

CURRICULUM VITAE ~ Marlene Elena Starr, PhD

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CURRICULUM VITAE

Marlene Elena Starr, PhD
Assistant Professor, Regular Title Series
Department of Surgery
Division of General Surgery
College of Medicine
University of Kentucky



I. GENERAL INFORMATION

Office Address 800 Rose Street, MS476
Lexington, KY 40536-0298

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Fax 859-323-2551

II. EDUCATION

08/1998-05/2003 **Texas A&M University**
Galveston, Texas
BS, Marine Biology

08/2007-05/2011 **University of Texas Medical Branch**
Galveston, Texas
PhD, Biochemistry and Molecular Biology

05/2011-07/2014 **University of Kentucky**
Lexington, Kentucky
Postdoctoral Fellow, Aging and Critical Care

III. PROFESSIONAL EXPERIENCES

08/2000-8/2002 **University of Texas Medical Branch**
Galveston, Texas
Research Assistant, National Resource Center for Cephalopods, part-time

- 08/2002-5/2003 **National Marine Fisheries Service, National Oceanic and Atmospheric Administration (NOAA)**
Galveston, Texas
Biological Science Technician, Benthic Ecology Laboratory, part-time
- 05/2003-5/2004 **National Marine Fisheries Service, National Oceanic and Atmospheric Administration (NOAA)**
Galveston, Texas
Biological Science Technician, Platform Removal Program, full-time
- 5/2004-5/2005 **Moody Gardens Aquarium**
Galveston, Texas
Water Quality Specialist, Engineering Department, full-time
- 5/2005-8/2007 **University of Texas Medical Branch**
Galveston, Texas
Research Associate, Department of Surgery, full-time
- 08/2007-05/2011 **University of Texas Medical Branch**
Galveston, Texas
Doctoral Student, Biochemistry and Molecular Biology
Due to the impact of Hurricane Ike on Galveston in 2008, the laboratory I was affiliated with moved to the University of Kentucky in 2009. I remained a student in the doctoral program at the University of Texas, while completing my dissertation research at the University of Kentucky with concurrent employment as a Research Assistant.
- 06/2009-5/2011 **University of Kentucky**
Lexington, Kentucky
Research Assistant, Department of Surgery
- 05/2011-07/2014 **University of Kentucky**
Lexington, Kentucky
Senior Research Associate (post-doctoral scholar), Department of Surgery

IV. ACADEMIC APPOINTMENTS

- 07/2014- **University of Kentucky**
Lexington, Kentucky
Assistant Professor of Surgery, Regular Title Series, tenure-track

V. HOSPITAL or CLINICAL APPOINTMENTS - N/A

VI. CONSULTING ACTIVITIES - N/A

VII. TEACHING ACTIVITIES – N/A

VIII. ADVISING ACTIVITIES

Student Advising

High School Students

2011	Mizuki Saito (current dental student, University of Louisville)
2013	Michiko Minowa (current undergraduate Student, Keio University, Japan)
2014	Robert Wendroth (current UK undergraduate student)

Undergraduate Students

2012	Mizuki Saito (current dental student, University of Louisville) Heepke Wendroth (current medical student, Cincinnati Children's)
2014	Beverly Balasuriya (current Research Associate, UK (Starr Lab))
2015	Robert Wendroth (current UK undergraduate student)
2016	Stephanie Yamashita (current Research Assistant, UK)

Medical Students

2014	Bill Hacker (current medical student at UK)
2015	Nisha Nataraj (current medical student at UK)
2016	Dwight Harris (current medical student at UK) Damon Wallace (current medical student at UK) Whitney Powell (current medical student at UK)
2017	Franklyn Wallace (current medical student at UK) David Turner (current medical student at UK)

Graduate Students

2011	Caitlyn Riedmann (recent UK graduate)
2012-2017	Allison Steele (current graduate student, Physiology, UK)

Post-doctoral Fellows

2010-2013	Daiki Okamura, MD, PhD (current Assistant Professor, Chiba University)
2011-2012	Jun Ienaga, MD (current clinical staff, Kyushu University, Japan)

Surgery Residents

2012 - 2013 W Conan Mustain, MD
2012 – 2014 Brittany Zwischenberger, MD
2013 – 2014 Jennifer W Harris, MD

Thesis & Dissertation

University of Kentucky
Lexington, Kentucky

2015-2017 Allison Steele, PhD Candidate, College of Medicine, Department of
Physiology, anticipated graduation Dec 2017 [committee member]

