CURRICULUM VITAE

Weiguo Andy Tao, Ph.D.

I. ADDRESS

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II. EDUCATION

2002 − 2005	Postdoc	Institute for Systems Biology, Seattle, WA (Sponsors: Leroy Hood and Ruedi Aebersold)
2001	Ph. D.	Purdue University (Advisor: R. Graham Cooks)

III. POSITIONS AND HONORS

Academic Appointments

2014 − present	Professor, Department of Biochemistry, Purdue University
2010 − 2013	Associate Professor, Department of Biochemistry, Purdue University
2005 − 2009	Assistant Professor, Department of Biochemistry, Purdue University
2005 − present	Courtesy Appointment, Department of Medicinal Chemistry & Molecular Pharmacology, Purdue University
2006 − present	Courtesy Appointment, Department of Chemistry, Purdue University
2014 − present	Adjunct Professor, Center for Plant Stress Biology, Chinese Academy of Science, Shanghai, China
2014 − present	Adjunct Professor, Beijing Institute of Technology, Beijing, China
2005 − 2012	Adjunct Professor, Apoptosis and Cell Death Program, Burnham Institute for Biomedical Research, La Jolla, CA
2005 − present	Member, Purdue University Center for Cancer Research

Awards and Honors

2012 − 2013	Scholar, Entrepreneur Leadership Academy (ELA), Purdue Research Park
2011 − 2012	Fellow, Entrepreneur Leadership Academy (ELA), Purdue Research Park
2011 − 2012	Fellow, Bindley Bioscience Center, Purdue Research Park
2011 − 2016	University Faculty Scholar
2008 − 2011	3M Non-Tenured Faculty Award
2007 − 2012	NSF CAREER Award
2007&2011	Seed for Success Award (>$1M grant), Purdue University
2006	American Society for Mass Spectrometry (ASMS) Research Award
2002 − 2005	*Damon Runyon* Cancer Research Postdoctoral Fellowship
2000 − 2001	Merck Fellowship
2000	*Charles N. Reilly* Upjohn Pharmacia Award for Analytical Chemistry

Professional Activities

2017 -	Editorial Board member, Proteomes

2017-2019	ASMS graduate student awards committee
2017-2020	Board member, US Human Proteome Organization (HuPO)
2017-	President, Chinese American Society for Mass Spectrometry (CASMS)
2015	Guest editor, *Analyst*
2012	Co-chair, ASMS Fall Workshop
2012 -	Editorial board, *Frontier in Biology*
2010	Co-Chair, Midwest Universities Analytical Chemistry Conference (MUACC)
2010 − 2012	ASMS Education Committee
2009 − 2010	ASMS annual conference organizing committee

IV. EXTERNAL FUNDING

Active

1. 5R01GM088317 (PI: Tao) 09/01/10-08/31/17
   NIH/NIGMS
   New Proteomic Technologies for the Analysis of Tyrosine Kinase Signaling Pathways
2. 1R01GM111788-01A1 (Tao) 09/15/15 - 09/14/18
   NIH/NIGMS
   A Proteomic Platform to identify and Validate Biomarkers in Metabolic Syndrome and Coronary Artery Disease
3. 1R41CA210772 (PI: Tao) 09/01/16-08/31/17
   NIH/NCI
   Developing Novel RPPA for the Detection of Metastatic Prostate Cancer
4. 0057997 (PI: Tao) 07/01/15-06/30/17
   International Foundation for CDKL5 Research
   Identification of CDKL5 direct substrates based on kinase assay linked phosphoproteomics
5. CH1506752 (PI: Tao) 07/01/15-06/30/18
   NSF
   New Proteomic Strategy to Visualize and Analyze Phosphoprotemoes

Completed in last five years

1. CHE-0645020 (PI: Tao) 7/01/07-6/30/13
   NSF Career development award
   Soluble Nanopolymers for Targeted Proteomics in vitro and in Living Cells
   CHE-0645020-REU Undergraduate supplementary grant
2. 1R41GM109626 (PI: Tao) 09/25/13-08/30/16
   NIH/NIGMS
   Metal ion-functionalized soluble nanopolymers: a new analytical platform for plasma proteomics
3. 86794 (PI: Shisheng Li) 02/01/14 – 01/31/15
   NSF
   Dot1 and Histone H3 K79 Methylation in Global Genomic Nucleotide Excision Repair
4. NIFA (PI: Xu) 01/15/10-01/14/14
   USDA
   The interactome of pathogenicity factors in the rice blast fungus Magnaporthe oryzae
5. 5R01GM097528 (PI: Kihara) 09/01/11-05/31/16
   NIH/NIGMS
   Identification of protein-metabolite interactome
6. 5R01GM088226 (PI: Xian) 09/01/11-08/31/15
   NIH/NIGMS

