BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
SHELLY CHI-LOO LU	PROFESSOR OF MEDICINE
eRA COMMONS USER NAME shellylu	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
UCLA, Los Angeles, California	BA	1978	Biology
UCLA, Los Angeles, California	MD	1982	Medicine

A. Positions and Honors:

Professional Experienc

7/82-6/85 Internship and residency Cedars-Sinai Medical Center, Los Angeles, CA
7/85-12/87 Fellowship. UCLA, CA - Integrated Training Program in Gastroenterology
1/88-2/90 Director, Section of Hepatobiliary Disease and Medical Director of Biliary Lithotripsy, Division of Gastroenterology, Cedars-Sinai Medical Center, Los Angeles, CA
10/88-2/90 Assistant Professor of Medicine, University of California, Los Angeles, CA
2/90-6/96 Assistant Professor of Medicine, USC School of Medicine, Los Angeles, CA
3/95- Director, Cell Culture Core, USC Research Center for Liver Diseases
7/96-2/01 Associate Professor of Medicine with Tenure, USC School of Medicine, Los Angeles, CA
3/01- Professor of Medicine with Tenure, Keck School of Medicine USC, Los Angeles, CA
7/03 - Associate Director, USC Research Center for Liver Diseases

Honors

1974-1978, Dean's Honors List every quarter for four years; 1978, graduated with highest honors in biology and Summa Cum Laude, Phi Beta Kappa and Alpha Lambda Delta
2/95, 3/99, 10/00, 2/02 Reviewer, GMA2 and Center for Scientific Review Special Emphasis Panel, NIH
7/97-6/00, 7/03-6/07 Regular Member, GMA2/HBPP NIDDK Study Section
2001 - 2003 Editorial board, American J. Physiol. GI liver Section
2001 Best attending of the Firm, Internal Medicine, LA County-USC Medical Center
2002 - American Society for Clinical Investigation (Young Turk)
2003 - 2006 Associate Editor, American J. Physiol. GI liver Section
4/04 USC Medical Faculty Assembly Recognition Award
2005 Western Society of Clinical Investigation's Outstanding Investigator Award
2006 Association of American Physicians (Old Turk)
July 2006 - Associate Editor, Hepatology
Jan 2007 - Editorial board, Experimental Biology and Medicine

B. Selected peer-reviewed publications (chronological order from 88 total, excluding chapters):

1. Yang, HP, Huang ZZ, Wang JH and **Lu SC**. The role of c-Myb and Sp1 in the up-regulation of methionine adenosyltransferase 2A gene expression in human hepatocellular carcinoma. *FASEB J*. 15:1507-1516, 2001.
2. **Lu SC**, Alvarez L, Huang ZZ, Chen LX, An W, Corrales FJ, Avila MA, Kanel G, and Mato JM. Methionine adenosyltransferase 1A knockout mice are predisposed to liver injury and exhibit increased expression of genes involved in proliferation. *Proc. Nat. Acad. Sci., USA* 98:5560-5565, 2001.
3. Ansorena E, García-Trevijano ER, Martínez-Chantar ML, Huang ZZ, Chen LX, Mato JM, Iraburu M, **Lu SC**, and Avila MA. S-adenosylmethionine and methylthioadenosine are anti-apoptotic in cultured rat hepatocytes but pro-apoptotic in human hepatoma cells. *Hepatology* 35:274-280, 2002.
4. Martínez-Chantar ML, Corrales FJ, Martínez-Cruz A, García-Trevijano ER, Huang ZZ, Chen LX, Kanel G,

Avila MA, Mato JM, **Lu SC**. Spontaneous oxidative stress and liver tumors in mice lacking methionine adenosyltransferase 1A. *FASEB J* 10.1096/fj.02-0078fje, published online June 7, 2002.

