

Recent ICBC Member Publications

Aebersold R. Quantitative proteomics and systems biology. *FASEB J* 21(5):A212-A212, 2007.

Au E, Richter MW, Vincent AJ, Tetzlaff W, Aebersold R, Sage EH, Roskams AJ. SPARC from olfactory ensheathing cells stimulates Schwann cells to promote neurite outgrowth and enhances spinal cord repair. *J Neurosci* 27(27):7208-7221, 2007.

Baker ES, Clowers BH, Li F, Tang K, Tolmachev AV, Prior DC, Belov ME, Smith RD. Ion mobility spectrometry-mass spectrometry performance using electrodynamic ion funnels and elevated drift gas pressures. *J Am Soc Mass Spectrom* 18(7):1176-1187, 2007.

Bodenmiller B, Mueller LN, Pedrioli PGA, Pflieger D, Juenger MA, Eng JK, Aebersold R, Tao WA. An integrated chemical, mass spectrometric and computational strategy for (quantitative) phosphoproteomics: application to *Drosophila melanogaster* Kc167 cells. *Mol Biosyst* 3(4):275-286, 2007.

Brunner E, Ahrens CH, Mohanty S, Baetschmann H, Loevenich S, Potthast F, Deutsch E W, Panse C, de Lichtenberg U, Rinner O, Lee H, Pedrioli PGA, Malmstrom J, Koehler K, Schimpf S, Krijgsveld J, Kregenow F, Heck AJR, Hafen E, Schlapbach R, Aebersold R. A high-quality catalog of the *Drosophila melanogaster* proteome. *Nat Biotechnol* 25(5): 576-583, 2007.

Chan EY, Qian WJ, Diamond DL, Liu T, Gritsenko MA, Monroe ME, Camp II DG, Smith RD, Katze MG. Quantitative analysis of human immunodeficiency virus type 1-infected CD4(+) cell proteome: Dysregulated cell cycle progression and nuclear transport coincide with robust virus production. *J Virol* 81(14):7571-7583, 2007.

Chaurand P, Schriver KE, Caprioli RM. Instrument design and characterization for high resolution MALDI-MS imaging of tissue sections. *J Mass Spectrom* 42(4):476-489, 2007.

Chen M, Ying WT, Song YP, Liu X, Yang B, Wu SF, Jiang Y, Cai Y, He FC, Qian X. Analysis of human liver proteome using replicate shotgun strategy. *Proteomics* 7(14):2479-2488, 2007.

Chen R, Brentnall TA, Pan S, Cooke K, Moyes KW, Lane Z, Crispin DA, Goodlett DR, Aebersold R, Bronner MP. Quantitative proteomics analysis reveals that proteins differentially expressed in chronic pancreatitis are also frequently involved in pancreatic cancer. *Mol Cell Proteomics* 6(8):1331-1342, 2007.

Chen R, Pan S, Cooke K, Moyes KW, Bronner MP, Goodlett DR, Aebersold R, Brentnall TA. Comparison of pancreas juice proteins from cancer versus pancreatitis using quantitative proteomic analysis. *Pancreas* 34(1):70-79, 2007.

Chin MH, Geng AB, Khan AH, Qian WJ, Petyuk VA, Boline J, Levy S, Toga AW, Smith RD, Leahy RM, Smith DJ. A genome-scale map of expression for a mouse brain section obtained using voxelation. *Physiol Genomics* 30(3):313-321, 2007.

Deng GH, Zhang R, Zhou GQ, Chen L, He FC, Wang YM. Relation between T29C single nucleotide polymorphism of estrogen receptor alpha (ESR1) and HBV-related hepatocellular carcinoma in a Chinese population. *J Hepatol* 46:S103-S103 255 Suppl. 1, 2007.

Faca V, Pitteri SJ, Newcomb L, Glukhova V, Phanstiel D, Krasnoselsky A, Zhang Q, Struthers J, Wang H, Eng J, Fitzgibbon M, McIntosh M, Hanash S. Contribution of protein fractionation to depth of analysis of the serum and plasma proteomes. *J Proteome Res* 6(9):3558-3565, 2007.

Fang CY, Chiang CY, Pan YR, Tse KP, Chang YS, Chang HY. Modulation of Epstein-Barr virus latent membrane protein 1 activity by intrabodies. *Intervirology* 50(4):254-263, 2007.

