DAVID ROBINSON GOODLETT, Ph.D.
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mobile: 206.465.6165 • email: goodlett@u.washington.edu

CURRICULUM VITAE

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BIOGRAPHY

Dr. Goodlett was born to David Vaughan Goodlett and Peggy Robinson Goodlett on 2 May 1960 in Athens, Alabama and raised in Montgomery, Alabama. He worked as a semi-professional musician from 1977-1987 and later 2001-2005. After graduation from Robert E Lee high school in Montgomery in 1978 he studied chemistry at Auburn University and was granted a Bachelor of Science degree in 1982. From 1982-1986 he continued to study chemistry with an emphasis on enzymology with Professors John Aull, Harlow Daron and Frank Bartol at Auburn University and worked as a technician in Professor Bartol's reproductive physiology laboratory. In 1987 he began work on a PhD in Biochemistry at North Carolina State University under direction of Professors Richard van Breemen and Frank Armstrong with a focus on mass spectrometry and protein structure. The same year he married Donna Rene' Minter of Montgomery, Alabama. His Master of Science degree was awarded in 1988 and a Doctor of Philosophy degree in 1991 after which he moved to Richland, WA to work for two years in the laboratory of Dr Richard Smith at Pacific Northwest National Laboratory where he learned the emerging method of electrospray ionization.

In 1993 he moved to New Jersey to work in pre-clinical analytical support for Johnson & Johnson where he continued until early 1995 when he moved to Seattle to work for Bristol-Myers Squibb characterizing major histocompatibility peptides. On 27 April 1996 his first child, David Minter Goodlett, was born. Shortly thereafter, having moved back into an academic setting at the University of Washington to work with Professor Ruedi Aebersold in the department of Molecular Biotechnology his second child, Graham Robinson Goodlett was born on 26 October 1997. In early 2000 the Institute for Systems Biology was founded and Professor Leroy Hood invited him to move there to establish and manage the Proteomics facility which he accepted remaining there until December 2003. In January 2004 he took up a post as Associate Professor in the department of Medicinal Chemistry at the University of Washington. He has also served as chair of the Administrative Board of Trinity United Methodist Church in Ballard from 1998 to 2000 and continues on the staff-parish relations committee.

Since 2008 Dr. Goodlett has been a Full Professor in the Department of Medicinal Chemistry at the University of Washington. He also holds an affiliate faculty appointment at the Institute for Systems Biology and is visiting Professor at the University of Edinburgh where he regularly visits as chair of a scientific advisory board based at University of Glasgow. At the University of Washington he is director of the school of Pharmacy Mass Spectrometry Facility and directs several National Institute of Health mass spectrometry cores.

His research program is based around developing proteomic separation and mass spectrometric methods applied to solve problems in prostate cancer, respiratory biology, Gram negative bacteria and leukemia. The ideas and accomplishments of he and his colleagues have been communicated through >100 lectures world-wide, > 100 manuscripts and several patent filings/awards. His work covers fields from reproductive physiology, prostate cancer, microbiology, organic synthesis, enzymology, fundamentals of electrospray ionization, separation science, mass spectrometric methods and proteomics. He is an Editor at *Rapid Communications in Mass Spectrometry* and serves on the scientific advisory board of several small companies and is a permanent member of the Enabling Biotechnologies and Imaging panel at the National Institutes of Health.

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PERSONAL

Citizenship:	U.S.A.
2 May 1960:	Born in Athens, Alabama.
1966-1983:	Raised in Montgomery, Alabama.
1977-1987:	Semi-professional musician.
9 May 1987:	Married Donna Rene' Minter.
27 Apr. 1996:	First son David Minter Goodlett born.
26 Oct. 1997:	Second son Graham Robinson Goodlett born.
1998-2000:	Chair, Trinity United Methodist Church Administrative Council.
2001-2007:	Member Administrative Council, Trinity United Methodist Church.
2001-2005:	Semi-professional musician

EDUCATION AND TRAINING

1966-1972:	Dalraida Elementary School, Montgomery, AL.
1972-1975:	Goodwyn Junior High School, Montgomery, AL.
1975-1978:	Robert E. Lee High School, Montgomery, AL.
1978-1982:	BS Chemistry Auburn University, Auburn, AL.
1982-1986:	MS Chemistry Auburn University, Auburn, AL.
1987-1991:	PhD Biochemistry North Carolina State University, Raleigh, NC.
1991-1993:	NORCUS post-doctoral fellow Battelle Memorial Institute, Richland, WA.

APPOINTMENTS AND POSITIONS

1982-1984:	Teaching Assistant, Department of Chemistry, Auburn University, Auburn, AL.
1984-1986:	Technician, Department of Reproductive Physiology, Auburn University, Auburn, AL.
1987-1990:	Teaching Assistant, Department of Biochemistry, North Carolina State University, Raleigh, NC.
1991-1993:	NORCUS Postdoctoral Fellow, Battelle Memorial Institute, Pacific Northwest National Laboratory, Richland, WA.
1993-1994:	Research Scientist, Immunobiology Research Institute, Johnson & Johnson Company, Annandale, NJ.
1995-present:	Owner Goodlett Scientific, Inc. consulting in Biological Mass Spectrometry, Seattle, WA.
1995-1997:	Research Investigator II, Immunological Diseases Pharmaceutical Research Institute, Bristol-Myers Squibb, Seattle, WA.
1997-2000:	Visiting Research Scientist, Aebersold Laboratory, Department of Molecular Biotechnology, University of Washington, Seattle, WA.
2000-2003:	Director Proteomics Laboratory, Institute for Systems Biology, Seattle, WA.
2004-present:	Associate Professor, Department of Medicinal Chemistry, University of Washington, Seattle, WA.
2008-present:	Professor, Department of Medicinal Chemistry, University of Washington, Seattle, WA.

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HONORS AND OTHER EXPERIENCE

1990:	North Carolina Section American Chemical Society Centennial Scholarship for Research.
1991:	Professor A.R. Main/Becton-Dickinson Research Award.
1991:	North Carolina State University College of Agriculture & Life Sciences Outstanding Graduate Student Teaching Award.
2001-2004:	Editorial advisory board *Chromatographia*.
2001-present:	*ad hoc* NIH review panel work for BEGM, NCRR, NIEHS, NIDDK and NCI.
2002-2004:	Scientific advisory board Intelligent Ion, Inc.
2002-2003:	Affiliate Assistant Professor, Medicinal Chemistry, University Washington.
2003-2009:	Editorial advisory board *Combinatorial Chemistry & High Throughput Screening.*
2004-present:	Scientific advisory board Insilicos, LLC
2004-present:	Founding council member USA branch Human Proteome Organization.
2004-present:	Scientific advisory board Dr Richard Smith's NCRR funded Proteomics Center.
2004-2006:	Editorial advisory board *Systems Biology*
2004-present:	Affiliate Faculty, Institute for Systems Biology, Seattle, WA.
2005-present:	Chair, scientific advisory board UK based, IRC award to University of Dundee, University of Glasgow and University of Edinburgh.
2005-present:	Visiting Professor, University of Edinburgh.
2005-present:	Editor, *Rapid Communications in Mass Spectrometry*
2005-present:	Faculty Director, School of Pharmacy Mass Spectrometry Facility.
2005:	Conference organizer UPPSALA Conference III on Electron Capture and Electron Transfer Dissociation held over four days at Salash Lodge, WA USA.
2006-present:	Scientific advisory board Protea Biosciences, Inc.
2006-present:	Scientific advisory board Professor Christophe Borcher's Genome British Columbia Proteomics Centre.
2006-present:	Editorial advisory board *Proteomics*.
2007-present:	Conference co-organizer Mass Spectrometry in Biology and Medicine, held during first week of July in Drubovnik, CROATIA.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

1983-present:	American Chemical Society.
1988-present:	American Society for Mass Spectrometry
2002-present:	Sigma Xi, Scientific Research Society.
2005-present:	European Respiratory Society.

TEACHING

Spring 2005:	Medicinal Chemistry 541.
Spring 2007:	Medicinal Chemistry 541.
2003-present:	Environmental Health 514 yearly guest lecture.
2004-present:	Pharmaceutics 586 yearly guest lecture since.
2006-present:	Medicinal Chemistry 501.

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MENTOREES

Graduate Students:

2004-present: Ms Sunhee Jung, began Medicinal Chemistry switched to MCB, PhD Student.
2005-present: Ms Shawna Hengel, Medicinal Chemistry PhD Student.
2005-present: Ms Soyoung Ryu, Statistics PhD Student.
2005-present: Mr Jace Jones, Chemistry PhD Candidate.
2006-present: Ms Pragya Singh, Medicinal Chemistry PhD Student.
2007-present: Ms Elizabeth Nguyen, Medicinal Chemistry PhD Student.
2008-present: Mr John Chapman, Medicinal Chemistry PhD Student
2008-present: Mr Lucas Monkkonen, Medicinal Chemistry PhD Student

Foreign Graduate Students:

2003-2007: Dr Jan-Jonas Filen, Turku Centre Biotechnology; currently Finnish patent office.
2005-present: Mr Tapio Lonnberg, Turku Centre Biotechnology.
2006-present: Mr Petri Konnoven, Turku Centre Biotechnology.

Post-doctoral Fellows:

2003-2005: Dr Jinzhi Chen, ISB and UW; current staff scientist Roche, CA site.
2003-present: Dr Young Ah Goo, ISB and UW; partial funding from her own DOD grant.
2004-present: Dr Brook Nunn, UW; partial funding from her own NSF grant.
2004-2006: Dr Catalin Doneanu, UW; current staff scientist Waters Corporation.
2005-2008: Dr Alexander Scherl, UW; one year Swiss National Federation fellow.
2008-2009: Dr Alexander Panchaud, UW; one year Swiss National Federation fellow.
2010-present: Dr J. Scott Edgar, UW.

