

UC Davis Medical Group Directory

Your guide to primary and specialty health-care providers



Patient information and
appointment assistance:

800-2-UCDAVIS
(800-282-3284)



Provider referral and
transfer assistance:

800-4-UCDAVIS
(800-482-3284)



UCDAVIS
MEDICAL GROUP

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UC Davis Medical Group offers nationally renowned primary care and specialty expertise based at UC Davis Medical Center and multiple medical offices across the greater Sacramento region. Medical group physicians, nurse practitioners and clinical nurse specialists emphasize wellness and prevention, apply the latest knowledge to solve health problems and offer access to promising clinical trials, newly proven therapies and advanced technologies when needed.

FOR PATIENTS

Find a UC Davis physician, nurse practitioner or clinical nurse specialist

Consumer Resource Center: **800-2-UCDAVIS (800-282-3284)**

- General information about available providers and services
- Assistance with appointments and referrals
- Information about accepted insurance plans

Established UC Davis patients can also use the MyChart web-based portal to communicate with their care teams, request certain appointments and refills, access medical records and more.

FOR HEALTH PROFESSIONALS

Outpatient referrals and provider phone consultations

UC Davis Physician Referral Center: **800-4-UCDAVIS (800-482-3284) Option #2** Monday | Friday, 8 a.m. to 5 p.m. Or online (non-urgent) requests via referrals.ucdavis.edu

- Information about availability of specialty services
- Coordination and status of referrals to specialty services
- Assistance for provider-to-provider phone consultations with specialists

Acute interfacility transfers and after-hours consultations

24/7 Transfer Center: **800-4-UCDAVIS (800-482-3284)**

- Round-the-clock, R.N.-led coordination of acute interfacility transfers
- After-hours coordination of emergent provider-to-provider telephone consultations for complex or unusual cases
- transfer requests evaluated based upon clinical urgency, availability of resources and other factors

Referring physicians can receive real-time access to test results and clinical information for their patients at UC Davis through the PhysicianConnect online electronic medical record.



Joseph F. Antognini, M.D.

Clinical Interests	Dr. Antognini's clinical interests include the mechanisms of anesthesia and factors that influence anesthetic requirements. His research focuses on the effects of selective delivery of anesthetics to the brain, anesthetic effects on the electroencephalogram and pain processing in the spinal cord.
Title	Director, Perioperative Services Professor
Specialty	Anesthesiology
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	Patient Support Services Building, 4150 V St. Suite 1200 Sacramento, CA 95817 Phone: 916-734-5028
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Southern California School of Medicine, Los Angeles, California, 1984 A.B., UC Berkeley, Berkeley, California, 1980
Internships	UC Davis Medical Center, Sacramento, California, 1984
Residency	UC Davis Medical Center, Sacramento, California, 1987
Professional Memberships	American Society of Anesthesiologists California Society of Anesthesiologists
Select Recent Publications	Antognini JF. Adventures in anesthetic mechanisms. <i>Anesthesiology</i> . 2012 Mar;116(3):701-4. Singh A, Antognini JF. Perioperative hypotension and myocardial ischemia: diagnostic and therapeutic approaches. <i>Ann Card Anaesth</i> . 2011 May-Aug;14(2):127-32. Singh A, Antognini JF. Perioperative pharmacology in elderly patients. <i>Curr Opin Anaesthesiol</i> . 2010 Aug;23(4):449-54. Tautz TJ, Urwyler A, Antognini JF, Riou B. Case scenario: Increased end-tidal carbon dioxide: a diagnostic dilemma. <i>Anesthesiology</i> . 2010 Feb;112(2):440-6. Talavera JA, Esser SK, Amzica F, Hill S, Antognini JF. Modeling the GABAergic action of etomidate on the thalamocortical system. <i>Anesth Analg</i> , 108(1): 160-7, 2009. Barter LS, Mark LO, Antognini JF. Proprioceptive function is more sensitive than motor function to



Joseph F. Antognini, M.D.

desflurane anesthesia. *Anesth Analg*, 108(3): 867-72, 2009.

Barter LS, Mark LO, Jinks SL, Carstens EE, Antognini JF. Immobilizing doses of halothane, isoflurane or propofol, do not preferentially depress noxious heat-evoked responses of rat lumbar dorsal horn neurons with ascending projections. *Anesth Analg*, 106(3): 985-90, 2009.

Jinks SL, Carstens E, Antognini JF. Nitrous oxide-induced analgesia does not influence nitrous oxide's immobilizing requirements. *Anesth Analg*. 2009 Oct;109(4):1111-6.

Jinks SL, Carstens E, Antognini JF. Nitrous oxide-induced analgesia does not influence nitrous oxide's immobilizing requirements. *Anesth Analg*, 109(4): 1111-6, 2009.

Judge O, Hill S, Antognini JF. Modeling the effects of midazolam on cortical and thalamic neurons. *Neurosci Lett*. 2009 Oct 23;464(2):135-9. Epub 2009 Aug 20.

Judge O, Hill S, Antognini JF. Modeling the effects of midazolam on cortical and thalamic neurons. *Neurosci Lett*, 464(2): 135-9, 2009.

Kungys G, Kim J, Jinks SL, Atherley RJ, Antognini JF. Propofol produces immobility via action in the ventral horn of the spinal cord by a GABAergic mechanism. *Anesth Analg*, 108(5): 1531-7, 2009.

Barter LS, Carstens EE, Jinks SL, Antognini JF. Rat dorsal horn nociceptive-specific neurons are more sensitive than wide dynamic range neurons to depression by immobilizing doses of volatile anesthetics: an effect partially reversed by the opioid receptor antagonist naloxone. *Anesth Analg*. 2009 Aug;109(2):641-7.

Barter LS, Carstens EE, Jinks SL, Antognini JF. Rat dorsal horn nociceptive-specific neurons are more sensitive than wide dynamic range neurons to depression by immobilizing doses of volatile anesthetics: an effect partially reversed by the opioid receptor antagonist naloxone. *Anesth Analg*, 109(2): 641-7, 2009.

Rivera R, Antognini, JF. Perioperative drug therapy in elderly patients. *Anesthesiology*, 110(5): 1176-81, 2009.

Shnayderman D, Laster MJ, Eger EI, Oh I, Zhang Y, Jinks SL, Antognini JF, Raines DE. Increases in spinal cerebrospinal fluid potassium concentration do not increase isoflurane minimum alveolar concentration in rats. *Anesth Analg*, 107(3): 879-84, 2008.

Yao A, Kim J, Atherley R, Jinks SL, Carstens E, Shargh S, Sulger A, Antognini JF. The effects of aromatic anesthetics on dorsal horn neuronal responses to noxious stimulation. *Anesth Analg*, 106(6): 1759-64, 2008.

Barter LS, Antognini JF. Kinetics and potency of halothane, isoflurane, and desflurane in the Northern Leopard frog *Rana pipiens*. *Vet Res Commun*, 32(5): 357-65, 2008.

Antognini JF, Atherley RJ, Dutton RC, Laster MJ, Eger EI, Carstens E. The excitatory and inhibitory



Joseph F. Antognini, M.D.

effects of nitrous oxide on spinal neuronal responses to noxious stimulation. *Anesth Analg*, 104(4): 829-35, 2007.

Antognini JF, Raines DE, Solt K, Barter LS, Atherley RJ, Bravo E, Laster MJ, Jankowska K, Eger EI. Hexafluorobenzene acts in the spinal cord, whereas o-difluorobenzene acts in both brain and spinal cord, to produce immobility. *Anesth Analg*, 104(4): 822-8, 2007.

Kim J, Atherley R, Werner DF, Homanics GE, Carstens E, Antognini JF. Isoflurane depression of spinal nociceptive processing and minimum alveolar anesthetic concentration are not attenuated in mice expressing isoflurane resistant gamma-aminobutyric acid type-A receptors. *Neurosci Lett*, 420(3): 209-12, 2007.

Barter LS, Mark LO, Smith AC, Antognini JF. Isoflurane Potency in the Northern Leopard Frog *Rana pipiens* is Similar to That in Mammalian Species and is Unaffected by Decerebration. *Vet Res Commun*, 31(6): 757-63, 2007.

Hemings, Jr. HC, Antognini JF. Do general anesthetics add up? *Anesthesiology*, 104(6):1120-1122, 2006.

Barter LS, Hawkins MG, Brosnan RJ, Antognini JF, Pypendop BH. Median effective dose of isoflurane, sevofurane and desflurane in green iguanas. *American Journal of Veterinary Medicine*, 67(3):392-397, 2006.

Leduc ML, Atherley R, Jinks SL, Antognini JF. Nitrous oxide depresses electroencephalographic responses to repetitive noxious stimulation in the rat. *British Journal of Anaesthesia*, 96(2):216-221, 2006.

Mitsuyo T, Antognini JF, Carstens E. Etomidate depresses lumbar dorsal horn neuronal responses to noxious thermal stimulation in rats. *Anesthesia and Analgesia*, 102(4):1169-1173, 2006.

Orth M, Bravo E, Barter L, Carstens E, Antognini JF. The differential effects of halothane and isoflurane on electroencephalographic responses to electrical microstimulation of the reticular formation. *Anesthesia and Analgesia*, 102(6):1709-1714, 2006.

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Christian Bohringer, M.B.B.S.

Philosophy of Care	Dr. Bohringer aims for competent care with good patient outcomes.
Clinical Interests	Dr. Bohringer has clinical interests in cardiac anesthesia, intraoperative echocardiography, vascular anesthesia and thoracic anesthesia.
Title	Associate Clinical Professor
Specialty	Anesthesiology, Anesthesiology - Cardiovascular and Thoracic
Department	Anesthesiology
Division	General Anesthesiology
Center/Program Affiliation	Cardiovascular Services
Address/Phone	UC Davis Medical Center, 2315 Stockton Blvd. Sacramento, CA 95817 Phone: 800-2-UCDAVIS (800-282-3284)
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.B.B.S., University of New South Wales, New South Wales, 1990
Internships	St. Vincent's Hospital, Sydney, 1990-1992
Residency	Gosford Hospital, Sydney, 1993-1994 John Hunter Hospital, Newcastle, 1994-1995 John Hunter Hospital/Mater Misericordiae Hospital, Newcastle, 1995-1997
Fellowships	John Hunter Hospital, Newcastle, 1997-1998 John Hunter Hospital, Newcastle, 1998-1999
Board Certifications	Board Certified, ICU and Anesthesia, Australia, 2000 National Board of Echocardiography, 2003
Professional Memberships	American Medical Association Australian College of Anaesthetists Australian College of Intensive Care Medicine California Society of Anesthesiologists
Select Recent Publications	2003 Beckmann U, Bohringer C, Carless R, Gillies OM, Runciman WB, Wu AW, Pronovost P. Evaluation of two methods for quality improvement in intensive care: Facilitated incident

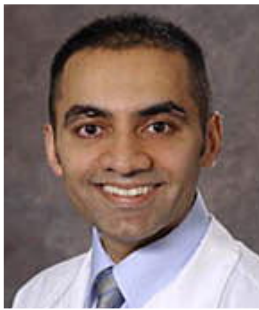
Christian Bohringer, M.B.B.S.

monitoring and retrospective medical chart review. *Critical Care Medicine*, 31(4):1006-11 & 1277.

