

CURRICULUM VITAE (Confidential)

NAME: Kangling Zhang

PRESENT POSITION AND ADDRESS:

Assistant Professor, tenure-track
Department of Pharmacology & Toxicology, UTMB
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BIOGRAPHICAL:

Citizen of U.S.A.
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EDUCATION:

1998-2000 **Ph. D., 2000**, University of the Pacific
(Major/Minor: Biochemistry/Mass Spectrometry)
1998-2000 **Predoc.** University of California at San Francisco
(Major: Mass Spectrometry)
1994-1997 **M. S. 1997**, University of the Pacific
(Major/Minor: Biochemistry/NMR)
1987-1990 **M. S. 1990**, East China University of Science & Technology
(Major/Minor: Mass Spectrometry/Analytical Chemistry)
1980-1984 **B. S. 1984**, Anhui University
(Major/Minor: Chemistry/Analytical Chemistry)

PROFESSIONAL AND TEACHING EXPERIENCE:

PROFESSIONAL EXPERIENCE

10/12 – present **Assistant Professor**, Department of Pharmacology and Toxicology
University of Texas Medical Branch at Galveston
Joint faculty of graduate students in the department of cell biology
Joint faculty member of Sealy Center of Translational Medicine
2007-2012 **Director**, Mass Spectrometry, Department of Basic Sciences, LLU,
Loma Linda, CA
2007-2012 **Associate Professor**, Division of Pharmacology, Basic Sci., LLU,
Loma Linda, CA
2002-2007 **Academic Coordinator**, Department of Chemistry, UCR, Riverside,
CA
2001-2002 **Senior Scientist**, ICN Pharmaceuticals. Costa Mesa, CA

2000-2000	Postdoctoral Fellow , Dept. Toxicology, School of Medicine, UC-Davis, Davis, CA
1998-2000	Research Assistant , Dept. Pharmacy, UCSF, San Francisco, CA
1998-1998	Assistant Researcher , Mount Sinai University, New York
1990-1994	Chemical Engineer , Institute of Chemical Analysis, Hefei, China
1994-1997	Teaching Assistant , Dept. Chemistry, UOP, CA
1984-1987	Lecturer , College of Chemical Engineering, Anqin, Anhui, China

TEACHING RESPONSIBILITIES

A. TEACHING RESPONSIBILITIES AT UTMB

a. Teaching:

2016 Fall **GIN PBL-8 weeks**
 2015 Fall **GIN PBL-8 weeks**
 2014 Fall **GIN PBL-8 weeks**
 2014-Spring **PHTO Journal Club-12 weeks**, one hour per week; Course Director
 2013 Fall **PHTO 6318 - Genome-wide Analytical Technologies for Biomedical**, one-hour lecture

b. Students/Mentees/Advisees/Trainees:

Post-doctoral fellows:

01/14 Hua-sheng Fan
 08/13 Hua Chen

Ph. D. students:

12/14-08/17 Barsam Mirfattah

Summer College Interns:

2014 Catherine Sampson
 2013 Eric Yin

B. TEACHING RESPONSIBILITIES AT OTHER UNIVERSITYIES (AT LOMA LINDA UNIVERSITY)

a. Teaching:

Graduate School (GSBS):

2012 Spring, **Topics in Epigenetics (3 credit)**. Course director.
 2011 Fall, **Topics in Mass Spectrometry (3 credits)**. Course director.
 2010 Spring, **Topics in Epigenetics (3 credits)**. Course director.
 2009 Fall, **Topics in Mass Spectrometry (3 credits)**. Course director.
 2008 Spring, **Topics in Epigenetics (3 credits)**. Course director.
 2007 Fall, **Topics in Mass Spectrometry (3 credits)**. Course director.

b. Students/Mentees/Advisees/Trainees:

Undergraduate students:

Summer 2012 Trivedi Ridish

Summer 2011 David Li, Kevin Deleon, Whitney Evans

c. Member of Ph.D. Supervisory Committee for:

2007 Elisha R. Injeti

2008 Teka, Haynes

2009 Joseph Kang

2009 David Rogstad

2010 Jason Herring

2012 Adidas Williams

2012 Matthias Curtis

RESEARCH ACTIVITIES:

Area of Research: Epigenetics, analytical biochemistry, mass spectrometry, proteomics, Biochemistry, metabolism

Grant support

Current

1 R01 CA184097-01; "Project Title: Oxidation of 5-methylcytosine: DNA damage and epigenetic reprogramming"

05-01-14-04-30-19. PIs: Sowers, Lawrence C and Zhang, Kangling (15% effort)

1R01DE025852-01 (PI: FLETCHER, HANSEL M.) STUDIES ON THE VIRULENCE REGULATION IN PORPHYROMONAS

04/01/2016-03/31/2021. Role: Co-I (sub award 10%)

1R01ES026874-01 (PI: Elferink Cornelis John) Aryl Hydrocarbon Receptor-mediated Epigenetic Processes.

06/01/2016-05/31/2021. Role: Co-I (10% effort)

1R21AI126371-01 (PI: Sun Jiaren), Retinoic Acid Regulates S100 Proteins and Immune Responses in Viral Hepatitis.

07/01/2016-06/30/2018. Role: Co-I (10% effort)

NIEHS-Pilot. Integrated Transcriptome-Proteome Analysis of ROS-Induced Gene Networks in Inflammation- Induced Airway Remodeling. 04/01/2016-04/01/2017. Role: Multiple-PIs (with Drs Jun Yang & Allan Brasier)

Past

NIH-NIDCR, R01 DE019730; "Mechanisms for adaptation to oxidative stress in Porphyromonas gingivalis" PI: Hansel Fletcher; Co-Investigator: Kangling Zhang (25% effort); 07-01-09 to 06-30-14.

NIH-NCRR, 1S10RR027643-01, "LTQ-Orbitrap-Velos-ETD mass spectrometer for LLU mass spectrometry facility", PI: Kangling Zhang. \$500,000; 04/21/2010-04/20/2011

COMMITTEE RESPONSIBILITIES:

UTMB

2014 – present Member of Sealy Center for Molecular Medicine at UTMB

Departmental

2013 – present Member of GSBS

Other

Scientific Sessions Organized

2002 - Symposia organizer of Ion-Reaction Mass Spectrometry at UC-Riverside

MEMBERSHIP IN SCIENTIFIC SOCIETIES/PROFESSIONAL ORGANIZATIONS:

1999-present American Mass Spectrometry Society
1999-present International Society of Mass Spectrometry
1998 American Chemical Society
2008-Present American Society of Molecular Biochemistry
2014 American Heart Association.
2015 American Association Immunology

ADDITIONAL INFORMATION:

Editorial Board:

2010- Present ISRN Spectroscopy
2012- Present Molecular Biology
2013- Present JSM Clinical Pharmaceuticals
2017- Present Journal of Toxicology-Current Research
2017- Advances in Clinical Toxicology (ACT)
2017- Journal of Systems Biology & Proteome Research

Referee for Faculty Promotion

2014 Referee for Dr. Cristin Print - Promotion from associate to full professor (Bioinformatics)-University of Auckland, Auckland 1142, New Zealand.

Referee for Grant Application

4/2017 Referee for funded AAPG ANR 2017 (France) grant “Molecular regulation of monocyte differentiation: from mechanism to therapeutic targets (Acronym: MonoDiff). PI: Elodie Segur

International Conference Section Chair

ASMS 63nd Conference Chair of Section of Epigenetic Modifications and Mechanisms

Journal Reviewer for:

2010 and 2011	Nature Communication
2015, 2016	Molecular and Cellular Proteomics
2006	Biochemistry
2007	International Journal of Biological Sciences
2011	Journal of Hematology & Oncology
2008, 2009, 2015	Journal of Proteome Research
2003, 2004, 2006, 2014, 2015(2)	Proteomics
2017	Proteomics
2010, 2013, 2015(2), 2016(2)	PLoS ONE
2009, 2011, 2015	Journal of Proteome Science
2009	Expert Review of Proteomics
2011, 2012, 2014, 2015 (3),	Anal. Chem.
2016, 2017	Anal. Chem.
2004, 2005, 2007	Anal. Biochemistry
2006	Analyst
2003, 2005, 2009	International Journal of Mass Spectrometry
2007, 2009, 2011	Journal of Pharmaceutical and Biomedical Analysis
2010	Journal of Cancer Therapy.
2014	Cell Biology and Toxicology
2015	DNA and Cell Biology
2016	Haematologica

