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UMass Center for Clinical and Translational Science Research Retreat

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University of Massachusetts Center for Clinical and Translational Science
5th Annual Research Retreat
May 20, 2014

POSTER PRESENTATIONS

Faculty Conference Room S1-342, 1st Floor Medical School Entrance
12:30 – 2:30 pm

- 1. Targeted Destruction of Triple Negative Breast Cancer using Nanoparticles**
Adeyinka C. Adejumo¹, Chinedu Charles Ochin¹, Rahul Jadia², Fulya Ekiz Kanik¹, Ikjot Singh Sohal³, Prakash Rai^{1,2,3,4}
¹Biomedical Engineering and Biotechnology Program, ²Department of Plastics Engineering, ³Department of Biological Sciences, ⁴Department of Chemical Engineering, University of Massachusetts Lowell
- 2. A pH Stable Turn-on Fluorescent Sensor for Imaging Labile Fe³⁺ in Living Cells**
Bayan Alhawsah, Ziya Aydin, Bing Yang, Maolin Guo
Department of Chemistry and Biochemistry, University of Massachusetts Medical School
- 3. Development of Novel Class of Therapeutic Oligonucleotides Based on Small Molecule Screening**
Julia Alterman, Hong Cao, Marie Didiot, Mehran Nikan, Matthew Hassler, Anastasia Khvorova
RNA Therapeutics Institute, Program in Molecular Medicine, Small Molecule Screening Core, Department of Biochemistry & Molecular Pharmacology, University of Massachusetts Medical School
- 4. Providing an Adaptive Research Data Infrastructure for Clinical and Translational Investigators**
Bill Amsbaugh, Steven Ellis, Yurima Guilarte-Murphy, Tyrone Jones, Robert Leonard, Paul Ranauro
University of Massachusetts Medical School
- 5. Psychometric Evaluation of the Care Transition Measures in a Sample of ACS Patients: Results from Transitions, Risks, and Actions in Coronary Events – Center for Outcomes Research and Education (TRACE-CORE)**
Milena D. Anatchkova, PhD¹, Constance Barysaukas, MS², Rebecca L. Kinney, MPH¹, Lisa Lombardini, BS¹, Jeroan J. Allison, MD¹
¹Department of Quantitative Health Sciences, University of Massachusetts Medical School; ²Department of Biostatistics and Computational Biology, Dana Farber Cancer Institute, Harvard Medical School
- 6. Psychosocial Factors Predict Patient Ratings of Care Transition Quality: Results from Transitions, Risks, and Actions in Coronary Events – Center for Outcomes Research and Education (TRACE-CORE)**
Milena D. Anatchkova¹, Jane S. Saczynski², Jeroan J. Allison¹, Arlene S. Ash¹, Catarina I. Kiefe¹
¹Department of Quantitative Health Sciences, ²Department of Medicine, University of Massachusetts Medical School
- 7. Severity of Infectious Mononucleosis (IM) Correlates with the Frequency of Crossreactive Influenza A Virus (IAV)-M1 and Epstein Barr Virus (EBV)-BMLF-1-specific CD8 T Cells**
Nuray Aslan¹, Levi Watkin¹, Anna Gil¹, Katherine Luzuriaga², Liisa K. Selin¹
¹Department of Pathology, ²Department of Pediatrics, University of Massachusetts Medical School

- 8. Utilization of Molecular Inversion Probes in Malaria Sequencing**
Özkan Aydemir¹, Alice Tran¹, Yasin Kaymaz¹, Nicholas J. Hathaway¹, Jeffrey A. Bailey^{1,2}
¹Program in Bioinformatics and Integrative Biology ²Division of Transfusion Medicine, University of Massachusetts Medical School
- 9. Perfusion Changes by Hyperspectral Imaging in a Burn Model**
Oksana O. Babchenko, BS, Michael S. Chin, MD, Jorge R. Lujan-Hernandez, MD, Heather Strom, MS, Ronald Ignatz, PhD, Janice F. Lalikos, MD
Division of Plastic and Reconstructive Surgery, University of Massachusetts Medical School
- 10. Detection of CD8+ T cell Responses in Individuals with Long-term Type 1 Diabetes and Generation of Human CD8+ T Cell Lines Specific to Islet-associated Autoantigens**
Jenny Aurielle B. Babon, David M. Harlan, Sally C. Kent
Diabetes Center of Excellence, University of Massachusetts Medical School
Perfusion Changes by Hyperspectral Imaging in a Burn Model
- 11. Mice Deficient in SFRP1 Exhibit Increased Adiposity, Dysregulated Glucose Metabolism**
Lotfi M. Bassa, Kelly J. Gauger, Elizabeth M. Henchey, Melissa Brown, Sallie S. Schneider
Department of Veterinary and Animal Science, University of Massachusetts Amherst, Pioneer Valley Life Science Institute, Springfield, MA
- 12. An *In Vitro* Model of the Horse Gut Microbiome Enables Identification of Lactate-Utilizing Bacteria That Differentially Respond to Starch Induction**
Amy S. Biddle¹, Samuel J. Black², Jeffrey L. Blanchard^{3,4,5}
¹Department of Microbiology, ²Department of Veterinary and Animal Science, ³Graduate Program in Molecular and Cellular Biology, ⁴Department of Biology, ⁵Graduate Program in Organismal and Evolutionary Biology, University of Massachusetts Amherst
- 13. Functional Response to Pain and its Treatment in Knee Osteoarthritis**
Katherine A. Boyer
Department of Kinesiology, University of Massachusetts Amherst
- 14. Topical Anti-TNF- α Antibody Enhances Wound Healing in Diabetic Mice**
Genevieve Broderick, MD, Heather Strom, MS, Ronald A. Ignatz, PhD
Division of Plastic and Reconstructive Surgery, University of Massachusetts Medical School
- 15. Is African-American Girls' Perception of their Mother-Daughter Relationship Associated to Psychosocial and Physical Activity Variables?**
Sarah Burkart, Brett Winner, Cory Greever, Sofiya Alhassan, PhD, FACSM
University of Massachusetts Amherst
- 16. Multiscale Entropy Identifies Postural Control Changes in Persons with Multiple Sclerosis**
Michael A. Busa, Stephanie L. Jones, Richard E.A. van Emmerik
University of Massachusetts Amherst
- 17. Targeted Mutagenesis of a Therapeutic Human Monoclonal IgG1 Antibody Prevents Gelation at High Concentrations**
Paul Casaz, Elisabeth Boucher, Rachel Wollacott, Sadettin Ozturk, William Thomas, Jr., Yang Wang
MassBiologics of the University of Massachusetts Medical School
- 18. Helping Children Through Evidence-based Trauma Treatments, Initial Findings from the Massachusetts Child Trauma Project (MCTP)**
Rachel Caty, BS¹, Charmaine Lo, PhD, MPH¹, Melodie Wenz-Gross, PhD¹, Robert Wentworth, MSW, LCSW²
¹Center for Mental Health Services Research, Department of Psychiatry, University of Massachusetts Medical School; ²Planning and Program Development, Department of Children and Families; Boston, MA

19. Visually Guided Inter-limb Adaptation During Walking In Children And Adults

Julia T Choi^{1,2}, Peter Jensen², Jens Bo Nielsen²

¹University of Massachusetts, Amherst, MA USA; ²University of Copenhagen, Denmark

20. Therapeutic Monoclonal Antibodies to Prevent Tuberculosis Infection

Andrew Crowley¹, Chloe Emery¹, Gregory Martens¹, Megan Proulx², Jon Goguen², Christopher Sasseti², Colby A Souders¹

¹Department of Product Delivery, MassBiologics of the University of Massachusetts Medical School;

²Department of Microbiology and Physiological Systems, University of Massachusetts Medical School

21. Networks Fighting Nicotine: Will Visitors to a Tobacco Cessation Website Engage in an Online Support Community?

Sarah L Cutrona¹, Rajani Sadasivam¹, Kathryn DeLaughter¹, Gregg H Gilbert⁴, Midge N Ray³, Thomas Houston^{1,2}, *National Dental PBRN Collaborative Group

¹University of Massachusetts Medical School; ²VA eHealth QUERI and CHOIR, Bedford, MA; ³Department of Health Services Administration, School of Health Professions, University of Alabama at Birmingham, Birmingham, AL; ⁴Department of Clinical & Community Sciences, School of Dentistry, University of Alabama at Birmingham, Birmingham, AL; *The National Dental PBRN Collaborative Group Comprises practitioners, faculty and staff who contributed to this activity.