Faculty:

2006-present: Dr Ru Chen, Resarch Assistant professor, Gastroenterology, K-award grantee.
2006-present: Dr Joachim Voss, Assistant Professor, Nursing. K-award grantee.

EMPLOYEES AND VISITORS

Technical Staff:

2000-2003: Mr Samuel Purvine, Institute for Systems Biology; currently staff scientist at Pacific Northwest National Laboratory.
2000-2002: Mr Jimmy Eng, Institute for Systems Biology; currently UW South Lake Union Proteomics Facility.
2000-2003: Dr Eugene Yi, Institute for Systems Biology; currently Zymogenetics group leader.
2001-2002: Mr Jason Thomas Eppel, Institute for Systems Biology; deceased.
2002-2003: Dr Hookeun Lee, Institute for Systems Biology; currently Molecular Institute for Systems Biology Zurich, Switzerland.
2002-2003: Mr Samuel Donohoe, Institute for Systems Biology; currently UW Medical school student.
2002-2003: Dr Wei Yan, Institute for Systems Biology.

2002-2003: Ms Gina Sperrazzo, Institute for Systems Biology.
2004-present: Dr Byron Gallis, UW research scientist.
2004-present: Dr Scott Shaffer, UW research scientist; former CTI group leader.
2004-2006: Dr Manhong Wu, UW acting instructor; currently Manager Children's Nutrition Research Center Laboratory, Baylor College of Medicine.
2004-2007: Mr Gregory Taylor, currently UW MCB graduate student.
2005-present: Mr William Howald, Manager, School of Pharmacy Mass Spectrometry Facility.
2005-present: Dr Ross Lawrence, Research Scientist, School of Pharmacy Mass Spectrometry Facility.
2005-2009: Dr Thomas Kalhorn, Research Scientist, School of Pharmacy Mass Spectrometry Facility.
2006-2007: Ms Jocelyn Aker, UW Research Scientist; currently at ProteoTech, Inc.
2006-present: Dr Lars Malmström, Research Engineer.
2006-present: Dr Eric Foss, Fred Hutchinson Cancer Research Institute staff scientist.
2007-2010: Ms Shannon Tsai, UW visiting scientist.
2008-present: Ms Sonia ting, UW visiting scientist.

Visiting Scientists:
2004-2004: Ms Laura Collantes de Teran, University of Seville PhD Candidate.
2005-2005: Dr Alexander Yates, UW visiting scientist; currently Mass Spectrometry Center Facility Manager department of Chemistry Rice University.
2005-present: Dr Victor Ng, Professor at National Yang Ming University of Republic of China is a visiting scholar in our laboratory each Summer.
2006-2007: Dr Jie Liu, UW Visiting Scholar from Nan Shan Center for Disease Control and Prevention Shen-Zhen, China.
2006-2006: Ms Shannon Tsai, visiting scholar Summer ’06 National Yang Ming University of Republic of China.
2007-2007: Ms Sonia Ting, visiting scholar Summer-Autumn ’07 from National Yang Ming University of Republic of China.
2007-2008: Ms Shu Hua Chen, visiting scholar Autumn-Winter 07-08 from Academia Sinica, Republic of China.
2008-2008: Dr Nadia Anwar, RASOR postdoctoral fellow Univ. Glasgow visits Jan-Feb 08.
2009-2009: Professor Ivanka Karadzic, University of Belgrade Fulbright scholar.
2009-2010: Professor “Jessie” Xing, Shandong University.

UNIVERSITY SERVICE

University and Department Committees:
2005-2006: Medicinal Chemistry Faculty search committee
2005-2009: University of Washington, department of Medicinal Chemistry graduate student admissions committee.
2006-2008: University of Washington, Faculty Senate representative for Medicinal Chemistry.
2006-present: University of Washington E-science committee.
2006-present: University of Washington Proteome Resource committee

Core Facility Director:
2000-2003: Institute for systems Biology proteomics laboratory

2003-present: Mass Spectrometry Core for National Institute of Allergy and Infectious Disease Research Center of Excellence in bioterrorism and emerging infectious disease.
2004-2009: Proteomics Core for National Institute of Environmental Health Sciences program on Ecogenetics and Environmental Health.
2005-present: Proteomics Core for Center on Human Development and Disability.
2009-present: Proteomics Core for Neuroproteomics center.
2005-present: School of Pharmacy Mass Spectrometry Facility.

INVITED LECTURES

1991: Becton-Dickinson "Characterization of Manduca Sexta Juvenile Hormone Esterase", Raleigh, NC.

1992: British Society for Mass Spectrometry "Study of Thermal Denaturation of Ribonuclease S by Electrospray Ionization-Mass Spectrometry", St. Andrews, SCOTLAND.

1993: Dionex Corporation "Study of Non-Covalent Gas Phase Interactions Between Biological Macromolecules", San Jose, CA.

1995: Affymax Research Institute "Parameters Affecting the Sensitivity of Capillary Electrophoresis/Electrospray Ionization-Mass Spectrometry", San Jose, CA.

1997: Eastern Analytical Symposium "LC/MS Applications in Genomic Research", Philadelphia, PA.

1999: European Society for Ion Cyclotron Resonance Mass Spectrometry “Isotope Distribution Encoded Tags and Cysteine Search Constraint for Protein Identification by Accurate Mass”, Warwick, ENGLAND.

1999: Federation of Analytical Chemistry and Spectroscopy Society “Isotope Distribution Encoded Tags for Protein Identification”, Philadelphia, PA.

1999: IBC Proteomic Conference, “Isotope Distribution Encoded Tags & Accurate Mass for Protein Identification”, San Diego, CA.

1999: Battelle’s Envirnomental Molecular Sciences Laboratory 1st User’s meeting, “FT-ICR-MS & Proteomics”, Richland, WA.

1999: British Soc. for Mass Spectrometry “Quantitative In Vitro Kinase Reactions as a Guide to Phosphoprotein Analysis”, Reading, ENGLAND.

1999: University of Edinburgh and Royal Society of Edinburgh “FT-ICR-MS & Proteomics”, Edinburgh, SCOTLAND.

1999: After The Genome V “Isotope Distribution Encoded Tags & Accurate Mass for Protein Identification”, Jackson Hole, WY.

1999: Max-Planck-Institute for Molecular Plant Physiology “HPLC-MS Approaches to Proteomics”, Potsdam, GERMANY.

2000: Compaq Computer’s Bioinformatics in the Post Genomic Era “Protein Expression Analysis via ICAT” San Francisco, CA.

2000: Cypter, Inc. “A review of Quantitative Proteomics” Seattle, WA.

2000: Seattle Genetics, Inc. “A review of Quantitative Proteomics”, Seattle, WA.

2000: Garvan Institute for Medical Research “Differential Isotopic Labeling for Proteome Studies”, Sydney, AUSTRALIA.

2000: International Mass Spectrometry Society “Isotopic Data Dependent Tandem MS”, Barcelona, SPAIN.

2000: ThermoQuest Bay Area User’s Meeting “Differential Isotopic Labeling for Proteome Studies”, San Jose, CA.

2000: American Electrophoresis Society Meeting “Protein Expression and Isotopic Labeling” Pasadena, CA

2001: February - U of CO Health Science Center student organized Molecular Biology Course, Boulder, CO.

2001: March - Keynote at IBC Global Conference on Mass Spectrometry, London, ENGLAND.

2001: March - SurroMed, Inc. A Review of Quantitative Proteomics, Palo Alto, CA.

2001: April - Pfizer,Inc. A Review of Quantitative Proteomics, Ann Arbor, MI.

2001: May - DOW, Inc. A Review of Quantitative Proteomics, San Diego, CA.

2001 May - ABRF, Proteomics without Polyacrylamide, San Diego, CA.

2001: May - ABI users meeting at ASMS meeting in Chicago, IL.

2001: June - Plenary lecture at LC Packings/DIONEX forum on Proteomics in Amsterdam.

2001: August - California Separation Science Society meeting in Boston, MA.

2001: August - Merck, Qualitative and Quantitative Proteomics by MS, West Point, PA.

2001: August - Small Talk 2001 meeting in San Diego, CA.

2001: September - Pacific Corporation, Seoul, KOREA

2001: September - National Cancer Center, Seoul, KOREA.

2001: September - Yuhan Corporation, Seoul, KOREA.

2001: September - Yonsei University Cardiology Symposium, Seoul, KOREA.

2001: September - Biochemistry Department, Yonsei University, Seoul, KOREA.

2001: September - Biomedical Mass Spectrometry meeting, Dubrovnik, CROATIA.

2001: October - Chemical & Pharmaceutical Structural Analysis forum in Princeton, NJ.

2001: November - U of IL at Chicago Dept of Pharmacognosy, Chicago, IL.

2001: November - Intl’ Symposium on Functional Proteomics & Genomics, Pohang, KOREA.

2001: December - NCTS Symposium: Gene Expression & Proteomics in Environmental Health Research, Bethesda, MD.

2001: December - DOE workshop Genomes to Life Bethesda, MD.

2001: December - NIDDK workshop “MS sample preparation” Columbia, MD.

2002: January - University of Southern Maine, Portland, ME.

2002: February - ThermoFinnigan Seattle area user’s meeting, Seattle, WA.

2002: March - NIAAA workshop on Proteomics, Bethesda, MD.

2002: April - ABI users meeting South San Francisco, CA

2002: May - Minnesota Chromatography Forum, Minneapolis**,** MN.