HONORS:

1997 Member of the Honor Society of Phi Kappa Phi

2015 American Society of Immunology Annual Conference Traveling Grant Award (\$1300).

PUBLISHED:

A. ARTICLES IN PEER-REVIEWED JOURNALS:

1. **Kangling Zhang**, Graig C. Hill, Michael J. Minch. Etoposide: conformational and hydration features. *Magnetic Resonance in Chemistry* **37**: 788-798, 1999.
2. **Kangling Zhang**, Hui Tang, James Blankenship, Patrick R. Jones, Peter Yau, and A. L. Burlingame. Identification of acetylation and methylation sites of Histone H3 from chicken erythrocyte by MALDI-TOF, MALDI-PSD and nano-ESI tandem mass spectrometry. *Analytical Biochemistry* **306**: 259-269, 2002.

3. **Kangling Zhang**, L. Huang, K. E. Williams, E. M. Bradbury, P. Yau, Patrick R. Jones, M. J. Minch, A. L. Burlingame. Histone acetylation and deacetylation: Analysis of histone H4 acetylation sites by mass spectrometry. *Molecular and Cellular Proteomics* **1**: 500-508, 2002. **Impact Factor: 7.251 (2013-2014). Citation: 148.**
4. Yinsheng Wang*, Shetty Viveknanda, **Kangling Zhang**. HPLC-MS/MS characterization of pyrimidine glycols in mononucleosides. *Analytical Chemistry* **74**: 4505-4512, 2002.
5. **Kangling Zhang***, Hui Tang. Analysis of core histones by liquid chromatography-mass spectrometry and peptide mapping. *J. of Chromatography B* **783**: 173-179, 2003.
6. **Kangling Zhang**, Stephane Bouchonnet, Scott Serafin, and Thomas Hellman Morton. Stereochemical analysis of deuterated alkyl chains by charge-remote fragmentations of protonated parent ions. *Intel. Journal of Mass Spectrometry* **227**: 175-189, 2003.
7. Sunran Kim, J-C. Mollet, **Kangling Zhang**, S. Y. Park, and EM Lord. SCA facilitates the action of a chemotropic peptide in the stigma, *PNAS* **100**: 16125-16130, 2003.
8. Scott V. Serafin, **Kangling Zhang** and Thomas Hellman Morton. Decomposition of protonated threonine, its stereoisomers and its homologues in the gas phase: evidence for internal backside displacement. *Organic Lett.* **6**: 1561-1564, 2004.
9. **Kangling Zhang***, Peter Yau, Brian S. Imai, Ron New, E. M. Bradbury. Differentiation of acetylated peptides from methylated peptides by mass spectrometry: An important application for determining lysine 9 acetylation and methylation of histone H3. *Proteomics* **4**: 1-10, 2004.
10. Dmitri Churikoy, Joseph Siino, Maria Svetlova, **Kangling Zhang**, Arunas Gineitis, Morton Bradbury, and Andrei Zalensky. Novel human testis-specific histone H2B encoded by the interrupted gene on the X chromosome, *Genomics* **84**: 745-756, 2004.
11. **Kangling Zhang***, Joseph S. Siino, Patrick R. Jones, Peter M. Yau, E. Morton Bradbury. A mass spectrometric “western blot” to evaluate the correlations between histone acetylation and methylation, *Proteomics* **4**: 3765-3775, 2004.
12. Scott V. Serafin, Rhonda Maranan, **Kangling Zhang** and Thomas Hellman Morton. Mass spectrometric differentiation of linear peptides composed of L-amino acids from isomers containing one D-amino acid residue. *Analytical Chemistry* **77**: 5480-5487, 2005.
13. **Kangling Zhang**, Francesco Faiola and Ernest Martinez. Six lysine residues on c-Myc are direct substrates for acetylation by p300. *BBRC* **336**: 274-280, 2005.
14. **Kangling Zhang***, Jennifer Tang and Patrick R. Jones. Qualitative and quantitative analysis of histone acetylation: a prospective method for evaluation of histone deacetylase inhibitor anticancer drugs. *Current pharmaceutical analysis* **3**: 319-328, 2005.
15. Mona Shahbazian, **Kangling Zhang** and Michael Grunstein. Histone H2B ubiquitylation is dispensable for mono-methylation but important for subsequent rounds of methylation by Dot1 and Set 1. *Molecular Cell* **19**: 271-277, 2005.
16. Francesco Faiola, Xiaohui Liu, Szuying Lo, Songqin Pan, **Kangling Zhang**, Elena Lyman, Anthony Farina, and Ernest Martinez. Dual Regulation of c-Myc by p300 via Acetylation-Dependent Control of Myc Protein Turnover and Coactivation of Myc-Induced Transcription, *Mol. & Cell. Biol.* **25**: 10220-10234, 2005.
17. Feng Xu, **Kangling Zhang**, Michael Grunstein, Acetylation in histone H3 globular domain regulates gene expression in yeast. *Cell* **121**: 375-385, 2005.
18. Catherine B. Miller, Feng Xu, **Kangling Zhang**, and Michael Grunstein. Acetylation of H2AZ Lys 14 is associated with genome-wide gene activity in yeast. *Genes & Development* **20**: 711-722, 2006.

