

CURRICULUM VITAE

Kirk Charles Hansen

School of Medicine
University of Colorado Health Sciences Center
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TITLE AND AFFILIATION

Primary Appointments

Assistant Research Professor
Division of Pediatrics
School of Medicine
University of Colorado Health Sciences Center
Aurora, CO

Manager
Proteomics and Mass Spectrometry Shared Resource
University of Colorado Health Sciences Center
Aurora, CO

Joint Appointment

Member (Cancer Cell Biology Program)
Comprehensive Cancer Research Center
University of Colorado Health Science Center
Aurora, CO

Graduate School Faculty
Molecular Structure Program
University of Colorado Health Sciences Center
Aurora, CO

Graduate School Faculty
Medical Scientist Training Program
University of Colorado Health Sciences Center
Aurora, CO

EDUCATION

Colorado State University
Fort Collins, CO
B.S. 1991-1995, Chemistry
Honors: Magna Cum Laude

NSF Internship, University of Utah
Department of Chemistry, 1994

NSF Internship, Columbia University
Department of Chemistry, 1995

California Institute of Technology
Pasadena, CA
Ph.D. 2001, Chemistry
Concentration: Bioanalytical and Bioorganic Chemistry

POSTDOCTORAL FELLOWSHIP

University of California San Francisco
NIH National Center for Research Resources Mass Spectrometry
Facility, 2001-2004

BIOGRAPHICAL SKETCH

Assistant Research Professor, University of Colorado Health Sciences Center, School of Medicine(2004-present)

Quantitative proteomic characterization of extracellular matrix and its role in metastasis. Development and application of methods for the identification of physiological protein-protein interaction partners and mass spectrometry based structure-function assays. Cancer biomarker discovery and characterization of post translational modifications.

Cancer Center Proteomics Core Manager (2004-present)

Responsibility for operation of the Proteomics Core and for development and implementation of protein characterization techniques. Training and supervision of Core technical staff, consulting with Cancer Center investigators and laboratory staff, and maintaining all Core records and data. Responsible for the development of a new fee structure and the establishment of Core operating and quality assurance procedures. Development and implementation of data analysis tools.

Assistant Research Chemist, University of California San Francisco (2003-2004)

Design and evaluation of differential expression strategies for the characterization of complex protein mixtures from mammalian tissue and cell-line, with emphasis on the liver and lung. Development of mass spectrometry based methods for the identification of membrane protein-protein interactions. Discovery and characterization of small peptide neurotoxins. Development of database searching and reporting tools.

Postdoctoral Researcher, University of California San Francisco, Mass Spectrometry Facility (2001-2003)

Development of instrumentation and chemical methods for high-throughput protein characterization in the low femtomole regime. Protein identification and quantification, including development of novel protocols for low level samples. Identification of lung carcinoma therapeutic targets (collaboration with Kevan Shokat's groups). De-novo sequencing of unknown peptides and proteins using LC/MS/MS. MS based identification and characterization of post-translational modifications.

Director: Alma Burlingame

Graduate Research Assistant, California Institute of Technology (1996-2001)

Synthesis and characterization of light sensitive "caged" enzyme substrates and peptides for use in rapid kinetic studies. Mass spectrometric characterization of modified peptides. Performed spectroscopic studies of biological electron transfer and protein folding. Enzymology of cytochrome bc₁ complex of the oxidative phosphorylation chain.

Thesis Title: Using Photolabile Protecting Groups for the Rapid Triggering of Fast Biological Events

Thesis Advisor: Sunney I. Chan

Collaboration, University of Hawaii at Manoa, Department of Chemistry (1999-2000)

Photothermal beam deflection measurements on the folding and unfolding of model proteins.

Collaboration with: Randy Larsen

NSF Internship, Columbia University, Department of Chemistry (1995)

Synthesis and characterization of biomimetic metallo-complexes.

Advisor: Gerald Parkin

NSF Internship, University of Utah, Department of Chemistry (1994)

Part of a team that built and tested a triple quadrupole mass spectrometer used to study surface chemistry.

Advisor: Thomas Curtiss

Colorado State University, Department of Toxicology (1993)

Studied the pharmacokinetics of environmental pollutants using animal models and enzymatic assays.

