

CURRICULUM VITAE

Daniel Christopher Liebler

Founder & Chief Scientific Officer
Protypia

Professor, Departments of Biochemistry, Pharmacology and Biomedical Informatics
Vanderbilt University School of Medicine

9720 Turner Lane
Brentwood, TN 37027
(615) 715-4312
daniel.liebler@protypia.com

PERSONAL

Born: July 21, 1958, Washington, D.C.
Married: Karen E. Edwards, 1987; one son, Andrew
Home: 9720 Turner Lane
Brentwood, TN 37027
(615) 776-7153

ACADEMIC TRAINING

B.S., Chemistry, 1980, Villanova University

Ph.D., Pharmacology, 1984, Vanderbilt University
Research Advisor: F.P. Guengerich, Ph.D.

Postdoctoral, Biochemistry and Biophysics, 1984-87, Oregon State University
Research Advisor: D.J. Reed, Ph.D.

RESEARCH AND PROFESSIONAL EXPERIENCE

2015-present	Founder & Chief Scientific Officer, Protypia
2003-present	Professor, Departments of Biochemistry, Pharmacology, and Biomedical Informatics, Vanderbilt University School of Medicine
2013-2015	Director, Center in Molecular Toxicology, Vanderbilt University School of Medicine

2008-2015	Ingram Professor of Cancer Research, Vanderbilt-Ingram Cancer Center
2006-2015	Director, Jim Ayers Institute for Precancer Detection and Diagnosis, Vanderbilt-Ingram Cancer Center, Vanderbilt University School of Medicine
2003-2007	Director, Proteomics Laboratory, Mass Spectrometry Research Center, Vanderbilt University School of Medicine
1999-2003	Director, Southwest Environmental Health Sciences Center, Center for Toxicology, University of Arizona
1998-2003	Professor, Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona
1998-1999	Deputy Director, Southwest Environmental Health Sciences Center, Center for Toxicology, University of Arizona
1999-2003	Director, Toxicology Training Program, Center for Toxicology, University of Arizona
1999-2001	Director, Proteomics Core Laboratory, Southwest Environmental Health Sciences Center and Arizona Cancer Center, University of Arizona
1994-1999	Director, Analytical Core Laboratory, Southwest Environmental Health Sciences Center and Arizona Cancer Center, University of Arizona
1993-1998	Associate Professor, Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona
1987-1993	Assistant Professor, Department of Pharmacology and Toxicology, College of Pharmacy, University of Arizona.
1984-1987	Research Associate, Department of Biochemistry and Biophysics, Oregon State University.
1980-1984	Graduate Research Assistant, Department of Pharmacology and Center in Environmental Toxicology, Vanderbilt University.

HONORS AND AWARDS

2013	Elected Fellow, American Chemical Society
------	---

2012	Top 25 Most Prolific Authors, <i>Chemical Research in Toxicology</i>
2009	International Society for the Study of Xenobiotics, North American Scientific Achievement Award in Honor of Ronald W. Estabrook
2008	Elected Fellow, American Association for the Advancement of Science
2008	Ingram Professorship in Cancer Research, Vanderbilt-Ingram Cancer Center
2007	Sidney P. Colowick Award, Vanderbilt University School of Medicine
2004	John Doull Lectureship in Toxicology, Kansas University Medical Center
2003	John Gilbert Lectureship, Merck & Co.
2001	Samuel Kuna Distinguished Lectureship in Toxicology, Environmental and Occupational Health Sciences Institute, University of Medicine and Dentistry of New Jersey
1998	Malcolm Trout Invited Lectureship, Department of Food Science, Michigan State University
1991	Visiting Scientist, Tokyo Metropolitan Institute of Gerontology
1984-1987	National Research Service Award Postdoctoral Fellowship
1983-1984	Pharmaceutical Manufacturers Association Foundation Advanced Predoctoral Fellowship

PROFESSIONAL AND ADVISORY ACTIVITIES

2012-present	Member, Expert Panel, Research Institute for Fragrance Materials
2009-present	Member, Expert Panel, Cosmetic Ingredient Review
2005-2009	Member, National Advisory Environmental Health Sciences Council
2005	Co-Chair, Gordon Research Conference on Toxicogenomics
2004-2006	National Research Council Committee on Applications of Toxicogenomics Technologies to Predictive Toxicology

2004-2006	COBRE Program Advisory Committee, Dartmouth University School of Medicine
2001-2005	External Advisory Board, Center in Environmental Toxicology, University of Texas Medical Branch
2002-2005	External Advisory Board, Center for Environmental Genetics, University of Cincinnati
2001-2004	External Advisory Board, Center in Urban Environmental Health, Johns Hopkins University
2002-2004	External Advisory Board, Center for Ecogenetics and Environmental Health, University of Washington
1994-1998	Member, NIH Chemical Pathology Study Section; Chair, 1996-98

RESEARCH SUPPORT

5U24 CA159988-03 (Liebler)

08/01/2011-07/31/2016

NIH/NCI

Vanderbilt Proteome Characterization Center

The project will use newly-developed technologies to link changes in tissue proteins to extensive new data on genetic abnormalities in tumors. The goal of the project is to identify protein characteristics that could serve as new diagnostics to aid the detection and treatment of cancer. (Leadership of this award transferred to Dr. Bing Zhang, August 1, 2015.)

5 U01 CA152647-04 (Liebler)

08/20/2010-06/30/2015

NIH/NCI

Vanderbilt Biomarker Developmental Laboratory

The objective is to employ standardized, refined proteomic technologies to more reliably identify biomarker proteins.

5P30 ES000267-46 (Liebler from Aschner)

04/01/2010-03/31/2015

NIH/NIEHS

The Center in Molecular Toxicology

The Center funds facility cores, pilot projects, and administrative activities that provide infrastructure to support EHS-relevant research projects of the 24 named Center Investigators.

5P30 CA068485-17 (Pietenpol)

09/10/2010-08/31/2015

NIH/NCI

Cancer Center Support Grant

The primary responsibilities of this project are to coordinate and integrate the cancer and cancer-related activities of Vanderbilt University; to conduct, support and enhance cancer research and to integrate cancer-related activities throughout the University; to integrate, develop and conduct cancer education programs; and to coordinate and to integrate the care of cancer patients at Vanderbilt University Medical Center and Veteran's Administration Medical Center.

2 P50 CA095103-12 (Coffey)

09/07/2012-04/30/2017

NIH/NCI

SPORE in GI Cancer

These four projects offer the potential to transform how we diagnose and treat individuals with colorectal cancer. Project 3. Molecular Markers of Colorectal Cancer Recurrence

Role: Project 3 Co-Leader (Liebler project role terminated 7-31-2015)

C3777PEER (Liebler)

08/01/2014-02/27/2015

Onyx Pharmaceutical

Studies of protein-drug covalent interactions

The objective is to investigate off-target covalent labeling of cellular proteins by anticancer drugs that covalently modify therapeutic targets.

1R01 ES022936-01A1 (Liebler)

05/01/2014-01/31/2019

NIH/NIEHS

ASK signalosomes and environmental sensing

Environmental chemicals activate cellular sensing systems that trigger either protective responses or cell death. This project will determine how reactive chemicals activate the major sensor system, thus enabling better tests to evaluate risks and prevent disease caused by chemical hazards in the environment. (Leadership of this award transferred to Dr. BethAnn McLaughlin, September 15, 2015.)

2T32 ES007028-40 (Liebler)

07/01/2014-06/30/2019

NIH/NIEHS

Training Program In Environmental Toxicology

This is a long-standing training program associated with the Center in Molecular Toxicology.

This interdisciplinary program supports seven predoctoral and six postdoctoral trainees and emphasizes molecular aspects of toxicology related to environmental health. (Leadership of this award transferred to Dr. Aaron Bowman, August 1, 2015.)

S14-038 -Yr01 (Liebler)

05/13/2014-05/12/2015

Liedos Biomedical Research, Inc – RFP:S14-038

Proteogenomic Analysis and Qualification of Colon Tumor Cells

The purpose of this agreement is to analyze a panel of 65 human colon and rectal tumor cell lines by both genomic and proteomic platforms to create datasets comparable to the TCGA colon and rectal tumor data.

PROFESSIONAL SOCIETIES

Society of Toxicology

Mountain West Regional Chapter, Councilor, 1991-94, Vice President, 1994-95, President, 1995-96

Mechanisms Specialty Section, Vice President-Elect, 2003-2004, Vice President, 2004-2005, President, 2005-2006

American Chemical Society; Elected Fellow 2013

Division of Chemical Toxicology, Councilor, 2002-2004; 2006-2008; Vice-Chair, 2009-2010; Chair-elect 2010; Chair 2011-2012

American Society for Mass Spectrometry

Human Proteome Research Organization

International Society for the Study of Xenobiotics

American Association for Cancer Research

Chemistry in Cancer Research Workgroup, Steering Committee 2008-2010

American Association for the Advancement of Science; Elected Fellow 2009

EDITORIAL DUTIES

Associate Editor, *Molecular and Cellular Proteomics*, 2012-present

Associate Editor, *Environmental Health Perspectives: Toxicogenomics*, 2002-2006

Associate Editor, *Molecular Carcinogenesis*, 2001-2006

Editorial Board, *Molecular and Cellular Proteomics*, 2009-2012

Editorial Board, *Chemical Research in Toxicology*, 1994-97, 2001-2008

Editorial Board, *Journal of Proteome Research*, 2002-2006

Editorial Board, *Chemico-Biological Interactions*, 1998-2007

GRADUATE STUDENTS SUPERVISED

1. Todd A. Kennedy 1988-91; Ph.D. 1991 (Current appointment: Associate, W.L. Gore & Associates, Flagstaff, AZ)
2. Richard C. Dart 1988-91; Ph.D. 1991 (Subsequent appointment: Director, Rocky Mountain Poison Control Center, Denver, CO)
3. Glenn Hoeger 1991-92; M.S., 1992 (Current appointment: Principal Scientist, ARCADIS, Tucson, AZ)
4. Amy-Joan L. Ham 1991-95; Ph.D. 1995 (Current appointment: Assistant Professor, Department of Pharmaceutical, Social and Administrative Sciences, Belmont University College of Pharmacy, Nashville, TN).

5. Steven P. Stratton 1991-96; Ph.D. 1996 (Current appointment: Research Associate Professor, Department of Medicine, The University of Arizona)
6. Kim Kramer-Stickland 1993-1997; Ph.D. 1997 (Current appointment: Director, Toxicology, Epizyme, Cambridge, MA)
7. Maralee McVean 1994-1997; Ph.D. 1997 (Current appointment: Vice President, Pharmacology and Toxicology Services, Pre-clinical Research Services, Ft. Collins, CO)
8. Daniel L. Baker 1992-1998, Ph.D. 1998 (Current appointment: Associate Professor, Department of Chemistry, University of Memphis, Memphis, TN)
9. Anna Mitchell 1997-1998, M.S. 1998 (Current appointment: Pharmacist, Tucson, Arizona)
10. Juliet A. Tanner (Jones) 1999-2001, Ph.D. 2001 (Current appointment: Intellectual Property Manager, Clopay Plastic Products, Cincinnati, OH)
11. Daniel E. Mason 1998-2002, Ph.D. 2002 (Current appointment: Senior Research Investigator, Genomics Institute of the Novartis Research Foundation, San Diego, CA)
12. Hamid Badghisi 1999-2001, M.S. 2001 (Current appointment: Research Specialist, Department of Pharmacology, University of Arizona)
13. Karolyn A.M. Richards 2002-2004, M.S. 2004
14. Beau T. Hansen 1998-2005, Ph.D. 2005 (Current appointment: Independent consultant, Boise, ID)
15. Fei Hong 2002-2005, Ph.D. 2005 (Current appointment: Scientist, aTyr Pharma, San Diego, CA)
16. Christopher R. Orton 2002-2006, Ph.D. 2006 (Current appointment: Pharmacy Intern, Sandy, UT)
17. Linda L. Manza 2001-2007, Ph.D. 2007 (Current appointment: Toxicologist, Quality Assurance Professional and Technical Writer, San Diego, CA)
18. Matthew V. Myers, 2006-2012, Ph.D. 2011 (Current appointment: Scientist II, Celgene Corporation, Summit, NJ)
19. Elizabeth Burnette 2004-2008
20. Karen S. Santa Cruz 1988-90 (Current appointment: Associate Professor of Pathology, University of New Mexico, Albuquerque, NM)
21. Fred Daddario 1989-90

