



Exponent[®]
Engineering & Scientific Consulting

Jill E. Sackman, DVM, Ph.D., DACVS

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Professional Profile

Dr. Sackman brings experience as a surgeon, researcher, medical device industry executive and consultant. Her breadth and depth of expertise includes the pharmaceutical and medical device industries, healthcare delivery, payors, and veterinary medicine.

Dr. Sackman has worked with leading physicians and researchers around the world exploring solutions to major medical/surgical problems and translating these needs into cutting edge medical tools. She has designed and established data driven strategies for regulated medical device design and development in a variety of therapeutic areas as well as led global initiatives to develop economic and clinical value for leading medical device and pharmaceutical companies. She has worked with government officials and corporate coalitions to influence public policy regarding medical devices.

She has demonstrated capabilities in effectively leveraging breadth and depth of clinical, research, and management expertise derived from experience across academia, research, and business environments to developing new products, building relationships, managing diverse organizations, solving complex problems and creating value.

Dr. Sackman has extensive experience working cross functionally within the medical device, diagnostics and pharmaceutical industries to define successful preclinical, clinical and regulatory strategies for products across the therapeutic spectrum.

She has had primary leadership accountability for the design, development and successful implementation of GLP compliant research programs for major medical device companies.

She has been a key organizational leader in the design, development and implementation of GCP compliant standard operating procedures and processes; and has had direct accountability for GCP compliant clinical data analysis, statistical planning and study design.

She has led a global regulatory affairs organization responsible for 510k, IDE and PMA submissions. She has been directly engaged with FDA, USDA and AAALAC audits and developed effective continuous improvement metrics, processes and training programs for GLP and GCP programs.

Dr. Sackman has assisted pharmaceutical and medical device clients in global product portfolio review, rationalization and positioning and worked with payor and marketing teams accountable for developing new market development strategies to maximize ROI.

She has assisted clients in defining clinical and economic value implications for product development and commercial strategy on a global basis. She has also built robust, value-based commercial claims strategies aligned with global market needs.

At a time when profound change is reshaping the healthcare industry, Dr. Sackman has assisted major healthcare delivery organizations in developing new internal infrastructure, capabilities and quality processes needed to adapt successfully. She has also assisted them in managing physician alignment and build leadership, as she sets up organizations for success at the intersection of clinical and administrative concerns.

Prior to joining Exponent, Dr. Sackman spent 5 years on faculty at a major medical school, 12 years at one of Johnson & Johnson's medical device companies as head of preclinical research and development and global regulatory affairs, and 7 years as a senior consultant for a healthcare consulting firm where her clients included major healthcare delivery systems, insurance companies, and global medical device and pharmaceutical companies. While at Johnson and Johnson, she received one of the company's highest leadership awards and numerous product innovation awards. She also sat on the Johnson & Johnson corporate animal use and welfare executive committee. She most recently served as Senior Medical Director for Mars Pet Care's Blue Pearl Specialty hospitals in Michigan.

Academic Credentials & Professional Honors

Ph.D., Molecular and Cellular Biology, University of Tennessee, Knoxville,

DVM, Veterinary Medicine, Michigan State University, <p>with High Honors</p>,</p>

B.A., Biological Sciences, Oakland University, with High Honors,

Internship, Small Animal Medicine and Surgery, University of Pennsylvania, Philadelphia, PA

Residency, Small Animal Surgery, University of Tennessee, Knoxville, TN

Residency, Veterinary Behavior, Blue Pearl Veterinary Specialists, Michigan

Executive Management Certificate, Ross School of Business, University of Michigan, Ann Arbor, MI

Licenses and Certifications

Board Certified, Diplomate, American College of Veterinary Surgeons

Resident, American College of Veterinary Behaviorists

Microsurgical training and certification, Henry Ford Hospital, Detroit, MI

Veterinarian License, State of Michigan and State of Ohio

DEA license

Six Sigma - Black Belt

Academic Appointments

Adjunct Professor, Michigan State University 2017-present

Adjunct Professor, University of Tennessee 1997-1999

Assistant Professor, University of Tennessee 1992-1997

Prior Experience

Senior Medical Director, Blue Pearl Veterinary Specialists, Mars Pet Care, 2015-2017

Senior Consultant, Numerof and Associates, Inc., 2007-2015

Director, Global Regulatory Affairs, Ethicon Endo-Surgery, Johnson & Johnson, 2005-2007

Director, Preclinical Research and Development, Ethicon Endo-Surgery, Johnson & Johnson, 1999-2007