19. Sun Tae Kim, **Kangling Zhang**, Juan Dong, Elizabeth M. Lord. Exogenous free ubiquitin enhances lily pollen tube adhesion to an *in vitro* stylar matrix and may facilitate endocytosis of SCA (Stigma/stylar Cysteine-rich Adhesin). *Plant Physiology* **142**: 1397-1411, 2006.
20. **Kangling Zhang**. From purification of large amounts of phospho-compounds (nucleotide) to the enrichment of phospho-peptides by anion-exchanging resin. *Anal. Biochemistry* **357**: 225-231, 2006.
21. Francesco Faiola, Yi-Ting Wu, Songgin Pan, **Kangling Zhang**, Anthony Farina and Ernest Martinez. Max is acetylated by p300 at lysine residues that control its nuclear localization. *Biochem. J.* **403**: 397-407, 2007.
22. Junhong Han, Hui Zhou, Bruce Horazdovsky, **Kangling Zhang**, Rui-Ming Xu, Zhiguo Zhang, Rtt109 acetylates histone H3 lysine 56 and regulates replisome stability. *Science* **315**: 653-655, 2007.
23. Vaniyambadi V. Sridhar, Avinish Kapoor, **Kangling Zhang**, Jianjun Zhu, Tao Zhou, Paul M. Hasegawa, Ray A. Bressan and Jian-Kang Zhu, Control of DNA methylation and heterochromatic silencing by histone H2B deubiquitination. *Nature* **447**: 735-738, 2007.
24. Qinchung Zhang, **Kangling Zhang**, Yan Zou, Avi Perna and Yinsheng Wang. A quantitative study on the *in vitro* and *in-vivo* acetylation of high mobility group A1 proteins. *J. Am. Soc. Mass Spectrom.* **18**, 1569-1578, 2007.
25. Feng Xu, Qiongyi Zhang, **Kangling Zhang**, Wei Xie, Michael Grunstein. Sir2 deacetylates histone H3 lysine 56 to regulate telomeric heterochromatin structure in yeast. *Mol. Cell.* **27**, 890-900, 2007.
26. Keun Chae, **Kangling Zhang**, Li Zhang, Dimitrios Morikis, Sun Tae Kim, Jean-Claude Mollet, Noelle de la Rosa, Kimberly Tan, Elizabeth M. Lord. Two SCA (Stigma/style Cysteine-rich Adhesin) isoforms show structural differences that correlate with their levels of *in vitro* pollen tube adhesion activity. *J. Biol. Chem.* **282**, 33845-33858, 2007.
27. **Kangling Zhang***, Vaniyambadi V. Sridhar, Jianhua, Zhu, Avinish Kapoor, and Jian-Kang Zhu*. Mass spectrometry reveals distinctive core histone post-translational modification pattern in *Arabidopsis thaliana*. *PLoS ONE* **2** (e1210), 1-11, 2007.
28. **Kangling Zhang**. Qualitative and quantitative analysis of lysine acetylation and methylation in yeast histone H3. *International Journal of Mass Spectrometry* **269**, 101-111, 2008.
29. Weimin Peng, Cynthia Togawa, **Kangling Zhang**, and Siavash Kurdistani. Regulators of cellular levels of histone acetylation in *Saccharomyces cerevisiae*. *Genetics* **179**, 277-289, 2008.
30. Teka-Ann S. Haynes, Penelope J. Duerksen-Hughes, Maria Filippova, Valery Filippov, **Kangling Zhang**. C18 ceramide analysis in mammalian cells employing reversed-phase high performance liquid chromatography tandem mass spectrometry. *Anal. Biochemistry* **378**: 80-86, 2008.
31. Gregory A. Horwiitz, **Kangling Zhang**, Matthew A. McBrien, Michael Grunstein, Siavash, K. Kurdistani, and Arnold J. Berk. Adenovirus e1a alters global patterns of histone modifications for oncogenic transformation. *Science* **321**: 1084-1085, 2008.
32. **Kangling Zhang**. Characterization of acetylation of *saccharomyces cerevisiae* H2B by mass spectrometry. *International Journal of Mass Spectrometry* **278**, 89-94, 2008.
33. Leroy G. Henry, Lawrence Sandberg, **Kangling Zhang**, and Hansel M. Fletcher. DNA Repair of 8-oxo-7,8-dihydroguanine lesions in *Porphyromonas gingivalis*. *J. of Bacteriology* **190**, 7985-7993, 2008.

