

**BIOGRAPHICAL SKETCH – Senior Trainer**

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NAME James Mukasa Ntambi	POSITION TITLE Professor of Biochemistry and of Nutritional Sciences		
eRA COMMONS USER NAME NTAMBI			
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
Makerere University, Kampala	B.Sc.	1975	Biochemistry
Makerere University, Kampala	M.Sc..	1978	Microb. Biochem.
The Johns Hopkins School of Medicine	PhD	1985	Molecular Biology
The Johns Hopkins School of Medicine	Postdoc.	1987	Molecular Biology

**A. Positions and Honors.**

## Professional Experience:

- 1989-92 Assistant Professor of Biochemistry and Molecular Biology, Georgetown University Medical School, Washington, DC.
- 1992-97 Assistant Professor of Biochemistry and Nutritional Sciences, University of Wisconsin-Madison.
- 1997- Associate Professor of Biochemistry and Nutritional Sciences, University of Wisconsin-Madison
- 2002- Professor of Biochemistry and Nutritional Sciences University of Wisconsin-Madison
- 2003- Steenbock Professor

## Honors and Awards:

- 1975-78 Federal Republic of Germany (DAAD) Fellowship
- 1976 UNDP/UNESCO Fellowship
- 1980 Fulbright Fellowship
- 1985 David Israel Macht Research Award the Johns Hopkins Univ. School of Medicine
- 1985-87 Rockefeller Foundation Postdoctoral Fellowship
- 1986 Rockefeller Biotechnology Career Fellowship
- 1988 Biennial L. W. Frolich Award Fellowship by the New York Academy of Sciences
- 1992- Steenbock Career Development Award, Dept of Biochemistry, Univ. of Wisconsin-Madison
- 1997-03 Fogarty International Center/NIH International Biomedical Research Minority Faculty Fellow
- 2001-03 Wisconsin/Hilldale Faculty Research award
- 2003 Outstanding Teaching and Advising award Univ. of Wisconsin-Madison
- 2003 Endowed Steenbock Professor
- 2004 Osborne and Mendel Award in Nutritional Sciences

## Peer Review Committees:

- USDA (2001)
- NIH Site visit teams
- American Heart Association/ Wisconsin Affiliate 1998-2001
- NIH Physiological Chemistry Study Section 2002-2004
- NRC/National Academy of Sciences
- Food and Nutrition Board, IOM (2002-2004)
- NIH MGC Study Section (2004-present)
- Board of Scientific Counselors, NIAAA (2003-present)

**B. Publications selected from 100 peer-reviewed publications:**

1. Flowers, M. T., Miyazaki, M., Liu, X. and Ntambi, J. M. Probing the role of stearoyl-CoA desaturase-1 in hepatic insulin resistance. *J. Clin. Invest.* **116**, 1478-1481 (2006).
2. Chu, K., Miyazaki, M., Man, W. C. and Ntambi, J. M. Stearoyl-coenzyme A desaturase 1 deficiency protects against hypertriglyceridemia and increases plasma high-density lipoprotein cholesterol induced by liver X receptor activation. *Mol. Cell. Biol.* **26**, 6786-6798. (2006)
3. Man, W. C., Miyazaki, M., Chu, K. and Ntambi, J. M. Co-localization of SCD1 and DGAT2: implying preference for endogenous monounsaturated fatty acids in triglyceride synthesis. *J. Lipid Res.* **47**, 1928-1939 (2006).
4. Biddinger, S. B., Miyazaki, M., Boucher, J., Ntambi, J. M. and Kahn, C. R. Leptin suppresses stearoyl-CoA desaturase 1 by mechanisms independent of insulin and sterol regulatory element-binding protein-1c. *Diabetes* **55**, 2032-2041 (2006).
5. Miyazaki M, Biddinger SB, Boucher J, Ntambi JM and Kahn CR Leptin suppresses stearoyl-CoA destaurase 1 by insulin and sterol regulatory element binding protein-1c independent mechanisms. *Diabetes in press*
6. Miyazaki M, Bruggink SM, Ntambi JM. Identification of mouse palmitoyl-coenzyme A Delta9-desaturase. 2006 *J. Lipid Res.* **47**:700-704.
7. Man WC, Miyazaki M, Chu K, Ntambi JM Membrane topology of mouse stearoyl-CoA desaturase 1. *J Biol. Chem* 2006 **281**;1251-1260.
8. Hulver MW, Berggren JR, Carper MJ, Miyazaki M, Ntambi JM, Hoffman EP, Thyfault JP, Stevens R, Dohm GL, Houmard JA, Muoio DM. Elevated stearoyl-CoA desaturase-1 expression in skeletal muscle contributes to abnormal fatty acid partitioning in obese humans. *Cell Metab.* 2005 **2**:251-261.
9. Miyazaki M, Dobrzyn A, Elias PM, Ntambi JM. Stearoyl-CoA desaturase-2 gene expression is required for lipid synthesis during early skin and liver development. *Proc Natl Acad Sci U S A.* 2005 **102**:12501-12506.
10. Dobrzyn A, Dobrzyn P, Miyazaki M, Ntambi JM. Polyunsaturated fatty acids do not activate AMP-activated protein kinase in mouse tissues. *Biochem Biophys Res Commun.* 2005; **332**:892-896.
11. Biddinger SB, Almind K, Miyazaki M, Kokkotou E, Ntambi JM, Kahn CR. Effects of diet and genetic background on sterol regulatory element-binding protein-1c, stearoyl-CoA desaturase 1, and the development of the metabolic syndrome. *Diabetes.* 2005;**54**:1314-1323.
12. Dobrzyn A, Dobrzyn P, Miyazaki M, Sampath H, Chu K, Ntambi JM. Stearoyl-CoA desaturase 1 deficiency increases CTP:choline cytidyltransferase translocation into the membrane and enhances phosphatidylcholine synthesis in liver *J Biol Chem.* 2005 ;**280**:23356-23362.
13. Lee SH, Dobrzyn A, Dobrzyn P, Rahman SM, Miyazaki M, Ntambi JM. Lack of stearoyl-CoA desaturase 1 upregulates basal thermogenesis but causes hypothermia in a cold environment. *J Lipid Res.* **45**: 1674-1678 (2004)
14. Miyazaki M, Dobrzyn A, Sampath H, Lee SH, Man WC, Chu K, Peters JM, Gonzalez FJ Ntambi JM. Reduced adiposity and liver steatosis by stearoyl-CoA desaturase deficiency are independent of peroxisome proliferator-activated receptor- $\alpha$ . *J. Biol. Chem.* **279**:35017-35024 (2004)
15. Dobrzyn P, Dobrzyn A, Miyazaki M, Cohen P, Asilmaz E, Hardie DG, Friedman JM, Ntambi JM. Stearoyl-CoA desaturase 1 deficiency increases fatty acid oxidation by activating AMP-activated protein kinase in liver. *Pro. Nat. Acad. Sci.* **101**:6409-6414 (2004)
16. Miyazaki M, Dobrzyn A, Man WC, Chu K, Sampath H, Kim HJ, Ntambi JM. Stearoyl-CoA desaturase 1 gene expression is necessary for fructose-mediated induction of lipogenic gene expression by sterol regulatory element binding protein-1c-dependent and independent mechanisms. *J. Biol. Chem.* **279**:25164-25171 (2004)
17. Asilmaz E, Cohen P, Miyazaki M, Dobrzyn P, Ueki K, Soukas AA, Viale A, Ntambi JM, Kahn CR, Succi ND and Friedman JM. Site and mechanism of leptin action in a rodent form of congenital lipodystrophy. *J Clin. Invest.* **113**:414-424. (2004)
18. Rahman SM, Dobrzyn A, Lee SH, Miyazaki M, and Ntambi JM (2003) stearoyl-CoA desaturase 1 deficiency elevates insulin signaling components and down-regulates protein-tyrosine phosphatase 1B in muscle. *Pro. Nat. Acad. Sci.* **100**:11110-11115. (2003)

