

Scientific Activities of the
California Pacific Medical Center Research Institute

2004 Compendium of Peer-Reviewed Publications

Scientists at the California Pacific Medical Center Research Institute are involved in a variety of laboratory and clinical research projects. This report lists manuscripts published in the peer-reviewed literature in 2004 that describe their activities. For convenience, we have listed them in alphabetical order by Principal Investigator (PI). We appreciate the contributions of many other scientists (including post-doctoral fellows and technicians) in the Research Institute.

Mary Abood, PhD (aboodm@sutterhealth.org)

Dr. Abood's laboratory studies cannabinoid receptors on the surface of neurons and other cells. Recently she has found evidence that cannabinoids may be useful in the treatment of ALS, as described below. Dr. Raman was a post-doctoral candidate in her laboratory.

Raman C, McAllister SD, Rizvi G, Patel SG, Moore DH, Abood ME. Amyotrophic lateral sclerosis: delayed disease progression in mice by treatment with a cannabinoid. Amyotroph Lateral Scler Other Motor Neuron Disord 2004;5(1):33-9.

See also Sean McAllister

Saleh Adi, MD (adis@sutterhealth.org)

Dr. Adi is a pediatric endocrinologist who studies the differentiation and development of muscle cells. A recent report discloses some of the biological pathways that are involved in this process.

Tiffin N, **Adi S**, Stokoe D, Wu NY, Rosenthal SM. Akt phosphorylation is not sufficient for insulin-like growth factor-stimulated myogenin expression but must be accompanied by down-regulation of mitogen-activated protein kinase/extracellular signal-regulated kinase phosphorylation. Endocrinology 2004;145(11):4991-6.

John Astin, PhD (astinja@sutterhealth.org)

Dr. Astin's work involves an examination of barriers to the integration of psychosocial factors in medical training and practice. The first paper reviews some of the evidence that links psychosocial factors with health outcomes. Kelly Forys is a research associated working with Dr. Astin.

Astin JA, Forys K. Psychosocial determinants of health and illness: integrating mind, body, and spirit. Adv Mind Body Med 2004;20(4):14-21.

Astin JA. Mind-body therapies for the management of pain. Clin J Pain 2004;20(1):27-32.

Ari Baron, MD

Dr. Baron recently participated in a multi-site trial of a new treatment involving monoclonal antibodies for colon cancer.

Hurwitz H, Fehrenbacher L, Novotny W, Cartwright T, Hainsworth J, Heim W, Berlin J, **Baron A**, et al. Bevacizumab plus irinotecan, fluorouracil, and leucovorin for metastatic colorectal cancer. *N Engl J Med* 2004;350(23):2335-42.

James L. Bennington, MD (benninj@sutterhealth.org)

See Ling-Chun Chen and Pierre Desprez

Luiz Bermudez, MD (bermudl@sutterhealth.org)

Dr. Bermudez has a longstanding interest in how mycobacteria infect cells. Peter Kolonoski, Mary Petrofsky and Martin Wu were research associates in the laboratory; Dr. Lowell Young is a colleague. The first paper describes new treatments for resistant mycobacteria.

Bermudez LE, Kolonoski P, Seitz LE, **Petrofsky M**, Reynolds R, **Wu M, Young LS**. SRI-286, a thiosemicarbazole, in combination with mefloquine and moxifloxacin for treatment of murine *Mycobacterium avium* complex disease. *Antimicrob Agents Chemother* 2004;48(9):3556-8.

Bermudez LE, Yamazaki Y. Effects of macrolides and ketolides on mycobacterial infections. *Curr Pharm Des* 2004;10(26):3221-8.

Bermudez LE, Petrofsky M, Sangari F. Intracellular phenotype of *Mycobacterium avium* enters macrophages primarily by a macropinocytosis-like mechanism and survives in a compartment that differs from that with extracellular phenotype. *Cell Biol Int* 2004;28(5):411-9.

Carter G, **Young LS, Bermudez LE**. A subinhibitory concentration of clarithromycin inhibits *Mycobacterium avium* biofilm formation. *Antimicrob Agents Chemother* 2004;48(12):4907-10.

