

# CURRICULUM VITAE

Hsiu-Ming Shih (施修明)

## Personal data:

Born: Oct. 31, 1962, in Taipei, Taiwan, R.O.C.

Citizenship: Taiwan

Home Address: 5F, No. 56, Chung-An ST. San-Chung, Taipei County, Taiwan

Telephone: (02) 2972-8499 (home), (02) 2652-3520 (office), (02) 2789-9060  
(lab), Fax: (02) 2782-7654, e-mail: hmshih@ibms.sinica.edu.tw

## Education and Training

1982~1986: **B.S.** in Department of Medical Technology, National Taiwan University

1986~1988: **Military service** in Army Air-Defense Missile Command, Taiwan

1988-1989: **Research assistant** in Institute of Biomedical Sciences, Academia Sinica

1989~1993: **Ph.D.** in Department of Biochemistry, University of Minnesota,  
Minneapolis, USA (Dr. Howard C. Towle)

1994-1995: **Postdoctoral fellow** in Department of Biochemistry, University of  
Minnesota, Minneapolis, USA (Dr. Howard C. Towle)

1995-1996: **Postdoctoral fellow** in Vollum Institute, Portland, USA (Dr. Richard H.  
Goodman)

## Academic Appointments

1996-1997: **Instructor** in School and Graduate Institute of Medical Technology,  
College of Medicine, National Taiwan University

1997-2002: **Assistant Investigator** in Division of Molecular and Genomic Medicine,  
National Health Research Institutes

2002-2004: **Associate Investigator** in Division of Molecular and Genomic Medicine,  
National Health Research Institutes

2005- 2007: **Associate Research Fellow** in Institute of Biomedical Sciences,  
Academia Sinica

2007- now: **Research Fellow** in Institute of Biomedical Sciences, Academia Sinica

## Awards and honors

1983-1986: Book Coupon Award (five times for top 5% student only)

1984-1985: Duke Scholarship (twice)

1985: Association of Medical Technologist Scholarship

1986: President Award, College of Medicine, NTU (top one student in  
graduation)

1987: ROTC Academy Award (ranked first in class)

- 1994: FASEB Young Investigator Award  
2005: Academia Sinica Young Investigator Award (中研院年輕學者研究著作獎)  
2006: Distinguished Research Award, National Science Council (國科會傑出獎)  
2007: Frontier Science Award, National Science Council (尖端計劃)  
2007: Academia Sinica Investigator Award (深耕計劃)  
2007: The 3<sup>rd</sup> Yung Shih Lee Tian-De Medical and Pharmaceutical Science and Technology Award-Young Scientist Research Scholarship  
2010: Distinguished Research Award, National Science Council (國科會傑出獎)

### **Editorial Board:**

Associate Editor for BMC Molecular Biology

### **Ad Hoc Reviewer (selected) for:**

BMC Molecular Biology  
Brain Research  
Journal of Biological Chemistry  
Journal of Biomedical Science  
Journal of Cellular physiology  
Molecular Biology of the Cell  
Molecular Carcinogenesis  
Molecular Endocrinology  
Nucleic Acid Research  
Oncogene  
FEBS Letter

### **Ad Hoc grant review for:**

National Science Council (Taiwan)  
Research grant council (Hong Kong)

### **Professional Affiliations**

1994-1999: American Association for the Advancement of Science  
2002-now: American Society for Biochemistry and Molecular Biology

### **Research interests:**

#### **1. Protein sumoylation in gene regulation**

A number of ubiquitin-like proteins have been discovered recently that are attached to lysine residues of target proteins in a way analogous to that of ubiquitination. Among them, SUMO-1, which is highly conserved from yeast to humans, has been shown to modify a member of proteins, including transcription factors, signaling molecules and viral proteins. Unlike ubiquitination, sumoylation does not appear to promote protein degradation but rather was shown to be involved in mediating protein-protein interactions, subcellular compartmentalization and protein stability.

We have recently identified several transcription factors and signaling molecules which could be modified by SUMO-1. Studies are undergoing to dissect the functional significances of these factors modified by sumoylation.

