

DAVID M. ROCKE

Curriculum Vitae

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Division of Biostatistics
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EDUCATION

Ph.D., 1972, University of Illinois, Chicago (Mathematics)
Supplemental Coursework, 1977–78, University of Chicago (Statistics)
M.A., 1968, University of Illinois, Chicago (Mathematics)
A.B., 1966, Shimer College (Mathematics and Physics)

HONORS

National Merit Scholarship, 1963
Graduated “With Distinction” from Shimer College, 1966
National Science Foundation Graduate Fellowship, 1968–71
Fellow of the Royal Statistical Society, 1979
Youden Prize, Chemical Division, American Society for Quality Control, 1982
Award for Interlaboratory Testing, American Statistical Association, 1985
Shewell Award, Chemical and Process Industries Division, American Society for Quality Control, 1987
Fellow of the American Statistical Association, 1995
Statistics in Chemistry Award, American Statistical Association, 1997
Elected to Membership in the International Statistical Institute, 1997
Distinguished Service Award, Division of Molecular Orthopaedics, University of Pennsylvania, 2000
Fellow, American Association for the Advancement of Science, 2007
Senior Member, International Society for Computational Biology, 2016
Fellow, American Institute for Medical and Biological Engineering, 2017

EMPLOYMENT

Distinguished Professor, Division of Biostatistics, Dept. of Public Health Sciences (Medicine), UC Davis, 2007–present, Professor 1997–2007.
Distinguished Professor, Department of Biomedical Engineering, UC Davis, 2011–present.
Distinguished Professor, Department of Applied Science (Engineering), UC Davis, 2007–2011, Professor 2000–2007.
Vice-Chair, Department of Public Health Sciences, UC Davis, 2015–2021.
Director of Biostatistics, UC Davis Clinical and Translational Science Center, 2010–present.
Director, UC Davis Center for Biomarker Discovery, 2010–present.
Member, UC Davis Genome Center, 2004–present.
Member, UC Davis Comprehensive Cancer Center, 1998–present.
Co-Director, Institute for Data Analysis and Visualization (formerly Center for Image Processing and Integrated Computing), UC Davis, 1996–2007.
Director, Center for Digital Security, UC Davis, 2001–2007.
Director, Center for Statistics in Science and Technology, UC Davis, 1995–1999.
Professor Graduate School of Management, UC Davis, 1986–2000. Associate Professor, 1980–1986.
Academic Visitor, Department of Mathematics, Imperial College, London, 1987–1988.
University Professor of Business Administration, Governors State University, 1974–80.

RECENT GRANTS AND CONTRACTS

National Institutes of Health/NCATS, 2006–2021, UC Davis Clinical and Translational Science Center, Biostatistics Director, Lars Berglund is PI.

National Institutes of Health/NIEHS, 2017–2022, Biomarkers of Exposure to Hazardous Substances, Biostatistics Core, Bruce Hammock is PI.

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science (Fellow)

American Chemical Society

American Institute for Medical and Biological Engineering (Fellow)

American Statistical Association (Fellow)

JSM Writing Mentor 2008–present

W.J. Youden Award in Interlaboratory Testing Committee, 2016–2021

Association of Clinical and Translational Statisticians

Treasurer and Board of Directors 2014–2021

Biomedical Engineering Society

Federation of American Societies for Experimental Biology (FASEB)

Finance Committee 2010–2018

Board of Directors: Advisor 2012–2015, Member 2015–2018

Treasurer Elect 2015–2016, Treasurer 2016–2018

Science Policy Committee 2014–2018

Public Affairs Committee 2015–2018

Institute of Mathematical Statistics

International Biometric Society (WNAR)

International Fibrodysplasia Ossificans Progressiva Association

Treasurer and Board of Directors 2017-2019

International Society for Computational Biology (Senior Member)

Treasurer 2002–2009

Board of Directors 2002–2013

Finance Committee 2002–present

International Statistical Institute (Elected Member)

Royal Statistical Society (Fellow)

GRADUATE PROGRAM MEMBERSHIP AT UC DAVIS

Graduate Group in Applied Mathematics

Graduate Group in Biostatistics (Chair, Educational Policy Committee 2015–2017)

Designated Emphasis in Biotechnology (Executive Committee)

Graduate Group in Clinical Research (Chair 2012–2018)

Graduate Group in Computer Science

Graduate Group in Epidemiology

Graduate Group in Public Health (Executive Committee 2004-2013)

Graduate Program in Statistics

RECENT COMMITTEE SERVICE AT UC DAVIS

School of Medicine Committee on Rules, Jurisdiction and Organization, 2015–2018

Biomedical Engineering Academic Merits and Promotions Committee, 2011–, Chair 2016–2017