22. Josiah Hutton, 2011-present

23. Joel Federspiel 2012-present

POSTDOCTORAL FELLOWS SUPERVISED

1. Thomas D. McClure, Ph.D., 1993-94 (Current appointment: Manager, Intellectual Property Strategy, ThermoFisher Scientific, San Jose, CA)
2. Ed S. Krol, Ph.D., 1996-2000 (Current appointment: Associate Professor, Department of Pharmacy, University of Saskatchewan, Canada)
3. Arti Arora, Ph.D., 1997-2000 (Current appointment: Senior Director, Regulatory & Policy, Coca Cola Co., Atlanta, GA)
4. Juliet A. Tanner (Jones), Ph.D., 2001-2002 (Current appointment: Intellectual Property Manager, Clopay Plastic Products, Cincinnati, OH)
5. James N. Riggins, Ph.D., 2003-2004 (Current appointment: Staff Scientist, Codexis, Inc., Redwood City, CA)
6. Michelle K. Dennehy, Ph.D., 2003-2005 (Current appointment: Senior Scientist, Quality Assurance, Abbott Laboratories, Ottawa, ON, Canada)
7. Simona Codreanu, Ph.D. 2003-2005 (Current appointment: Research Assistant Professor, Center for Innovative Technology and Department of Chemistry, Vanderbilt University, Nashville, TN)
8. Jeremy S. Myers, Ph.D. 2006-2007 (Current Appointment: Director, Oncology Target Drug Discovery, Pfizer Pharmaceuticals, New York, NY)
9. Matthew E. Szapacs, Ph.D. (2004-2006) (Current appointment: Manager in DMPK, Glaxo SmithKline, King of Prussia, PA)
10. Nah-Young Shin, Ph.D. (2005-2006) (Current appointment: Research fellow, Harvard School of Dental Medicine, Cambridge, MA)
11. Ying Xiong, Ph.D. (2005-2007) (Current appointment: Research Scientist, University of Science and Technology, China)
12. Kripa Keerthi, Ph.D. (2006-2008) (Current appointment: Postdoctoral fellow, University of California at Davis)
13. Hansen L. Wong, Ph.D. (2005-2008) (Current appointment: Associate Director, Clinical Pharmacology, Onyx Pharmaceuticals, South San Francisco, CA)
14. Jonathan W. C. Brock, Ph.D. (2006-2007) (Current appointment: Pediatrician, Sand Hills Pediatrics, Columbia, SC)

15. Qinfeng Liu, Ph.D. (2005-2008) (Current appointment: Assistant Professor, Department of Pharmaceutical Sciences, Campbell University, Buies Creek, NC)
16. De Lin, Ph.D. (2007-2010) (Current appointment: Staff Scientist, University of Dundee, Dundee, Scotland)
17. Chengjian Tu, Ph.D. (2007-2010) (Current appointment: Research Assistant Professor, University of Buffalo, Buffalo, NY)
18. Robert Sprung, Ph.D. (2007-2011) (Current appointment: Staff Scientist, Proteomics Core Facility, Moffitt Cancer Center, Tampa, FL)
19. Patrick Halvey, Ph.D. (2008-2012) (Current appointment: Scientist, Discovery at Momenta Pharmaceuticals, Cambridge, MA)
20. Haixia Zhang, Ph.D. (2008-2010) (Current appointment: Technical Officer, Mass Spectrometry Facility Plant Biotechnology Institute (PBI) National Research Council of Canada)
21. Kan Chen, Ph.D. (2008-2010) (Current appointment: Senior Scientist, AstraZeneca, Shanghai, China)
22. Rebecca Connor, Ph.D. (2008-2010) (Current appointment: Assistant Professor of Chemistry, Dickinson College, Carlisle, PA)
23. Stacy Sherrod, Ph.D. (2009-2012) (Current appointment: Research Assistant Professor, Center for Innovative Technology and Department of Chemistry, Vanderbilt University, Nashville, TN)
24. Jonathan Clark, Ph.D. (2010-2012) (Current appointment: Scientist Personal Healthcare Analytical, Proctor & Gamble, Cincinnati, OH)
25. Jing Yang, Ph.D. (2012-2015) (Current appointment: Assistant Professor, Beijing Proteome Center)
26. Hye-Jung Kim, Ph.D. (2012-2015) (Current appointment: Assistant Professor, Korea Brain Research Institute, Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea)
27. Hyoun-Joo Lee, Ph.D. (2014-2015) (Current appointment: Research Instructor in Biochemistry, Vanderbilt University School of Medicine)
28. Carlos Morales-Betanzos, Ph.D. (2014-present)

PUBLICATIONS

1. Liebler, D. C. and Guengerich, F. P. (1983). Olefin oxidation by cytochrome p-450: Evidence for group migration in catalytic intermediates formed with vinylidene chloride and trans-1-phenyl-1-butene. *Biochemistry* 22(24): 5482-5489.
2. Guengerich, F. P. and Liebler, D. C. (1985). Enzymatic activation of chemicals to toxic metabolites. *Crit Rev Toxicol* 14(3): 259-307.
3. Liebler, D. C., Meredith, M. J. and Guengerich, F. P. (1985). Formation of glutathione conjugates by reactive metabolites of vinylidene chloride in microsomes and isolated hepatocytes. *Cancer Res* 45(1): 186-193.
4. Guengerich, F. P., Hogy, L. L., Inskeep, P. B. and Liebler, D. C. (1986). Metabolism and covalent binding of vic-dihaloalkanes, vinyl halides and acrylonitrile. *IARC Sci Publ*(70): 255-260.
5. Liebler, D. C., Kling, D. S. and Reed, D. J. (1986). Antioxidant protection of phospholipid bilayers by alpha-tocopherol. Control of alpha-tocopherol status and lipid peroxidation by ascorbic acid and glutathione. *J Biol Chem* 261(26): 12114-12119.
6. Liebler, D. C., Latwesen, D. G. and Reeder, T. C. (1988). S-(2-chloroacetyl)glutathione, a reactive glutathione thiol ester and a putative metabolite of 1,1-dichloroethylene. *Biochemistry* 27(10): 3652-3657.
7. Liebler, D. C., Kaysen, K. L. and Kennedy, T. A. (1989). Redox cycles of vitamin e: Hydrolysis and ascorbic acid dependent reduction of 8a-(alkyldioxy)tocopherones. *Biochemistry* 28(25): 9772-9777.
8. Liebler, D. C., Kaysen, K. L. and Burr, J. A. (1991). Peroxyl radical trapping and autoxidation reactions of alpha-tocopherol in lipid bilayers. *Chem Res Toxicol* 4(1): 89-93.
9. Kennedy, T. A. and Liebler, D. C. (1991). Peroxyl radical oxidation of beta-carotene: Formation of beta-carotene epoxides. *Chem Res Toxicol* 4(3): 290-295.
10. Brown, A. P., Hastings, K. L., Gandolfi, A. J., Liebler, D. C. and Brendel, K. (1992). Formation and identification of protein adducts to cytosolic proteins in guinea pig liver slices exposed to halothane. *Toxicology* 73(3): 281-295.
11. Liebler, D. C. and Kennedy, T. A. (1992). Epoxide products of beta-carotene antioxidant reactions. *Methods Enzymol* 213: 472-479.
12. Kennedy, T. A. and Liebler, D. C. (1992). Peroxyl radical scavenging by beta-carotene in lipid bilayers. Effect of oxygen partial pressure. *J Biol Chem* 267(7): 4658-4663.

13. Liebler, D. C. and Burr, J. A. (1992). Oxidation of vitamin e during iron-catalyzed lipid peroxidation: Evidence for electron-transfer reactions of the tocopheroxyl radical. *Biochemistry* 31(35): 8278-8284.
14. Dart, R. C., Liebler, D. C. and Sipes, I. G. (1993). Hepatic injury and lipid peroxidation during hemorrhagic shock and resuscitation. *Life Sci* 53(22): 1685-1690.
15. Liebler, D. C. (1993). The role of metabolism in the antioxidant function of vitamin e. *Crit Rev Toxicol* 23(2): 147-169.
16. Liebler, D. C. (1993). Antioxidant reactions of carotenoids. *Ann N Y Acad Sci* 691: 20-31.
17. Liebler, D. C., Matsumoto, S., Iitaka, Y. and Matsuo, M. (1993). Reactions of vitamin e and its model compound 2,2,5,7,8-pentamethylchroman-6-ol with ozone. *Chem Res Toxicol* 6(1): 69-74.
18. Stratton, S. P., Schaefer, W. H. and Liebler, D. C. (1993). Isolation and identification of singlet oxygen oxidation products of beta-carotene. *Chem Res Toxicol* 6(4): 542-547.
19. Liebler, D. C., Burr, J. A., Matsumoto, S. and Matsuo, M. (1993). Reactions of the vitamin e model compound 2,2,5,7,8-pentamethylchroman-6-ol with peroxy radicals. *Chem Res Toxicol* 6(3): 351-355.
20. Liebler, D. C. (1994). Tocopherone and epoxytocopherone products of vitamin e oxidation. *Methods Enzymol* 234: 310-316.
21. McClure, T. D. and Liebler, D. C. (1995). A rapid method for profiling the products of antioxidant reactions by negative ion chemical ionization mass spectrometry. *Chem Res Toxicol* 8(1): 128-135.
22. Ham, A. J. and Liebler, D. C. (1995). Vitamin e oxidation in rat liver mitochondria. *Biochemistry* 34(17): 5754-5761.
23. Liebler, D. C. and Burr, J. A. (1995). Antioxidant stoichiometry and the oxidative fate of vitamin e in peroxy radical scavenging reactions. *Lipids* 30(9): 789-793.
24. Liebler, D. C., Burr, J. A., Philips, L. and Ham, A. J. (1996). Gas chromatography-mass spectrometry analysis of vitamin e and its oxidation products. *Anal Biochem* 236(1): 27-34.
25. Pillai, U. A., Ziegler, T. L., Wang, D. X., Kattnig, M. J., McClure, T., Liebler, D. C., Mayersohn, M. and Sipes, I. G. (1996). 3,3',4,4'-tetrachloroazobenzene absorption, disposition, and metabolism in male fischer 344 rats. *Drug Metab Dispos* 24(2): 238-244.

26. Liebler, D. C. and McClure, T. D. (1996). Antioxidant reactions of beta-carotene: Identification of carotenoid-radical adducts. *Chem Res Toxicol* 9(1): 8-11.
27. Ziegler, T. L., Pillai, U. A., Smith, R. L., Kattnig, M. J., Liebler, D. C., Mayersohn, M. and Sipes, I. G. (1996). Absorption and disposition kinetics of 3,3',4,4'-tetrachloroazoxybenzene in the male fischer 344 rat. *Drug Metab Dispos* 24(9): 1009-1014.
28. Hoglen, N. C., Waller, S. C., Sipes, I. G. and Liebler, D. C. (1997). Reactions of peroxynitrite with gamma-tocopherol. *Chem Res Toxicol* 10(4): 401-407.
29. McVean, M. and Liebler, D. C. (1997). Inhibition of uvb induced DNA photodamage in mouse epidermis by topically applied alpha-tocopherol. *Carcinogenesis* 18(8): 1617-1622.
30. Siegel, D., Bolton, E. M., Burr, J. A., Liebler, D. C. and Ross, D. (1997). The reduction of alpha-tocopherolquinone by human nad(p)h: Quinone oxidoreductase: The role of alpha-tocopherolhydroquinone as a cellular antioxidant. *Mol Pharmacol* 52(2): 300-305.
31. Omaye, S. T., Krinsky, N. I., Kagan, V. E., Mayne, S. T., Liebler, D. C. and Bidlack, W. R. (1997). Beta-carotene: Friend or foe? *Fundam Appl Toxicol* 40(2): 163-174.
32. Kramer, K. A. and Liebler, D. C. (1997). Uvb induced photooxidation of vitamin e. *Chem Res Toxicol* 10(2): 219-224.
33. Liebler, D. C., Stratton, S. P. and Kaysen, K. L. (1997). Antioxidant actions of beta-carotene in liposomal and microsomal membranes: Role of carotenoid-membrane incorporation and alpha-tocopherol. *Arch Biochem Biophys* 338(2): 244-250.
34. Ham, A. J. and Liebler, D. C. (1997). Antioxidant reactions of vitamin e in the perfused rat liver: Product distribution and effect of dietary vitamin e supplementation. *Arch Biochem Biophys* 339(1): 157-164.
35. Stratton, S. P. and Liebler, D. C. (1997). Determination of singlet oxygen-specific versus radical-mediated lipid peroxidation in photosensitized oxidation of lipid bilayers: Effect of beta-carotene and alpha-tocopherol. *Biochemistry* 36(42): 12911-12920.
36. Liebler, D. C. (1998). Antioxidant chemistry of alpha-tocopherol in biological systems. Roles of redox cycles and metabolism. *Subcell Biochem* 30: 301-317.
37. Kramer-Stickland, K. and Liebler, D. C. (1998). Effect of uvb on hydrolysis of alpha-tocopherol acetate to alpha-tocopherol in mouse skin. *J Invest Dermatol* 111(2): 302-307.

