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The complete program including abstracts is available on the
Western Michigan University Homer Stryker M.D. School of Medicine website:
<http://www.med.wmich.edu/research/research-activities/research-day>.

CME CREDIT

The evaluation of this activity will be done electronically through the WMed CME website:

<http://med.wmich.edu/education/continuing-medical-education>

Click on 'Evaluation Forms' from the left menu.

After completion of the form, print or save a copy for your files.

The CME Activity Code is available by handout at the Check-in table.

Western Michigan University Homer Stryker M.D. School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Western Michigan University Homer Stryker M.D. School of Medicine designates this live activity for a maximum of 5.0 *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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DISCLOSURES

Please see the handout offered at the registration table for a listing of disclosure statements from today's presenters.

INTRODUCTION

RESEARCH, EDUCATION AND SCHOLARSHIP

The 34th anniversary of Research Day represents a set of firsts in the growth of Western Michigan University Homer Stryker M.D. School of Medicine (WMed) and Research Day, as we not only look forward to holding the conference at a new venue located in the Radisson in downtown Kalamazoo, but for the first time we are also excited to include presentations from our WMed medical students. We look forward to the continued participation by our students, residents, faculty, and community in future years as we continue expansion of our research, clinical, educational, and service activities across the medical school and throughout the community.

The commitment and participation of WMed faculty and the Kalamazoo scientific community in Research Day continues, as represented by the large increase in number of submissions received for this year's event. Over 230 abstracts were submitted for consideration this year, an increase of over 100 abstract submissions in comparison with last year's event. As a result, there will be more oral presentations and significantly more posters than in previous years. The increased submission volume also meant that oral sessions could not accommodate all of the quality submissions, although each of these authors was provided an option to present their work in the poster session.

We also wish to acknowledge the participation of a group of faculty and thank them for volunteering their time and expertise to review the submissions. A panel of over 30 judges participated in the reviews. Each judge typically reviewed approximately 30 submissions, which were assigned based upon area of expertise. The judges' evaluations were critical in determining the award winning presentations and posters, as well as those selected for presentation in the oral sessions. Awards will be presented today to the best research studies in each of six submission categories, as well as the top-scoring posters, to recognize the excellence of research, education, and scholarship.

The continuous support and collaborative efforts of faculty and staff involved in the planning and implementation of this year's Research Day are greatly appreciated.

On behalf of Western Michigan University Homer Stryker M.D. School of Medicine, we welcome you and hope you enjoy this rewarding day.



Dale D. Vandré
Associate Dean for Research
Chair, 2016 Kalamazoo Community Medical and Health Sciences Research Day

We wish to thank the following WMed professionals who dedicated their time to participate as abstract scoring judges and/or session moderators for today's event.

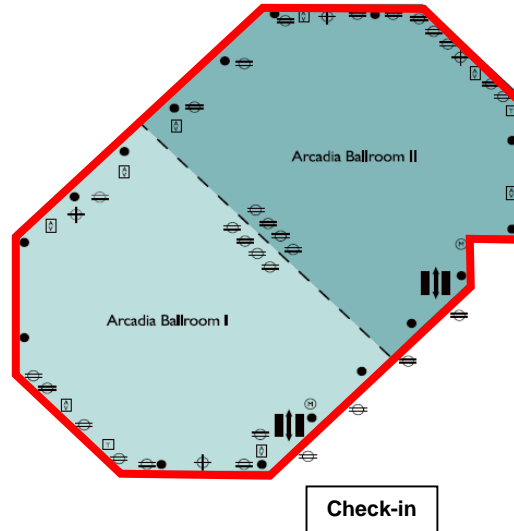
Syed Alam, MD	Arthur Feinberg, MD	Gitonga Munene, MD
Fritz Allhoff, MD	Rolbert Fischre, MD	Ahsan Nazeer, MD
Hakima Bachimi-Aqel, MD	Tyler Gibb, JD, PhD	Earl Norman, MD
Robert Baker, MD	Jeffrey Greene, PhD	David Overton, MD
Joanne Baker, DO	Vishal Gupta, MD	Dilip Patel, MD
Susan Bannon, MD	David Hartman, MD	Elizabeth Brooke Pope, PhD
Daniel Barnas, MD	Kristen Hatten, PhD	Jerry Pratt, MD
Tim Bauler, PhD	James R. Jastifer, MD	Kelly Quesnelle, PhD
Craig Beam, PhD	Jagadeesh Kalavakunta, MD	Dale Rowe, MD
Tom Blok, MD	Keith Kenter, MD	Steven Rudich, MD
Karen Bovid, MD	Wendy Lackey, PhD	Sharma Saith, MD
Joseph Calles, MD	Mark Loehrke, MD	Carrie Sandborn, DO
Sreenivasa Chandana, MD	Larry Lutwick, MD	Robert Satonik, MD
Joseph Chess, MD	Jessica McCoy, MD	Mark Schauer, MD
Jim DeMoss, DO	Vicki McKinney, PhD	Saad Shebrain, MD
Bonny Dickinson, PhD	Thomas A. Melgar, MD	Shama Tareen, MD
Martin Draznin, MD	Tracey Mersfelder, PharmD	Dale Vandr�e, PhD
Glenn Dregansky, DO	Lisa Miller, MD	Perry Westerman, MD
Glenn Ekblad, DO	Manoj Mithal, PhD	Allan Wilke, MD
Christian Ertl, MD	Nathan Mollberg, DO	Jeffrey Wilt, MD