Chemical approaches for detecting S-nitrosothiols

7. 1256600 (PI: Iliuk) 02/01/13 – 01/31/16
   NSF
   SBIR Phase II: Development of Novel Dendrimer-based Technologies for Phosphorylation Analyses
8. R21RR031246 (PI: Ouyang) 08/09/10-05/31/13
   NIH/NCRR
   Paper Spray Ionization Mass Spectrometry Device for Direct Analysis of Biofluids
9. R21 RR025802 (PI: Tao) 03/01/09-02/28/13
   NIH/NCRR
   Proteomic studies of dendrimer-based nanomedicines
10. S10 RR025044 (PI: Tao) 05/01/09-04/30/10
    NIH/NCRR
    The acquisition of a high resolution Orbitrap mass spectrometer for analysis of protein modifications
11. R01 CA115465 (PI: Geahlen) 12/0106-11/30/12
    NIH/NCI
    Syk and Associated Proteins in Breast Cancer
    R01CA115465-03-S109 Minority supplementary grant
12. R01 AI070749-02 (PI: Rajagopal) 05/01/07-04/30/12
    NIH/NAID
    Eukaryotic-type signaling mediates two-component regulation of GBS virulence

V. PATENTS

1. Tao WA and Wang L, Difference gel electrophoresis of phosphoproteome. Appl. No. 15/004,339. Filed on Jan. 22, 2016.
2. Tao WA, Hu CD, and Zeng L, Novel high throughput technology to identify direct upstream kinases. Appl. No. 14/297,824. U.S. patent filed on June 6, 2014.
3. Tao WA and Yang L, Methods for isolating proteins, PCT utility patent, PCT/US13/30841. Filed on March 13, 2013. 14/387,082.
4. Tao WA and Iliuk AB, Materials, systems, and methods for phosphorylation staining and imaging. Non-utility patent application. PCT/US2011/032331. Filed on April 13, 2011. (Licensed)
5. Tao WA. Materials and methods for isolating phosphopeptides. US 8,501,486 B2. Issued on Aug. 6, 2013. (Licensed)
6. He X, Tian Q, Tao WA, Hood L, and Li L. PTEN/Akt methods and compositions relating to BMP. US 8,106,166.

VI. PUBLICATIONS

Significant Publications

1. Chen IH, Xue L, Hsu CC, Paez JS, Pan L, Andaluz H, Wendt MK, Iliuk AB, Zhu JK, Tao WA (2017). Phosphoproteins in extracellular vesicles as candidate markers for breast cancer. *Proc Natl Acad Sci U S A*. **114**(12):3175-3180.
2. Pan L, Aguilar HA, Wang L, Iliuk AB, Tao WA (2016). Three-dimensionally Functionalized Reverse Phase Glycoprotein Array for Cancer Biomarker Discovery and Validation. *J Am Chem Soc.* **138**(47):15311-14.

3. Wang L, Yang L, Pan L, Kadasala NR, Xue L, Schuster RJ, Parker LL, Wei A, Tao WA (2015). Time-Resolved Proteomic Visualization of Dendrimer Cellular Entry and Trafficking. *J Am Chem Soc.* **137**(40):12772-5.
4. Xue L, Wang W, Hu L, Iliuk A, Geahlen RL, Tao WA (2012), Sensitive kinase assay linked with phosphoproteomics for identifying kinase substrates, *Proc. Natl. Acad. Sci. USA*. **109**(15):5615-20.
5. Pan L, Iliuk A, Yu S, Geahlen RL, Tao WA (2012). Multiplexed quantitation of protein expression and phosphorylation based on functionalized soluble nanopolymers. *J Am Chem Soc* **134**(44): 18201-4.
6. Hu L, Iliuk A, Galan J, Hans M, Tao WA (2011). Identification of Drug Targets in vitro and in Living Cells by Soluble Nanopolymer-based Proteomics. *Angew. Chem. Int. Ed.* **50**(18): 4133-36.
7. Iliuk AB, Martin VA, Alicie BM, Geahlen RL and Tao WA (2010). In-depth analyses of kinase-dependent tyrosine phosphoproteomes based on metal ion functionalized soluble nanopolymers. *Mol Cell Proteomics*. **9**: 2162-2172.
8. Cooks RG, Chen H, Eberlin MN, Zheng X, and Tao WA (2006). Polar acetalization and transacetalization in the gas phase: the Eberlin Reaction. *Chem. Rev.*, 106, 188-211.
9. Tao WA, Wollscheid B, O'Brien R, Eng J, Li X, Bodenmiller B, Watts J, Hood L and Aebersold R (2005). Quantitative phosphoproteome analysis using a dendrimer conjugation chemistry and mass spectrometry. *Nature Methods*. **2(8):** 591-598.