Advisor: Raymond Yang

Army Reserves, 244th Engineering Battalion (1991-1995)

Chief of a civil engineering survey team.

HONORS, SPECIAL RECOGNITIONS AND AWARDS

National Research Service Award (NIH Fellowship)	(1997-2000)
Outstanding Graduate Teaching assistant Service Award (Term's top teaching assistant)	(1998)
Reuben G. Gustavson Award (Year's top senior chemistry major)	(1995)
Colorado Scholars Award/Scholarship	(1994-1995)
President's Scholarship	(1994)
National Science Foundation Research Experiences for Undergraduates Grant	(1993-1994)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Colorado Biological Mass spectrometry Society
American Society of Mass Spectrometry
Bay Area Mass Spectrometry Society
American Chemical Society
Protein Society
American Peptide Society
American Association for the Advancement of Science
Human Proteome Organization (HUPO) Proteomics Standards Initiative
Working Group on Publication Guidelines for Peptide and Protein Identification Data

REVIEW AND REFEREE WORK

Reviewer for the Journal Molecular and Cellular Proteomics
Reviewer for the Journal Proteomics
Reviewer for the Journal of Analytical Chemistry

TEACHING RECORD

Thesis Advisor for Simon Chiang (Graduate Program, UCHSC)	(2006-2008)
Thesis Advisor for Joanna Marcinkiewicz (Masters Program, CU Denver) Graduated – Thesis Title: Proteomic Characterization of Extracellular Matrix to Identify Tumor-Associated Factors	(2006-2007)
Advisor for Lindsay Hosford (Undergraduate, CU Boulder)	(2006-2007)
Proteomics Short Course Lecturer (NHLBI)– UCHSC/NJM	(2006-2008)
Proteomics Short Course Lecturer – UCHSC	(2005-2006)
Lab Teaching Assistant, UCSF - Bio Mass Spectrometry	(2001-2002)
Head Teaching Assistant, Caltech - Biophysical Chemistry	(1998-1999)
Teaching Assistant, Caltech - Biophysical Chemistry	(1997)
Head Teaching Assistant, Caltech - General Chemistry	(1996)

ACTIVE GRANT SUPPORT

High End Shared Instrumentation Grant 5/01/2007 - 4/30/2008
Principal Investigator: Kirk C. Hansen
Agency: NIH/NCRR
Amount: \$ 1,067,480
1 S10RR023015
For the purchase of a LTQ FT-ICR hybrid mass spectrometer. This instrument is used to facilitate detailed proteomic analysis of biological samples.

Cancer Center Core Grant
Principal Investigator: Paul Bunn 3/01/2008 -1/31/2011

Agency: NIH/NCI
Amount: \$12,141,528
5 P30 CA046934
Partial support of the UCCC Proteomics Facility
Role: Manager of the Facility at 25% effort

Cancer League of Colorado Foundation Research Grant

7/01/2008 – 6/30/2009

Principal Investigator: Kirk Hansen

Amount: \$30,000

PN200803-043

For the development of a 3D cell culture model based on breast epithelial cells to establish proteomic methods for extracellular matrix characterization

Proteomics & Genomics Hands-On Workshop: From Sample Preparation to Data Analysis 9/05/2006 - 8/31/2010

Principal Investigator: Nichole Reisdorph

Agency: NIH/NHLBI

Amount: \$526,136

T15 HL086386

This project offers a 10-day hands on training workshop in proteomics and genomics technologies and to widely disseminate educational materials.

Role: Instructor at 9% effort

Department of Defense Grant

1/01/2006 - 12/31/2009

Principal Investigator: Pepper Schedin

Agency: DOD

Amount: \$300,000

BC051532 Idea Award

Identifying ECM Mediators of Tumor Cell Dormancy

Role : Co-Investigator at 5% effort

Department of Defense Grant

3/29/2006 - 4/28/2009

Principal Investigator: Arthur Gutierrez-Hartmann

Agency: DOD

Amount: \$299,761

BC051589 Idea Award

Identification of Cytoplasmic Proteins Interacting with the Mammary Cell Transforming Domain of Ese-1.