2015-2016 Grishma Trivedi, Masters Candidate, Medical Sciences, graduated May
2016 [committee member]

IX. ADMINISTRATIVE ACTIVITIES & UNIVERSITY SERVICE

University of Kentucky
Lexington, KY

University

2011- present Emergency Response Facilitator

X. SPECIAL ASSIGNMENTS – N/A

XI. HONORS & AWARDS

2007 Best Student Poster Award, Sealy Center on Aging 11th Annual Forum on
Aging, University of Texas Medical Branch (UTMB)

George Sacher Student Award, 60th Annual Scientific Meeting,
Gerontological Society of America (GSA)

2008 James E Beall II Memorial Scholarship

Best Student Poster Award, Sealy Center on Aging 12th Annual Forum on
Aging, University of Texas Medical Branch (UTMB)

- 2009
- Best Poster Presentation in Immunology, National Student Research Forum, UTMB
 - American Medical Association Foundation Award for Overall Excellence in Basic Research, National Student Research Forum, UTMB
 - Stephen C Silverthorne Memorial Scholarship Award, UTMB
 - Rose and Harry Walk Research Scholarship Award, UTMB
 - George Sacher Student Award, 62nd Annual Scientific Meeting, Gerontological Society of America
- 2010
- American Foundation for Aging Research Graduate Fellowship
 - Best Oral Presentation in Pathology – National Student Research Forum, UTMB
 - Travel Award, 33rd Annual Conference on Shock, The Shock Society
 - Travel Award, 39th Annual Meeting of the American Aging Association
 - Walter R. Nicolai Award for Meritorious Research by a Predoctoral Candidate in Biomedical Gerontology, American Aging Association
 - Best Presentation at the “Student Data Blitz Competition,” American Aging Association
 - UTMB Sealy Center on Aging Scholarship Award
 - James E Beall II Memorial Scholarship Award, UTMB
- 2011
- Shock Society Diversity Enhancement Award
 - Travel Award, 14th Congress of the International Association of Biomedical Gerontology
 - Travel Award, 64th Annual Meeting of the Gerontological Society of America (GSA)
- 2012
- Barnstable Brown Obesity and Diabetes Research Day Outstanding Postdoctoral Research Presentation Award
- 2013
- Travel Award, 36th Annual Conference on Shock, The Shock Society

Emerging Scholar and Professional Organization Poster Award, 66th
Annual Meeting of the Gerontological Society of America

2014 Travel Award, 37th Annual Conference on Shock, The Shock Society

XII. PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT

Memberships

2007-Present	The Gerontological Society of America (GSA)
2007-2015	Emerging Scholar and Professional Organization, GSA
2011-Present	The Shock Society
2011-2013	American Aging Association

Positions Held

Local

	University of Texas Medical Branch, Graduate School
2007-2008	Member, Basic Biomedical Science Curriculum Representative to the Graduate Student Organization
2008	Member, Biochemistry and Molecular Biology Program Orientation Committee
2008-2009	Vice President, Graduate Student Organization

National/International

	Gerontological Society of America
2011-2103	Member, Emerging Scholar and Professional Organization (ESPO) Representative to the Biological Sciences Executive Committee
2013	Chair, ESPO Biological Sciences Symposia Coordinator
2014-2015	Chair, ESPO Awards Committee

Journal Peer-Reviewing

Journal of Gerontology: Biological Sciences
Critical Care Medicine
Microvascular Research
BBA Molecular Basis of Disease

XIII. SPEAKING ENGAGEMENTS

Local

09/2010 **University of Kentucky**
Lexington, Kentucky
Department of Surgery Research Colloquium: “The Role of Adipose Tissue in Age-associated Vulnerability to Sepsis”

National/International

06/2016 **The Shock Society**
San Antonio, Texas
39th Annual Conference on Shock: “Aging and Adipose Tissue in Critical Illness”

XIV. RESEARCH & INTELLECTUAL CONTRIBUTIONS

A. PUBLICATIONS

Peer-Reviewed Original Research in Professional, Scientific or Educational Journals

