

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–present.
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, 2006–2026, UC Davis Clinical and Translational Science Center, Biostatistics Director, Theodore Wun is PI.
National Institutes of Health/NIEHS, 2017–2022, Biomarkers of Exposure to Hazardous Substances, Biostatistics Core, Bruce Hammock is PI.
Department of Defense, 2018–2023, UC Davis-DGMC TBI Precision Medicine Network for Complex Trauma, Biostatistics Core Lead, Tina Palmieri and Frederick Meyers are PI's.
National Institutes of Health/NCI, 2018–2023, University of California Minority Patient-Derived Xenograft (PDX) Development and Trial Center (UCaMP) to Reduce Cancer Health Disparities. Biostatistics and Bioinformatics Core Lead, Chong-Xian Pan 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 2008–2022
W.J. Youden Award in Interlaboratory Testing Committee, 2016–2021, Chair 2021
Association of Clinical and Translational Statisticians
Treasurer and Board of Directors 2014–2025
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 (WJAR)
WJAR Regional Advisory Board 2020–2022
President Elect 2024, President 2025, Past President 2026
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 and Business Development Committee 2002–present
Publications Committee 2020–present
ISMB/ECCB program 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 2001–, Chair 10/2020–12/2020)
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

Academic Senate Committee on Research, 2021–2024
School of Medicine Committee on Rules, Jurisdiction and Organization, 2015–2018, 2020–2022
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

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*, 2005–2011
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, 2011–2023.
FDA Cellular, Tissue and Gene Therapies Advisory Committee consultant, 2008–2018.
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 = 67; i10 index = 165; 19,212 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. Roche, *Optimal Imperfection? Domestic Uncertainty and Institutions in International Relations*, Princeton: Princeton University Press.
1990 George W. Downs and David M. Roche, *Tacit Bargaining, Arms Races, and Arms Control*, Ann Arbor: University of Michigan Press.

ARTICLES AND PAPERS

- 2024 Katrina Abuabara, Benjamin Stroebel, Shreya Sreekantaswamy, Richard Wonjoong Kim, Linda Zukley, Noreen Karim, Robert H. Rice, Blythe Durbin-Johnson, David Roche, and Theodora Mauro, “Demographic Factors Predictive of Skin Barrier Function in a Large Population-Based Study,” submitted for publication.
2024 Harrison Shawa, Ramanjot Kaur, Catherine Tchanque-Fossuo, Hadar Lev-Tov, Kaitlyn West, Nuen Yang, Chin-Hasng Li, David M. Roche, Sara Dahle, R. Rivkah Isseroff, “Cellular vs. Acellular Matrix Products for Diabetic Foot Ulcer Treatment (DOLCE): A Randomized, Single-Blinded, Non-Inferiority Trial,” submitted for publication.
2024 Lauren N. Lopez, Blythe Durbin-Johnson, Chenoa R. Vargas, John Ruzinski, Anne Goodling, Rajnish Mehrotra, Tomas Vaisar, David M. Roche, and Maryam Afkarian, “Comparative analysis of protein quantification by the SomaScan assay versus orthogonal methods in urine from people with diabetic kidney disease,” *Journal of Proteome Research*, **23**, 2598-2607.