Full list of peer-reviewed articles (in reverse chronological order)

1. Yan J, Wang P, Wang B, Hsu CC, Tang K, Zhang H, Hou YJ, Zhao Y, Wang Q, Zhao C, Zhu X, Tao WA, Li J, Zhu JK (2017). The SnRK2 kinases modulate miRNA accumulation in Arabidopsis. *PLoS Genet*. **13**(4):e1006753.
2. Hsu CC, Xue L, Arrington JV, Wang P, Paez Paez JS, Zhou Y, Zhu JK, Tao WA (2017). Estimating the Efficiency of Phosphopeptide Identification by Tandem Mass Spectrometry. *J Am Soc Mass Spectrom.* **28**(6):1127-1135.
3. Chen IH, Xue L, Hsu CC, Paez JS, Pan L, Andaluz H, Wendt MK, Iliuk AB, Zhu JK, Tao WA (2017). Phosphoproteins in extracellular vesicles as candidate markers for breast cancer. *Proc Natl Acad Sci U S A*. **114**(12):3175-3180.
4. Li G, Zhang X, Tian H, Choi YE, Tao WA, Xu JR (2017). MST50 is involved in multiple MAP kinase signaling pathways in Magnaporthe oryzae. *Environ Microbiol.* **19**(5):1959-1974.
5. Zeng L, Shin WH, Zhu X, Park SH, Park C, Tao WA*, Kihara D* (2017). Discovery of Nicotinamide Adenine Dinucleotide Binding Proteins in the Escherichia coli Proteome Using a Combined Energetic- and Structural-Bioinformatics-Based Approach. *J Proteome Res*. **16**(2):470-480.
6. Arrington JV, Hsu CC, Tao WA (2017). Kinase Assay-Linked Phosphoproteomics: Discovery of Direct Kinase Substrates. *Methods Enzymol*. **586**:453-471.
7. Wang C, Wang M, Arrington J, Shan T, Yue F, Nie Y, Tao WA, Kuang S (2017). Ascl2 inhibits myogenesis by antagonizing the transcriptional activity of myogenic regulatory factors. *Development*. **144**(2):235-247.
8. Duan CG, Wang X, Xie S, Pan L, Miki D, Tang K, Hsu CC, Lei M, Zhong Y, Hou YJ, Wang Z, Zhang Z, Mangrauthia SK, Xu H, Zhang H, Dilkes B, Tao WA, Zhu JK (2017). A pair of

transposon-derived proteins function in a histone acetyltransferase complex for active DNA demethylation. *Cell Res.* **27**(2):226-240.

9. Pan L, Aguilar HA, Wang L, Iliuk AB, Tao WA (2016). Three-dimensionally Functionalized Reverse Phase Glycoprotein Array for Cancer Biomarker Discovery and Validation. *J Am Chem Soc.* **138**(47):15311-14.
10. Iliuk A, Li L, Melesse M, Hall MC, Tao WA (2016). Multiplexed Imaging of Protein Phosphorylation on Membranes Based on Ti(IV) Functionalized Nanopolymers. *Chembiochem*. **17**(10):900-3. (Front cover)
11. Zhang T, Xue L, Li L, Tang C, Wan Z, Wang R, Tan J, Tan Y, Han H, Tian R, Billiar TR, Tao WA, Zhang Z (2016). BNIP3 Protein Suppresses PINK1 Kinase ProteolyticCleavage to Promote Mitophagy. *J Biol Chem*. **291**(41):21616-21629.
12. Zhang HT, Zeng LF, He QY, Tao WA, Zha ZG, Hu CD (2016). The E3 ubiquitin ligase CHIP mediates ubiquitination and proteasomal degradation of PRMT5. Biochim Biophys Acta. **1863**(2):335-46.
13. Duan CG, Wang X, Tang K, Zhang H, Mangrauthia SK, Lei M, Hsu CC, Hou YJ, Wang C, Li Y, Tao WA, Zhu JK (2015). MET18 Connects the Cytosolic Iron-Sulfur Cluster Assembly Pathway to Active DNA Demethylation in Arabidopsis. *PLoS Genet*. **11**(10):e1005559.
14. Wang L, Yang L, Pan L, Kadasala NR, Xue L, Schuster RJ, Parker LL, Wei A, Tao WA (2015). Time-Resolved Proteomic Visualization of Dendrimer Cellular Entry and Trafficking. *J Am Chem Soc.* **137**(40):12772-5.
15. Iliuk AB, Tao WA (2015). Universal Non-Antibody Detection of Protein Phosphorylation Using pIMAGO. *Curr Protoc Chem Biol*. **7**(1):17-25.
16. Pan L, Wang L, Hsu CC, Zhang J, Iliuk A, Tao WA (2015). Sensitive measurement of total protein phosphorylation level in complex protein samples. *Analyst*. **140**(10):3390-6.
17. Lang Z, Lei M, Wang X, Tang K, Miki D, Zhang H, Mangrauthia SK, Liu W, Nie W, Ma G, Yan J, Duan CG, Hsu CC, Wang C, Tao WA, Gong Z, Zhu JK (2015). The Methyl-CpG-Binding Protein MBD7 Facilitates Active DNA Demethylation to Limit DNA Hyper-Methylation and Transcriptional Gene Silencing. *Mol Cell*. **57**(6):971-83.
18. Gendrin C, Lembo A, Whidbey C, Burnside K, Berry J, Ngo L, Banerjee A, Xue L, Arrington J, Doran KS, Tao WA, Rajagopal L (2015). The sensor histidine kinase RgfC affects group B streptococcal virulence factor expression independent of its response regulator RgfA. *Infect Immun*. **83**(3):1078-88.
19. Wang P, Du Y, Hou YJ, Zhao Y, Hsu CC, Yuan F, Zhu X, Tao WA, Song CP, Zhu JK (2015). Nitric oxide negatively regulates abscisic acid signaling in guard cells by S-nitrosylation of OST1. *Proc Natl Acad Sci U S A*. **112**(2):613-8.
20. Iiuk A, Jayasundera K, Wang WH, Schluttenhofer R, Geahlen RL, Tao WA (2015). In-depth analyses of B cell signaling through tandem mass spectrometry of phosphopeptides enriched by PolyMAC. *Intl J Mass Spec*. **377**:744-753.