<https://www.ncbi.nlm.nih.gov/pubmed/?term=marlene+e+starr>

1. Steele AM, **Starr ME**, Saito H. Late therapeutic intervention with antibiotics and fluid resuscitation allows for a prolonged disease course with high survival in a severe murine model of sepsis. *Shock*. 2017; 47(6):726-734. PMID: 27879561.
2. Li J, Song J, Zaytseva YY, Liu Y, Rychahou P, Jiang K, **Starr ME**, Kim JT, Harris JW, Yiannikouris FB, Katz WS, Nilsson PM, Orho-Melander M, Chen J, Zhu H, Fahrenholz T, Higashi RM, Gao T, Morris AJ, Cassis LA, Fan TW, Weiss HL, Dobner PR, Melander O, Jia J, Evers BM. An obligatory role for neurotensin in high-fat diet-induced obesity. *Nature*. 2016; 533(7603):411-5. PMID: 27193687.
3. **Starr ME**, Steele AM, Cohen DA, Saito, H. Short-term dietary restriction rescues mice from lethal abdominal sepsis and endotoxemia, and reduces the inflammatory/coagulant potential of adipose tissue. *Critical Care Medicine* 2016; 44(7):e509-19. PMID: 26646465.
4. **Starr ME**, Saito M, Evers BM, Saito H. Age-associated increase in cytokine production during systemic inflammation-II: The role of IL-1 β in age-dependent IL-6 upregulation in adipose tissue. *J Gerontol A Biol Sci Med Sci*. 2015; 70(12):1508-1515. PMID: 25344820.

5. **Starr ME**, Takahashi H, Okamura D, Zwischenberger BA, Mrazek AA, Ueda J, Stromberg AJ, Evers BM, Esmon CT, Saito H. Increased coagulation and suppressed generation of activated protein C in aged mice during intra-abdominal sepsis. *Am J Physiol Heart Circ Physiol*. 2015; 308(2):H83-91. PMID: PMC4338937.
6. **Starr ME**, Steele AM, Saito M, Hacker BJ, Evers BM, Saito H. A new cecal slurry preparation protocol with improved long-term reproducibility for animal models of sepsis. *PLoS One*. 2014; 9(12):e115705. PMID: PMC4274114.
7. Shinozaki S, Chang K, Sakai M, Shimizu N, Yamada M, Tanaka T, Nakazawa H, Ichinose F, Yamada Y, Ishigami A, Ito H, Ouchi Y, **Starr ME**, Saito H, Shimokado K, Stamler JS, Kaneki M. Inflammatory stimuli induce inhibitory S-nitrosylation of the deacetylase SIRT1 to increase acetylation and activation of p53 and p65. *Science Signal*. 2014; 7(351):ra106. PMID:25389371.
8. **Starr ME** and Saito H. Sepsis in old age: review of human and animal studies. *Aging and Disease* 2014; 5 (2): 126-136. PMID: 24729938.
9. Mustain WC, **Starr ME**, Valentino JD, Cohen DA, Okamura D, Wang C, Evers BM, Saito H. Inflammatory cytokine gene expression in mesenteric adipose tissue during acute colitis. *PLoS ONE* 2013; 8 (12):e83693. PMID: 24386254.
10. **Starr ME**, Hu Y, Stromberg AJ, Carmical JR, Wood TG, Evers BM, Saito H. Gene expression profile of mouse white adipose tissue during inflammatory stress: age-dependent upregulation of major procoagulant factors. *Aging Cell* 2013; 12(2):194-206. PMID: 23279636.
11. Li J, Song J, Cassidy MG, Rychahou P, **Starr ME**, Liu J, Li X, Epperly G, Weiss HL, Townsend CM Jr, Gao T, Evers BM. PI3K p110 α /Akt signaling negatively regulates secretion of the intestinal peptide neurotensin through interference of granule transport. *Mol Endocrinol* 2012; 26(8):1380-93. PMID: 22700584.
12. Okamura D, **Starr ME**, Lee EY, Stromberg AJ, Evers BM, Saito H. Age-dependent vulnerability to experimental acute pancreatitis is associated with increased systemic inflammation and thrombosis. *Aging Cell* 2012; 11(5):760-9. PMID: 22672542.
13. **Starr ME**, Saito H. Age-related increase in food spilling by laboratory mice may lead to significant overestimation of actual food consumption: implications for studies on dietary restriction, metabolism, and dose calculations. *J Gerontol A Biol Sci Med Sci* 2012; 67 (10):1043-8. PMID: 22451471.
14. Takahashi H, Okamura D, **Starr ME**, Saito H, Evers BM. Age-dependent reduction of the PI3K regulatory subunit p85 α suppresses pancreatic acinar cell proliferation. *Aging Cell* 2012; (2):305-14. PMID: 22212451.