38. Liebler, D. C., Aust, A. E., Wilson, G. L. and Copeland, E. S. (1998). Reactive oxidants from nitric oxide, oxidants and cellular signalling, and repair of oxidative DNA damage: A chemical pathology study section workshop. *Mol Carcinog* 22(4): 209-220.
39. Krol, E. S. and Liebler, D. C. (1998). Photoprotective actions of natural and synthetic melanins. *Chem Res Toxicol* 11(12): 1434-1440.
40. Liebler, D. C., Burr, J. A. and Ham, A. J. (1999). Gas chromatography-mass spectrometry analysis of vitamin e and its oxidation products. *Methods Enzymol* 299: 309-318.
41. Hoglen, N. C. and Liebler, D. C. (1999). Products from reaction of peroxyxynitrite with gamma-tocopherol. *Methods Enzymol* 301: 483-490.
42. Faustman, C., Liebler, D. C. and Burr, J. A. (1999). Alpha-tocopherol oxidation in beef and in bovine muscle microsomes. *J Agric Food Chem* 47(4): 1396-1399.
43. Valcic, S., Muders, A., Jacobsen, N. E., Liebler, D. C. and Timmermann, B. N. (1999). Antioxidant chemistry of green tea catechins. Identification of products of the reaction of (-)-epigallocatechin gallate with peroxy radicals. *Chem Res Toxicol* 12(4): 382-386.
44. Faustman, C., Liebler, D. C., McClure, T. D. and Sun, Q. (1999). Alpha,beta-unsaturated aldehydes accelerate oxymyoglobin oxidation. *J Agric Food Chem* 47(8): 3140-3144.
45. Kramer-Stickland, K., Krol, E. S. and Liebler, D. C. (1999). Uv-b-induced photooxidation of vitamin e in mouse skin. *Chem Res Toxicol* 12(2): 187-191.
46. Baker, D. L., Krol, E. S., Jacobsen, N. and Liebler, D. C. (1999). Reactions of beta-carotene with cigarette smoke oxidants. Identification of carotenoid oxidation products and evaluation of the prooxidant/antioxidant effect. *Chem Res Toxicol* 12(6): 535-543.
47. McVean, M. and Liebler, D. C. (1999). Prevention of DNA photodamage by vitamin e compounds and sunscreens: Roles of ultraviolet absorbance and cellular uptake. *Mol Carcinog* 24(3): 169-176.
48. Liebler, D. C. (2000). Reactions of vitamin e with ozone. *Methods Enzymol* 319: 546-551.
49. Krol, E. S., Kramer-Stickland, K. A. and Liebler, D. C. (2000). Photoprotective actions of topically applied vitamin e. *Drug Metab Rev* 32(3-4): 413-420.

50. Jones, J. A. and Liebler, D. C. (2000). Tandem ms analysis of model peptide adducts from reactive metabolites of the hepatotoxin 1,1-dichloroethylene. *Chem Res Toxicol* 13(12): 1302-1312.
51. Liebler, D. C. and Burr, J. A. (2000). Effects of uv light and tumor promoters on endogenous vitamin e status in mouse skin. *Carcinogenesis* 21(2): 221-225.
52. Arora, A., Valcic, S., Cornejo, S., Nair, M. G., Timmermann, B. N. and Liebler, D. C. (2000). Reactions of genistein with alkylperoxyl radicals. *Chem Res Toxicol* 13(7): 638-645.
53. Mason, D. E. and Liebler, D. C. (2000). Characterization of benzoquinone-peptide adducts by electrospray mass spectrometry. *Chem Res Toxicol* 13(10): 976-982.
54. Valcic, S., Burr, J. A., Timmermann, B. N. and Liebler, D. C. (2000). Antioxidant chemistry of green tea catechins. New oxidation products of (-)-epigallocatechin gallate and (-)-epigallocatechin from their reactions with peroxyl radicals. *Chem Res Toxicol* 13(9): 801-810.
55. Liebler, D. C. and Burr, J. A. (2000). Antioxidant reactions of alpha-tocopherolhydroquinone. *Lipids* 35(9): 1045-1047.
56. Liebler, D. C., Valcic, S., Arora, A., Burr, J. A., Cornejo, S., Nair, M. G. and Timmerman, B. N. (2001). Antioxidant reactions of green tea catechins and soy isoflavones. *Adv Exp Med Biol* 500: 191-197.
57. Hansen, B. T., Jones, J. A., Mason, D. E. and Liebler, D. C. (2001). Salsa: A pattern recognition algorithm to detect electrophile-adducted peptides by automated evaluation of cid spectra in lc-ms-ms analyses. *Anal Chem* 73(8): 1676-1683.
58. Arora, A., Willhite, C. A. and Liebler, D. C. (2001). Interactions of beta-carotene and cigarette smoke in human bronchial epithelial cells. *Carcinogenesis* 22(8): 1173-1178.
59. Zakharyan, R. A., Sampayo-Reyes, A., Healy, S. M., Tsaprailis, G., Board, P. G., Liebler, D. C. and Aposhian, H. V. (2001). Human monomethylarsonic acid (mma(v)) reductase is a member of the glutathione-s-transferase superfamily. *Chem Res Toxicol* 14(8): 1051-1057.
60. Lauridsen, C., Leonard, S. W., Griffin, D. A., Liebler, D. C., McClure, T. D. and Traber, M. G. (2001). Quantitative analysis by liquid chromatography-tandem mass spectrometry of deuterium-labeled and unlabeled vitamin e in biological samples. *Anal Biochem* 289(1): 89-95.
61. Krol, E. S., Escalante, D. D. and Liebler, D. C. (2001). Mechanisms of dimer and trimer formation from ultraviolet-irradiated alpha-tocopherol. *Lipids* 36(1): 49-55.

62. Liebler, D. C. (2002). Proteomic approaches to characterize protein modifications: New tools to study the effects of environmental exposures. *Environ Health Perspect* 110 Suppl 1: 3-9. PMC1241143.
63. Terentis, A. C., Thomas, S. R., Burr, J. A., Liebler, D. C. and Stocker, R. (2002). Vitamin e oxidation in human atherosclerotic lesions. *Circ Res* 90(3): 333-339.
64. Liebler, D. C., Hansen, B. T., Davey, S. W., Tiscareno, L. and Mason, D. E. (2002). Peptide sequence motif analysis of tandem ms data with the salsa algorithm. *Anal Chem* 74(1): 203-210.
65. Badghisi, H. and Liebler, D. C. (2002). Sequence mapping of epoxide adducts in human hemoglobin with lc-tandem ms and the salsa algorithm. *Chem Res Toxicol* 15(6): 799-805.
66. Lantum, H. B., Liebler, D. C., Board, P. G. and Anders, M. W. (2002). Alkylation and inactivation of human glutathione transferase zeta (hgstz1-1) by maleylacetone and fumarylacetone. *Chem Res Toxicol* 15(5): 707-716.
67. Anderson, W. B., Liebler, D. C., Board, P. G. and Anders, M. W. (2002). Mass spectral characterization of dichloroacetic acid-modified human glutathione transferase zeta. *Chem Res Toxicol* 15(11): 1387-1397.
68. Liebler, D. C., Hansen, B. T., Jones, J. A., Badghisi, H. and Mason, D. E. (2003). Mapping protein modifications with liquid chromatography-mass spectrometry and the salsa algorithm. *Adv Protein Chem* 65: 195-216.
69. Alderton, A. L., Faustman, C., Liebler, D. C. and Hill, D. W. (2003). Induction of redox instability of bovine myoglobin by adduction with 4-hydroxy-2-nonenal. *Biochemistry* 42(15): 4398-4405.
70. Lee, S., Phillips, A. L., Liebler, D. C. and Faustman, C. (2003). Porcine oxymyoglobin and lipid oxidation in vitro. *Meat Sci* 63(2): 241-247.
71. Mason, D. E. and Liebler, D. C. (2003). Quantitative analysis of modified proteins by lc-ms/ms of peptides labeled with phenyl isocyanate. *J Proteome Res* 2(3): 265-272.
72. Jones, J. A., Kaphalia, L., Treinen-Moslen, M. and Liebler, D. C. (2003). Proteomic characterization of metabolites, protein adducts, and biliary proteins in rats exposed to 1,1-dichloroethylene or diclofenac. *Chem Res Toxicol* 16(10): 1306-1317.
73. Manza, L. L., Codreanu, S. G., Stamer, S. L., Smith, D. L., Wells, K. S., Roberts, R. L. and Liebler, D. C. (2004). Global shifts in protein sumoylation in response to electrophile and oxidative stress. *Chem Res Toxicol* 17(12): 1706-1715.
74. Liebler, D. C. (2004). Shotgun mass spec goes independent. *Nat Methods* 1(1): 16-17.

75. Hong, F., Freeman, M. L. and Liebler, D. C. (2005). Identification of sensor cysteines in human keap1 modified by the cancer chemopreventive agent sulforaphane. *Chem Res Toxicol* 18(12): 1917-1926.
76. Person, M. D., Mason, D. E., Liebler, D. C., Monks, T. J. and Lau, S. S. (2005). Alkylation of cytochrome c by (glutathion-s-yl)-1,4-benzoquinone and iodoacetamide demonstrates compound-dependent site specificity. *Chem Res Toxicol* 18(1): 41-50.
77. Hansen, B. T., Davey, S. W., Ham, A. J. and Liebler, D. C. (2005). P-mod: An algorithm and software to map modifications to peptide sequences using tandem ms data. *J Proteome Res* 4(2): 358-368.
78. Manza, L. L., Stamer, S. L., Ham, A. J., Codreanu, S. G. and Liebler, D. C. (2005). Sample preparation and digestion for proteomic analyses using spin filters. *Proteomics* 5(7): 1742-1745.
79. Liebler, D. C. and Guengerich, F. P. (2005). Elucidating mechanisms of drug-induced toxicity. *Nat Rev Drug Discov* 4(5): 410-420.
80. Kirkpatrick, D. S., Weldon, S. F., Tsaprailis, G., Liebler, D. C. and Gandolfi, A. J. (2005). Proteomic identification of ubiquitinated proteins from human cells expressing his-tagged ubiquitin. *Proteomics* 5(8): 2104-2111.
81. Hong, F., Sekhar, K. R., Freeman, M. L. and Liebler, D. C. (2005). Specific patterns of electrophile adduction trigger keap1 ubiquitination and nrf2 activation. *J Biol Chem* 280(36): 31768-31775.
82. Zimmerman, L. J., Wernke, G. R., Caprioli, R. M. and Liebler, D. C. (2005). Identification of protein fragments as pattern features in maldi-ms analyses of serum. *J Proteome Res* 4(5): 1672-1680.
83. Luka, Z., Ham, A. J., Norris, J. L., Yeo, E. J., Yermalitsky, V., Glenn, B., Caprioli, R. M., Liebler, D. C. and Wagner, C. (2006). Identification of phosphorylation sites in glycine n-methyltransferase from rat liver. *Protein Sci* 15(4): 785-794. PMC2242492.
84. Codreanu, S. G., Adams, D. G., Dawson, E. S., Wadzinski, B. E. and Liebler, D. C. (2006). Inhibition of protein phosphatase 2a activity by selective electrophile alkylation damage. *Biochemistry* 45(33): 10020-10029.
85. Dennehy, M. K., Richards, K. A., Wernke, G. R., Shyr, Y. and Liebler, D. C. (2006). Cytosolic and nuclear protein targets of thiol-reactive electrophiles. *Chem Res Toxicol* 19(1): 20-29.
86. Boutte, A. M., Woltjer, R. L., Zimmerman, L. J., Stamer, S. L., Montine, K. S., Manno, M. V., Cimino, P. J., Liebler, D. C. and Montine, T. J. (2006). Selectively increased