2002: May - University of Minnesota, Department of Biochemistry, Minneapolis**,** MN.

2002: May - UK Department of Trade and Industry symposium, Oxford, ENGLAND.

2002: May - UMIST Department of Chemistry, Manchester, ENGLAND.

2002: May - Environmental Mutagen Society Meeting, Anchorage, Alaska

2002: June - Micromass user's meeting at ASMS, Orlando, Florida.

2002: June - Teratology Society Meeting, Scottsdale, AZ.

2002: June - NCRR workshop on nonhuman primates, Beaverton, OR.

2002: June - Medicinal Chemistry Dept. Univ. Washington, Seattle, WA.

2002: July - 6th International Meeting on Molecular Epidemiology and Evolutionary Genetics in Infectious Diseases, Paris, FRANCE.

2002: August - Symposium on Functional Genomics and Bioinformatics, Turku, FINLAND.

2002: September - Howard Hughes Medical Institute & U.S. National Research Council Understanding Bacterial Pathogenesis Summer Course, Prague, CZECH REPUBLIK.

2002: September - World Genomics Conference, Atlantic City, NJ.

2002: October - Federation of Analytical Chemistry and Spectroscopy Soc., Providence, RI.

2002: October - Chemical & Pharmaceutical Structural Analysis meeting, Proteomics workshop, Princeton, NJ.

2002: October - Toxicogenomics Forum 2002, Nagoya, JAPAN.

2002: November - American Heart Association meeting, Chicago, IL.

2002: December - International Institute for Research Proteomics Conference, San Diego, CA.

2003: February - University of South Florida, Tampa, FL.

2003: March - Brechbuhler West coast seminars, Seattle, WA, San Jose & Los Angeles, CA.

2003: April - University of Alaska, Fairbanks, AK.

2003: May - Dana Faber Cancer Institute, Boston, MA.

2003: May - University of Washington, Gene Expression in Diabetes, Seattle, WA.

2003: June - Micromass user's meeting at ASMS, Montreal, Quebec, CANADA.

2003: June - NIAAA Proteomics workshop, Orlando, FL.

2003: June - Cambridge Healthtech Institute's Beyond the Genome, San Diego, CA.

2003: June - BIO 2003 a meeting on Proteomics and Drug Discovery, District of Columbia.

2003: June - Geneva University Hospital, Geneva SWITZERLAND.

2003: July - Univ. Muenster Institute for Medical Physics und Biophysics, Muenster GERMANY.

2003: July - IBC's Proteomics and the Proteome, Basel, Switzerland.

2003: July - Lawrence county rotary club, Moulton, AL.

2003: July - Men's breakfast club First United Methodist church, Moulton, AL.

2003: September - Korean National Cancer Center, Seoul KOREA.

2003: September - Proteomics workshop 16th International MS meeting Edinburgh, SCOTLAND.

2003: September - Genomics to Function of Microbes, Greifswald, GERMANY.

2003: October - Chemical & Pharmaceutical Structural Analysis meeting, Proteomics workshop, Princeton, NJ.

2003: October - Association of American Cancer Institutes meeting, Bethesda, MD.

2003: November - Chemistry/Biochemistry Department lecture MSU, Bozeman, MT.

2003: November - Electrophoresis Society meeting, San Francisco, CA.

2004: January - Shotgun Proteomics review, Oregon Health Sciences University, Portland OR.

2004: February - LTQFT and shotgun proteomics, Laboratory Automation, San Jose, CA.

2004: March - 2nd ERS Lung Science Conference, Taormina, SICILY.

2004: April - Institute for Pure and Applied Math, Los Angeles, CA.

2004: May - Korean Society for Biochemistry and Molecular Biology, Seoul, KOREA.

2004: May - Biotech China 2004, Beijing, CHINA.

2004: June - Cambridge Healthtech Institute's 8th Proteomics conference, San Francisco, CA.

2004: August - SIRCAMS open house University of Edinburgh, Edinburgh, SCOTLAND.

2004: August - 2nd Uppsala meeting on ECD, North Berwick, East Lothian, SCOTLAND.

2004: September - 6th Siena meeting on Proteomics, Siena, ITALY.

2004: October - Toxicogenomics forum, Kyoto, JAPAN.

2004: October - Biotech Forum, Copenhagen, DENMARK.

2004: October - 1st International Fungal Proteomics Symposium, Portland, OR.

2004: November Vanderbilt University Department of Biochemistry, Nashville, TN.

2005: January - UW Chemistry Department Analytical Series Lecture, Seattle, WA.

2005: February - Proteomics workshop for 18th International Symposium in MicroScale Bioseparations, New Orleans, LA.

2005: February - UW Cystic Fibrosis group, Seattle, WA.

2005: May - Opening of ThermoElectron FTICRMS facility, Bremen, GERMANY. *CANCELLED.*

2005: May - Japanese Society of Mass Spectrometry, Saitama, JAPAN.

2005: July - British Proteome Society, Cambridge, UK.

2005: August - Turku University BioCity, Turku FINLAND.

2005: September - Vanderbilt University Proteomics short course, Nashville, TN.

2005: September - Institute for Systems Biology annual retreat. Seabeck, WA

2005: November - Dagstuhl Computational Symposium, Saarbruecken, GERMANY.

2006: March - US HUPO, Boston, MA.

2006: May - Canadian Proteome Society Meeting, CANADA.

2006: May - First Annual meeting RASOR PI's, Falkirk, SCOTLAND.

2006: July - 3rd International Conference on Genomics, Proteomics and Bioinformatics for Medicine. Novosibirsk, RUSSIA.

2006: August - Informatics conference. Berlin, GERMANY.

2006: September - Key note lecture on Proteomics. International Mass Spectrometry Society, Prague, CZECH REPUBLIC.

2006: September - 1.5 day long training class on Proteomics. International Mass Spectrometry Society, Prague, CZECH REPUBLIC.

2006: September - 7th International Siena Proteomics meeting, Siena ITALY.

2006: September - Turku University BioCity, Turku FINLAND.

2006: October - Southwestern Regional American Chemical Society Proteomic workshop, Houston, TX.

2006: November - 5th International Tularemia meeting at Woods Hole, MA.

2007: January - Academia Sinica, Taipei, REPUBLIC of CHINA.

2007: January - National Yang Ming University, Proteomics Symposium, Taipei, REPUBLIC of CHINA.

2007: January - National Yang Ming University, Full day Proteomics Workshop, Taipei, REPUBLIC of CHINA.

2007: January - Chang Gung University, Tao-Yuan, REPUBLIC of CHINA.

2007: March - USHUPO, Seattle WA

2007: March - Tokyo University, Tokyo, JAPAN.

2007: May - ASMS, Indianapolis, IN

2007: May - Waters Users forum pre-ASMS Indianapolis, IN

2007: July - Co-organizer of 2nd Mass Spectrometry in Medical and Biomedical Sciences conference, Dubrovnik, CROATIA.

2007: September - European Respiratory Society Meeting, Stockholm, SWEDEN.

2007: September - 2nd annual RASOR PI meeting, Grangemouth, SCOTLAND.

2007: October - Beijing Conference and Exhibition of Instrumental Analysis, Beijing, CHINA.

2007: November - Beatson Cancer Institute, Glasgow SCOTLAND.

2008: February - University California, Irvine Department Physiology & Biophysics, Irvine, CA.

2008: February - University of Turku Systems Biology Retreat, Turku FINLAND.

2008: March - 28th International Symposium on Intensive Care and Emergency Medicine, Brussels, BELGIUM.

2008: March - Finnish Proteomic Society meeting, Turku, FINLAND.

2008: May - UW Chemistry Department Analytical Series Lecture, Seattle, WA USA.

2008: June - American Society for Mass Spectrometry, Denver, CO USA.

2008: August - Zheizhang University, Hangzhou, CHINA.

2008: September - 8th International Siena Proteomics meeting, Siena ITALY.

2008: September - University of Dundee, Dundee SCOTLAND.

2008: September - CHI Biomarker Summit, Philadelphia, PA USA.

2009: July – Mass Spectrometry in Biotechnology and Medicine III, Dubrovnik, CROATIA.

2009: August – International Mass Spectrometry conference, Bremen, GERMANY.

2009: September – 8th Annual Human Proteome Society Meeting, Toronto, CANADA.

2009: September – Thermo fisher User's Meeting at 8th Annual Human Proteome Society Meeting, Toronto, CANADA.

2009: September – 6th RASOR-EMSG Ardgour Symposium, Ft William, SCOTLAND.

2009: November – Beijing Conference and Exhibition of Instrumental Analysis, Beijing, CHINA.

2010: July – Mass Spectrometry in Biotechnology and Medicine IV, Dubrovnik, CROATIA.

2010: July – Ruđer Bošković Institute, Zagreb, CROATIA.

2010: September – Royal Society of Edinburgh event on FTICRMS, Edinburgh, SCOTLAND.

2010: September – 7th RASOR-EMSG Ardgour Symposium, Ft William, SCOTLAND.

RESEARCH INTERESTS

Conundrum of protein structure-function relationships studied by mass spectrometry and in silico protein structure prediction; determination of early protein markers of lung diseases and leukemia classification; lipid A structure analysis by mass spectrometry; construction of novel mass spectrometry platforms; software pipelines to aid –omic data interpretation; discovery based science to generate hypotheses in less biased fashion than literature trolling.

PATENTS & FILINGS

• 6629040 US 6,629,040 B1 Isotope issued. Filed 1999 and 2000. Issued 2004.
Tile: Isotope Distribution Encoded Tags for Protein Identification.
Inventors: D.R. Goodlett, J.E. Bruce, G. Anderson, R. Aebersold, R.D. Smith.