21. Xue L, Wang P, Cao P, Zhu JK, Tao WA (2014). Identification of ERK1 Direct Substrates using Stable Isotope Labeled Kinase Assay-Linked Phosphoproteomics. *Mol Cell Proteomics*. **13**(11):3199-210.
22. Wang L, Pan L, Tao WA (2014). Specific visualization and identification of phosphoproteome in gels. *Anal Chem.* **86**(14):6741-7.
23. Jayasundera KB, Iliuk AB, Nguyen A, Higgins R, Geahlen RL, Tao WA (2014). Global Phosphoproteomics of Activated B Cells Using Complementary Metal Ion Functionalized Soluble Nanopolymers. *Anal Chem.* **86**(13):6363-71.
24. Searleman AC, Iliuk AB, Collier TS, Chodosh LA, Tao WA, Bose R (2014). Tissue phosphoproteomics with PolyMAC identifies potential therapeutic targets in a transgenic mouse model of HER2 positive breast cancer. Electrophoresis. **35**(24):3463-9.
25. Xue L, Geahlen RL, and Tao WA (2013). Identification of Direct Tyrosine Kinase Substrates Based on Protein Kinase Assay-Linked Phosphoproteomics. *Mol Cell Proteomics* **12**(10):2969-80.
26. Walls CD, Iliuk A, Bai Y, Wang M, Tao WA, Zhang ZY (2013). Phosphatase of regenerating liver 3 (PRL3) provokes a tyrosine phosphoproteome to drive prometastatic signal transduction. *Mol Cell Proteomics*. **12**(12):3759-77.
27. Huang R, Oh H, Arrendale A, Martin VA, Galan J, Workman EJ, Stout JR, Walczak CE, Tao WA, Borch RF, Geahlen RL (2013). Intracellular targets for a phosphotyrosine peptidomimetic include the mitotic kinesin, MCAK. *Biochem Pharmacol*. **86**(5):597-611.
28. Wang P, Xue L, Batelli G, Lee S, Hou YJ, Van Oosten MJ, Zhang H, Tao WA, Zhu JK (2013). Quantitative phosphoproteomics identifies SnRK2 protein kinase substrates and reveals the effectors of abscisic acid action. *Proc Natl Acad Sci U S A.* **110**:11205-10.
29. Xue L, Wang P, Wang L, Renzi E, Radivojac P, Tang H, Arnold R, Zhu JK, and Tao WA (2013). Quantitative measurement of phosphoproteome response to osmotic stress in Arabidopsis based on Library-Assisted eXtracted Ion Chromatogram (LAXIC). *Mol Cell Proteomics* **12**:2354-69.
30. Radu M, Rawat SJ, Beeser A, Iliuk A, Tao WA, Chernoff J (2013). ArhGAP15, a Rac-Specific GTPase Activating Protein, Plays a Dual Role in Inhibiting Small GTPase Signaling. *J Biol Chem.* **288**:21117-25.
31. Hu L, Yang L, Lipchik AM, Geahlen RL, Parker LL, Tao WA (2013). A Quantitative Proteomics-based Competition Binding Assay to Characterize pITAM-Protein Interactions. *Anal Chem.* **85**(10):5071-7.
32. Yu S, Huang H, Iliuk A, Wang WH, Jayasundera KB, Tao WA, Post CB, Geahlen RL (2013). Syk inhibits the activity of protein kinase a by phosphorylating tyrosine 330 of the catalytic subunit. *J Biol Chem*. 288(15):10870-81.
33. Puchulu-Campanella E, Chu H, Anstee DJ, Galan JA, Tao WA, Low PS (2013). Identification of the components of a glycolytic enzyme metabolon on the human red blood cell membrane. *J Biol Chem* **288**(2):848-58.
34. Xue L, Wang W, Hu L, Iliuk A, Geahlen RL, Tao WA (2012), Sensitive kinase assay linked with phosphoproteomics for identifying kinase substrates, *Proc. Natl. Acad. Sci. USA.* **109**(15):5615-20.