15. **Starr ME**, Ueda J, Yamamoto S, Evers BM, Saito H. The effects of aging on pulmonary oxidative damage, protein nitration and extracellular superoxide dismutase down-regulation during systemic inflammation. *Free Radic Biol Med* 2011; 50 (2):371-80. PMID: 21092756.
16. **Starr ME**, Ueda J, Takahashi H, Weiler H, Esmon CT, Evers BM, Saito H. Age-dependent vulnerability to endotoxemia is associated with reduction of anti-coagulant factors APC and thrombomodulin. *Blood* 2010; 115 (23): 4886-4893. PMID: 20348393.
17. **Starr ME**, Evers BM, Saito H. Age-associated increase in cytokine production during systemic inflammation: Adipose tissue as a major source of IL-6. *J Gerontol A Biol Sci Med Sci* 2009; 64A:723-730. PMID: 19377014.
18. Ueda J, **Starr ME**, Takahashi H, Chang LY, Du J, Crapo JD, Evers BM, Saito, H. Decreased pulmonary extracellular superoxide dismutase during systemic inflammation. *Free Radic Biol Med* 2008; 45:897-904. PMID: 18640266.

B. ABSTRACT PRESENTATIONS (partial list)

Local/State/Regional Meetings

1. October 2005. Ueda J, Yamamoto S, Mizutani A, **Alexander ME**, Du J, Evers BM Saito H. Age-associated loss of EC-SOD: Therapeutic effects of an SOD-mimetic molecule for sepsis in the elderly. Sealy Center on Aging Poster Forum, University of Texas Medical Branch (UTMB), Galveston, Texas. Poster (Ueda).
2. October 2006. **Alexander ME**, Ueda J, Falls BA, Evers BM and Saito H. Age-associated increase in thrombosis during systemic inflammation. Sealy Center on Aging Poster Forum, UTMB, Galveston, Texas. Poster (Starr).
3. October 2007. Mrazek AA, Edge D, Takahashi H, **Starr ME**, Evers BM, Saito H. Age-associated increase in coagulation during sepsis: role of thrombomodulin. Sealy Center on Aging Poster Forum, UTMB, Galveston, Texas. Poster (Mrazek).
4. October 2007. **Starr ME**, Evers BM, Saito H. Vulnerability to sepsis in old age is associated with increased IL-6 production by adipose tissue. Sealy Center on Aging Poster Forum, UTMB, Galveston, Texas. Poster (Starr). *This presentation received the **Best Student Poster Award**.*
5. November 2008. **Starr ME**, Evers BM, Saito H. Altered adipokine expression in old age increases sensitivity to systemic inflammation. Sealy Center on Aging Poster Forum, UTMB, Galveston, Texas. Poster (Starr). *This presentation received the **Best Student Poster Award**.*