University of Washington issued a patent covering use of isotope distribution encoded tags to detect and identify proteins using e.g. the accurate mass of a single cysteine-containing peptide.

• 26 December 2000 filed United States Patent Application No.: 09/748,793. Licensed by Waters Corporation.
Title: Methods for Rapid and Quantitative Proteome Analysis.
Inventors: R.H. Aebersold and D.R. Goodlett. University of Washington and Institute for Systems Biology filed patent covering use of an annotated peptide database for identification of proteins based on peptide physicochemical properties rather than tandem mass spectrometry and for measurement of protein expression.

• 26 December 2000 filed United States Patent Application No.: 09/748,784. Licensed by Waters Corporation.
Title: Methods for Rapid and Quantitative Proteome Analysis and Related Methods.
Inventors: D.R. Goodlett.
Institute for Systems Biology filed patent covering use of an annotated peptide database for identification of proteins based on peptide physicochemical properties and related techniques rather than tandem mass spectrometry and for measurement of protein expression.

• 13 April 2001 filed United States Patent Application No.: 09/835,072. Issued 2004.
Title: Methods for Quantification and De novo Polypeptide Sequencing by Mass Spectrometry.
Inventors: D.R. Goodlett and A. Keller.
Institute for Systems Biology filed for patent on a method for protein quantification and *de novo* sequencing by mass spectrometry.

PUBLICATIONS

136. Mo F, Mo Q, Chen Y, Goodlett DR, Hood L, Omenn GS, Li S, Lin B. WaveletQuant, an improved quantification software based on wavelet signal threshold de-noising for labeled quantitative proteomic analysis. BMC Bioinformatics. 2010 Apr 29;11:219.

135. Goo YA, Goodlett DR. Advances in proteomic prostate cancer biomarker discovery. J Proteomics. 2010 Apr 14. [Epub ahead of print]

134. Heron SR, Wilson R, Shaffer SA, Goodlett DR, Cooper JM. Surface acoustic wave nebulization of peptides as a microfluidic interface for mass spectrometry. Anal Chem. 2010 May 15;82(10):3985-9.

133. McIlwain S, Draghicescu P, Singh P, Goodlett DR, Noble WS. Detecting cross-linked peptides by searching against a database of cross-linked peptide pairs. J Proteome Res. 2010 May 7;9(5):2488-95.

132. Panchaud A, Singh P, Shaffer SA, Goodlett DR. xComb: a cross-linked peptide database approach to protein-protein interaction analysis. J Proteome Res. 2010 May 7;9(5):2508-15.

131. Kim JH, Stevens RC, Maccoss MJ, Goodlett DR, Scherl A, Richter RJ, Suzuki SM, Furlong CE. Identification and characterization of biomarkers of organophosphorus exposures in humans. Adv Exp Med Biol. 2010;660:61-71.

130. Singh P, Panchaud A, Goodlett DR. Chemical cross-linking and mass spectrometry as a low-resolution protein structure determination technique. Anal Chem. 2010 Apr 1;82(7):2636-42.

129. Jones JW, Cohen IE, Tureĉek F, Goodlett DR, Ernst RK. Comprehensive structure characterization of lipid A extracted from Yersinia pestis for determination of its phosphorylation configuration. J Am Soc Mass Spectrom. 2010 May;21(5):785-99. Epub 2010 Jan 25.

128. Morris RM, Nunn BL, Frazar C, Goodlett DR, Ting YS, Rocap G. Comparative metaproteomics reveals ocean-scale shifts in microbial nutrient utilization and energy transduction. ISME J. 2010 May;4(5):673-85. Epub 2010 Feb 18.

127. Morrissey C, Gallis B, Solazzi JW, Kim BJ, Gulati R, Vakar-Lopez F, Goodlett DR, Vessella RL, Sasaki T. Effect of artemisinin derivatives on apoptosis and cell cycle in prostate cancer cells. Anticancer Drugs. 2010 Apr;21(4):423-32.

126. Hood RD, Singh P, Hsu F, Güvener T, Carl MA, Trinidad RR, Silverman JM, Ohlson BB, Hicks KG, Plemel RL, Li M, Schwarz S, Wang WY, Merz AJ, Goodlett DR, Mougous A type VI secretion system of Pseudomonas aeruginosa targets a toxin to bacteria. JD. Cell Host Microbe. 2010 Jan 21;7(1):25-37.

125. Brentnall TA, Pan S, Bronner MP, Crispin DA, Mirzaei H, Cooke K, Tamura Y, Nikolskaya T, Jebailey L, Goodlett DR, McIntosh M, Aebersold R, Rabinovitch PS, Chen R. Proteins That Underlie Neoplastic Progression of Ulcerative Colitis. Proteomics Clin Appl. 2009 Sep 14;3(11):1326-1337.

124. Gharib SA, Nguyen E, Altemeier WA, Shaffer SA, Doneanu CE, Goodlett DR, Schnapp LM. Of mice and men: comparative proteomics of bronchoalveolar fluid. Eur Respir J. 2010 Jun;35(6):1388-95. Epub 2009 Dec 23.

123. Jung S, Marelli M, Rachubinski RA, Goodlett DR, Aitchison JD. Dynamic changes in the subcellular distribution of Gpd1p in response to cell stress. J Biol Chem. 2010 Feb 26;285(9):6739-49. Epub 2009 Dec 21.

122. Parra MC, Shaffer SA, Hajjar AM, Gallis BM, Hager A, Goodlett DR, Guina T, Miller S, Collins CM. Identification, cloning, expression, and purification of Francisella lpp3: An immunogenic lipoprotein. Microbiol Res. . [Epub ahead of print]

121. Nunn BL, Aker JR, Shaffer SA, Tsai S, Strzepek RF, Boyd PW, Freeman TL, Brittnacher M, Malmström L, Goodlett DR. Deciphering diatom biochemical pathways via whole-cell proteomics. Aquat Microb Ecol. 2009 Jun 3;55(3):241-253.

120. Reimel BA, Pan S, May DH, Shaffer SA, Goodlett DR, McIntosh MW, Yerian LM, Bronner MP, Chen R, Brentnall TA. Proteomics on Fixed Tissue Specimens - A Review. Curr Proteomics. 2009 Apr 1;6(1):63-69.

119. Tsai YS, Scherl A, Shaw JL, MacKay CL, Shaffer SA, Langridge-Smith PR, Goodlett DR. Precursor ion independent algorithm for top-down shotgun proteomics. J Am Soc Mass Spectrom. 2009 Nov;20(11):2154-66. Epub 2009 Aug 13.

118. Wang X, Lundgren AD, Singh P, Goodlett DR, Plymate SR, Wu JD. An six-amino acid motif in the alpha3 domain of MICA is the cancer therapeutic target to inhibit shedding. Biochem Biophys Res Commun. 2009 Sep 25;387(3):476-81. Epub 2009 Jul 16.

117. Panchaud A, Scherl A, Shaffer SA, von Haller PD, Kulasekara HD, Miller SI, Goodlett DR. Precursor acquisition independent from ion count: how to dive deeper into the proteomics ocean. Anal Chem. 2009 Aug 1;81(15):6481-8.

116. Coats SR, Jones JW, Do CT, Braham PH, Bainbridge BW, To TT, Goodlett DR, Ernst RK, Darveau RP. Human Toll-like receptor 4 responses to P. gingivalis are regulated by lipid A 1- and 4'-phosphatase activities. Cell Microbiol. 2009 Nov;11(11):1587-99. Epub 2009 Jun 13.

115. Pan S, Chen R, Reimel BA, Crispin DA, Mirzaei H, Cooke K, Coleman JF, Lane Z, Bronner MP, Goodlett DR, McIntosh MW, Traverso W, Aebersold R, Brentnall TA. Quantitative proteomics investigation of pancreatic intraepithelial neoplasia. Electrophoresis. 2009 Apr;30(7):1132-44.

114. Dahlberg CL, Nguyen EZ, Goodlett D, Kimelman D. Interactions between Casein kinase Iepsilon (CKIepsilon) and two substrates from disparate signaling pathways reveal mechanisms for substrate-kinase specificity. PLoS ONE. 2009;4(3):e4766. Epub 2009 Mar 10.

113. Malmstroem L, Hou L, Atkins WM, Goodlett DR. On the use of hydrogen/deuterium exchange mass spectrometry data to improve de novo protein structure prediction. Rapid Commun Mass Spectrom. 2009 Feb;23(3):459-61. No abstract available.

112. Pan S, Aebersold R, Chen R, Rush J, Goodlett DR, McIntosh MW, Zhang J, Brentnall TA. Mass spectrometry based targeted protein quantification: methods and applications. J Proteome Res. 2009 Feb;8(2):787-97. Review.

111. Moore NH, Costa LG, Shaffer SA, Goodlett DR, Guizzetti M. Shotgun proteomics implicates extracellular matrix proteins and protease systems in neuronal development induced by astrocyte cholinergic stimulation. J Neurochem. 2009 Feb;108(4):891-908. Epub 2008 Dec 10.

110. Hengel SM, Shaffer SA, Nunn BL, Goodlett DR. Tandem mass spectrometry investigation of ADP-ribosylated kemptide. J Am Soc Mass Spectrom. 2009 Mar;20(3):477-83. Epub 2008 Nov 17.

109. Gao Q, Xue S, Shaffer SA, Doneanu CE, Goodlett DR, Nelson SD. Minimize the detection of false positives by the software program DetectShift for 18O-labeled cross-linked peptide analysis. Eur J Mass Spectrom (Chichester, Eng). 2008;14(5):275-80.