## **2. Protein networks in cancers and viruses**

The investigation of cellular processes and the understanding of signaling transduction and regulation require a knowledge of protein-protein interactions and the fine tuning of these interactions on the molecular level by post-translational modifications. Since network of protein-protein interaction controls most cellular processes, studies of protein-protein interaction would therefore facilitate in elucidating the protein functions. With yeast two-hybrid library screening for interacting proteins, we have explored several functions of novel proteins, including tyrosine kinase, Ser/Thr kinases, viral proteins, Zn finger protein, receptors, signaling adaptor, transcription factor, and hepatoma related protein (HURP). In addition, we have also developed a platform technology to establish a protein linkage map in a high throughput fashion for studying viral protein networks of EBV and EV71. Our findings should help to identify target molecules for therapeutic intervention.

## **3. Platform technology for identifying molecules that can disrupt protein-protein interactions**

Networks of protein-protein interactions control the activities of a large collection of different cellular responses. Thus, protein-protein interactions represent an obvious target for disruption for therapeutic purpose. We have previously developed a novel and powerful genetic selection in yeast, the yeast split-hybrid system, for identification of molecules that abrogate association of two interacting proteins. However, one major limitation of this yeast-based screen in identifying drugs or small compounds is the impermeability of yeast to most organic molecules, resulting from the existence of a cell wall. To circumvent this problem for drug screening, we have developed a mammalian version of split-hybrid system.

### **Invitational presentations**

#### **Symposia**

07/1998	NHRI education series
07/1999	Kinase symposium organized by Taipei veterans General Hospital
02/2001	NHRI conference on signaling transduction
03/2001	The 16 <sup>th</sup> joint annual conference of Biomedical Sciences
05/2001	Taiwan Strait symposium of cellular and molecular biology organized by Wu-Han University, PRC.
10/2001	International symposium on cell signaling-from diseases to drug discovery, Hong Kong
11/2001	2001 joint annual conference of Formosan Medicine
11/2001	The 4 <sup>th</sup> Taiwan-France meeting on oncogenes and viruses, Taiwan
01/2002	The 10 <sup>th</sup> symposium on recent advances in Cellular and Molecular Biology, Taiwan
07/2002	The 7 <sup>th</sup> Asian Conference on Transcription, Malaysia
11/2002	The 4 <sup>th</sup> APOCB Congress, Taiwan
11/2003	The 2 <sup>nd</sup> Taiwan-America Biotech Conference, Taiwan
11/2003	The 6 <sup>th</sup> A-IMBN Conference, Japan
07/2004	The 10 <sup>th</sup> SCBA conference, Beijing
04/2005	The 3 <sup>rd</sup> NHRI conference on signal transduction, Taiwan
10/2005	Mini-symposium on cytokine research, Taiwan
11/2005	Taiwan-France Joint symposium "Transcription and Diseases"
12/2005	The IX Asian Conference on Transcription, Taiwan
02/2006	The Third International Conference Ubiquitin, Ubiquitin-Like Protein and cancer, Houston, USA

03/2006 The 21<sup>th</sup> joint annual conference of Biomedical Sciences, Taiwan  
07/2006 The 11<sup>th</sup> SCBA conference, San Francisco  
11/2006 IBC symposium on protein post-translational modification  
01/2007 2007 Advanced Study Institute funded by the Croucher Foundation on “Molecular Genetics and Cell Signaling in Cancer and Cancer Metastasis”, Hong Kong  
03/2007 The 22<sup>th</sup> joint annual conference of Biomedical Sciences, Taiwan  
04/2007 The 6<sup>th</sup> across the Taiwan Strait Symposium on Cell Biology, Taiwan  
06/2007 Biochemical Society Focused Meeting: Regulation of protein function by SUMO modification, Manchester, UK  
01/2008 The X Asian Conference on Transcription, India  
02/2008 The fourth International Conference Ubiquitin, Ubiquitin-Like protein and Cancer, Houston, USA  
11/2008 International Symposium on Cell signaling and gene regulation, Tainan, Taiwan  
06/2009 The 12<sup>th</sup> SCBA conference, Taipei  
07/2009 The 7<sup>th</sup> across the Taiwan Strait Symposium on Cell Biology, Xi’an, Mainland China  
02/2010 The fifth International Conference Ubiquitin, Ubiquitin-Like protein and Cancer, Houston, USA  
02/2012 The sixth International Conference Ubiquitination, Ubiquitin-Like protein and Cancer, Houston, USA

