

BIOGRAPHICAL SKETCH

NAME SURESH T. MATHEWS		POSITION TITLE Assistant Professor	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Madras, India	B.Sc	1984	Biochemistry
Bharathiar University, India	M.Sc	1986	Biochemistry
University of Madras, India	Ph.D	1992	Medical Biochemistry

A. Positions and HonorsPositions:

- 1992-1993: Research Associate, Center for Plant Molecular Biology, Agricultural University, Coimbatore, India
1993-1994: Senior Scientist, MSS Research Foundation, Madras, India
1994-2000: Research Associate, Dept. of Internal Medicine, Wayne State University School of Medicine, Detroit, MI
2001-2002: Research Scientist, Dept. of Internal Medicine, Wayne State University School of Medicine, Detroit, MI
2002-2003: Research Scientist, Center for Integrative Metabolic and Endocrine Research, Wayne State University School of Medicine, Detroit, MI
2003-2004: Assistant Professor (Research), Department of Pathology, Wayne State University School of Medicine, Detroit, MI
2005- : Assistant Professor, Nutrition and Food Science Dept, Auburn University, AL

Honors/Awards/Patents:

- American Diabetes Association: Travel Grant Award, 60th Scientific Sessions, San Antonio, June, 2000
- Mathews ST*, Grunberger G, Goustin AS, Srinivas PR. "Inhibition of alpha2-HS glycoprotein (Ahsg/Fetuin) in obesity and insulin control of glucose homeostasis" (PCT: WO 02/39923 A2)
- Mathews ST*, Kim T, Papizan JB. Methods and compositions for treating obesity and diabetes (USPTO 07-011, 2006, patent pending)
- Ad-hoc Reviewer: Diabetes/Metabolism: Research and Reviews, Journal of Endocrinology, Journal of Clinical Endocrinology and Metabolism, Biochimica et Biophysica Acta, Endocrine, International Journal of Experimental Diabetes Research, Journal of Neuroscience Research, PPAR Research

B. Selected Publications *(out of a total of 50 publications which includes 22 published abstracts)*

- Srinivas PR, Deutsch DD, *Mathews ST*, Goustin AS, Leon MA, Grunberger G: Recombinant human α 2-HS glycoprotein inhibits insulin-stimulated mitogenic pathway without affecting metabolic signaling in Chinese Hamster Ovary cells overexpressing the human insulin receptor. Cellular Signaling 8: 567-573, 1996
- Mathews ST*, Srinivas PR, Leon MA, Grunberger G: Bovine fetuin is an inhibitor of insulin receptor tyrosine kinase. Life Sciences 61: 1583-1592, 1997
- Mathews ST*, Chellam N, Srinivas PR, Cintron VJ, Leon MA, Goustin AS, Grunberger G: α 2-HSG, a specific and reversible inhibitor of insulin receptor autophosphorylation, interacts with the insulin receptor. Molecular and Cellular Endocrinology 164: 87-98, 2000
- Grunberger G, Qiang X, Li Z-G, *Mathews ST*, Sbrissa D, Shisheva A, Sima AAF: Molecular basis for the insulinomimetic effects of C-peptide. Diabetologia 44:1247-1257, 2001
- Mathews ST*, Deutsch DD, Iyer G, Hora N, Pati B, Marsh J and Grunberger G. α 2-HS glycoprotein kinetics after acute myocardial infarction: Development of a sandwich ELISA using commercial antibodies. Clinica Chimica Acta, 319:27-34, 2002
- Chu AJ, Rauci M, Nwobi OI, *Mathews ST*, Beydoun S. Novel anticoagulant activity of polybrene: Inhibition of monocytic tissue factor hypercoagulation following bacterial endotoxin induction. Blood Coagulation and Fibrinolysis, 13: 123-128, 2002
- Mathews ST*, Singh GP, Ranaletta M, Cintron VJ, Qiang X, Goustin AS, Jen K-L C, 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