RADISSON CONFERENCE CENTER FLOOR PLANS

Lobby Level

Check-in and Sessions

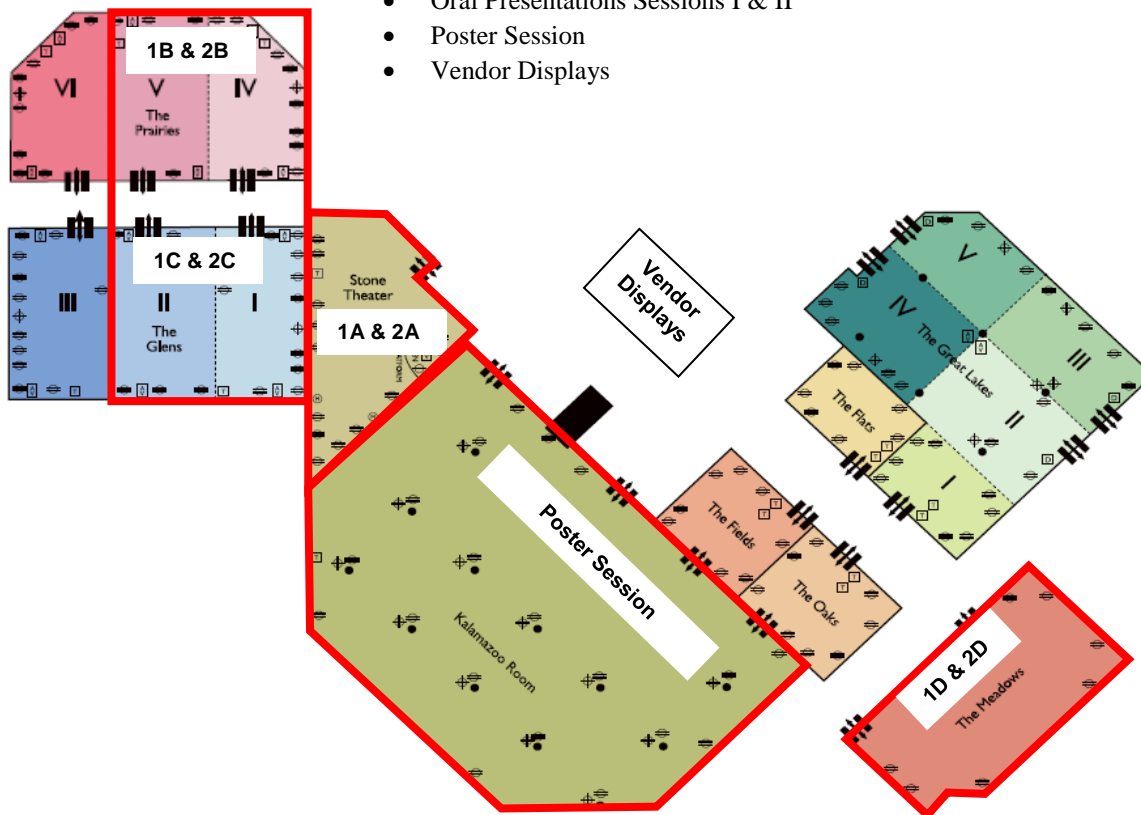
- Keynote Speaker with Lunch
- Afternoon Oral Presentations and Awards



