. Safdar has facilitated a campus-led mentoring workshop and helped plan the UW-Madison mid-career faculty mentoring program. In addition, she helped develop department-wide training programs for investigators who host medical students for summer research. Nationally, she has been honored with the 2017 President’s Early Career Award for Scientists and Engineers, the 2017 Society for Healthcare Epidemiology of America Midcareer Investigator Award and the NIH Director’s New Innovator Award in 2018.

2:15-4:00 PM  
Podium Presentations  
1306,1325,  
1335,1345 HSLC

4:00-5:00 PM  
Poster Session and Reception  
School of Medicine  
and Public Health  
UNIVERSITY OF WISCONSIN-MADISON

Support for the 17th Annual Medical Student Research Forum is provided by the SMPH Office of Academic Affairs, the Herman and Gwendolyn Shapiro Foundation, and the Wisconsin Medical Alumni Association.

Photography by Media Solutions and University Marketing
1. Variation in Ultrasound Probe Use in the Ambulatory Setting: Disinfection Status and Supplies During Use
   Angela C. Ai
2. Factors Impacting the Development of Post-Heart Transplantation Malignancy in the Veteran Population
   Calvin M. Albrecht
3. The Utility of Urinalysis Prior to In-office Procedures: a Randomized Clinical Trial
   Kate M. Backhaus
4. Who Is at the Table: Levels of Inter-professionalism in Mental Health Courts
   Ben Beduhn
5. Radiographic Alignment Following Reduction and Fixation of Tibia Shaft Fractures
   Richard J. Behlmer
6. Surgeon Engagement in Surgical Health Policy Advocacy
   Sarah R. Beilke
7. Enhancing Top-Down Proteomics Data Analysis Tools for Precision Medicine through Machine Learning
   Daniel J. Belongia
8. Impact of Digital Breast Tomosynthesis-Guidance on Pathology Outcomes and Quality Metrics of Breast Biopsies
   Curran K. Bice
9. Creating a Primary Care Toolkit for Transgender, Non-Binary, and Gender Non-Conforming (TNG) Youth through Iterative Design Methods
   Brian Bizub
10. Evaluating the Role of Pre-Treatment Renal Mass Biopsy in Large or Advanced Renal Masses
    Evalina S. Bond
11. Perceptions and Practices Toward Tuberculosis Screening By Tibetan Health Workers and Students in India: Recommendations for the Zero TB Campaign
    Noah Borchardt
12. Northeast Clinic Navigator Program Evaluation
    Alex B. Bryant
13. Silicosis: Medicolegal Implications of Diagnosis
    Brandon Bukoviz
14. Viewpoints of Pregnant Mothers and Community Health Workers on Prenatal Care in Lweza Village, Uganda
    Mackenzie E. Carlson
15. Biomimetic Cardiac Organoid for in Vitro Investigation of Cardiac Cell-To-Cell Interactions
    Sophia Colevas
    Lucia C. Covert
17. Factors Which Affect the Decision of Family Physicians That Enter Practice in Underserved Communities
    Lenka Craigova
18. Development of High Fidelity Training Cases for Independent Radiology Call Exam
    Alex J. Cuskey
19. Determining B78 Melanoma Sensitivity To Cytotoxic T-Cells Using Incucyte
    Do D. Dang
20. Investigating the Prognostic Value of Serum Biomarkers for High-Risk Renal Cell Carcinoma Recurrence Following Surgery
    Emily L. Davidson
21. Outcomes of Pre-Transplant, Recurrent and Post-Transplant Malignant Melanoma in Kidney Transplant Recipients
    Sarah E. Di Bartolomeo
22. Differences in Radiographic Measurements on Standing Versus Supine Pelvic Radiographs
    Sean P. Dunmnie
23. Physician Preferred Transathoracic Echo Acoustic Windows for Evaluating Aortic and Mitral Valves in Anticipation of Transcatheter Valve Interventions
    Jacob K. Ellis
24. Statin Efficacy Related to Adherence and Follow-Up in a Pediatric Population
    Connor J. Enright
25. Improving Function After Peripheral Nerve Injury with Mineral Coated Microparticles Releasing Growth Factors
    Elliot Franczek
26. Incidence and Risk Factors of Acute Kidney Injury in Pediatric Acute Myeloid Leukemia
    Brenna R. Funfar
27. Safety and Efficacy of Moderate Sedation in Obese Patients Undergoing Endoscopic Retrograde Cholangiopancreatography and Endoscopic Ultrasound
    Genti A. Gjyzeli
28. Caring for Women in Wisconsin: A Guide To Understanding Women’s Health Funding and Policy
    David A. Glaubke
29. Characterizing the Inflammation Response in Burn Tissue
    Christopher R. Glover
30. Changing Patients with Type 2 Diabetes Mellitus From Insulin To DPP-4 Inhibitors
    Matthew J. Goblirsch
31. Enhancing Detection Sensitivity of Humanized Therapeutic Antibody in Patient Samples for Improved Pharmacokinetic Evaluation
    Megan Gokey
32. Timing Is Everything: Decreasing Mortality Associated with Severe Hyperkalemia in Hospitalized End Stage Renal Disease Patients
    Andrew J. Gregory
33. Shock Expectancy as a Measure of Fear Learning in Youth with PTSD
    Julia H. Harari
34. Decreasing Patient Distress During Minor Procedures in a Pediatric Emergency Department as Assessed Using Pediatric Sedation State Scale
    Jenna M. Hatab
35. PTSD Symptom Severity and Opioid Misuse at 12 Weeks Post-Discharge Following Traumatic Injury
    Kathryn Henschel
    Steven P. Hesse
37. Provider Comfort & HPV Vaccine Recommendation: A Survey
    Elizabeth Hovel
38. Impact of Survivorship Care Plans and Planning On Breast, Colon and Prostate Cancer Survivors in a Community Oncology Practice
    Alexandra Hua
39. The Effectiveness in Soccer Headgear to Reduce the Incidence and Severity of Sports Related Concussions in Adolescents
    Joseph D. Janz
40. Pet Ownership and the Microbial Diversity of the Human Gut Microbiome
    Omar G. Jarrett
41. Barriers to Active Surveillance: a Survey of Endocrinologists and Surgeons
    Catherine B. Jensen
42. Enhancing Outreach to Our Communities: Exploring Opportunities to Integrate Primary Care with Community Health Workers
    Yanzi (Katherine) J. Jiang
43. The Role of Autoantibodies in Cardiac QTc Prolongation in Patients with Rheumatoid Arthritis
    Alexis M. Keefe
44. Using 4D DSA To Create an In Vitro Model for Analyzing Intracranial Aneurysms Hemodynamics
    Aahad N. Khan
45. Identification of Predictors of Mortality and Early Interventions for Pediatric Patients in the Acute Care Setting At Mbale Regional Referral Hospital, Uganda
    Brandon R. Kim
46. Use of Herbal Medicine to Improve Trust of Amish Communities in Western Health Care
    Beth Klein