108. Nakase I, Gallis B, Takatani-Nakase T, Oh S, Lacoste E, Singh NP, Goodlett DR, Tanaka S, Futaki S, Lai H, Sasaki T. Transferrin receptor-dependent cytotoxicity of artemisinin-

transferrin conjugates on prostate cancer cells and induction of apoptosis. Cancer Lett. 2009 Feb 18;274(2):290-8. Epub 2008 Nov 8.

107. Pacheco B, Maccarana M, Goodlett DR, Malmström A, Malmström L. Identification of the active site of DS-epimerase 1 and requirement of N-glycosylation for enzyme function. J Biol Chem. 2009 Jan 16;284(3):1741-7. Epub 2008 Nov 11.

106. Singh P, Shaffer SA, Scherl A, Holman C, Pfuetzner RA, Larson Freeman TJ, Miller SI, Hernandez P, Appel RD, Goodlett DR. Characterization of protein cross-links via mass spectrometry and an open-modification search strategy. Anal Chem. 2008 Nov 15;80(22):8799-806. Epub 2008 Oct 24.

105. Goo YA, Liu AY, Ryu S, Shaffer SA, Malmström L, Page L, Nguyen LT, Doneanu CE, **Goodlett DR**. Identification of secreted glycoproteins of human prostate and bladder stromal cells by comparative quantitative proteomics. *Prostate*. 2008 Sep 15. [Epub ahead of print]

104. Scherl A, Tsai YS, Shaffer SA, **Goodlett DR**. Increasing information from shotgun proteomic data by accounting for misassigned precursor ion masses. *Proteomics*. 2008 Jul;8(14):2791-7.

103. Jones, JW, Shaffer, SA, Ernst, RK, **Goodlett, DR**, Tureček, F. Determination of pyrophosphorylated forms of lipid A in Gram-negative bacteria using a multivaried mass spectrometric approach. *Proc Natl Acad Sci U S A*. 2008 105(35):12742-7.

102. Singh P, Shaffer SA, Scherl A, Holman C, Pfuetzner R, Freeman TL, Miller SI, Hernandez P, Appel RD, **Goodlett DR**. Characterization of protein crosslinks via mass spectrometry and an open-modification search strategy. *Anal. Chem*. 2008 in press.

101. Scherl A, Shaffer SA, Taylor GK, Kulasekara HD, Miller SI, **Goodlett DR**. Genome-specific gas-phase fractionation strategy for improved shotgun proteomic profiling of proteotypic peptides. *Anal Chem*. 2008 80(4):1182-91.

100. Scherl A, Shaffer SA, Taylor GK, Hernandez P, Appel RD, Binz PA, **Goodlett DR**. On benefits of acquiring Peptide fragment ions at high measured mass accuracy. *J Am Soc Mass Spectrom*. 2008 19(6):891-901.

99. Wang H, Kennedy DS, Nugent KD, Taylor GK, Goodlett DR. A Qit-q-Tof mass spectrometer for two-dimensional tandem mass spectrometry. *Rapid Commun Mass Spectrom* 2007;21(19): 3223-6.

98. Guina T, Radulovic D, Bahrami AJ, Bolton DL, Rohmer L, Jones-Isaac KA, Chen J, Gallagher LA, Gallis B, Ryu S, Taylor GK, Brittnacher MJ, Manoil C, Goodlett DR MglA Regulates Francisella tularensis subsp. novicida Response to Starvation and Oxidative Stress. *J Bacteriol.* 2007 Jul 20; [Epub ahead of print]

97. Prakash A, Piening B, Whiteaker J, Zhang H, Shaffer SA, Martin D, Hohmann L, Cooke K, Olson JM, Hansen S, Flory MR, Lee H, Watts J, Goodlett DR, Aebersold R, Paulovich A, Schwikowski B. Assessing bias in experiment design for large-scale mass spectrometry-based quantitative proteomics. *Mol Cell Proteomics.* 2007 Jul 27; [Epub ahead of print]

96. Rohmer L, Fong C, Abmayr S, Wasnick M, Larson Freeman TJ, Radey M, Guina T, Svensson K, Hayden HS, Jacobs M, Gallagher LA, Manoil C, Ernst RK, Drees B, Buckley D, Haugen E, Bovee D, Zhou Y, Chang J, Levy R, Lim R, Gillett W, Guenthener D, Kang A, Shaffer SA, Taylor G, Chen J, Gallis B, D'Argenio DA, Forsman M, Olson MV, Goodlett DR, Kaul R, Miller SI, Brittnacher MJ. Comparison of Francisella tularensis genomes reveals evolutionary events associated with the emergence of human pathogenic strains. *Genome Biol*. 2007 Jun 5;8(6):R102

95. Gendlina I, Held KG, Bartra SS, Gallis BM, Doneanu CE, Goodlett DR, Plano GV, Collins CM. Identification and type III-dependent secretion of the Yersinia pestis insecticidal-like proteins. *Mol Microbiol.* 2007 Jun;64(5):1214-27.

94. D'Argenio DA, Wu M, Hoffman LR, Kulasekara HD, Deziel E, Smith EE, Nguyen H, Ernst RK, Larson Freeman TJ, Spencer DH, Brittnacher M, Hayden HS, Selgrade S, Klausen M, Goodlett DR, Burns JL, Ramsey BW, Miller SI. Growth phenotypes of Pseudomonas aeruginosa lasR mutants adapted to the airways of cystic fibrosis patients. *Mol Microbiol.* 2007 Apr;64(2):512-33.

93. Trute M, Gallis B, Doneanu C, Shaffer S, Goodlett D, Gallagher E. Characterization of hepatic glutathione S-transferases in coho salmon (Oncorhynchus kisutch). *Aquat Toxicol*. 2007 28;81(2):126-36.

92. Shaffer SA, Harvey MD, Goodlett DR, Ernst, RK. Structural Heterogeneity and Environmentally Regulated Remodeling of *Francisella tularensis* subspecies *novicida* Lipid A Characterized by Tandem Mass Spectrometry. *J Am Soc Mass Spectrom*. 2007 18, 1080-92.

91. Foss EJ, Radulovic D, Shaffer SA, Ruderfer DM, A Bedalov, DR Goodlett, L Kruglyak. Genetic basis of proteome variation in yeast. *Nature Genetics*, 2007 39(11):1369-75.

90. Pan S, Zhu D, Quinn JF, Peskind ER, Montine TJ, Lin B, Goodlett DR, Taylor G, Eng J, Zhang J. A combined dataset of human cerebrospinal fluid proteins identified by multi-dimensional chromatography and tandem mass spectrometry. *Proteomics.* 2007 Feb;7(3):469-73.

89. Chen R, Pan S, Cooke K, Moyes KW, Bronner MP, Goodlett DR, Aebersold R, Brentnall TA. Comparison of pancreas juice proteins from cancer versus pancreatitis using quantitative proteomic analysis. *Pancreas*. 2007 Jan;34(1):70-9.

88. Bellew M, Coram M, Fitzgibbon M, Igra M, Randolph T, Wang P, May D, Eng J, Fang R, Lin C, Chen J, Goodlett D, Whiteaker J, Paulovich A, McIntosh M. A suite of algorithms for the comprehensive analysis of complex protein mixtures using high-resolution LC-MS. Bioinformatics. 2006 Aug 1;22(15):1902-9. Epub 2006 Jun 9.

87. Jones JW, Sasaki T, Goodlett DR, Turecek F.Electron capture in spin-trap capped peptides. An experimental example of ergodic dissociation in Peptide cation-radicals. *J Am Soc Mass Spectrom*. 2007 Mar;18(3):432-44. Epub 2006 Nov 16.

86. Hajjar AM, Harvey MD, Shaffer SA, Goodlett DR, Sjostedt A, Edebro H, Forsman M, Bystrom M, Pelletier M, Wilson CB, Miller SI, Skerrett SJ, Ernst RK. Lack of in vitro and in vivo

recognition of Francisella subspecies LPS by Toll-like receptors. *Infect Immun*. 2006 Dec;74(12):6730-8. Epub 2006 Sep 18.

85. Schnapp LM, Donohoe S, Chen J, Sunde DA, Kelly PM, Ruzinski J, Martin T, Goodlett DR.Mining the acute respiratory distress syndrome proteome: identification of the insulin-like growth factor (IGF)/IGF-binding protein-3 pathway in acute lung injury. *Am J Pathol*. 2006 Jul;169(1):86-95.

84. Nunn BL, Shaffer SA, Scherl A, Gallis B, Wu M, Miller SI, Goodlett DR. Comparison of a Salmonella typhimurium proteome defined by shotgun proteomics directly on an LTQ-FT and by proteome pre-fractionation on an LCQ-DUO. *Brief Funct Genomic Proteomic*. 2006 Jun;5(2):154-68. Review.

83. Chen R, Pan S, Yi EC, Donohoe S, Bronner MP, Potter JD, Goodlett DR, Aebersold R, Brentnall TA. Quantitative proteomic profiling of pancreatic cancer juice. *Proteomics*. 2006 Jul;6(13):3871-9.

82. Xu J, Chen J, Peskind ER, Jin J, Eng J, Pan C, Montine TJ, Goodlett DR, Zhang J. Characterization of proteome of human cerebrospinal fluid. *Int Rev Neurobiol*. 2006;73:29-98.

81. Gao Q, Doneanu CE, Shaffer SA, Adman ET, Goodlett DR, Nelson SD. Identification of the interactions between cytochrome P450 2E1 and cytochrome b5 by mass spectrometry and site-directed mutagenesis. *J Biol Chem*. 2006 Jul 21;281(29):20404-17. Epub 2006 May 5.