22. Clinical and Financial Impact of Readmissions Following Colorectal Resection: An Analysis of Predictors, Outcomes, and Cost

Rachelle N. Damle, MD¹, Nicole B. Cherng, BS², Julie M. Flahive, MS³, Jennifer S. Davids, MD⁴, Justin A. Maykel, MD, FACS⁴, Paul R. Sturrock, MD⁴, W. Brian Sweeney, MD, FACS⁴, Karim Alavi, MD, FACS⁴

¹Department of Surgery, ²University of Massachusetts Medical School, ³Center for Outcomes Research,

⁴Division of Colorectal Surgery, University of Massachusetts Medical Center

23. A Soft Robotic Exomusculature Glove with Integrated sEMG sensing for Hand Rehabilitation

Michael Delph, Christopher Nycz, Gregory Fischer

Automation and Interventional Medicine (AIM) Laboratory, Health Care Delivery Institute at Worcester Polytechnic Institute

24. Silencing DUX4 Expression in FSHD Cells by CRISPR

Alec DeSimone¹, Peter Jones¹, Michael Broadsky¹, Kathryn Wagner², Genila Bibat², and Charles P. Emerson Jr.¹

¹Wellstone Center for FSHD Research, University of Massachusetts Medical School; ²Center for Genetic Muscle Disorders, Kennedy Krieger Institute, Johns Hopkins School of Medicine, Baltimore, MD

25. Sentinel Lymph Node Biopsy Does Not Improve Disease-Specific Survival in Elderly Patients with Intermediate Thickness Melanoma

Kate H. Dinh, MD¹, Mary Maloney, MD², Dori Goldberg, MD², April Deng, MD³, Mary Sullivan, NP¹, Laura Lambert, MD¹, Giles Whalen, MD¹, Jennifer LaFemina, MD¹

¹Department of Surgery, ²Division of Dermatology, ³Department of Pathology; University of Massachusetts Medical School

26. Risk Prediction Modeling for Liver Transplantation: A Systematic Review

Natasha Dolgin, BA, Paulo N. Martins, MD, PhD, Gordon Fitzgerald, PhD, Robert Goldberg, PhD, Fred Anderson, PhD, Adel Bozorgzadeh, MD

Department of Surgery, University of Massachusetts Medical School

27. Robotics Enabled In-Home Environment Screening for Fall Risks

Ruixiang Du¹, Vinayak Jagtap¹, Taskin Padir¹, Rajani Sadasivam², Thomas Houston²

¹Robotics Engineering Program, Worcester Polytechnic Institute; ²Department of Quantitative Health Science, University of Massachusetts Medical School

28. Antineoplastic Effects of *Rhodiola crenulata* on B16F10 Melanomas

Maxine Dudek, Richard B. Arenas, Kaityln Wong, Carmen Mora, Lotfi Bassa, Sallie S. Schneider
University of Massachusetts Amherst and Baystate Medical Center

29. Patient-focused Websites Related to Stress Urinary Incontinence and Pelvic Organ Prolapse: a DISCERN Quality Analysis

Omar F. Duenas, Katharine O'Dell, Danielle Patterson, Padmasini Kandadai, Jyot Saini, Michael K. Flynn
Urogynecology Division, Department of Obstetrics and Gynecology, University of Massachusetts Medical School

30. Activin Limits Progenitor Capability by Promoting Epithelial Cell Differentiation in the Mammary Gland

Karen A. Dunphy^{1,2}, Thiruppavai Chandrasekaran¹, Niraj Bhatt¹, Michelle Chen¹, Amy L. Roberts^{1,2}, Mary Hagen¹, and D. Joseph Jerry^{1,2}

¹University of Massachusetts Amherst; ²Pioneer Valley Life Sciences Institute, Springfield, MA

31. Effects of Increased Utilization of CVD Medications by Medicare Beneficiaries on Spending Vary by CVD Status

Hassan Fouayzi, MS¹, Arlene S. Ash, PhD², Allison B. Rosen, MD, MPH, ScD²

¹Meyers Primary Care Institute (Reliant Medical Group, Fallon Community Health Plan, and University of Massachusetts Medical School); ²Quantitative Health Sciences, University of Massachusetts Medical School

32. The Health Effects of Increased CVD Medication use Varies by CVD Status of Medicare Beneficiaries

Hassan Fouayzi, MS¹, Arlene S. Ash, PhD², Allison B. Rosen, MD, MPH, ScD²

¹Meyers Primary Care Institute (Reliant Medical Group, Fallon Community Health Plan, and University of Massachusetts Medical School); ²Quantitative Health Sciences, University of Massachusetts Medical School

33. Predictors of Patient-reported Outcomes after TKR not Included in Risk Models Based on Administrative Data

Patricia D. Franklin, MD, MBA, MPH¹, Leslie Harrold, MD, MPH¹, Wenjun Li, PhD², Courtland Lewis, MD⁴, Jeroan Allison, MD, MS³, David Ayers, MD¹

¹Department of Orthopedics and Physical Rehabilitation, ²Department of Preventive and Behavioral Medicine, ³Department of Quantitative Health, University of Massachusetts Medical School; ⁴Hartford Hospital, Hartford CT

34. Differences in Patient Characteristics Prior to TKA and THA Between Switzerland and the US

Patricia D. Franklin, MD, MBA, MPH¹, Leslie Harrold, MD, MPH¹, Hermes Miozzari, MD², Pierre Hoffmeyer, MD², David Ayers, MD¹, Anne Lübbecke, MD²

¹Department of Orthopedics and Physical Rehabilitation, University of Massachusetts Medical School; ²Université of Genève, Genève, Switzerland

35. Getting to the Root of Bacterial Hairs: What is “s”?

Rebecca Gaddis¹, Samantha O'Connor¹, Evan Anderson¹, Terri Camesano², Nancy Burnham^{1,3}

¹Department of Physics, ²Chemical Engineering, ³Biomedical Engineering, Healthcare Delivery Institute at Worcester Polytechnic Institute

36. Cup Feeding in the ICU: The Influence of Health Care Team Knowledge

Sameh Ghareeb, Lisa Chiodo, Linda Lewandowski
University of Massachusetts Amherst