Forrester S, Qiu J, Mangold L, Partin A, Misek D, Phinney B, Whitten D, Andrews P, Diamandiss E, Omenn GS, Hanash S, Haab BB. Ion experimental strategy for quantitative analysis of the humoral immune response to prostate cancer antigens using natural protein microarrays. *Proteomics Clin Appl* 1(5):494-505, 2007.

Garcia J, Faca V, Jarzembowski J, Zhang Q, Hanash S. High resolution quantitative cell surface proteomic analysis of more and less mature SY5Y neuroblastoma cells identifies markers which can distinguish more from less mature neuroblastoma tumors in tissue microarray analysis. *Pediatr Blood Cancer* 48(6):639-639, 2007.

Gingras AC, Gstaiger M, Raught B, Aebersold R. Analysis of protein complexes using mass spectrometry. *Nat Rev Mol Cell Biol* 8(8):645-654, 2007.

Hamblin M, Friedman DB, Hill S, Caprioli RM, Smith HM, Hill MF. Alterations in the diabetic myocardial proteome coupled with increased myocardial oxidative stress underlies diabetic cardiomyopathy. *J Mol Cell Cardiol* 42(4):884-895, 2007.

Huang WC, Hsu RM, Chi LM, Leu YL, Chang YS, Yu, JS. Selective downregulation of EGF receptor and downstream MAPK pathway in human cancer cell lines by active components partially purified from the seeds of *Livistona chinensis* R. Brown. *Cancer Lett* 248(1):137-146, 2007.

Hui CK, Zhang HY, Lee NP, Chan W, Yueng YH, Leung KW, Lue L, Leung N, Lo CM, Fan ST, Luk JM, Xu A, Lam KS, Kwong YL, Lau GKK. (for The Hong Kong Liver Fibrosis Study Group). Serum adiponectin is increased in advancing liver fibrosis and declines with reduction in fibrosis in chronic hepatitis B. *J Hepatol* 47(2):191-202, 2007.

Ioannou GN, Splan MF, Weiss NS, McDonald GB, Beretta L, Lee SP. Incidence and predictors of hepatocellular carcinoma in patients with cirrhosis. *Clin Gastroenterol Hepatol* 5(8):938-945, 2007.

Kang H, Pasa-Tolic L, Smith RD. Targeted tandem mass spectrometry for high-throughput comparative proteomics employing NanoLC-FTICR MS with external ion dissociation. *J Am Soc Mass Spectrom* 18(7):1332-1343, 2007.

Karlan BY, McIntosh M. The quest for ovarian cancer's holy grail: Can CA-125 still be the chalice of early detection? *J Clin Oncol* 25(11):1303-1304, 2007.

Kelly RT, Page JS, Tang KQ, Smith RD. Array of chemically etched fused-silica emitters for improving the sensitivity and quantitation of electrospray ionization mass spectrometry. *Anal Chem* 79(11):4192-4198, 2007.

Kuick R, Misek DE, Monsma DJD, Webb CP, Wang H, Peterson KJ, Pisano M, Omenn GS, Hanash SM. Discovery of cancer biomarkers through the use of mouse models. *Cancer Lett* 249(1):40-48, 2007.

Lam H, Deutsch EW, Eddes JS, Eng JK, King N, Stein SE, Aebersold R. Development and validation of a spectral library searching method for peptide identification from MS/MS. *Proteomics* 7(5):655-667, 2007.

Lee M, Yoo HS. Human Raf-1 proteins associate with Rad24 and Cdc25 in cell-cycle checkpoint pathway of fission yeast, *Schizosaccharomyces pombe*. *J Cell Biochem* 101(2):488-497, 2007.

Lessard J, Wu JI, Ranish JA, Wan M, Winslow MM, Staahl BT, Wu H, Aebersold R, Graef IA, Crabtree GR. An essential switch in subunit composition of a chromatin remodeling complex during neural development. *Neuron* 55(2):201-215, 2007.

Li L, Deng BW, Xing GC, Teng Y, Tian CY, Cheng X, Yin XS, Y JT, Gao X, Zhu YP, Sun QH, Zhang LQ, Yang X, He FC. PACT is a negative regulator of p53 and essential for cell growth and embryonic development. *Proc Natl Acad Sci U S A* 104(19):7951-7956, 2007.

Liu T, Belov ME, Jaitly N, Qian WJ, Smith RD. Accurate mass measurements in proteomics. *Chem Rev* 107(8):3621-3653, 2007.

