

TAB D

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Education

1993 B.S. Chemistry, Framingham State College, Framingham, Massachusetts
1997 Ph.D. Analytical Chemistry, Florida State University, Tallahassee, Florida

Work Experience

1/92-6/93	Research Assistant, US Army Research and Development Center, Food Science Program, Natick, Massachusetts
1/94-8/97	Research Assistant, Florida State University, Tallahassee, Florida
9/97-5/99	Research Associate, University of Virginia, Charlottesville, Virginia
5/99-1/01	Senior Scientist, Proteome Research Institute, Charlottesville, Virginia
1/01-4/02	Research Scientist, MDS Proteomics, Inc., Charlottesville, Virginia
4/02 – 10/02	Senior Research Scientist, MDS Proteomics, Inc.
10/02 – 6/03	Project Manager and Group Leader, MDS Proteomics, Inc.
7/03 – 7/07	Assistant Professor, Biological Engineering Division, Massachusetts Institute of Technology, Cambridge, MA
7/07 – 7/14	Associate Professor, Department of Biological Engineering, Massachusetts Institute of Technology, Cambridge, MA
7/14 -	Professor, Department of Biological Engineering, Massachusetts Institute of Technology, Cambridge, MA

Publications

- 1) Kim, H.J.; Ball, D.; Giles, J.; White, F.M. "Analysis of Thermally Produced Compounds in Food by Thermospray Liquid Chromatography-Mass Spectrometry and Gas Chromatography-Mass Spectrometry", *J. Agri. Food Chem.* **42**, 2812-16 (1994).
- 2) Marto, J.A.; White, F.M.; Seldomridge, S.; Marshall, A.G. "Structural Characterization of Phospholipids by Matrix-Assisted Laser Desorption/Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry", *Anal. Chem.* **67**, 3979-3984 (1995).