#### **Institutions**

09/1996 Department of Clinical Medicine, College of Medicine, National Taiwan University  
12/1996 Institute of Molecular Biology, Academia Sinica  
10/1997 Chang Gung University  
12/1997 Tzu-Chi University, Taiwan  
06/1998 Taipei Veterans General Hospital  
12/2000 National Yang-Ming University  
03/2001 Taipei Veteran General Hospital  
03/2001 National Cheng-Kung University  
04/2001 Taipei Medical University  
05/2001 National Chung-Hsing University  
06/2001 Division of Cancer Research, NHRI  
07/2001 Institute of Biomedical Sciences, Academia Sinica  
08/2001 National Taiwan University  
08/2001 Chinese Taipei Intellectual Property Office  
11/2001 National Cheng-Kung University  
12/2001 Chung-Shan Medical University  
01/2002 Institute of BioAgricultured Science, Academia Sinica  
03/2002 National Taiwan University Hospital  
04/2002 Cancer center, UC Davis, at Sacramento  
04/2002 National Yang-Ming University  
11/2002 National Taiwan University, Medical School  
03/2003 財團法人自強工業科學基金會  
04/2003 Institute of Biomedical Sciences, Academia Sinica  
04/2003 Taipei Veteran General Hospital  
06/2003 National Defense Medical Center  
07/2003 University of Minnesota, Minneapolis, USA  
07/2003 Michigan State University, East Lansing, USA  
08/2003 Merck Ltd., Taiwan  
09/2003 National Defense Medical Center  
03/2004 National Chengchi University  
10/2004 National Kaohsiung Marine University  
12/2004 National Taiwan University

12/2004	Chang Gung University
03/2005	National Yang-Ming University
07/2005	Taipei Medical University
10/2005	National Yang-Ming University
10/2005	National Taiwan University
10/2005	National Chung-Hsing University
10/2005	National Cheng-Kung University
11/2005	National Kaohsiung Medical University
11/2005	Chung-Shan Medical University
02/2006	National Taiwan University
02/2006	University of Southern California
03/2006	National Taiwan University, Medical School
03/2006	National Dong Hua University
03/2006	National Yang-Ming University
12/2006	Chung-Shan Medical University
12/2006	China Medical University
12/2006	National Health Research Institutes
01/2007	Institute of Chemistry, Academia Sinica
04/2007	UMDNJ-Robert Wood Johnson Medical School
05/2007	National Defense Medical Center
05/2007	National Kaohsiung Medical University
05/2007	National Sun Yat-Sen University
06/2007	University of Dundee, Scotland
11/2007	China Medical University
12/2007	National University of Singapore
12/2007	National Health Research Institutes
12/2007	National Chung Cheng University
12/2007	National University of KaoHsiung
02/2008	City of Hope, USA
02/2008	Baylor College of Medicine, USA
04/2008	National Defense medical Center
05/2008	National Chiao-Tung University
11/2009	Chang Gung University
12/2009	National Taiwan University Hospital
12/2009	National Yang-Ming University
02/2010	City of Hope, USA
09/2010	National Taiwan University, Medical School
12/2010	Case Western Reserve University, USA
05/2011	National University of KaoHsiung
05/2011	University of Minnesota, USA
08/2011	National Health Research Institutes
10/2011	China Medical University
12/2011	National Tsing Hua University
12/2011	National Yang-Ming University
12/2011	Tzu-Chi University

### **Publications**

#### **Referred papers**

1. Kao, CL., Lee, CN., Lee, WL, Hsieh, MT, **Shih, H.-M.** “Isolation and typing of herpes simplex virus from clinical specimens collected at National Taiwan University Hospital, 1981-1990”, Zhonghua Min Guo Wei Sheng Wu Ji Mian Yi Xue Za Zhi. 24(3):255-63, 1991
2. **Shih, H.-M.** and Towle, H. C., "Definition of the Carbohydrate Response Element

of the Rat S<sub>14</sub> Gene: Evidence for a Common Factor Required for Carbohydrate Regulation of Hepatic Genes", *J. Biol. Chem.* 267: 13222-28, 1992.