- 37. Acute Symptomatic Influenza A Virus (IAV) Infection in Humans Leads to Expansion of Highly Diverse CD8 T Cell Repertoires Crossreactive with Persistent Epstein Barr Virus (EBV)**
Anna Gil, Rabinarayan Mishra, Nuray Aslan, and Liisa K. Selin
Department of Pathology, University of Massachusetts Medical School
- 38. Objective Analysis of Preschoolers Physical Activity Patterns during Free Playtime**
Cory Greever, MS, John Sirard, PhD, Sofiya Alhassan, FACSM
Pediatric Physical Activity Laboratory, University of Massachusetts Amherst
- 39. Fluorescent Probes for Molecular Imaging of ROS/RNS Species in Living Systems**
Maolin Guo, Yibin Wei, Weiqi Yang, Xiaofei Fu, Yi Zhang, Bing Yan
Department of Chemistry and Biochemistry, University of Massachusetts Dartmouth
- 40. Improving Depression Screening and Diagnosis in a Diverse Urban University Health Service**
Patricia A. Halon, DNP, FNP-C
University of Massachusetts Boston, College of Nursing and Health Sciences
- 41. The Validity of Patient-Reported Short-Term Complications following Total Hip and Knee Arthroplasty**
Leslie Harrold, MD, MPH¹, Scott Pascal¹, David Ayers, MD¹, Courtland Lewis, MD², Regis O'Keefe, MD, PhD³, Patricia D. Franklin, MD, MBA, MPH¹
¹Department of Orthopedics and Physical Rehabilitation, University of Massachusetts Medical School; ²Hartford Hospital, Hartford CT; ³University of Rochester School of Medicine, Rochester, NY
- 42. Do Younger TKR and THR Patients Have Similar Disability at Time of Surgery as Older Adults? Lessons from FORCE-TJR**
Leslie Harrold, MD MPH¹, Wenjun Li, PhD², Courtland Lewis, MD⁴, Jeroan Allison, MD, MS³, David Ayers, MD¹, Patricia D. Franklin, MD, MBA, MPH¹
¹Department of Orthopedics and Physical Rehabilitation, ²Department of Preventive and Behavioral Medicine, ³Department of Quantitative Health Sciences, University of Massachusetts Medical School; ⁴Hartford Hospital, Hartford CT
- 43. Using Next-Gen Sequencing to Estimate Strain Diversity and Frequency within Infections**
Nicholas J. Hathaway¹, Jeffrey A. Bailey^{1,2}
¹Program in Bioinformatics and Integrative Biology, ²Division of Transfusion Medicine, University of Massachusetts Medical School
- 44. A Context-Aware Activity Recommendation Smartphone Application to Mitigate Sedentary Lifestyles**
Qian He, Emmanuel O. Agu
Healthcare Delivery Institute at Worcester Polytechnic Institute
- 45. Characterizing the Performance and Behaviors of Runners Using Twitter**
Qian He, Emmanuel O. Agu, Diane M. Strong, Bengisu Tulu, Peder C. Pedersen
Healthcare Delivery Institute at Worcester Polytechnic Institute
- 46. Severity of Pre-existing Cerebral Small Vessel Disease is Associated with Outcome after Traumatic Brain Injury**
Nils Henninger, MD^{1,2}, Saef Izzy, MD¹, Raphael Carandang, MD^{1,3}, Wiley Hall, MD^{1,3}, Susanne Muehlschlegel, MD, MPH^{1,3,4}
¹Departments of Neurology, ²Psychiatry, ³Surgery, ⁴Anesthesia/Critical Care, University of Massachusetts Medical School

- 47. Evaluation of Antibiotic Properties of Diarylhydrazones, Diaryl Schiff-bases and Their Precursors**
William Horton¹, Kristina D'Amico¹, Stephanie Davis¹, Christian Schäfer¹, Gregory Beck², Béla Török^{1,3}
¹Department of Chemistry, ²Department of Biology, University of Massachusetts Boston; ³University of Massachusetts Center for Clinical and Translational Science
- 48. A Reconsideration of the Diagnosis and Management of Gastrointestinal Bleeding Based on its Epidemiology and Outcomes Analysis**
Salmaan Jawaid¹, Neil Marya¹, Bilal Gondal¹, Louise Maranda², Christopher Marshall¹, Joseph Charpentier¹, Anupam Singh¹, Anne Foley¹, David Cave¹
¹Department of Internal Medicine, ²Departments of Medicine and Quantitative Health Sciences, University of Massachusetts Medical School
- 49. Enhancing Antibiotic Activity Using Nanomaterial-Antibiotic Conjugates**
H. Surangi N. Jayawardena, Thareendra De Zoysa, Kalana W. Jayawardana, Scott T. Boiko, Mingdi Yan
Department of Chemistry, University of Massachusetts Lowell
- 50. Interactions of Carbohydrate-conjugated Nanoparticles with Mycobacterium Smegmatis**
K. W. Jayawardana, H. S. N. Jayawardena, Thareendra De Zoysa, Mingdi Yan
Department of Chemistry, University of Massachusetts Lowell
- 51. Postural Stability is Reduced in People with Multiple Sclerosis due to Walking-imposed Fatigue**
Stephanie L. Jones, Michael A. Busa, Julianna L. Averill, Richard E. A. van Emmerik
Motor Control Laboratory, Department of Kinesiology, University of Massachusetts Amherst
- 52. A Prospective Randomized Comparison of Patient Specific Instruments with Standard TKA Instrumentation**
Christina Kane, MD, Anthony Porter, MD, Patricia Franklin, MD, MBA, MPH, David Ayers, MD
University of Massachusetts School of Medicine and UMass Memorial Medical Center
- 53. Radiostereometric Analysis of Femoral Head Penetration in Cross-Linked Polyethylene in THR Patients**
Christina Kane, MD¹, Anthony Porter, MD¹, Benjamin Snyder, MD, MPH¹, Marie Walcott, MD¹, Michelle Aubin, MD¹, Jacob Drew, MD¹, Meridith Greene, BA², Henrik Malchau, MD², Charles Bragdon, PhD², David Ayers, MD¹
¹University of Massachusetts School of Medicine and UMass Memorial Medical Center; ²Harris Orthopaedic Laboratory, Massachusetts General Hospital, Boston, MA
- 54. Radiostereometric Analysis of Tantalum vs. Titanium Acetabular Shells in Young THR Patients**
Christina Kane, MD¹, Anthony Porter, MD¹, Benjamin Snyder, MD, MPH¹, Marie Walcott, MD¹, Michelle Aubin, MD¹, Jacob Drew, MD¹, Meridith Greene, BA², Henrik Malchau, MD², Charles Bragdon, PhD², David Ayers, MD¹
¹University of Massachusetts School of Medicine and UMass Memorial Medical Center; ²Harris Orthopaedic Laboratory, Massachusetts General Hospital, Boston, MA
- 55. Stability of a Tapered Femoral Stem in Total Hip Arthroplasty using Radiostereometric Analysis**
Christina Kane, MD¹, Audrey Nebergall, BA², Meridith Greene, BA², Anthony Porter, MD¹, Benjamin Snyder, MD, MPH¹, Marie Walcott, MD¹, Michelle Aubin, MD¹, Jacob Drew, MD¹, Peyton Heys, MD¹, Mark Eskander, MD¹, Henrik Malchau, MD², Charles Bragdon, PhD², David Ayers, MD¹
¹University of Massachusetts School of Medicine and UMass Memorial Medical Center; ²Harris Orthopaedic Laboratory, Massachusetts General Hospital, Boston, MA
- 56. High-throughput Genome Scaffolding from in vivo DNA Interaction Frequency**
Noam Kaplan, Job Dekker
Program in Systems Biology, Department of Biochemistry and Molecular Pharmacology, University of Massachusetts Medical School