6. May 2012. **Starr ME**, Evers BM, Saito H. Dietary restriction and surgical removal of adipose tissue reduce age-dependent intolerance to inflammatory stress. 2nd Annual Barnstable Brown Obesity and Diabetes Research Day, Lexington, Kentucky. Podium (Starr). *This presentation received the **Outstanding Postdoctoral Research Presentation Award**.*
7. May 2012. **Starr, ME**, Hu Y, Stromberg A, Carmical, J, Wood TG, Evers BM, Saito H. Aged-associated changes in gene expression from mouse white adipose tissue during endotoxemia and sepsis. 2nd Annual Barnstable Brown Obesity and Diabetes Research Day, Lexington, Kentucky. Poster (Starr).
8. March 2014. **Starr ME**, Zwischenberger BA, Evers BM, Chang PK, Saito H. Increased inflammatory and thrombotic gene expression in visceral adipose tissue of patients with sepsis. 9th Annual CCTS Spring Conference, Lexington KY. Poster (Starr).
9. March 2015. **Starr ME**, Zwischenberger BA, Stromberg AJ, Chang PK, Saito H. Analysis of inflammatory and pro-coagulant factor expression in visceral adipose tissue of patients with intra-abdominal sepsis: adipose tissue as a major source of systemic PAI-1 which correlates with sepsis severity. 10th Annual CCTS Spring Conference, Lexington, KY. Poster (Starr).
10. March 2015. Steele AM, **Starr ME**, England J, Riley L, Esser KA, Saito H. Middle-aged mice rescued from lethal sepsis by a new late-intervention protocol exhibit long-term muscle dysfunction. 10th Annual CCTS Spring Conference, Lexington, KY. Poster (Steele).
11. March 2017. Wallace DK, Balasuriya BK, Steele, AM, Okamura D, **Starr ME**, Saito H. Pathological role of visceral white adipose tissue in development of severe acute pancreatitis. 12th Annual CCTS Spring Conference, Lexington, KY. Poster (Wallace).
12. March 2017. Powell WL, Balasuriya BK, Steele AM, Cohen DA, **Starr ME**. Age-dependent expansion of gamma delta T cells in visceral adipose tissue. 12th Annual CCTS Spring Conference, Lexington, KY. Poster (Powell).
13. March 2017. Harris DD, Zwischenberger BA, Balasuriya BB, Steele AM, Stromberg AJ, Chang PK, Saito H, **Starr ME**. Adipose-derived PAI-1 correlates with systemic levels, kidney injury, and severity of intra-abdominal sepsis. 12th Annual CCTS Spring Conference, Lexington, KY. Poster (Harris).
14. May 2017. Balasuriya B, Steele AM, Cohen, DA, Starr ME. Barnstable Brown Obesity and Diabetes Research Day, Lexington, Kentucky. Age-Dependent Expansion of Gamma Delta ($\gamma\delta$)-T Cells in Visceral Adipose Tissue. Poster (Starr).

National/International Meetings

1. June 2016. Ueda J, **Alexander ME**, Crapo JD, Evers BM, Saito H. Age-associated increase in oxidative damage and down-regulation of extracellular superoxide dismutase (EC-SOD) in endotoxin-mediated acute lung injury. 29th Annual Conference on Shock, Broomfield, CO.

Shock 25 Suppl.1: p.68-69. Poster (Ueda).

2. November 2006. Saito H, **Alexander ME**, Evers BM, Ueda J. Increased thrombosis and decreased expression of an anti-coagulation factor in aged mice during acute inflammatory stress. 59th Annual Scientific Meeting of the Gerontological Society of America, Dallas, TX. *The Gerontologist* 46: Special Issue, p.108. Poster (Saito).
3. June 2007. **Alexander ME**, Ueda J, Takahashi H, Evers BM, Weiler H, Saito H. Age-associated increase in thrombosis and down-regulation of thrombomodulin during sepsis and endotoxemia. 30th Annual Conference on Shock, Baltimore, MD. *Shock* 27: Supple.1, P160. Poster (Saito).
4. November 2007. **Starr ME**, Evers BM, Saito H. Age-associated increase in IL-6 expression by adipose tissue and its role in vulnerability to sepsis in old age. 60th Annual Scientific Meeting of the Gerontological Society of America, San Francisco, CA. *The Gerontologist* 46:Special Issue, p.287. Poster (Starr). *This presentation received the **George Sacher Student Award**.*
5. June 2008. Takahashi H, **Starr ME**, Mrazek AA, Weiler H, Evers BM, Saito H. Age-associated decrease in anticoagulation factors results in increased coagulation and mortality during sepsis. 6th Congress of the International Federation of Shock Societies and 31st Annual Conference on Shock, Cologne, Germany. *Shock* 29: Suppl.1, P341. Poster (Saito).
6. June 2008. **Starr ME**, Evers ME, Saito H. Altered adipokine expression in old age increases sensitivity to systemic inflammation. 6th Congress of the International Federation of Shock Societies and 31st Annual Conference on Shock, Cologne, Germany. *Shock* 29: Supple.1, P339. Poster (Saito).
7. April 2009. **Starr ME**, Evers BM, Saito H. Adipose tissue is a major source of IL-6 production and contributes to age-associated mortality during sepsis. National Student Research Forum Galveston, Texas. Poster (Starr). *This presentation received the **AMA Foundation Award for Overall Excellence in Basic Research and the Best Poster Presentation in Immunology**.*
8. June 2009. **Starr ME**, Evers BM, Saito H. Proteomics approach identifies proteins with age-related increases in nitration during systemic inflammation. 32nd Annual Conference on Shock, San, Antonio, TX. *Shock* 31: Supple.1, P146. Poster (Starr).
9. November 2009. **Starr ME**, Evers BM, and Saito H. IL-1 β mediates age-associated over-production of IL-6 in the adipose tissue. 62th Annual Scientific Meeting of the Gerontological Society of America, Atlanta, GA. *The Gerontologist* 49: Suppl 2; 183. Poster (Starr). *This presentation received the **George Sacher Student Award**.*
10. April 2010. **Starr ME**, Takahashi H, Evers BM, Saito H. Vulnerability to sepsis in the aged is linked to reduced protein C pathway activation. National Student Research Forum Galveston, Texas. Podium (Starr). *This presentation received an award for **Best Oral Presentation in Pathology**.*