3. **Shih, H.-M.** and Towle, H. C., "Definition of the Carbohydrate Response Element of the Rat S<sub>14</sub> Gene: Context of the CACGTG Motif Determines the Specificity of Carbohydrate Regulation", *J. Biol. Chem.* 269: 9380-87, 1994.

4. Kim, J. B., Spotts, G. D., Halvorsen, Y.-D., **Shih, H.-M.**, Ellenberger, T., Towle, H.C., and Spiegelman, B. M., "Dual DNA Binding Specificity of ADD1/SREBP1 Controlled by a Single Amino Acid in the Basic Helix-Loop-Helix Domain" *Mol. Cell. Biol.* 15:2582-88, 1995.

5. Bergad, P.L., **Shih, H.-M.**, Towle, H.C., Schwarzenberg, S.J., Berry, S.A., "Growth Hormone Induction of Hepatic Serine Protease Inhibitor 2.1 Transcription is Mediated by a Stat5-related Factor Binding Synergistically to Two Gamma-activated Sites", *J. Biol. Chem.* 270:24903-10, 1995.

6. **Shih, H.-M.** and Towle, H.C., "Matrigel Treatment of Primary Hepatocytes Following DNA Transfection Enhances Responsiveness to Extracellular Stimuli", *Bio Techniques.* 18:813-16, 1995.

7. **Shih, H.-M.** Liu, Z. and Towle, H.C., "Two CACGTG motifs with Proper Spacing Dictate the Carbohydrate Regulation of Hepatic Genes" *J. Biol. Chem.* 270:21991-7, 1995.

8. Towle, H.C., Kaytor, E.N., and **Shih, H.-M.**, "Metabolic Regulation of Hepatic Gene Expression", *Biochemical Society Transaction* 24:364-368, 1996.

9. Kwok, R.P.S., Laurance, M.E., Lundblad, J.R., Goldman, P.S., **Shih, H.-M.**, Connor, L.M., Marriott, S. J. and Goodman, R. H., "Control of c-AMP-regulated Enhancers by the Viral Transactivator Tax through CREB and the Co-activator CBP", *Nature* 380:642-6, 1996.

10. **Shih, H.-M.**, Goldman, P.S., DeMaggio, A. J., Hollenberg, S.M., Goodman, R.H., and Hoekstra, M.H., "A Positive Genetic Selection for Disrupting Protein-Protein Interaction: Identification of CREB Mutants that Prevent Association with the Co-activator CBP", *Proc. Natl. Acad. Sci. USA*, 93:13896-13901, 1996.