80. Q. Gao, S. Xue, C.E. Doneanu, S.A. Shaffer, D.R. Goodlett, and S.D. Nelson. "Pro-CrossLink. Software Tool for Protein Cross-Linking and Mass Spectrometry" *Analytical Chemistry* 2006, ASAP Article

79. Gan RR, Yi EC, Chiu Y, Lee H, Kao YC, Wu TH, Aebersold R, Goodlett DR, Ng WV. Proteome analysis of Halobacterium sp. NRC-1 facilitated by the biomodules analysis tool BMSorter. *Mol Cell Proteomics.* 2006 Feb 23; [Epub ahead of print]

78. Corthals GL, Aebersold R, Goodlett DR. Identification of phosphorylation sites using microimmobilized metal affinity chromatography*. Methods Enzymol.* 2005;405:66-81. Review

77. Goo YA, Goodlett DR, Pascal LE, Worthington KD, Vessella RL, True LD, Liu AY. Stromal mesenchyme cell genes of the human prostate and bladder. *BMC Urol.* 2005 Dec 12;5:17.

76. Chen SS, Deutsch EW, Yi EC, Li XJ, Goodlett DR, Aebersold R. Improving mass and liquid chromatography based identification of proteins using bayesian scoring. *J Proteome Res*. 2005 Nov-Dec;4(6):2174-84.

75. Taylor GK, Goodlett DR. Rules governing protein identification by mass spectrometry. *Rapid Commun Mass Spectrom*. 2005;19(23):3420.

74. Filen JJ, Nyman TA, Korhonen J, Goodlett DR, Lahesmaa R. Characterization of microsomal fraction proteome in human lymphoblasts reveals the down-regulation of galectin-1 by interleukin-12. *Proteomics*. 2005 Dec;5(18):4719-32.

73. Chen R, Yi EC, Donohoe S, Pan S, Eng J, Cooke K, Crispin DA, Lane Z, Goodlett DR, Bronner MP, Aebersold R, Brentnall TA. Pancreatic cancer proteome: the proteins that underlie invasion, metastasis, and immunologic escape. *Gastroenterology*. 2005 Oct;129(4):1187-97.

72. K.D. Welch, B. Wen, D.R. Goodlett, E.C. Yi, H. Lee, T.P. Reilly, S.D. Nelson, L.R. Pohl "Proteomic Identification of Potential Susceptibility Factors in Drug-Induced Liver Disease" *Chem Res Toxicol*. 2005, 18, 924.

71. J. Zhang, D.R. Goodlett, J.F. Quinn, E. Peskind, J.A. Kaye, Y. Zhou, C. Pan, E. Yi, J. Eng, Q. Wang, R.H. Aebersold, T.J. Montine "Quantitative proteomics of cerebrospinal fluid from patients with Alzheimer disease" *J Alzheimers Dis*. 2005, 7, 125.

70. B. Lin, J.T. White, W. Lu, T. Xie, A.G. Utleg, X. Yan. E.C. Yi, P. Shannon, I. Khrebtukova, P.H. Lange, D.R. Goodlett, D. Zhou, T.J. Vasicek, L. Hood "Evidence for the presence of disease-perturbed networks in prostate cancer cells by genomic and proteomic analyses: a systems approach to disease" *Cancer Res.* 2005, 65, 3081.

69. M.P. Molloy, S. Donohoe, E.E. Brzezinski, G.W. Kilby, T.I. Stevenson, J.D. Baker, D.R. Goodlett, D.A. Gage "Large-scale evaluation of quantitative reproducibility and proteome coverage using acid cleavable isotope coded affinity tag mass spectrometry for proteomic profiling" *Proteomics* 2005, 5, 1204.

68. E.C. Yi, X.J. Li, K. Cooke, H. Lee, B. Raught, A. Page, V. Aneliunas, P. Hieter, D.R. Goodlett, R. Aebersold "Increased quantitative proteome coverage with (13)C/(12)C-based, acid-cleavable isotope-coded affinity tag reagent and modified data acquisition scheme" *Proteomics* 2005, 5, 380.

67. M. Marelli, J.J. Smith, S. Jung, E. Yi, A.I. Nesvizhskii, R.H. Christmas, R.A. Saleem, Y.Y. Tam, A. Fagarasanu, D.R. Goodlett, R. Aebersold, R.A. Rachubinski, J.D. Aitchison "Quantitative mass spectrometry reveals a role for the GTPase Rho1p in actin organization on the peroxisome membrane" *J Cell Biol*. 2004, 167, 1099.

66. J. Zhang, D.R. Goodlett, E.R. Peskind, J.F. Quinn, Y. Zhou, Q. Wang, C. Pan, E. Yi, J. Eng, R.H. Aebersold, T.J. Montine "Quantitative proteomic analysis of age-related changes in human cerebrospinal fluid" *Neurobiol Aging* 2005, 26, 207.

65. W. Yan, H. Lee, E.C. Yi, D. Reiss, P. Shannon, B.K. Kwieciszewski, C. Coito, X.J. Li, A. Keller, J. Eng, T. Galitski, D.R. Goodlett, R. Aebersold, M.G. Katze "System-based proteomic analysis of the interferon response in human liver cells" *Genome Biol.* 2004, 5:R54. Epub 2004 Jul 22.

64. B. Wollscheid, P.D. von Haller, E. Yi, S. Donohoe, K. Vaughn, A. Keller, A.I. Nesvizhskii, J. Eng, X.J. Li, D.R. Goodlett, R. Aebersold, J.D. Watts "Lipid raft proteins and their identification in T lymphocytes" *Subcell Biochem*. 2004, 37, 121.

63. Q. Tian, S.B. Stepaniants, M. Mao, L. Weng, M.C. Feetham, M.J. Doyle, E.C. Yi, H. Dai, V. Thorsson, J. Eng, D. Goodlett, J.P. Berger, B. Gunter, P.S. Linseley, R.B. Stoughton, R. Aebersold, S.J. Collins, W.A. Hanlon, L.E. Hood "Integrated genomic and proteomic analyses of gene expression in mammalian cells" *Mol Cell Proteomics*. 2004 Jul 6 [Epub ahead of print].

62. Y. Zhou, G. Gu, D.R. Goodlett, T. Zhang, C. Pan, T.J. Montine, K.S. Montine, R.H. Aebersold, J. Zhang "Analysis of alpha -synuclein-associated proteins by quantitative proteomics" *J Biol Chem*. 2004, 279, 39155.

61. J. Zhang, D.R. Goodlett "Proteomic approach to studying Parkinson's disease" *Mol Neurobiol.* 2004, 29, 271.

60. H. Lee, E.C. Yi, B. Wen, T.P. Reily, L. Pohl, S. Nelson, R. Aebersold, D.R. Goodlett "Optimization of reversed-phase microcapillary liquid chromatography for quantitative proteomics" *J Chromatogr B Analyt Technol Biomed Life Sci.* 2004, 803, 101.

59. P.R. Hardwidge, I. Rodriguez-Escudero, D. Goode, S. Donohoe, J. Eng, D.R. Goodlett, R. Aebersold, B.B. Finlay "Proteomic analysis of the intestinal epithelial cell response to enteropathogenic Escherichia coli." *J Biol Chem*. 2004, 279, 20127.

58. V.L. MacKay, X. Li, M.R. Flory, E. Turcott, G.L. Law, K.A. Serikawa, X.L. Xu, H. Lee, D.R. Goodlett, R. Aebersold, L.P. Zhao, D.R. Morris "Gene expression analyzed by high-resolution state array analysis and quantitative proteomics: response of yeast to mating pheromone" *Mol Cell Proteomics*. 2004, 3, 478.

57. D.B. Martin, D.R. Gifford, M.E. Wright, A. Keller, E. Yi, D.R. Goodlett, R. Aebersold, P.S. Nelson "Quantitative proteomic analysis of proteins released by neoplastic prostate epithelium" *Cancer Res.* 2004, 64, 347.

56. A. Fejes, E.C. Yi, D.R. Goodlett, J.T. Beatty "Shotgun proteomic analysis of chromatophores from the purple phototrophic bacterium *Rhodopseudomonas palustris" Photosynthesis Research* 2004, 78, 195.

55. S. Purvine, J.T. Eppel, E.C. Yi, D.R. Goodlett "Shotgun collision induced dissociation of peptides using an electrospray ionization-time-of-flight mass spectrometer" *Proteomics* 2003, 3, 847.

54. E.C. Yi, H. Lee, R. Aebersold, D.R. Goodlett "Automated Routine Operation of a Microcapillary Trap Cartridge-Microcapillary-HPLC-ESI Emitter Device capable of Peptide Tandem Mass spectrometry at the Attomole level on an Ion Trap Mass Spectrometer" *Rapid Commun Mass Spectrom.* 2003, 17, 2093.

53. P.D. Von Haller, E. Yi, S. Donohoe, K. Vaughn, A. Keller, A.I. Nesvizhskii, J. Eng, X.J. Li, D.R. Goodlett, R. Aebersold, J.D. Watts "The application of new software tools to quantitative protein profiling via ICAT and tandem mass spectrometry: I. Statistically annotated data sets for peptide sequences and proteins identified via the application of ICAT and tandem mass spectrometry to proteins co-purifying with T cell lipid rafts" *Mol Cell Proteomics* 2003, 2, 426.

52. P.D. Von Haller, E. Yi, S. Donohoe, K. Vaughn, A. Keller, A.I. Nesvizhskii, J. Eng, X.J. Li, D.R. Goodlett, R. Aebersold, J.D. Watts "The application of new software tools to quantitative protein profiling via ICAT and tandem mass spectrometry: II. Evaluation of tandem mass spectrometry methodologies for large-scale protein analysis and the application of statistical tools for data analysis and interpretation" *Mol Cell Proteomics*. 2003, 2, 428.