- 57. Low Self-Reported Physical Function Status Was an Excellent Predictor of Adverse Postoperative Course in Older Veterans Having Knee and Hip Surgery**
Alok Kapoor^{1,2,3}, Priscilla Chew², Joel Reisman², Dan Berlowitz^{1,2}
¹Section of General Internal Medicine, Boston University School of Medicine, Boston, MA; ²Center for Health Quality, Outcomes, and Economic Research, Edith Nourse Rogers Memorial Hospital, Bedford, MA; ³UMass Memorial Health Care, Worcester, MA
- 58. Differential Gene Expression Analysis and Clinical Correlations within Endemic Burkitt Lymphoma**
Yasin Kaymaz¹, Cliff Odour², John Vulule², Juliana A Otieno³, Ann M. Moormann^{4,5}, Jeffrey A. Bailey^{1,6}
¹Program in Bioinformatics and Integrative Biology, University of Massachusetts Medical School; ²Kenyan Medical Research Institute and Maseno University, Kenya; ³Kenya Ministry of Health, Kenya; ⁴Department of Pediatrics, ⁵Quantitative Health Sciences, ⁶Department of Medicine, University of Massachusetts Medical School
- 59. High Performance Amphiphilic Polymer/Hydroxyapatite Composite Tissue Scaffolds**
Artem Kutikov, Jie Song
Department of Orthopedics & Physical Rehabilitation, Department of Cell and Developmental Biology, University of Massachusetts Medical School
- 60. Pericyte NF- κ B Activation Enhances Endothelial Cell Proliferation and Proangiogenic Cytokine Secretion**
Katherine E. LaBarbera¹, Robert D. Hyldahl², Sarah Witkowski¹
¹Department of Kinesiology, University of Massachusetts Amherst; ²Department of Exercise Sciences, Brigham Young University, Provo, Utah
- 61. Testosterone Treatment Does Not Facilitate Prefrontal Cortex Mediated Cognition in Male Marmosets (*callithrix jacchus*)**
Matthew LaClair¹, Jeemin Chang², Agnès Lacreuse²
¹Neuroscience and Behavior Program, ²Department of Psychology, University of Massachusetts Amherst
- 62. Long-term Effects of Use of Prescription Non-steroidal Anti-inflammatory Agents on Symptoms and Disease Progression among Patients with Radiographically Confirmed Osteoarthritis of the Knee**
Kate L. Lapane, PhD, MS¹, Shibing Yang, MS², Jeffrey B Driban, PhD³, Shao-Hsien Liu, MPH¹, Catherine E. Dubé, EdD¹, Timothy E. McAlindon, MD, MPH³, Charles B. Eaton, MD, MS^{4,5}
¹Department of Quantitative Health Sciences, University of Massachusetts Medical School; ²Division of Epidemiology, Department of Family Medicine and Population Health, Virginia Commonwealth University, Richmond, VA; ³Department of Rheumatology, Tufts Medical Center, Boston, MA; ⁴Center for Primary Care and Prevention, Memorial Hospital of Rhode Island, Pawtucket, RI; ⁵Departments of Family Medicine and Epidemiology, Warren Alpert Medical School, School of Public Health, Brown University, Providence, RI
- 63. Social Support and Total Joint Replacement: Differences Preoperatively between Patients Living Alone and Those Living with Others**
Celeste Lemay, RN, MPH¹, Leslie Harrold, MD, MPH¹, Wenjun Li, PhD², David Ayers, MD¹, Patricia D. Franklin, MD, MBA, MPH¹
¹Department of Orthopedics and Physical Rehabilitation, ²Department of Preventive and Behavioral Medicine, University of Massachusetts Medical School
- 64. Modulation of Severity of RPGR-associated Retinal Degeneration in Mice due to Mutations in RPGR-interacting Proteins**
Linjing Li¹, Nageswara Rao Kollu¹, Cecinio C. Ronquillo², Wolfgang Baehr², Hemant Khanna¹
¹Department of Ophthalmology, University of Massachusetts Medical School; ²Department of Ophthalmology and Visual Sciences, John A. Moran Eye Center, Salt Lake City, UT
- 65. Does Functional Gain and Pain Relief After TKR and THR Differ by Patient Obese Status?**
Wenjun Li, PhD¹, Jeffrey Lange, MD², Leslie Harrold, MD, MPH², Jeroan Allison, MD, MS³, Courtland Lewis, MD⁴, Thomas Bowen, MD⁵, David Ayers, MD², Patricia D. Franklin, MD, MBA, MPH²

¹Department of Preventive and Behavioral Medicine, ²Department of Orthopedics and Physical Rehabilitation, ³Department of Quantitative Health Sciences, University of Massachusetts Medical School; ⁴Hartford Hospital, Hartford CT; ⁵Geisinger Medical Center, Danville, PA

66. Creating Store and Community-Level Feedback Reports for Food Establishments to Support Nutrition Environment Improvement

Wenjun Li, PhD¹, Kevin Kane, MS¹, Ning Guo, MS¹, Bonnie Andrews, MPH³, Andrea Pinzon-Marquardt, MPH³, Hyung-Joo Kang, MS¹, Vijayalakshmi Patil, MS¹, Barbara Olendzki, MPH, RD¹
¹Health Statistics and Geography Lab, ²Center for Applied Nutrition, University of Massachusetts Medical School; ³Massachusetts Department of Public Health

67. Risk of Recurrent Falls after Indoor and Outdoor Falls in the Elderly

Wenjun Li, PhD¹, Hyung-joo Kang, MS¹, Elizabeth Procter-Gray, PhD¹, Marian Hannan, PhD², Lewis Lipsitz, MD²
¹Preventive and Behavioral Medicine, University of Massachusetts Medical School; ²Institute for Aging Research, Hebrew Senior Life

68. Racial Disparities in Emergency Department Mortality and Departure Status among Trauma Patients in Massachusetts

Wenjun Li, PhD¹, Holly Hackman, MD, MPH², Sylvia Hobbs, MPH⁵, Georgia Simpson May, MSM², Iyah Romm, BS², Hyung-Joo Kang, MS¹, Vera Mouradian, PhD², Timothy Emhoff, MD¹, Hasan Alam, MD³, Jon Burstein, MD², Selwyn Rogers, MD⁴
¹University of Massachusetts Medical School; ²Massachusetts Department of Public Health; ³University of Michigan Medical School; ⁴Temple University School of Medicine; ⁵Massachusetts Center for Health Information and Analysis

69. Racial Disparities in In-hospital Mortality and Discharge Disposition among Trauma Patients in Massachusetts

Wenjun Li, PhD¹, Sylvia Hobbs, MPH⁷, Holly Hackman, MD, MPH², Turner Osler, MD³, Frederick Milham, MD⁴, Georgia Simpson May, PhD², Hyung-Joo Kang, MS¹, Kevin Kane, MS¹, Heena Santry, MD¹, Selwyn Rogers, MD⁵, Hasan Alam, MD⁶
¹University of Massachusetts Medical School; ²Massachusetts Department of Public Health; ³University of Vermont Medical Center; ⁴Newton-Wellesley Hospital; ⁵Temple University School of Medicine; ⁶University of Michigan Medical School; ⁷Massachusetts Center for Health Information and Analysis

70. Modification of Ti6Al4V Substrates with Well-defined Zwitterionic Polysulfobetaine Brushes for Improved Surface Mineralization

Pingsheng Liu, Emily Domingue, David C. Ayers, Jie Song
Department of Orthopedics & Physical Rehabilitation, University of Massachusetts Medical School

71. Inhibition of Protein Tyrosine Phosphatase 1B by Polyphenol Natural Products: Relevant to Diabetes Management

Zhiwei Liu, Maolin Guo
UMass Cranberry Health Research Center, Department of Chemistry and Biochemistry, University of Massachusetts Dartmouth

72. Translational Model for External Volume Expansion in Irradiated Skin

Jorge Lujan-Hernandez, MD¹, Michael S. Chin, MD², Oksana O. Babchenko, BS¹, Elizabeth Bannon, MS², Heather Strom, MA¹, Ronald Ignatz, PhD¹, Yuan-Chyuan Lo, PhD², Thomas J. Fitzgerald, MD², Janice F. Lalikos, MD¹
¹Division of Plastic and Reconstructive Surgery, ²Department of Radiation Oncology, University of Massachusetts Medical School

73. Computerized 3-dimensional Localization of a Video Capsule in the Abdominal Cavity: Validation by Digital Radiography

Neil Marya, MD¹, Andrew Karellas PhD², Abhijit Roychowdhury MD², Anne Foley¹, David Cave MD¹

¹Department of Internal Medicine, ²Department of Radiology, University of Massachusetts Medical School

74. Development and Validation of a Clinical Scoring System to Differentiate Patients with Inflammatory Bowel Disease and Diarrhea-Predominant Irritable Bowel Disease

Neil Marya¹, Veronica Baptista¹, Krunal Patel¹, Bruce A. Barton², Anne Foley¹, Christopher Macomber³, David R. Cave¹

¹Department of Internal Medicine, ²Department of Quantitative Health Sciences, ³Department of Surgery, University of Massachusetts Medical School

75. A Year of Gastrointestinal Bleeding: An Epidemiologic Study

Neil Marya¹, Salmaan A. Jawaid¹, Bilal Gondal¹, Louise Maranda², Christopher A. Marshall¹, Anne Foley¹, Joseph Charpentier¹, Anupam Singh¹, David R. Cave¹