- 11 Newburg, E.A., **Shih, H.-M.** and Towle, H.C. “ Carbohydrate Regulation of Hepatic Gene Expression: Evidence Against a Role for the Upstream Stimulatory Factor”, *J. Biol. Chem.*, 272:7525-7531, 1997.
12. Xu, R-H., Lechleider, R. J., **Shih, H.-M.**, Hao, C-F., Sredni, D., Robert, A.B., and Kung, H-F., “ Functional analysis of human Smad1 role of the amino-terminal domain”, *Biochem. Biophys. Res. Commun.* 258: 366-373, 1999
13. Xin Wen, H. Helen Lin, **Shih, H.-M.**, Hsing-Jien Kung, and David K. Ann, “Kinase Activation of the Non-receptor Tyrosine Kinase Etk/BMX Alone Is Sufficient to Transactivate STAT-mediated Gene Expression in Salivary and Lung Epithelial Cells”, *J. Biol. Chem.*, 274 38204-38210, 1999.
14. Tsai, Y.T., Su, Y.-H., Fang, S.S., Huang, T.N., Qiu, Y., Jou, Y.S., **Shih, H.-M.**, Kung, H.J., and Chen, R.H. “Etk, a Btk family tyrosine kinase, mediates cellular transformation by linking Src to Stat3 activation” *Mol. Cell. Biol.* 20: 2043-2054, 2000
15. Jui, H. Y. , Tzeng, Y. J., Wei, X., Fang, H.I., Huang, L.M., Kung, H.J., Ann, D.K. and **Shih, H.-M.**\* “ Tyrosine phosphatase PTPD1, a potential regulator and effector for Tec family kinases”, *J. Biol. Chem.* 275: 41124-32, 2000
16. Yu, CT, **Shih, H.-M.**, Lai, MZ, Multiple signals required for cyclic AMP-responsive element binding protein (CREB) binding protein interaction induced by CD3/CD28 costimulation. *J Immunol.* 2001 Jan 1;166(1):284-92.
17. Huang, LM, Chao, ME, Chen, MY, **Shih, H.-M.**, Chiang, YP, Chuang, CY, Lee, CY “Reciprocal regulatory interaction between human herpes virus 8 and human immunodeficiency virus type 1”. *J Biol Chem.* 2001 276:13427-32
18. Li LY, **Shih H.-M.**, Liu MY, Chen JY. “The cellular protein PRA1 modulates the anti-apoptotic activity of Epstein-Barr virus BHRF1, a homologue of Bcl-2, through direction interaction. “ *J Biol Chem.* 2001 276:27354-27362.
19. Zentner MD, Lin HH, Deng HT, Kim KJ, **Shih H.-M.**, Ann DK. “Requirement for high mobility group protein HMGI-C interaction with STAT3 inhibitor PIAS3 in repression of  $\alpha$ -ENaC transcription by Ras activation in salivary epithelial cells.” *J Biol Chem.* 2001 276: 29805-29814.

20. Lin, JL, Chen, HC, Fang, HI, Roberson, D, Kung HJ, **Shih, H.-M.**\* “MST4, a new Ste20 related kinase that mediates cell growth and transformation via modulating ERK pathway” 2001 **Oncogene**, 20: 6559-6569
21. Lin, DY and **Shih, H.-M.**\* “Essential role of the 58-kDa microspherule protein (MSP58) in the modulation of Daxx-dependent transcriptional repression as revealed by nucleolar sequestration”, 2002 **J Biol Chem**. 277:25446-25456
22. Chen, HC., **Shih, H.-M.**, and Chen, YJ., “Essential role of cAMP-response element-binding protein activation by A2A adenosine receptors in rescuing the nerve growth factor-induced neurite outgrowth impaired by blockage of the MAPK cascade”, 2002 **J. Biol. Chem**. 277:33930-33942
23. Yu, CT., Feng, MHL., **Shih, H.-M.**, and Lai, MZ., “Increased p300 expression abrogates Glucocorticoid receptor-T cell receptor antagonism but does not affect thymocyte selection”, 2002 **Mol. Cell. Biol**. 22: 4556-4566
24. Huang, CY, Wu, YM, Hsu, CY, Lee, WS, Lu TJ, Lai, MD, Leu, TH, Fang, HI, **Shih, H.-M.**, Robinson, DR, Kung HJ, Yuan CJ, “Caspase activation of mammalian Steile 20-like kinase 3 (Mst3): nuclear translocation and induction of apoptosis, 2002 **J. Biol. Chem**. 277: 34367-34374
25. Chau, C.H., Chen, K.Y., Hosoya, K.I., Teraski, T., Kim, K.J., **Shih, H.-M.**, and Ann, D.K., “Coordinating Etk/Bmx activation and VEGF upregulation: promoting Cell survival and proliferation”, 2002 **Oncogene**, 21: 8817-29.
26. Lin, DY., Lai, MZ., Ann, DK, and **Shih, H.-M.**\* “PML functions as a glucocorticoid receptor co-activator by sequestering Daxx to the PODs to enhance its transcription potential” 2003, **J. Biol. Chem**. 278:15958-65.
27. Wu, CC., Hsu, SC., **Shih, H.-M.**, and Lai, MZ. “Nuclear factor of activated T cells c is a target of p38 MAPK in T cells” 2003, **Mol. Cell. Biol**. 23: 6442-6454.
28. Chen, KY., Huang, LM., Kung, H.J., Ann, D.K., and **Shih, H.-M.**\* “The role of Etk/Bmx in EGF-induced apoptosis of MDA-MB-468 breast cancer cells” 2004, **Oncogene** 23:1854-62