- 3) Solouki, T.; Marto, J.A.; White, F.M.; Guan, S.; Marshall, A.G. "Attomole Biomolecule Mass Analysis by Matrix-Assisted Laser Desorption/Ionization Fourier Transform Ion Cyclotron Resonance", *Anal. Chem.* **67**, 4139-4144 (1995).
- 4) White, F.M.; Marto, J.A.; Marshall, A.G. "An External Source 7 Tesla FT-ICR Mass Spectrometer with Electrostatic Ion Guide", *Rapid Commun. Mass Spectrom.* **10**, 1845-1849 (1996).
- 5) Senko, M.W.; Hendrickson, C.L.; Pasa-Tolic, L.; Marto, J.A.; White, F.M.; Guan, S.; Marshall, A.G. "Electrospray Ionization Fourier Transform Ion Cyclotron Resonance at 9.4 Tesla", *Rapid Commun. in Mass Spectrom.* **10**, 1824-1828 (1996).
- 6) Milgram, K.E.; White, F.M.; Goodner, K.L.; Watson, C.H.; Koppenaal, D.W.; Baringa, C.J.; Smith, B.H.; Winefordner, J.D.; Marshall, A.G.; Houk, R.S.; Eyler, J.R. "High Resolution Inductively Coupled Plasma Fourier Transform Ion Cyclotron Resonance Mass Spectrometry" *Anal. Chem.* **69**, 3714-3721 (1997).
- 7) Jackson, G.S.; White, F.M.; Hammill, C.L.; Clark, R.C.; Marshall, A.G. "Gas Phase Dehydrogenation of Saturated and Aromatic Cyclic Hydrocarbons by $(Pt_n)^+$, n = 1-4", *J. Am. Chem Soc.* **119**, 7567-7572 (1997).
- 8) Emmett, M.R.; White, F.M.; Hendrickson, C.L.; Shi, S.D.-H.; Marshall, A.G. "Application of Micro-Electrospray Liquid Chromatography Techniques to FT-ICR MS to Enable High-Sensitivity Biological Analysis", *J. Am. Soc. Mass Spectrom.* **9**, 333-340 (1998).
- 9) Rodgers, R.P.; White, F.M.; McIntosh, D.G.; Marshall, A.G. "5.6 Tesla Fourier Transform Ion Cyclotron Resonance Mass Spectrometer for Analysis of Volatile Complex Mixtures", *Rev. Sci. Inst.* **69**, 2278-2284 (1998).
- 10) Rodgers, R.P.; White, F.M.; Hendrickson, C.L.; Marshall, A.G.; Andersen, K.V. "Resolution, Elemental Composition, and Simultaneous Monitoring by Fourier Transform Ion cyclotron Resonance Mass Spectrometry of Organosulfur Species Before and After Diesel Fuel Processing", *Anal. Chem.* **70**, 4743-4750 (1998).
- 11) Shabanowitz, J.; Settlage, R.E.; Marto, J.A.; Christian, R.E.; White, F.M.; Russo, P.S.; Martin, S.E.; Hunt, D.F. "Sequencing the Primordial Soup", In *Mass Spectrometry in Biology and Medicine*, A.L. Burlingame, S.A. Carr, and M.A. Baldwin, eds. Humana Press, Totowa, N.J. (1999)
- 12) Pierce, R.A.; Field, E.D.; den Haan, J.M.M.; Caldwell, J.A.; White, F.M.; Marto, J.A.; Wang, W.; Frost, L.M.; Blokland, E.; Reinhardus, C.; Shabanowitz, J.; Hunt, D.F.; Goulmy E.; Engelhard V.H. "Cutting edge: The HLA-A*0101-restricted HY minor histocompatibility antigen originates from DFFRY and contains a cysteinylated cysteine residue as identified by a novel mass spectrometric technique", *J. Immunol.* **163**, 6360-6364 (1999).
- 13) Crotzer, V.L.; Christian, R.E.; Brooks, J.M.; Shabanowitz, J.; Settlage, R.E.; Marto, J.A.; White, F.M.; Rickinson, A.B.; Hunt, D.F.; Engelhard, V.H. "Immunodominance among EBV-derived epitopes restricted by HLA-B27 does not correlate with epitope abundance in EBV-transformed B-lymphoblastoid cell lines", *J. Immunol.* **164**, 6120-6129 (2000).
- 14) Huberman, A.; Aguilar, M.B.; Navarro-Quiroga, I.; Ramos, L.; Fernandez, I.; White, F.M.; Hunt, D.F.; Shabanowitz, J. "A hyperglycemic peptide hormone from the Caribbean shrimp *Penaeus (litopenaeus) schmitti*", *Peptides* **21**, 331-338