Chacon O, **Bermudez LE**, Barletta RG. Johne's disease, inflammatory bowel disease, and *Mycobacterium paratuberculosis*. *Annu Rev Microbiol* 2004;58:329-63.

Cope RB, Stang B, Valentine BA, **Bermudez LE**. Topical exposure to exogenous ultraviolet-irradiated urocanic acid enhances *Mycobacterium ulcerans* infection in a CrI:IAF(HA)-hrBR hairless guinea-pig model of Buruli ulcer disease. *Photodermatol Photoimmunol Photomed* 2004;20(1):14-20.

Danelishvili L, Poort MJ, **Bermudez LE**. Identification of *Mycobacterium avium* genes up-regulated in cultured macrophages and in mice. *FEMS Microbiol Lett* 2004;239(1):41-9.

Kent ML, Whipps CM, Matthews JL, Florio D, Watral V, Bishop-Stewart JK, **Bermudez LE**. Mycobacteriosis in zebrafish (*Danio rerio*) research facilities. *Comp Biochem Physiol C Toxicol Pharmacol* 2004;138(3):383-90.

McGarvey JA, Wagner D, **Bermudez LE**. Differential gene expression in mononuclear phagocytes infected with pathogenic and non-pathogenic mycobacteria. *Clin Exp Immunol* 2004;136(3):490-500.

Ohkusu K, **Bermudez LE**, Nash KA, MacGregor RR, Inderlied CB. Differential virulence of *Mycobacterium avium* strains isolated from HIV-infected patients with disseminated *M. avium* complex disease. *J Infect Dis* 2004;190(7):1347-54.

Kenneth Binmoeller, MD (binmoek@sutterhealth.org)

Dr. Binmoeller reported the preliminary results of using “superglue” to treat bleeding in patients with cirrhosis. Dr. Rengstorff was a fellow in gastroenterology at CPMC.

Rengstorff DS, Binmoeller KF. A pilot study of 2-octyl cyanoacrylate injection for treatment of gastric fundal varices in humans. *Gastrointest Endosc* 2004;59(4):553-8.

Warren Browner, MD, MPH (brownew@sutterhealth.org)

Dr. Browner studies the epidemiology of aging, including cardiovascular disease and osteoporosis. In collaboration with other members of the Genetics of Longevity Consortium, he reviewed recent studies in this area, as described in the first paper below.

Browner WS, Kahn AJ, Ziv E, Reiner AP, Oshima J, Cawthon RM, Hsueh WC, Cummings SR. The genetics of human longevity. *Am J Med* 2004;117(11):851-60.

Otte C, Marmar CR, Pipkin SS, Moos R, **Browner WS, Whooley MA.** Depression and 24-hour urinary cortisol in medical outpatients with coronary heart disease: The Heart and Soul Study. *Biol Psychiatry* 2004;56(4):241-7.

Pletcher MJ, Tice JA, Pignone M, McCulloch C, Callister TQ, **Browner WS.** What does my patient’s coronary artery calcium score mean? Combining information from the coronary artery calcium score with information from conventional risk factors to estimate coronary heart disease risk. *BMC Med* 2004;2(1):31.

Pletcher MJ, Tice JA, Pignone M, **Browner WS.** Using the coronary artery calcium score to predict coronary heart disease events: a systematic review and meta-analysis. *Arch Intern Med* 2004;164(12):1285-92.

Harry J. Buncke, MD (bunckehj@sutterhealth.org)

These papers describe some recent advances in microsurgery.

Komorowska-Timek E, Timek TA, Brevetti LS, Szuba A, Stuehlinger M, Hardesty RA, **Buncke HJ.** Oral administration of L-arginine decreases necrosis of the epigastric skin flap in the rat. *Ann Plast Surg* 2004;53(1):73-8.

Komorowska-Timek E, Timek TA, Brevetti LS, Zhang F, Lineaweaver WC, **Buncke HJ.** The effect of single administration of vascular endothelial growth factor or L-arginine on necrosis and vasculature of the epigastric flap in the rat model. *Br J Plast Surg* 2004;57(4):317-25.

Ling-Chun Chen, PhD (chenlc@sutterhealth.org)

Dr. Chen studies early genetic changes in two diseases: colon cancer and ALS. The first paper reports several early changes in the development of colon polyps. The other authors are scientists and physicians at CPMC.