Lowery DM, Clauser KR, Hjerrild M, Lim D, Alexander J, Kishi K, Ong SE, Gammeltoft S, Carr SA, Yaffe MB. Proteomic screen defines the Polo-box domain interactome and identifies Rock2 as a PIK1 substrate. *EMBO J* 26(9):2262-2273, 2007.

Luk JM, Wang X, Liu P, Wong KF, Chang KL, Tong Y, Hui CK, Lau GK, Fan ST. Traditional Chinese herbal medicines for treatment of liver fibrosis and cancer: from laboratory discovery to clinical evaluation. *Liver Int* 27(7): 879-890, 2007.

Manes NP, Gustin JK, Rue J, Mottaz HM, Purvine SO, Norbeck AD, Monroe ME, Zimmer JSD, Metz TO, Adkins JN, Smith RD, Heffron F. Targeted protein degradation by *Salmonella* under phagosome-mimicking culture conditions investigated using comparative peptidomics. *Mol Cell Proteomics* 6(4):717-727, 2007.

Mato JM, He FC, Beretta L. The 2006 Human Liver Proteome Project (HLPP) Workshops. *Proteomics Clin Appl* 1(5):442-445, 2007.

May D, Fitzgibbon M, Liu Y, Holzman T, Eng J, Kemp CJ, Whiteaker J, Paulovich A, McIntosh M. A platform for accurate mass and time analyses of mass spectrometry data. *J Proteome Res* 6 (7):2685-2694, 2007.

McIntosh MW, Liu Y, Drescher C, Urban N, Diamandis EP. Validation and characterization of human kallikrein 11 as a serum marker for diagnosis of ovarian carcinoma. *Clin Cancer Res* 13(15):4422-4428, 2007.

McIntosh M. The need to characterize and report the normal heterogeneity of proteins in clinical biological samples. *J Proteome Res* 6(8):2913-2913, 2007.

McLean JA, Ridenour WB, Caprioli RM. Profiling and imaging of tissues by imaging ion mobility-mass spectrometry. *J Mass Spectrom* 42(8):1099-1105, 2007.

Orton CR, Liebler DC. Analysis of protein adduction kinetics by quantitative mass spectrometry - Competing adduction reactions of glutathione-S-transferase P1-1 with electrophiles. *Chem Biol Interact* 168(2):117-127, 2007.

Parastatidis I, Thomson L, Fries DM, Moore RE, Tohyama J, Fu XM, Hazen SL, Heijnen HFG, Dennehy MK, Liebler DC, Rader DJ, Ischiropoulos H. Increased protein nitration

burden in the atherosclerotic lesions and plasma of apolipoprotein A-I-deficient mice. *Circ Res* 101(4):368-376, 2007.

Parent R, Kolippakkam D, Booth G, Beretta L. Mammalian target of rapamycin activation impairs hepatocytic differentiation and targets genes moderating lipid homeostasis and hepatocellular growth. *Cancer Res* 67(9):4337-4345, 2007.

Park KM, Kang E, Jeon YJ, Kim N, Kim NS, Yoo HS, Yeom YI, Kim SJ. Identification of novel regulators of apoptosis using a high-throughput cell-based screen. *Mol Cells* 23(2):170-174, 2007.

Picotti P, Aebersold R, Domon B. The implications of proteolytic background for shotgun proteomics. *Mol Cell Proteomics* 6(9):1589-1598, 2007.

Ranish JA, Brand M, Aebersold R. Using stable isotope tagging and mass spectrometry to characterize protein complexes and to detect changes in their composition. *Methods Mol Biol* 359:17-35, 2007.

Reyzer ML, Caprioli RM. Molecular imaging of proteins using mass spectrometry. *Int J Biol Markers* 22(1):56-56, 2007.

Sancak Y, Thoreen CC, Peterson TR, Lindquist RA, Kang SA, Spooner E, Carr SA, Sabatini DM. PRAS40 is an insulin-regulated inhibitor of the mTORC1 protein kinase. *Mol Cell* 25(6):903-915, 2007.

Scholler N, Bergan L, Gross J, Nevin B, Garvik B, Urban N. Development and in vitro validation of anti-mesothelin biobodies that prevent CA125/mesothelin-dependent cell attachment. *Clin Immunol* 123:S107-S107 Suppl S, 2007.

Shin NY, Liu QF, Stamer SL, Liebler DC. Protein targets of reactive electrophiles in human liver microsomes. *Chem Res Toxicol* 20(6):859-867, 2007.