Principal Scientist, Ethicon Endo-Surgery, Johnson & Johnson, 1997-1999

Assistant Professor, Surgery, University of Tennessee, 1992-1997

Director, Vascular Research Laboratory, Department of Surgery, University of Tennessee, 1992-1997

Professional Affiliations

Adjunct Professor, Michigan State University

American College of Veterinary Surgeons (ACVS)

American College of Veterinary Behaviorists (ACVB)

American Heart Association (AHA)

American Society for Cell Biology

American Society for Gene Therapy

American Society of Quality Assurance (SQA)

American Veterinary Medical Association (AVMA)

Healthcare Business Women's Association (HBA)

Licensing Executives Society (LES)

National Academies of Practice (NAP) - invited membership

North American Vascular Biology Organization

Phi Kappa Phi

Phi Zeta

Adjunct Professor, University of Tennessee, Knoxville, TN

Patents

"Vacuum Actuated Tissue Lifting Device and Method", 1999 (Harper K, Fox W, Sackman JE).

Publications

Scientific Journals

Sackman JE, Adams WH, McGavin MD. X-ray computed tomography-aided diagnosis of nasal adenocarcinoma with extension to the skull and central nervous system in a dog. *Journal of the American Veterinary Medical Association*, 1989; 194:1073-1078.

Sackman JE, Gompf RE. Vagal induced arrhythmia in a Pekingese: ECG of the Month. *Journal of American Veterinary Medical Association* 1990; 196:1392-1393.

Sackman JE, Sims MH. Electromyographic evaluation of the external urethral sphincter during cystometry in the male cat. *The American Journal of Veterinary Research* 1990; 51:1237-1241.

Bright RM, Sackman JE, DeNovo RC, Toal RC. Hiatal hernia in the dog and cat: a retrospective study of 16 cases. *Journal of Small Animal Practice* 1990; 31:244-250.

Pardo AD, Hoskinson JJ, Sackman JE, Selcer RR. What's your diagnosis, neurology. *Prog Veterinary Neurol* 1990; 2:82.

Sackman JE, Sims MH, Krahwinkel DJ. Urodynamic evaluation of the male cat following maximal and minimal dissection perineal urethrostomy. *Veterinary Surgery* 1991; 20:55-60.

Sackman JE, Sims MH. Electromyographic evaluation of the external urethral sphincter during urethral pressure profilometry. *The American Journal of Veterinary Research* 1991; 52:314-316.

Sackman JE. Pain: Its perception and alleviation in dogs and cats Part I. The physiology of pain. *Compendium on Cont Ed for Prac Veterinarians* 1991; 13:71-79.

Sackman JE. Pain. Part II. Control of pain in animals. *Compendium on Cont Ed for Prac Veterinarians*, 1991; 13:181-193.

Sims MH, Sackman JE, McLean RA, Slaymaker C. Characteristics of oscillatory potentials in the electroretinogram of dark-adapted cats. *Prog in Vet & Comp Ophthalmology* 1991; (1) 3:177-185.

McCrackin MA, Harvey RC, Sackman JE, Paddleford RR. Butorphanol tartrate for partial reversal of oxymorphone-induced postoperative respiratory depression in the dog. *Veterinary Surgery* 1994; 23:67-74.

Sackman JE, Freeman MB, Petersen MG, Alleban Z, Niemeyer GP, Lothrop CD, Jr. Synthetic vascular grafts seeded with genetically modified endothelium in the dog: Evaluation of the effect of seeding technique and retroviral vector on cell persistence in vivo. *Cell Transplantation* 1995; 4:219-235.

Sackman JE, Daniel GB, Freeman MB, Lothrop CD, Jr. The use of radionuclide angiography to study blood flow through endothelial cell seeded extrathoracic bypass grafts in the dog. *Veterinary Radiology and Ultrasound* 1997; 38:150-155.

Sackman JE, Cezeaux JL, Reddick TT, Freeman MB, Stevens SL, Goldman MH. Evaluation of the effects of retroviral mediated gene transduction on endothelial adhesion to matrix proteins. *Tissue Engineering* 1996; 2:223-234.

Weatherford DA, Sackman JE, Reddick TT, Freeman MB, Stevens SL, Goldman MH. VEGF and heparin in a biologic glue promotes human aortic endothelial cell proliferation with aortic smooth muscle cell inhibition. *Surgery* 1996; 120:433-439.