Role : Co-Investigator at 5% effort

PENDING SUPPORT

Innovations in Cancer Sample Preparation

4/01/2009 – 3/31/2011

Principal Investigator: Kirk C. Hansen

Agency: NIH

Amount: \$423,500

1 R21CA132741

Sample Preparation Methods for the Detailed Characterization of Tumor Associated Extracellular Matrix

Career Catalyst Award

Principal Investigator: Kirk C. Hansen

Agency: Komen Foundation

Amount: \$300,000

KG070050

PREVIOUS SUPPORT

Bio-organic, Biomedical Mass Spectrometry Research Resource

3/01/2002 - 2/28/2007

Principal Investigator: A. L. Burlingame

Agency: NIH/NCRR

The long term objective of this national research resource involves the development of advanced methods of separations, mass spectrometry and bioinformatics for solving difficult or previously intractable problems in protein detection, identification and the structural analysis of their covalent modifications (phosphorylation, glycosylation, etc.).

Role: Research Scientist

Cancer Center Support Grant

2/01/2001 - 1/31/2008

Principal Investigator: Paul Bunn

Agency: NIH/NCI

As a part of the University of Colorado Cancer Center, these funds support, in part, the operation of the Proteomics Core Resource.

Role : Manager Proteomics & Mass Spectrometry Core

Lung Cancer Specialized Programs of Research Excellence (SPORE) Pilot Project

5/01/2005 - 4/30/2007

Principal Investigators: Kirk Hansen and Ben Solomon

Agency: NIH/NCI

Amount: \$35,000

5 P50 CA058187-11 [Paul Bunn]

Comparative Proteomic Profiling of Plasma with Isobaric Tagging Reagents and Tandem Mass Spectrometry to Detect Biomarkers of Lung Cancer

PEER REVIEWED JOURNAL ARTICLES

1. Brian E. Schultz, Kirk C. Hansen, Charles C. Lin, and Sunney I. Chan. "Rapid photochemical generation of ubiquinol through a radical pathway: an avenue for probing submillisecond enzyme kinetics" **Journal of Organic Chemistry** 2000, 65, 3244.
2. Kirk C. Hansen, Brian E. Schultz, Guangyang Wang, Sunney I. Chan. "Reaction of Escherichia coli cytochrome bo3 and mitochondrial cytochrome bc1 with a photoreleasable decylubiquinol" **Biochimica et Biophysica Acta** 2000, 1456, 121.
3. Kirk C. Hansen, Ronald S. Rock, Randy W. Larsen, and Sunney I. Chan. "A Method for Photoinitiating Protein Folding", **Journal of the American Chemical Society** 2000, 122, 11567.
4. Kirk C. Hansen, Gerold Schmitt-Ulms, Robert J. Chalkley, Jan Hirsch, Michael A. Baldwin, and A. L. Burlingame "Mass Spectrometric Analysis of Protein Mixtures at Low Levels Using Cleavable 13C-ICAT and Multi-Dimensional Chromatography" **Molecular & Cellular Proteomics** 2003, 5, 299.
5. J. Hirsch, K. C. Hansen J. A. Frank, X. Fang, R. J. Chalkley, A. L. Burlingame and M. A. Matthay "Changes in the proteome of alveolar type II epithelial cells after high tidal volume ventilation " **Anästhesiologie und Intensivmedizin** November 2003, 44, 11.
6. Jan Hirsch, Kirk C. Hansen, Alma L. Burlingame and Michael A. Matthay "Proteomics: Potential Applications to Lung Diseases" Invited Review: **American Journal of Physiology-Lung Cellular and Molecular Physiology**, 2004, 287, L1.
7. Pedro R. Cutillas Robert J. Chalkley, Kirk C. Hansen, Rainer Cramer, Anthony G. W. Norden, Mike D. Waterfield, Alma L. Burlingame, Robert J. Unwin "Abnormalities in the urinary proteome of Dent's disease patients (CLCN5 mutation) imply specificity in the reabsorption of proteins by renal proximal tubular cells" **American Journal of Physiology-Renal Physiology** 2004, May 12, 287.
8. Gerold Schmitt-Ulms, Kirk Hansen, Jialing Liu, Cynthia Cowdrey, Jian Yang, Stephen J. DeArmond, Fred E. Cohen, Stanley B. Prusiner and Michael A. Baldwin "Time controlled transcadiac perfusion crosslinking