Lower Level

Sessions

- Oral Presentations Sessions I & II
- Poster Session
- Vendor Displays



SCHEDULE

8:00 – 8:30 am	Check-in Refreshments available	Lobby Level
8:30 – 9:45 am	Oral Presentation Session 1 Session 1A Session 1B Session 1C Session 1D	Stone Theatre The Prairies IV & V The Glens I & II The Meadows
9:50 – 10:50 am	Poster Presentations	Kalamazoo Room
	Vendor Display Tables	Lower Level Area
11:00 am – 12:15 pm	Oral Presentation Session 2 Session 2A Session 2B Session 2C Session 2D	Stone Theatre The Prairies IV & V The Glens I & II The Meadows
12:15 – 12:25 pm	Break Restrooms, pick up boxed lunch, find seat	
12:30 – 1:40 pm	Lunch / Keynote Speaker	Arcadia Ballroom I & II
1:45 – 3:15 pm	Oral Presentation Session 3 1:45-2:00 pm Community Research 2:00-2:15 pm Educational Research 2:15-2:30 pm Quality Improvement Research 2:30-2:45 pm Medical Humanities Research 2:45-3:00 pm Basic Science Research 3:00-3:15 pm Clinical Research	Arcadia Ballroom I & II
3:15 – 3:30 pm	Award Presentation	Arcadia Ballroom I & II
3:30 pm	Farewell	Arcadia Ballroom I & II

KEYNOTE SPEAKER

The Dr. Robert P. Carter Research Lecture

This is the eighth year of this annual lecture supported by the Board of Western Michigan University Homer Stryker M.D. School of Medicine to celebrate the Research Day activities and to recognize Dr. Carter's commitment and support of research.



Patrick Schlievert, PhD

Chair and Department Executive Office, Professor of
Microbiology and Internal Medicine, University of
Iowa Carver College of Medicine

presents

Staphylococcus aureus Can Cause Diabetes Mellitus Type II

Dr. Patrick M. Schlievert is Professor and Department Executive Officer of the Department of Microbiology, University of Iowa Carver College of Medicine. He is also Co-founder and Chief Scientific Officer of Hennepin Life Sciences.

Dr. Schlievert and his clinical colleagues have described the causes of 29 newly recognized infections caused by *Staphylococcus aureus* and *Streptococcus pyogenes*. These include the first description, in 1981 in the *Journal of Infectious Diseases*, of toxic shock syndrome toxin, the major cause of the tampon-associated toxic shock syndrome in collaboration with the Centers for Disease Control and Prevention (CDC). In 1987, Drs. Larry Cone and Schlievert provided the first description of streptococcal toxic shock syndrome (also known as the “flesh-eating streptococcal disease”) and its cause in the *New England Journal of Medicine*. Most recently, he and his colleagues have proposed that *S. aureus* and its superantigens are important causes/contributors to development of diabetes mellitus type II.

Dr. Schlievert has focused attention on development of dual-acting anti-infectives, including glycerol monolaurate (GML). GML is generally recognized as safe compound that is both broadly antimicrobial and anti-inflammatory, thus the name dualacting. The CDC has noted that infections constitute the greatest healthcare costs in the United States. Through the University of Iowa and Hennepin Life Sciences, it is Dr. Schlievert's hope that GML, as a dual-acting anti-infective, can significantly reduce these infections.

In addition to Dr. Schlievert's scientific accomplishments, he has trained large numbers of new scientists and physicians. He has received multiple teaching awards for his teaching of graduate and medical students, including being recognized the 2016 American Society for Microbiology Graduate and Medical Teacher of the Year.

ORAL PRESENTATIONS

SESSION 1A

STONE THEATRE

Moderator:	Karen Bovid, MD; Orthopaedic Surgery
8:30-8:45 am	Minimalist Running: A Primer for the Running Athlete's Medical Team. Andrew G. Geeslin, MD; James R. Jastifer, MD; Peter A. Gustafson, PhD
8:45-9:00 am	Fibrolamellar HCC - A Case Series. Jairo A. Espinosa, MD; Gitonga Munene, MD, FACS; Yirong Zhu; Alex Merlo, MD; Mohamed Arafeh, MD; Marc T. Downing, MD
9:00-9:15 am	Combined Pediatric Orthopaedic Surgery and General Surgery Reconstruction of a Pediatric Amputated Limb. Nicholas Miladore, MD; Karen Bovid, MD; Audrey F. Hand, MD; Christian Ertl, MD
9:15-9:30 am	Results of the Gravity Stress Examination in the Normal Patient Population. Matthew Jaykel, MD; James R. Jastifer, MD
9:30-9:45 am	Gastrocnemius Contracture in Patients with and without Foot Pathology. Jessica Marston, MD; James R. Jastifer, MD