- (2000).
- 15) Zarling, A.L.; Ficarro, S.B.; White, F.M.; Shabanowitz, J.; Hunt, D.F.; Engelhard, V.H. “Phosphorylated peptides are naturally processed and presented by MHC class I molecules *in vivo*”, *J. Exp. Med.* **192**, 1755-1762 (2000).
- 16) Gimenez-Bonafe, P.; Laszczak, M.; Kassinsky, H.E.; Lemke, M.J.; Lewis, J.D.; Iskandar, M.; He, T.; Ikonomou, M.G.; White, F.M.; Hunt, D.F.; Chiva, M.; Ausio, J. “Characterization and evolutionary relevance of the sperm nuclear basic proteins from stickleback fish”, *Mol. Repro. and Dev.* **57**, 185-193 (2000).
- 17) Luckey, C.J.; Marto, J.A.; Partridge, M.; Hall, E.; White, F.M.; Lippolis, J.D.; Shabanowitz, J.; Hunt, D.F.; Engelhard, V.H. “Differences in the expression of Human MHC class I alleles and their associated peptides in the presence of proteasome inhibitors”, *J. Immunol.*, **167**, 1212-1221 (2001).
- 18) Nepom, G.T.; Lippolis, J.D.; White, F.M.; Masewicz, S.; Marto, J.A.; Herman, A.; Luckey, C.J.; Falk, B.; Shabanowitz, J.; Hunt, D.F.; Engelhard, V.H. “Identification and modulation of a naturally processed T-cell epitope from the diabetes-associated autoantigen hGAD65”, *Proc. Nat. Acad. Sci.* **98**, 1763-1768 (2001).
- 19) Ficarro, S.B.; McCleland, M.L.; Stukenberg, P.T.; Burke, D.J.; Ross, M.M.; Shabanowitz, J.; Hunt, D.H.; White, F.M. “Phosphoproteome analysis by mass spectrometry and its application to *Saccharomyces cerevisiae*”, *Nat. Biotechnol.* **20**, 301-305 (2002).
- 20) Flyer, D.C.; Ramakrishna, V.; Miller, C.; Myers, H.; McDaniel, M.; Root, K.; Flournoy, C.; Engelhard, V.H.; Canaday, D.H.; Marto, J.A.; Ross, M.M.; Hunt, D.F.; Shabanowitz, J.; White, F.M. “Identification by mass spectrometry of CD8+-T-Cell *Mycobacterium tuberculosis* epitopes within the Rv0341 gene product”, *Infect. Immun.* **70**, 2926-2932 (2002).
- 21) Goeli, D.; Ficarro, S.B.; Kwiek, J.J.; Aaronson, D.; Hancock, M.; Catling, A.D.; White, F.M.; Christian, R.E.; Settlage, R.E.; Shabanowitz, J.; Hunt, D.F.; Weber, M.J. “Androgen receptor phosphorylation – regulation and identification of the phosphorylation sites”, *J. Biol. Chem.*, **277**, 29304-29314 (2002).
- 22) Lippolis, J.D.; White, F.M.; Marto, J.A.; Luckey, C.J.; Bullock, T.N.; Shabanowitz, J.; Hunt, D.F.; Engelhard, V.E. “Analysis of MHC Class II Antigen Processing by Quantitation of Peptides that Constitute Nested Sets”, *J. Immunol.* **169**, 5089-5097 (2002).
- 23) Ficarro, S.B.; Chertihin, O.; Westbrook, V.A.; White, F.M.; Jayes, F.; Kalab, P.; Marto, K.A.; Shabanowitz, J.; Herr, J.C.; Hunt, D.F.; Visconti, P.E. “Phosphoproteome of capacitated human sperm”, *J. Biol. Chem.* **278**, 11579-11589 (2003).
- 24) Saibil, S.D.; Ohteki, T.; White, F.M.; Luscher, M.; Zakarian, A.; Elford, A.; Shabanowitz, J.; Nishina, H.; Hugo, P.; Penninger, J.; Barber, B.; Hunt, D.F.; Ohashi, P.S. “Weak agonist self-peptides promote selection and tuning of virus-specific T cells”, *Eur. J. Immunol.* **33**, 685-696 (2003).
- 25) Zarling, A.H.; Luckey, C.J.; Marto, J.A.; White, F.M.; Brame, C.J.; Lehner, P. J.; Cresswell, P.; Shabanowitz, J.; Hunt, D.F.; Engelhard, V.H. “Tapasin is a facilitator, not an editor, of HLA-B8 peptide binding” *J. Immunol.* **171**, 5287-5295 (2003).