Academic Senate Parliamentarian, 2014–2015

Committee on Elections, Rules, and Jurisdiction (Chair) 2012–2014

Executive Council 2012–2014

School of Medicine Faculty Personnel Committee 2009–2012

School of Medicine Compensation Advisory Committee 2006–2008

EDITORIAL AND REVIEW

Member, Editorial Board, *BMC Bioinformatics*, 2005–
Member, Editorial Board, *Molecular and Cellular Proteomics*, 2005–2015
Associate Editor, *Journal of the American Statistical Association, Theory and Methods*, 2005–2011
Associate Editor, *Bioinformatics*, 2005–11
Member, Editorial Board, *Bioinformatics*, 2012–2014
Associate Editor, *Metrika*, 1998–2007
Associate Editor, *Biometrics*, 1997–2000
Member Biodata Management and Analysis Study Section, NIH, 2007–2010.
Ad Hoc member of NIH study sections in bioinformatics, software, genetics, and genomics.
FDA Cellular, Tissue and Gene Therapies Advisory Committee consultant, 2008–2018.
Recent Reviewer for: *Bioinformatics*, *BMC Bioinformatics*, *BMC Genomics*, *Biometrics*, *Biometrika*, *Computational Statistics and Data, US Department of Energy, Analysis*, *Journal of Computational Biology*, *Journal of Immunological Methods*, *Journal of the American Statistical Association*, *Molecular and Cellular Proteomics*, *Nature Biotechnology*, *Nucleic Acids Research*, *Technometrics*.

PUBLICATIONS

Google Scholar (h index = 58; i10 index = 144; 14,303 citations)

<https://scholar.google.com/citations?user=u4jTBywAAAAJ&hl=en>

NCBI My Bibliography

<http://www.ncbi.nlm.nih.gov/sites/myncbi/david.rocke.1/bibliography/40453496/public/?sort=date>

BOOKS

1995 George W. Downs and David M. Rocke, *Optimal Imperfection? Domestic Uncertainty and Institutions in International Relations*, Princeton: Princeton University Press.
1990 George W. Downs and David M. Rocke, *Tacit Bargaining, Arms Races, and Arms Control*, Ann Arbor: University of Michigan Press.

ARTICLES AND PAPERS

2019 David M. Rocke, Luyao Ruan, J. Jared Gossett, Blythe Durbin-Johnson, and Sharon Aviran, “Controlling False Positive Rates in Methods for Differential Gene Expression Analysis using RNA-Seq Data,” submitted for publication.
2019 Katharina A.M. Hackenberg, Hamidreza Rajabzadeh-Oghaz, Rita Dreier, Bruce A. Buchholz, Ali Navid, David M. Rocke, Amr Abdulazim, Daniel Hänggi, Adnan Siddiqui, Loch Macdonald, Hui Meng, and Nima Etminan, “Collagen Turnover in Relation to Risk Factors and Hemodynamics in Human Intracranial Aneurysms,” submitted for publication.
2019 Marjorie A. Phillips, Angela Cánovas, Miguel A. Rea, Alma Islas-Trejo, Juan F. Medrano, Blythe Durbin-Johnson, David M. Rocke, Robert H. Rice, “Parallel Actions and Signaling Pathways of Arsenite and Antimonite in Human Epidermal Keratinocytes,” submitted for publication.
2019 John T. Halloran, Hantian Zhang, Kaan Kara, Cedric Renggli, Mathew The, Ce Zhang, David Rocke, Lukas Käll, William Stafford Noble, “Speeding up Percolator,” *Journal of Proteome Research*, 18, 3353–3359.
2019 Catherine N. Tchanque-Fossuo, Sara E. Dahle, Hadar Lev-Tov, Kaitlyn I.M. West, Chin-Shang Li, David M. Rocke, R.R. Isseroff, “Cellular Versus Acellular Matrix Devices in Treatment of Diabetic Foot Ulcers: Interim Results of a Comparative Efficacy Randomized Controlled Trial,” *Journal of Tissue Engineering and Regenerative Medicine*, 13, 1430–1437.

2019 Noreen Karim, Blythe Durbin-Johnson, David M. Rocke, Michelle Salemi, Brett S. Phinney, Muhammad Naeem, and Robert H. Rice, "Proteomic Manifestations of Genetic Defects in Autosomal Recessive Congenital Ichthyosis," *Journal of Proteomics*, **201**, 104–109.

2019 Jennifer A. Milan, Pei-Wen Wu, Michelle R. Salemi, Blythe P. Durbin-Johnson, David M. Rocke, Brett S. Phinney, Robert H. Rice, and Glendon J. Parker, "Comparison of Protein Expression Levels and Proteomically-Inferred Genotypes Using Human Hair from Different Body Sites," *Forensic Science International: Genetics*, **41**, 19–23.