2002 Eandi JA, de Vere White RW, Tunuguntla HSGR, Bohringer CH, Evans CP. Can single dose preoperative intrathecal morphine sulfate provide cost-effective postoperative analgesia and patient satisfaction during radical prostatectomy in the current era of cost containment? *Prostate Cancer and Prostatic Diseases*, 5:226-30.

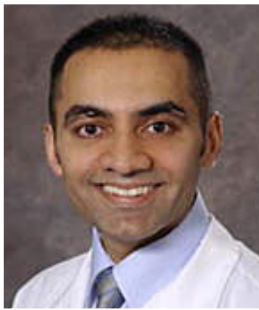
2000 Bohringer CH, JS Jahr, S Rowell and K Mayer. Severe hypotension in a patient receiving pemoline during general anesthesia, *Anesthesia and Analgesia*, 91:1131-3.

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Rajvinder Dhamrait, B.M., F.C.A.R.C.S.I., F.R.C.A.

Clinical Interests	Dr. Dhamrait is the Director of Pediatric Anesthesiology in the Department of Anesthesiology and Pain Medicine and is the Medical Director of the Children's Surgery Center. He completed 7 years of anesthesia training in the UK, including a fellowship in pediatric anesthesia, and joined the department in 2006. He administers anesthesia to neonatal and pediatric patients scheduled to undergo a wide variety of surgical and radiological procedures at UC Davis Children's Hospital, including complex congenital cardiac surgery. Dr. Dhamrait is active in the training of pediatric anesthesia fellows, anesthesiology and pediatric residents, and medical students, and is active in clinical research. Dr Dhamrait also provides anesthesia services for adult patients.
Title	Associate Professor Director, Pediatric Anesthesiology
Specialty	Anesthesiology - Cardiovascular and Thoracic, Pediatric Anesthesiology
Department	Anesthesiology
Division	Pediatric Anesthesiology
Center/Program Affiliation	UC Davis Children's Hospital
Address/Phone	UC Davis Children's Hospital, 2315 Stockton Blvd. Sacramento, CA 95617 Phone: 800-282-3284
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Languages	Punjabi
Education	B.M., University of Southampton, Southampton, Hampshire, 1994 B.Sc., University of Southampton, Southampton, Hampshire, 1994
Internships	University of Southampton, Southampton, Hampshire, 1994-1995
Residency	Portsmouth University Hospital, Portsmouth, Hampshire, 1995-1998 Portsmouth University Hospital, Portsmouth, Hampshire, 2000-2001 University of Southampton, Southampton, Hampshire, 1998-2000 University of Southampton, Southampton, Hampshire, 2001-2003
Fellowships	Great Ormond Street Hospital for Sick Children, London, England, 2003-2004



Rajvinder Dhamrait, B.M., F.C.A.R.C.S.I., F.R.C.A.

Board Certifications

College of Anaesthetists of the Royal College of Surgeons, Ireland , 2003
Diploma in Child Health, Royal College of Paediatrics and Child Health, UK, 2001
Royal College of Anaesthetists, UK, 2003

Professional Memberships

American Society of Anesthesiologists
California Society of Anesthesiologists
Congenital Cardiac Anesthesia Society
Royal College of Anaesthetists, UK
Society of Pediatric Anesthesiologists

Select Recent Publications

Dhamrait RS. Fasciotomy following intravenous fluid infiltration. *Pediatric Anesthesia*, 16(10): 1097, 2006.
Way C, Dhamrait R, Wade A, Walker I. Perioperative fluid therapy in children: A survey of current prescribing practice. *British Journal of Anaesthesia*, 97(3):371-9, 2006.
Dhamrait RS. Airway obstruction following potassium permanganate ingestion. *Anaesthesia*, 58: 606, 2003.
Dhamrait RS. Anaesthetic equipment – Familiarity is comforting, but check it. *Anaesthesia*, 58:482, 2003.
Dhamrait RS. Christmas trachys, *Anaesthesia*, 57:508, 2002.

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Michael J. Ferns, Ph.D.

Clinical Interests My clinical interest is in diseases of cholinergic neuromuscular and autonomic synapses, such as myasthenia gravis and congenital myasthenic syndrome. Our aim is to understand the pathological basis for these diseases at a molecular level and to define new therapeutic targets for the treatment of these disorders. My research interest is the cellular and molecular basis of synapse formation in the mammalian nervous system. Synapse formation is critical for the development, maintenance, and plasticity of the nervous system and perturbations in synaptic structure and function have been implicated in a range of neurological disorders. My research focuses on cholinergic neuromuscular and interneuronal synapses in the peripheral nervous system. Our main aims are (1) to define the extracellular synaptogenic factors that regulate the formation and maintenance of these synapses; (2) to define the intracellular protein interactions that regulate the localization and trafficking of nicotinic acetylcholine receptors (AChR) at these synapses; and (3) to establish how dysregulation of AChR localization contributes to diseases such as myasthenia gravis and congenital myasthenic syndrome.

Title Professor

Department Anesthesiology

Division Anesthesiology/Physiology

Education Ph.D., University of Western Australia, Perth, Crawley, 1988
B.Sc., University of Otago, Dunedin, 1983

Select Recent Publications Lee Y, Rudell J, Ferns M. Rapsyn interacts with the muscle acetylcholine receptor via alpha-helical domains in the alpha, beta, and epsilon subunit intracellular loops. *Neuroscience*. 2009 Sep 29; 163(1):222-32. Epub 2009 May 29.

Lee Y, Rudell J, Yechikhov S, Taylor R, Swope S, Ferns M. Rapsyn carboxyl terminal domains mediate muscle specific kinase-induced phosphorylation of the muscle acetylcholine receptor. *Neuroscience*. 2008 Jun 2;153(4):997-1007. Epub 2008 Mar 18.

Borges LS, Yechikhov S, Lee YI, Rudell JB, Friese MB, Burden SJ, Ferns MJ. Identification of a motif in the acetylcholine receptor beta subunit whose phosphorylation regulates rapsyn association and postsynaptic receptor localization. *J Neurosci*. 2008 Nov 5;28(45):11468-76.

Gingras J, Rassadi S, Cooper E, Ferns M. Synaptic transmission is impaired at neuronal autonomic synapses in agrin-null mice. *Dev Neurobiol*. 2007 Apr;67(5):521-34.

Kumar P, Ferns MJ, Meizel S. Identification of agrinSN isoform and muscle-specific receptor

Michael J. Ferns, Ph.D.

- tyrosine kinase in sperm. *Biochem and Biophys Res Comm*, 342:522-528.
- Gingras J, Spicer J, Altares M, Zhu Q, Kuchel GA, Ferns M. Agrin becomes concentrated at neuroeffector junctions in developing rodent urinary bladder. *Cell and Tissue Research*, 320:115-125.
- Moransard M, Borges LS, Willmann R, Marangi PA, Brenner HR, Ferns MJ, Fuhrer C. Agrin regulates rapsyn interaction with surface acetylcholine receptors, and this underlies cytoskeletal anchoring and clustering. *J Biol Chem*, 278(9):7350-9.
- Gingras J, Rassadi S, Cooper E, Ferns M. Agrin plays an organizing role in the formation of sympathetic synapses. *J Cell Biol*, 157(6):1109-1118.
- Borges LS, Lee Y, Ferns M. Dual role for calcium in agrin signaling and acetylcholine receptor clustering. *J Neurobiol*, 50(1):69-79.
- Ferns M, Carbonetto S. Challenging the neurocentric view of neuromuscular synapse formation. *Neuron*, 30:311-314.
- Gingras J, Ferns MJ. Expression and localization of agrin during sympathetic synapse formation in vitro. *J Neurobiol*, 48(3):228-242.
- Borges LS, Ferns M. Agrin-induced phosphorylation of the acetylcholine receptor regulates cytoskeletal anchoring and clustering. *J Cell Biol*, 153(1):1-11.
- Grow WA, Ferns M, Gordon H. A mechanism for acetylcholine receptor clustering distinct from agrin signaling. *Dev Neurosci*, 21:436-443.
- Grow WA, Ferns M, Gordon H. Agrin-independent activation of the agrin signal transduction pathway. *J Neurobiol*, 40:356-365.
- Gramolini AO, Burton EA, Tinsley JM, Ferns MJ, Cartaud A, Cartaud J, Davies KE, Lunde JA, Jasmin BJ. Muscle and neural isoforms of agrin increase utrophin expression in cultured myotubes via a transcriptional regulatory mechanism. *J Biol Chem*, 273(2):736-43.
- Jacobson C, Montanaro F, Lindenbaum M, Carbonetto S, Ferns MJ. Alpha-dystroglycan functions in acetylcholine receptor aggregation but is not a coreceptor for agrin=MuSK signaling. *J Neurosci*, 18(16):6340-6348.
- Wang ZZ, Fuhrer C, Shtrom S, Sugiyama JE, Ferns MJ, Hall ZW. The nicotinic acetylcholine receptor at the neuromuscular junction: assembly and tyrosine phosphorylation. *Cold Spring Harbor Symposia on Quantitative Biology, Function and Dysfunction in the Nervous System*, 61: 363-71.
- Ferns MJ, Deiner M, Hall Z. Agrin-induced acetylcholine receptor clustering in mammalian muscle requires tyrosine phosphorylation. *J Cell Biol*, 132(5):937-944.
- Bowen DC, Sugiyama J, Ferns M, Hall ZW. Neural agrin activates a high-affinity receptor in C2

Michael J. Ferns, Ph.D.

muscle cells that is unresponsive to muscle agrin. *J Neurosci*, 16(12):3791-3797.

Ferns MJ, Hollyday M. Chick wing innervation. III. Formation of axon collaterals in developing peripheral nerves. *J Comp Neurol*, 357(2):272-80.