35. Pan L, Iliuk A, Yu S, Geahlen RL, Tao WA (2012). Multiplexed quantitation of protein expression and phosphorylation based on functionalized soluble nanopolymers. *J Am Chem Soc* **134**(44): 18201-4. Research highlights by *Nature Methods*, **9**(12), 1144.
36. Choo YS, Vogler G, Wang D, Kalvakuri S, Iliuk A, Tao WA, Bodmer R, Zhang Z (2012). Regulation of Parkin and PINK1 by Neddylation. *Hum Mol Genet.* **21**(11):2514-23.
37. Chu H, Puchulu-Campanella E, Galan JA, Tao WA, Low PS, Hoffman JF (2012). Identification of cytoskeletal elements enclosing the ATP pools that fuel humanred blood cell membrane cation pumps. *Proc Natl Acad Sci U S A* **109**(31):12794-9.
38. Iliuk A, Liu XS, Xue L, Liu X, Tao WA (2012). Chemical visualization of phosphoproteomes on membrane. *Mol Cell Proteomics* **11**(9):629-39.
39. Hu L, Tao WA (2011). Chemical enrichment of tyrosine phosphopeptides. *Chromatography (in Chinese)*. **29**(9):869-75.
40. Burnside K, Lembo A, Harrell MI, Gurney M, Xue L, BinhTran NT, Connelly JE, Jewell KA, Schmidt BZ, de los Reyes M, Tao WA, Doran KS, Rajagopal L (2011) Serine/threonine phosphatase Stp1 mediates post-transcriptional regulation of hemolysin, autolysis, and virulence of group B Streptococcus. *J Biol Chem*. **286**(51):44197-210.
41. Zhang JI, Tao WA, Cooks RG (2011). Facile determination of double bond position in unsaturated fatty acids and esters by low temperature plasma ionization mass spectrometry. *Anal Chem* 2011 **83**(12): 4738-44.
42. Hu L, Iliuk A, Galan J, Hans M, Tao WA (2011). Identification of Drug Targets in vitro and in Living Cells by Soluble Nanopolymer-based Proteomics. *Angew. Chem. Int. Ed.* **50**(18): 4133-36.
43. Zhang JI, Costa AB, Tao WA, Cooks RG (2011). Direct detection of fatty acid ethyl esters using low temperature plasma (LTP) ambient ionization mass spectrometry for rapid bacterial differentiation. *Analyst*. **136**(15):3091-7.
44. Iliuk A, Martinez J, Hall MC, Tao WA (2011). Phosphorylation assay based on functionalized soluble nanopolymer. *Anal. Chem.* **83**(7): 2767-74.
45. Galan J, Paris L, Zhang H, Min J, Adler J, Geahlen RL and Tao WA (2011). Identification of Syk-interacting proteins using a novel amines-specific isotopic tag and GFP nanotrap. *J. Am. Soc Mass Spec*. **22**(2): 319-28.
46. Zhang JI, Talaty N, Costa AB, Yu Xia, Tao WA, Bell R, Callahan JH, Cooks RG (2011). Rapid direct lipid profiling of bacteria using desorption electrospray ionization mass spectrometry, *Int. J. Mass Spec.* **301**: 37-44.
47. Girón ME, Estrella A, Sánchez EE, Galán J, Tao WA, Guerrero B, Salazar AM, Rodríguez-Acosta A (2011). Purification and characterization of a metalloproteinase, Porthidin-1, from the venom of Lansberg's hog-nosed pit vipers. *Toxicon*. **57**: 608-18.
48. Paris LL, Hu J, Galan J, Ong SS, Ma H, Tao WA, Harrison ML, and Geahlen RL (2010). Regulation of Syk by phosphorylation on serine in the linker insert. *J. Biol Chem.* **285**: 39844-39854.
49. Iliuk AB, Martin VA, Alicie BM, Geahlen RL and Tao WA (2010). In-depth analyses of kinase-dependent tyrosine phosphoproteomes based on metal ion functionalized soluble nanopolymers. *Mol Cell Proteomics*. **9**: 2162-2172.