29. Wang, CY., Liang, YJ., Lin, YS., **Shih, H.-M.**, Jou, YS., and Yu, WCY. “YY1AP, a novel coactivator of YY1” 2004, **J. Biol. Chem.** 279:17750-5.
30. Yu, SH, Chiang, WC, **Shih, H.-M** and Wu, KL. “Stimulation of c-Rel transcriptional activity by PKA catalytic subunit beta”, 2004, **J. Mol. Med.** 82: 621-628
31. Lin, DY, Fang, HI, Ma, AH, Huang, YS, Pu, YS, Jenster, G, Kung, HJ, and **Shih, H.-M.\*** “Negative modulation of the androgen receptor transcriptional activity by Daxx”, 2004, **Mol. Cell. Biol.** 24: 10529-41.
32. Li, Z., Day, C-P., Yang, J-Y., Tsai, W-B., Lozano, G., **Shih H.-M.**, Hung, M-C. “Adenoviral E1A targets Mdm4 to stabilize tumor suppressor p53”, 2004, **Cancer Res** 64: 9080-9085
33. Chang, CC, Lin, DY, Fang, HI, Chen, RH, and **Shih, H.-M.\*** “Daxx mediates the SUMO-dependent transcriptional repression of Smad4”, 2005, **J. Biol. Chem.** 280: 10164-10173
34. Yedavalli, YS<sup>#</sup>, **Shih, H.-M<sup>#</sup>**, Chiang, YP, Lu, CY, Chang, LY, Chen, MY, Che-Yen Chuang, CY, Dayton, AI, Jeang, KT, and Huang, LM, “HIV-1 Vpr interacts with anti-apoptotic mitochondrial protein HAX-1” 2005, **J. Virology**, 79: 13735-46 <sup>#</sup>equal contribution
35. Kuo, HY, Chang, CC, Jeng, JC, Hu, HM, Lin, DY, Maul, GG, Kwok, RPS, and **Shih, H.-M. \*** “SUMO modification negatively modulates the transcriptional activity of CREB-Binding Protein via the recruitment of Daxx”, 2005, **Proc. Natl. Acad. Sci. USA**, 102: 16973-16978.
36. van den Akker E, Ano, S, **Shih, H.-M**, Wang, LC, Pironin, M, Palvimo, JJ, Kotaja, N, Kirsh, O, Dejean, A and Ghysdael, J. “FLI-1 functionally interacts with PIAS $\alpha$ , a member of the PIAS E3-SUMO family” 2005, **J. Biol. Chem.** 280: 38035-38046
37. Ma, AH, Xia, L, Desai, SJ, Boucher, DL, Guan, Y, **Shih, H.-M.**, Shih, XB, deVere White, RW, Chen, HW, Tepper, CG, and Kung, HJ, “Male germ cell-associated kinase, a male-specific kinase regulated by androgen, is a coactivator of androgen receptor in prostate cancer cells”, 2006, **Cancer Res** 66: 8439- 8447