Sackman JE, Wymore AM, Reddick TT, Freeman MB, Stevens SL, Goldman MH. Retroviral mediated gene transduction alters integrin expression in vascular endothelial cells. J Surg Res 1997; 69:45-50.

Reeves TR, Cezeaux JL, Sackman JE, Cassada DC, Freeman MB, Stevens SL, Goldman MH. Mechanical characteristics of lyophilized human saphenous vein valves. J Vasc Surg 1997; 26:823-828.

Kerstetter K, Sackman JE, Buchanan JW, Bright JM, Krahwinkel DJ, Bright RM, Lorinson D, Gompf RE. Short-term evaluation of circumferential mitral annuloplasty for correction of mitral valve regurgitation in dogs. Veterinary Surgery 1998; 27:216-223.

Business Publications

Rothenberg S, Sackman JE, Numerof RE. Animal health: Breaking out of the blockbuster model. Animal Pharm, World Animal Health and Nutrition News. No 652, January 2009.

Numerof RE, Abrams MA, Sackman JE, Ott W. Continuing medical education and healthcare: The impending crisis and new solutions (monograph), 2009.

Sackman JE. Numerof RE. Sunshine and transparency: Building positive industry-physician relationships (monograph), 2009.

Sackman JE. Abrams MA, Numerof RE Continuing Medical Education and Healthcare: The Impending Crisis (monograph), 2009.

Sackman JE. Follow the money...Where healthcare policy is headed: challenges lifesciences licensing executives must address. Licensing Executives (LES) Insights, 2010.

Sackman JE. Rothenberg S. 510(k) clearance: Change is in the wind. Marketing a New Process in MX: Medtech Executive, December 2011.

Sackman JE. Navigating emerging markets: Eastern Europe. BioPharm International February 2013.

Sackman JE. Real world data: Medical Device and Diagnostics Perspectives. Eye for Pharma, March 2013.

Sackman JE. Navigating emerging markets: Latin America. BioPharm International, April 2013.

Sackman JE. Navigating emerging markets: ASEAN. BioPharm International, June 2013.

Sackman JE. Navigating emerging markets: South Korea. BioPharm International, August 2013.

Sackman JE. Kuchenreuter, M. Changing payer perspectives on market access across Europe's G-5. Eye for Pharma, October 2013.

Numerof RE, Sackman JE. Economic and clinical value as marketing strategy: What payer changes mean for your business. Eye for Pharma, October 2013.

Sackman JE. Navigating emerging markets: Middle East and North Africa. BioPharm International, October 2013.

Sackman JE, Kuchenreuther M. Navigating emerging markets: Israel BioPharm International December 2013.

Sackman JE, Abrams MA, Numerof RE. The impact of the Affordable Care Act ("Obamacare") on innovation in biopharma. BioPharm International, January 2014.

Sackman JE, Citrin L How to address cost outliers. Healthcare Financing Management Association (HFMA) Magazine, March 2014.

Agarwal SJ, Delhougne GV, Citrin L, Sackman JE, Senagore AJ. The impact of minimally invasive surgery on complex DRG assignments. Managed Care, March 2014.

Sackman JE, Kuchnreuther M. Navigating emerging markets: India. BioPharm International, May 2014.

Sackman JE, Rothenberg S. Market access - Global challenges for oncology drugs. PM360, May 2014.

Sackman JE, Abrams MA. Population health 101. Hospitals & Health Networks (H&H) Magazine, July 2014.

Sackman JE, Buseman C. Payment reform: Essential elements for going at risk. Healthcare Financial Management Association (HFMA), October 2014.

Abstracts Presented and Published

Sackman JE, Sims MH, Krahwinkel DJ. A new technique for urodynamic evaluation of the male cat. American college of veterinary internal medicine. 7th Annual Veterinary Medicine Forum, San Diego, CA, May 1989. Proceeding of the Seventh Annual Veterinary Medical Forum 1989; 7:1030.

Sackman JE, Freeman MB, Lothrop CD. The use of genetically modified endothelium as a model for gene therapy in the dog. Keystone Symposium on Molecular and Cellular Biology: Gene Therapy. Copper Mountain, CO, March 1992. Abstracts Journal of Cellular Biochemistry 1992; Supplement 16F:43.

Sackman JE, Freeman MB, Alleban Z, Petersen MG, Niemeyer GP, Lothrop CD, Jr. Evaluation of genetically modified endothelial cells seeded on polytetrafluoroethylene vascular grafts. Veterinary Surgery October 1993; 22.