11. June 2010. **Starr ME**, Evers BM, Saito H. Aging alters inflammation- and coagulation-related gene expression in white adipose tissue during inflammatory stress. 39th Annual Meeting of the American Aging Association, *Portland, OR*. Poster (Starr). *This presentation received the Walter R. Nicolai Award for Meritorious Research by a Predoctoral Candidate in Biomedical Gerontology.*
12. June 2010. **Starr ME**, Takahashi H, Weiler H, Esmon CT, Evers BM, Saito H. Vulnerability to sepsis in the aged is linked to reduced protein C pathway activation. 33rd Annual Conference on Shock, Portland, OR. *Shock* 33: Suppl.1, P59. Poster (Starr). *Received a Travel Award.*
13. November 2010. **Starr ME** and Saito H. Loss of table manners in aged mice leads to food consumption paradox. 63th Annual Scientific Meeting of the Gerontological Society of America, New Orleans, LA. *The Gerontologist* 50: Suppl 1; 184. Poster (Starr).
14. November 2010. **Starr ME**, Hu Y, Stromberg, AJ, Carmical J, Evers BM, Saito H. Age-associated changes in gene expression from mouse white adipose tissue during systemic inflammation. 63th Annual Scientific Meeting of the Gerontological Society of America, New Orleans, LA. Late Breaker Poster Session. Poster (Starr).
15. June 2011. **Starr ME**, Evers BM, Saito H. Dietary restriction and surgical removal of adipose tissue reduce age-associated intolerance to inflammatory stress. 40th Annual Meeting of the American Aging Association, Raleigh, NC. Poster (Starr).
16. June 2011. **Starr ME**, Evers BM, Saito H. Age-associated changes in gene expression from mouse white adipose tissue during endotoxemia and sepsis. 34th Annual Conference on Shock, Norfolk, VA. *Shock* 35: Supple.1, P135. Poster (Starr). *This abstract received the Diversity Enhancement Award.*
17. June 2011. Ienaga J, Takahashi H, Okamura D, **Starr ME**, Evers BM, Saito H. Impact of protein c expression in the pancreas on plasma protein c levels during sepsis in mice. 34th Annual Conference on Shock, Norfolk, VA. *Shock* 35: Supple.1. Poster (Ienaga).
18. June 2011. Okamura D, Ienaga J, **Starr ME**, Evers BM, Saito H. Age-associated multiple organ dysfunction during acute pancreatitis is linked to reduced pancreatic protein C. 34th Annual Conference on Shock, Norfolk, VA. *Shock* 35: Supple.1, P162. Poster (Okamura).
19. July 2011. **Starr ME**, Evers BM, Saito H. The role of adipose tissue in age-related sensitivity to acute inflammatory stress and the therapeutic potential of short-term dietary restriction. 14th Congress of the International Association of Biomedical Gerontology, Brighton, United Kingdom. Poster (Starr). *This abstract received an NIH-sponsored Travel Award.*
20. November 2011. **Starr ME**, Evers BM, Saito H. Proteomic Analysis Identifies Age-Associated Release of Histone H4 during Acute Inflammatory Stress. 64th Annual Scientific Meeting of the Gerontological Society of America, Boston, MA. Late Breaker Poster Session. Poster (Starr). *This abstract received an NIH-sponsored Travel Award.*