SESSION 1B

THE PRAIRIES IV & V

Moderator:	Mark Schauer, MD; Medicine
8:30-8:45 am	Point-of-Care Ultrasound Education in Internal Medicine, Pediatric, and Medicine-Pediatrics Residency Programs: Preliminary Nationwide Survey Data. Matthew T. Siuba, DO; Michael S. Wagner, MD; Thomas A. Melgar, MD
8:45-9:00 am	Computer Simulations of Influence of Deformable Blockages on Fluids in an Elastic Blood Vessel. Dewei Qi; Tai-hsien WU
9:00-9:15 am	Julius Hess: The Father of American Neonatology. Alissa Welsh, MD; Luis H. Toledo-Pereyra, MD
9:15-9:30 am	A Historical Review of Anterior Cruciate Ligament Reconstruction: A Century of Evolution. Andrew G. Geeslin, MD; Quinter Burnett, MD; Luis H. Toledo-Pereyra, MD, PhD
9:30-9:45 am	Innovations in Anatomy Education: Reciprocal Peer-Teaching (RPT) at Western Michigan University Homer Stryker M.D. School of Medicine (WMed). Wendy Lackey-Cornelison, PhD

ORAL PRESENTATIONS (cont.)

SESSION 1C

THE GLENS I & II

Moderator:	Susan Bannon, MD; Medicine
8:30-8:45 am	Non-Staphylococcal Tricuspid Valve Endocarditis in a Non-Injection Drug User: A Rare Entity. Larry Lutwick, MD; Eric Yoder, DO
8:45-9:00 am	Neurosarcoidosis: A Rare Cause of Isolated Myelopathy. Sandra Koehn, DO; Sara Lang
9:00-9:15 am	Post Viral Transient Synovitis in a Three Week Old Infant. Theotonius J. Gomes, DO; Ryan F. Halas, DO; Megan Sikkema, DO
9:15-9:30 am	A Case of Severe Necrotizing Pancreatitis Infected with the “Nightmare Bacteria” – Carbapenem Resistant Enterobacteriaceae. Monoj Kumar Konda, MD; Karthik Kailasam, MD; Jason Lam, DO
9:30-9:45 am	Acute Infectious Purpura Fulminans Related to Pasteurella Multocida Sepsis. Monoj Kumar Konda, MD; Stephanie Chang, Mathew Zaccheo, DO

SESSION 1D

THE MEADOWS

Moderator:	Earl Norman, MD; Surgery
8:30-8:45 am	Why Patients Miss Scheduled Appointments in the Orthopedic Clinic. Matthew Jaykel, MD; Karen Bovid, MD; Michael Fonger, PA-C; Satya Dalavayi
8:45-9:00 am	Identifiable Markers for Low-Income Children, 0-5, Who Fall Through Medical or Community Service Gaps. Catherine L. Kothari, PhD; Cheryl A. Dickson, MD; Colleen MacCallum, Amy Curtis, PhD; Craig Beam, PhD
9:00-9:15 am	Case Management Program Shows Marginal Clinical Significance in Outcomes for Patients with Type-2 Diabetes Mellitus at Family Health Center. Heather I-Hsuan Chen, Patricia J. Choi, Nicole C. Foley, Alan J. Hifko, Sheila Sullivan; Alyssa Woodwyk, Catherine L. Kothari, PhD
9:15-9:30 am	Mortality in Adult and Pediatric Cystic Fibrosis (CF) Patients Requiring Endotracheal Intubation: A Nationwide Cohort Study. Matthew T. Siuba, DO; Amy Attaway, MD; Susan Bannon, MD; Frank Jacono, MD; Steven Strausbaugh, MD; Elliott Dasenbrook, MD
9:30-9:45 am	A Quality Improvement Project to Assess and Treat Cystic Fibrosis (GF) Patients with Inadequate Vitamin D Levels in Kalamazoo, Michigan. M. Myrtha Gregoire-Bottex, MD; Sally Bonnema; Polly Hollenbeck; Nichole Sackett; Niecia Anjorin

ORAL PRESENTATIONS (cont.)