Ferns MJ, Hollyday M. Motor innervation of dorsoventrally reversed wings in chick/ quail chimeric embryos. *J Neurosci*, 13(6):2463-76.

Ferns MJ, Campanelli JT, Hoch W, Scheller RH, Hall Z. The ability of agrin to cluster AChRs depends on alternative splicing and on cell surface proteoglycans. *Neuron*, 11(3):491-502.

Hoch W, Ferns M, Campanelli JT, Hall ZW, Scheller RH. Developmental regulation of highly active alternatively spliced forms of agrin. *Neuron*, 11(3):479-490.

Campanelli JT, Ferns MJ, Hoch W, Rupp F, von Zastrow M, Hall Z, Scheller RH. Agrin: a synaptic basal lamina protein that regulates development of the neuromuscular junction. *Cold Spring Harbor Symposia on Quantitative Biology*, LVII:461-472.

Ferns MJ, Hall ZW. How many agrins does it take to make a synapse? *Cell*, 70(1):1-3.

Ferns M, Hoch W, Campanelli JT, Rupp F, Hall ZW, Scheller RH. RNA splicing regulates agrin-mediated acetylcholine receptor clustering activity on cultured myotubes. *Neuron*, 8:1079-1086.

Lamb AH, Ferns MJ, Klose K. Peripheral competition in the control of sensory neuron numbers in *Xenopus* frogs reared with a single bilaterally innervated hindlimb. *Dev Brain Research*, 45(1):149-54.

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Scott Fishman, M.D.

Clinical Interests	Dr. Fishman is continuing his educational and research activities in chronic pain, cancer pain management, psychiatric issues of chronic illness and pain, neuropathic pain treatment strategies, and medical informatics.
Title	Chief of Pain Medicine Professor Vice Chair for Pain Medicine & Faculty Development
Specialty	Anesthesiology, Hospice and Palliative Medicine, Pain Medicine
Department	Anesthesiology
Division	Pain Medicine
Clinic	Pain Management Clinic
Center/Program Affiliation	UC Davis Medical Group
Address/Phone	Lawrence J. Ellison Ambulatory Care Center, 4860 Y St. Suite 2700 Sacramento, CA 95817 Phone: 916-734-7246 UC Davis Medical Group - Folsom, 1370 Prairie City Rd. Folsom, CA 95630 Phone: 916-985-9300
Additional Phone	Clinic Phone: 916-734-7246 Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Massachusetts Medical School, Worcester, Massachusetts, 1990 B.A., Hampshire College, Amherst, Massachusetts, 1981
Internships	Greenwich Hospital, Yale University, New Haven, Connecticut, 1992
Residency	Greenwich Hospital, Yale University, New Haven, Connecticut, 1992 Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, 1996
Fellowships	Massachusetts General Hospital, Harvard Medical School, Cambridge, Massachusetts, 1995
Board Certifications	American Board of Internal Medicine, 2005 American Board of Pain Medicine



Scott Fishman, M.D.

American Board of Psychiatry and Neurology, 2010

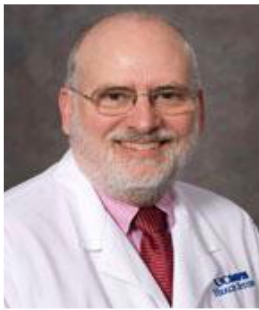
American Board of Psychiatry and Neurology, 2010

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Neal W. Fleming, M.D., Ph.D.

Clinical Interests	Dr. Fleming has clinical interests in cardiovascular monitoring. His research interests are in neuromuscular physiology and pharmacology.
Title	Director, Cardiovascular and Thoracic Anesthesia Professor of Clinical Anesthesia
Specialty	Anesthesiology, Anesthesiology - Cardiovascular and Thoracic
Department	Anesthesiology
Division	General Anesthesiology
Center/Program Affiliation	Cardiovascular Services
Address/Phone	UC Davis Medical Center, 2315 Stockton Blvd. Sacramento, CA 95817 Phone: 800-2-UCDAVIS (800-282-3284)
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Kansas School of Medicine, Kansas City, Kansas, 1981 Ph.D., Georgetown University, Washington, 1989 B.A., Grinnell College, Grinnell, Iowa, 1977
Residency	Georgetown University School of Medicine, Washington, District of Columbia, 1982-1985
Fellowships	Georgetown University School of Medicine, Washington, District of Columbia, 1985-1986
Board Certifications	American Board of Anesthesiology, 1986 National Board of Echocardiography, 2003 National Board of Medical Examiners, 1983
Professional Memberships	American Medical Association American Society of Anesthesiologists Association of Anesthesia Clinical Directors (1997-1999) California Society of Anesthesiologists International Anesthesia Research Society International Trauma Anesthesia and Critical Care Society Society of Cardiovascular Anesthesiologists



Neal W. Fleming, M.D., Ph.D.

Select Recent Publications

- Rose DD, Fleming NW, Kentner R. Goal-directed Therapies for Positive Patient Outcomes: Monitoring and Volume Replacement With 6% Hydroxyethyl Starch 130/0.4 in 0.9% Sodium Chloride for Injection. *Anesthesiology News*, (December) 30-31.
- Liu H, Konia MR, Li Z, Fleming NW. The Comparison of Stroke Volume Variation and Arterial Pressure Based Cardiac Output with Standard Hemodynamic Measurements during Cardiac Surgery. *The Internet Journal of Anesthesiology*. 2010 Volume 22 Number 2
- 2009 Kungys G, Rose O, Fleming NW. Stroke Volume Variation during Acute Normovolemic Hemodilution. *Anesth Analg*, Dec, 109(6):1823-30.
- 2007 Deyhimy OI, Fleming NW, Brodtkin IG, Liu H. Anesthetic preconditioning combined with postconditioning offers no additional benefit over preconditioning or postconditioning alone. *Anesth Analg*, 105(2):316-24.
- 2007 Lee HT, Hennig GW, Fleming NW, Keef KD, Spencer NJ, Ward SM, Sanders KM, Smith TK. Septal interstitial cells of Cajal conduct pacemaker activity to excite muscle bundles in human jejunum. *Gastroenterology*, 133:907-17.
- 2007 Lee HT, Hennig GW, Fleming NW, Keef KD, Spencer NJ, Ward SM, Sanders KM, Smith TK. The mechanism and spread of pacemaker activity through myenteric interstitial cells of Cajal in human small intestine. *Gastroenterology*, 132(5):1852-65.
- 2006 Choi H, Fleming NW, Serikov VB. Contact activation via ICAM-1 induces changes in airway epithelial permeability *in vitro*. *Immunol Invest*, 36(1):59-72.
- 2006 Ro S, Kang SH, Farrelly AM, Ordog T, Partain R, Fleming N, Sanders KM, Kenyon JL, Keef KD. Template switching within exons 3 and 4 of Kv11.1 (HERG) gives rise to a 5' truncated eDNA. *Biochemical and Biophysical Research Communications*, May (345):1342-9.
- 2004 Grow MP, Singh A, Fleming NW, Young N, Watnik M. Cardiac output monitoring during off-pump coronary artery bypass grafting. *J Cardiothorac Vase Anesth*, 18(1):43-6.
- 2004 Nguyen NT, Anderson JT, Budd M, Fleming NW, Ho HS, Jahr J, Stevens CM, Wolfe BM. Effects of pneumoperitoneum on intraoperative pulmonary mechanics and gas exchange during laparoscopic gastric bypass. *Surg Endosc*, 18(1):64-71.
- 2004 Serikov VB, Choi H, Schmiel K, Skaggs C, Fleming NW, Wu R, Widdicombe JH. Endotoxin induces leukocyte transmigration and changes in permeability of the airway epithelium via protein-kinase C and extracellular regulated kinase activation. *J Endotoxin Res*, 10(1):55-65.
- 2004 Serikov VB, Fleming NW, Talalov VA, Stawitcke FA. Effects of the ventilation pattern and pulmonary blood flow on lung heat transfer. *Eur J Appl Physiol*, 91:314-23.



Neal W. Fleming, M.D., Ph.D.

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Ken Furukawa, M.D.

Clinical Interests	Dr. Furukawa specializes in acute and chronic pain management, pediatric acute pain management and pediatric anesthesiology. His research interests include general anesthesia and respiratory infections, as well as acute pain control for skin grafting in burned children.
Title	Professor
Specialty	Anesthesiology, Pain Medicine
Department	Anesthesiology
Division	Pain Medicine
Center/Program Affiliation	Spine Center
Address/Phone	Lawrence J. Ellison Ambulatory Care Center, 4860 Y St. Suite 2700 Sacramento, CA 95817 Phone: 916-734-7246
	Cannery Building, Spine Center, 3301 C St. Suite 1500 Sacramento, CA 95816 Phone: 916-734-7463
Additional Phone	Clinic Phone: 916-734-7246 Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Texas Medical Branch at Galveston, Galveston, Texas, 1985 B.A., Pomona College, Claremont, California, 1981
Internships	The University of Texas Medical Branch, Galveston, Texas, 1986
Residency	The University of Texas Medical Branch, Galveston, Texas, 1987 Walter Reed Army Medical Center, Washington, D.C., 1992
Board Certifications	American Board of Anesthesiology, 1993 American Board of Anesthesiology, Pain Medicine, 1998
Professional Memberships	American Burn Association American Medical Association American Society of Anesthesiologists and California Society of Anesthesiologists American Society of Regional Anesthesia and Pain Medicine California Medical Board



Ken Furukawa, M.D.

Journal of Burn Care & Rehabilitation
Sierra Sacramento Valley Medical Society
Society for Pediatric Anesthesia

Honors and Awards

North Atlantic Treaty Organisation (NATO) Service Ribbon, 1999
Army National Defense Service Ribbon, 1991
Reserve Forces Service Ribbon, 1991
Army Achievement Medal, 1988
Distinguished Military Graduate, 1981
Reserve Officers Training Corporation (ROTC) Award, Pomona College, 1981

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Matthew Grow, M.D.

Clinical Interests	Matthew Grow provides general anesthesia to patients undergoing a wide range of surgical procedures. Additionally, Grow and three of his colleagues are part of the liver transplantation team at UC Davis Medical Center.
Title	Associate Professor
Specialty	Anesthesiology
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	Patient Support Services Building, 4150 V St. Suite 1200 Sacramento, CA 95817 Phone: 916-734-5028
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Nevada School of Medicine, Reno, Nevada, 1999 B.S., University of Nevada, Reno, Nevada, 1995
Internships	University of Nevada/VA Medical Center, Reno, Nevada, 1999-2000
Residency	University of California, Davis Medical Center, Sacramento, California, 2000-03
Board Certifications	American Board of Anesthesiology, 2003
Professional Memberships	American Society of Anesthesiology California Society of Anesthesiology
Select Recent Publications	Grow MP, A Singh, NW Fleming, N Young and M Watnik. Cardiac Output Monitoring During Off-Pump Coronary Artery Bypass Grafting. Journal of Cardiothoracic and Vascular Anesthesia, 18(1): 43-46, 2004.