Simon I, Liu Y, Krall KL, Urban N, Wolfert RL, Kim NW, McIntosh MW. Evaluation of the novel serum markers B7-H4, Spondin 2, and DcR3 for diagnosis and early detection of ovarian cancer. *Gynecol Oncol* 106(1):112-118, 2007.

Sun S, Lee NPY, Poon RTP, Fan ST, He QY, Lau GK, Luk JM. Oncoproteomics of hepatocellular carcinoma: from cancer markers' discovery to functional pathways. *Liver Int* 27(8):1021-1038, 2007.

Suzuki K, Yu XP, Chaurand P, Araki Y, Lareyre JJ, Caprioli RM, Orgebin-Crist MC, Matusik RJ. Epididymis-specific lipocalin promoters. *Asian J Androl* 9(4):515-521, 2007.

Taguchi F, Solomon B, Gregorc V, Roder H, Gray R, Kasahara K, Nishio M, Brahmer J, Spreafico A, Ludovini V, Massion PP, Dziadziuszko R, Schiller J, Grigorieva J, Tsy-pin M, Hunsucker SW, Caprioli R, Duncan MW, Hirsch FR, Bunn Jr PA, Carbone DP. Mass spectrometry to classify non-small-cell lung cancer patients for clinical outcome after treatment with epidermal growth factor receptor tyrosine kinase inhibitors: A multicohort cross-institutional study. *J Natl Cancer Inst* 99(11):838-846, 2007.

Taylor CF, Paton NW, Lilley KS, Binz PA, Julian Jr RK, Jones AR, Zhu WM, Apweiler R, Aebersold R, Deutsch EW, Dunn MJ, Heck AJR, Leitner A, Macht M, Mann M, Martens L, Neubert TA, Patterson SD, Ping P, Seymour SL, Souda P, Tsugita A, Vandekerckhove J, Vondriska TM, Whitelegge JP, Wilkins MR, Xenarios I, Yates III J, Hermjakob H. The

minimum information about a proteomics experiment (MIAPE). *Nat Biotechnol* 25(8):887-893, 2007.

Wang HJ, Ding KY, Zhang Y, Jin L, Kullo IJ, He FC. Comparative and evolutionary pharmacogenetics of ABCB1: complex signatures of positive selection on coding and regulatory regions. *Pharmacogenet Genomics* 17(8):667-678, 2007.

Wang P, Tang H, Fitzgibbon MP, McIntosh M, Coram M, Zhang H, Yi E, Aebersold R. A statistical method for chromatographic alignment of LC-MS data. *Biostatistics* 8(2):357-367, 2007.

Wang YC, Ding SJ, Wang W, Jacobs JM, Qian WJ, Moore RJ, Yang F, Camp II DG, Smith RD, Klemke RL. Profiling signaling polarity in chemotactic cells. *Proc Natl Acad Sci U S A* 104(20):8328-8333, 2007.

Watson W, Byrne J, O'Donogue N, Dunn M, Scaife C, Fitzpatrick J, Pennington S. The prostate cancer research consortium: A bio-resource for the discovery of tissue and serum markers for prostate cancer. *Anticancer Res* 27(3A):1372-1372, 2007.

Whited BW, Wilburn CR, Holt GE, Schwartz HS, Caprioli RM, Mundy GR, Caldwell RL. Proteomic evaluation of osteosarcoma metastasis to lung. *Bone* 40(6):S239-S239 Suppl. 2, 2007.

Zhang Q, Qian WJ, Knyushko TV, Clauss TRW, Purvine SO, Moore RJ, Sacksteder CA, Chin MH, Smith D, Camp II DG, Bigelow DJ, Smith RD. A method for selective enrichment and analysis of nitrotyrosine-containing peptides in complex proteome samples. *J Proteome Res* 6(6):2257-2268, 2007.

Zhang QB, Tang N, Brock JWC, Mottaz HM, Ames JM, Baynes JW, Smith RD, Metz TO. Enrichment and analysis of nonenzymatically glycosylated peptides: Boronate affinity chromatography coupled with electron-transfer dissociation mass spectrometry. *J Proteome Res* 6(6):2323-2330, 2007.

Zhou GQ, Zhai Y, Cui Y, Zhang XM, Dong XJ, Yang H, He Y, Yao K, Zhang HX, Zhi LT, Yuan XY, Qiu W, Zhang X, Shen Y, Qiang BQ, He FC. MDM2 promoter SNP309 is associated with risk of occurrence and advanced lymph node metastasis of nasopharyngeal carcinoma in Chinese population. *Clin Cancer Res* 13(9):2627-2633, 2007.