- (tcTPC), a novel tool for the study of protein interactions in complex tissues” **Nature Biotechnology**, 2004, 22, 724.
9. Christian F.W. Becker, Pavel Strop, Randal B. Bass, Kirk C. Hansen, Kaspar P. Locher, Gang Ren, Mark Yeager, Douglas C. Rees, and Gerd Kochendoerfer “Conversion of a Mechanosensitive Channel protein from a Membrane-embedded to a Water-soluble Form by Covalent Modification with Amphiphiles” **Journal of Molecular Biology** 2004, 343(3), 747.
 10. Pavel Strop, Alexander J. Bankovich, Kirk C. Hansen, K. Christopher Garcia and Axel T. Brunger “Structure of a human A-type potassium channel interacting protein DPPX, a member of the dipeptidyl aminopeptidase family.” **Journal of Molecular Biology** 2004, 343(4), 1055.
 11. Ana Serban, Giuseppe Legname, Kirk Hansen, Nadia Kovaleva, and Stanley B. Prusiner “Immunoglobulins in Urine of Hamsters with Scrapie” **The Journal of Biological Chemistry**. 2004, Vol. 279, No. 47, 48817.
 12. Ronald S. Rock, Kirk C. Hansen, Randy W. Larsen and Sunney I. Chan “Rapid photochemical triggering of protein unfolding in a non-denaturing environment” **Chemical Physics**, 2004, Vol. 307, No. 2-3, 201.
 13. Keith Vosseller, Kirk C. Hansen, Robert J. Chalkley, Jonathan C. Trinidad, Lance Wells, Gerald W. Hart, Alma L. Burlingame “Quantitative analysis of both protein expression and serine / threonine post-translational modifications through stable isotope labeling with dithiothreitol” **Proteomics** 2005, Vol 5, No. 2, 388.
 14. Masahiro Tanaka, Raynard Bateman, Daniel Rauh, Eugeni Vaisberg, Shyam Ramachandani, Chao Zhang, Kirk C. Hansen, Alma L. Burlingame, Kevan M. Shokat, and Cynthia L. Adams “An Unbiased Cell Morphology Based Screen for New Biologically Active Small Molecules” **PLOS Biology** 2005, Vol. 3, No. 5, e128.
 15. Robert J. Chalkley, Peter R. Baker, Kirk C. Hansen, Katalin F. Medzihradzsky and A.L. Burlingame “Comprehensive analysis of a multidimensional liquid chromatography mass spectrometry dataset acquired on a QqTOF mass spectrometer: 1. How much of the data is theoretically interpretable by search engines?” **Molecular & Cellular Proteomics**, 2005, 8, 1189.
 16. Robert J. Chalkley, Peter R. Baker, Lan Huang, Kirk C. Hansen, Nadia P. Allen, Michael Rexach, and A L. Burlingame “Comprehensive analysis of a multidimensional liquid chromatography mass spectrometry dataset acquired on a QqTOF mass spectrometer: 2. New developments in protein prospector allow for reliable and comprehensive automatic analysis of large datasets” **Molecular & Cellular Proteomics**, 2005, 8, 1194.
 17. Fusheng Chen, Hiroshi Hasegawa, Gerold Schmitt-Ulms, Toshitaka Kawarai, Christopher Bohm, Taiichi Katayama, Yongjun Gu, Nobuo Sanjo, Michael Glista, Ekaterina Rogaeval, Yosuke Wakutani, Raphaëlle Pardossi Piquard, Xueying Ruan, Anurag Tandon, Frédéric Checler, Philippe Marambaud, Kirk Hansen, David Westaway, Peter St George-Hyslop, Paul Fraser “TMP21 Is A Presenilin Complex Component That Modulates γ - But Not ϵ -Secretase Activity” **Nature**, 2006, Vol 440, 1208-1212.
 18. Jan Hirsch, Kirk C. Hansen, SooJinNa Choi, Joonhwa Noh, Ryutaro Hirose, John P. Roberts, Michael A. Matthey, Alma L. Burlingame, Jacquelyn J. Maher, and Claus U. Niemann “Warm ischemia induced alterations in oxidative and inflammatory proteins in hepatic Kupffer cells in rats” **Molecular & Cellular Proteomics**, 2006 5: 979-986,
 19. Zhongzhou Chen, Jianye Zang, Johnathan Whetstone, Xia Hong, Foteini Davrazou, Tatiana G. Kutateladze, Michael Simpson, Qilong Mao, Cheol-Ho Pan, Shaodong Dai, James Hagman, Kirk Hansen, Yang Shi, and Gongyi Zhang “Structural Insights into Histone Demethylation by JMJD2 Family Members” **Cell**, 2006, 125, 691-702.
 20. R. El Mezayen, L. Pons, A.W. Burks, M. West, S. Stanley, M. El Gazzar, M.W. Duncan, K.C. Hansen and S.C. Dreskin “Ara H 2.02 Is A More Potent Cross-linker Of Anti- Peanut IgE Than Is Ara H 2.01” **Journal of Allergy and Clinical Immunology**, 2007, V119, S193.
 21. McDermott RA, Porterfield HS, El Mezayen R, Burks AW, Pons L, Schlichting DG, Solomon B, Redzic J, Harbeck RJ, Duncan MW, Hansen KC, Dreskin SC. “Contribution of Ara h 2 to peanut-specific, IgE-mediated, cell activation.” **Clinical and Experimental Allergy**, 2007, Vol. 37, p752.