¹Department of Internal Medicine, ²Department of Quantitative Health Sciences, University of Massachusetts Medical School

76. Evening Snacking in Relation to Self-reported Declines in Sleep Quality during Pregnancy: Preliminary Results from the Decision-Making, Eating, and Weight Gain During Pregnancy (DEW) Study

Wendy McCallum, BA¹, Bradley M. Appelhans, PhD², Tiffany A. Moore Simas, MD, MPH, MEd^{3,4,5}, Sherry R. Xiao, MPH¹, Shums Alikhan, BS¹, Isabelle C. Pierre-Louis, BS¹, Barbara C. Olendzki, RD, MPH, LDN⁶, Sherry L. Pagoto, PhD⁶, Molly E. Waring, PhD¹

¹Division of Epidemiology of Chronic Diseases and Vulnerable Populations, Department of Quantitative Health Sciences, University of Massachusetts Medical School; ²Department of Preventive Medicine, Rush University Medical Center, Chicago, IL; ³Division of Research, Department of Obstetrics and Gynecology and Department of Pediatrics, ⁴Department of Pediatrics, University of Massachusetts Medical School; ⁵Department of Obstetrics and Gynecology, UMass Memorial Health Care; ⁶Division of Behavioral and Preventive Medicine, Department of Medicine, University of Massachusetts Medical School

77. Plasma microRNAs are Associated with Atrial Fibrillation (the miRhythm Study) and Change After Catheter-ablation

David D. McManus, MD, MSc^{1,2,3}, Kahraman Tanriverdi, PhD¹, Honghuang Lin, PhD^{2,4}, Nada Esa, MD¹, Menhel Kinno, MD¹, Rosalind Lee, MS⁸, Divakar Mandapati, MD¹, Stanley Tam, MD¹, MBA, Patrick T. Ellinor, MD, PhD^{9,10}, John F. Keane, Jr., MD¹, Emelia J. Benjamin, MD, MSc^{5,6,7}, Victor Ambros, PhD⁸, Jane E. Freedman, MD^{1,2}

¹Cardiology Division, Department of Medicine, University of Massachusetts Medical School; ²National Heart Lung and Blood Institute's and Boston University's Framingham Heart Study, Framingham, MA;

³Epidemiology Division, Department of Quantitative Health Sciences, University of Massachusetts Medical School; ⁴Computational Biomedicine Section, Department of Medicine, Boston University School of Medicine, Boston, MA; ⁵Section of Cardiovascular Medicine, Department of Medicine, Boston University, Boston, MA; ⁶Preventive Medicine Section, Department of Medicine, Boston University School of Medicine, Boston, MA; ⁷Epidemiology Department, Boston University School of Public Health, Boston, MA; ⁸Program in Molecular Medicine, University of Massachusetts Medical School; ⁹Cardiac Arrhythmia Service, Massachusetts General Hospital, Boston, MA; ¹⁰Cardiovascular Research Center, Massachusetts General Hospital, Charlestown, MA

78. In-hospital Depression Predicts Early Hospital Readmission after an Acute Coronary Syndrome: Preliminary Data from TRACE-CORE

David D. McManus, MD, ScM, FACC, FHRS^{1,2,3}, Jane S. Saczynski, PhD^{1,2,3}, Molly E. Waring, PhD¹, Milena Anatchkova, PhD^{1,3}, Richard McManus, MPH^{1,3}, Robert J. Goldberg, PhD^{1,2,3}, Jeroan Allison, MD, MS^{1,2,3}, David C. Parish, MD⁴, Hamza H. Awad, PhD, MD⁴, Jerry Gurwitz, MD^{1,2,3}, Arlene Ash, PhD^{1,3}, Catarina I. Kiefe, PhD, MD^{1,3}

¹Department of Quantitative Health Sciences, ²Department of Medicine, ³Meyers Primary Care Institute, University of Massachusetts Medical School; ⁴Department of Internal Medicine, Mercer University School of Medicine, Macon, GA

79. Transthoracic Bioimpedance Monitoring Predicts Heart Failure Decompensation and Early

Readmission after Heart Failure Hospitalization: Preliminary Data from SENTINEL-HF

David D. McManus, MD, ScM, FACC, FHRS^{1,2,3}, Jarno Riistema, PhD⁴, Jane S. Saczynski, PhD^{1,2,3}, Fatima Sert Kuniyoshi, PhD⁵, Joseph Rock⁶, Theo E. Meyer, MD, DPhil, FACC¹, Niek G.P. den Teuling, MSc⁴, Robert J. Goldberg, PhD^{1,2,3}, Chad Darling, MD, FACEP⁷

¹Department of Medicine, ²Department of Quantitative Health Sciences, ³Meyers Primary Care Institute, University of Massachusetts Medical School; ⁴Philips Research Eindhoven, The Netherlands; ⁵Philips Home Healthcare Solutions, Murrysville, PA; ⁶Philips Hospital-to-Home, Framingham, MA; ⁷Department of Emergency Medicine, University of Massachusetts Medical School

80. A Comparison of Wrist and Hip Accelerometer Output at Different Walking Speeds

Albert R. Mendoza, Amanda M. Hickey, Allison H. Gruber, John Staudenmayer, Patty S. Freedson, FACSM
University of Massachusetts Amherst

81. Prevalence and Comorbidity of Alcohol Dependence, Depression, and Anxiety Disorders in their Association with the Serotonin Transporter Gene

Ruben Miozzo, MD, MPH¹; O. Joseph Bienvenu, MD, PhD², William W Eaton, PhD³, Gerald Nestadt, MD, MPH²

¹Worcester Recovery Center and Hospital, Worcester, MA; ²Psychiatry and Behavioral Sciences Johns Hopkins University School of Medicine; ³Department of Mental Health Bloomberg School of Public Health

82. Prescribing Patterns of Antipsychotic Medication in a Long-Term Care Psychiatric Hospital

Ruben Miozzo, MD, MPH¹, Mayra Tisminetzky, MD, PhD², Seven Dolley, PharmD¹, Boris Lorberg, MD³, Jeffrey Geller, MD, MPH³

¹Worcester Recovery Center and Hospital, Worcester, MA; ²Department of Quantitative Health Sciences, University of Massachusetts Medical School; ³Department of Psychiatry, University of Massachusetts Medical School

83. Epstein-Barr Virus (EBV)-lytic Cross-reactive Influenza-A (IAV) Memory. CD8 T-cells in EBV Seronegative Middle-aged Adults

Rabinarayan Mishra¹, Levi Watkin¹, Nuray Aslan¹, Anna Gil¹, Katherine Luzuriaga², Liisa K. Selin¹

¹Department of Pathology, ²Program in Molecular Medicine, University of Massachusetts Medical School

84. Crossreactive Epstein-Barr Virus (EBV)-Influenza A Virus (IAV) Specific CD8 Memory T Cells During Acute Symptomatic IAV Infection

Rabinarayan Mishra¹, Anna Gil¹, Nuray Aslan¹, Katherine Luzuriaga², Liisa K. Selin¹

¹Department of Pathology, ²Program in Molecular Medicine, University of Massachusetts Medical School

85. Exosome-mediated Delivery of RNA Interference and miRNA Mimic

Fatemeh Momen-Heravi, DDS, Shashi Bala, PhD, Terence Bukong, PhD, Gyongyi Szabo, MD, PhD
Department of Medicine, University of Massachusetts Medical School

86. MassTERi: Promoting Translational Research and Entrepreneurship at the University of Massachusetts Medical School

Steering Committee: Melissa Moore, PhD¹, Celia Schiffer, PhD², Anastasia Khvorova, PhD³, Anita Ballesteros, PhD⁴, Cynthia Fuhrmann, PhD⁵, Jean King, PhD⁶, Margaret Koziel, MD⁷, Thomas McCullough⁸, Linda Plano, PhD⁹