51. Y.A. Goo, E.C. Yi, N.S. Baliga, W.A. Tao, M. Pan, R. Aebersold, D.R. Goodlett, L. Hood, W.V. Ng "Proteomic analysis of an extreme halophilic archaeon *Halobacterium sp.* NRC-1" *Mol Cell Proteomics* 2003, 2, 506.

50. E. Kolker, S. Purvine, M.Y. Galperin, S. Stolyar, D.R. Goodlett, A.I. Nesvizhskii, A. Keller, T. Xie, J.K. Eng, E. Yi, L. Hood, A.F. Picone, T. Cherny, B.C. Tjaden, A.F. Siegel, T.J. Reilly, K.S. Makarova, B.O. Palsson, A.L. Smith "Initial proteome analysis of model microorganism Haemophilus influenzae strain Rd KW20" *J Bacteriol*. 2003, 185, 4593.

49. Y. Shiio, R.N. Eisenman, E.C. Yi, S. Donohoe, D.R. Goodlett, R. Aebersold "Quantitative proteomic analysis of chromatin-associated factors" *J Am Soc Mass Spectrom* 2003, 14, 696.

48. A.G. Utleg, E.C. Yi, T. Xie, P. Shannon, J.T. White, D.R. Goodlett, L. Hood, B. Lin "Proteomic analysis of prostasomes" *Prostate* 2003, 56, 150.

47. Y. Shiio, E.C. Yi, S. Donohoe, D.R. Goodlett, R. Aebersold, R.N. Eisenman "*Quantitative Proteomic Analysis of Chromatin-associated Factors" J. Am Soc Mass Spectrom.* 2003, 14, 696.

46. T Guina, M. Wu, S.O. Purvine, E.C. Yi, R.K. Ernst, K.A. Lee, J. Eng, D.R. Goodlett, R. Aebersold, S.I. Miller "Proteomic Analysis of *Pseudomonas aeruginosa* Grown Under Magnesium Limitation" *J. Am Soc Mass Spectrom.* 2003, 14, 742.

45. J.A. Ranish, E.C. Yi, D.M. Leslie, S.O. Purvine, D.R. Goodlett, J. Eng, R. Aebersold "The study of macromolecular complexes by quantitative proteomics" *Nat. Genetics* 2003, 33, 349.

44 T. Guina, S.O. Purvine, E.C. Yi, J. Eng, D.R. Goodlett, R. Aebersold, S.I. Miller "Quantitative Proteomic Analysis Indicates *Pseudomonas aeruginosa* Produces A Quinolone Signal In Cystic Fibrosis Airways" *Proc Natl Acad Sci U S A*, 2003, 100, 2771.

43 Y. Sydorsky, D.J. Dilworth, E.C. Yi, D.R. Goodlett, J.D. Aitchison "The intersection of Kap123p-mediated nuclear import and ribosome export pathways" *Mol. Cell. Biology* 2003, 23, 2042.

42. A. Keller, S. Purvine, A. Nesvizhskii, S. Stolyar, D.R. Goodlett, E. Kolker "Experimental protein mixture for validating tandem mass spectral analysis." *OMICS* 2002, 6, 207.

41. N.S. Baliga, M. Pan, Y.A. Goo, E.C. Yi, D.R. Goodlett, K. Dimitrov, P. Shannon, R. Aebersold, W.V. Ng, L. Hood. "Coordinate regulation of energy transduction modules in Halobacterium sp. analyzed by a global systems approach" *Proc Natl Acad Sci U S A* 2002, 99, 14913.

40. E.C. Yi, M. Marelli, H. Lee, S.O. Purvine, R. Aebersold, J.D. Aitchison, D.R. Goodlett "Approaching complete peroxisome charcterization by gas-phase fractionation" *Electrophoresis* 2002, 23, 3205.

39. Y. Shiio, S. Donohoe, E.C. Yi, D.R. Goodlett, R. Aebersold, R.N. Eisenman "Quantitative Proteomic Analysis of Myc Oncoprotein Function" *E.M.B.O.* 2002, 21, 5088.

38. D.R. Goodlett and E.C. Yi "Proteomics without Polyacrylamide" *Functional and Integrative Genomics* 2002, 2, 138.

37. S. Dramsi, M. Scheid, A. Maiti, P. Hojabrpour, X. Chen, K. Schubert, D.R. Goodlett**,** R. Aebersold, V. Duronio "Identification of a novel phosphorylation site, Ser170, as a regulator of Bad pro-apoptotic activity" *J. Biol. Chem.* 2002, 277, 6399.

36. F. Hayashi, D.M. Underhill, A. Ozinsky, K.D. Smith, E.C. Yi, J.K. Eng, D.R. Goodlett, A. Aderem "The Innate Immune Response to Bacterial Flagellin is Mediated by Toll-like Receptor-5" *Nature* 2001, 410, 1099.

35. T. Ideker, V. Thorsson, J.A. Ranish, R. Christmas, J. Buhler, J.K. Eng, R. Bumgarner, D.R. Goodlett, R. Aebersold, L. Hood "Integrated Genomic and Proteomic Analyses of a Systematically Perturbed Metabolic Network" *Science* 2001, 292, 929.

34. D.R. Goodlett, A. Keller, J.D. Watts, R. Newitt, E.C. Yi, S. Purvine, P. von Haller, J.K. Eng, R. Aebersold, E. Kolker "Differential Stable Isotopic Labeling of Peptides for Quantification and *de novo* Sequence Derivation" *R. Commun. Mass Spec.* 2001, 15, 1214.

33. P. von Haller, S. Donohoe, D.R. Goodlett, R. Aebersold, J.D. Watts, "Mass Spectrometric Characterization of Proteins Extracted from Jurkat T-Cell Detergent Resistant Membranes" *Proteomics* 2001, 1, 1010.

32. M.G. Katze, B. Kwieciszewski, D.R. Goodlett, C.M. Blakely, P. Nedderman, S-L Tan, R Aebersold "Ser2194 is a highly conserved Major Phosphoreylation Site of the Hepatitis C Virus Nonstructural protein NS5A" *Virology* 2000, 278, 501.

31. R. Aebersold and D.R. Goodlett "Proteomics and Mass Spectrometry" *Chemical Reviews* 2001, 101, 269.

30. T. Griffin, D.R. Goodlett, R. Aebersold "Pharmaceutical Biotechnology Review" *Current Opinions in Biotech.* 2001, 12, 607.

29. D.R. Goodlett, R. Aebersold, J.D. Watts "Quantitative *in vitro* Kinase Reaction as a Guide for Phosphoprotein analysis by Mass Spectrometry" *Rapid Commun Mass Spectrom*. 2000, 14, 344.

28. D.R. Goodlett, J.E. Bruce, G.A. Anderson, B. Rist, L. Pasa-Tolic, O. Fiehn, R.D. Smith, R. Aebersold "Protein Identification with a Single Accurate Mass of a Cysteine-containing Peptide and Constrained Database Searching" *Anal Chem*. 2000, 72, 1112.

27. M. Heller, D.R. Goodlett, J.D. Watts, R. Aebersold "A comprehensive characterization of the T-cell antigen receptor complex composition by microcapillary liquid chromatography-tandem mass spectrometry" *Electrophoresis* 2000, 21, 2180.

26. S.D. Patterson, R. Aebersold and D.R. Goodlett "*Proteomics - Mass Spectrometry Based Methods for Protein Identification and Phosphorylation Site Analysis*" S. Pennington and M. Dunn (eds), Bios Scientific Publishers Ltd. Oxford, 2001, 87.

25. D.R. Goodlett, D.C. Gale, S. Guiles and J.B. Crowther *Encyclopedia of Analytical Chemistry* John Wiley & Sons, London, 2001.

24. S.A. Susin, H.K. Lorenzo, N. Zamzami, I. Marzo, G. Brothers, B. Snow, E. Jacotot, P. Costantini, N. Larochette, D.R. Goodlett, R. Aebersold, G. Pietu, M.-C. Prevost, D. Siderovski, J. Penninger, G. Kroemer "Molecular characterization of mitochondrial apoptosis-inducing factor." *Nature* 1999, 397, 441.

23. B. Gallis, G.L. Corthals, D.R. Goodlett, H. Ueba, F. Kim, S.R. Presnell, D. Figeys, D.G. Harrison, B.C. Berk, R. Aebersold, M. Corson "Identification of flow-dependent endothelial nitric-oxide synthase phosphorylation sites by mass spectrometry and regulation of phosphorylation and nitric oxide production by the phosphatidylinositol 3-kinase inhibitor LY294002" *J. Biol. Chem.*, 1999, 274, 30101.

22. D. Figeys, G.L. Corthals, B. Gallis, D.R. Goodlett, A. Ducret, M.A. Corson, R. Aebersold "Data-dependent modulation of solid-phase extraction capillary electrophoresis for the analysis of complex peptide and phosphopeptide mixtures by tandem mass spectrometry: application to endothelial nitric oxide synthase" *Anal. Chemistry* 1999, 71, 2279.

21. D.R. Goodlett, A. Timperman, S.P. Gygi, J.D. Watts, G.L. Corthals, D. Figeys, R. Aebersold "*Proteome and Protein Analysis"* Springer-Verlag, Heidelberg, 2000, 3.

20. R. Aebersold, D. Figeys, S. Gygi, G. Corthals, P. Haynes, B. Rist, Y. Zhang, D.R. Goodlett "Towards an integrated analytical technology for the generation of multidimensional protein expression maps" *J. of Prot. Chem.* 1998, 17, 533.