Chen LC, Hao CY, Chiu YS, Wong P, Melnick JS, Brotman M, Moretto J, Mendes F, Smith AP, Bennington JL, Moore D, Lee NM. Alteration of gene expression in normal-appearing colon mucosa of APC(min) mice and human cancer patients. *Cancer Res* 2004;64(10):3694-700.

Chen LC, Smith A, Ben Y, Zukic B, Ignacio S, Moore D, Lee NM. Temporal gene expression patterns in G93A/SOD1 mouse. *Amyotroph Lateral Scler Other Motor Neuron Disord* 2004;5(3):164-71.

Steve Cummings, MD, FACP (scummings@sfcc-cpmc.net)

Dr. Cummings does research in women's health, especially breast cancer and osteoporosis, and in longevity. In a report in *Obstetrics and Gynecology*, Dr. Cummings and his colleagues reported some of the important side effects of raloxifene.

Grady D, Ettinger B, Moscarelli E, Plouffe L, Jr., Sarkar S, Ciaccia A, **Cummings S.** Safety and adverse effects associated with raloxifene: multiple outcomes of raloxifene evaluation. *Obstet Gynecol* 2004;104(4):837-44.

Bouxsein ML, Kaufman J, Tosi L, **Cummings S,** Lane J, Johnell O. Recommendations for optimal care of the fragility fracture patient to reduce the risk of future fracture. *J Am Acad Orthop Surg* 2004;12(6):385-95.

Chapurlat RD, Palermo L, Ramsay P, **Cummings SR.** Risk of fracture among women who lose bone density during treatment with alendronate. *The Fracture Intervention Trial. Osteoporos Int* 2004.

Coleman AL, Stone K, Ewing SK, Nevitt M, **Cummings S,** Cauley JA, et al. Higher risk of multiple falls among elderly women who lose visual acuity. *Ophthalmology* 2004;111(5):857-62.

Ettinger B, Ensrud KE, Wallace R, Johnson KC, **Cummings SR,** Yankov V, et al. Effects of ultralow-dose transdermal estradiol on bone mineral density: a randomized clinical trial. *Obstet Gynecol* 2004;104(3):443-51.

Jamal SA, Leiter RE, Bayoumi AM, Bauer DC, **Cummings SR.** Clinical utility of laboratory testing in women with osteoporosis. *Osteoporos Int* 2004.

Jamal SA, **Cummings SR,** Hawker GA. Isosorbide mononitrate increases bone formation and decreases bone resorption in postmenopausal women: a randomized trial. *J Bone Miner Res* 2004;19(9):1512-7.

Kanaya AM, Harris T, Goodpaster BH, Tyllavsky F, **Cummings SR.** Adipocytokines attenuate the association between visceral adiposity and diabetes in older adults. *Diabetes Care* 2004;27(6):1375-80.

Martino S, Cauley JA, Barrett-Connor E, Powles TJ, Mershon J, Disch D, Secretst RJ, **Cummings SR.** Continuing outcomes relevant to Evista: breast cancer incidence in postmenopausal osteoporotic women in a randomized trial of raloxifene. *J Natl Cancer Inst* 2004;96(23):1751-61.

Moffett SP, Zmuda JM, Cauley JA, Stone KL, Nevitt MC, Ensrud KE, Hillier TA, Hochberg MC, Joslyn G, Morin P, **Cummings SR.** Association of the G-174C variant in the

interleukin-6 promoter region with bone loss and fracture risk in older women. *J Bone Miner Res* 2004;19(10):1612-8.

Nevitt MC, **Cummings SR**, Stone KL, Palermo L, Black DM, Bauer DC, et al. Risk factors for a first-incident radiographic vertebral fracture in women > or = 65 years of age: the study of osteoporotic fractures. *J Bone Miner Res* 2005;20(1):131-40.

Olszynski WP, Shawn Davison K, Adachi JD, Brown JP, **Cummings SR**, Hanley DA, et al. Osteoporosis in men: epidemiology, diagnosis, prevention, and treatment. *Clin Ther* 2004;26(1):15-28.