50. Ding SL, Liu W, Iliuk A, Ribot C, Vallet J, Tao A, Wang Y, Lebrun MH, Xu JR (2010). The Tig1 Histone Deacetylase Complex Regulates Infectious Growth in the Rice Blast Fungus Magnaporthe oryzae. *Plant Cell* **22(7)**: 2495-2508.
51. Sanchez EE, Lucena SE, Reyes S, Soto JG, Cantu E, Lopez-Johnston JC, Guerrero B, Salazar AM, Rodriguez-Acosta A, Galan JA, Tao WA and Perez JC (2010). Cloning, expression, and hemostatic activities of a disintegrin, r-mojastin 1, from the mohave rattlesnake (Crotalus scutulatus scutulatus). *Thromb Res.* **126(3)**: e211-19.
52. Burnside K, Lembo A, de Los Reyes M, Iliuk A, Binhtran NT, Connelly JE, Lin WJ, Schmidt BZ, Richardson AR, Fang FC, Tao WA and Rajagopal L (2010). Regulation of hemolysin expression and virulence of Staphylococcus aureus by a serine/threonine kinase and phosphatase. *PLoS ONE* 5: e11071.
53. Silvestroni A, Jewell KA, Lin W-J, Connelly JE, Iliuk A, Ivancic MM, Tao WA and Rajagopal L (2009). Enrichment and identification of serine/threonine phosphopeptides from the human pathogen *Streptococcus agalactiae. J. .Proteome Res*. **8(5)**:2563-74.
54. Iliuk A and Tao WA (2009). Quantitative phospho-proteomics based on soluble nanopolymers. *Methods in Molecular Biology*. **527**: 117-29.
55. Salazar AM, Guerrero B, Cantu B, Cantu E, Rodríguez-Acosta A, Pérez JC, Galán JA, Tao WA, Sánchez EE (2009).Venom variation in hemostasis of the southern Pacific rattlesnake (Crotalus oreganus helleri): Isolation of hellerase. *Comp Biochem Physiol C Toxicol Pharmacol.* **149(3)**:307-16.
56. Iliuk A, Galan J, Tao WA (2009). Playing tag with quantitative proteomics. *Anal Bioanal Chem.* **393**(2):503-13.
57. Galan JA, Guo M, Sanchez EE, Cantu E, Rodriguez -Acosta A, Perez JC, and Tao WA (2008) Quantitative analysis of snake venom by soluble polymer-based isotope labeling, *Mol. Cell. Proteomics*, **7(3)**: 785-799.
58. Timmer JC, Enoksson M, Wildfang E, Zhu W, Igarashi Y, Denault J, Ma Y, Chang Y-H, Mast AE, Eroshkin A, Osterman A, Smith J, Tao WA, Salvesen GS (2007). Profiling constitutive proteolytic events *in vivo*. *Biochem. J.* **407(1)**:41-8.
59. Enoksson M, Li J, Ivancic MM, Timmer J, Wildfang E, Eroshkin A, Salvesen GS and Tao WA (2007). Identification of proteolytic cleavage sites by quantitative proteomics. *J. Proteome Res*. **6(7)**, 2850-2858.
60. Guo M, Galan J, Tao WA (2007). A novel quantitative proteomics reagent based on soluble nanopolymers, *Chem. Commun.*, 1251-1253.
61. Bodenmiller B, Mueller LN, Pedrioli PGA, Pflieger D, Jünger MA, Eng JK, Aebersold R, and Tao WA (2007). An integrated chemical, mass spectrometric and computational strategy for (quantitative) phosphoproteomics: Application to Drosophila melanogaster Kc167 Cells, *Mol. Biosys.* **3**, 275-286.
62. Song Y, Talaty N, Tao WA, Pan Z, Cooks RG (2007). Rapid ambient mass spectrometric profiling of intact, unteated bacteria using desorption electrospray ionization, *Chem. Commun.*, 61-63.
63. He XC, Yin T, Grindley JC, Tian Q, Sato T, Tao WA, Dirisina R, Porter-Westpfahl KS, Hembree M, Johnson T, Wiedemann LM., Barrett TA, Hood L, Wu H, Li L (2007). PTEN-deficient intestinal stem cells initiate intestinal polyposis, *Nature Genetics*, **39(2)**, 189-198.

64. Zhou F, Galan J, Geahlen RL, Tao WA (2007). A novel quantitative proteomics strategy to study phosphorylation-dependent peptide-protein interactions, *J. Proteome Res.* **6**, 133-40.
65. Cooks RG, Chen H, Eberlin MN, Zheng X, and Tao WA (2006). Polar acetalization and transacetalization in the gas phase: the Eberlin Reaction. *Chem. Rev.*, 106, 188-211.
66. Tao WA, Wollscheid B, O'Brien R, Eng J, Li X, Bodenmiller B, Watts J, Hood L and Aebersold R (2005). Quantitative phosphoproteome analysis using a dendrimer conjugation chemistry and mass spectrometry. *Nature Methods*. **2(8):** 591-598.
67. Tian Q, Freethman M, Tao WA, He X, Li L, Aebersold R and Hood L (2004). Proteomic analysis identifies 14-3-3ξ interacts and stabilizes β-catenin and facilitates its activation by Akt. *Proc. Natl. Acad. Sci. USA.* **101:** 15370-5.
68. Goo YA, Yi EC, Tao WA, Pan M, Aebersold R, Goodlett DR, Hood L and Ng WV (2004). Proteomic analysis of an extreme halophilic archaeon,Halobacterium sp. NRC-1. *Mol. Cell. Proteomics.* **2:** 506-24.
69. Tao WA and Cooks RG (2003). Chiral analysis by mass spectrometry. *Anal. Chem.* (A-page feature article) **75:** 25A-31A.
70. Tao WA, Cooks RG and Nikolaev EN (2002). Chiral preference in the dissociation of homogeneous amino acid/metal ion clusters. *Eur. J. Mass Spectrom.* **8:** 107-115.
71. Wu L, Tao WA and Cooks RG (2002). Ligand and metal-ion effects in metal-ion clusters used for chiral analysis of alpha-hydroxy acids by the kinetic method. *Anal. Bioanal. Chem.* **373(7):** 618-627.
72. Tao WA, Clark RL and Cooks RG (2002). Quotient ratio method for quantitative enantiomeric determination by mass spectrometry. *Anal. Chem.* **74:** 3783-3789.
73. Tao WA, Wu L, Cooks RG, Wang F, Begley JA and Lampert B (2001). Rapid enantiomeric quantification of an antiviral nucleoside agent (D,L-FMAU, 2'-fluoro-5-methyl-β-D,L-arabinofuranosyluracil) by mass spectrometry. *J. Med. Chem.* **44(22):** 3541-3544.
74. Tao WA, Gozzo FC and Cooks R (2001). Mass spectrometric quantitation of chiral drugs by the kinetic method. *Anal. Chem.* **73(8):** 1692-1698.
75. Tao WA and Cooks RG (2001). Parallel reactions for enantiomeric quantification of peptides by the mass spectrometry. *Angew. Chem. Intl. Ed.* **40(4):** 757-760; *Angew. Chem.* **113:** 779-782.
76. Zhang D, Tao WA and Cooks RG (2001). Chiral recognition of D- and L-amino acids based on the nickle(II)-bound complexes. *Intl. J. Mass Spectrom.* **204(1-3):** 159-169.
77. Nikolaev EN, Davankov VA, Lunine JI, Tao WA and Cooks RG (2001). Possible strategies for enantiomeric excess determination by mass spectrometry and chromatography-mass spectrometry under extraterrestrial conditions. *Adv. Mass Spectrom.* **15:** 509-510.
78. Cooks RG, Tao WA, Nikolaev EN, Davankov VA and Lunine JI (2001). Experiments aimed at evaluation of strategies for enantiomeric excess determination by mass spectrometry under extraterrestrial conditions. *Adv. Mass Spectrom.* **15:** 349-350.
79. Tao WA and Gilpin RK (2001). Liquid chromatographic studies of the effect of phosphate on the binding properties of silica-immobilized bovine serum albumin. *J. Chrom. Sci.* **39(5):** 205-212.
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ketals. *J. Chem. Soc. Perkin Trans. 2* **3:** 350-355.