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Virginia Harvey, M.D.

Clinical Interests	Virginia Harvey performs general anesthetic services, along with obstetrical and pediatric anesthesiology.
Title	Associate Professor
Specialty	Anesthesiology, Anesthesiology - Obstetric
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	Patient Support Services Building, 4150 V St. Suite 1200 Sacramento, CA 95817 Phone: 916-734-5028
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., Albany Medical College, Albany, New York, 1977 M.S., Boston College, Chestnut Hill, Massachusetts, 1973 B.A., Connecticut College, New London, Connecticut, 1969
Internships	University of California, Los Angeles, Los Angeles, California, 1977-78
Residency	University of California, Irvine, Irvine, California, 1980-82 University of California, Los Angeles, Los Angeles, California, 1978-80
Board Certifications	American Board of Anesthesiology, 1984
Professional Memberships	American Society of Anesthesiologists California Society of Anesthesiologists

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Steven Jinks, M.S., Ph.D.

Clinical Interests	Dr. Jinks' laboratory is funded by the NIH and the Department of Anesthesiology and Pain Medicine. His research interests include sites and mechanisms of general anesthetics, pain mechanisms and treatments, and basic spinal cord/brainstem neurophysiology relating to nociceptive sensorimotor and locomotor function. Dr. Jinks' laboratory investigates these processes using <i>in vivo</i> electrophysiology in rodents as well as <i>in vitro</i> neonatal rodent and lamprey cord preparations.
Title	Adjunct Assistant Professor
Department	Anesthesiology
Division	General Anesthesiology
Education	M.S., UC Davis, Davis, California, 1998 Ph.D., UC Davis, Davis, California, 2001 B.S., University of Rhode Island, Kingston, Rhode Island, 1994
Professional Memberships	American Association for the Advancement of Science Association of American Anesthesiologists Association of University Anesthesiologists International Association for the Study of Pain Society for Neuroscience
Honors and Awards	Loren D. Carlson Dissertation Prize in Physiology, University of California, Davis, 2001 Alpha Award for Undergraduate Research, University of Rhode Island, 1995
Select Recent Publications	Inceoglu B, Wagner K, Schebb NH, Morisseau C, Jinks SL, Ulu A, Hegedus C, Rose T, Brosnan R, Hammock BD. Analgesia mediated by soluble epoxide hydrolase inhibitors is dependent on cAMP. <i>Proc Natl Acad Sci U S A</i> . 2011 Mar 22;108(12):5093-7. Epub 2011 Mar 7. Jinks SL, Andrada J, Satter O. Anesthetic effects on fictive locomotion in the rat isolated spinal cord. <i>Neuroreport</i> . 2011 Sep 14;22(13):655-9. Jinks SL, Andrada J. Validation and insights of anesthetic action in an early vertebrate network: the isolated lamprey spinal cord. <i>Anesth Analg</i> . 2011 Nov;113(5):1033-42. Epub 2011 Jul 25. Carstens EE, Carstens MI, Simons CT, Jinks SL. Dorsal horn neurons expressing NK-1 receptors mediate scratching in rats. <i>Neuroreport</i> . 2010 Mar 10;21(4):303-8. Jinks SL, Bravo M, Satter O, Chan YM. Brainstem regions affecting minimum alveolar concentration and movement pattern during isoflurane anesthesia. <i>Anesthesiology</i> . 2010 Feb;112(2):316-24.

Steven Jinks, M.S., Ph.D.

- Morrisseau C, Inceoglu B, Schmelzer K, Tsai HJ, Jinks SL, Hegedus CM, Hammock BD. Naturally occurring monoepoxides of eicosapentaenoic acid and docosahexaenoic acid are bioactive antihyperalgesic lipids. *J Lipid Res*. 2010 Dec;51(12):3481-90. Epub 2010 Jul 27.
- Jinks SL, Carstens E, Antognini JF. Nitrous oxide-induced analgesia does not influence nitrous oxide's immobilizing requirements. *Anesth Analg*. 2009 Oct;109(4):1111-6.
- Inceoglu B, Jinks SL, Ulu A, Hegedus CM, Georgi K, Schmelzer KR, Wagner K, Jones PD, Morrisseau C, Hammock BD. Soluble epoxide hydrolase and epoxyeicosatrienoic acids modulate two distinct analgesic pathways. *Proc Natl Acad Sci U S A*. 2008 Dec 2;105(48):18901-6. Epub 2008 Nov 21.
- Jinks SL, Bravo M, Hayes SG. Volatile anesthetic effects on midbrain-elicited locomotion suggest that the locomotor network in the ventral spinal cord is the primary site for immobility. *Anesthesiology*. 2008 Jun;108(6):1016-24.
- Jinks SL, Carstens EE, Antognini JF. Glutamate receptor blockade in the rostral ventromedial medulla reduces the force of multisegmental motor responses to supramaximal noxious stimuli. *Neurosci Lett*. 2007 Oct 22;426(3):175-80. Epub 2007 Sep 4.
- Schmelzer KR, Inceoglu B, Kubala L, Kim IH, Jinks SL, Eiserich JP, Hammock BD. Enhancement of antinociception by coadministration of nonsteroidal anti-inflammatory drugs and soluble epoxide hydrolase inhibitors. *Proc Natl Acad Sci U S A*. 2006 Sep 12;103(37):13646-51. Epub 2006 Sep 1.

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Norma J. Klein, A.D., M.D.

Clinical Interests	Norma J. Klein has clinical and research interests in pediatric anesthesiology. Her research projects also focus on legalities in medicine. Klein has completed residency training in pediatrics, anesthesiology and pediatric anesthesiology. She also holds a nursing degree from Weber State College in Ogden, Utah.
Title	Associate Professor
Specialty	Anesthesiology, Pediatric Anesthesiology
Department	Anesthesiology
Division	Pediatric Anesthesiology
Center/Program Affiliation	UC Davis Children's Hospital
Address/Phone	UC Davis Children's Hospital, 2315 Stockton Blvd. Sacramento, CA 95617 Phone: 800-282-3284
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Utah School of Medicine, Salt Lake City, Utah, 1984 B.Sc., University of Utah, Salt Lake City, Utah, 1979
Residency	Children's Hospital of San Francisco, San Francisco, California, 1984-87 University of Michigan Hospitals, Ann Arbor, Michigan, 1988-90
Fellowships	University of Washington, Seattle, Washington, 1991-92
Board Certifications	American Board of Anesthesiology, 1992 American Board of Medical Examiners, 1985 American Board of Pediatrics, 1995
Professional Memberships	American Medical Association American Society of Anesthesiologists American Society of Law, Medicine and Ethics California Society of Anesthesiology Fellow, American Academy of Pediatrics Society for Pediatric Anesthesia

Norma J. Klein, A.D., M.D.

Honors and Awards University of Utah, School of Medicine, Pediatrics & Internal Medicine, 1984
University of Utah, Cum Laude, 1979
University of Utah, Phi Kappa Phi, 1977
Weber State College, WSC Honor Society, 1975

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Paul Kreis, M.D.

Clinical Interests	Dr. Kreis has a special interest in spinal injections, including selective nerve root blocks, sympathetic blockade, radiofrequency ablation, facet injections and discography.
Title	Professor
Specialty	Anesthesiology, Pain Medicine
Department	Anesthesiology
Division	Pain Medicine
Center/Program Affiliation	Spine Center UC Davis Medical Group
Address/Phone	Lawrence J. Ellison Ambulatory Care Center, 4860 Y St. Suite 2700 Sacramento, CA 95817 Phone: 916-734-7246 UC Davis Medical Group - Folsom, 1370 Prairie City Rd. Folsom, CA 95630 Phone: 916-985-9300 Cannery Building, Spine Center, 3301 C St. Suite 1500 Sacramento, CA 95816 Phone: 916-734-7463
Additional Phone	Clinic Phone: 916-734-7246 Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., UC San Diego, La Jolla, California, 1982

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Cathy Lammers, M.D.

Clinical Interests	Dr. Lammers is a fellow-trained pediatric anesthesiologist. She administers anesthesia to pediatric patients scheduled for general and cardiovascular surgical procedures. She serves as the Director of the one year Pediatric Anesthesia fellowship training program in the Department of Anesthesiology and Pain Medicine and is active in medical student and resident education. Her research interests include pediatric pain management and pediatric regional anesthesia.
Title	Associate Professor Director of Pediatric Anesthesiology
Specialty	Anesthesiology, Pediatric Anesthesiology
Department	Anesthesiology
Division	Pediatric Anesthesiology
Center/Program Affiliation	UC Davis Children's Hospital
Address/Phone	UC Davis Children's Hospital, 2315 Stockton Blvd. Sacramento, CA 95617 Phone: 800-282-3284
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., Baylor College of Medicine, Houston, Texas, 1992 B.A., UC Davis, Davis, California, 1988
Internships	University of California, San Francisco, San Francisco, California, 1993
Residency	Stanford University, Stanford, California, 1997
Fellowships	Stanford University & Lucile Salter Packard Children's Hospital, Stanford, California, 1997-98
Select Recent Publications	Lammers CR, Hammer GB, Brodsky JB, Cannon WB. Failure to separate and isolate the lungs with an endotracheal tube positioned in the bronchus. <i>Anesthesia and Analgesia</i> 1997;85:946-947

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Gary A. Levin, M.B.A., M.D.

Clinical Interests	Dr. Levin is an associate professor of anesthesiology — general anesthesiology. His clinical interests are in practice management, consulting, strategic management and organizational dynamics.
Title	Professor
Specialty	Anesthesiology, Anesthesiology - Obstetric
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	UC Davis Medical Center, 2315 Stockton Blvd. Sacramento, CA 95817 Phone: 800-2-UCDAVIS (800-282-3284)
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., Michigan State University, East Lansing, Michigan, 1980 M.B.A., Pepperdine University, School of Business and Management, Culver City, California, 1992 B.A., UC San Diego, La Jolla, California, 1975
Internships	Emanuel Hospital and Medical Center, Portland, Oregon, 1980-1981
Residency	University of California, Irvine Medical Center, Orange, California, 1981-1983
Fellowships	University of California, Davis Medical Center, Sacramento, California, 2002 University of Washington, Harborview and Children's Hospitals, Seattle, Washington, 2002
Board Certifications	American Board of Anesthesiology, 2005
Select Recent Publications	Kleiner SA, Vogt WB, Gladowski P, DeVries A, Levin G, Antonucci C, Fong J. B-blocker compliance, mortality and re-infarction: Validation of clinical trial association using insurer claims data. <i>Am J Med Qual</i> , 2009, 24(6):512-19.