¹Howard Hughes Medical Institute, RNA Therapeutic Institute; ²Biochemistry and Pharmacology, ³RNA Therapeutic Institute, ⁴Office of Technology Management, ⁵Career and Professional Development, ⁶Psychiatry and Center for Comparative Neuroimaging, ⁷Clinical Research, UMass Center for Clinical and Translational Science, ⁸Corporate and Foundation Relations, University of Massachusetts Medical School; ⁹Plano & Simple, Boston, MA

87. Adipose Tissue Inflammation in Diabetic versus Non-diabetic Pregnancies

Tiffany A. Moore Simas, MD, MPH, MEd^{1a}, Raziel Rojas-Rodriguez, BS^{1b}, Jacqueline Tessa Draper, BS¹, Aylin Sert, MEd¹, Maxwell Kruse^{1b}, Crina Boeras, MD^{1a}, Brittany Rosenthal^{1b}, Olga Gealekman, PhD^{1b}, So Yun Min, MSc^{1b}, Kathy Leung, MPH^{1a}, Silvia Corvera, MD^{1b}

¹University of Massachusetts Medical School, ^aObstetrics & Gynecology, ^bProgram in Molecular Medicine

88. Associations of Adipose Tissue Architecture, Adipokines and Inflammatory Markers with Body Mass Index and Gestational Weight Gain in Non-diabetic Pregnancies

Tiffany A. Moore Simas, MD, MPH, MEd^{1a}, Crina Boeras, MD^{1a}, NingNing Zhang, PhD^{1b}, Olga Gealikman, PhD^{1c}, Kathy Leung, MPH^{1a}, Nicole Wedick, PhD^{1d}, Laura Robidoux, BS^{1a}, Jodi Adams Puleo, MA^{1a}, Mary Lee, MD^{1b}, Silvia Corvera, PhD^{1c}, Milagros Rosal, PhD^{1d}

¹University of Massachusetts Medical School, ^aObstetrics & Gynecology, ^bPediatrics, ^cProgram in Molecular Medicine, ^dDivision of Preventive and Behavioral Medicine, Department of Medicine

89. The Effects of *Rhodiola Crenulata* Extract on Proliferation and Differentiation in Glioblastoma Multiforme

Maria Carmen Mora, MD^{2,3}, Kaitlyn Wong, MD, MPH^{2,3}, Michael Tirabassi, MD¹, Richard Arenas, MD^{2,3,4}, Sallie Schneider, PhD^{3,4}

¹Baystate Children's Hospital, Tufts University School of Medicine, Springfield, MA; ²Baystate Medical Center, Tufts University School of Medicine, Springfield, MA; ³Pioneer Valley Life Sciences Institute, Springfield, MA; ⁴University of Massachusetts Amherst

90. Dantrolene for the Prevention and Treatment of Cerebral Vasospasm after Subarachnoid Hemorrhage – a Randomized Placebo-Controlled Trial to assess Safety, Tolerability and Feasibility

Susanne Muehlschlegel, MD, MPH^{1,2,3}, Raphael Carandang, MD^{1,3}, Wiley Hall, MD^{1,3}, Nishi Kini, MPH⁴, Saef Izzy, MD¹, I. Martijn VanDerBom, PhD⁵, Thomas F. Flood, BA⁵, Matthew Gounis, PhD⁵, John Weaver, MD⁶, Bruce Barton, PhD⁴

Departments of ¹Neurology (Neurocritical Care), ²Anesthesia/Critical Care, ³Surgery, ⁴Quantitative Health Sciences, ⁵Radiology and ⁶Neurosurgery, University of Massachusetts Medical School

**91. Live Well Springfield (LWS) – A Community Transformation Initiative
LWS.org Website Evaluation**

Jesse Mushenko¹, Elena Carbone¹, Joseph Krupczynski¹, Kathy Wicks², Elaine Puleo¹

¹University of Massachusetts Amherst; ²Partners for a Healthier Community

92. Isolation of Human Antigen-Specific Antibodies from Memory B-Cells Nearly Two Years Post Vaccination

Stuart Nelson, Andrew Crowley, William Thomas, Colby A Souders

Department of Product Delivery, MassBiologics of the University of Massachusetts Medical School

93. Inhibition of Colon Cancer by Polyphenols from Whole Cranberry

Catherine Neto¹, Anne Liberty¹, Sarah Frade¹, Anuradha Tata¹, Tracie Ferreira², Mingyue Song³, Xian Wu³, Hang Xiao³

UMass Cranberry Health Research Center and ¹Department of Chemistry and Biochemistry, ²Department of Bioengineering, University of Massachusetts Dartmouth; ³Department of Food Science, University of Massachusetts Amherst

94. Cranberry Fruit and Leaf Polyphenols Inhibit Staphylococcus Bacterial Biofilms

Catherine Neto¹, Jason MacLean¹, Biqin Song¹, Anthony Dovell¹, Steven Kwasny², Timothy Opperman²

¹UMass Cranberry Health Research Center and Department of Chemistry and Biochemistry, University of Massachusetts Dartmouth; ²Microbiotix, Inc., Worcester, MA

95. A Pilot Study to Explore Contamination of Student Nurses' Scrubs with *Staphylococcus aureus* and MRSA Before and After Laundering in College Dormitory

Jennifer Nicoloro¹, Desta Marika^{2,3}, Susan Duty², Elizabeth Scott^{3,4}, Nancy Goodyear¹

¹Department of Clinical Laboratory and Nutritional Sciences, University of Massachusetts Lowell;

²Department of Nursing, Simmons College, Boston MA; ³Department of Biology, Simmons College, Boston MA; ⁴Simmons College Center for Hygiene and Health in Home and Community

96. Establishment of Rab-11 Induced Inflammatory Regulation as Therapeutic Targets in Colon Cancer Progression

Yingchao Nie¹, Alla Amcheslavsky¹, Qi Li¹, Shiyang Yu², Nan Gao², Zhong Jiang⁴, Michele Markstein³, Tony Ip¹

¹Program in Molecular Medicine, University of Massachusetts Medical School; ²Biological Sciences, Rutgers University, Newark, NJ; ³Biology Department, University of Massachusetts Amherst; ⁴Department of Pathology, University of Massachusetts Medical School

97. Patient- and Hospital-level Predictors of 30-day Readmission after Acute Coronary Syndrome: A Systematic Review

Lisa Nobel, MSc^{1,2}, Jane Saczynski, PhD^{1,2}, Arlene Ash, PhD², Catarina I. Kiefe, MD, PhD², Jeroan J. Allison, MD, MSc²

¹University of Massachusetts Medical School, ²Department of Quantitative Health Sciences, University of Massachusetts Medical School

98. Cervical Cancer in Cameroon: A Three Pronged Approach to Increase Awareness, Vaccination, Screening and Treatment

Javier Gordon Ogembo¹, T.P. Muffih², L. Maranda¹, R. Wamai³; R. Kemunto³, E. Welty², T. Welty², S. Manga², L. Bradford¹, K. Kalmakis⁴ and L. K. Sheldon⁵

¹University of Massachusetts Medical School; ²Cameroon Baptist Convention Health Service;

³Northeastern University; ⁴University of Massachusetts Boston; ⁵University of Massachusetts Amherst

99. Anti-pPKC θ (T538) Delivery via Cell Penetrating Peptide Mimics as a Novel Treatment of Aplastic Anemia

Emrah Ilker Ozay^{1,2,3}, Gabriela Gonzalez-Perez², Joe Torres^{1,2}, Gregory N. Tew^{1,2,3}, Lisa M. Minter^{1,2}

¹Program in Molecular and Cellular Biology, ²Department of Veterinary and Animal Sciences, ³Department of Polymer Science and Engineering, University of Massachusetts Amherst

100. Live Well Springfield (LWS): Measuring Baseline Usage of the Springfield River Walk

Timothy Paradis¹, Elena Carbone¹, Jeffrey McCollough², Elaine Puleo³

¹Department of Nutrition, University of Massachusetts Amherst; ²Pioneer Valley Planning Commission, Springfield, MA; ³Department of Public Health, University of Massachusetts Amherst