22. Zhongzhou Chen, Jianye Zang, John Kappler, Xia Hong, Frances Crawford, Qin Wang, Fei Lan, Chengyu Jiang, Johnathan Whetstone, Shaodong Dai, Kirk Hansen, Yang Shi, and Gongyi Zhang "Structural basis of the recognition of a methylated histone tail by JMJD2A" **Proceedings of the National Academy of Sciences (PNAS)**, 2007, 104, p10818-10823.
23. Jan Hirsch, Kirk C. Hansen, Anil Sapru, James A. Frank, Robert J. Chalkley, Xiaohui Fang, Jonathan C. Trinidad, Peter Baker, Alma L. Burlingame and Michael A. Matthey "Impact of low and high tidal volumes on the rat alveolar epithelial type II cell proteome" **American Journal of Respiratory and Critical Care Medicine**, 2007, Vol. 175, p 1006-1013.
24. Janeen R. Jordan, Ernest E. Moore, Sagar S. Damle, Phillip Eckels, Jeffrey L. Johnson, Jonathan P. Roach, Jasmina S. Redzic, Kirk C. Hansen and Anirban Banerjee "Gelsolin is Depleted in Post-Shock Mesenteric Lymph" **Journal of Surgical Research**, 2007, Vol. 143, p130-135.
25. Heather Fairchild, Michael D Howell, Mark Boguniewicz, Jasmina S. Redzic, Kirk C Hansen, Donald YM Leung "Th2 cytokines act on S100/A11 to downregulate keratinocyte" **The Journal of Clinical Investigation**, 2008, Vol. 128, p2248-58
26. Kipnis E, Hansen K, Sawa T, Moriyama K, Zurawel A, Ishizaka A, Wiener-Kronish J "Proteomic Analysis of Undiluted Lung Epithelial Lining Fluid" **CHEST**, 2008 Vol 134, p 338-345.
27. Hirsch J, Niemann CU, Hansen KC, Choi S, Su X, Frank JA, Fang X, Hirose R, Theodore P, Sapru A, Burlingame AL, Matthey MA. "Alterations in the proteome of pulmonary alveolar type II cells in the rat after hepatic ischemia-reperfusion" **Critical Care Medicine**. 2008 Vol. 36, No.6; p 1846-54.
28. Horita, HN, Redzic, J, Hansen, KC, Arthur F, Thorburn, J, Thorburn, A "Autophagy regulates selective HMGB1 release in tumor cells that are destined to die" **Cell Death and Differentiation**, 2008 Oct 10. [Epub ahead of print]
29. HS Porterfield, K Murray, D Schlichting, KC Hansen, MW Duncan, and SC Dreskin "Effector Activity of Peanut Allergens: A critical role for low molecular mass proteins" **Clinical and Experimental Allergy** Submitted.