38. Li, LY, Liu, MY, **Shih, H.-M.**, Tsai, CH, and Chen JY, “Human cellular protein VRK2 interacts specifically with Epstein-Barr virus BHRF1, a homologue of Bcl2, and enhances cell survival”, 2006, **J. Gen Virol** 87: 2869-78.
39. Lin, DY, Huang, YS, Jeng, JC, Kuo, HY, Chang, CC, Chao, TT, Ho, CC, Chen, YC, Lin TP, Fang, HI, Hung, CC, Suen, CS, Hwang, MJ, Chang, KS, Maul, GG, and **Shih, H.-M.\***, “Role of SUMO-interacting motif in Daxx SUMO modification, subnuclear localization and repression of sumoylated transcription factors”, 2006, **Mol. Cell** 24: 341-354
40. Chiu, MW, **Shih, H.-M.**, Yang, TH, and Yang YL.\*, “The type 2 dengue virus envelop protein interacts with small ubiquitin-like modifier-1 (SUMO-1) conjugating enzyme 9 (Ubc9), 2007, **J. Biomed Sci** 14: 429-444.
41. Hong, S, Wang, LC, Gao, X, Kuo, YL, Liu, B, Merling, R, Kung, HJ, **Shih, H.-M.**, and Giam, CZ.\*, “Heptad repeats regulate protein phosphatase 2A recruitment to I-kappa B kinase gamma/NF-kappa B essential modulator and are targeted by human T-lymphotropic virus type 1 Tax”, 2007, **J. Biol. Chem.** 282: 12119-26.
42. Chao, TT, Chang, CC and **Shih, H.-M.\***, “SUMO modification modulates the transrepression activity of PLZF” 2007, **Biochem. Biophys. Res. Commun.** 358: 475-82
43. **Shih, H.-M.\***, Chang, CC, Kuo, HY, and Lin, DY, “Daxx mediates SUMO-dependent transcriptional control and subnuclear compartmentalization” 2007, **Biochemical Society Transactions**, 35: 1397-1400
44. Li, X., Lee, YK, Jeng, JC, Yen, Y, Schultz, DC, **Shih, H.-M.**, and Ann, DK\*, “Role for KAP1 serine 824 phosphorylation and SUMOylation/deSUMOylation switch in regulating KAP1-mediated transcriptional repression” 2007, **J. Biol. Chem.**, 282: 36177-89.
45. Lo, YH., Wu, CC., **Shih, H.-M.**, and Lai, MZ\*, “Selective activation of NFAT by promyelocytic leukemia protein”, 2008, **Oncogene.** 27:3821-30
46. Cao, X., Clavijo, C., Li, X., Lin, HH., Chen, Y., **Shih, H.-M.**, and Ann, DK\*, “Sumoylation of HMGA2: selective destabilization of promyelocytic leukemia protein via proteasome”, 2008, **Mol. Cancer Therapeutics** 7:923-34

47. Gao, C., Ho, CC., Reineke E., Lam, M., Cheng, X., Stanya, KJ, Liu, Y., Chakraborty, S., **Shih, H.-M.**, and Kao, HY\*. “Histone deacetylase 7 promotes PML sumoylation and is essential for PML nuclear body formation”, 2008, **Mol. Cell. Biol.**, 28: 5658-67
48. Chang, LY\*, Chang, IS, Chen, WJ, Huang, YC, Chen, GW, Shih, SR, Juang, JL, **Shih, H.-M.**, Hsiung, CA, Lin, TY and Huang, LM. “HLA-A33 is associated with susceptibility to enterovirus 71 infection”, 2008, **Pediatrics**, 122: 1271-6
49. Wang, HC, Huang, YS, Ho, CC, Jeng, JC and **Shih, H.-M.\*** “SUMO modification modulates the activity of calpain-2”, 2009, **Biochem. Biophys. Res. Commun.** 384: 444-9
50. Huang, YS and **Shih, H.-M.\*** “Daxx positively modulates beta-catenin/TCF4-mediated transcriptional potential”, 2009, **Biochem. Biophys. Res. Commun.** 386: 762-8
51. Jeng, JC, Lin, YM, Lin, CH, and **Shih, H.-M.\***” Cdh1 controls the stability of TACC3”, 2009, **Cell Cycle** 8: 3529-36
52. Lee, YR, Yuan, WC, Ho, HC, Chen CH, **Shih, H.-M** and Chen, RH\*. “The cullin 3 substrate adaptor KLHL20 mediates DAPK ubiquitination to control interferon responses”, 2010, **EMBO J** 29: 1748-61
53. Li, X, Lin, HH, Chen, H, Xu, X, **Shih, H.-M** and Ann, DK\*. “SUMOylation of the transcriptional co-repressor KAP1 is regulated by the serine and threonine phosphatase PP1” 2010, **Science Signaling** 3: ra32
54. Lin CH, Hu, CH and **Shih, H.-M\***. “Clathrin heavy chain mediates TACC3 targeting to mitotic spindles to ensure spindle stability”, 2010, **J. Cell Biol.** 189: 1097-1105. **Selected for highlights and Cover**
55. Naik, MT, Chang, CC, Naik, NM, Kung, CC-H, **Shih, H.-M** and Huang, TH.\* “NMR chemical shift assignments of a complex between SUMO-1 and SIM peptide derived from the C-terminus of Daxx”, 2011, **Biomol NMR Assign** 5:75-77.