2019 Glendon J. Parker, Julia M. Yip, Jelmer W. Eerkens, Michelle Salemi, Blythe Durbin-Johnson, Caleb Kiesow, Randall Haas, Jane Buikstra, Haagen Klaus, Laura A. Regan, David M. Rocke, and Brett Phinney, "Sex Estimation Using Sexually Dimorphic Amelogenin Protein Fragments in Human Enamel," *Journal of Archaeological Science*, **101**, 169–180.

2018 John T. Halloran and David M. Rocke, "Learning Concave Conditional Likelihood Models for Improved Analysis of Tandem Mass Spectra," *Proceedings of the 32nd Conference on Neural Information Processing Systems* (NIPS 2018), Montréal, Canada.

2018 Tomas Vaisar, Blythe Durbin-Johnson, Kathryn Whitlock, Ilona Babenko, Rajnish Mehrotra, David Rocke, and Maryam Afkarian, "Urine Complement Components and the Risk of Kidney Disease Progression and Mortality in Type 2 Diabetes," *Diabetes Care*, doi.org/10.2337/dc18-0699.

2018 Robert H. Rice, Blythe P. Durbin-Johnson, Selena M. Mann, Michelle Salemi, Shiro Urayama, David M. Rocke, Brett S. Phinney, and John P. Sundberg, "Corneocyte Proteomics: Applications to Skin Biology and Dermatology," *Experimental Dermatology*, **27**, 931–938.

2018 John T. Halloran and David M. Rocke, "A Matter of Time: Faster Percolator Analysis via Efficient SVM Learning for Large-Scale Proteomics," *Journal of Proteome Research*, **17**, 1978–1982.

2018 Huguette Albrecht, Hsin-ya Yang, Maija Kiuru, Saipiroon Maksareekul, Blythe Durbin-Johnson, Michael S. Wong, Thomas R. Stevenson, David M. Rocke, and R. Rivkah Isseroff, "The Beta 2 Adrenergic Receptor Antagonist Timolol Improves Healing of Combined Burn and Radiation Wounds," *Radiation Research*, **189**, 441–445.

2018 Robert J. Pignolo, Blythe P. Durbin-Johnson, David M. Rocke, and Frederick S. Kaplan, "Joint-Specific Risk of Impaired Function in Fibrodysplasia Ossificans Progressiva (FOP)," *Bone*, **109**, 124–133.

2018 Rishi R. Gupta, Patricia L.R. Delai, David L. Glaser, David M. Rocke, Mona Al Mukaddam, Robert J. Pignolo, and Frederick S. Kaplan, "Prevalence and Risk Factors for Kidney Stones in Fibrodysplasia Ossificans Progressiva," *Bone*, **109**, 120–123.

2017 John T. Halloran and David M. Rocke, "Gradients of Generative Models for Improved Discriminative Analysis of Tandem Mass Spectra," *Proceedings of the 31st Conference on Neural Information Processing Systems* (NIPS 2017), Long Beach, CA, USA.

2017 Robert H. Rice, Blythe P. Durbin-Johnson, Michelle Salemi, Mary E. Schwartz, David M. Rocke, and Brett S. Phinney, "Proteomic Profiling of Pachyonychia Congenita Plantar Callus," *Journal of Proteomics*, **165**, 132–137.

2017 Rogelio U. Almario, Wendy M. Buchan, David M. Rocke, and Sidiqa E. Karakas, "Glucose-Lowering Response to Whey Protein Depends Upon the Clinical Characteristics of Type 2 Diabetes Patients," *BMJ Open Diabetes Research & Care*, **5**, e000420. doi: 10.1136/bmjdrc-2017-000420

2017 Pei-Wen Wu, Katelyn E. Mason, Blythe P. Durbin-Johnson, Michelle Salemi, Brett S. Phinney, David M. Rocke, Glendon J. Parker, and Robert H. Rice, "Proteomic Analysis of Hair Shafts from Monozygotic Twins: Expression Profiles and Genetically Variable Peptides," *Proteomics*, **17**, 1600462. https://doi.org/10.1002/pmic.201600462.

2016 Glendon J. Parker, Tami Leppert, Deon S. Anex, Jonathan K. Hilmer, Nori Matsunami, Lisa Baird, Jeffery Stevens, Krishna Parsawar, Blythe P. Durbin-Johnson, David M. Rocke, Chad Nelson, Daniel J. Fairbanks, Andrew S. Wilson, Robert H. Rice, Scott R. Woodward, Brian

Bothner, Bradley Hart, and Mark Leppert, "Demonstration of Protein-Based Human Identification Using the Hair Shaft Proteome," *PLOS ONE*, **10**, e0160653.