21. June 2012. **Starr ME**, Evers BM, Saito H. Age-dependent upregulation of cytokines and coagulation factors in resident stromal cells of adipose tissue during systemic inflammation. 35th Annual Conference on Shock, Miami, FL. *Shock* 37 Suppl 1. Poster (Saito).
22. June 2012. Okamura D, **Starr ME**, Takahashi H, Evers BM, Saito H. Mechanisms for age-dependent coagulation after CLP-induced sepsis in mice. 35th Annual Conference on Shock, Miami, FL. *Shock* 37 Suppl 1. Poster (Okamura).
23. June 2012. Okamura D, **Starr ME**, Ienaga J, Evers BM, Saito H. Inhibition of JNK After Caerulein-Induced Acute Pancreatitis Ameliorated Systemic Thrombosis in Old Mice. Digestive Disease Week. *Gastroenterology* 142 (5), S-318. Poster (Okamura).
24. June 2012. Mustain WC, **Starr ME**, Okamura D, Evers BM, Saito H. (2012) Intra-Abdominal Adipose Tissue as a Major Source of IL-6 During Acute Experimental Colitis. Digestive Disease Week. *Gastroenterology* 142 (5), S-1086. Poster (Mustain).
25. November 2012. Saito H, **Starr ME**. Age-dependent induction of pro-inflammatory and pro-thrombotic genes in adipose tissue by inflammatory stress. 65th Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA. *The Gerontologist* 52 Suppl 1. Poster (Starr).
26. March 2013. Okamura D, **Starr ME**, Evers BM, Saito H. (2012) Plasma KC and IL-6 are Early Predictive Markers of Severe Acute Pancreatitis. *Pancreas* 41 (8), 1393. Poster (Okamura).
27. July 2013. Campbell KE, Song J, **Starr ME**, Saito H, Li J, Evers BM. Defective mTORC1/4E-BP1 signaling contributes to the age-associated reduction of p85 alpha expression in pancreatic acinar cells. *Journal of the American College of Surgeons* 217 Suppl 3. Poster (Campbell).
28. June 2013. **Starr ME**, Evers BM, and Saito H. Dietary restriction improves age-related intolerance to endotoxemia by reducing thrombosis. 36th Annual Conference on Shock, San Diego, CA. *Shock* 39 Suppl 2, Abstract 33. Podium (Starr). ***This abstract received a travel award.***
29. June 2013. Okamura D, **Starr ME**, Evers BM, Saito H. Plasma IL-6 and KC levels during the early phase of acute pancreatitis can predict later progression to a severe condition with multiple organ dysfunction syndrome. 36th Annual Conference on Shock, San Diego, CA. *Shock* 39 Suppl 2, Abstract P133. Poster (Okamura).
30. November 2013. **Starr ME** and Saito H. Csprs is a novel adipose-specific biomarker of aging. 66th Annual Scientific Meeting of the Gerontological Society of America, New Orleans, LA, *The Gerontologist* 53: Suppl 1. Poster (Starr).
31. June 2014. **Starr ME**, Zwischenberger BA, Harris JW, Evers BM, Chang PK, Saito H. Exaggerated inflammatory and thrombotic gene expression in visceral adipose tissue of patients

- with intra-abdominal sepsis. 37th Annual Conference on Shock, Charlotte, NC. *Shock* 41 Suppl 2, Abstract P49. Poster (Starr). ***This abstract received a travel award.***
32. November 2014. **Starr ME**, Takahashi H, Okamura D, Mrazek A, Evers BM, Saito H. Increased coagulation and suppressed generation of activated protein C in aged mice during intra-abdominal sepsis. 67th Annual Scientific Meeting of the Gerontological Society of America, Washington DC. *The Gerontologist* 54: Suppl 2. Poster (Starr).
33. June 2015. **Starr ME**, Zwischenberger B, Stromberg AJ, Chang PK, Saito H. Analysis of inflammatory and pro-coagulant factor gene expression in visceral adipose tissue of patients with intra-abdominal sepsis: adipose tissue is a major source of systemic PAI-1 which correlates with sepsis severity. 38th Annual Conference on Shock, Denver, CO. *Shock* 43 Suppl 1, Abstract P139. Poster (Starr).
34. June 2015. Steele AM, **Starr ME**, Saito H. Late intervention with repeated antibiotic and fluid resuscitation rescues mice from lethal cecal slurry-induced sepsis. 38th Annual Conference on Shock, Denver, CO. *Shock* 43 Suppl 1, Abstract P129. Poster (Steele). ***This abstract received a travel award.***
35. November 2015. **Starr ME**, Okamura D, Steele AM, Saito H. IL-6 levels during early acute pancreatitis predict progression to severe conditions in aged animals. 68th Annual Meeting of the Gerontological Society of America, Orlando, FL. *The Gerontologist* 55: Suppl 2. Poster (Starr)..
36. June 2016. Steele AM, **Starr ME**, Smith JD, Esser K, Saito H. Mice rescued from lethal sepsis using an ICU-like resuscitation protocol exhibit prolonged muscle dysfunction. 39th Annual Conference on Shock, Austin, TX. *Shock* 45 Suppl 1, Abstract P83. Poster (Steele). ***This abstract received a travel award.***
37. November 2016. **Starr ME**, Steele AM, Cohen DA, Saito H. Short-term dietary restriction rescues mice from sepsis and reduces inflammation in adipose tissue. 69th Annual Scientific Meeting of the Gerontological Society of America. New Orleans, LA. *The Gerontologist* 56: Suppl 3. Poster (Starr).
38. June 2017. **Starr ME**, Steele AM, Wallace DK, Balasuriya BB, Okamura D, Saito H. Pathological role of visceral white adipose tissue in development of severe acute pancreatitis. 40th Annual Conference on Shock, Fort Lauderdale, FL. *Shock* 47 Suppl 1, Abstract 31. Podium (Starr).
39. June 2017. Steele AM, Starr ME, Patel SP, Smith JD, Kaneki M, Esser K, Rabchevsky AG, Peterson CA, Saito H. Mitochondrial damage and dysfunction in skeletal muscle of middle-aged murine sepsis survivors. 40th Annual Conference on Shock, Fort Lauderdale, FL. *Shock* 47 Suppl 1, Abstract 54. Podium (Steele). ***This abstract received a travel award.***