5. **Lu SC**, Gukovsky I, Reyes CN, Lugea A, Huang ZZ, Chen LX, Mato JM, and Pandol SJ. Protective role of S-adenosylmethionine in two experimental models of pancreatitis. *FASEB J* 10.1096/fj.01-0752fje, 2002.
6. Santamaría E, Avila MA, Latasa MU, Rubio A, Martín-Duce A, **Lu SC**, Mato JM, and Corrales FJ. Functional proteomics of non-alcoholic steatohepatitis: mitochondrial proteins as targets of S-adenosylmethionine. *Proc. Nat. Acad. Sci., USA* 100:3065-3070, 2003.
7. Martínez-Chantar ML, Latasa MU, Varela-Rey M, **Lu SC**, García-Trevijano E, Mato JM, and Avila MA. L-Methionine availability regulates the expression of methionine adenosyltransferase 2A gene in human hepatocarcinoma cells. *J. Biol. Chem*. 278:19885-19890, 2003.
8. Yang HP, Sadda MR, Yu V, Zeng Y, Lee TD, Ou XP, Chen LX, and **Lu SC**. Induction of human methionine adenosyltransferase 2A expression by tumor necrosis factor alpha: Role of NF-κB and AP-1. *J. Biol. Chem*. 278:50887-50896, 2003.
9. Lee TD, Sadda ME, Mendler MH, Bottiglieri T, Kanel G, Mato JM, and **Lu SC**. Abnormal hepatic methionine and GSH metabolism in patients with alcoholic hepatitis. *Alcoholism: Clin. Exp. Res*. 28:173-181, 2004.
10. Hevia H, Varela-Rey M, Corrales FJ, Berasain C, Martínez-Chantar ML, Latasa MU, **Lu SC**, Mato JM, García-Trevijano ER, and Avila MA. 5'-Methylthioadenosine modulates the inflammatory response to endotoxin in mice and in rat hepatocytes. *Hepatology* 39:1088-1098, 2004.
11. Chen L, Zeng Y, Yang HP, Lee TD, French SW, Corrales FJ, García-Trevijano ER, Avila MA, Mato JM, and **Lu SC**. Impaired liver regeneration in mice lacking methionine adenosyltransferase 1A. *FASEB J* 10.1096/fj.03-1204fje, March 2004.
12. Veal N, Hsieh CL, Xiong S, **Lu SC**, and Tsukamoto H. Inhibition of lipopolysaccharide-stimulated TNFα promoter activity by S-adenosylmethionine and 5'-methylthioadenosine. *AJP* 287:G352-362, 2004.
13. Yang HP, Sadda MR, Li M, Zeng Y, Chen LX, Bae WJ, Ou, XP, Runnegar MT, Mato JM, and **Lu SC**. S-Adenosylmethionine and its metabolite induce apoptosis in HepG2 cells: role of protein phosphatase 1 and Bcl-x_S. *Hepatology* 40:221-231, 2004.
14. Lee TD, Yang HP, Whang J and **Lu SC**. Cloning and characterization of the human glutathione synthetase 5'-flanking region. *Biochem. J*. 390:521-528, 2005.
15. Yang HP, Magilnick N, Kalmaz D, Ou XP, Chan JY and **Lu SC**. Nrf1 and Nrf2 regulate rat glutamate-cysteine ligase catalytic subunit transcription indirectly via AP-1 and NFκB. *Mol. Cell Biol*. 25:5933-5946, 2005.
16. Yang HP, Magilnick N, Ou XP, and **Lu SC**. Tumor necrosis alpha induces coordinated activation of rat GSH synthetic enzymes via NFκB and AP-1. *Biochem. J*. 391:399-408, 2005.
17. Santamaría M, Muñoz J, Fernández-Irigoyen J, Sesma L, Mora MI, Berasain C, **Lu SC**, Mato JM, Prieto J, Avila MA, and Corrales FJ. Molecular profiling of hepatocellular carcinoma in mice with a chronic deficiency of hepatic S-adenosylmethionine. *J. of Proteome Res*. 5:944-953, 2006.
18. Prudova A, Bauman Z, Braun A, Vitvitsky V, **Lu SC**, and Banerjee R. AdoMet Regulation of Cystathionine β-Synthase: Relevance to Oxidative Stress in Liver Disease. *Proc Nat Acad Sci USA* 103:6489-6494, 2006.
19. Martínez-Chantar ML, Vázquez-Chantada M, Garnacho-Echevarria M, Latasa MU, Varela-Rey M, Dotor J, Santamaria M, Martínez-Cruz LA, Parada LA, **Lu SC**, and Mato JM. S-Adenosylmethionine Regulates Cytoplasmic HuR Via AMP-Activated Kinase. *Gastroenterology* 131:223-232, 2006.
20. **Lu SC**, Martínez-Chantar ML, and Mato JM. MAT and SAMe in Alcoholic Liver Disease. *J. Gastro and Hepatol.* 3:S61-4, 2006.
21. Ou XP, Yang HP, Ramani K, Iglesias Ara, A, Chen H, Mato JM, and **Lu SC**. Inhibition of Human Betaine Homocysteine Methyltransferase Expression by S-adenosylmethionine and Methylthioadenosine. *Biochem J* 401:87-96, 2007.
22. Yang HP, Magilnick N, Noureddin M, Mato JM, and **Lu SC**. Effect of hepatocyte growth factor on methionine adenosyltransferase genes and growth is cell density-dependent in HepG2 cells. *J. Cell Physiol* 210:766-73, 2007.