34. Yi-Hui Lin, Purvi Kakadia, Ying Chen, Ya-Qiang Li, Aniruddha Deshpanda, Christian Buske, **Kangling Zhang**, Yi Zhang, Guo-Liang, Xu, and Stefan K. Bohlander. Leukemic CALM-AF10 fusion causes global epigenetic change and promotes chromosomal instability. *Blood* **114**: 651-658, 2009.
35. Bo Liu, Yi-Hui Lin, Agus Darwanto, Xue-Hui Song, Guo-Liang X, and **Kangling Zhang**. Identification and characterization of propionylation on histone H3 lysine 23 in mammalian cells. *J. Biol. Chem.* **284**: 32288-32295, 2009. **Impact Factor: 4.6 (2013-2014). Citation: 43.**
36. Jia-Lei Hu, Bo Zhou, **Kangling Zhang**, Jin-Qiu Zhou and Guo-Liang Xu. The N-terminus of histone H3 is required for *de novo* DNA methylation in chromatin. *PNAS* **106**: 22187-22192, 2009.
37. Agus Darwanto, Matthew Curts, Matthew Schrag, Wolff Kirsch, Peng Liu, Guoliang Xu, Jonahan Neidigh, and **Kangling Zhang**. A modified “cross-talk” between histone H2B Lys-120 ubiquitination and H3 Lys-K79 methylation. *J. Biol. Chem.* **285**: 21868-21876, 2010.
38. Feng Tan, **Kangling Zhang**, Hana Mujahid, Desh Pal S. Verma, and Zhaohua Peng. Differential Histone Modification and Protein Expression Associated with Cell Wall Removal and Regeneration in Rice (*Oryza sativa*). *J. Proteome Res.* **10**: 551-563, 2011.
39. Lei Xiong, Agus Darwanto, Seema Sharma, Jason Herring, Shaoyan Hu, Maria Filippova, Valery Filippov, Yinsheng Wang, Chien-Shing Chen, Penelope J. Duerksen-Hughes, Lawrence C. Sowers, and **Kangling Zhang**. Mass spectrometric studies on epigenetic interaction networks in cell differentiation. *J. Biol. Chem.* **286**: 13657-13668, 2011.
40. **Kangling Zhang***, Teka-Ann S. Haynes, Maria Filippov, Valery Filippov, and Penelope J. Duerksen-Hughes*. Quantification of ceramide levels in mammalian cells by high performance liquid chromatography coupled to tandem mass spectrometry with multiple-reaction-monitoring mode (HPLC-MS/MS-MRM). *Anal. Method*: **3**, 1193-1197, 2011.
41. Yu-Fei He, Bin-Zhong Li, Zheng Li, Peng Liu, Yang Wang, Qingyu Tang, Jianping Ding, Yingying Jia, Zhangcheng Chen, Lin Li, Yan Sun, Xiuxue Li, Qing Dai, Chun-Xiao Song, **Kangling Zhang**, Chuan He, Guo-Liang Xu. Tet-Mediated Formation of 5-Carboxylcytosine and Its Excision by TDG in Mammalian DNA. *Science* **333**:1303-1307, 2011.
42. Valery Filippov, Minwoo Andrew Song, **Kangling Zhang**, Harry V. Vinters, Spencer Tung, Wolff M. Kirsch, Jun Yang, Penelope J. Duerksen-Hughes. Increased ceramide in brains with Alzheimer’s and other neurodegenerative diseases. *Journal of Alzheimer’s Disease* **29**: 537-547, 2012.
43. **Kangling Zhang***, Matthew Schrag, Rishi Trivedi, Andrew Crofton, Harry Vinters, and Wolff Kirsch*. Targeted proteomics for quantification of histone acetylation in Alzheimer’s disease. *Proteomics* **12**: 1261-1268, 2012.
44. Teka-Ann S. Haynes, Valery Filippov, Maria Filippova, Jun Yang, **Kangling Zhang**, Penelope J. Duerksen-Hughes. DNA damage induces down-regulation of UDP-Glucose Ceramide Glucosyltransferase, increases ceramide levels and triggers apoptosis in p53-deficient cancer cells. *BBA - Molecular and Cell Biology of Lipids* **1821**: 943-953, 2012.
45. Weiqiang Qian, Daisuke Miki, Heng Zhang, Yunhua Liu, Xi Zhang, Kai Tang, Yunchao Kan, Honggui La, Xiaobing Shi, **Kangling Zhang**, Xuemei Chen, Renyi Liu, Zhizhong Gong, Jian-Kang Zhu. A novel histone acetyltransferase recognizes methylated DNA and