101. Effect of Oligopeptide Orientation on Polymer-based DNA Delivery

Sangram S. Parelkar¹, Rachel Letteri¹, Jayne Ellis², Robert Elder³, Arthi Jayaraman³, Marxa Figueiredo², Todd Emrick¹

¹Polymer Science and Engineering Department, University of Massachusetts Amherst; ²Department of Pharmacology and Toxicology, University of Texas Medical Branch, Galveston, TX; ³Department of Chemical and Biological Engineering, University of Colorado Boulder, Boulder, CO

102. Ovariectomy Induces Early Changes in Cardiac Fibrosis and Angiotensin II Gene Expression

Anisha Patel¹, Espen E. Spangenburg², Sarah Witkowski¹

¹Department of Kinesiology, University of Massachusetts Amherst; ²University of Maryland, College Park, MD

103. Structure-based Design of Broadly Neutralizing HCV Antibody and Vaccine

Brian G. Pierce¹, Elisabeth Boucher², Heidi Smith², William Thomas, Jr.², Zhiping Weng¹, Yang Wang²

¹Program in Bioinformatics and Integrative Biology, University of Massachusetts Medical School;

²Product Discovery, MassBiologics of the University of Massachusetts Medical School

- 104. Pharmaceutical Pain Management among Older Adults with Cancer in Nursing Homes**
Camilla B. Pimentel, MPH¹, Becky A. Briesacher, PhD^{2,3}, Kate L. Lapane, PhD⁴
¹Clinical and Population Health Research Program, Graduate School of Biomedical Sciences ²Meyers Primary Care Institute, ³Division of Geriatric Medicine, ⁴Department of Quantitative Health Sciences, University of Massachusetts Medical School
- 105. Differential Burden of Musculoskeletal Pain in Blacks and Whites at the Time of Total Joint Replacement Surgery**
Anthony Porter, MD¹, Leslie Harrold, MD, MPH¹, Philip Noble, PhD³, David Ayers, MD¹, Patricia D. Franklin, MD, MBA, MPH¹, Jeroan Allison, MD, MS²
¹Department of Orthopedics and Physical Rehabilitation, ²Department of Quantitative Health Sciences, University of Massachusetts Medical School; ³Baylor College of Medicine, Houston, TX
- 106. Point-of-Care Diabetes Monitoring via Breath Acetone Detection**
Ronny Priefer¹, Michael Rust²
¹Department of Pharmaceutical and Administrative Science, ²Department of Biomedical Engineering, Western New England University, Springfield, MA
- 107. Gene Expression Profiles Identify Features Common to Lobular and Ductal Premalignant Breast Lesions**
Amy L. Roberts¹, D. Joseph Jerry^{1,2}, Kelly A. Gauger², Sallie S. Schneider², Giovanna M. Crisi³, Grace Makari-Judson³, Ashraf Khan⁴, Karl Simin⁴
¹University of Massachusetts Amherst; ²Pioneer Valley Life Sciences Institute, Springfield, MA; ³Baystate Medical Center, Springfield, MA; ⁴University of Massachusetts Medical School
- 108. Application of Diarylhydrazones, Schiff-bases and Their Saturated Derivatives as Multifunctional Inhibitors of Amyloid Self-Assembly**
Christian Schäfer¹, Sanjukta Ghosh¹, Marianna Török^{1,2}, Béla Török^{1,2}
¹Department of Chemistry, University of Massachusetts Boston; ²University of Massachusetts Center for Clinical and Translational Science
- 109. Transdifferentiation of α - to β -cells is Enhanced in FSTL3 KO Mice**
Alan Schneyer¹, Danielle Andrzejewski¹, Amy Burnside¹, Melissa Brown²
¹Veterinary & Animal Sciences; ²Department of Continuing & Professional Education, University of Massachusetts Amherst
- 110. Modified Hatch Score Predicts 6-Month Recurrence of Atrial Fibrillation after Pulmonary Vein Isolation: Data from the University Of Massachusetts Atrial Fibrillation Registry**
Amir Y. Shaikh, MD¹, Abhishek Maan, MD², Nada Esa, MD¹, Menhel Kinno, MD¹, Kevin C. Floyd, MD^{1,3}, Lawrence S. Rosenthal, MD^{1,3}, Clifford A. Browning, MD^{1,3}, David D. McManus, MD^{1,3,4}
¹Department of Medicine, University of Massachusetts Medical School; ²Cardiac Arrhythmia Research Center, Massachusetts General Hospital, Boston, MA; ³Division of Cardiology, Department of Quantitative Health Sciences, University of Massachusetts Medical School
- 111. Physical Activity and Screen Time in Adolescents and Their Nominated Friends**
John R. Sirard, PhD^{1*}, Meg Bruening, PhD, MPH, RD^{2*}, Melanie M. Wall, PhD^{3*}, Marla E. Eisenberg, ScD, MPH⁴, Sun K. Kim, PhD⁵, Dianne Neumark-Sztainer, PhD, MPH, RD⁶
¹Department of Kinesiology, School of Public Health and Health Sciences, University of Massachusetts Amherst; ²School of Nutrition and Health Promotion, Arizona State University, Phoenix, Arizona; ³Department of Biostatistics, Mailman School of Public Health, Columbia University, New York City, NY; ⁴Division of Adolescent Health and Medicine, ⁵Division of Biostatistics, ⁶Division of Epidemiology and Community Health, University of Minnesota School of Public Health, Minneapolis, MN
*Authors Sirard, Bruening, and Wall were employed at the University of Minnesota when this research was completed.

- 112. Vancomycin-bearing Synthetic Bone Graft Delivers rhBMP-2 and Promotes Healing of Critical Rat Femoral Segmental Defects**
Jordan D. Skelly, Jeffrey Lange, Tera M. Fillion, Xinning Li, David C. Ayers, Jie Song
Department of Orthopedics & Physical Rehabilitation, University of Massachusetts Medical School
- 113. *In Vivo* Evaluation of a Biomimetic Polymer-Doxorubicin Conjugate for Cancer Therapy**
Matthew Skinner¹, Samantha McRae Page¹, Xiangji Chen¹, Sangram S. Parelkar¹, Kaitlyn Wong², Maria Mora², Sallie Schneider², Todd Emrick¹
¹Polymer Science & Engineering Department, University of Massachusetts Amherst; ²Pioneer Valley Life Sciences Institute, Springfield, MA
- 114. Poor Pre-Operative Emotional Health Limits Gain in Function after Total Hip Replacement**
Benjamin Snyder, MD, MPH¹, Leslie Harrold, MD, MPH¹, Timothy Boardman¹, Wenjun Li, PhD², Courtland Lewis, MD³, David Ayers, MD¹, Patricia D. Franklin, MD, MBA, MPH¹
¹Department of Orthopedics and Physical Rehabilitation, ²Department of Preventive and Behavioral Medicine, University of Massachusetts Medical School; ³Hartford Hospital, Hartford CT
- 115. Multiple Approaches to Determine Toxicity of Micro and Nano-sized Titanium Dioxide Materials When Exposed to Human Red Blood Cells**
Aaron Stella¹, Shu-Feng Hsieh^{1,2}, Dhimiter Bello^{2,3}, Daniel Schmidt^{2,4}, Eugene Rogers^{1,2}
¹Department of Clinical Laboratory and Nutritional Sciences, ²Center for High-rate Nanomanufacturing, ³Department of Work Environment, ⁴Department of Plastics Engineering, University of Massachusetts Lowell
- 116. Live Well Springfield (LWS) -- A Community Transformation Initiative. Springfield MENU Program Evaluation**
Hannah Stenger¹, Elena Carbone DrPH¹, Tasha Moultrie-Phillips², Wanda Givens², Elaine Puleo PhD³
¹Department of Nutrition, University of Massachusetts Amherst; ²Mason Square Health Task Force, Springfield MA; ³Department of Public Health, University of Massachusetts Amherst
- 117. Ablation Of Raf-1 Kinase Inhibitory Protein (RKIP) Improves Photoreceptor Structure and Function in a Cep290-Mutant Mouse Model Of Severe Retinal Degeneration**
Balajikarthick Subramanian, Manisha Anand, Hemant Khanna
Department of Ophthalmology, University of Massachusetts Medical School
- 118. Trends and Characteristics Associated with the Risk of Re-hospitalization in Patients Discharged from the Hospital after Acute Myocardial Infarction**
Mayra Tisminetzky, MD, PhD, Han-Yang Chen, MS, Edgard Alex Granillo, MD, Joel Gore, MD. Jorge Yarzebski, MD, MPH, Darleen Lessard, MS, Robert Goldberg, PhD
Department of Quantitative Health Sciences, University of Massachusetts Medical School
- 119. Inhibition of Bromodomain Proteins in Treatment of Diffuse Large B-cell Lymphoma**
Sally E. Trabucco¹, Rachel M. Gerstein², Andrew M. Evens³, James E. Bradner⁴, Leonard D. Shultz⁵, Dale L. Greiner⁶, Hong Zhang¹
¹Department of Cell and Developmental Biology, ²Department of Microbiology and Physiological Systems, ⁶Program in Molecular Medicine, University of Massachusetts Medical School; ³Division of Hematology and Oncology, Tufts Medical Center, Boston, MA; ⁴Department of Medical Oncology, Dana-Farber Cancer Institute, Boston, MA; ⁵The Jackson Laboratory, Bar Harbor, ME
- 120. Displacement Across a Fracture Gap with Axial Loading of Far Cortical Locking Constructs**
Peter J. Wagner, MD, MMS¹, Dennis T. Murphy, BS¹, Kristen Billiar, PhD², Judith Siegel, MD¹, John J. Wixted, MD¹
¹UMass Memorial Medical Center, Worcester, MA; ²Worcester Polytechnic Institute, Worcester, MA