BOOK CHAPTERS

1. Sunney I. Chan, Joseph J.-T. Huang, Randy W. Larsen, Ronald S. Rock, and Kirk C. Hansen, Dynamic Studies in Biology: Phototriggers, Photoswitches and Caged Biomolecules; Maurice Goeldner (Editor), Richard Givens (Editor), "**Early Kinetic Events in Protein Folding: The Development and Applications of Caged Peptides**" Book Chapter, Wiley, April 2005, 479-494.
2. Robert J Chalkley, Kirk C. Hansen, Michael A. Baldwin "Bioinformatic methods to exploit mass spectrometric data for proteomic applications" **Methods in Enzymology**, 2005, Vol. 402, p289-312.

PATENTS

1. Kevan M. Shokat, Masahiro Tanaka, Al L. Burlingame, Chao Zhang, and Kirk C. Hansen "Novel Pyrazolo Pyrimidine Derivatives As Short Chain Dehydrogenases/Reductases Inhibitors" U.S. patent, March 2003.

PRESENTATIONS AT SCIENTIFIC MEETINGS

1. L. Huang; R. J. Chalkley; K. Hansen; C. Sihlbom; A. L. Burlingame; K. Williams; M. Pallavicini. "High Throughput Proteomics of Leukemia Proteins Using 200Hz MALDI-TOF/TOF MS" HUPO meeting France, 2002.
2. Kirk Hansen; David A. Maltby; Katalin F. Medzihradzsky; Robert Chalkley; Hen-Tzu Lin; Alma L. Burlingame "Comparison of In-gel Protein Digests Analyzed by LC/MS/MS on ESI Qq-TOF and MALDI TOF/TOF Instruments" American Society of Mass Spectrometry, 50th International Conference 2002.