- oxidative modifications mapped to detergent-insoluble forms of alpha and beta-tubulin in Alzheimer's disease. *FASEB J* 20(9): 1473-1483.
87. Yarbrough, W. G., Slebos, R. J. and Liebler, D. (2006). Proteomics: Clinical applications for head and neck squamous cell carcinoma. *Head Neck* 28(6): 549-558.
 88. Liebler, D. C. (2006). The poisons within: Application of toxicity mechanisms to fundamental disease processes. *Chem Res Toxicol* 19(5): 610-613.
 89. Suman, S. P., Faustman, C., Stamer, S. L. and Liebler, D. C. (2006). Redox instability induced by 4-hydroxy-2-nonenal in porcine and bovine myoglobins at pH 5.6 and 4 degrees C. *J Agric Food Chem* 54(9): 3402-3408.
 90. Greco, T. M., Hodara, R., Parastatidis, I., Heijnen, H. F., Dennehy, M. K., Liebler, D. C. and Ischiropoulos, H. (2006). Identification of S-nitrosylation motifs by site-specific mapping of the S-nitrosocysteine proteome in human vascular smooth muscle cells. *Proc Natl Acad Sci U S A* 103(19): 7420-7425. PMC1464354.
 91. Szapacs, M. E., Riggins, J. N., Zimmerman, L. J. and Liebler, D. C. (2006). Covalent adduction of human serum albumin by 4-hydroxy-2-nonenal: Kinetic analysis of competing alkylation reactions. *Biochemistry* 45(35): 10521-10528.
 92. Chacon, A., Masterson, D. S., Yin, H., Liebler, D. C. and Porter, N. A. (2006). N-terminal amino acid side-chain cleavage of chemically modified peptides in the gas phase: A mass spectrometry technique for N-terminus identification. *Bioorg Med Chem* 14(18): 6213-6222.
 93. Parastatidis, I., Thomson, L., Fries, D. M., Moore, R. E., Tohyama, J., Fu, X., Hazen, S. L., Heijnen, H. F., Dennehy, M. K., Liebler, D. C., Rader, D. J. and Ischiropoulos, H. (2007). Increased protein nitration burden in the atherosclerotic lesions and plasma of apolipoprotein A-I deficient mice. *Circ Res* 101(4): 368-376.
 94. Suman, S. P., Faustman, C., Stamer, S. L. and Liebler, D. C. (2007). Proteomics of lipid oxidation-induced oxidation of porcine and bovine oxymyoglobins. *Proteomics* 7(4): 628-640.
 95. Tallman, K. A., Kim, H. Y., Ji, J. X., Szapacs, M. E., Yin, H., McIntosh, T. J., Liebler, D. C. and Porter, N. A. (2007). Phospholipid-protein adducts of lipid peroxidation: Synthesis and study of new biotinylated phosphatidylcholines. *Chem Res Toxicol* 20(2): 227-234.
 96. Shin, N. Y., Liu, Q., Stamer, S. L. and Liebler, D. C. (2007). Protein targets of reactive electrophiles in human liver microsomes. *Chem Res Toxicol* 20(6): 859-867. PMC2556149.
 97. Orton, C. R. and Liebler, D. C. (2007). 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. PMC2063493.
98. Yildiz, P. B., Shyr, Y., Rahman, J. S., Wardwell, N. R., Zimmerman, L. J., Shakhtour, B., Gray, W. H., Chen, S., Li, M., Roder, H., Liebler, D. C., Bigbee, W. L., Siegfried, J. M., Weissfeld, J. L., Gonzalez, A. L., Ninan, M., Johnson, D. H., Carbone, D. P., Caprioli, R. M. and Massion, P. P. (2007). Diagnostic accuracy of maldi mass spectrometric analysis of unfractionated serum in lung cancer. *J Thorac Oncol* 2(10): 893-901. PMC4220686.
 99. Wong, H. L. and Liebler, D. C. (2008). Mitochondrial protein targets of thiol-reactive electrophiles. *Chem Res Toxicol* 21(4): 796-804. PMC3805131.
 100. Lin, D., Saleh, S. and Liebler, D. C. (2008). Reversibility of covalent electrophile-protein adducts and chemical toxicity. *Chem Res Toxicol* 21(12): 2361-2369. PMC2772158.
 101. Slebos, R. J., Brock, J. W., Winters, N. F., Stuart, S. R., Martinez, M. A., Li, M., Chambers, M. C., Zimmerman, L. J., Ham, A. J., Tabb, D. L. and Liebler, D. C. (2008). Evaluation of strong cation exchange versus isoelectric focusing of peptides for multidimensional liquid chromatography-tandem mass spectrometry. *J Proteome Res* 7(12): 5286-5294. PMC2669493.
 102. Parastatidis, I., Thomson, L., Burke, A., Chernysh, I., Nagaswami, C., Visser, J., Stamer, S., Liebler, D. C., Koliakos, G., Heijnen, H. F., Fitzgerald, G. A., Weisel, J. W. and Ischiropoulos, H. (2008). Fibrinogen beta-chain tyrosine nitration is a prothrombotic risk factor. *J Biol Chem* 283(49): 33846-33853. PMC2590685.
 103. Vila, A., Tallman, K. A., Jacobs, A. T., Liebler, D. C., Porter, N. A. and Marnett, L. J. (2008). Identification of protein targets of 4-hydroxynonenal using click chemistry for ex vivo biotinylation of azido and alkynyl derivatives. *Chem Res Toxicol* 21(2): 432-444. PMC2760080.
 104. Liebler, D. C. (2008). Protein damage by reactive electrophiles: Targets and consequences. *Chem Res Toxicol* 21(1): 117-128. PMC2533766.
 105. Rachakonda, G., Xiong, Y., Sekhar, K. R., Stamer, S. L., Liebler, D. C. and Freeman, M. L. (2008). Covalent modification at cys151 dissociates the electrophile sensor keap1 from the ubiquitin ligase cul3. *Chem Res Toxicol* 21(3): 705-710.
 106. Szapacs, M. E., Kim, H. Y., Porter, N. A. and Liebler, D. C. (2008). Identification of proteins adducted by lipid peroxidation products in plasma and modifications of apolipoprotein a1 with a novel biotinylated phospholipid probe. *J Proteome Res* 7(10): 4237-4246. PMC2664612.

107. Li, J., Zimmerman, L. J., Park, B. H., Tabb, D. L., Liebler, D. C. and Zhang, B. (2009). Network-assisted protein identification and data interpretation in shotgun proteomics. *Mol Syst Biol* 5: 303. PMC2736651.
108. Codreanu, S. G., Zhang, B., Sobel, S. M., Billheimer, D. D. and Liebler, D. C. (2009). Global analysis of protein damage by the lipid electrophile 4-hydroxy-2-nonenal. *Mol Cell Proteomics* 8(4): 670-680. PMC2667350.
109. Sprung, R. W., Jr., Brock, J. W., Tanksley, J. P., Li, M., Washington, M. K., Slebos, R. J. and Liebler, D. C. (2009). Equivalence of protein inventories obtained from formalin-fixed paraffin-embedded and frozen tissue in multidimensional liquid chromatography-tandem mass spectrometry shotgun proteomic analysis. *Mol Cell Proteomics* 8(8): 1988-1998. PMC2722776.
110. Addona, T. A., Abbatiello, S. E., Schilling, B., Skates, S. J., Mani, D. R., Bunk, D. M., Spiegelman, C. H., Zimmerman, L. J., Ham, A. J., Keshishian, H., Hall, S. C., Allen, S., Blackman, R. K., Borchers, C. H., Buck, C., Cardasis, H. L., Cusack, M. P., Dodder, N. G., Gibson, B. W., Held, J. M., Hiltke, T., Jackson, A., Johansen, E. B., Kinsinger, C. R., Li, J., Mesri, M., Neubert, T. A., Niles, R. K., Pulsipher, T. C., Ransohoff, D., Rodriguez, H., Rudnick, P. A., Smith, D., Tabb, D. L., Tegeler, T. J., Variyath, A. M., Vega-Montoto, L. J., Wahlander, A., Waldemarson, S., Wang, M., Whiteaker, J. R., Zhao, L., Anderson, N. L., Fisher, S. J., Liebler, D. C., Paulovich, A. G., Regnier, F. E., Tempst, P. and Carr, S. A. (2009). Multi-site assessment of the precision and reproducibility of multiple reaction monitoring-based measurements of proteins in plasma. *Nat Biotechnol* 27(7): 633-641. PMC2855883.
111. Loeber, R. L., Michaelson-Richie, E. D., Codreanu, S. G., Liebler, D. C., Campbell, C. R. and Tretyakova, N. Y. (2009). Proteomic analysis of DNA-protein cross-linking by antitumor nitrogen mustards. *Chem Res Toxicol* 22(6): 1151-1162. PMC2706101.
112. Liebler, D. C. and Presenters (2009). Summary of united states human proteome organisation (hupo) symposium entitled "standardized clinical proteomics platforms". *Mol Cell Proteomics* 8(5): 1165-1166. PMC2689782.
113. Liebler, D. C. and Ham, A. J. (2009). Spin filter-based sample preparation for shotgun proteomics. *Nat Methods* 6(11): 785; author reply 785-786.
114. Fiske, W. H., Tanksley, J., Nam, K. T., Goldenring, J. R., Slebos, R. J., Liebler, D. C., Abtahi, A. M., La Fleur, B., Ayers, G. D., Lind, C. D., Washington, M. K. and Coffey, R. J. (2009). Efficacy of cetuximab in the treatment of menetrier's disease. *Sci Transl Med* 1(8): 8ra18. PMC3638759.
115. Kim, H. Y., Tallman, K. A., Liebler, D. C. and Porter, N. A. (2009). An azido-biotin reagent for use in the isolation of protein adducts of lipid-derived electrophiles by streptavidin catch and photorelease. *Mol Cell Proteomics* 8(9): 2080-2089. PMC2742437.

116. Nelson, K. J., Klomsiri, C., Codreanu, S. G., Soito, L., Liebler, D. C., Rogers, L. C., Daniel, L. W. and Poole, L. B. (2010). Use of dimedone-based chemical probes for sulfenic acid detection methods to visualize and identify labeled proteins. *Methods Enzymol* 473: 95-115. PMC3835715.
117. MacLean, B., Tomazela, D. M., Shulman, N., Chambers, M., Finney, G. L., Frewen, B., Kern, R., Tabb, D. L., Liebler, D. C. and MacCoss, M. J. (2010). Skyline: An open source document editor for creating and analyzing targeted proteomics experiments. *Bioinformatics* 26(7): 966-968. PMC2844992.
118. Li, M., Gray, W., Zhang, H., Chung, C. H., Billheimer, D., Yarbrough, W. G., Liebler, D. C., Shyr, Y. and Slebos, R. J. (2010). Comparative shotgun proteomics using spectral count data and quasi-likelihood modeling. *J Proteome Res* 9(8): 4295-4305. PMC2920032.
119. Rudnick, P. A., Clauser, K. R., Kilpatrick, L. E., Tchekhovskoi, D. V., Neta, P., Blonder, N., Billheimer, D. D., Blackman, R. K., Bunk, D. M., Cardasis, H. L., Ham, A. J., Jaffe, J. D., Kinsinger, C. R., Mesri, M., Neubert, T. A., Schilling, B., Tabb, D. L., Tegeler, T. J., Vega-Montoto, L., Variyath, A. M., Wang, M., Wang, P., Whiteaker, J. R., Zimmerman, L. J., Carr, S. A., Fisher, S. J., Gibson, B. W., Paulovich, A. G., Regnier, F. E., Rodriguez, H., Spiegelman, C., Tempst, P., Liebler, D. C. and Stein, S. E. (2010). Performance metrics for liquid chromatography-tandem mass spectrometry systems in proteomics analyses. *Mol Cell Proteomics* 9(2): 225-241. PMC2830836.
120. Rodriguez, H., Tezak, Z., Mesri, M., Carr, S. A., Liebler, D. C., Fisher, S. J., Tempst, P., Hiltke, T., Kessler, L. G., Kinsinger, C. R., Philip, R., Ransohoff, D. F., Skates, S. J., Regnier, F. E., Anderson, N. L., Mansfield, E. and Workshop, P. (2010). Analytical validation of protein-based multiplex assays: A workshop report by the nci-fda interagency oncology task force on molecular diagnostics. *Clin Chem* 56(2): 237-243.
121. Regnier, F. E., Skates, S. J., Mesri, M., Rodriguez, H., Tezak, Z., Kondratovich, M. V., Alterman, M. A., Levin, J. D., Roscoe, D., Reilly, E., Callaghan, J., Kelm, K., Brown, D., Philip, R., Carr, S. A., Liebler, D. C., Fisher, S. J., Tempst, P., Hiltke, T., Kessler, L. G., Kinsinger, C. R., Ransohoff, D. F., Mansfield, E. and Anderson, N. L. (2010). Protein-based multiplex assays: Mock submissions to the us food and drug administration. *Clin Chem* 56(2): 165-171.
122. Paulovich, A. G., Billheimer, D., Ham, A. J., Vega-Montoto, L., Rudnick, P. A., Tabb, D. L., Wang, P., Blackman, R. K., Bunk, D. M., Cardasis, H. L., Clauser, K. R., Kinsinger, C. R., Schilling, B., Tegeler, T. J., Variyath, A. M., Wang, M., Whiteaker, J. R., Zimmerman, L. J., Fenyo, D., Carr, S. A., Fisher, S. J., Gibson, B. W., Mesri, M., Neubert, T. A., Regnier, F. E., Rodriguez, H., Spiegelman, C., Stein, S. E., Tempst, P. and Liebler, D. C. (2010). Interlaboratory study characterizing a yeast performance standard for benchmarking lc-ms platform performance. *Mol Cell Proteomics* 9(2): 242-254. PMC2830837.