- 26) Chen, W.G.; White, F.M. "Proteomic Analysis of Cellular Signaling" *Expert Rev. Proteomics* **1**, 343-354 (2004). (Invited Review)
- 27) Zhang, Y; Wolf-Yadlin, A.; Pappin, D.J.; Rush, J.; Lauffenburger, D.A.; White, F.M. "Time resolved mass spectrometry of tyrosine phosphorylation sites in the EGF receptor signaling network reveals dynamic modules" *Mol. Cell. Proteomics* **4**, 1240-1250 (2005).
- 28) Kim, J.E.; Tannenbaum, S.R.; White, F.M. "Global phosphoproteome of HT-29 human colon adenocarcinoma cells" *J. Proteome Res.* **4**, 1339-1346 (2005).
- 29) Behr, J.R.; Matsumoto, Y.; White, F.M.; Sasisekharan, R. "Quantification of Isomers from a Mixture of twelve heparin and heparan sulfate disaccharides using tandem mass spectrometry" *Rapid Commun. in Mass Spectrom.* **19**, 2553-2562 (2005).
- 30) Moser, K.; White, F.M. "Phosphoproteomic Analysis of Rat Liver by High Capacity IMAC and LC-MS/MS" *J. Proteome Res.* **5**, 98-104 (2006).
- 31) Kim, J.E.; White F.M. "Quantitative Analysis of Phosphotyrosine Signaling Networks triggered by CD3 and CD28 co-stimulation in Jurkat cells" *J. Immunol.*, **176**, 2833-2843 (2006).
- 32) Brar, G.A.; Kiburz, B.M.; Zhang, Y.; Kim, J.E.; White, F.M.; Amon, A. "Rec8 phosphorylation and recombination promote the stepwise loss of cohesions in meiosis" *Nature*, **441**, 532-536 (2006)
- 33) Schmelzle, K.; Kane, S.; Gridley, S.; Lienhard, G.E.; White, F.M. "Temporal Dynamics of Tyrosine Phosphorylation in Insulin Signaling" *Diabetes*, **55**, 2171-2179 (2006).
- 34) Schmelzle, K.; White, F.M. "Proteomic approaches to elucidate cellular signaling networks" *Current Opin. Biotechnol.* **17**, 406-414 (2006) (Invited Review)
- 35) Wolf-Yadlin, A.; Kumar, N.; Zhang, Y.; Hautaniemi, S.; Zaman, M.; Kim, H.-D.; Grantcharova, V.; Lauffenburger, D.A.; White, F.M. "Quantitative Phosphoproteomic Analysis of HER2-overexpression effects on Cell Signaling Networks governing proliferation and migration" *Mol. Systems Biol.* **2**, 54 (2006).
- 36) Albeck, J.G.; MacBeath, G.; White F.M.; Sorger, P.K.; Lauffenburger, D.A.; Gaudet, S. "Collecting and organizing systematic sets of protein data" *Nat. Rev. Mol. Cell Biol.*, **7**, 803-812 (2006)
- 37) Tannenbaum, S.R.; White F.M. "Regulation and specificity of S-nitrosylation and denitrosylation" *ACS Chem. Biol.*, **1**, 615-618 (2006)
- 38) Kumar, N.; Wolf-Yadlin, A.; White F.M.; Lauffenburger, D.A. "Modeling HER2 effects on cell behavior from mass spectrometry phosphotyrosine data" *PLOS Comp. Biol.*, **3**, e4 (2007).
- 39) Wilker, E.W.; van Vugt, M.; Artim, S.A.; Huang, P.H.; Petersen, C.P.; Reinhardt, H.C.; Feng, Y.; Sharp, P.A.; Sonenberg, N.; White, F.M.; Yaffe, M.B. "14-3-3s controls mitotic translation to facilitate cytokinesis" *Nature*, **446**, 329-332 (2007).
- 40) Yaffe, M.B.; White F.M. "Signaling netwErks get the global treatment" *Genome Biol.* **8**, 202 (2007).
- 41) Wolf-Yadlin, A.; Hautaniemi, S.; Lauffenburger, D.A.; White, F.M. "Multiple reaction monitoring for robust quantitative analysis of cellular signaling networks" *Proc. Nat. Acad. Sci.* **104**, 5860-5865 (2007).
- 42) Zhang, Y.; Wolf-Yadlin, A.; White, F.M. "Quantitative Proteomic Analysis of

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