3. K. C. Hansen, R. J. Chalkley, P. Baker, A. Burlingame “New Features of Protein Prospector: Improved Database Scoring and Analysis of ICAT Data” Sixth International Symposium on Mass Spectrometry in the Health and Life Sciences 2003.
4. T. Su, F. Luton, M. Verges, S. M. Ulrich, K. C. Hansen, A. L. Burlingame, K. M. Shokat, K. Mostov “The roles of the Src family protein tyrosine kinase c-Yes and epidermal growth factor receptor in transcytosis of polymeric immunoglobulin A mediated by the polymeric immunoglobulin receptor” ASCB international meeting 2003.
5. J. Hirsch, R.J. Chalkley, K.C. Hansen, J.A. Frank, X. Fang, L.B. Ware, T. Nuckton, A.L. Burlingame and M.A. Matthay “Proteomic Analysis of human pulmonary edema fluid in patients with acute lung injury an hydrostatic pulmonary edema” Annual conference of the American Thoracic Society, Seattle, WA, 99th International Conference 2003.
6. Kirk Hansen; Robert Chalkley; Gerold Schmitt-Ulms; Jan Hirsch; Michael A. Baldwin; Alma L. Burlingame “Analysis of Low Level Protein Mixtures Using Cleavable 13C9/12C9-ICAT Reagents” American Society of Mass Spectrometry, 51st International Conference 2003.
7. Pedro R. Cutillas, Kirk C. Hansen, Robert J. Chalkley, Robert Unwin, Al L. Burlingame “Relative Quantitation of Polypeptides in the Urine of Dent’s Disease Patient by Multidimensional Liquid Chromatography and Complementary Quantitative Mass Spectrometric Approaches” Sixth International Symposium on Mass Spectrometry in the Health and Life Sciences, 2003.
8. Kirk C. Hansen, Gerold Schmitt-Ulms, Robert J. Chalkley, Michael A. Baldwin, A. L. Burlingame. “Mass Spectrometric Quantitation Using Cleavable Isotope Coded Affinity Tags; Maximizing Peptide Coverage of Low Level Protein Samples” The Association of Biomolecular Resource Facilities, International Conference 2003.
9. J. Hirsch, K.C. Hansen, J.A. Frank, R.J. Chalkley, X. Fang, A.L. Burlingame and M.A. Matthay “Effects of different ventilation strategies on the proteome of rat alveolar type II cells.” Sixth International Symposium on Mass Spectrometry in the Health & Life Sciences, San Francisco, 2003.
10. Peter R. Baker, Robert J. Chalkley, Kirk C. Hansen, Pedro R. Cutillas, Lan Huang, Michael A. Baldwin, A.L. Burlingame “A novel protein quantitation algorithm within ProteinProspector” American Society of Mass Spectrometry, 52nd International Conference 2004.
11. T. Su, F. Luton, M. Vergés, S. M. Ulrich, K. Hansen, A. L. Burlingame, K. M. Shokat, K. E. Mostov “Regulation of IgA-pIgR transcytosis by EGFR-MEK-ERK signaling pathway in epithelial cells” American Society for Cell Biology 2005.
12. Kirk C. Hansen, Soojinna Choi, Joonhwa Noh, Jan Hirsch, Ryutaro Hirose, John P. Roberts, Al Burlingame, Claus U. Niemann “Mild Hypothermia Significantly Induces the Hepatic Antioxidant Proteome in Obese Rats During Ischemia Reperfusion” American Transplant Congress 2005.
13. Jonathan C. Trinidad, Agnes Thalhammer, Christian Specht, Kirk C. Hansen, Jasmina Allen, Ralf Schoepfer, and Alma L. Burlingame “Analysis of Post-synaptic Receptor Complexes in the Mammalian Central Nervous System” Mass Spectrometry in the Health & Life Sciences, 2005.
14. Xin Zhang, Kirk C. Hansen, Robert J. Chalkley, and Alma L. Burlingame “An Improved Accelerated In-gel Tryptic Digestion Method for Protein Identification by Mass Spectrometry” Mass spectrometry in the Health & Life Sciences, 2005.
15. Pedro R. Cutillas, Kirk C. Hansen, Robert J. Chalkley, Robert J. Unwin, and Alma L. Burlingame “Relative Quantitation of Polypeptides in the Urine of Dents Disease Patients by Multidimensional Liquid Chromatography and Complementary Quantitative Mass Spectrometric Approaches” Mass Spectrometry in the Health & Life Sciences, 2005.
16. Kirk C. Hansen, Robert J. Chalkley, Lan Huang, Peter R. Baker, and A. L. Burlingame “New Features of Protein Prospector: Improved Database Scoring and Analysis of ICAT Data” Mass Spectrometry in the Health & Life Sciences, 2005.

17. Ashley Zurawel, Janeen R. Jordan, Sagar S. Damle, Jasmina Redzic, Ernest E. Moore, Anirban Banerjee, Kirk C. Hansen “2D-Gel Based Proteomic Analysis of Mesenteric Lymph Following Hemorrhagic Shock and Resuscitation” 8th International Meeting of Mass Spectrometry in the Health & Life Sciences, 2007.
18. Kirk C. Hansen and Michael A. Baldwin “Multi-Dimensional HPLC-MS/MS with a Cleavable ICAT Reagent: Proteomic Analysis with the MALDI / 4700 Proteomics Analyzer and ESI / QSTAR.” Invited Speaker, Applied Biosystems Discovery Proteomics Seminar Series, April 2003.
19. Kirk Hansen “MALDI-LC/MS/MS Approaches for Differential Expression Proteomics” Invited Speaker, LC Packing/Dionex Bioanalysis Seminar, December 2002.
20. Gerold Schmitt-Ulms, Kirk Hansen, Jialing Liu, Stephen J. DeArmond, Fred E. Cohen, Stanley B. Prusiner, and Michael A. Baldwin “Time-controlled Transcardiac Perfusion Crosslinking (tcTPC): A Novel Tool for the *In Vivo* Study of Protein Interactions in Complex Tissues” Mass Spectrometry in the Health & Life Sciences Conference, San Francisco, CA 2005. **Molecular Cellular Proteomics** 2003, Vol 2, Issue 7, S39