SESSION 2A

STONE THEATRE

- Moderator:** Joseph Chess, MD; Orthopaedic Surgery
- 11:00-11:15 am **Partial Tears of the Distal Biceps Brachii Tendon: A Systematic Review of Surgical Outcomes.** Michael A. Behun; Jeffrey C. King, MD; Andrew G. Geeslin, MD; Emma C. O'Hagan
- 11:15-11:30 am **Outcome of Glenoid Labral Repairs in Competitive Swimmers.** Keith Kenter, MD; Douglas Hollern, MD; John Divine, MD
- 11:30-11:45 am **The Ankle and Subtalar Joint Functional Unit, Rationale for the Development of a Ball and Socket Ankle Joint; A Computational Study.** Tyler Snoap, MD; James R. Jastifer, MD; Peter A. Gustafson, PhD; Aaron Labomascus
- 11:45 am-12:00 pm **Current Concepts Review of Biologic Treatments for Sports Injuries: Basic Science, Clinical Applications, and FDA Regulation.** Andrew G. Geeslin, MD; Robert F. LaPrade, MD, PhD
- 12:00-12:15 pm **Prospective Study of Arthroscopic Biceps Tendon Tenodesis with Associated Rotator Cuff Repair: Preliminary Results.** Andrew G. Geeslin, MD; Tyler Snoap, MD; Christopher W. Uggen, MD

SESSION 2B

THE PRAIRIES IV & V

- Moderator:** Shama Tareen, MD; Psychiatry
- 11:00-11:15 am **Innovative WMed-Community Partnership Revitalizes Kalamazoo Fetal Infant Mortality Review.** Deb Lenz; Catherine L. Kothari, PhD; Yamini Kuchipudi, MD; Cheryl A. Dickson, MD; Jen Brenton; Grace Lubwama, PhD
- 11:15-11:30 am **The Interplay of Race, Socioeconomic Status and Neighborhood Upon Birth Outcomes.** Catherine L. Kothari, PhD; Rajib Paul, PhD; Ben Dormitorio; Fernando Ospina; Arthur James; Deb Lenz; Kathleen M. Baker, PhD; Amy Curtis, PhD; James Wiley, PhD
- 11:30-11:45 am **Mapping Core Transmission Area of Single and Repeating Chlamydia and Gonorrhea Cases for Planning STI Interventions in an Urban-Rural County (2012-2014).** Claudio Owusu, Kathleen M. Baker, PhD; Yasaman Back; Rajib Paul, PhD; Elizabeth MacQuillan; Amy Curtis, PhD
- 11:45 am-12:00 pm **A Nasal Intermittent Positive Pressure Ventilation Device for Treatment of Neonatal Respiratory Distress in Low Resources Settings.** Nickolas D. Habben; Peter A. Gustafson, PhD; Stephen John, Joseph D. Barnett, Hoa T. Le
- 12:00-12:15 pm **Narrative Analysis of Fetal Infant Mortality Review (FIMR) Summaries.** Yamini Kuchipudi, MD; Catherine L. Kothari, PhD; Amy Damashek, PhD; Camryn Romph, Terra Bautista

ORAL PRESENTATIONS (cont.)

SESSION 2C

THE GLENS I & II

Moderator:	Joanne Baker, DO; Medicine
11:00-11:15 am	TB or not TB: Pulmonary Infection with an Unusual Organism: Mycobacterium Celatum. Larry Lutwick, MD; Pimpawan Boapimp, MD
11:15-11:30 am	AKT: A Therapeutic Target in Hepatic Ischemia-Reperfusion Injury. Stephen Covington; Luis H. Toledo-Pereyra, MD, PhD
11:30-11:45 am	Mononuclear Phagocytic Infiltration and Inflammation in the Brain in Response to Oral Salmonella Infection. Tim Bauler, PhD
11:45 am-12:00 pm	Decreased TNF-α Levels in Preconditioned Rat Livers Following Ischemic Injury. H. Arad Abadi; Luis H. Toledo-Pereyra MD, PhD; Tarannom Shoghi
12:00-12:15 pm	Evaluation of MTOT Modulators in Kidney Cell Lines. Eric Edeward; Gregory Vanden Heuvel, PhD; Angela Brightell-Conrad, William McDonald, Jerry Colca, PhD; Rolf Kletzien, PhD

SESSION 2D

THE MEADOWS

Moderator:	David Overton, MD; Emergency Medicine
11:00-11:15 am	Analysis of Prehospital Opioid-Related Cardiac Arrests in a Statewide EMS Information System and the Potential Preventative Value of Non-Paramedic First Responder Naloxone. Kevin Patel, DO; William Fales, MD
11:15-11:30 am	A Challenging Percutaneous Intervention of an Unprotected Left Main Coronary Artery. Monoj Kumar Konda, MD; Vishal Gupta, MD, MPH
11:30-11:45 am	Increased Lung Weights in Drug Overdoses. Heather I. Chen; Joyce deJong, DO
11:45 am-12:00 pm	Restrictive Cardiomyopathy Misdiagnosed as Asthma. Christopher J. Schmeihil, MD
12:00-12:15 pm	Rapid Response to Propranolol in a Stridorous Patient with Extensive Infantile Hemangiomas. Devika Malhotra, MD; Ryan F. Halas, DO; Robin Fountain, MD

ORAL PRESENTATIONS (cont.)