Sackman JE, Freeman MB, Alleban Z, Petersen MG, Niemeyer GP, Lothrop CD, Jr. Evaluation of genetically modified endothelial cells seeded on polytetrafluoroethylene vascular grafts. American Association of Academic Surgeons, Proceedings for the 27th Annual Meeting. Hershey, PA, November 1993.

Sackman JE, Cezeaux JL, Freeman MB. Evaluation of the effect of seeding substrate on the response to shear stress of retrovirally transduced vascular endothelial cells. Abstracts Annals of Biomedical Engineering 1994; 22(Supp 1)123.

Sackman JE, Cezeaux JL, Reddick TT, Freeman MB, Stevens SL, Goldman MH. Retroviral gene transfer alters vascular endothelial cell adhesion to matrix proteins under shear stress. Keystone Symposium on Tissue Engineering and Wound Healing, Taos, NM, January 23-29, 1996.

Weatherford DA, Sackman JE, Reddick TT, Freeman MB, Stevens SL, Goldman MH. Evaluation of the effect of VEGF and heparin in a biologic glue on human aortic endothelial cell and smooth muscle cell proliferation on synthetic vascular graft materials. Keystone Symposium on Tissue Engineering and Wound Healing, Taos, NM, January 23-29, 1996.

Weatherford DA, Sackman JE, Reddick TT, Freeman MB, Stevens SL, Goldman MH. VEGF and heparin in a biologic glue promotes selective human aortic endothelial cell proliferation and aortic smooth muscle cell inhibition. Proceedings of the Society of University Surgeons. Bethesda, MD, February 8-10, 1996.

Sackman JE, Cezeaux JL, Reddick TT, Freeman MB, Stevens SL, Goldman MH. The effect of retroviral gene transfer on endothelial cell adhesion and cell cycle kinetics. Experimental Biology (FASEB).

Washington, D.C., April 14-17, 1996.

Reddick TT, Sackman JE. The effect of retroviral gene transfer on fibronectin receptor expression in endothelial cells. South Central Flow Cytometry Association, Gatlinburg, TN, April 12, 1996.

Sackman JE, Wymore AM, Cezeaux JL, Reddick TT, Freeman MB, Stevens SL, Goldman MH. The effect of retroviral gene transfer on vascular endothelial cell adhesion and fibronectin receptor expression in vitro. Genomic Science Series Conference on Gene Therapy. Hilton Head, SC, May 9-12, 1996.

Weatherford DA, Sackman JE, Reddick TT, Freeman MB, Stevens SL, Goldman MH. The effect of gene transfer on human endothelial cell response to angiogenic growth factors in vitro. Genomic Science Series Conference on Gene Therapy, Hilton Head, SC, May 9-12, 1996.

Kerstetter KK, Sackman JE, Buchanan JW, Bright JM, Krahwinkel DJ, Bright RM, Lorinson D, Gompf RE. Hemodynamic evaluation of a surgical procedure for correction of mitral valve regurgitation in the dog. American College of Veterinary Surgeons 31th Annual Scientific Meeting, San Francisco, CA, November 3-5, 1996.

Sackman JE, Wymore AM, Reddick TT, Freeman MB, Stevens SL, Goldman MH. The effect of retroviral gene transfer on integrin subunit expression in canine and human endothelial cells. Association for Academic Surgery, Chicago, IL, November 1996.

Weatherford DA, Sackman JE, Reddick TT, Freeman MB, Stevens SL, Goldman MH. The effect of gene transfer on endothelial cell response to growth factors and expression of growth factor receptors. Association for Academic Surgery, Chicago, IL, November 1996.

Sackman JE, Morgan KR, Reddick TT, Cezeaux JL. The effect of retroviral gene transfer on endothelial cell adhesion to ePTFE. Keystone Symposium on Inflammation, Growth-Regulatory Molecules and Atherosclerosis, Keystone, CO, January 20-26, 1997.

Reddick TT, Sackman JE. Endothelium exhibits altered integrin receptor and focal adhesion kinase expression following retroviral gene transfer. Keystone Symposium on Inflammation, Growth-Regulatory Molecules and Atherosclerosis, Keystone, CO, January 20-26, 1997.

Cassada DC, Sackman JE, Reddick TT, Goldman MH. Human umbilical vein endothelial cells transduced with tPA gene upregulate ICAM-1 expression. Southern Vascular Association Annual Meeting, Del Coronado, CA, January 23-25, 1997.

Reeves TR, Cezeaux JL, Sackman JE, Goldman MH. Hemodynamic evaluation of lyophilized human saphenous vein valves. American Venous Forum, San Antonio, TX, Feb 21, 1997.