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Hong Liu, M.D.

Clinical Interests	I provide general and cardiac anesthesia. I have been engaged in basic and clinical research for more than 20 years. My primary research areas include myocardial ischemia/reperfusion injury, pre- and post-conditioning in myocardial protection and high-risk surgery outcomes.
Title	Associate Professor Director of Clinical Anesthesia Research
Specialty	Anesthesiology, Anesthesiology - Cardiovascular and Thoracic
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	Patient Support Services Building, 4150 V St. Suite 1200 Sacramento, CA 95817 Phone: 916-734-5028
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Languages	Chinese (Mandarin)
Education	M.D., Nanjing Medical College, Jiangso, 1987
Internships	St. Vincent Hospital and Medical Center, New York, New York, 1996
Residency	UC Davis Medical Center, Sacramento, California, 2000
Fellowships	UC Davis Medical Center, Sacramento, California, 2001
Board Certifications	American Board of Anesthesiology, 2001 Medical Board of California, 1998 National Board of Echocardiography, Perioperative Transesophageal Echocardiography, 2004
Professional Memberships	American Medical Association American Society of Anesthesiologists California Society of Anesthesiologists Chinese American Medical Association of California Chinese American Society of Anesthesiology International Anesthesia Research Society



Hong Liu, M.D.

Society of Cardiovascular Anesthesiologists

Honors and Awards

Guest Professor of Soochow University, China, 2009

California Society of Anesthesiologists (CSA) Resident Research Award: Third Place, 1998

National Institutes of Health (NIH) Postdoctoral Research Fellowship, 1995

Select Recent Publications

Cao L, Young JN, Liu H, Silvestry S, Sun W, Zhao N, Dielh J, Sun JZ. Preoperative aspirin use and outcomes in cardiac surgery patients. *Ann Surg*, 2012 February, 255(2): 399-404.

Konia M, Liu H. Recombinant activated Factor VII in cardiac surgery: the new magic drug in post-aprotinin era. *J Clin Anesthesiol*, 2012 January, 28(1): 103-6.

Kumar S, Young JN, Liu H. Atrial septal aneurysm causing impaired venous drainage in CPB. *Ann Thoracic Surg*, 2012.

Soares JHN, Brosnan RJ, Fukushima FB, Hodges J, Liu H. Solubility of haloether anesthetics in human and animal blood. *Anesthesiology*, 2012 Jul;117(1):48-55.

Xie H, Wang C, Wu X, Liu X, Qiao S, Liu C, Liu H. Parthenolide attenuates LPS-induced activation of NF- κ B in a time-dependent manner in rat myocardium. *Journal of Biomedical Research*, 2012 26 (1): 37-43.

Zhong C, Fleming NW, Lu X, Moore PG, Liu H. Age-associated differences in gene expression in response to delayed anesthetic preconditioning. *Age*, 2011 October 19 [Epub ahead of print].

Sun JZ, Cao LH, Liu H. ACE inhibitors in cardiac surgery: current studies and controversies. *Hypertension Research*, 2011 34: 15-22.

Tang D, Liu H. Acute left atrial intramural wall dissection after mitral valve replacement. *Journal of Cardiothoracic and Vascular Anesthesia*, 2011 25, 3(June): 498-500.

Liu H. Is the PAC Passe: Exposing the data for continued (mis)use in perioperative and critical care settings. *J Clin Anesth*, 2011 27(6): 627-31.

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Tehani Anne Liyanage, M.B.B.S.

Clinical Interests	As well as providing general anesthesia, Dr. Liyanage also administers anesthesia to obstetric, neuro, geriatric and vascular patients. Dr. Liyanage's future research interests are in neuro anesthesiology.
Title	Assistant Clinical Professor
Specialty	Anesthesiology
Department	Anesthesiology
Division	General Anesthesiology
Center/Program Affiliation	Cardiovascular Services Vascular Center
Address/Phone	UC Davis Medical Center, 2315 Stockton Blvd. Sacramento, CA 95817 Phone: 800-2-UCDAVIS (800-282-3284)
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Languages	Sinhalese
Education	M.B.B.S., University of Kelaniya, Ragama, 1998
Internships	National Hospital, Colombo, 1999-2000 UC Davis Medical Center, Sacramento, California, 2004-2005
Residency	National Hospital, Colombo, 2001-2002 UC Davis Medical Center, Sacramento, California, 2005-2008
Board Certifications	American Board of Anesthesiology, 2009
Professional Memberships	American Society of Anesthesiologists California Society of Anesthesiologists Kaplan Honorary Society

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Stephen M. Macres, M.D., Pharm.D.

Clinical Interests	Dr. Macres has clinical interests in regional anesthesia and acute perioperative pain management. He is director of the Acute Perioperative Pain Service, and is also director of the Annual Anesthesiology Review Course and the Ultrasound Guided Peripheral Nerve Block Workshop.
Title	Clinical Professor Director, Acute Perioperative Pain Service
Specialty	Anesthesiology, Anesthesiology - Regional
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	UC Davis Medical Center, 2315 Stockton Blvd. Sacramento, CA 95817 Phone: 800-2-UCDAVIS (800-282-3284)
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Cincinnati College of Medicine, Cincinnati, Ohio, 1990 Pharm.D., UC San Francisco, San Francisco, California, 1979 B.S., UC Davis, Davis, California, 1972 M.S., UC Davis, Davis, California, 1974
Internships	Santa Clara Valley Medical Center, San Jose, California, 1990-1991
Residency	University of California, Davis Medical Center, Sacramento, California, 1991-1994 University of California, San Francisco, San Francisco, California, 1979-1980
Fellowships	University of California, Davis Medical Center, Sacramento, California, 1994-1995
Board Certifications	American Board of Anesthesiology, 1995
Professional Memberships	American Society of Anesthesiologists American Society of Regional Anesthesia and Pain Medicine (ASRA) California Society of Anesthesiologists
Select Recent Publications	2009 Macres SM, Moore PG, Fishman SM: Acute Pain Management, Barash, Cullen, Stoelting, Cahalan and Stock, 6th edition, (ed), <i>Clinical Anesthesia</i> , Vol. Chapter 57, pp.1473-1504. 1996 Fleming NW, Macres S, Antognini JF, Vengco J. Neuromuscular blocking action of



Stephen M. Macres, M.D., Pharm.D.

suxamethonium after antagonism of vecuronium by edrophonium, pyridostigmine or neostigmine. *British Journal of Anaesthesia*, 77(4):492-5.

1996 Richeimer SH, Macres SM. Psychological and medical complications of chronic pain management. *Seminars in Anesthesia*, 15(3):224-237.

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Gagan Mahajan, M.D.

Clinical Interests	Dr. Mahajan has both clinical and research interests in pain medicine.
Title	Professor
Specialty	Anesthesiology, Pain Medicine
Department	Anesthesiology
Division	Pain Medicine
Clinic	UC Davis Medical Group, Rocklin
Center/Program Affiliation	Spine Center UC Davis Medical Group
Address/Phone	Lawrence J. Ellison Ambulatory Care Center, 4860 Y St. Suite 2700 Sacramento, CA 95817 Phone: 916-734-7246 UC Davis Medical Group - Rocklin, 550 West Ranch View Dr. Suite 2005 Rocklin, CA 95765 Phone: 916-295-5700 Cannery Building, Spine Center, 3301 C St. Suite 1500 Sacramento, CA 95816 Phone: 916-734-7463
Additional Phone	Clinic Phone: 916-734-7246 Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., Pennsylvania State University College of Medicine, Hershey, Pennsylvania, 1996 B.S., UCLA, Los Angeles, California, 1992
Internships	Loma Linda University Medical Center, Loma Linda, California, 1996-1997
Residency	Baylor College of Medicine, Houston, Texas, 1997-2000
Fellowships	UC Davis Medical Center, Sacramento, California, 2000-2001
Board Certifications	American Board of Anesthesiology, Pain Medicine, 2001 American Board of Physical Medicine and Rehabilitation, Pain Medicine, 2001



Gagan Mahajan, M.D.

Professional Memberships

American Academy of Physical Medicine and Rehabilitation
Physicians' Association of Spine, Sports and Occupational Medicine

Honors and Awards

Rhone-Poulenc Rorer Physiatry Residents Scholarship Program, 1999
Third prize, Lewis Leavitt MD Memorial Lectureship, Baylor College of Medicine, 1999
Graduated with honors, UCLA, 1992

Select Recent Publications

Mahajan B, Kaldis T, Kevorkian C, Oden K. Functional outcomes of post-cardiac surgery stroke patients. *Archives of Physical Medicine and Rehabilitation*, 80:1138, 1990.

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Peter G. Moore, M.D., Ph.D.

Clinical Interests	Dr. Moore's clinical and research interests involve cardiovascular and thoracic anesthesia as well as lung transplant anesthesia, subjects on which he has published widely in books and journals.
Research/Academic Interests	Dr. Moore has also conducted research investigating hypertonic saline, airway thermal volume in humans and its relation to body size, and the effects of calcitonin-gene related peptide (CGRP) and adenosine on regional coronary conductance in dogs with ventricular pacing.
Title	Chair of Anesthesiology Professor
Specialty	Anesthesiology, Pain Medicine
Department	Anesthesiology
Division	General Anesthesiology
Center/Program Affiliation	Cardiovascular Services
Address/Phone	Patient Support Services Building, 4150 V St. Suite 1200 Sacramento, CA 95817 Phone: 916-734-5028
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Sydney, Sydney, New South Wales, 1972 Ph.D., University of Newcastle, Callaghan, New South Wales, 1991 B.S., University of Sydney, Sydney, New South Wales, 1972
Residency	Royal Brisbane Hospital, Brisbane, Australia, 1972 Royal Newcastle Hospital, Newcastle, Australia, 1973
Fellowships	Australian and New Zealand College of Anaesthetists, Melbourne, Australia, 1992 Royal Australasian College of Surgeons, Melbourne, Australia, 1977
Professional Memberships	American Association for the Advancement of Science American Medical Association American Society of Anesthesiologists American Society of Echocardiography Association of Anesthesia Clinical Directors Association of Anesthesiology Program Directors & Society of Academic Anesthesiology Chairs



Peter G. Moore, M.D., Ph.D.