8. Hegele RA, Cao H, Frankowski C, Mathews ST, Leff T: PPAR γ F388L, a transactivation-deficient mutant, in familial partial lipodystrophy. Diabetes 51:3586-3590, 2002
9. Chu AJ, Beydoun S, Mathews ST, Hoang J. Novel anticoagulant polyethylenimine suppresses blood coagulation: Inhibition of thrombin-catalyzed fibrin formation. Archives of Biochemistry and Biophysics 415:101-108, 2003
10. Chu AJ, Mathews ST. Anticoagulant potential of an antibody against factor VII. J Surgical Research 114:37-41, 2003
11. 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
12. Chu, AJ, Mathews ST. Poly-L-hisditine downregulates fibrinolysis. Blood Coagulation and Fibrinolysis 14:627-632, 2003
13. Leff T, Mathews ST, Camp HS. PPAR γ , the adipocyte and diabetes. Experimental Diabetes Research 5:1-11, 2004
14. 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
15. Davis J*, Kim T, Mathews ST. The Role of Curcumin in Insulin Action and Glucose Metabolism. In: Martirosyan, DM (Ed.): Functional Foods for Chronic Diseases: Cardiovascular Diseases, Diabetes, and Aging (Manuscript in press), 2007
16. Amin RH, Mathews ST, Alli A, Leff T. Endogenous production of adiponectin in heart contributes to the cardioprotective effect of PPAR γ activation. Circulation, 2008 (Manuscript submitted)
17. Papizan JP, Kim T, Wernette C, White BD, Jen KL-C, Mathews ST: Phosphorylated fetuin-A, a physiological inhibitor of insulin action, altered in insulin resistance and regulated by insulin and leptin. Diabetes, 2008 (Manuscript submitted)

C. Support (Completed)

- **Morris Hood Jr. Comprehensive Diabetes Center Postdoctoral Fellowship** (03/01/1999 – 02/28/2001)
Role: PI, 100% effort
Title: Insulin-stimulated RSK3 signaling in C2C12 skeletal muscle cells
Total award: \$50,000
- **Alabama Agricultural Experimental Station** (October 1, 2005 – September 30, 2007)
Role: Co-PI, 10%
Title: Lack of central leptin and insulin resistance: a potential connection between obesity and type 2 diabetes
Total Award: \$63,865
- **Alabama Agricultural Experimental Station** (October 1, 2005 – September 30, 2007)
Role: Co-PI, 10%
Title: Influence of a high glycemic diet on oxidative stress and glucose metabolism
Total Award: \$80,000

D. Support (Current)

- **American Diabetes Association Junior Faculty Award** (07-01-2004 – 12/31/2007)
Role: PI, 40% effort
Title: Role of alpha2-HS glycoprotein in insulin resistance: Mechanism and functional characterization
Total Award: \$414,000
- **Auburn University Biogrant Program** (May 1, 2006 – April 30, 2008)
Role: PI, 10%
Title: Regulation of insulin action by fetuin-A
Total Award: \$44,000
- **Agricultural Initiatives on Natural and Human Resources** (Jan.1 – Sep.30, 2008)
Role: PI, 10%
Title: Development and validation of a metabolic screen to characterize bioactive components in functional foods for a healthy lifestyle
Total Award: \$81,280
- **Alabama Agricultural Experimental Station Grants Program** (Pending, Sep.1, 2007 – Aug.30, 2010)
Role: PI, 10%

Principal Investigator/Program Director (Last, First, Middle): Mathews, Suresh, T.

Title: Phosphorylated Fetuin-A, a Novel Regulator of Insulin Action, in Insulin Resistance and Metabolic Syndrome

Total Award: \$120,000

- ***Diabetes Action Research and Education Foundation*** (Jan. 1, 2008 – December 31, 2008)
Role: PI, 10%
Title: Dietary curcuminoids: Mechanisms of improved insulin sensitivity
Total Award: \$25,000
- ***USDA Tribal College Research Grant*** (Sep.1, 2007 – Aug.30, 2008)
Role: Co-PI, Sub-contract award, 5%
Title: Development of two medicinal plant species with anti-diabetic properties for cultivation on Native Indian reservation
Total Award: \$11,159
- ***Alabama Agricultural Experimental Station Hatch Project*** (Oct.1, 2007 – Sep. 30, 2012)
Role: Co-PI, 10%
Title: Humoral factors that affect insulin sensitivity and glucose homeostasis
Total Award: ~\$14,000/yr