123. Tabb, D. L., Vega-Montoto, L., Rudnick, P. A., Variyath, A. M., Ham, A. J., Bunk, D. M., Kilpatrick, L. E., Billheimer, D. D., Blackman, R. K., Cardasis, H. L., Carr, S. A., Clauser, K. R., Jaffe, J. D., Kowalski, K. A., Neubert, T. A., Regnier, F. E., Schilling, B., Tegeler, T. J., Wang, M., Wang, P., Whiteaker, J. R., Zimmerman, L. J., Fisher, S. J., Gibson, B. W., Kinsinger, C. R., Mesri, M., Rodriguez, H., Stein, S. E., Tempst, P., Paulovich, A. G., Liebler, D. C. and Spiegelman, C. (2010). Repeatability and reproducibility in proteomic identifications by liquid chromatography-tandem mass spectrometry. *J Proteome Res* 9(2): 761-776. PMC2818771.
124. Diamante, C., Fiume, M. Z., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Alan Andersen, F. (2010). Final safety assessment of thiodipropionic acid and its dialkyl esters as used in cosmetics. *Int J Toxicol* 29(4 Suppl): 137S-150S.
125. Burnett, C. L., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2010). Final report of the safety assessment of kojic acid as used in cosmetics. *Int J Toxicol* 29(6 Suppl): 244S-273.
126. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2010). Amended safety assessment of dodecylbenzenesulfonate, decylbenzenesulfonate, and tridecylbenzenesulfonate salts as used in cosmetics. *Int J Toxicol* 29(6 Suppl): 288S-305.
127. Andersen, F. A., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J. and Snyder, P. W. (2010). Final report of the cosmetic ingredient review expert panel amended safety assessment of calendula officinalis-derived cosmetic ingredients. *Int J Toxicol* 29(6 Suppl): 221S-243.
128. Andersen, F. A., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J. and Snyder, P. W. (2010). Final amended safety assessment of hydroquinone as used in cosmetics. *Int J Toxicol* 29(6 Suppl): 274S-287.
129. Lin, D., Li, J., Slebos, R. J. and Liebler, D. C. (2010). Cysteinyl peptide capture for shotgun proteomics: Global assessment of chemoselective fractionation. *J Proteome Res* 9(10): 5461-5472. PMC2948434.
130. Tu, C., Rudnick, P. A., Martinez, M. Y., Cheek, K. L., Stein, S. E., Slebos, R. J. and Liebler, D. C. (2010). Depletion of abundant plasma proteins and limitations of plasma proteomics. *J Proteome Res* 9(10): 4982-4991. PMC2948641.
131. Michaelson-Richie, E. D., Loeber, R. L., Codreanu, S. G., Ming, X., Liebler, D. C., Campbell, C. and Tretyakova, N. Y. (2010). DNA-protein cross-linking by 1,2,3,4-diepoxybutane. *J Proteome Res* 9(9): 4356-4367. PMC2956319.

132. Connor, R. E., Marnett, L. J. and Liebler, D. C. (2011). Protein-selective capture to analyze electrophile adduction of hsp90 by 4-hydroxynonenal. *Chem Res Toxicol* 24(8): 1275-1282. PMC3155980.
133. Johnson, W., Jr., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Klaassen, C. D., Hill, R., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2011). Final report of the cosmetic ingredient review expert panel on the safety assessment of pelargonic acid (nonanoic acid) and nonanoate esters. *Int J Toxicol* 30(6 Suppl): 228S-269S.
134. Johnson, W., Jr., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2011). Safety assessment of cyclomethicone, cyclotetrasiloxane, cyclopentasiloxane, cyclohexasiloxane, and cycloheptasiloxane. *Int J Toxicol* 30(6 Suppl): 149S-227S.
135. Bergfeld, W. F., Belsito, D. V., Klaassen, C. D., Hill, R., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2011). Safety assessment of xylene sulfonic acid, toluene sulfonic acid, and alkyl aryl sulfonate hydrotropes as used in cosmetics. *Int J Toxicol* 30(6 Suppl): 270S-283S.
136. Dasari, S., Chambers, M. C., Codreanu, S. G., Liebler, D. C., Collins, B. C., Pennington, S. R., Gallagher, W. M. and Tabb, D. L. (2011). Sequence tagging reveals unexpected modifications in toxicoproteomics. *Chem Res Toxicol* 24(2): 204-216. PMC3042045.
137. Zhang, B., Shi, Z., Duncan, D. T., Prodduturi, N., Marnett, L. J. and Liebler, D. C. (2011). Relating protein adduction to gene expression changes: A systems approach. *Mol Biosyst* 7(7): 2118-2127. PMC3659419.
138. Zhang, H., Liu, Q., Zimmerman, L. J., Ham, A. J., Slebos, R. J., Rahman, J., Kikuchi, T., Massion, P. P., Carbone, D. P., Billheimer, D. and Liebler, D. C. (2011). Methods for peptide and protein quantitation by liquid chromatography-multiple reaction monitoring mass spectrometry. *Mol Cell Proteomics* 10(6): M110 006593. PMC3108838.
139. Michaelson-Richie, E. D., Ming, X., Codreanu, S. G., Loeber, R. L., Liebler, D. C., Campbell, C. and Tretyakova, N. Y. (2011). Mechlorethamine-induced DNA-protein cross-linking in human fibrosarcoma (ht1080) cells. *J Proteome Res* 10(6): 2785-2796. PMC3208907.
140. Johnson, W., Jr., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2011). Amended safety assessment of sesamum indicum (sesame) seed oil, hydrogenated sesame seed oil, sesamum indicum (sesame) oil unsaponifiables, and sodium sesameseedate. *Int J Toxicol* 30(3 Suppl): 40S-53S.
141. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2011).

Final report of the cosmetic ingredient review expert panel safety assessment of polymethyl methacrylate (pmma), methyl methacrylate crosspolymer, and methyl methacrylate/glycol dimethacrylate crosspolymer. *Int J Toxicol* 30(3 Suppl): 54S-65S.

142. Li, J., Su, Z., Ma, Z. Q., Slebos, R. J., Halvey, P., Tabb, D. L., Liebler, D. C., Pao, W. and Zhang, B. (2011). A bioinformatics workflow for variant peptide detection in shotgun proteomics. *Mol Cell Proteomics* 10(5): M110 006536. PMC3098595.
143. Ma, Z. Q., Tabb, D. L., Burden, J., Chambers, M. C., Cox, M. B., Cantrell, M. J., Ham, A. J., Litton, M. D., Oreto, M. R., Schultz, W. C., Sobecki, S. M., Tsui, T. Y., Wernke, G. R. and Liebler, D. C. (2011). Supporting tool suite for production proteomics. *Bioinformatics* 27(22): 3214-3215. PMC3208394.
144. Bose, D., Zimmerman, L. J., Pierobon, M., Petricoin, E., Tozzi, F., Parikh, A., Fan, F., Dallas, N., Xia, L., Gaur, P., Samuel, S., Liebler, D. C. and Ellis, L. M. (2011). Chemoresistant colorectal cancer cells and cancer stem cells mediate growth and survival of bystander cells. *Br J Cancer* 105(11): 1759-1767. PMC3242606.
145. Hoofnagle, A. N., Aebersold, R., Anderson, N. L., Felsenfeld, A. and Liebler, D. C. (2011). Painting a moving picture: Large-scale proteomics efforts and their potential for changing patient care. *Clin Chem* 57(10): 1357-1360.
146. Burnett, C. L., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2011). Final report of the amended safety assessment of pvm/ma copolymer and its related salts and esters as used in cosmetics. *Int J Toxicol* 30(5 Suppl): 128S-144S.
147. Rexer, B. N., Ham, A. J., Rinehart, C., Hill, S., Granja-Ingram Nde, M., Gonzalez-Angulo, A. M., Mills, G. B., Dave, B., Chang, J. C., Liebler, D. C. and Arteaga, C. L. (2011). Phosphoproteomic mass spectrometry profiling links src family kinases to escape from her2 tyrosine kinase inhibition. *Oncogene* 30(40): 4163-4174. PMC3204390.
148. Codreanu, S. G., Kim, H. Y., Porter, N. A. and Liebler, D. C. (2012). Biotinylated probes for the analysis of protein modification by electrophiles. *Methods Mol Biol* 803: 77-95. PMC3811082.
149. Bereman, M. S., MacLean, B., Tomazela, D. M., Liebler, D. C. and MacCoss, M. J. (2012). The development of selected reaction monitoring methods for targeted proteomics via empirical refinement. *Proteomics* 12(8): 1134-1141. PMC3643124.
150. Halvey, P. J., Liebler, D. C. and Slebos, R. J. (2012). A reporter system for translational readthrough of stop codons in human cells. *FEBS Open Bio* 2: 56-59. PMC3342693.
151. Myers, M. V., Manning, H. C., Coffey, R. J. and Liebler, D. C. (2012). Protein expression signatures for inhibition of epidermal growth factor receptor-mediated signaling. *Mol Cell Proteomics* 11(2): M111 015222. PMC3277773.

152. Halvey, P. J., Zhang, B., Coffey, R. J., Liebler, D. C. and Slebos, R. J. (2012). Proteomic consequences of a single gene mutation in a colorectal cancer model. *J Proteome Res* 11(2): 1184-1195. PMC3271737.
153. Wang, X., Slebos, R. J., Wang, D., Halvey, P. J., Tabb, D. L., Liebler, D. C. and Zhang, B. (2012). Protein identification using customized protein sequence databases derived from rna-seq data. *J Proteome Res* 11(2): 1009-1017. PMC3727138.
154. Le, A., Lane, A. N., Hamaker, M., Bose, S., Gouw, A., Barbi, J., Tsukamoto, T., Rojas, C. J., Slusher, B. S., Zhang, H., Zimmerman, L. J., Liebler, D. C., Slebos, R. J., Lorkiewicz, P. K., Higashi, R. M., Fan, T. W. and Dang, C. V. (2012). Glucose-independent glutamine metabolism via tca cycling for proliferation and survival in b cells. *Cell Metab* 15(1): 110-121. PMC3345194.
155. Halvey, P. J., Ferrone, C. R. and Liebler, D. C. (2012). Gelc-mrm quantitation of mutant kras oncoprotein in complex biological samples. *J Proteome Res* 11(7): 3908-3913. PMC3400422.
156. Ma, Z. Q., Polzin, K. O., Dasari, S., Chambers, M. C., Schilling, B., Gibson, B. W., Tran, B. Q., Vega-Montoto, L., Liebler, D. C. and Tabb, D. L. (2012). Quameter: Multivendor performance metrics for lc-ms/ms proteomics instrumentation. *Anal Chem* 84(14): 5845-5850. PMC3730131.
157. Burnett, C. L., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Final report of the cosmetic ingredient review expert panel on the safety assessment of cocamidopropyl betaine (capb). *Int J Toxicol* 31(4 Suppl): 77S-111S.
158. Fiume, M. M., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Final report of the cosmetic ingredient review expert panel on the safety assessment of dicarboxylic acids, salts, and esters. *Int J Toxicol* 31(4 Suppl): 5S-76S.
159. Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Final report of the cosmetic ingredient review expert panel on the safety assessment of methyl acetate. *Int J Toxicol* 31(4 Suppl): 112S-136S.
160. Zimmerman, L. J., Li, M., Yarbrough, W. G., Slebos, R. J. and Liebler, D. C. (2012). Global stability of plasma proteomes for mass spectrometry-based analyses. *Mol Cell Proteomics* 11(6): M111 014340. PMC3433892.
161. Sprung, R. W., Martinez, M. A., Carpenter, K. L., Ham, A. J., Washington, M. K., Arteaga, C. L., Sanders, M. E. and Liebler, D. C. (2012). Precision of multiple reaction monitoring mass spectrometry analysis of formalin-fixed, paraffin-embedded tissue. *J Proteome Res* 11(6): 3498-3505. PMC3368395.

