

**Suresh Mathews, Ph.D, FACN**

Associate Professor & Graduate Program Director  
Department of Nutrition, Dietetics, and Hospitality Management  
260 Lem Morrison Drive, 101 PSB  
Auburn University, Auburn, AL 36849  
Phone: 334-844-7418  
Fax: 334-844-3268  
Email: [mathest@auburn.edu](mailto:mathest@auburn.edu)

Ph.D., University of Madras, India  
Postdoc, Wayne State University School of Medicine

**Research Interests:**

Metabolic diseases, bioactive components, molecular mechanisms of insulin resistance, animal models of obesity & type 2 diabetes, translational research

**Selected Publications** (*out of a total of 80 publications which includes 40 published abstracts*):

1. Kothari V, **Mathews ST**. Western blotting: Not all blockers are created equal. Methods in Molecular Biology, 2015 (In Press)
2. **Mathews ST**, Graff E, Judd RL, Kothari V. Comparison of chemiluminescence vs. infrared techniques for detection of fetuin-A in saliva. Methods in Molecular Biology, 2015 (In Press)
3. Desai GS, **Mathews ST**. Saliva as a non-invasive diagnostic tool for inflammation and insulin-resistance. World Journal of Diabetes 5(6): 730-738, 2014
4. Desai G, Zheng C, Geetha T, **Mathews ST**, White BD, Huggins KW, Zizza CA, Broderick TL and Babu JR. The pancreas-brain axis: insight into disrupted mechanisms associating type 2 diabetes and Alzheimer disease. Journal of Alzheimer's Disease 42: 347-356, 2014
5. Moss CJ, **Mathews ST**. Thiamin status and supplementation in the management of diabetes mellitus and its vascular comorbidities. Vitamins and Minerals 2:111, 2013
6. Rege SD, Kumar S, Wilson DN, Tamura L, Geetha T, **Mathews ST**, Huggins KW, Broderick TL, Babu JR. Resveratrol protects the brain of obese mice from oxidative damage. Oxidative Medicine and Cellular Longevity Article ID 419092, 2013
7. Zhang AJ, Rimando AM, Fish W, Mentreddy SM, **Mathews ST**. Serviceberry [Amelanchier alnifolia (Nutt.) Nutt. ex. M. Roem (Rosaceae)] leaf extract inhibits mammalian  $\alpha$ -glucosidase activity and suppresses postprandial glycemic response in a mouse model of diet-induced obesity and hyperglycemia. Journal of Ethnopharmacology 143: 481-487, 2012
8. Ren G, Okerberg CK, **Mathews ST**. Ultra-sensitive protein detection and imaging: Comparison of Lumitein™, ProteoSilver™, SYPRO™ Ruby, and Coomassie™ Brilliant Blue gel stains. Methods in Molecular Biology 869: 621-32, 2012
9. Amin RH, **Mathews ST**, Camp HS, Ding L, Leff T. Selective activation of PPAR $\gamma$  in skeletal muscle induces endogenous production of adiponectin and protects mice from diet-induced insulin resistance. American Journal of Physiology: Endocrinology and Metabolism 298: E28-E37, 2010
10. Kim T, Davis J, Zhang AJ, He X, **Mathews ST**. Curcumin activates AMPK and suppresses gluconeogenic gene expression in hepatoma cells. Biochemical and Biophysical Research Communications 388:377-382, 2009
11. Kaushik SV, Plaisance EP, Kim T, Huang E, Mahurin AJ, Grandjean PW, **Mathews ST**. Decreased serum fetuin-A concentrations are associated with lowering of triglycerides in

niaspan-treated individuals with metabolic syndrome. Diabetes/Metabolism: Research and Reviews, 25: 427-434, 2009