- 2024 Noreen Karim, Yatian Yang, Michelle Salemi, Brett Phinney, Blythe Durbin-Johnson, David M. Rocke, Robert H. Rice, "Human Keratinocyte Responses to Woodsmoke Chemicals." *Chemical Research in Toxicology*, <https://doi.org/10.1021/acs.chemrestox.3c00353>.
- 2024 Lo-Wei Lin, Blythe P. Durbin-Johnson, David M. Rocke, Michelle Salemi, Brett S. Phinney, and Robert H. Rice, "Environmental Pro-Oxidants Induce Altered Envelope Protein Profiles in Human Keratinocytes," *Toxicological Sciences*, **197(1)**, 16–26.
- 2023 Peter A. Sariano, Rachel R. Mizenko, Venkatesh S. Shirure, Abigail Brandt, Bryan B. Nguyen, Cem Nesiri, Bhupinder Shergill, Terza Brostoff, David M. Rocke, Alexander D. Borowsky, Randy P. Carney, and Steven C. George, "Convection and Extracellular Matrix Binding Control Interstitial Transport of Extracellular Vesicles," *Journal of Extracellular Vesicles*, **12(4)**, <https://doi.org/10.1002/jev2.12323>.
- 2023 Noreen Karim, Paradi Mirmirani, Blythe P. Durbin-Johnson, David M. Rocke, Michelle Salemi, Brett S. Phinney, Robert H. Rice, "Protein Profiling of Forehead Epidermal Corneocytes Distinguishes Frontal Fibrosing from Androgenetic Alopecia," *PLoS ONE*, **18(3)**: March, e0283619. <https://doi.org/10.1371/journal.pone.0283619>.
- 2022 John P. Sundberg, Hannah Galantino-Homer, Heather Fairfield, Pat Ward-Bailey, Belinda Harris, Melissa Berry, C. Herbert Pratt, Nicholas Gott, Lesley Bechtold, Pauline R. Kaplan, Blythe P. Durbin-Johnson, David M. Rocke, and Robert H. Rice, "Witch Nails (Krt90^{whnl}): A spontaneous mouse mutation affecting nail growth and development," *PLoS ONE*, <https://doi.org/10.1371/journal.pone.0277284>.
- 2021 John T. Halloran and David M. Rocke, "GPU-Accelerated Primal Learning for Extremely Fast Large-Scale Classification," *Advances in Neural Information Processing Systems* **33**, 5945-5956.
- 2021 Noreen Karim, Tempest J. Plott, Blythe P. Durbin-Johnson, David M. Rocke, Michelle Salemi, Brett S. Phinney, Zachary C. Goecker, Marc J. M. Pieterse, Glendon J. Parker, and Robert H. Rice, "Elucidation of Familial Relationships Using Hair Shaft Proteomics," *Forensic Science International: Genetics*, **54**, Article Number 102564.
- 2021 Frederick S. Kaplan, David T. Teachey, Jeffrey R. Andolina, David M. Siegel, Edna E. Mancilla, Edward C. Hsiao, Mona Al Mukaddam, David M. Rocke, and Robert Pignolo, "Off-On-Off-On Use of Imatinib in Three Children with Fibrodysplasia Ossificans Progressiva," *Bone*, **150**, Article Number 116016.
- 2021 Glendon J. Parker, Tammy Buonasera, Julia M. Yip, Jelmer W. Eerkens, Michelle Salemi, Blythe Durbin-Johnson, Randall Haas, Jane E. Buikstra, Haagen Klaus, David M. Rocke, and Brett Phinney, "AMELY deletion is not detected in systematically sampled reference populations: A Reply to Štampfelj," *Journal of Archaeological Science*, **130**, Article Number 105354.
- 2020 Tempest J. Plott, Noreen Karim, Blythe P. Durbin-Johnson, Dionne P. Swift, R. Scott Youngquist, Michelle Salemi, Brett S. Phinney, David M. Rocke, Michael G. Davis, Glendon J. Parker, and Robert H. Rice, "Age-Related Changes in Hair Shaft Protein Profiling and Genetically Variant Peptides," *Forensic Science International: Genetics*, **47**, Article Number 102309.
- 2020 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," *Stroke*, **51**, 1624–1628.
- 2020 Marjorie A. Phillips, Angela Cánovas, Miguel A. Rea, Alma Islas-Trejo, Juan F. Medrano, Blythe Durbin-Johnson, David M. Rocke, and Robert H. Rice, "Deducing Signaling Pathways from Parallel Actions of Arsenite and Antimonite in Human Epidermal Keratinocytes," *Scientific Reports*, **10**, Article Number 2890.
- 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 John T. Halloran and David M. Rocke, “Gradients of Generative Models for Improved Discriminative Analysis of Tandem Mass Spectra,” *arXiv:1909.02093*.
- 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. Eerikens, 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,” *Advances in Neural Information Processing Systems*, **31** (NeurIPS 2018).
- 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 Maksiarekul, 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,” *Advances in Neural Information Processing Systems*, **30** (NIPS 2017).
- 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 Sidika 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/bmjdr-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 Liljeström, 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 David M. Rocke, Luyao Ruan, Yilun Zhang, J. Jared Gossett, Blythe Durbin-Johnson, and Sharon Aviran, "Excess False Positive Rates in Methods for Differential Gene Expression Analysis using RNA-Seq Data," *BioRxiv* 020784, 018739.
- 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 Nolte, 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 Peeper, 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. Roche, "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. Roche, 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. Roche, "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. Roche, 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. Roche, 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. Roche, 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. Roche, 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. Roche, 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.
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RECENT PRESENTATIONS

- 2024 David M. Rocke, “Biomarkers in Precision Medicine,” Graduate Group in Biostatistics Seminar Series, UC Davis, February.
- 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. Roche, “Statistical Issues in the Analysis of Data from RNA-Seq Experiments,” Presentation, *Joint Statistics Meeting*, Seattle, August.
- 2015 David M. Roche, “Statistical Issues in the Analysis of Data from RNA-Seq Experiments,” Invited Presentation, UCSD, February.
- 2014 David M. Roche, “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. Roche, “Statistical Issues in the Analysis of Data from RNA-Seq Experiments,” Invited Presentation, *UC Davis Biostatistics Seminar Series*, October.
- 2014 David M. Roche, “Analysis of RNA-Seq Data: Issues and Guidelines,” *International Biometric Society WNAAR Annual Meeting*, University of Hawaii, Manoa, July.
- 2014 David M. Roche, “Statistical considerations and validation of bioinformatics procedures,” Invited Presentation, *RQR Bioinformatics Workshop*, University of Montreal, Montreal, Canada, April.
- 2014 David M. Roche, “Challenges in Experimental Design and Data Analysis for High-Throughput Omics Assay Data,” Invited Presentation, University of California, Berkeley, April.
- 2012 David M. Roche, “Multivariate Extensions of Univariate Methods,” Invited Presentation, *UC Davis workshop on Multivariate Analysis in Bioinformatics*, August.
- 2011 David M. Roche, “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. Roche, “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. Roche, “Serum Glycan Biomarkers for Diagnosis and Prognosis,” Invited Presentation, *Biomarker Discovery Conference: BDC 2010*, Shoal Bay, NSW Australia, December.
- 2010 David M. Roche 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. Roche, “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. Roche, “Serum Glycan Biomarkers for Diagnosis and Prognosis,” Invited Presentation, *Advances in Bioinformatics and Genomics Symposium*, Stanford, February.