2016 David S. Bunch and David M. Rocke, "Variance-Component-Based Nested Logit Specifications: Improved Formulation, and Practical Microsimulation of Random Disturbance Terms," *Journal of Choice Modelling*, **21**, 30–35.

2016 Robert H. Rice, Blythe P. Durbin-Johnson, Yosuke Ishitsuka, Michelle Salemi, Brett S. Phinney, David M. Rocke, and Dennis R. Roop, "Proteomic Analysis of Loricrin Knockout Mouse Epidermis," *Journal of Proteome Research*, **15**, 2560–2566.

2016 Susan M. Perkins, Peter Bacchetti, Cynthia S. Davey, Christopher J. Lindsell, Madhu Mazumdar, Robert A. Oster, Peter N. Peduzzi, David M. Rocke, Kyle D. Rudser, Mimi Kim, and the Biostatistics, Epidemiology, and Research Design (BERD) Key Function Committee of the Clinical and Translational Science (CTSA) Consortium, "Best Practices for Biostatistical Consultation and Collaboration in Academic Health Centers," *The American Statistician*, **70**, 187–194.

2016 Björn Oskarsson, David M. Rocke, Karsten Dengel, and David P. Richman, "Myasthenia gravis exacerbation after discontinuing mycophenolate: A single center cohort study," *Neurology*, **86**, 1159–1163.

2016 Robert J. Pignolo, Christopher Bedford-Gay, Moira Liljesthröm, Blythe P. Durbin-Johnson, Eileen M. Shore, David M. Rocke, and Frederick S. Kaplan, "The Natural History of Flare-ups in Fibrodysplasia Ossificans Progressiva (FOP): A Comprehensive Global Assessment," *Journal of Bone and Mineral Research*, **31**, 650–656.

2015 L. Renee Ruhaak, Donald A. Barkauskas, Javier Torres, Cara L. Cooke, Lauren D. Wu, Carol Stroble, Sureyya Ozcan, Cynthia C. Williams, Margarita Camorlinga, David M. Rocke, Carlito B. Lebrilla, and Jay V. Solnick, "The Serum Immunoglobulin G Glycosylation Signature of Gastric Cancer," *EuPA Open Proteomics*, **6**, 1–9.

2015 Kristin N. Grimsrud, Sihem Ait-Oudhia, Blythe P. Durbin-Johnson, David M. Rocke, Khursheed R. Mama, Marlis L. Rezende, Scott D. Stanley, William J. Jusko, "Pharmacokinetic and Pharmacodynamic Analysis Comparing Diverse Effects of Detomidine, Medetomidine and Dexmedetomidine in the Horse: A Population Analysis," *Journal of Veterinary Pharmacology and Therapeutics*, **38**, 24–34.

2014 Noriko Satake, Connie Duong, Cathy Chen, Gustavo A. Barisone, Elva Diaz, Joseph Tuscano, David M. Rocke, Jan Nolta, Nitin Nitin, "Targeted Therapy with MXD3 siRNA, antiCD22 Antibody, and Nanoparticles for Precursor B-cell Acute Lymphoblastic Leukemia," *British Journal of Haematology*, **167**, 487–499.

2014 Chelsea Laatsch, Blythe Durbin-Johnson, David Rocke, Sophie Mukwana, Abby Newland, Michael Flagler, Michael Davis, Richard Eigenheer, Brett Phinney, and Robert H. Rice, "Human Hair Shaft Proteomic Profiling: Individual Differences, Site Specificity and Cuticle Analysis," *PeerJ*, **2**:e506 <http://dx.doi.org/10.7717/peerj.506>

2014 Jing Xia, David M. Rocke, George Perry, and Monika Ray "Differential Network Analyses of Alzheimer's Disease Identify Early Events in Alzheimer's Disease Pathology," *International Journal of Alzheimer's Disease*, **2014**, Article ID 721453, 18 pages.

2014 Sureyya Ozcan, Donald A. Barkauskas, L. Renee Ruhaak, Javier Torres, Cara L. Cooke, Hyun Joo An, Serenus Hua, Cynthia C. Williams, Lauren M. Dimapasoc, Jae Han Kim, Margarita Camorlinga-Ponce, David Rocke, Carlito B. Lebrilla, and Jay V. Solnick, "Serum Glycan Signatures of Gastric Cancer," *Cancer Prevention Research*, **7**, 226–235.

2014 Ana M. Ibáñez, Federico Martinelli, Russell L. Reagan, Sandra L. Uratsu, Anna Vo, Mario A. Tinoco, My L. Phu, Ying Chen, David M. Rocke, and Abhaya M. Dandekar, "Transcriptome and Metabolome Analysis of Citrus Fruit to Elucidate Puffing Disorder," *Plant Science*, **217–218**, 87–98.