The following presentations represent the top-scoring abstracts in each of the six topic areas. Together with Dean Jenson, we congratulate all of the authors on their fine work.

SESSION 3

ARCADIA BALLROOM

Moderator:	Dale Vandr�, PhD; Biomedical Sciences
1:45-2:00 pm	Pre-Gravid Overweight and Risk of Low Birthweight, Preterm Birth, and Stillbirth Among Kalamazoo County Mothers. Elizabeth MacQuillan; Amy Curtis, PhD
2:00-2:15 pm	Domestic Violence Training Improves Trauma-Related Competencies Among Mental Health and Social Service Providers. Eleanor Yu; Julie Helmer; Sherry Brockway; Catherine L. Kothari, PhD
2:15-2:30 pm	Improving the Quality of Prenatal Care Provided at the WMed Family Medicine Clinic. Susan Jevort, DO; Kanika Jaggi, MD; Lauren Piper, DO; Allan Wilke, MD
2:30-2:45 pm	A Historical Consideration of the Role of Whole Organ Pancreas Transplantation Following 50 Years of Clinical and Experimental Use. Peter White; Luis H. Toledo-Pereyra, MD, PhD
2:45-3:00 pm	Stress Concentrations at Coracoclavicular Ligament Reconstruction Tunnels: A Biomechanical and Finite Element Evaluation of Clavicle Fracture Risk. Peter A. Gustafson, PhD; Mark Omwansa; Mark Sytsma, MD; Andrew G. Geeslin, MD
3:00-3:15 pm	Experimental Virotherapy of Human Melanoma Tumors in Nude Mice with 15L-knock-out Tanapoxvirus. Tiantian Zhang, Karim Essani, Yogesh R. Suryawansh, Dennis H. Kordish, Helene M. Woyczeszcyk; David Jeng, PhD

POSTER PRESENTATIONS

1. **State-wide Patterns in Diabetes Screening Service Utilization: Comparing Medicaid and Blue Cross Blue Shield of Michigan.** Stephen Anim-Preko, Kathleen M. Baker, Monica Kwasnik, Rajib Paul, Elizabeth MacQuillan, Amy Curtis
2. **Improvement in Skill Level of Interns After a Focused Training Session at the Start of an Academic Year.** Abhishek Seth, Thomas A. Melgar, Alec Wilson
3. **All Inside ACL: How Does it Compare to Standard Techniques?** Alexander J Connaughton, Christopher W. Uggen
4. **Hypernatremia in a Patient with Lithium Induced Diabetes Insipidus.** Allan Wilke, Uzair Munshey
5. **Diffuse Alveolar Hemorrhage Presenting Initially As Pneumonia, In A Patient With Systemic Lupus Erythematosus: A Case Report.** Amanda Springer, Lindsey Henderson, Kristi Vanderkolk
6. **Rare Cause of Neonatal Respiratory Distress: A Pink Puffer.** Anju Patel, Kristen Hastin, Kristen Hastings, Andrea Scheurer
7. **Offspring Phenotypic Expression of Maternal Balance Pericentric Inversion of Chromosome 18.** Thomas Pott, Anna Jain, Dilip Patel
8. **Initial Presentation of Angioedema and Hand Foot and Mouth Disease Caused by Coxsackie B4 Virus in an Adult.** Aness Al-Khateeb, Sumaiya Ansari, Chris Jacob, Guraminder Thind, Karthik Kailasam, Prashant Patel
9. **Review of an Infrequently Documented Rash.** Arthur Feinberg
10. **Mechanism of PWI Motif Function in RNA Processing.** Blair Szymczyna, Harry Chanzu
11. **Peer-Led Diabetes Self-Management Program in Kalamazoo: Preliminary Results.** Catherine L. Kothari, Michael A. Behun, McKenzie J. Akers, Peter J. White, Amy O. Chonghasawat, Yen-Yu Tina Chen, Thu N. Nguyen, Grant M. Finlayson
12. **Endulza tu Vida: a Tailored Diabetic Workshop for the Hispanic Community.** Catherine L. Kothari, Timothy Wysozan, Ana Villalobos
13. **Presentation Efficacy: A Comparison of Lecture and Powerpoint--Based Presentation Methods in the Dissemination of Medical Information.** Catherine L. Kothari, Satya Dalavayi
14. **Increasing Participation Rates of the Kalamazoo Summer Food Service Program.** Catherine L. Kothari
15. **A Study of Criminal Justice Involvement of Persons with Intellectual or Developmental Disabilities and Associated Health Consequences.** Catherine L. Kothari, Kathy Lentz