Abstracts are posted at https://www.med.wisc.edu/education/student-research/#forum
POSTER PRESENTATION SESSIONS
Noon - 1:00 pm and 4:00 - 5:00 pm  Numbers correspond to display boards in the HSLC Atrium

47. Current Practice Patterns for Primary Umbilical Hernia Repair in the United States
   Samuel D. Koebe

48. An Evaluation of the Impact of the Certified Ophthalmic Paramedic Program at a Large Charity Eye Hospital in Delhi, India
   Vimal S. Kunduri

49. Effect of High Fat Diet on Inflammatory Cytokines/Adipokines Associated with Atherosclerosis
   McDaniel H. Lang

50. Consequence of an Early Catheter Intervention to Treat Pulmonary Artery Stenosis in a Swine Model of Congenital Heart Disease
   Carolina M. Larrian

51. The Effects of Tumor Treating Fields and ABT-414 in Elevated EGFR Expressing and Standard Expressing Patient-Derived Glioblastoma Stem-Like Cells
   Maria T. Leighton

52. A Critique of the AAP Policy Statement on Safety in Youth Tackle Football
   Alec P. Lerner

53. One Versus Two Diagnostic Blocks in Radiofrequency Ablation for Pain Management
   Michael D. Loebertman

54. Does Daily Self-Weighing (DSW) Compared To Routine Care Impact Postpartum Weight Loss?
   Ali N. Lohr

55. Correlation of Self-Reported Depressed Mood Using Telehealth and 6-Week EPDS in Postpartum Women with Hypertension
   Ali N. Lohr

56. Pain Assessment Following Adductor Canal Block in Total Knee Arthroplasty with Liposomal Bupivacaine or Standard Bupivacaine
   Bradley Maerz