162. Sherrod, S. D., Myers, M. V., Li, M., Myers, J. S., Carpenter, K. L., Maclean, B., Maccoss, M. J., Liebler, D. C. and Ham, A. J. (2012). Label-free quantitation of protein modifications by pseudo selected reaction monitoring with internal reference peptides. *J Proteome Res* 11(6): 3467-3479. PMC3368409.
163. Schepeler, T., Holm, A., Halvey, P., Nordentoft, I., Lamy, P., Riising, E. M., Christensen, L. L., Thorsen, K., Liebler, D. C., Helin, K., Orntoft, T. F. and Andersen, C. L. (2012). Attenuation of the beta-catenin/tcf4 complex in colorectal cancer cells induces several growth-suppressive micrornas that target cancer promoting genes. *Oncogene* 31(22): 2750-2760.
164. Sousa, J. F., Ham, A. J., Whitwell, C., Nam, K. T., Lee, H. J., Yang, H. K., Kim, W. H., Zhang, B., Li, M., LaFleur, B., Liebler, D. C. and Goldenring, J. R. (2012). Proteomic profiling of paraffin-embedded samples identifies metaplasia-specific and early-stage gastric cancer biomarkers. *Am J Pathol* 181(5): 1560-1572. PMC3483808.
165. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Safety assessment of trimoniums as used in cosmetics. *Int J Toxicol* 31(6 Suppl): 296S-341S.
166. Johnson, W., Jr., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Safety assessment of isoparaffins as used in cosmetics. *Int J Toxicol* 31(6 Suppl): 269S-295S.
167. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Safety assessment of alkyl benzoates as used in cosmetics. *Int J Toxicol* 31(6 Suppl): 342S-372S.
168. Kikuchi, T., Hassanein, M., Amann, J. M., Liu, Q., Slebos, R. J., Rahman, S. M., Kaufman, J. M., Zhang, X., Hoeksema, M. D., Harris, B. K., Li, M., Shyr, Y., Gonzalez, A. L., Zimmerman, L. J., Liebler, D. C., Massion, P. P. and Carbone, D. P. (2012). In-depth proteomic analysis of nonsmall cell lung cancer to discover molecular targets and candidate biomarkers. *Mol Cell Proteomics* 11(10): 916-932. PMC3494148.
169. Fiume, M. M., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Safety assessment of stearyl heptanoate and related stearyl alkanoates as used in cosmetics. *Int J Toxicol* 31(5 Suppl): 141S-146S.
170. Fiume, M. M., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Safety assessment of alkyl peg ethers as used in cosmetics. *Int J Toxicol* 31(5 Suppl): 169S-244S.

171. Fiume, M. M., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Safety assessment of propylene glycol, tripropylene glycol, and ppgs as used in cosmetics. *Int J Toxicol* 31(5 Suppl): 245S-260S.
172. Johnson, W., Jr., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2012). Safety assessment of 1,2-glycols as used in cosmetics. *Int J Toxicol* 31(5 Suppl): 147S-168S.
173. Udyavar, A. R., Hoeksema, M. D., Clark, J. E., Zou, Y., Tang, Z., Li, Z., Li, M., Chen, H., Statnikov, A., Shyr, Y., Liebler, D. C., Field, J., Eisenberg, R., Estrada, L., Massion, P. P. and Quaranta, V. (2013). Co-expression network analysis identifies spleen tyrosine kinase (syk) as a candidate oncogenic driver in a subset of small-cell lung cancer. *BMC Syst Biol* 7 Suppl 5: S1. PMC4029366.
174. Connor, R. E., Codreanu, S. G., Marnett, L. J. and Liebler, D. C. (2013). Targeted protein capture for analysis of electrophile-protein adducts. *Methods Mol Biol* 987: 163-176. PMC3801415.
175. Wang, D., Dasari, S., Chambers, M. C., Holman, J. D., Chen, K., Liebler, D. C., Orton, D. J., Purvine, S. O., Monroe, M. E., Chung, C. Y., Rose, K. L. and Tabb, D. L. (2013). Basophile: Accurate fragment charge state prediction improves peptide identification rates. *Genomics Proteomics Bioinformatics* 11(2): 86-95. PMC3737598.
176. Liu, Q., Ullery, J., Zhu, J., Liebler, D. C., Marnett, L. J. and Zhang, B. (2013). Rna-seq data analysis at the gene and cds levels provides a comprehensive view of transcriptome responses induced by 4-hydroxynonenal. *Mol Biosyst* 9(12): 3036-3046. PMC3864034.
177. Lin, D., Alborn, W. E., Slebos, R. J. and Liebler, D. C. (2013). Comparison of protein immunoprecipitation-multiple reaction monitoring with elisa for assay of biomarker candidates in plasma. *J Proteome Res* 12(12): 5996-6003. PMC3864264.
178. Skates, S. J., Gillette, M. A., LaBaer, J., Carr, S. A., Anderson, L., Liebler, D. C., Ransohoff, D., Rifai, N., Kondratovich, M., Tezak, Z., Mansfield, E., Oberg, A. L., Wright, I., Barnes, G., Gail, M., Mesri, M., Kinsinger, C. R., Rodriguez, H. and Boja, E. S. (2013). Statistical design for biospecimen cohort size in proteomics-based biomarker discovery and verification studies. *J Proteome Res* 12(12): 5383-5394. PMC4039197.
179. Demory Beckler, M., Higginbotham, J. N., Franklin, J. L., Ham, A. J., Halvey, P. J., Imasuen, I. E., Whitwell, C., Li, M., Liebler, D. C. and Coffey, R. J. (2013). Proteomic analysis of exosomes from mutant kras colon cancer cells identifies intercellular transfer of mutant kras. *Mol Cell Proteomics* 12(2): 343-355. PMC3567858.

180. Slebos, R. J., Jehmlich, N., Brown, B., Yin, Z., Chung, C. H., Yarbrough, W. G. and Liebler, D. C. (2013). Proteomic analysis of oropharyngeal carcinomas reveals novel hpv-associated biological pathways. *Int J Cancer* 132(3): 568-579. PMC3479311.
181. Liu, Q., Halvey, P. J., Shyr, Y., Slebos, R. J., Liebler, D. C. and Zhang, B. (2013). Integrative omics analysis reveals the importance and scope of translational repression in microrna-mediated regulation. *Mol Cell Proteomics* 12(7): 1900-1911. PMC3708174.
182. Liebler, D. C. and Zimmerman, L. J. (2013). Targeted quantitation of proteins by mass spectrometry. *Biochemistry* 52(22): 3797-3806. PMC3674507.
183. Burnett, C. L., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of 2-amino-4-hydroxyethylaminoanisole and 2-amino-4-hydroxyethylaminoanisole sulfate as used in cosmetics. *Int J Toxicol* 32(3 Suppl): 25S-35S.
184. Fiume, M. M., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of triethanolamine and triethanolamine-containing ingredients as used in cosmetics. *Int J Toxicol* 32(3 Suppl): 59S-83S.
185. Fiume, M. M., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of diethanolamides as used in cosmetics. *Int J Toxicol* 32(3 Suppl): 36S-58S.
186. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of silylates and surface-modified siloxysilicates. *Int J Toxicol* 32(3 Suppl): 5S-24S.
187. Burnett, C. L., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of alpha-amino acids as used in cosmetics. *Int J Toxicol* 32(6 Suppl): 41S-64S.
188. Boyer, I. J., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Amended safety assessment of formaldehyde and methylene glycol as used in cosmetics. *Int J Toxicol* 32(6 Suppl): 5S-32S.
189. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of ammonium hectorites as used in cosmetics. *Int J Toxicol* 32(6 Suppl): 33S-40S.

190. Ellis, M. J., Gillette, M., Carr, S. A., Paulovich, A. G., Smith, R. D., Rodland, K. K., Townsend, R. R., Kinsinger, C., Mesri, M., Rodriguez, H., Liebler, D. C. and Clinical Proteomic Tumor Analysis, C. (2013). Connecting genomic alterations to cancer biology with proteomics: The nci clinical proteomic tumor analysis consortium. *Cancer Discov* 3(10): 1108-1112. PMC3800055.
191. Abbatiello, S. E., Mani, D. R., Schilling, B., Maclean, B., Zimmerman, L. J., Feng, X., Cusack, M. P., Sedransk, N., Hall, S. C., Addona, T., Allen, S., Dodder, N. G., Ghosh, M., Held, J. M., Hedrick, V., Inerowicz, H. D., Jackson, A., Keshishian, H., Kim, J. W., Lyssand, J. S., Riley, C. P., Rudnick, P., Sadowski, P., Shaddox, K., Smith, D., Tomazela, D., Wahlander, A., Waldemarson, S., Whitwell, C. A., You, J., Zhang, S., Kinsinger, C. R., Mesri, M., Rodriguez, H., Borchers, C. H., Buck, C., Fisher, S. J., Gibson, B. W., Liebler, D., Maccoss, M., Neubert, T. A., Paulovich, A., Regnier, F., Skates, S. J., Tempst, P., Wang, M. and Carr, S. A. (2013). Design, implementation and multisite evaluation of a system suitability protocol for the quantitative assessment of instrument performance in liquid chromatography-multiple reaction monitoring-ms (lc-mrm-ms). *Mol Cell Proteomics* 12(9): 2623-2639. PMC3769335.
192. Johnson, W., Jr., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of alkyl glyceryl ethers as used in cosmetics. *Int J Toxicol* 32(5 Suppl): 5S-21S.
193. Fiume, M. M., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of decyl glucoside and other alkyl glucosides as used in cosmetics. *Int J Toxicol* 32(5 Suppl): 22S-48S.
194. Fiume, M. M., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of bis-diglyceryl polyacyladipate-2 and bis-diglyceryl polyacyladipate-1 as used in cosmetics. *Int J Toxicol* 32(5 Suppl): 56S-64S.
195. Burnett, C. L., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of lauriminodipropionic acid, sodium lauriminodipropionate, and disodium lauriminodipropionate as used in cosmetics. *Int J Toxicol* 32(5 Suppl): 49S-55S.
196. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2013). Safety assessment of borosilicate glasses as used in cosmetics. *Int J Toxicol* 32(5 Suppl): 65S-72S.
197. Yang, J., Gupta, V., Carroll, K. S. and Liebler, D. C. (2014). Site-specific mapping and quantification of protein s-sulphenylation in cells. *Nat Commun* 5: 4776. PMC4167403.

198. Halvey, P. J., Wang, X., Wang, J., Bhat, A. A., Dhawan, P., Li, M., Zhang, B., Liebler, D. C. and Slebos, R. J. (2014). Proteogenomic analysis reveals unanticipated adaptations of colorectal tumor cells to deficiencies in DNA mismatch repair. *Cancer Res* 74(1): 387-397. PMC3896054.
199. Mertins, P., Yang, F., Liu, T., Mani, D. R., Petyuk, V. A., Gillette, M. A., Clauser, K. R., Qiao, J. W., Gritsenko, M. A., Moore, R. J., Levine, D. A., Townsend, R., Erdmann-Gilmore, P., Snider, J. E., Davies, S. R., Ruggles, K. V., Fenyo, D., Kitchens, R. T., Li, S., Olvera, N., Dao, F., Rodriguez, H., Chan, D. W., Liebler, D., White, F., Rodland, K. D., Mills, G. B., Smith, R. D., Paulovich, A. G., Ellis, M. and Carr, S. A. (2014). Ischemia in tumors induces early and sustained phosphorylation changes in stress kinase pathways but does not affect global protein levels. *Mol Cell Proteomics* 13(7): 1690-1704. PMC4083109.
200. Codreanu, S. G., Ullery, J. C., Zhu, J., Tallman, K. A., Beavers, W. N., Porter, N. A., Marnett, L. J., Zhang, B. and Liebler, D. C. (2014). Alkylation damage by lipid electrophiles targets functional protein systems. *Mol Cell Proteomics* 13(3): 849-859. PMC3945913.
201. Carr, S. A., Abbatiello, S. E., Ackermann, B. L., Borchers, C., Domon, B., Deutsch, E. W., Grant, R. P., Hoofnagle, A. N., Huttenhain, R., Koomen, J. M., Liebler, D. C., Liu, T., MacLean, B., Mani, D. R., Mansfield, E., Neubert, H., Paulovich, A. G., Reiter, L., Vitek, O., Aebersold, R., Anderson, L., Bethem, R., Blonder, J., Boja, E., Botelho, J., Boyne, M., Bradshaw, R. A., Burlingame, A. L., Chan, D., Keshishian, H., Kuhn, E., Kinsinger, C., Lee, J. S., Lee, S. W., Moritz, R., Oses-Prieto, J., Rifai, N., Ritchie, J., Rodriguez, H., Srinivas, P. R., Townsend, R. R., Van Eyk, J., Whiteley, G., Wiita, A. and Weintraub, S. (2014). Targeted peptide measurements in biology and medicine: Best practices for mass spectrometry-based assay development using a fit-for-purpose approach. *Mol Cell Proteomics* 13(3): 907-917. PMC3945918.
202. Johnson, W., Jr., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of chlorphenesin as used in cosmetics. *Int J Toxicol* 33(2 suppl): 5S-15S.
203. Fiume, M. M., Heldreth, B. A., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of citric acid, inorganic citrate salts, and alkyl citrate esters as used in cosmetics. *Int J Toxicol* 33(2 suppl): 16S-46S.
204. Fiume, M. M., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of cucumis sativus (cucumber)-derived ingredients as used in cosmetics. *Int J Toxicol* 33(2 suppl): 47S-64S.
205. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014).