- unmethylated H3K4 marks and regulates active DNA demethylation in Arabidopsis. *Science* **336**: 1445-1448, 2012.
46. **Kangling Zhang***. Mass spectrometry in epigenetic studies on disease: current progress, limitation, and prospective. *Molecular Biology* **2**:2, 2013.
 47. Daliao Xiao, Chiranjib Dasgupta, Man Chen, **Kangling Zhang**, John Buchholz, Zhice Xu, Lubo Zhang. Inhibition of DNA methylation reverses norepinephrine-induced cardiac hypertrophy in rats. *Cardiovasc Res.***101**: 373-82, 2014.
 48. Hui Tang, Saied Mirshahidi, Maheswari Senthil, Kevork Kazanjian, Chien-Shing Chen, and **Kangling Zhang***. Down-regulation of LXR/RXR activation and negative acute phase response pathways in colon adenocarcinoma revealed by proteomics and bioinformatics analysis. *Cancer biomarkers* **14**: 313-324, 2014.
 49. A Aruni, **Kangling Zhang**, Yuetan Dou, and Hansel Fletcher. Proteome analysis of filifactor aloicis coinfection of epithelial cells with Porphyromonas gingivalis shows modulation of pathogen and host regulatory pathways. *Infection and Immunity* **82**: 3261-3274, 2014.
 50. Hui Tang, Huasheng Fang, Eric Yin, Allan R. Brasier, Lawrence C. Sowers, **Kangling Zhang***. Multiplexed parallel reaction monitoring (PRM) targets histone modifications on the Q-Exactive mass spectrometer. *Anal. Chem.* **86**: 5526-5534, 2014. **Impact Factor: 5.825 (2013-2014)**.
 51. Maria Filippova, Valery Filippov, Vonetta Williams, **Kangling Zhang**, Anatolii Kokoza, Svetlana Bashkirova, Penelope Duerksen-Hughes. Cellular levels of oxidative stress affect the response of cervical cancer cells to chemotherapeutic agents. *BioMed Research International*. doi:10.1155/2014/574659. 1-14. 2014.
 52. Dequina Nicholas, Hui Tang, Qiongyi Zhang, Jai Rudra, Feng Xu, William Langridge, and **Kangling Zhang***. Quantitative Proteomics Reveals a Role for Epigenetic Reprogramming During Human Monocyte Differentiation. *Molecular and Cellular Proteomics* **14**: 15-29, 2015. **Impact Factor: 7.251 (2013-2014)**
 53. Jacques C Mbongue, Dequina A Nicholas, **Kangling Zhang**, Nan-Sun Kim, Brittany N Hamilton, Marco Larios, Guangyu Zhang, Kazuo Umezawa, Anthony F Firek, WH Langridge. Induction of Indoleamine 2, 3-Dioxygenase in Human Dendritic Cells by a Cholera Toxin B Subunit—Proinsulin Vaccine. *PloS ONE* **10**: e0118562. 1-23. 2015.
 54. James Sowers, Barsam Mirfattah, Pei Xu, Hui Tang, In Young Park, Cheryl Walker, Ping Wu, Fernanda Laezza, Lawrence C. Sowers, **Kangling Zhang***. Quantification of Histone Modifications by PRM, A Method Validation. *Anal. Chem.* **87**: 10006–10014. 2015.
 55. Sun-Yee Kim, Choon Kiat Sim, Hui Tang, Weiping Han, **Kangling Zhang***, Feng Xu*. Acetylome Analysis Identifies SIRT1 Targets in mRNA-processing and Chromatin-remodeling in Mouse Liver. *PloS ONE* **10**: e0140619. 1-16. 2015.
 56. Patel JP, Sowers ML, Herring JL, Theruvathu JA, Emmett MR, Hawkins BE, **Zhang K**, DeWitt DSPrough DSSowers LCMeasurement of post-replicative DNA metabolism and damage in the rodent brain. *Chem Res Toxicol.* **28**: 2352-2363. 2015.
 57. Sun-Yee Kim, Choon Kiat Sim, Hui Tang, Weiping Han, **Kangling Zhang***, Feng Xu*. Acetylome study in mouse adipocytes identifies targets of SIRT1 deacetylation in chromatin organization and RNA processing. *Archives of Biochemistry and Biophysics* **598**: 1-10. 2016.
 58. Hui Tang, Bing Tian, Allan R. Brasier, Lawrence C. Sowers, **Kangling Zhang***. Measurement of histone methylation dynamics by one-carbon metabolic isotope labeling