- 121. Use of the Spine Adverse Events Severity (SAVES) System to Categorize and Report Adverse Events in Spine Surgery.**
Wagner PJ¹, Ailon T², Zhou H¹, Pascal S¹, Harrigan MB¹, Stauff M¹, Lapinsky A¹, Connolly PJ¹, DiPaola CP¹
¹UMass Memorial Medical Center, Worcester, MA; ²Harvard School of Public Health, Boston MA
- 122. Detection of Diabetic Foot Ulcers Using SVM Based Classification**
Lei Wang¹, Peder C. Pedersen¹, Diane M. Strong², Bengisu Tulu², Emmanuel Agu³, Qian He³, Ronald Ignatz⁴, Raymond Dunn⁴, David Harlan⁵, Sherry Pagoto⁶
¹Department of Electrical and Computer Engineering, ²School of Business, ³Department of Computer Science, Healthcare Delivery Institute at Worcester Polytechnic Institute; ⁴Department of Surgery, ⁵Department of Medicine, University of Massachusetts Medical School
- 123. Automatic Article Screening in Systematic Review**
Tong Wang
Department of Computer Science, University of Massachusetts Boston
- 124. Developing a Whole Plant *Artemisia annua* Antimalarial Therapeutic: pACT**
Pamela Weathers¹, Nicole Jordan¹, Praphapan Lasin¹, Melissa Towler², Douglas Golenbock³, Mostafa Elfawal⁴, Nicholas Reich⁵, George Acquaaah-Mensah³, Stephen Rich³
¹Department of Biology and Biotechnology, Healthcare Delivery Institute at Worcester Polytechnic Institute; ²Infectious Diseases and Immunology, University of Massachusetts Medical School; ³Lab Medical Zoology, Department of Microbiology, ⁴Division of Biostatistics and Epidemiology, School of Public Health and Health Sciences, University of Massachusetts Amherst; ⁵School of Pharmacy, Massachusetts College of Pharmacy and Health Sciences, Worcester MA
- 125. Coordination Variability after Hip Replacement Surgery: A Case Report**
A.J. Whited, J. Freedman Silvernail, D. Kelly, N. Fay, J. Hamill
Biomechanics Laboratory, University of Massachusetts Amherst
- 126. A Novel Approach to Targeted Oncologic Therapy - Co-culture Viability of Polymer Prodrug Conjugation to Mesenchymal Stem Cells**
Kaitlyn Wong^{1,2,4}, Nicholas Panzarino^{1,2,3}, Samantha McRae Page³, Richard Arenas^{1,2,4}, Sallie Schneider^{1,2}, Todd Emrick³
¹Pioneer Valley Life Sciences Institute, Springfield, MA; ²Molecular and Cellular Biology Program, ³Polymer Science and Engineering Program, University of Massachusetts Amherst; ⁴Baystate Medical Center, Tufts Medical School, Springfield, MA
- 127. Availability of Food Preparation Supplies among Pregnant Women: Preliminary Results from the Decision Making, Eating, and Weight Gain during Pregnancy (DEW) Study**
Rui S. Xiao, MPH¹, Tiffany A. Moore Simas, MD, MPH, MEd^{2,3,4}, Bradley M. Appelhans, PhD⁵, Isabelle C. Pierre-Louis, BS¹, Shums Alikhan, BS¹, Barbara C. Olendzki, RD, MPH, LDN⁶, Sherry L. Pagoto, PhD⁶, Molly E. Waring, PhD¹
¹Division of Epidemiology of Chronic Diseases and Vulnerable Populations, Department of Quantitative Health Sciences, ²Division of Research, Department of Obstetrics and Gynecology, ³Department of Pediatrics, University of Massachusetts Medical School; ⁴Department of Obstetrics and Gynecology, UMass Memorial Health Care; ⁵Department of Preventive Medicine, Rush University Medical Center, Chicago, IL; ⁶Division of Behavioral and Preventive Medicine, Department of Medicine, University of Massachusetts Medical School
- 128. Cytocompatible Tough Hydrogel Platform with Predictable Degradation**
Jianwen Xu, Ellva Feng, Jie Song
Department of Orthopedics & Physical Rehabilitation, Department of Cell & Developmental Biology, University of Massachusetts Medical School

- 129. Amphiphilic Degradable Polymers for Immobilization and Sustained Delivery of Sphingosine 1-Phosphate**
Jing Zhang, PhD, Jie Song, PhD
Department of Orthopedics & Physical Rehabilitation, University of Massachusetts Medical School
- 130. Comprehensive Data Management System for National Patient-Centered Outcomes Research for Comparative Effectiveness in Total Joint Replacement**
Hua Zheng, PhD¹, Bruce Barton, PhD², Dane Netherton, PhD², Wenjun Li, PhD³, Jeroan Allison, MD, MS², David Ayers, MD¹, Patricia D. Franklin, MD, MPH, MBA¹
¹Department of Orthopedics & Physical Rehabilitation, ²Quantitative Health Sciences, ³Preventive and Behavioral Medicine, University of Massachusetts Medical School
- 131. Self-esteem Influences on Multiple Domains: Stress, Health, Mood, and Social Identity**
Hannah E. Lapp, Stephanie L. Power, Kymberlee M. O'Brien, Celia L. Moore
Department of Psychology, University of Massachusetts Boston
- 132. Upconversion Nanoparticles for Photodynamic Therapy**
Hyungseok Lee, Mahmoud El-rifai, Amira Tokatli-Apollon, Amol Punjabi, Xiang Wu, Gang Han
Department of Biochemistry and Molecular Pharmacology, University of Massachusetts Medical School
- 133. The Role of miR-122 in Alcoholic Liver Disease**
Abhishek Satishchandran, Nicita Mehta, Donna Catalano, Shashi Bala, Gyongyi Szabo
Department of Medicine, University of Massachusetts Medical School
- 134. Development of Novel 3,5-Dimethylisoxazoles as Selective Inhibitors of BET-bromodomain Proteins**
Shuai Liu¹, Michael R. McKeown², Harry Fu¹, Daniel Shaw², Yibo Huang¹, Jun Qi², James E. Bradner², Wei Zhang¹
¹Department of Chemistry, University of Massachusetts Boston; ²Department of Medical Oncology, Dana-Farber Cancer Institute, Boston, MA