Association of University Anesthesiologists
International Anesthesia Research Society
Society of Cardiovascular Anesthesiologists

Select Recent Publications

- Zhong C, Fleming NW, Lu X, Moore P and H Liu. Age-associated differences in gene expression in response to delayed anesthetic preconditioning. *Age*, 2012; (34) 1459-1472.
- Lu X, Moore PG, Liu H, Schaefer S. Phosphorylation of ARC is a critical element in the antiapoptotic effect of anesthetic preconditioning. *Anesth Analg*, 2011; 112(3): 525-31.
- Liu H, Moore PG. KATP channel blocker does not abolish the protective effect of Na/H exchange 1 inhibition against ischaemia/reperfusion in aged myocardium. *Eur J Anaesthesiol*, 2010; 27(8): 740-6.
- Macres SM, Moore PG, Fishman SM: Acute Pain Management, Barash, Cullen, Stoelting, Cahalan and Stock, 6th edition, (ed), *Clinical Anesthesia*, 2009; Vol. Chapter 57, pp.1473-1504.
- Konia M, Uppington J, Moore P, Liu H. Ascending aortic pseudoaneurysm: a late complication of coronary artery bypass. *Anesth Analg*, 2008; 106(3): 767-8.
- Nguyen NT, Ho HS, Fleming NW, Moore P, Lee SJ, Goldman CD, Cole CJ, Wolfe BM. Cardiac function during laparoscopic vs open gastric bypass. *Surg Endosc*, 2002; 16(1): 78-83.
- P.G. Moore, Quail, A. W., Cottee, D.B., McIlveen S.A., and White, S.W. Effect of Fentanyl on baroreflex control of circumflex coronary conductance. *Clinical and Experimental Pharmacology and Physiology*, (2000) 27, 1034-1038.
- Porges, W.L., Hennessy, E.J., Quail, A.W., Cottee, David B.F., Moore, P.G. McIlveen, S.A., G.H. Parsons and S.W. White. Heart-Lung interactions: The sigh and autonomic control in the bronchial and coronary circulations. *Clinical and Experimental Pharmacology and Physiology* (2000) 27, 1022-1027.
- Cottee, D.B., Quail, A., Porges, W.L., P.G. Moore and S.W. White. Effects of anaesthesia on regional coronary control mechanisms. *Clinical and Experimental Pharmacology and Physiology* (2000) 27, 1034-1038.
- Kien ND, Reitan JA, Moore PG. Hypertonic saline: current research and clinical implications. *Seminars in Anesthesia, Perioperative Medicine and Pain*, 1998; 17(3): 167-173.

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Lara Moser, M.D.

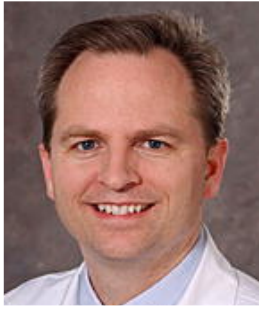
Clinical Interests	Lara Moser directs the post-anesthesia care unit. She has clinical and research interests in general anesthesiology, perioperative medicine and post-anesthesia recovery care. Moser also holds a nursing degree.
Title	Associate Professor
Specialty	Anesthesiology
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	UC Davis Medical Center, 2315 Stockton Blvd. Sacramento, CA 95817 Phone: 800-2-UCDAVIS (800-282-3284)
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., UC Davis School of Medicine, Sacramento, California, 1996
Internships	University of California, Davis Medical Center, Sacramento, California, 1996-97
Residency	University of California, Davis Medical Center, Sacramento, California, 1997-2000
Board Certifications	American Board of Anesthesiology, 2001
Professional Memberships	American Medical Association American Society of Anesthesiologists California Society of Anesthesiologists
Honors and Awards	Hamilton S. Davis Award for Anesthesia – awarded to outstanding medical student who completes a four-week Anesthesia rotation., 1996

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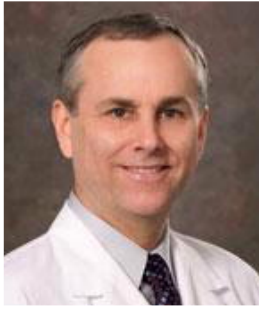
Brian Pitts, M.D., M.S.

Philosophy of Care	I believe that each patient is unique and deserves the highest quality of compassionate care available.
Clinical Interests	Dr. Pitts provides anesthesia to all types of adult patients and specializes in regional anesthesia. He is actively involved in resident education and pursues innovative and effective approaches in teaching the next generation of anesthesiologists.
Title	Assistant Clinical Professor
Specialty	Anesthesiology
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	UC Davis Medical Center, 2315 Stockton Blvd. Sacramento, CA 95817 Phone: 800-2-UCDAVIS (800-282-3284)
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., Loma Linda University School of Medicine, Loma Linda, California, 2001 M.S., Loma Linda University, Riverside, California, 2004 M.S., Loma Linda University, Riverside, California, 2006 B.S., UC Irvine, Irvine, California, 1992
Internships	Loma Linda University Medical Center, Loma Linda, California, 2001-2002
Residency	UC Davis Medical Center, Sacramento, California, 2002-2005
Board Certifications	American Board of Anesthesiology, 2006
Professional Memberships	American Society of Anesthesiologists California Society of Anesthesiologists Society for Education in Anesthesia
Honors and Awards	Graduate of the Teaching Scholars Program, UC Davis School of Medicine, 2009 Teacher of the Year Award, Department of Anesthesiology and Pain Medicine, 2008 Teacher of the Year Award, Department of Anesthesiology and Pain Medicine, 2007



Brian Pitts, M.D., M.S.

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Bradley Randel, M.D.

Clinical Interests	Dr. Bradley Randel is a fellowship trained pediatric anesthesiologist. His clinical practice is devoted to providing anesthesia services to pediatric patients scheduled for a wide range of procedures including pediatric cardiac surgery, interventional radiology and same day surgical procedures. As a pediatric anesthesiologist, Dr. Randel is actively involved with quality of care issues relating to the administration of anesthetics and their effect on pediatric patients. He is also involved in reviewing educational methods used in teaching fellows, residents, and medical students.
Title	Assistant Professor
Specialty	Anesthesiology, Pain Medicine
Department	Anesthesiology
Division	General Anesthesiology
Address/Phone	Patient Support Services Building, 4150 V St. Suite 1200 Sacramento, CA 95817 Phone: 916-734-5028
Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., UC Davis School of Medicine, Sacramento, California, 2002 B.A., UC Santa Cruz, Santa Cruz, California, 1990
Residency	Massachusetts General Hospital, Boston, Mass, 2003-2006
Fellowships	Children's National Medical Center, Washington, DC, 2008
Professional Memberships	American Board of Anesthesiology
Select Recent Publications	Randel BE, "Adult, Pediatric, and Newborn Resuscitation" IN: Clinical Anesthesia Procedures of the Massachusetts General Hospital, 7th Ed, Dunn, et.al., Lippincott Williams & Wilkins, 2007 Holmes JF, Offerman SR, Chang CH, Randel BE, Hahn DD, Frankowsky MJ, Wisner DH. Performance of Helical Computed Tomography Without Oral Contrast for the Detection of Gastrointestinal Injuries. Annuals of Emergency Medicine, 43(1):120-28, 2004.

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Ben A. Rich, J.D., M.A., Ph.D.

Clinical Interests	Dr. Rich is an attorney with a doctoral degree in philosophy. He has substantial experience in both private practice and as a legal counsel for several leading academic medical centers. His special interests include the legal and ethical aspects of the physician-patient relationship, end-of-life care and pain management. He received the Mayday Scholar's Award and the University of Colorado President's Fund for the Humanities Award. Dr. Rich is working to further develop the UC Davis Bioethics Program and its training of medical staff, students and other professionals.
Title	Professor and Alumni Association Endowed Chair
Specialty	Bioethics, Internal Medicine
Department	Anesthesiology Internal Medicine
Division	General Medicine Pain Medicine
Center/Program Affiliation	Bioethics Program
Education	Ph.D., University of Colorado, Boulder, Boulder, Colorado, 1995 J.D., Washington University School of Law, St. Louis, Missouri, 1973 B.A., DePauw University, Greencastle, Indiana, 1969
Select Recent Publications	Rich, B.A. Causation and Intent: Persistent Conundrums in End of Life Care. Cambridge Quarterly of Health Care Ethics, Vol. 16, No. 1, 16: 63-73. Rich, B.A. Physician Paternalism v. Respect for Patient Autonomy: The More Things Change the More They Remain the Same, Journal of Medicine and Law 10: 87-124. Rich, B.A. The Treating Physician as Expert Witness: Ethical and Pragmatic Considerations. Pain Medicine 7: 460-463. Rich, B.A. The politics of pain: rhetoric or reform. DePaul University Journal of Health Care Law 8: 519-558. Rich, B.A. Medical custom and medical ethics: rethinking the standard of care. Cambridge Quarterly of Healthcare Ethics 14: 27-39. Rich, B.A. Bioethics in court. The Journal of Law, Medicine & Ethics 33:194-197. Rich, B. A. Oregon versus Ashcroft: the battle over the soul of medicine. Cambridge Quarterly of Healthcare Ethics, 12: 310-321, 2003. Rich, B. A. A placebo for the pain: a medico-legal case analysis. Pain Medicine, 4: 366-372, 2003.

Ben A. Rich, J.D., M.A., Ph.D.

- Rich, B. A. Oregon versus Ashcroft: pain relief, physician-assisted suicide, and the controlled substances act. *Pain Medicine*, 3: 353-360, 2002.
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- Rich, B. A. Prognostication in clinical medicine: prophecy or professional responsibility? *The Journal of Legal Medicine*, 23: 297-358, 2002.
- Rich, B. A. Defining and delineating a duty to prognosticate. *Theoretical Medicine*. 22:177-192, 2001.
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- Rich, B. A. Prescription for the pain: the emerging standard of care for pain management. *William Mitchell Law Review* 26:1-91, 2000.
- Nelson-Marten, P., B. A. Rich. A historical perspective of informed consent in clinical practice and research. *Seminars in Oncology Nursing* May; 15:81-88, 1999.
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- Rich, B. A. Pain management: an age old ethic seeks modern standards. *Today's Internist* 39:37-39, 1998.
- Rich, B. A. Advance directives: the next generation. *Journal of Legal Medicine*, 19:63-97, 1998.
- Rich, B. A. A Legacy of silence: bioethics and the culture of pain. *Journal of Medical Humanities* 18:233-259, 1997.
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Ben A. Rich, J.D., M.A., Ph.D.