2013 Christine Mall, David M. Rocke, Blythe Durbin-Johnson, and Robert H. Weiss "Stability of miRNA in Human Urine Supports its Biomarker Potential," *Biomarkers in Medicine*, **7**, 623–631.

2013 Robert H. Rice, Katie M. Bradshaw, Blythe P. Durbin-Johnson, David M. Rocke, Richard A. Eigenheer, Brett S. Phinney, Matthias Schmuth, and Robert Gruber, "Distinguishing Ichthyoses by Protein Profiling," *PLOS ONE*, **8**, e75355.

2013 Daniel N. Stewart, Jozsef Lango, Krishnan P. Nambiar, Miranda J. S. Falso, Paul G. FitzGerald, David M. Rocke, Bruce D. Hammock, and Bruce A. Buchholz, "Carbon Turnover in Water-Soluble Protein of the Adult Human Lens," *Molecular Vision*, **19**, 463–475.

2013 Robert H. Rice, Brett R. Winters, Blythe P. Durbin-Johnson, and David M. Rocke, "Chicken Corneocyte Cross-Linked Proteome," *Journal of Proteome Research*, (Cover Article), **12**, 771–776.

2012 Robert H. Rice, Katie M. Bradshaw, Blythe P. Durbin-Johnson, David M. Rocke, Richard A. Eigenheer, Brett S. Phinney, and John P. Sundberg, "Differentiating Inbred Mouse Strains from Each Other and those with Single Gene Mutations using Hair Proteomics," *PLOS ONE*, **7**, e51956.

2012 Joseph A. Kitterman, Jonathan B. Strober, Lixin Kan, David M. Rocke, Amanda Cali, Jeannie Peepo, Jennifer Snow, Patricia L. R. Delai, Rolf Morhart, Robert J. Pignolo, Eileen M. Shore, and Frederick S. Kaplan, "Neurological Symptoms in Individuals With Fibrodysplasia Ossificans Progressiva," *Journal of Neurology*, **259**, 2636–2643.

2012 Reem Yunis, Huguette Albrecht, Karen M. Kalanetra, Shiquan Wu, and David M. Rocke, "Genomic characterization of three dimensional skin model following exposure to ionizing radiation," *Journal of Radiation Research*, **53**, 860–875.

2012 Monika Ray, Reem Yunis, Xiucui Chen, and David Rocke, "Comparison of Low and High Dose Ionising Radiation using Topological Analysis of Gene Coexpression Networks," *BMC Genomics*, **13**:190.

2012 Heather M. Fritz, Kerry R. Buchholz, Xiucui Chen, Blythe Durbin-Johnson, David M. Rocke, Patricia A. Conrad, and John C. Boothroyd, "Transcriptomic analysis of Toxoplasma development reveals many novel functions and structures specific to sporozoites and oocysts," *PLOS ONE*, **7**, e29998.

2012 Huguette Albrecht, Blythe Durbin-Johnson, Reem Yunis, Karen M. Kalanetra, Shiquan Wu, Rachel Chen, Thomas S. Stevenson, and David M. Rocke, "Transcriptional response of ex vivo human skin to ionizing radiation: comparison between low and high dose effects," *Radiation Research*, **177**, 69–83.

2011 Kerry R. Buchholz, Heather Fritz, Xiucui Chen, Blythe Durbin-Johnson, David M. Rocke, David J. Ferguson, Patricia A. Conrad, and John C. Boothroyd, "Identification of Tissue Cyst Wall Components by Transcriptome Analysis of *In Vivo* and *In Vitro* *Toxoplasma gondii* Bradyzoites," *Eukaryotic Cell*, **10**, 1637–1647.

2011 Patrick S. Romano, James P. Marcin, Jian J. Dai, Xiaowei D. Yang, Richard L. Kravitz, David M. Rocke, Madan Dharmar, Zhongmin Li, "Impact of Public Reporting of Coronary Artery Bypass Graft Surgery Performance Data on Market Share, Mortality, and Patient Selection," *Medical Care*, **49**, 1118–1125.

2011 Alaa Afify, Stacey Tate, Blythe Durbin-Johnson, David Rocke, Thomas Konia, "Expression of CD44s and CD44v6 in Lung Cancer and Their Correlation with Prognostic Factor," *International Journal of Biological Markers*, **26**, 50–57.

2010 Jill L. Maron, Kirby L. Johnson, David M. Rocke, Michael Cohen, and Diana W. Bianchi, "Neonatal Salivary Analysis Reveals Global Gene Expression Changes in the Developing Premature Infant," *Clinical Chemistry*, **56**, 409–416.