POSTER PRESENTATIONS

16. **Unsafe Sleep Related Deaths Spike in Kalamazoo County in 2015.** Catherine L. Kothari, Susmitha Daggubati, Terra Bautista
17. **Mini-Medical School Curriculum for Early Introduction to Health Careers (EIHC) Initiative for Kalamazoo Public Schools.** Cheryl A. Dickson, Bonny Dickinson, Jennifer Kim, Stephanie Chang, Audrey Jensen, David Lee, Kim Wells, Xavier Jean
18. **Explorations: Effects of Chemotherapy on Maternal Cancer and Neonatal Development.** Bonny Dickinson, Heather I. Chen, Patricia J. Choi, Nicole C. Foley, Alan J. Hifko, Sheila Sullivan
19. **The Experience of Teachers Managing Attention Deficit/Hyperactivity Disorders (ADHD) in Classrooms at Milwood Magnet Middle School.** Cheryl A. Dickson, Tarannom Shoghi, Alyssa Woodwyk, Abby Childs
20. **Views on the State of Mental Health Collaboration in Kalamazoo, MI.** Cheryl A. Dickson, Serena Chen, Olivia Fournier, Cody Overmyer, William Rasmussen, Daphne Sy, Alyssa Woodwyk
21. **Child Trauma Education at Domestic Violence Shelters.** Cheryl A. Dickson, Samarth Bhandari
22. **Evaluation of Access to Healthcare in Kalamazoo County.** Cheryl A. Dickson, H. Arad Abadi, Andrew Selles
23. **Reducing No-Show Rates at the Family Health Center.** Cheryl A. Dickson,
24. **Health Needs Assessment of the Homeless and Precariously Housed Population of Kalamazoo.** Cheryl A. Dickson, Eric Edeward, Rohan Kedar, Joshua Szykowski, Lance von Bracht, Eleanor Yu
25. **How to Like Math Again: An Ecological Study in the Importance of High School Mathematics Coursework.** Cheryl A. Dickson
26. **An Unfortunate Consequence of Atrial Fibrillation.** Chris Jacob, Karthik Kannegolla, William Nichols
27. **A Severe Complication of Chronic Otitis Media.** Chris Jacob, Christopher DeFelice
28. **Injury-Induced Neuronal Turnover with Zinc Sulfate Affects Ciliated Olfactory Sensory Neurons More Than Microvillous Olfactory Sensory Neurons in the Adult Zebrafish.** Christine A. Byrd-Jacobs, James Hentig
29. **Plasticity of Mitral Cell Dendritic Morphology in the Adult Zebrafish Olfactory Bulb Following Deafferentation.** Christine A. Byrd-Jacobs, Joanna M. Dickens

POSTER PRESENTATIONS

30. **Loss of Specific Olfactory Sensory Neurons in Zebrafish after Chemical Exposure.** Tara L. Maser, Christine A. Byrd-Jacobs
31. **Social Determinants of Pneumococcal and Influenza Immunization Rates of Nursing Home and Homes for the Aged Residents in Kalamazoo and Calhoun Counties, Michigan: Role of Race and Segregation.** Cynthia Schauer
32. **Impact of Procalcitonin on Appropriate Antibiotic Days in Patient with Lower Respiratory Tract Infections: a Retrospective Study.** Dean Van Loo, Katelin Anderson
33. **Ingestion of a Hickory Tussock Caterpillar: A Case Report.** Dilip Patel
34. **Benign Paroxysmal Torticollis of Infancy.** Dilip Patel, Aaron Lane-Davies
35. **Perceptions of Low Socio-economic Families on Barriers to Accessing Free Health Services.** Diti Ronvelia, Catherine L. Kothari
36. **Cardiac Tamponade as a Result of Right Atrial Rupture in Blunt Trauma Patient.** Jerry Pratt, Hira Hasnain
37. **Protein Analysis by Desorption Electrospray Ionization Mass Spectrometry.** Elahe Honarvar
38. **'Gangrenous Finger' Proven to be an Acute Gout Flare in a Patient with Severe Gouty Arthritis.** Eric Gallagher, Todd Ruitter
39. **Spontaneous Arterial Hemorrhage of the Hand Resulting in Compartment Syndrome.** Eric Gallagher, Todd Ruitter
40. **Chronic Subtalar Subluxation in a Pediatric Patient.** Eric Gallagher, Nicholas Miladore, Robert Gorman
41. **Regulation of Chronic Inflammation in Endothelial Cells by Oxidized Fatty Acids.** Gabriel Cole, Abbie Brackman, Piao Jian Tan, James R. Springstead
42. **Caustic Ingestion of Laundry Detergent Pods.** Garrett Koon, Patrick Staso
43. **Isolated Native Tricuspid Valve Streptococcus Gallolyticus Endocarditis Initially Presenting as Pneumonia.** Geneva A. Sagun, Yashwant Agrawal
44. **Compliance of a Resident Clinic with KDIGO Guidelines for Early Nephrology Referral—a Quality Improvement Study.** Hardik Chhatrala, Christopher Begley, Andrew Whipple, Courtney Barrett, Sean Pippen, Emily Cordes, Joanne Baker, Valerie Duhn, Dominick Ohocinski