57. Characterization of Toll-Like Receptors in the Larynx: Implications for Inflammation
   Alexandra M. Mechler-Hickson

58. Disparities in Gynecologic Cancer Prevention Referral Patterns: Promoting Health Equity and Process Change
   Laura Miller

59. Impact of Intraoperative Hemodynamics and Blood Loss on Risk of Postoperative Delirium
   Samantha Miller

60. School-Based Immunization as a Method of Increasing HPV Vaccination Rates Among Wisconsin Youth
   Katherine E. Mooney

61. Evaluating Survivorship Care Plans for Use By Hematopoietic Stem Cell Transplant Survivors and Non-Transplant Clinicians: An Engineering, Primary Care, and Oncology Collaborative for Survivorship Health
   Colleen M. Morken

62. Current Trends in Hip Arthroscopy
   Capsule Management: A Survey of Hip Arthroscopists
   Alison M. Mueller

63. Mineral-Coatings for mRNA-based Reprogramming in Nerve Grafts
   Miguel A. Navarro

64. Cancer Rates Are Down Nationally: Are They down Where You Live?
   Andrew Nguyen

65. Web-Based Case Study Analysis on US Med-Peds Residency Global Health Opportunities
   Jayne-Norah N. Ntiamb

66. Exploring the Effects of Cytokine Administration on Liver Allografts During Normothermic Ex-Vivo Liver Perfusion (NEVLP)
   Andre U. Obua

67. To Operate or Not: An Assessment of Operative Indication of Distal Radius Fractures Using X-Rays and CT Scan in the Same Patient
   Tetyana Osadchuk

68. A Gap Analysis of Simulation Training in Medical Education for Students with Physical Disabilities
   Kush A. Patel

69. Feeding Outcomes Following Mandibular Distraction Osteogenesis in Pierre Robin Sequence
   Vik B. Patel

70. Pre-Operative Predictors of Post-Operative Shoulder Pain
   Nicholas R. Phillips

71. Postoperative Pain and Opioid Use in Total Knee Arthroplasty Using Liposomal Bupivacaine Versus Bupivacaine for Adductor Canal Block
   Haley A. Probst

72. Simultaneous Assessment of Cardiac Metabolism and Function Using PET/MR with Continuous FDG Infusion
   Franchesca C. Razalan

73. Outcomes of Norovirus Diarrhoeal Infections in Kidney Transplant Recipients: a Single-Center Retrospective Study
   Stacey C. Rolak

74. Identification of T Lymphocyte Activation Biomarkers in the Canine Model for Future Use in Melanoma Treatment Response Monitoring
   Kimberly A. Rosenthal

75. Use of BNP in the Emergency Department
   Sarah N. Saenz

76. Antibiotic Use and Indications in a Community Survey of Adults in Wisconsin
   Maria Schletzbaum

77. Vascular Surgery Outcomes of Trauma Patients at TASH, Addis Ababa, Ethiopia
   Yoseph Semma

78. A Pilot Study of Female Athlete Triad and Iron Deficiency Prevalence and Association in High School Athletes
   Paige Skorseth

79. FNIRS Imaging: Investigating Listening Effort in Single-Sided-Deaf Cochlear Implant Simulation
   Gabriel G. Sobczak

80. Content Validity of the PROMIS® Pediatric Family Relationships Measure for Children with Chronic Illness
   Jacob Svenson

81. Barriers To Adoption of Medication Assisted Treatment for Opioid Use Disorder by Family Medicine Physicians, in Wisconsin
   Quinton A. Taylor

82. Physician Calls To Pediatric General Surgeons – Foundational Data To Guide Future Interventions
   Ainsley Timmel

83. Functional Outcomes Following Medial Patellofemoral Ligament (MPFL) Repair for Chronic Patellar Instability
   Priya B. Varghese

84. Impact of Liposomal Bupivacaine Injected for Adductor Canal Block on Recovery Profile and Block Characteristics Following Total Knee Arthroplasty
   Cameron A. Trotter

85. Investigating the Relationship Between CSF Metabolites, Alzheimer’s Biomarkers and Demographic Data in People with a Parental History of Alzheimer’s Disease
   Michael J. Wakely

86. Comparing the Characteristics of Pediatric Osteoarticular Infection on MRI: MRSA vs. Non-MRSA
   Jarrett A. Warden

87. A Multivariant Analysis of No-Show Rates and Factors Contributing to Non-Attendance at an Academic Pediatric Dermatology Center in the United States
   Katie M. Welsh