56. Zhi, H, Yang, L, Kuo, YL, Ho, YK, **Shih, H.-M**, and Giam, CZ.\* “NF-kB hyper-activation by HTLV-1 Tax induces cellular senescence, but can be alleviated by the viral anti-sense protein HBZ”, 2011, **PLoS Pathogens** 7: e1002025.
57. Li, A.Y, Lin, H, Kuo, CY, Shih, H.-M, Wang, CC, Yen, Y, and Ann DK\*. “High mobility group A2 protein modulates hTERT transcription to promote tumorigenesis”, 2011, **Mol. Cell. Biol.** 13: 2605-17.
58. Chang, CC, Naik, MT, Huang, YS, Jeng, JC, Liao, PH, Kuo, HY, Ho, CC, Hsieh, YL, Lin, CH, Huang, NJ, Naik, NM, Kung, CC-H, Lin, SY, Chen, RH, Chang, KS, Huang, TH \*, and **Shih, H.-M\*** “Structural and functional roles of Daxx SIM phosphorylation in SUMO paralogue-selective binding and apoptosis modulation” , 2011, **Mol. Cell** 42: 62-74 **Selected for highlights (preview in the journal) and also recommended by Faculty of 1000.**
59. Yuan, WC, Lee, YR, Huang, SF, Lin, YM, Chen, TY, Chung, HC, Tsai, CH, Chen, HY, Chiang CT, Lai, CK, Lu, LT, Chen, CH, Gu, DL, Pu, YS, Jou, YS, Lu, KP, Hsiao, PW, **Shih, H.-M**, and Chen, RH\*, “A cullin3-KLHL20 ubiquitin ligase-dependent pathway targets PML to potentiate HIF-1 signaling and prostate cancer progression” , 2011, **Cancer Cell** 20: 214-228
60. Chen, SC, Chang LY, Wang, YW, Chen, YC, Weng, KF, Shih, SR and **Shih, H.-M.\***, “Sumoylation-promoted enterovirus 71 3C degradation correlates with a reduction in viral replication and cell apoptosis”, 2011, **J. Biol. Chem.** 286: 31373-31384.
61. Chen, KY, Wu, CC, Chang, CF, Chen, YH, Chiu, WT, Lou, YH, Chen, YH, **Shih, H.-M**, and Chiang, YH\*. “Suppression of Etk/Bmx protects against ischemic brain injury”, 2011, **Cell Transplant.** (Epub ahead of print)
62. Huang, YS, Chang, CC, Hsieh, YL, Huang, TC, and **Shih, H.-M\***, Daxx interacts with and modulates the activity of CREB”, 2011, **Cell Cycle.** (in press)

### **Review articles**

1. Towle, H.C., Newburg, E. A., and **Shih, H.-M.**, “Regulation of Lipogenic Enzyme Gene Expression by Carbohydrate Metabolism”, **Annual Review of Nutrition** 17:405-433, 1997

**Book chapters**

1. DeMaggio, A. J, Goldman, P. S, **Shih, H.-M.**, Goodman, RH and Hoekstra, M. H  
“Yeast Split-Hybrid System”, **Methods in Enzymology** Vol 328: 128-37, 2000