19. Miyazaki M, Jacobson MJ, Man WC, Cohen P, Asilmaz E, Friedman JM and Ntambi JM, Identification and characterization of murine SCD4: a novel heart-specific stearoyl-CoA desaturase isoform regulated by leptin and dietary factors, *J. Biol. Chem.* 278, 33904-33911 (2003)
20. Attie AD, Krauss RM, Gray-Keller MP, Brownlie A, Miyazaki M, Kastelein JJ, Lusis AJ, Stalenhoef AFH, Stoehr, JP, Hayden MR, and Ntambi JM Relationship between stearoyl-CoA desaturase activity and plasma triglycerides in human and mouse hypertriglyceridemia. *J. Lipid Res.* 43, 1899-1907 (2002).
21. Cohen P, Miyazaki M, Socci ND, Hagge-Greenberg A, Liedtke W, Soukas AA, Sharma R, Hudgins LC, Ntambi JM, Friedman JM. Role for stearoyl-CoA desaturase-1 in leptin mediated weight loss. *Science* 297, 240-243 (2002)
22. Ntambi JM, Miyazaki M, Stoehr JP, Lan H, Kendzioriski CM, Yandell BS, Cohen P, Friedman JM and Attie AD, Loss of stearoyl-CoA desaturase-1 function protects mice against adiposity. *Proc. Natl. Acad. Sci. USA* 20, 11482-11486 (2002)

### C. Research Support

#### Ongoing Research Support

RO01162388                      Ntambi (PI)                                      7/1/02-6/20/11

NIH

Role of stearoyl-CoA desturase in metabolism

The major goal is to determine how stearoyl-CoA desaturase-1 deficiency down regulates lipogenesis and induces fatty acid oxidation

Role: PI

WISO4785                              Ntambi (PI)                                      10/1/05-9/30/07

USDA/CREES/Hatch

Stearoyl-CoA desturase regulation by leptin signaling

The major goal is to determine how stearoyl-CoA desaturase-1 deficiency downregulates lipogenesis and induces fatty acid oxidation

Role: PI

#### Completed Research Support

USDA                                      Ntambi (PI)                                      09/1999-08/2003

Conjugated linoleic acid (CLA) in fat cell differentiation and metabolism

The goal of this research is to investigate the effect of CLA on the expression of the stearoyl-CoA desaturase gene during the differentiation of 3T3-L1 preadipocytes

Role: PI

USDA                                      Ntambi (PI)                                      09/1999-08/2003

Conjugated linoleic acid (CLA) in fat cell differentiation and metabolism

The goal of this research is to investigate the effect of CLA on the expression of the stearoyl-CoA desaturase gene during the differentiation of 3T3-L1 preadipocytes.

Role: PI