XIV. RESEARCH & INTELLECTUAL CONTRIBUTIONS - *continued*

C. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

Active

Project Title: Adipose tissue gamma delta T cells in aging and obesity
Project Number: COBRE-COCVD Pilot Project
Principal Investigator(s): Marlene E Starr, PhD
Role in Project: PI
Effort: 20 %
Institution/University: University of Kentucky
Source of Funding: NIGMS
Duration of Project: 2/2017-1/2018
Total Award: \$50,000

Project Title: Adipose tissue gamma delta T cells in aging and obesity
Project Number: COBRE-COCVD Junior Investigator (5P20GM103527)
Principal Investigator(s): Marlene E Starr, PhD
Role in Project: PI
Effort: 50 %
Institution/University: University of Kentucky
Source of Funding: NIGMS
Duration of Project: 8/2017-7/2018
Total Award: \$100,000

Project Title: Mechanisms mediating severity of acute pancreatitis in the aged
Project Number: 1 R01 AG055359 01A1
Principal Investigator(s): Hiroshi Saito, PhD
Role in Project: Co-Investigator
Effort: 20 %
Institution/University: University of Kentucky
Source of Funding: NIA, NIH
Duration of Project: 09/2017-5/2022
Total Award: \$1, 250,000

Pending

Project Title: Chronic muscle weakness in sepsis survivors
Project Number: **1 R01 GM126181**
Principal Investigator(s): Hiroshi Saito, PhD
Role in Project: Co-Investigator
Effort: 20 %

Institution/University: University of Kentucky
Source of Funding: NIGMS, NIH
Duration of Project: pending
Total Award: \$1,250,000
Impact Score: 25, Percentile: 7

Inactive

Project Title: The role of adipokines in age-related sensitivity to systemic inflammation
Project Number: 1R36 AG038547
Principal Investigator(s): Marlene E Starr, PhD
Role in Project: PI
Effort: 50 %
Institution/University: University of Kentucky
Source of Funding: NIA, NIH
Duration of Project: 2/2011-5/2011 (*terminated early due to PI's graduation with PhD*)
Total Award: \$39,074

Project Title: The role of adipose tissue in age-dependent sensitivity to critical illness
Project Number: 1R01 AG039732
Principal Investigator(s): Hiroshi Saito, PhD
Role in Project: Co-Investigator
Effort: 50 %
Institution/University: University of Kentucky
Source of Funding: NIA, NIH
Duration of Project: 8/2011-5/2017
Total Award: \$1,250,000

Project Title: The role of visceral adipose tissue in sepsis
Project Number: UK-CCTS Small Grant Program
Principal Investigator(s): Hiroshi Saito, PhD and Phillip Chang, MD
Role in Project: Co-Investigator
Effort: no salary support
Institution/University: University of Kentucky
Source of Funding: NIH, CTSA (UL1TR001998)
Duration of Project: 05/2014-12/2014
Total Award: \$5,000

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