- advance directives. *Cambridge Quarterly of Health Care Ethics* 6:138-147, 1997.
- Rich, B. A. The values history: restoring narrative identity to long term care. *The Journal of Ethics, Law and Aging*, 2:75-84, 1996.
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- Rich, B. A. Malpractice issues in the academic medical center. *Journal of College and University Law* 13:149-177. Reprinted at *Defense Law Journal* 36:641-675, 1987.
- Rich, B. A. Minimizing the risk of obstetrical malpractice. *Hospital Risk Management* 8:107, 1986.
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- Rich, B. A. Sovereign immunity: the liability of government and its officials, National Association of Attorneys General (January) 1-71, 1975.
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- Rich, B. A. Managing recreation rivers. *University of Akron Law Review* 8:43-56, 1974.
- Rich, B. A. Commentary: Equal protection as a means of securing adequate municipal services. *Urban Law Annual*, 277-282, 1973.

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Richard Rivera, M.D.

Clinical Interests	Dr. Rivera has clinical interests in geriatric anesthesia and difficult airway management.
Title	Clinical Professor
Specialty	Anesthesiology
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Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., UCLA School of Medicine, Los Angeles, California, 1978 B.S., UC Riverside, Riverside, California, 1974
Internships	University of California, Los Angeles - VA Hospital, Sepulveda, California, 1979
Residency	University of California, Los Angeles Medical Center, Los Angeles, California, 1981
Board Certifications	American Board of Anesthesiology, 1984
Professional Memberships	American Society of Anesthesiologists California Society of Anesthesiologists Society for Education in Anesthesia
Select Recent Publications	2008 Rivera R, Antognini J. Geriatric Anesthesia Pharmacokinetics and Pharmacodynamics. <i>Anesthesiology</i> , (May) 1176-81.

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Charandip Sandhu, M.D.

Clinical Interests	Dr. Sandhu has clinical interests in acute pain.
Title	Assistant Clinical Professor Assistant Director, Resident Program
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Division	Pain Medicine
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Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Languages	Punjabi, Spanish
Education	M.D., Creighton University School of Medicine, Omaha, Nebraska, 2005 B.A., Creighton University, Omaha, Nebraska, 2001
Internships	University of California, Davis, Medical Center, Sacramento, California, 2005-2006
Residency	University of California, Davis, Medical Center, Sacramento, California, 2006-Present
Professional Memberships	American Society of Anesthesiologists California Society of Anesthesiologists

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Amrik Singh, M.D.

Philosophy of Care	Dr. Singh's philosophy of care incorporates evidence-based practice blended with common sense and compassion.
Clinical Interests	Dr. Singh's clinical focus is on cardiovascular and thoracic anesthesiology as well as transesophageal echocardiography. His research interests are cardiovascular and thoracic anesthesiology.
Title	Associate Clinical Professor Director, Anesthesiology Residency Program
Specialty	Anesthesiology, Anesthesiology - Cardiovascular and Thoracic
Department	Anesthesiology
Division	General Anesthesiology
Center/Program Affiliation	Cardiovascular Services
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Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Languages	Hindi, Punjabi
Education	M.D., Government Medical College Patiala, Patiala, Punjab, 1991 B.S., Government Medical College, Patiala, Punjab, 1991
Internships	UC Davis Medical Center, Sacramento, California, 1998
Residency	UC Davis Medical Center, Sacramento, California, 2001
Fellowships	UC Davis Medical Center, Sacramento, California, 2002
Board Certifications	American Board of Anesthesiology, 2002 National Board of Echocardiography, 2003
Professional Memberships	American Medical Association American Society of Anesthesiologists California Society of Anesthesiologists
Select Recent Publications	2009 Muilenburg OJ, Singh A, Torzilli G, Khatri VP: Surgery in the patient with liver disease.



Amrik Singh, M.D.

Medical Clinics of North America, Vol. 93(5), pp. 1065-81.

2007 Singh A, Fleming N. Right heart embolism and acute right atrial dilation during total knee arthroplasty. *Anesth Anal*, Nov; 105(5):1224-7.

2004 Grow MP, Singh A, Fleming NW, Young N, Watnik M. Cardiac output monitoring during off-pump coronary artery bypass grafting. *Journal of Cardiothoracic and Vascular Anesthesia*, 18 (1):43-6.

2003 Singh A, Ayyalapu A, Keochekian A: Anesthetic management in fibrodysplasia ossificans progressiva (FOP): a case report. *Journal of Clinical Anesthesia*, Vol. 15, pp. 211-213.

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Anne Smith, Ph.D.

Clinical Interests Dr. Smith is conducting research into applied mathematics, biomathematics and neurobiology.

Title Adjunct Assistant Professor

Department Anesthesiology

Division General Anesthesiology

Education Ph.D., University of Virginia School of Medicine, Charlottesville, Virginia, 1993
B.Sc., University of Manchester, Manchester, 1987
M.S., University of Virginia, Charlottesville, Virginia, 1989

Fellowships Massachusetts General Hospital/Harvard Medical School, Boston, Massachusetts, 1994

Select Recent Publications

Smith AC, Wirth S, Suzuki WA, Brown EN. Bayesian analysis of interleaved learning and response bias in behavioral experiments. *Journal of Neurophysiology*, 97(3): 2516-24., 2007.

Smith AC, Smith P. A set probability technique for detecting relative time order across multiple neurons. *Neural Computation*, 18, 1197-1214., 18(5): 1197-214, 2006.

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Law JR, Flanery MA, Wirth S, Yanike M, Smith AC, Frank LM, Suzuki WA, Brown EN, Stark CEL. Functional magnetic resonance imaging activity during the gradual acquisition and expression of paired-associate memory. *Journal of Neuroscience*, 25(24):5720-5729.

Smith AC, Stefani MR, Moghaddam B, Brown EN. Analysis and design of behavioral experiments to characterize population learning. *J Neurophysiol*, 93(3):1776-92.

Smith AC, Wu XB, Levy WB. Controlling activity fluctuations in large, sparsely connected random networks. *Network: Computation in Neural Systems*; 11:63-81.

Wirth S, Yanike M, Frank LM, Smith AC, Brown EN, Suzuki WA. Single neurons in the monkey hippocampus and learning of new associations. *Science*, 300(5625):1578-81.

Smith AC, Brown EN. Estimating a state-space model from point process observations. *Neural Comput*, 15(5):965-91.

Smith AC, Frank LM, Wirth S, Yanike M, Hu D, Kubota Y, Graybiel AM, Suzuki WA, Brown EN. Dynamic analysis of learning in behavioral experiments. *J Neurosci*, 24(2):447-61.

Smith AC, Gerrard JL, Barnes CA, McNaughton BL. Effect of age on burst firing characteristics of rat hippocampal pyramidal cells. *Neuroreport*, 11(17):3865-71.

Anne Smith, Ph.D.

Smith AC, Roberts WW. Computational modeling of fiber formation in spunbonding of polypropylene with crystallization: Comparison with experiments. *International Nonwovens Journal*, 6(1):31-41.

Smith AC, Roberts WW. Straightening of crimped and hooked fibers in converging transport ducts: Computational modeling. *Textile Research Journal*; 64(6):325-334.

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Timothy J. Tautz, M.D.

Clinical Interests	Timothy J. Tautz's clinical interests lie in general anesthesia and malignant hyperthermia. He is co-director of the Malignant Hyperthermia Lab.
Title	Associate Professor Co-Director, Malignant Hyperthermia Lab
Specialty	Anesthesiology, Anesthesiology - Regional
Department	Anesthesiology
Division	General Anesthesiology
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Education	M.D., Loma Linda University School of Medicine, Loma Linda, California, 1990-94 B.S., Pacific Union College, Angwin, California, 1985-89
Internships	St. Mary's Hospital, San Francisco, California, 1995
Residency	University of California, Davis, Medical Center, Sacramento, California, 1995
Board Certifications	American Board of Anesthesiology, 1999
Professional Memberships	American Society of Anesthesiologists California Society of Anesthesiologists

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Jeannette Patricia Tom-Lerman, M.D.

Clinical Interests	Dr. Tom-Lerman has clinical interests in general anesthesia and difficult airway management. She strives to provide compassionate care to all of her patients.
Title	Assistant Professor
Specialty	Anesthesiology
Department	Anesthesiology
Division	General Anesthesiology
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Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., UCLA School of Medicine, Los Angeles, California, 1991 B.S., UC Riverside, Riverside, California, 1988
Internships	Maricopa Medical Center, University of Arizona, Phoenix, Arizona, 1991-92
Residency	Maricopa Medical Center, University of Arizona, Phoenix, Arizona, 1992-93 Maricopa Medical Center, University of Arizona, Phoenix, Arizona, 1993-96
Board Certifications	American Board of Anesthesiology, 1998 National Board of Medical Examiners, 1992
Professional Memberships	American Society of Anesthesiologists California Society of Anesthesiologists

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Jeffrey Uppington, M.B.B.S.

Clinical Interests	Dr. Uppington's clinical support involves working in the operating room two-to-three days/week providing cardiothoracic anesthesia, transesophageal echocardiograms (TEE) and general anesthesia. His research includes new anesthetic agents and servo control of anesthetic infusions.
Title	Chief of Staff Clinical Professor
Specialty	Anesthesiology, Anesthesiology - Cardiovascular and Thoracic
Department	Anesthesiology
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Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.B.B.S., The London Hospital Medical School, London, England, 1971
Internships	The London Hospital Medical School, London, 1971
Residency	United Bath Hospitals, Bath, 1972-73 United Bath Hospitals, Bath, 1983-86
Board Certifications	American Board of Anesthesiology, 1988 National Board of Echocardiography, 2002
Professional Memberships	American Society of Anesthesiologists Association of Anesthetics of Great Britain and Ireland Society for Education in Anesthesia Society of Anesthetists of the South Western Region, Great Britain Society of Cardiovascular Anesthesiologists Society of Obstetric Anesthetists, Great Britain
Select Recent Publications	2008 Konia M, Uppington J, Moore P, Liu H. Ascending aortic pseudoaneurysm: a late complication of coronary artery bypass. <i>Anesth Analg</i> , 106(3):767-8.



Jeffrey Uppington, M.B.B.S.