23. Mato JM, and **Lu SC**. Role of S-adenosyl-L-methionine in liver health and injury. *Hepatology* 45:1306-1312, 2007.
24. Chen H, Xia M, Lin M, Yang HP, Kuhlenkamp J, Li T, Sodir NM, Chen YH, Josef-Lenz H, Laird PW, larke S, Mato JM, and **Lu SC**. Role of methionine adenosyltransferase 2A and S-adenosylemthionine in mitogen-induced growth of human colon cancer cells. *Gastroenterology* 133:207-218, 2007.
25. Yuan JM, **Lu SC**, Van Den Berg D, Govindarajan S, Zhang ZQ, Mato JM, and Yu MC. Genetic polymorphisms in the methylenetetrahydrofolate reductase and thymidylate synthase genes and risk of hepatocellular carcinoma. *Hepatology* 46:749-758, 2007.
26. Yang HP, Magilnick N, Xia M, and **Lu SC**. Effects of Hepatocyte Growth Factor on Glutathione Synthesis, Growth, and Apoptosis is Cell Density-Dependent. *Exp. Cell Res*. (in press)
27. Ramani K, Yang HP, Xia M, Iglesias Ara A, Mato JM, and **Lu SC**. Leptin's Mitogenic Effect in Human Liver Cancer Cells Requires Induction of both Methionine Adenosyltransferase 2A and 2β. *Hepatology* (in press)
28. Yang HP, Iglesias Ara A, Magilnick N, Xia M, Ramani K, Chen H, Lee TD, Mato JM, and **Lu SC**. Expression pattern, regulation and function of methionine adenosyltransferase 2β alternative splicing variants in hepatoma cells. *Gastroenterology* (in press)

c. Research Support (active):

1. Title: Role of SAMe in liver function and injury
   PI: Shelly C. Lu, M.D. Source: NIH - 1R01AT1576-04, total project period 9/20/02-5/31/08
   Project description: there are five specific aims in this NIH proposal:
   (1) Examine SAMe's effect on cell cycle progression, (2) elucidate SAMe's differential effect on apoptosis in normal versus cancerous liver cells, (3) investigate how hepatic SAMe deficiency leads to increased CYP2E1 and UCP2 expression and oxidative stress, (4) examine effect of chronic hepatic SAMe deficiency on CCl4-induced liver fibrosis and SAMe treatment in the absence of MAT1A, and (5) elucidate mechanisms of malignant degeneration in MAT1A knockout mice and possible synergy with p53 knockout
2. Title: Regulation of Methionine Adenosyltransferase (MAT) in Liver
   PI: Shelly C. Lu, M.D. Source: NIH - 2R01DK51719-10, total project period 4/1/06-3/31/011
   Project description: There are four specific aims in this NIH proposal:
   (1) Examine transcriptional regulation of MAT1A, (2) examine transcriptional and post-transcriptional regulation of MAT2A, (3) examine transcriptional regulation of MAT2β and how it regulates growth, and (4) examine the influence of MAT expression on tumorigencity, liver growth and HCC treatment
3. Title: Regulation of hepatic glutathione synthesis
   PI: Shelly C. Lu, M.D. Source: NIH 2R01DK45334-12, total project period 6/1/04-3/31/09
   Project description: There are three specific aims in this NIH proposal:
   (1) Examine transcriptional regulation of rat glutamate-cysteine ligase catalytic subunit
   (2) Examine transcriptional regulation of rat glutamate-cysteine ligase modifier subunit
   (3) Examine transcriptional regulation of rat GSH synthetase
4. Title: University of Southern California Liver Disease Research Center
   PI: Neil Kaplowitz, M.D.,
   Co-Director of the Center and Director of Cell Culture Core: Shelly C. Lu, M.D.
   Source: NIH DK48522-11, total project period 3/1/95-2/28/10
   Project description: This is a Core facility for the Liver Center at USC
5. Title: MAT1A null mouse: model for alcoholic tissue injury
   PI: Shelly C. Lu, M.D. Source: NIH 1R01AA13847-04, total project period 3/1/03-2/28/08
   Project description: there are four specific aims in this NIH proposal:
   (1) Examine the effect of SAM depletion and treatment in ethanol-induced liver injury
   (2) Examine the effect of SAM depletion and treatment in ethanol-induced pancreatic injury
   (3) Elucidate the mechanisms of SAM depletion's sensitizing effect on liver injury
   (4) Identify the molecular targets of SAM's therapeutic effect in alcoholic liver injury

d. Research Support (completed):

1. Title: Altered methionine metabolism in alcoholic liver injury
   PI: Shelly C. Lu, M.D. Source: NIH - R01AA12677-05, total project period 8/01/01-7/31/07
   Project description: characterize changes in methionine metabolism in ALD