POSTER PRESENTATIONS

45. **Unexplained Myalgia in the Setting of Interstitial Lung Disease: Think About Antisynthetase Syndrome.** Hardik Chhatrala, Monoj Kumar Konda, Sandeep Patri, Sumaiya Ansari
46. **The RNA-binding Mechanism of Rotavirus Non-Structural Protein 3 (NSP3).** Harry Chanzu, Blair Szymczyna
47. **Rise in Narcotic-Related Deaths in South-West Michigan.** Heather I. Chen, Joyce deJong
48. **Eye Trauma on the Ice.** Hou-en Joseph Hui
49. **Empiric Antipseudomonal Monotherapy Versus Combination Therapy in the Treatment of Pneumonia in Ventilated Patients: A Retrospective Study.** Jaclyn Skradski, Dean Van Loo
50. **Utilization of Liposomal Bupivacaine for Robotic-assisted Gynecologic Surgery at a Community Teaching Hospital: A Retrospective Study.** James M. Curtis, David L. Montgomery, Brandon L. Seagle, Anna Hoekstra
51. **Investigation of the Regulation of Chronic Inflammation in Endothelial Cells by a Pro-Inflammatory Epoxyisoprostane Phospholipid.** James R. Springstead, Gabriel Cole, Piao Jian Tan
52. **Profuse Repetitive Vomiting Presenting as Food Protein Induced Enterocolitis Syndrome.** Jason Lam, Elena Lewis
53. **Double Vision and Neck Pain as Presenting Sign of Pseudotumor Cerebri.** Jason Lam, Claire Liepmann
54. **Efficacy of Transcutaneous Cerebral Oximetry Monitoring During Carotid Endarterectomy.** Jason T Ryan, John T. Collins, Jorge Weber
55. **Explorations: The Fundamentals of Female-to-Male Sex Reassignment.** Tarannom Shoghi, Thu N. Nguyen, Samarth Bhandari, Cynthia Bishara
56. **The Ruptured Bladder.** Thu N. Nguyen
57. **The Effectiveness of Frequent User System Enhancement in the Prevention of ED visits by Homeless Individuals suffering from Chronic Pain.** Jeffrey Johnson, Jacqueline Dauch, Philip Bystrom
58. **Prognostic Factors of Mortality in Patients with Necrotizing Fasciitis of the Abdominal Wall.** Jeffrey Johnson, Christian Ertl, Leandra Burke, Nicole Carpp
59. **Using Narrated-Animated Videos in Medical Education.** Jeffrey Johnson, Kelly Quesnelle, Maria Sheakley, David Riddle

POSTER PRESENTATIONS

60. **A Collaboration Between Medical Student and Pre-Medical AMSA Chapters in Kalamazoo County to Positively Impact Students' Interest in Healthcare Careers.** Jennifer Kim, Sulin Wu, Jean Shelton, Mark Loehrke
61. **A National Survey of Pediatric Medication Dosing Training, Practices and Errors in the Prehospital Setting.** John Hoyle
62. **Pediatric Prehospital Dosing Errors: A Mixed Methods Study.** John Hoyle
63. **IV Haloperidol for the Treatment of Pediatric Headaches in the ED.** Jessica McCoy
64. **Infant Volvulus Due to Intestinal Malrotation.** Claire Cameron-Ruetz, Joseph Prahlow
65. **Delayed Death After Aorta Laceration.** Diana Fidrocki, Joseph Prahlow
66. **Low Vaccination Rates for the Human Papilloma Virus (HPV) in Kalamazoo, Michigan.** Diana Fidrocki, Jessica Ramsay, Nina Sadigh
67. **Death due to Positional Asphyxia Related to Underlying Seizure Disorder.** Joseph Prahlow
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