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84. Tao WA, Zheng X and Cooks RG (2000). Synthesis of B,N,O-containing heterocycles via reaction of an aminoborinium ion with cyclic acetals and ketals. *J. Mass Spectrom.* **35(10):**1215-1221.
85. Tao WA, Wu L and Cooks RG (2000). Rapid enantiomeric determination of □-hydroxy acids by electrospray ionization tandem mass spectrometry. *Chem. Comm.* **20:** 2023-2024.
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Book Chapters

1. Xue L, Arrington JV, Tao WA (2015). Identification of Direct Kinase Substrates via Kinase Assay-Linked Phosphoproteomics. *Methods Mol Biol.* **1355**:263-73.
2. Arrington JV, Xue L, Tao WA (2014). Quantitation of the phosphoproteome using the library-assisted extracted ion chromatogram (LAXIC) strategy. *Methods Mol Biol.* **1156**:407-16.
3. Galan J, Iliuk A and Tao WA (2012). Quantitative Proteomics by Mass spectrometry, in Mass Spectrometry of Proteins and Peptides in Drug Discovery, Chen G, Gross ML and Pramanik eds., Wiley & Sons, New York.
4. Iliuk A, Jayasundera K, Schluttenhofer R, Tao WA (2011). Functionalized soluble nanopolymers for phosphoproteome analysis. *Methods Mol Biol.* **790**:277-85.
5. Liu W, Iliuk A, Tao WA, Ding S (2011). Identifying protein complexes by affinity purification and mass spectrometry analysis in the rice blast fungus. *Fungal Genomics.* Chapter 11. *Methods in Molecular Biology*. **722**: 157-166.
6. Galan J, Iliuk A and Tao WA (2011). Quantitative Proteomics by Mass spectrometry, in Mass Spectrometry of Proteins and Peptides in Drug Discovery, Chen, G. and Gross, M. eds., Wiley &

Sons, New York.
7. Iliuk A, Jayasundera K, Schluttenhofer R, Tao WA (2011). Functionalized Soluble Nanopolymers for Phosphoproteome Analysis. *Nanoproteomics: Methods and Protocols*. Chapter 27. *Methods in Molecular Biology*. Humana Press, New York.
8. Tian Q and Tao WA (2008), Proteomics in stem cells, in *Chemical and Functional Genomic Approaches to Stem Cell Biology and Regenerative Medicine*, Ding S eds., Wiley & Sons, New York.
9. Tao WA, Bodenmiller B, and Aebersold R (2007), Characterization of post-translational modifications: undertaking the phosphoproteome, in *Method Express-Proteomics*, O'Connor, D. ed., Scion Publishing, London.
10. Tao WA and Aebersold R (2004). Quantitative proteomics via mass spectrometry and stable isotope dilution, in Encyclopedia of Mass Spectrometry on Biological Applications, Caprioli, R. and Gross, M. eds., Wiley & Sons, New York.