- Safety assessment of dimethicone crosspolymers as used in cosmetics. *Int J Toxicol* 33(2 suppl): 65S-115S.
206. Burnett, C. L., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of pegylated oils as used in cosmetics. *Int J Toxicol* 33(4 Suppl): 13S-39S.
207. Burnett, C., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of animal- and plant-derived amino acids as used in cosmetics. *Int J Toxicol* 33(4 Suppl): 5S-12S.
208. Burnett, C., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of nylon as used in cosmetics. *Int J Toxicol* 33(4 Suppl): 47S-60S.
209. Johnson, W., Jr., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of tin(iv) oxide as used in cosmetics. *Int J Toxicol* 33(4 Suppl): 40S-46S.
210. Zhang, B., Wang, J., Wang, X., Zhu, J., Liu, Q., Shi, Z., Chambers, M. C., Zimmerman, L. J., Shaddox, K. F., Kim, S., Davies, S. R., Wang, S., Wang, P., Kinsinger, C. R., Rivers, R. C., Rodriguez, H., Townsend, R. R., Ellis, M. J., Carr, S. A., Tabb, D. L., Coffey, R. J., Slebos, R. J., Liebler, D. C. and Nci, C. (2014). Proteogenomic characterization of human colon and rectal cancer. *Nature* 513(7518): 382-387. PMC4249766.
211. Fiume, M. M., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of vitis vinifera (grape)-derived ingredients as used in cosmetics. *Int J Toxicol* 33(3 Suppl): 48S-83S.
212. Burnett, C. L., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Safety assessment of 6-hydroxyindole as used in cosmetics. *Int J Toxicol* 33(3 Suppl): 24S-35S.
213. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014). Amended safety assessment of hypericum perforatum-derived ingredients as used in cosmetics. *Int J Toxicol* 33(3 Suppl): 5S-23S.
214. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2014).

Safety assessment of modified terephthalate polymers as used in cosmetics. *Int J Toxicol* 33(3 Suppl): 36S-47S.

215. Bowton, E. A., Collier, S. P., Wang, X., Sutcliffe, C. B., Van Driest, S. L., Couch, L. J., Herrera, M., Jerome, R. N., Slebos, R. J., Alborn, W. E., Liebler, D. C., McNaughton, C. D., Mernaugh, R. L., Wells, Q. S., Brown, N. J., Roden, D. M. and Pulley, J. M. (2015). Phenotype-driven plasma biobanking strategies and methods. *J Pers Med* 5(2): 140-152. PMC4493492.
216. Slebos, R. J., Wang, X., Wang, X., Zhang, B., Tabb, D. L. and Liebler, D. C. (2015). Corrigendum: Proteomic analysis of colon and rectal carcinoma using standard and customized databases. *Sci Data* 2: 150037. PMC4508824.
217. Slebos, R. J., Wang, X., Wang, X., Zhang, B., Tabb, D. L. and Liebler, D. C. (2015). Proteomic analysis of colon and rectal carcinoma using standard and customized databases. *Sci Data* 2: 150022. PMC4477697.
218. Gajadhar, A. S., Johnson, H., Slebos, R. J., Shaddox, K., Wiles, K., Washington, M. K., Herline, A. J., Levine, D. A., Liebler, D. C., White, F. M. and Clinical Proteomic Tumor Analysis, C. (2015). Phosphotyrosine signaling analysis in human tumors is confounded by systemic ischemia-driven artifacts and intra-specimen heterogeneity. *Cancer Res* 75(7): 1495-1503. PMC4383696.
219. Api, A. M., Belsito, D., Bruze, M., Cadby, P., Calow, P., Dagli, M. L., Dekant, W., Ellis, G., Fryer, A. D., Fukayama, M., Griem, P., Hickey, C., Kromidas, L., Lalko, J. F., Liebler, D. C., Miyachi, Y., Politano, V. T., Renskers, K., Ritacco, G., Salvito, D., Schultz, T. W., Sipes, I. G., Smith, B., Vitale, D. and Wilcox, D. K. (2015). Criteria for the research institute for fragrance materials, inc. (rifm) safety evaluation process for fragrance ingredients. *Food Chem Toxicol* 82 Suppl: S1-S19.
220. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, l-borneol, cas registry number 464-45-9. *Food Chem Toxicol* 82 Suppl: S74-80.
221. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, borneol, cas registry number 507-70-0. *Food Chem Toxicol* 82 Suppl: S81-88.
222. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, allyl phenylacetate, cas registry number 1797-74-6. *Food Chem Toxicol* 82 Suppl: S66-73.

223. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, ethyl anthranilate, cas registry number 87-25-2. *Food Chem Toxicol* 82 Suppl: S97-S104.
224. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, allyl (cyclohexyloxy)acetate, cas registry number 68901-15-5. *Food Chem Toxicol* 82 Suppl: S59-65.
225. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, alpha-irone, cas registry number 79-69-6. *Food Chem Toxicol* 82 Suppl: S105-113.
226. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, 2,6-dimethyl-5-heptenal, cas registry number 106-72-9. *Food Chem Toxicol* 82 Suppl: S89-96.
227. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, linalool, cas registry number 78-70-6. *Food Chem Toxicol* 82 Suppl: S29-38.
228. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, methyl dihydrojasmonate, cas registry number 24851-98-7. *Food Chem Toxicol* 82 Suppl: S114-121.
229. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, linalyl hexanoate, cas registry number 7779-23-9. *Food Chem Toxicol* 82 Suppl: S49-58.
230. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and

- Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, linalyl acetate, cas registry number 115-95-7. *Food Chem Toxicol* 82 Suppl: S39-48.
231. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, alpha-amylcinnamaldehyde, cas registry number 122-40-7. *Food Chem Toxicol* 82 Suppl: S20-28.
232. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, benzyl propionate, cas registry number 122-63-4. *Food Chem Toxicol*.
233. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, alpha-ionone, cas registry number 127-41-3. *Food Chem Toxicol*.
234. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, eugenol, cas registry number 97-53-0. *Food Chem Toxicol*.
235. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, l-linalool, cas registry number 126-91-0. *Food Chem Toxicol*.
236. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rifm fragrance ingredient safety assessment, isoeugenol, cas registry number 97-54-1. *Food Chem Toxicol*.
237. Abbatiello, S. E., Schilling, B., Mani, D. R., Zimmerman, L. J., Hall, S. C., MacLean, B., Albertolle, M., Allen, S., Burgess, M., Cusack, M. P., Ghosh, M., Hedrick, V., Held, J. M., Inerowicz, H. D., Jackson, A., Keshishian, H., Kinsinger, C. R., Lyssand, J., Makowski, L., Mesri, M., Rodriguez, H., Rudnick, P., Sadowski, P., Sedransk, N., Shaddox, K., Skates, S. J., Kuhn, E., Smith, D., Whiteaker, J. R., Whitwell, C., Zhang, S., Borchers, C. H., Fisher, S. J., Gibson, B. W., Liebler, D. C., MacCoss, M. J., Neubert, T. A., Paulovich, A. G., Regnier, F. E., Tempst, P. and Carr, S. A. (2015). Large-scale inter-laboratory study to

- develop, analytically validate and apply highly multiplexed, quantitative peptide assays to measure cancer-relevant proteins in plasma. *Mol Cell Proteomics*.
238. Codreanu, S. G. and Liebler, D. C. (2015). Novel approaches to identify protein adducts produced by lipid peroxidation. *Free Radic Res* 49(7): 881-887.
239. Fiume, M. M., Boyer, I., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of talc as used in cosmetics. *Int J Toxicol* 34(1 Suppl): 66S-129S.
240. Fiume, M. M., Heldreth, B. A., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of ethanolamides as used in cosmetics. *Int J Toxicol* 34(1 Suppl): 18S-34S.
241. Young, C. D., Zimmerman, L. J., Hoshino, D., Formisano, L., Hanker, A. B., Gatza, M. L., Morrison, M. M., Moore, P. D., Whitwell, C. A., Dave, B., Stricker, T., Bhola, N. E., Silva, G. O., Patel, P., Brantley-Sieders, D. M., Levin, M., Horiates, M., Palma, N. A., Wang, K., Stephens, P. J., Perou, C. M., Weaver, A. M., O'Shaughnessy, J. A., Chang, J. C., Park, B. H., Liebler, D. C., Cook, R. S. and Arteaga, C. L. (2015). Activating pik3ca mutations induce an epidermal growth factor receptor (egfr)/extracellular signal-regulated kinase (erk) paracrine signaling axis in basal-like breast cancer. *Mol Cell Proteomics* 14(7): 1959-1976.
242. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of dialkyl malates as used in cosmetics. *Int J Toxicol* 34(1 Suppl): 5S-17S.
243. Johnson, W., Jr., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of galactomannans as used in cosmetics. *Int J Toxicol* 34(1 Suppl): 35S-65S.
244. Yang, J., Gupta, V., Tallman, K. A., Porter, N. A., Carroll, K. S. and Liebler, D. C. (2015). Global, in situ, site-specific analysis of protein s-sulfenylation. *Nat Protoc* 10(7): 1022-1037.
245. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rf1m fragrance ingredient safety assessment, (z)-2-penten-1-ol, cas registry number 1576-95-0. *Food Chem Toxicol*.
246. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and

- Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, (2e,6z)-nona-2,6-dien-1-ol, cas registry number 28069-72-9. *Food Chem Toxicol*.
247. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, benzyl acetate, cas registry number 140-11-4. *Food Chem Toxicol*.
248. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, 2-methyl-3-buten-2-ol, cas registry number 115-18-4. *Food Chem Toxicol*.
249. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, isophytol, cas registry number 505-32-8. *Food Chem Toxicol*.
250. Yang, J., Tallman, K. A., Porter, N. A. and Liebler, D. C. (2015). Quantitative chemoproteomics for site-specific analysis of protein alkylation by 4-hydroxy-2-nonenal in cells. *Anal Chem* 87(5): 2535-2541. PMC4350606.
251. Palubinsky, A. M., Stankowski, J. N., Kale, A. C., Codreanu, S. G., Singer, R. J., Liebler, D. C., Stanwood, G. D. and McLaughlin, B. (2015). Chip is an essential determinant of neuronal mitochondrial stress signaling. *Antioxid Redox Signal*.
252. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of panax spp root-derived ingredients as used in cosmetics. *Int J Toxicol* 34(3 Suppl): 5S-42S.
253. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of synthetic fluorophlogopite as used in cosmetics. *Int J Toxicol* 34(3 Suppl): 43S-52S.
254. Fiume, M., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of alkyl ethylhexanoates as used in cosmetics. *Int J Toxicol* 34(3 Suppl): 61S-73S.
255. Fiume, M. M., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015).

Safety assessment of boron nitride as used in cosmetics. *Int J Toxicol* 34(3 Suppl): 53S-60S.

256. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, benzyl acetate, cas registry number 140-11-4. *Food Chem Toxicol* 84 Suppl: S15-24.
257. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, isoborneol, cas registry number 124-76-5. *Food Chem Toxicol* 84 Suppl: S33-41.
258. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, linalyl isovalerate, cas registry number 1118-27-0. *Food Chem Toxicol* 84 Suppl: S88-99.
259. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, isoamyl salicylate, cas registry number 87-20-7. *Food Chem Toxicol* 84 Suppl: S110-121.
260. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, linalyl isobutyrate, cas registry number 78-35-3. *Food Chem Toxicol* 84 Suppl: S76-87.
261. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, isophytol, cas registry number 505-32-8. *Food Chem Toxicol* 84 Suppl: S42-49.
262. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, benzyl alcohol, cas registry number 100-51-6. *Food Chem Toxicol* 84 Suppl: S1-S14.
263. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y.,

- Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, (2e,6z)-nona-2,6-dien-1-ol, cas registry number 28069-72-9. *Food Chem Toxicol* 84 Suppl: S57-65.
264. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, (z)-2-penten-1-ol, cas registry number 1576-95-0. *Food Chem Toxicol* 84 Suppl: S66-75.
265. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, alpha-butylcinnamaldehyde, cas registry number 7492-44-6. *Food Chem Toxicol* 84 Suppl: S100-109.
266. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, 2-methyl-3-buten-2-ol, cas registry number 115-18-4. *Food Chem Toxicol* 84 Suppl: S50-56.
267. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Miyachi, Y., Politano, V. T., Ritacco, G., Salvito, D., Shen, J., Schultz, T. W., Sipes, I. G., Wall, B. and Wilcox, D. K. (2015). Rfcm fragrance ingredient safety assessment, fenchyl alcohol, cas registry number 1632-73-1. *Food Chem Toxicol* 84 Suppl: S25-32.
268. Becker, L. C., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of pentaerythrityl tetraesters as used in cosmetics. *Int J Toxicol* 34(2 Suppl): 99S-112S.
269. Johnson, W., Jr., Heldreth, B., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of alkyl peg sulfosuccinates as used in cosmetics. *Int J Toxicol* 34(2 Suppl): 70S-83S.
270. Fiume, M. M., Heldreth, B. A., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of alkyl esters as used in cosmetics. *Int J Toxicol* 34(2 Suppl): 5S-69S.
271. Fiume, M. M., Heldreth, B. A., Bergfeld, W. F., Belsito, D. V., Hill, R. A., Klaassen, C. D., Liebler, D. C., Marks, J. G., Jr., Shank, R. C., Slaga, T. J., Snyder, P. W. and Andersen, F. A. (2015). Safety assessment of ethanolamine and ethanolamine salts as used in cosmetics. *Int J Toxicol* 34(2 Suppl): 84S-98S.