88. A Multidisciplinary Approach to Patients with Acute Necrotizing Pancreatitis
   Kyle EW. Williams

89. Disability Information Needs of Women with Advanced Breast Cancer
   Athena S. Wilson

90. Assessing the Feasibility and Barriers of a Diabetic Diet in a Rural Guatemalan Community
   Julia L. Wilson

91. Top-Down Proteomics of Hypertrophic Cardiomyopathy for Precision Medicine: Exploring Sarcomeric Protein Changes in a 3D Engineered Cardiac Tissue Model
   Max G. Wrobel

92. Pain Management for Burn Patients Undergoing Skin Grafting
   Haley R. Zimmerman

Abstracts are posted at https://www.med.wisc.edu/education/student-research/#forum
SESSION A ............................................ 1306 HSLC
Facilitator: Christine S. Seibert, MD
Relative Clinical Outcomes Comparing Manual and Robotic Assisted Total Knee Arthroplasty at Minimum 1 Year Follow-up
Jesse Wang
Identifying Gaps in Primary Care that Influence Emergency Care Use by Community-Dwelling Patients with Dementia
Aaron Beck
Knowledge and Attitudes Regarding LTBI Treatment Among the Tibetan Monastic Population Living in India: Recommendations for the Zero TB Campaign
Sam Starke
Optimizing Levothyroxine Dose Adjustment After Thyroidectomy with a Decision Tree
Stephen Chen
Investigating The Role Of Rac1 And ROCK Signaling In Breast Cancer Cell Migration In Aligned Matrices
Rachel Van Doorn
Peritoneal Dialysis in the Elderly: An Opportunity Not to Miss
Jakob Ohman

SESSION B ................................. Room 1325  HSLC
Facilitator: Pamela J. Kling, MD
Maximum Diameter is a Poor Surrogate Measure for Volume of Small Pancreatic Cysts
Adam Awe
Regulating the Immune Landscape in Pancreatic Ductal Adenocarcinoma
Chelsie Sievers
Biomimetic Cardiac Organoid for In Vitro Investigation of Cardiac Cell-to-cell Interactions
Sophia Colevas
The Impact of Diagnosis on Patient Satisfaction in a Large Sample of General Surgery Outpatients
Nadeem Bandealy
Using Quality Improvement to Address Low Serum Albumin in Hemodialysis Patients
Catherine Richardson
Understanding Communication Gaps in the Hospital Consultation Process
Cristina Fischer

SESSION C ................................. Room 1335 HSLC
Facilitator: Robert F. Lemanske, Jr, MD
Peritoneal Dialysis after Renal Transplant Failure: A Different Beast Altogether
Vivian Gama
CT Texture Analysis of Large Renal Cell Carcinoma: Comparing the Performance of Two Texture Analysis Software Platforms in Predicting Histologic Findings and Clinical Outcomes
Leo Dreyfuss
Variables Associated with Intracardiac Thrombus During Orthotopic Liver Transplant: A Retrospective Single-Center Study
Breanna Aldred
Surgical Coaching for Advancement of Global Surgical Skills and Capacity: a Systematic Review
Deena El-Gabri
Community Paramedic Pilot Program Operational Metrics and Impact on Patient Emergency Medical Services Utilization
Nicholas Genthe
Surgeon Reflections on the Use of a Question Prompt List by Patients Considering High-Risk Operations
Sophie Shogren

SESSION D ................................. Room 1345 HSLC
Facilitator: Elizabeth M. Petty, MD
LinkNet Box CAD: Artificial Intelligence that Detects Prostate Cancer on MRI with Radiologist-Comparable Performance using Deep Learning
Yohan Sumathipala
Improving Metabolic Health Through Reduced Consumption of Specific Dietary Amino Acids
Eunhae Park
Factors Influencing the Measurement of Antibiotic Utilization in Nursing Homes
John Ziegler
Does High BMI or High Insulin Requirements in Simultaneous Pancreas-Kidney Transplant Candidates Increase the Risk of Graft Failure or Return to Insulin?
Phuoc Pham
Assessing the Clinical Feasibility of Whole-Body Dynamic FDG PET Imaging
John Li
Radiofrequency Ablation for Treating Headache Related Pericranial Neuralgia
Sean Nguyen

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