- and high-energy collisional dissociation methylation signature ion detection. *Scientific Reports* **6**: 31537, 1-7. 2016.
59. Sun-Yee Kim, Choon Kiat Sim, Qiongyi Zhang, Hui Tang, Reinhard Brunmeir, Hong Pan, Neerja Karnani, Weiping Han, **Kangling Zhang***, Feng Xu*. An Alternative Strategy for Pan-acetyl-lysine Antibody Generation. *PLoS ONE* 11(9):e0162528. September 2016.
 60. López-García, I., Geró, D., Szczesny, B., Szoleczky, P., Olah, G., Módis, K., **Zhang, K.**, Gao, J., Wu, P., Sowers, L. C., DeWitt, D., Prough, D. S., and Szabo, C. Development of a stretch-induced neurotrauma model for medium-throughput screening in vitro: identification of rifampicin as a neuroprotectant. *British Journal of Pharmacology*, doi: 10.1111/bph.13642. November, 2016.
 61. Barsam Mirfattah, Jason Herring, Hui Tang, and **Kangling Zhang***. Probes and targets of DNA methylation and demethylation in drug development. *Current Topics in Medicinal Chemistry*. DOI: 10.2174/1568026617666161116143. 2017.
 62. Yuejin Liang, Zuliang Jie, Panpan Yi, Xianxiu Wan, Wei Wang, Hui Tang, Zakari Kwota, Lynn Soong, Yingzi Cong, **Kangling Zhang** and Jiaren Sun. Retinoic acid regulates immune responses by promoting IL-22 production and modulating S100 protein in viral hepatitis. *Journal of Immunology* **198**(9):3448-3460. 2017.
 63. Nicholas DA, **Zhang K**, Hung C, Glasgow S, Aruni AW, Unternaehrer J, Payne KJ, Langridge WHR, De Leon M. Palmitic acid is a toll-like receptor 4 ligand that induces human dendritic cell secretion of IL-1 β . *PLoS ONE* **12**(5):e0176793. May 2017.
 64. Kangling Zhang, Pei Xu, James L. Sowers, Daniel F. Machuca, Barsam Mirfattah, Jason Herring, Hui Tang, Yan Chen, Bing Tian, Allan R. Brasier, and Lawrence C. Sowers. Proteome analysis of hypoxic glioblastoma cells reveals sequential metabolic adaptation of one-carbon metabolic pathways. *Molecular Cellular Proteomics*, in press