Invited Review
1. Iliuk AB, Arrington JV, Tao WA (2014). Analytical Challenges Translating Mass Spectrometry-based Phosphoproteomics from Discovery to Clinical Applications. *Electrophoresis*. **35**(24):3430-40.
2. Iliuk AB, Tao WA (2013). Is phosphoproteomics ready for clinical research? *Clin Chim Acta*. 420:23-27.
3. Tao WA, Coon J (2013). 2012 ASMS Fall Workshop: Mass Spectrometry-Based Phosphorylation Analysis and Phosphoproteomics. *J Am Soc Mass Spectrom* **24**(3):464-5.
4. Xue L and Tao WA (2013). Current technologies to identify protein kinase substrates in high throughput. *Frontiers in Biology* **8**(2):261-277.
5. Iliuk AB, Hu L, Tao WA (2011). Aptamer in bioanalytical applications. *Anal Chem.* **83**(12): 4440-52.
6. Tao WA (2010). Chiral recognition in the gas phase. *J. Am. Chem. Soc.*, **132**, 15457.
7. Tao WA (2007). Soluble polymers-based isotopic labeling (SoPIL): a new strategy to discover protein biomarkers? *Expert Review of Proteomics*, **4(5)**, 603-607.
8. Guo M, Galan J, Tao WA (2007). Soluble nanopolymers-based phosphoproteomics for studying protein phosphatase, *Methods*, **42(3)**, 289-297.
9. Tao WA and Aebersold R (2003). Advances in quantitative proteomics via stable isotope tagging and mass spectrometry. *Curr. Opin. Biotechnol.* **14:** 110-118.

VII. INVITED LECTURES/ KEYNOTE SPEECHES (from 2005)
1. Invited speaker. Nankai University. October 2016.
2. Invited speaker. 2016 Pittcon. Atlanta. March 2016.
3. Seminar speaker. Department of Crop Sciences. University of Illinois- at Urbana-Champaign. February 2016.
4. Keynote speaker, 2015 HPLC conference. Beijing. Sep 2015.
5. Invited speaker, 30th Beijing Conference and Exhibition on Instrumental Analysis (BCEIA). Beijing. Oct 2015.
6. Invited speaker, 4th World Chinese American Mass Spectrometry Conference. Oct 2015.
7. Seminar speaker, Nanjing University, Southeastern University, and Chinese Pharmaceutical University. China. Dec 2015.
8. Invited speaker, Posttranslational Modification Networks, 2015 Gordon Research Conference.

Hong Kong, China. July 5-10, 2015.
9. Keynote speaker, 2014 International Mass Spectrometry Conference. Geneva, Switzerland. Aug. 24, 2014
10. Invited speaker and session chair, 2014 Canadian Society of Chemistry (CSC) Annual Conference. Vancouver, BC. June 02, 2014
11. Beijing Union Medical College, Beijing, China. May 12, 2014
12. Dalian Institute of Chemical Physics, Chinese Academy of Science. Oct. 15, 2013
13. ACS National Meeting. Sep. 10, 2013
14. University of Notre Dame. Aug 29, 2013
15. University of Wisconsin-Madison. Aug 01, 2013
16. Zhongnan University. Changsha, China. May 09, 2013
17. Northwestern Agriculture and Forest University. Yangling, China. May 13, 2013
18. Nankai University. Tianjin, China. May 28, 2013
19. Chinese Academy of Science, Beijing. June 03, 2013.
20. Wright State University, OH. Nov. 16, 2012.
21. Valparaiso University, IN. Oct 26, 2012.
22. University of Washington. Seattle, WA. May 17, 2012.
23. Ohio University, Athens, OH. November 14, 2011.
24. National Institute of Biological Sciences (NIBS). Beijing, China. Oct 2011.
25. Washington University. St. Louis, MO. Feb. 22 2011.
26. National Taiwan University. Taipei, Taiwan. January 2011.
27. Academia Sinica. Taipei, Taiwan. Dec 2010.
28. National Yang Ming University. Taipei, Taiwan. Dec 2010.
29. Beijing Institute of Chemistry. Chinese Academy of Science, Beijing. July 2010.
30. Dalian Institute of Chemical Physics. Chinese Academy of Science, Dalian. July 2010.
31. Pfizer Inc. San Diego, CA. February 2009.
32. School of Medicine, Yang-Ming University, Taipei. July 2008.
33. Institute of Chemistry, Chinese Academy of Science (CAS), Beijing, China. March 2008.
34. Department of Chemistry, Washington State University, Pullman, WA. February 2008.
35. Institute of Bioinformatics, Indiana University, Bloomington, IN. October 2007.
36. Peking University, Beijing. October 2007.
37. Beijing University of Chemistry and Chemical Engineering, Beijing. October 2007.
38. Nankai University, Tianjin. October 2007.
39. Shanghai Institute of Materia Medica, Chinese Academy of Science. Shanghai, China. May 2007.
40. National Yang-Ming University, Taipei, ROC. May 2007.
41. Institute of Chemistry, Academia Sinica, Taipei, ROC. May 2007.
42. Department of Chemistry & Chemical Biology, Indiana University-Purdue University in Indianapolis, April 2007.
43. Department of Chemistry, Texas A&M University- Kingsville, September 2006. Indiana University School of Medicine, Indianapolis, IN. Oct 2005.
44. Targeted proteomics based on dendrimer nanoprobes and mass spectrometry, Indiana University School of Medicine, Indianapolis, IN. Oct 2005.