2010 Frederick S. Kaplan, Michael A. Zasloff, Joseph A. Kitterman, Eileen M. Shore, Charles C. Hong, and David M. Rocke, "Early Mortality and Cardiorespiratory Failure in Patients With Fibrodysplasia Ossificans Progressiva," *Journal of Bone and Joint Surgery*, **92**, 686–691.

2010 Ying Chen, Rebecca Wu, James Felton, David M. Rocke, and Anu Chakicherla, "A Method to Detect Differential Gene Expression in Cross-Species Hybridization Experiments at Gene and Probe Level," *Biomedical Informatics Insights*, **3**, 1–10.

2010 Donald A. Barkauskas and David M. Rocke, "A General-Purpose Baseline Estimation Algorithm for Spectroscopic Data, *Analytica Chimica Acta*, **657**, 191–197.

2009 Baoqing Li, Dan Li, Derick H. Lau, D. Gregory Farwell, Quang Luu, David M. Rocke, Kathleen Newman, Jean Courquin, James A. Purdy, and Allen M. Chen, "Clinical-Dosimetric Analysis of Measures of Dysphagia including Gastrostomy-Tube Dependence among Head and Neck Cancer Patients Treated Definitively by Intensity-Modulated Radiotherapy with Concurrent Chemotherapy," *Radiation Oncology*, **4**:52.

2009 Gilles Clermont, Charles Auffray, Yves Moreau, David M. Rocke, Daniel Dalevi, Devdatt Dubhashi, Dana Marshall, Peter Raasch, Frank Dehne, Paolo Provero, Jesper Tegner, Bruce J. Aronow, Michael A. Langston, and Mikael Benson, "Bridging the Gap Between Systems Biology and Medicine," *Genome Medicine*, **1**:88.

2009 Federico Martinelli, Sandra L. Uratsu, Russell L. Reagan, Ying Chen, David Tricoli, Oliver Fiehn, David M. Rocke, Charles S. Gasser and Abhaya M. Dandekar, "Gene Regulation in Parthenocarpic Tomato Fruit," *Journal of Experimental Botany*, **60**, 3873–3890.

2009 Robert H. Rice, David M. Rocke, Hua-Sheng Tsai, Young Jin Lee, and John P. Sundberg, "Distinguishing Mouse Strains by Proteomic Analysis of Pelage Hair," *Journal of Investigative Dermatology*, **129**, 2120–2125.

2009 Cameron A. Wheeler, Seyed R. Jafarzadeh, David M. Rocke, and Alan J. Grodzinsky, "IGF-1 Does Not Moderate The Time-Dependent Transcriptional Patterns of Key Homeostatic Genes Induced By Sustained Compression Of Bovine Cartilage," *Osteoarthritis and Cartilage*, **17**, 944–952.

2009 Donald A. Barkauskas, Scott Kronewitter, Carlito B. Lebrilla, and David M. Rocke, "Analysis of MALDI FT-ICR Mass Spectrometry Data: a Time Series Approach," *Analytica Chimica Acta*, **648**, 207–214.

2009 Susanne R. Berglund, Alison Santana, Dan Li, Robert H. Rice, David M. Rocke, and Zelanna Goldberg, "Proteomic Analysis of Low Dose Arsenic and Ionizing Radiation Exposure on Keratinocytes," *Proteomics*, **9**, 1925–1938.

2009 Blythe A. Corbett, Laura J. Constantine, Robert Hendren, David Rocke, Sally Ozonoff, "Executive Functioning in Children with Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder and Typical Development," *Psychiatry Research*, **166**, 210–222.

2009 David M. Rocke, Trey Ideker, Olga Troyanskaya, John Quackenbush, and Joaquin Dopazo, "Papers on Normalization, Variable Selection, Classification, or Clustering of Microarray Data" (Editorial), *Bioinformatics*, **25**, 701–702.

2009 Donald A. Barkauskas, Hyun Joo An, Scott Kronewitter, Maria Lorna de Leoz, Susanne Miyamoto, Gary S. Leiserowitz, Carlito B. Lebrilla, and David M. Rocke, "Detecting Glycan Cancer Biomarkers using MALDI FT-ICR mass spectrometry data," *Bioinformatics*, **25**, 251–257.

2009 Raja K. Sivamani, Christine E. Pullar, Catherine G. Manabat-Hidalgo, David M. Rocke, Richard C. Carlsen, David G. Greenhalgh, R. Rivkah Isseroff, "Stress mediated increases in systemic and local epinephrine impair skin wound healing: potential new indication for beta blockers," *PLOS Medicine*, **6**(1): e1000012.