The whole list of publication and the contribution to the science can be seen from Researchgate (https://www.researchgate.net/profile/Kangling_Zhang)

<https://www.ncbi.nlm.nih.gov/myncbi/browse/collection/49897694/?sort=date&direction=descending>

B. OTHER:

Thesis/Dissertation

- | | |
|------|---|
| 1997 | Master degree thesis: Determination of etoposide in-solution structure by NMR, University of the Pacific |
| 2000 | Ph. D. dissertation: Determination of Acetylation and Methylation Sites of Histones by Mass Spectrometry, University of the Pacific |

C. ABSTRACTS: Not recorded (>20).

Hui Tang, Huasheng Fang, Eric Yin, Allan R. Brasier, Lawrence C. Sowers, **Kangling Zhang**. Multiplexed parallel reaction monitoring (PRM) targets histone modifications on the Q-Exactive mass spectrometer (poster). 62th ASMS meeting, Baltimore, June 10, 2014.

Dequina Nicholas, Hui Tang, Qiongyi Zhang, Jai Rudra, Feng Xu, William Langridge, and **Kangling Zhang**. Quantitative Proteomics Reveals a Role for Epigenetic Reprogramming During Human Monocyte Differentiation. American Society of Immunology Annual Conferenc, New Orleans, May, 8, 2015

James Sowers, Pei Xu, In Young Park, Cheryl Walker, Ping Wu, Fernanda Laezza, Lawrence C. Sowers, **Kangling Zhang**. Quantification of Histone Modifications by PRM, A Method Validation (Poster). 63th ASMS meeting, St. Louis, Missouri, June 3, 2015

Barsam Mirfattah, Hui Tang, Cheryl Lichti, Fernanda Laezza, and **Kangling Zhang**. Down Regulation of Glycolysis Pathway in PICALM Depleted Cells. 63th ASMS meeting, San Antonia, TX, June 6, 2016

D. ORAL PRESENTATION

- 04/16 “Acetylome”. UTMB Chinese Faculty Club.
- 11/15 “Hypoxia, One-Carbon Metabolism and Histone Methylation”. Faculty Retreat, SCMM.
- 08/15 “One Carbon Metabolism and Epigenetics”. UTMB Chinese Faculty Club
- 10/14 “One-carbon metabolism and epigenetics”. Faculty seminar, Department of Neuroscience & Cell Biology, UTMB
- 08/14 “Protein profiling reveals dynamic H1 expression and histone modifications during humanmonocyte differentiation.” UTMB Chinese Faculty Club
- 06/14 “Protein profiling reveals dynamic H1 expression and histone modifications during human monocyte differentiation.” 62th ASMS meeting, Baltimore
- 01/14 “Epigenetic reprogramming induced by bisphenol A and vitamin D. Mechanisms of Environmental Estrogen Toxicity (MEET)” (Chaired by Dr. Cheryl S. Watson).
- 09/13 “Histone Modifications: Identification and Quantification.” UTMB SCMM Faculty Seminar
- 09/12 “Proteomics”, Loma Linda University
- 07 /11 “CALM and endocytosis”, Loma Linda University

INVITED LECTURES

- 01/02 Shanghai Institute of Cell Biology, Shanghai, China.
- 10/10 Mississippi State University, Mississippi State, USA.
- 06/11 University of Science and Technology, Hefei, China.
- 06/11 East China University of Science & Technology, Shanghai, China.
- 06/14 ASMS 62nd Conference, oral presentation, Baltimore, USA.