Gingras PH, Karwoski T, Martakos P, Weatherford DA, Sackman JE, Goldman MH. A preliminary study investigating the influence of graft structure on healing of endoluminal stented grafts. Society for Biomaterials, New Orleans, LA, April 30-May 3, 1997.

Weatherford DA, Sackman JE, Moulton R, Gingras PH, Goldman MH, Stevens SL. Graft structure influences the healing of endoluminal stented vascular grafts. Society for Vascular Surgery/North American Chapter International Society for Cardiovascular Surgery, Boston, MA, June 1997.

Weatherford DA, Moulton RT, Gingras PH, Sackman JE. Graft structure influences the healing of endoluminal stented vascular grafts. Society for Vascular Surgery/North American Chapter, International Society for Cardiovascular Surgery; World Congress, London, England, September, 1997.

Balew K, Cezeaux JL, Sackman JE. Cytoskeletal alignment to flow of genetically modified vascular endothelial cells. Biomedical Engineering Society, Cleveland, OH, October 1998.

Reddan JR, DeHart DJ, Sackman JE. Influence of extracellular matrix on the growth of cultured mammalian epithelial cells. Abstracts Twenty-first Annual Meeting American Society for Cell Biology. The Journal of Cell Biology 1981 Nov; 91.

Reddan JR, Dziedzic DC, McGee SJ, DeHart DJ, Sackman JE. Effect of extracellular matrix, laminin and fibronectin on the growth of cultured mammalian epithelial cells. Abstracts Twenty-second Annual Meeting American Society for Cell Biology. The Journal of Cell Biology 1982 Nov; 95.

Book Chapters

Sackman JE. Patient Pain Management. In McCurnin D.M. (Ed.), Clinical Textbook for Veterinary Technicians, 3rd Edition. Orlando: W.B. Saunders, 1994: 572-588.

Sackman JE. Decision Making in Fluid Therapy. In Gorman N. (Ed.), Canine Medicine and Therapeutics, 4th Edition. Oxford: Blackwell Science, 1998.

Sackman JE. Patient Pain Management. In McCurnin D.M. (Ed.), Clinical Textbook for Veterinary Technicians, 4th Edition. Orlando: W.B. Saunders, 1998: 572-588.

Krahwinkel DJ, Sackman JE. Surgical Correction of Pulmonic Stenosis. In Bojrab M.J. (Ed.), Current Techniques in Small Animal Surgery, 4th Edition Philadelphia: Lea and Febiger, 1998.

Kerstetter KK, Sackman JE. Basic Vascular Surgical Techniques. In Bojrab M.J. (Ed.), Current Techniques in Small Animal Surgery, 4th Edition Philadelphia: Lea and Febiger, 1998.

Sackman JE. Pain and its Management. Veterinary Clinics of North America, vol. 27, no. 6, 1997: 1487-1504.

Sackman JE. Patient Pain Management. In McCurnin D.M. (Ed.), Clinical Textbook for Veterinary Technicians, 5th Edition. Orlando: W.B. Saunders, 2001.

Sackman JE. Vascular Surgery. In Slatter D (Ed.), Textbook of Small Animal Surgery, Orlando: W.B. Saunders, 2001.

Sackman JE. Energy Sources and their Use in Surgery. In Johnston, S. (Ed.) Textbook of Small Animal Surgery, Orlando: W.B. Saunders, 2010.

Presentations (select)

Sackman JE, McCartney ME. Managing variation in cost and quality. American College of Healthcare Executives, Chicago, IL, 2015.

Sackman JE. Real world evidence for healthcare. Eye for Pharma, Boston, MA, 2013, 2014.

Sackman JE. Essence of accountable care. Healthcare Financial Management Association (HFMA), Louisville, KY, 2013.

Sackman JE. Leadership development in healthcare. Becker's Hospital Review, Chicago, IL, 2015.

Sackman JE. Transparency is coming - how to get ready now. Center for Healthcare Governance, Naples, FL, 2014.

Sackman JE. Payer, patient, physician, manufacturer, how to provide value. Centric Ultra Orphan Conference, St. Louis, MO, 2011.

Advisory Appointments

Advisory Board Biomedical Engineering Curriculum, Western New England College

Editorships & Editorial Review Boards

Veterinary Surgery, 1993-1996

Peer Reviewer

Journal of Managed Care

American Journal of Veterinary Research

Journal of the American Veterinary Medical Association

American Journal of Physiology

Veterinary Surgery