2008 Zhongmin Li, Richard L. Kravitz, James P. Marcin, Patrick S. Romano, David M. Rocke, Timothy A. Denton, Ralph G. Brindis, Jian Dai, and Ezra A. Amsterdam, "Survival Enhancing Indications for Coronary Artery Bypass Graft Surgery in California," *BMC Health Services Research*, **8**:257.

2008 Ki-Hong Jung, Christopher Dardick, Laura E. Bartley, Peijian Cao, Jirapa Phetsom, Patrick Canlas, Young-Su Seo, Michael Shultz, Shu Ouyang, Qiaoping Yuan, Bryan C. Frank, Eugene Ly, Li Zheng, Yi Jia, An-Ping Hsia, Kyungsook An, H. H. Chou, David Rocke, Geun Cheol Lee, Patrick S. Schnable, Gynheung An, C. Robin Buell, and Pamela C. Ronald, "Refinement of Light-responsive Candidate Genes using Rice Oligonucleotide Arrays: Evaluation of Gene-redundancy," *PLOS ONE* **3**(10): e3337.

2008 Yuanxin Xi and David M. Rocke, "Baseline Correction for NMR Spectroscopic Metabolomics Data Analysis," *BMC Bioinformatics*, **9**:324.

2008 Ruixiao Lu, Geun-Cheol Lee, Michael Shultz, Chris Dardick, Kihong Jung, Jirapa Phetsom, Yi Jia, Robert H. Rice, Zelanna Goldberg, Patrick S. Schnable, Pamela Ronald and David M. Rocke, "Assessing Probe-Specific Dye and Slide Biases in Two-Color Microarray Data," *BMC Bioinformatics*, **9**:314.

2008 Marike Zwienenberg-Lee, Jonathan Hartman, Nancy Rudisill, Lori Kennedy Madden, Karen Smith, Joseph Eskridge, David Newell, Bon Verweij, M. Ross Bullock, Andrew Baker, William Coplin, Robert Mericle, Jian Dai, David Rocke, J. Paul Muizelaar, "Effect of Prophylactic Transluminal Balloon Angioplasty on cerebral vasospasm and outcome in patients with Fisher Grade III subarachnoid hemorrhage—Results of a phase II multicenter, randomized, clinical trial," *Stroke*, **39**, 1759–1765.

2008 James P. Marcin, Zhongmin Li, Richard L. Kravitz, Jian J. Dai, David M. Rocke, and Patrick S. Romano, "The CABG Surgery Volume-Outcome Relationship: Temporal Trends and Selection Effects in California, 1998-2004," *Health Services Research*, **43**, 174–192.

2008 Susanne R. Berglund, David M. Rocke, Jian Dai, Chad W. Schwietert, Alison Santana, Robin L. Stern, Joerg Lehmann, Christine L. Hartmann Siantar, and Zelanna Goldberg, "Transient Genome-Wide Transcriptional Response to Low-Dose Ionizing Radiation In-Vivo in Humans," *International Journal of Radiation Oncology, Biology, Physics*, **70**, 229–234.

2007 Jingjing Ye, Hao Liu, Crystal Kirmiz, Carlito B. Lebrilla, and David M. Rocke, "On the Analysis of Glycomics Mass Spectrometry Data via the Regularized Area under the ROC Curve," *BMC Bioinformatics*, **8**:477.

2007 Blythe A. Corbett, Aaron B. Kantor, Howard Shulman, Wynn L. Walker, Lisa Lit, Paul Ashwood, David M. Rocke, and Frank R. Sharp, "A Proteomic Study of Serum from Children with Autism Showing Differential Expression of Apolipoproteins and Complement Proteins," *Molecular Psychiatry*, **12**, 292–306.

2006 J Bruce German, Floyd L Schanbacher, Bo Lönnerdal, Juan F Medrano, Mark A McGuire, James L McManaman, David M Rocke, Timothy P Smith, Margaret C Neville, Paul Donnelly, Matthew Lange, and Robert Ward, "International Milk Genomics Consortium," *Trends in Food Science and Technology*, **17**, 656–661.

2006 Miguel A. Rea, Lei Zhou, Qin Qin, Yann Barrandon, Karen Easley, Sarah Gungner, Marjorie A. Phillips, William S. Holland, Paul H. Gumerlock, David M Rocke, and Robert H. Rice, "Spontaneous Immortalization of Human Epidermal cells with Naturally Elevated Telomerase," *Journal of Investigative Dermatology*, **126**, 2507–2515.

2006 Hyun Joo An, John S. Tillinghast, David L. Woodruff, David M. Rocke, and Carlito B. Lebrilla, "A New Computer Program (GlycoX) to determine simultaneously the Glycosylation Sites and Oligosaccharide Heterogeneity of Glycoproteins," *Journal of Proteome Research*, **5**, 2800–2808.