272. Whiteaker, J. R., Halusa, G. N., Hoofnagle, A. N., Sharma, V., MacLean, B., Yan, P., Wrobel, J. A., Kennedy, J., Mani, D. R., Zimmerman, L. J., Meyer, M. R., Mesri, M., Boja, E., Carr, S. A., Chan, D. W., Chen, X., Chen, J., Davies, S. R., Ellis, M. J., Fenyo, D., Hiltke, T., Ketchum, K. A., Kinsinger, C., Kuhn, E., Liebler, D. C., Liu, T., Loss, M., MacCoss, M. J., Qian, W. J., Rivers, R., Rodland, K. D., Ruggles, K. V., Scott, M. G., Smith, R. D., Thomas, S., Townsend, R. R., Whiteley, G., Wu, C., Zhang, H., Zhang, Z., Rodriguez, H. and Paulovich, A. G. (2016). Using the cptac assay portal to identify and implement highly characterized targeted proteomics assays. *Methods Mol Biol* 1410: 223-236.
273. Kim, H. J., Lin, D., Lee, H. J., Li, M. and Liebler, D. C. (2016). Quantitative profiling of protein tyrosine kinases in human cancer cell lines by multiplexed parallel reaction monitoring assays. *Mol Cell Proteomics* 15(2): 682-691. PMC4739681.
274. Hoofnagle, A. N., Whiteaker, J. R., Carr, S. A., Kuhn, E., Liu, T., Massoni, S. A., Thomas, S. N., Townsend, R. R., Zimmerman, L. J., Boja, E., Chen, J., Crimmins, D. L., Davies, S. R., Gao, Y., Hiltke, T. R., Ketchum, K. A., Kinsinger, C. R., Mesri, M., Meyer, M. R., Qian, W. J., Schoenherr, R. M., Scott, M. G., Shi, T., Whiteley, G. R., Wrobel, J. A., Wu, C., Ackermann, B. L., Aebersold, R., Barnidge, D. R., Bunk, D. M., Clarke, N., Fishman, J. B., Grant, R. P., Kusebauch, U., Kushnir, M. M., Lowenthal, M. S., Moritz, R. L., Neubert, H., Patterson, S. D., Rockwood, A. L., Rogers, J., Singh, R. J., Van Eyk, J. E., Wong, S. H., Zhang, S., Chan, D. W., Chen, X., Ellis, M. J., Liebler, D. C., Rodland, K. D., Rodriguez, H., Smith, R. D., Zhang, Z., Zhang, H. and Paulovich, A. G. (2016). Recommendations for the generation, quantification, storage, and handling of peptides used for mass spectrometry-based assays. *Clin Chem* 62(1): 48-69.
275. Yang, J., Carroll, K. S. and Liebler, D. C. (2016). The expanding landscape of the thiol redox proteome. *Mol Cell Proteomics* 15(1): 1-11. PMC4762510.
276. Api, A. M., Belsito, D., Bhatia, S., Bruze, M., Calow, P., Dagli, M. L., Dekant, W., Fryer, A. D., Kromidas, L., La Cava, S., Lalko, J. F., Lapczynski, A., Liebler, D. C., Politano, V. T., Ritacco, G., Salvito, D., Schultz, T. W., Shen, J., Sipes, I. G., Wall, B. and Wilcox, D. K. (2016). Rlfm fragrance ingredient safety assessment, alpha-methylbenzyl acetate, cas registry number 93-92-5. *Food Chem Toxicol*.
277. Ruggles, K. V., Tang, Z., Wang, X., Grover, H., Askenazi, M., Teubl, J., Cao, S., McLellan, M. D., Clauser, K. R., Tabb, D. L., Mertins, P., Slebos, R., Erdmann-Gilmore, P., Li, S., Gunawardena, H. P., Xie, L., Liu, T., Zhou, J. Y., Sun, S., Hoadley, K. A., Perou, C. M., Chen, X., Davies, S. R., Maher, C. A., Kinsinger, C. R., Rodland, K. D., Zhang, H., Zhang, Z., Ding, L., Townsend, R. R., Rodriguez, H., Chan, D., Smith, R. D., Liebler, D. C., Carr, S. A., Payne, S., Ellis, M. J. and Fenyo, D. (2016). An analysis of the sensitivity of proteogenomic mapping of somatic mutations and novel splicing events in cancer. *Mol Cell Proteomics* 15(3): 1060-1071.
278. Wang, X., Slebos, R. J., Chambers, M. C., Tabb, D. L., Liebler, D. C. and Zhang, B. (2016). Probamsuite, a bioinformatics framework for genome-based representation and analysis of proteomics data. *Mol Cell Proteomics* 15(3): 1164-1175.

279. Tabb, D. L., Wang, X., Carr, S. A., Clauser, K. R., Mertins, P., Chambers, M. C., Holman, J. D., Wang, J., Zhang, B., Zimmerman, L. J., Chen, X., Gunawardena, H. P., Davies, S. R., Ellis, M. J., Li, S., Townsend, R. R., Boja, E. S., Ketchum, K. A., Kinsinger, C. R., Mesri, M., Rodriguez, H., Liu, T., Kim, S., McDermott, J. E., Payne, S. H., Petyuk, V. A., Rodland, K. D., Smith, R. D., Yang, F., Chan, D. W., Zhang, B., Zhang, H., Zhang, Z., Zhou, J. Y. and Liebler, D. C. (2016). Reproducibility of differential proteomic technologies in cptic fractionated xenografts. *J Proteome Res* 15(3): 691-706. PMC4779376.
280. Federspiel, J. D., Codreanu, S. G., Palubinsky, A. M., Winland, A. J., Morales Betanzos, C., McLaughlin, B. and Liebler, D. C. (2016). Assembly dynamics and stoichiometry of the apoptosis signal-regulating kinase (ask) signalosome in response to electrophile stress. *Mol Cell Proteomics*.

BOOKS

1. Liebler, DC (2002) Introduction to Proteomics. Tools for the New Biology, Humana Press, Totowa, NJ.
2. Liebler, DC, Ed. (2005) Proteomics in Cancer Research, Wiley-Liss, New York, NY.

BOOK CHAPTERS

3. Guengerich, F.P., Macdonald, T.L., Burka, L.T., Miller, R.E., Liebler, DC, Zirvi, K., Frederick, C.B., Kadlubar, F.F. & Prough, R.A. (1982) Diversified functions of cytochrome P-450. In *Cytochrome P-450: Biochemistry, Biophysics, and Environmental Implications* (Hietanen, E., Laitinen, M. & Hanninen, O., eds.) pp. 27-34, Elsevier Biomedical Press, Amsterdam.
4. Guengerich, F.P., Hogy, L.L., Inskeep, P.B. & Liebler, DC (1986) Metabolism and covalent binding of vic-dihaloalkanes, vinyl halides, and acrylonitrile. In *The Role of Cyclic Nucleic Acid Adducts in Carcinogenesis and Mutagenesis* (IARC Scientific Publications No. 70) (Singer, B. & Bartsch, H., eds.) pp. 255-260, International Agency for Research on Cancer, Lyon.
5. Liebler, DC & Sipes, I.G. (1992) Bioactivation: the role of metabolism in chemical toxicity. In *Medical Toxicology of Hazardous Materials* (Sullivan, J.B. & Krieger, G.R., eds.) Williams and Wilkins, Baltimore, pp. 31-45.
6. Liebler, DC (1992) Peroxyl radical trapping reactions of α -tocopherol in biomimetic systems. In *Vitamin E: Biochemistry and Clinical Applications* (Packer, L. & Fuchs, J., eds.) Marcel Dekker, New York, pp. 85-95.
7. Liebler, DC, Burr, J.A., McClure, T.D., Chaudhary, A.K., Rouzer, C.A., Nokubo, M., Reddy, G.R., Blair, I.A. & Marnett, L.J. (1996) Analysis of products of antioxidant reactions by mass spectrometry and detection of endogenous malondialdehyde-

- deoxyguanosine adducts in humans. In *Antioxidant Methodology: In Vivo and In Vitro Concepts*. (Arouma, O., ed.) AOCS Press, Champaign, IL, pp. 64-84.
8. McClure, T.D. & Liebler, DC (1997) Carotenoid Antioxidant Chemistry in Food Factors for Cancer Prevention (Ohigashi, H. Osawa, T. Watanabe, S. & Yoshikawa, T., eds.), pp.556-561.
 9. Liebler, DC & Reed, D.J. (1997) Free radical defense and repair mechanisms. In *Free Radical Toxicology* (Wallace, K., ed.), Lipincott-Raven, Philadelphia, pp. 141-171.
 10. Liebler, DC (1998) Antioxidant chemistry of α -tocopherol in biological systems. Roles of redox cycles and metabolism. In *Subcellular Biochemistry*. Vo. 30. Fat Soluble Vitamins (Quinn, P.J. & Kagan, V.E., eds.), Academic Press, New York, 301-317.
 11. D. A. Badger, D. C. Liebler & I. G. Sipes (1998) Principles of toxicology. In *Clinical Principles of Environmental Health*, 2nd Ed. (Sullivan, J.B. & Krieger, G.R., eds.), Williams and Wilkins, Baltimore.
 12. McVean, M., Kramer-Stickland, K.A. & Liebler, DC (1998) Roles of oxidants and antioxidants in ultraviolet-induced nonmelanoma skin cancer. In *Antioxidants in Nutrition and Health* (Papas, A.M., ed.), CRC Press, Boca Raton, pp. 401-430.
 13. Liebler, DC & Baker, D. L. (1998) Reactions of β -carotene with cigarette smoke: is β -carotene a prooxidant or an antioxidant? In *Biological Oxidants and Antioxidants: Molecular Mechanisms and Health Effects* (Packer, L., ed.) AOCS Press, Champaign, IL, pp. 65-71.
 14. Liebler, DC, Valcic, S., Arora, A., Burr, J.A., Cornejo, S., Nair, M.G. & Timmermann, B.N. (2001) Antioxidant reactions of green tea catechins and soy isoflavones. In *Biological Reactive Intermediates VI. Chemical and Biological Mechanisms in Susceptibility to and Prevention of Environmental Diseases*. (Dansette, P.M., Snyder, R., Delaforge, M., Gibson, G.G., Greim, H., Jollow, D.J., Monks, T.J. & Sipes, I.G. , eds.) *Advances in Experimental Medicine and Biology*, Vol. 500, Kluwer Academic/Plenum Publishers, New York, pp. 191-197.
 15. Liebler DC, Hansen BT, Jones JA, Badghisi H, Mason D.E. (2003) Mapping protein modifications with liquid chromatography-mass spectrometry and the SALSA algorithm. In *Proteome Characterization and Proteomics. Advances in Protein Chemistry*, Vol. 65 (Smith,R.D. & Veenstra, T.D., eds.) Academic Press, San Diego, pp. 195-216.
 16. Liebler DC (2005) Essential elements of a proteomics laboratory. In *Proteomics in Cancer Research* (Liebler, DC, Ed.), Wiley-Liss, New York, NY, pp. 1-16.

17. Liebler DC (2005) Analysis of protein posttranslational modifications and protein adducts. In Proteomics in Cancer Research (Liebler, DC, Ed.), Wiley-Liss, New York, NY, pp. 71-85.
18. Liebler DC and Friedman DB. (2005) Bioinformatics tools for proteomics. In Proteomics in Cancer Research (Liebler, DC, Ed.), Wiley-Liss, New York, NY, pp. 87-106.

UNITED STATES PATENTS

1. Liebler, Daniel C. (Tucson, AZ); McClure, Thomas D. (Tucson, AZ); Powis, Garth (Tucson, AZ) (2002) Analysis of Differential Protein Expression. U.S. Patent #6,379,970, issued April 30, 2002.
2. Liebler, Daniel C. (Tucson, AZ); Hansen, Beau T. (Tucson, AZ); Mason, Daniel E. (Tucson, AZ); Davey, Sean N. (Tucson, AZ); Jones, Juliet A. (Tucson, AZ); McClure, Thomas D. (Santee, CA) (2001) Method and system for mining mass spectral data. U.S. Patent # 7,158,862, issued January 2, 2007.

Updated 03/27/16