12. **Mathews ST**, Plaisance EP, Kim T. Imaging systems for Westerns: Chemiluminescence vs. infrared detection. Methods in Molecular Biology, 536:499-513, 2009
13. **Mathews ST**, Rakhade S, Zhou X, Parker G, Coscina DV, Grunberger G. Fetuin-null mice are protected against obesity and insulin resistance associated with aging. Biochemical and Biophysical Research Communications 350: 437-443, 2006
14. Leff T, **Mathews ST**, Camp HS. PPARgamma, the adipocyte and diabetes. Experimental Diabetes Research 5: 99-109, 2004
15. Chu AJ, Rauci, M, Nwobi OI, **Mathews ST**, Beydoun S. Novel anticoagulant activity of polyamino acid offsets bacterial endotoxin-induced extrinsic hypercoagulation: Downregulation of monocytic tissue factor-dependent FVII activation. Journal of Cardiovascular Pharmacology 42: 477-483, 2003
16. Hegele RA, Cao H, Frankowski C, **Mathews ST**, Leff T: *PPARG* F388L, a transactivation-deficient mutant, in familial partial lipodystrophy. Diabetes 51: 3586-3590, 2002
17. **Mathews ST**, Singh GP, Ranaletta M, Cintron VJ, Qiang X, Goustin AS, Jen K-LC, Charron MJ, Jahnen-Dechent W, Grunberger G: Improved insulin sensitivity and resistance to weight gain in mice null for the *Ahsg* gene. Diabetes 51: 2450-2458, 2002
18. Grunberger G, Qiang X, Li Z-G, **Mathews ST**, Sbriessa D, Shisheva A, Sima AAF: Molecular basis for the insulinomimetic effects of C-peptide. Diabetologia 44: 1247-1257, 2002

#### Dissertations and Theses Directed

1. Guang Ren, 2014 – PhD Dissertation: Alterations of phosphorylation status of serum fetuin-A in obese individuals before and after weight loss. Auburn University, AL
2. Gauri Desai, 2014 - Antioxidant, anti-inflammatory and anti-hyperglycemic properties of *Tridax procumbens* in lowering cardio-metabolic risk factors. Auburn University, AL
3. Jian (Albert) Zhang, 2012 – Ph.D Dissertation: Mechanisms mediating antidiabetic effects of serviceberry extracts, curcumin, and stilbenes. Auburn University, AL
4. Carl Okerberg, 2012 – MS Thesis: Altered temporal changes in Ser312-phosphofetuin-A concentrations in response to a glucose challenge in a mouse model of diet-induced obesity and insulin resistance. Auburn University, AL
5. Xiaoming He, 2010 – MS Thesis: Plasma fetuin-A responses to a single bout of exercise and short-term exercise in obese and normal weight individuals. Auburn University, AL
6. Edmond Huang, 2008 – MS Thesis: A novel role for fetuin-A in the pathophysiology of glucocorticoid-mediated insulin resistance. Auburn University, AL
7. Shalini Kaushik, 2008 – MS Thesis: Ser312 fetuin-A phosphorylation and its association with serum lipids in metabolic syndrome. Auburn University, AL
8. James Papizan, 2008 – MS Thesis: Phosphorylation of fetuin-A, a physiological inhibitor of insulin action, regulated by insulin and leptin. Auburn University, AL
9. Rebecca Ludvigsen, 2009 - Undergraduate Honors Thesis: Daily variations and effect of a single bout of exercise on serum fetuin-A in individuals with metabolic syndrome. Auburn University, AL
10. Jessica Davis, 2009 – Undergraduate Honors Thesis: Curcumin downregulates gluconeogenic gene expression and induces PPARγ transcriptional activation. Auburn University, AL

**Non-Thesis Research**

1. Carly Moss, 2013 – MS non-thesis research paper: Thiamin status and supplementation in the management of diabetes mellitus and its vascular comorbidities
2. Taylor Rodick, 2014 – MS non-thesis research paper: Biological functions of Coenzyme Q10 and its therapeutic use in chronic diseases

**Courses Taught**

NTRI 2000: Nutrition and Health  
NTRI 2003: Nutrition and Health (online course)  
NTRI 4830: Vitamins and Minerals  
NTRI 4930: Undergraduate Research and Study  
NTRI 4997: Honors Thesis  
NTRI 7510: Vitamins  
NTRI 7530: Human Nutrient Metabolism  
NTRI 7960: Directed Readings/Independent study  
NTRI 7980: Non-thesis Research  
NTRI 7990: Research and Thesis  
NTRI 8970: Advanced Topics in Nutrition and Food Science  
NTRI 8990: Research and Dissertation