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2006 Jian J. Dai, Linh H. Lieu, and David M. Rocke, "Dimension Reduction for Classification with Gene Expression Microarray Data," *Statistical Applications in Genetics and Molecular Biology*, **5(1)**, Article 6.

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RECENT PRESENTATIONS

2019 David M. Rocke, "Challenges in Experimental Design and Data Analysis for Biomarkers in Precision Medicine," Invited Presentation, Berlin Institute of Health (Charité, Humboldt University, and Freie Universität, Berlin), May.

2018 David M. Rocke, "Challenges in Experimental Design and Data Analysis for Biomarkers in Precision Medicine," Invited Presentation, Radiology Grand Rounds, UC Davis, October.

2017 David M. Rocke, "Excess False Positives in Negative-Binomial Based Analysis of Data from RNA-Seq Experiments," Invited Presentation, McGill University, Montreal, October.

2016 David M. Rocke, "Excess False Positives in Negative-Binomial Based Analysis of Data from RNA-Seq Experiments," Presentation, *Joint Statistics Meeting*, Chicago, August.

2016 David M. Rocke, "Challenges in Experimental Design and Data Analysis for Modern Biological Data," Invited Presentation, *Society for the Study of Reproduction Annual Meeting*, San Diego, July.

2016 David M. Rocke, "Excess False Positives in Negative-Binomial Based Analysis of Data from RNA-Seq Experiments," Presentation, *International Biometric Conference*, Victoria, BC, July.

2016 David M. Rocke, "Excess False Positives in Negative-Binomial Based Analysis of Data from RNA-Seq Experiments," Invited Presentation, University of Virginia, Charlottesville VA, March.

2015 David M. Rocke, "Statistical Issues in the Analysis of Data from RNA-Seq Experiments," Presentation, *Joint Statistics Meeting*, Seattle, August.

2015 David M. Rocke, "Statistical Issues in the Analysis of Data from RNA-Seq Experiments," Invited Presentation, UCSD, February.

2014 David M. Rocke, "Statistical Issues in the Analysis of Data from RNA-Seq Experiments," Invited Presentation, *UC Davis Genome Center Structure and Function Focus Group*, December.

2014 David M. Rocke, "Statistical Issues in the Analysis of Data from RNA-Seq Experiments," Invited Presentation, *UC Davis Biostatistics Seminar Series*, October.

2014 David M. Rocke, "Analysis of RNA-Seq Data: Issues and Guidelines," *International Biometric Society WNAR Annual Meeting*, University of Hawaii, Manoa, July.

2014 David M. Rocke, "Statistical considerations and validation of bioinformatics procedures," Invited Presentation, *RQR Bioinformatics Workshop*, University of Montreal, Montreal, Canada, April.

2014 David M. Rocke, "Challenges in Experimental Design and Data Analysis for High-Throughput Omics Assay Data," Invited Presentation, University of California, Berkeley, April.

2012 David M. Rocke, "Multivariate Extensions of Univariate Methods," Invited Presentation, *UC Davis workshop on Multivariate Analysis in Bioinformatics*, August.

2011 David M. Rocke, "Serum Glycan Biomarkers for Diagnosis and Prognosis," Invited Presentation, *ASA Statistical Genomics Genetics and Proteomics Symposium*, CSU East Bay, May

2011 Huguette Albrecht, Saipiroon Maksareekul, Blythe Durbin-Johnson, Karen M. Kalanetra and David M. Rocke, "Inter-individual variations in the human transcriptome following in vivo exposure to low dose ionizing radiation," Poster Presentation, *DOE Low-Dose Radiation Symposium*, May.

2010 David M. Rocke, "Serum Glycan Biomarkers for Diagnosis and Prognosis," Invited Presentation, *Biomarker Discovery Conference: BDC 2010*, Shoal Bay, NSW Australia, December

2010 David M. Rocke and R. Rivkah Isseroff, "Gene Expression Changes to Combined Injury from Burning and Radiation in an Ex-Vivo Human Skin Model," Invited Presentation, *NIAID Workshop on Medical Countermeasures and Animal Model Development for Radiation Induced Cutaneous Injury*, June.

2010 Huguette Albrecht, Reem Yunis, Karen K. Kalanetra, Saipiroon Maksareekul, Peter Nahm, Zelanna Goldberg and David M. Rocke, "Studies of transcriptional changes induced by low dose ionizing radiation in three human skin models," Poster Presentation, *DOE Low-Dose Radiation Symposium*, April.

2010 David M. Rocke, "Serum Glycan Biomarkers for Diagnosis and Prognosis," Invited Presentation, *Advances in Bioinformatics and Genomics Symposium*, Stanford, February.