- 2008 Konia MR, Uppington J. Diastolic regurgitation through a bi-leaflet mechanical valve in the mitral position. *Anesth Analg*, 107(4):1166-7.
- 2006 Uppington J: Guidelines, recommendations, protocols and practice, Shorten G, Brown J, Carr O, Puig M, Harmon O, (ed), *Postoperative Pain Management--A Guide to Evidence Based Practice* (Chapter 3), Elsevier.
- 2006 Uppington J: Opioids, Ballantyne JC, (ed), *The Massachusetts General Hospital Handbook of Pain Management, 3rd edition*, Lippincott Williams and Wilkins, 104-26.
- 2002 Uppington J: Opioids (Chapter 9), SM Fishman, Abdi S, (ed), *The Massachusetts General Hospital of Pain Management, 2nd edition*, Lippincott Williams &Wilkins, Philadelphia. 103-124.
- 2000 Sutcliffe DG, Murphy CM, Maslow A, Uppington J, Shorten GO. A comparison of antagonism of rocuronium-induced neuromuscular blockade during sevoflurane and isoflurane anaesthesia. *Anaesthesia*, 55(10):960-4.
- 2000 Uppington J: Miscellaneous Issues (Chapter 15), BJ Sweitzer, (ed), *Handbook of Preoperative Assessment and Management*, Lippincott Williams &Wilkins, Philadelphia. 331-366.

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David A. White, M.D.

Clinical Interests	David A. White's clinical interests include fiber optic intubation and airway management. He reviewed the anesthesia and analgesia manuscript for critical and trauma care at UC Davis Medical Center, and also served as a consultant and reviewer for the FDA study of the drug mivacurium. White's research interests focus on regulation of skeletal muscle acetylcholine receptors and their effect on neuromuscular blockers, effects of cholinesterase inhibitors on neuromuscular blocking action of suxamethonium, and the relationship of systolic pressure and stroke volume to myocardial contractility.
Title	Emeritus Associate Professor
Specialty	Anesthesiology
Department	Anesthesiology
Division	General Anesthesiology
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Additional Phone	Physician Referrals: 800-4-UCDAVIS (800-482-3284)
Education	M.D., UC Irvine College of Medicine, Irvine, California, 1979 B.S., UC Irvine, Irvine, California, 1973
Internships	University of California, Davis Medical Center, Sacramento, California, 1979-80
Residency	University of California, Davis Medical Center, Sacramento, California, 1980-83
Board Certifications	American Board of Anesthesiology, 1985
Professional Memberships	American Society of Anesthesiologists Association of University Anesthesiologists California Society of Anesthesiologists International Anesthesiologists Research Society
Select Recent Publications	Fung DL, White DA, Gronert GA, Disbow E. The changing pharmacodynamics of metocurine identify the onset and offset of canine gastrocnemius disuse atrophy. <i>Anesthesiology</i> 1995;83(1): 134-140

David A. White, M.D.

Reitan JA, Moore PG, Kien ND, Lee S, White DA. The relationship between systolic pressure and stroke volume describes myocardial contractility. *Journal of Cardiothoracic and Vascular Anesthesia* 1995;9(6):676-683

Valdrighi JB, Fleming NW, Smith BK, Baker GL, White DA. Effects of cholinesterase inhibitors on the neuromuscular blocking action of suxamethonium. *British Journal of Anaesthesia* 1994;72:237-239

Reitan JA, Kien ND, Moore PG, White DA. Regional myocardial function during contiguous ischaemia in an anesthetized canine model: comparison of six methods of measurement. *British Journal of Anaesthesia* 1994;73(3) :371-379

Fleming NW, Lewis BK, White DA, Dretchen KL. Acute effects of calcitonin gene-related peptide on the mechanical and electrical responses of the rat hemidiaphragm. *Journal of Pharmacology and Experimental Therapeutics* 1993;265(3):1199-1204

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Barth L. Wilsey, M.D., M.M.S.

Clinical Interests	<p>Dr. Wilsey is heavily involved in clinical pain medicine research at UC Davis Medical Center and at the Sacramento VA Medical Center, where he also performs acupuncture services on a limited basis. One of his major research interests is the use of medical marijuana for neuropathic pain, and he is involved in a federally funded study of the analgesic and neuropsychological effects of cannabis when treating central pain from spinal cord injury. Dr. Wilsey also studies prescription opioid abuse, and collaborates on NIH and CDC grants involving computerization of historical pain-management information.</p> <p>Dr. Wilsey has a strong interest in research ethics and has chaired institutional review boards at UC Davis and the Northern California VA Health Care System. He believes translational research is particularly important for improving patient care.</p>
Title	ASC Physician Diplomate
Specialty	Pain Medicine, Anesthesiology
Department	Anesthesiology Physical Medicine and Rehabilitation
Division	Pain Medicine Physical Medicine and Rehabilitation
Center/Program Affiliation	Center for Health Services Research in Primary Care Physical Medicine and Rehabilitation
Address/Phone	Lawrence J. Ellison Ambulatory Care Center, 4860 Y St. Sacramento, CA 95817
Additional Phone	Phone: 800-4-UCDAVIS (800-482-3284)
Education	M.D., University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, 1973 B.A., Rutgers University, New Brunswick, New Jersey, 1969
Internships	Southern Illinois University School of Medicine, Springfield, Illinois, 1973-1974
Residency	UC Davis Medical Center, Sacramento, California, 1974-1977
Fellowships	Medical College of Virginia, Richmond, Virginia, 1994-1995 UC San Francisco, San Francisco, CA, 1995-96
Board Certifications	American Board of Anesthesiology, 1976 American Board of Anesthesiology, Pain Medicine, 1996



Barth L. Wilsey, M.D., M.M.S.

Honors and Awards

NIH Research Fellowship Pain Management, 1995
Henry Rutgers Scholar in Biochemistry, 1969

Select Recent Publications

Gilson, A. M., Fishman, S. M., Wilsey, B. L., Casamalhuapa, C., and Baxi, H. Time Series Analysis of California's Prescription Monitoring Program: Impact on Prescribing and Multiple Provider Episodes. *Journal of Pain* 2012 13(2):103-11.

Grant, I., Atkinson, J., Gouaux, B, Wilsey, B. Medical Marijuana: Clearing Away the Smoke. *The Open Neurology Journal*, 2012, 6: 18-25.

Han, Kass, Wilsey, Li, Individual and County-Level Factors Associated with Use of Multiple Prescribers and Multiple Pharmacies to Obtain Opioid Prescriptions in California, *PLOS ONE*, September 2012; Volume 7, Issue 9

Wilsey B, Marcotte T, Deutsch, et al. Low Dose Vaporized Cannabis Significantly Improves Neuropathic Pain" *Journal of Pain* Dec 10, 2012 [Epub ahead of print]

Wilsey, B. L., Fishman, S. M., Gilson, A. M., Casamalhuapa, C., Baxi, H., Lin, T. C., and Li, C. S. An analysis of the number of multiple prescribers for opioids utilizing data from the California Prescription Monitoring Program. *Pharmacoepidemiol Drug Saf* 2011 20(12):1262-8.

Wilsey BL, Fishman SM, Gilson A, Casamalhuapa C, Baxi H, Zhang, Li CS Profiling Multiple Provider Prescribing of Opioids, Benzodiazepines, Stimulants, and Anorectics, *Drug and Alcohol Dependence*, 2010 Nov 1;112(1-2):99-106.

Wilsey BL, Fishman SM, Casamalhuapa , Singh N Computerized Progress Notes for Chronic Pain Patients Receiving Opioids; the Prescription Opioid Documentation System (PODS), *Pain Medicine*, 2010;11(11):1707-17.

Wilsey BL, Fishman SM, Casamalhuapa C, Gupta A. Documenting and improving opioid treatment: the Prescription Opioid Documentation and Surveillance (PODS) System. *Pain Med.* Jul-Aug 2009;10(5):866-877.

Wilsey BL, Fishman S, Li CS, Storment J, Albanese A. Markers of abuse liability of short- vs long-acting opioids in chronic pain patients: a randomized cross-over trial. *Pharmacol Biochem Behav.* Nov 2009;94(1):98-107.

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Aubrey Yao, M.D.

Philosophy of Care	I strive to do my best for each patient.
Clinical Interests	Dr. Yao's clinical research interests include transesophageal echocardiography, resident education, and anesthesia simulation. His research interests include non-invasive techniques for measuring cardiac output monitoring and non-invasive hemoglobin measurement.
Title	Assistant Clinical Professor
Specialty	Anesthesiology, Anesthesiology - Cardiovascular and Thoracic
Department	Anesthesiology
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Education	M.D., University of Missouri, Kansas City, School of Medicine, Kansas City, Missouri, 2001 B.A., Northwestern University, Evanston, Illinois, 1995
Residency	University of California, Davis, Medical Center, Sacramento, California, 2001-2004 University of California, Davis, Medical Center, Sacramento, California, 2005-2008 University of California, Davis, Medical Center, Sacramento, California, 2008-2009
Board Certifications	American Board of Anesthesiology, 2009 National Board of Echocardiography (Testamur), 2010 National Board of Echocardiography, Perioperative Transesophageal Echocardiography, 2009
Professional Memberships	American Society of Anesthesiologists International Anesthesia Research Society Society of Cardiovascular Anesthesiologists
Honors and Awards	Outstanding Resident Teaching Award, UC Davis Department of Anesthesiology and Pain Medicine, 2011 Clinical Fellow Professionalism Award, UC Davis, Department of Anesthesiology and Pain Medicine, Sacramento, CA, 2009

Aubrey Yao, M.D.

Sara C. Armstrong Award for Compassionate Care, UC Davis Health System, Sacramento, CA, 2009

Anesthesiology Resident of the Year, UC Davis, Department of Anesthesiology and Pain Medicine, Sacramento, CA, 2007

Abbott Laboratories Resident Research Award Finalist, CSA Annual Meeting, San Diego, CA, 2007

Honors earned in Urology, Transplant Surgery, Surgery, General Surgery, Psychiatry, Family Medicine, Clinical Pharmacology, University of Missouri at Kansas City, 2001

National Merit Scholar, Northwestern University, 1995

Select Recent Publications

2009 Yao A, et al. The effects of aromatic anesthetics on dorsal horn neuronal responses to noxious stimulation. *Anesth Analg*, June, 106(6):1759-64.

2007 Kim J, Yao A, et al. Neurons in the ventral spinal cord are more depressed by isoflurane, halothane and propofol than are neurons in the dorsal spinal cord. *Anesth Analg*, October, 105(4): 1020-6.

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