19. N. Lee, D.R. Goodlett, H. Marquardt, D.E. Geraghty "HLA-E surface expression depends on binding of TAP-dependent peptides derived from certain HLA class I signal sequences" *J. of Immunology* 1998, 160, 4951.

18. A. Vidyasagar, N. Corkum, A. Jacala, T. Mukherjee, D.R. Goodlett, J.B. Crowther, I.W. McConnell, G. Goldstein "Pharmacokinetics and toxicokinetics of an orally active tripeptide, IRI-695, in animals" *Biopharm. Drug Dispos.*1996, 17, 25.

17. R.D. Smith, H.R. Udseth, J.H. Wahl, D.R. Goodlett, S.A. Hofstadler "Capillary electrophoresis-mass spectrometry" *Methods in Enzymology* 1996, 271, 448.

16. D.R. Goodlett, P. Abuaf, T. Mukherjee, J.B. Crowther, N. Corkum, G. Goldstein "Peptide chiral purity determination: hydrolysis in deuterated acid, derivatization with Marfey's reagent and analysis using high-performance liquid chromatography-electrospray ionization-mass spectrometry" *J. Chromatogr.A* 1995, 707, 233.

15. D.C. Gale, D.R. Goodlett, K.J. Light-Wahl, R.D. Smith "Observation of Duplex-DNA Noncovalent Complexes by electrospray Ionization-Mass Spectrometry" *J. Am. Chem. Soc.* 1995, 116, 6027.

14. D.R. Goodlett, R.R.O. Loo, J.A. Loo, J.H. Wahl, H.R. Udseth, R.D. Smith "A study of the Thermal Denaturation of Ribonuclease S by Electrospray Ionization Mass Spectrometry" *J. Am. Soc. Mass Spectrom.* 1995, 5, 614.

13. R.D. Smith, D.R. Goodlett, J.H. Wahl *Handbook of Capillary Electrophoresis* (Ed. J.P. Landers), CRC Press, 1994, 185.

12. R.D. Smith, K.J. Light-Wahl, B.E. Winger, D.R. Goodlett "*Electrospray Ionization in Biological Mass Spectrometry: Present and Future"* (Eds. T. Matsuo, Y. Seyama, R.C. Caprioli and M.L. Gross) John Wiley & Sons, 1994, 41.

11. J.H. Wahl, D.R. Goodlett, H.R. Udseth, R.D. Smith "Use of small-diameter capillaries for increasing peptide and protein detection sensitivity in capillary electrophoresis-mass spectrometry" *Electrophoresis* 1993, 14, 448.

10. R.D. Smith, J.H. Wahl, D.R. Goodlett, S.A. Hofstadler "Capillary Electrophoresis/Mass Spectrometry" *Anal. Chem.* 1993, 65, 574A .

9. D.R. Goodlett, J.H. Wahl, H.R. Udseth, R.D. Smith "Reduced Elution Speed Detection for Capillary Electrophoresis-Mass Spectrometry"*J. of Microcolumn Separations*, 1993, 5, 57.

8. D.R. Goodlett, D.G. Camp, C.C. Hardin, M. Corregan, R.D. Smith "Direct observation of a DNA quadruplex by electrospray ionization mass spectrometry" *Biol. Mass Spectrom.* 1993, 22 181.

7. R.R.O. Loo, D.R. Goodlett, R.D. Smith J.A. Loo "Observation of Noncovalent Ribonuclease S-Protein/S-Peptide Complex by Electrospray Ionization Mass Spectrometry" *J. of American Chem. Soc.* 1993, 115, 4391.

6. J.A. Loo, R.R.O. Loo, D.R. Goodlett, R.D. Smith, A.F. Fuciarelli, D.L. Springer, B.D. Thrall, C.G. Edmonds "*Techniques in Protein Chemistry IV*" (Ed. R. H. Angeletti) Academic Press, 1993, 23.

5. M. Saljoughian, P.G. Williams, H. Morimoto, D.R. Goodlett, R.B. van Breemen "Tritiated Diimide: A Regio- and Stereo-selective Tritium Labeling Reagent" *The J. Chem. Soc., Chem. Commun* 1993, 4, 414.

4. J.H. Wahl, D.R. Goodlett, H.R. Udseth, R.D. Smith Attomole level capillary electrophoresis mass spectrometric protein analysis using 5 um id capillaries. *Anal. Chem.* 1992, 64, 3194.

3. R.J. Linderman, T. Tshering, K. Venkatesh, D.R. Goodlett, W.C. Dauterman, R.M. Roe "Organophosphorus Inhibitors of Insect Juvenile Hormone Esterase" *Pesticide Biochemistry and Physiology*, 1991, 39, 57.

2. D.R. Goodlett, F.B. Armstrong, R.J. Creech, R.B. van Breemen "Formylated Peptides from Cyanogen Bromide Digests Identified by Fast Atom Bombardment Mass Spectrometry" *Anal. Biochem*. 1990, 186, 116.

1. F.F. Bartol, A.A. Wiley, D.R. Goodlett "Ovine Uterine Morphogenesis: Histochemical Aspects of Endometrial Development in the Fetus and Neonate" *J. of Animal Science* 1988, 66, 1303.

CURRENT GRANTS AWARDED

5 U54 AI057141-06 (Miller, PD; Goodlett, Core PI) 3/1/09-2/28/14
National Institutes of Health
NW Regional Center of Excellence for Biodefense and Emerging Infectious Diseases
Mass Spectrometry Core
Generate global profiles of protein levels, characterize post-translational modifications (PTMs), define structures of small biological molecules like lipopolysaccharides (LPS), integrate data from global protein mRNA profiles to produce new hypothesis for testing, develop software for analysis of disparate global data sets and refine analytical methods for analysis of samples of limited availability and protein PTM analysis.

OCE-0825790 (Goodlett, PI) 9/1/08-8/31/11
National Science Foundation
Collaborative Research: Integrating Geochemistry and Proteomics to Assess Protein Sources and Their Fate in Marine Systems
Mass spectrometric methods to explore proteomes from oceans and their sediments.

5R01CA107209-03 (Brentnall, PI) 9/22/06-7/31/11
National Institutes of Health
Pancreatic Cancer Protein Biomarkers for Early Detection
The goal is to consult on sample preparation for pancreatic cancer biomarker discovery. Additionally, proteins will be identified in samples prepared by Dr Brentnall's laboratory and aid will be given in id data analysis.

1R01HL083481-04 (Schnapp, PI) 9/29/05-6/30/10
National Institutes of Health
Matrix Remodeling in the Lung During HIV Infection
To provide assistance in mass spectrometry analysis in support of Dr. Schnapp's experiments, and to supervise a research associate's proteomics experiments on ARDS BALF.

1U01DK082325-01 (Buchwald, PI) 9/15/08-6/30/13
National Institutes of Health
University of Washington Urologic Chronic Pelvic Pain Syndrome Discovery Center
Proteomic biomarker analysis of proteins present in patients with chronic pelvic pain.

1R01 AG033398-01 (Zhang, PI) 9/15/08-8/31/13
National Institutes of Health
Post-translational Modifications of Proteins in Parkinson's disease
This project investigates the potential biomarkers correlating with the development of cognitive impairment in Parkinson's patients. Identification of these makers can increase therapeutic window for Parkinson's patients at risk for developing dementia that is associated with mortality, caregiver burden and risk for nursing home admission.

R33CA099139-04S1 (Goodlett, PI) 9/30/09-9/29/10
National Institutes of Health
Parallel Peptide Tandem Mass Spectrometry
To optimize a method we refer to as Peptide Acquisition Independent From Ion Count (PAcIFIC). Our proposed plan will lead to more facile methods for protein discovery that may be immediately adopted by laboratories searching for protein markers of disease.

P42 ES004696 (Checkoway, PD; Zhang, PI) 4/1/10-3/31/14
National Institutes of Health
Effects-Related Biomarkers of Environmental Neurotoxic Exposures (Project 3: Biomarkers of neurotoxicants). The goal of this project is to study plasma biomarkers that might be related to manganese toxicity.

3R01GM079280-02S1 (Eaton, PI) 9/1/07-8/31/10
National Institutes of Health
Isothiocyanates as specific antagonists of human SXR
The goal of the proposed research is to identify potential endogenous biomarkers for CYP3A drug metabolism activity using targeted and profiling metabolomic approaches.

1RC2NR011959-01 (Heitkamper, PI) 9/28/09-7/31/11
National Institutes of Health
Abdominal Symptom Phenotypes: Pathways to New Biomarkers
The goal is to discover biomarkers and understand linkages between symptoms and biomarkers of functional gastrointestinal (GI) disorders (FGIDs), in particular irritable bowel syndrome (IBS) in adults and children; and to identify the mechanisms leading to symptoms, and ultimately symptom management through methods including proteomic analyses of urine samples.

LSDF 3127535 (Sasaki, PD; Goodlett, PI) 3/11/10-3/10/13
Washington State Life Sciences Discovery Fund
Development of Artemisinin Compounds for Cancer Treatment (Goodlett LSDF Sub)
The objective of this proposal is to undertake development of novel endoperoxide compounds as potentially more selective, effective and safer therapeutics for the treatment of cancer.

NordForsk (Corthals; Goodlett, co-PI) 1/1/08-12/31/11
Noridic Signals: an omics network for cell signaling in health & disease
Contribute to Nordic multi-laboratory network via hosting visiting scientists and knowledge transfer to enhance research in cell signaling and enhance proficiency in experimental expertise. Overall aims and objectives of the Nordic Signals infrastructure network are to enable efficient cooperation between some of highest quality Nordic researchers through collaborative use of high-impact technology and researcher exchange.