Stone KL, Bauer DC, Sellmeyer D, **Cummings SR**. Low serum vitamin B-12 levels are associated with increased hip bone loss in older women: a prospective study. *J Clin Endocrinol Metab* 2004;89(3):1217-21.

Taylor BC, Schreiner PJ, Stone KL, Fink HA, **Cummings SR**, Nevitt MC, et al. Long-term prediction of incident hip fracture risk in elderly white women: study of osteoporotic fractures. *J Am Geriatr Soc* 2004;52(9):1479-86.

Waetjen LE, Brown JS, Modelska K, Blackwell T, Vittinghoff E, **Cummings SR**. Effect of raloxifene on urinary incontinence: a randomized controlled trial. *Obstet Gynecol* 2004;103(2):261-6.

Wong SY, Lau EM, Lynn H, Leung PC, Woo J, **Cummings SR**, et al. Depression and bone mineral density: is there a relationship in elderly Asian men? Results from Mr. Os (Hong Kong). *Osteoporos Int* 2004.

Ziv E, Tice J, Smith-Bindman R, Shepherd J, **Cummings S**, Kerlikowske K. Mammographic density and estrogen receptor status of breast cancer. *Cancer Epidemiol Biomarkers Prev* 2004;13(12):2090-5.

See also Warren Browner

Shanaz Dairkee, PhD (dairkees@sutterhealth.org)

Dr. Dairkee and her colleagues study the characteristics of breast cancer cells. The first paper describes some of the findings from the model systems that her lab uses to study breast cancer. Drs. Meng and Ben were members of her lab.

Meng ZH, Ben Y, Li Z, Chew K, Ljung BM, Lagios MD, **Dairkee SH**. Aberrations of breast cancer susceptibility genes occur early in sporadic breast tumors and in acquisition of breast epithelial immortalization. *Genes Chromosomes Cancer* 2004;41(3):214-22.

Dairkee SH, Ji Y, **Ben Y, Moore DH, Meng Z**, Jeffrey SS. A molecular 'signature' of primary breast cancer cultures; patterns resembling tumor tissue. *BMC Genomics* 2004;5(1):47.

Robert Debs, MD (debsrj@sutterhealth.org)

Dr. Debs studies the delivery of genes to specific cells and tissues. The first paper shows how nuclear delivery of extracellular DNA by nonviral vectors is inhibited by a series of cell membrane and compartmental barriers. Dr. Sylvia Fong is a post-doc in his laboratory; Paul Fong is a research technician.

Fong S, Liu Y, Heath T, **Fong P**, Liggitt D, **Debs RJ**. Membrane-permeant, DNA-binding agents alter intracellular trafficking and increase the transfection efficiency of complexed plasmid DNA. *Mol Ther* 2004;10(4):706-18.

Nosrati M, Li S, Bagheri S, Ginzinger D, Blackburn EH, **Debs RJ**, et al. Antitumor activity of systemically delivered ribozymes targeting murine telomerase RNA. *Clin Cancer Res* 2004;10(15):4983-90.

Goncalves E, **Debs RJ**, Heath TD. The effect of liposome size on the final lipid/DNA ratio of cationic lipoplexes. *Biophys J* 2004;86(3):1554-63.

Kashani-Sabet M, Shaikh L, Miller JR, 3rd, Nosrati M, Ferreira CM, **Debs RJ**, et al. NF-kappa B in the vascular progression of melanoma. *J Clin Oncol* 2004;22(4):617-23.

See also Pierre Desprez

Pierre Desprez, PhD (desprepy@sutterhealth.org)

The Desprez laboratory studies the early changes that occur in cancer cells, especially breast and prostate cancer. In a paper published in *Cancer Research*, they reported how progesterone affects breast cancer cells. Dr. Sumida was a post-doc in the lab; Yoko Itahana and J. P. Coppe were graduate students.

Sumida T, Itahana Y, Hamakawa H, **Desprez PY**. Reduction of human metastatic breast cancer cell aggressiveness on introduction of either form a or B of the progesterone receptor and then treatment with progestins. *Cancer Res* 2004;64(21):7886-92.

Coppe JP, Itahana Y, Moore DH, Bennington JL, Desprez PY. Id-1 and Id-2 proteins as molecular markers for human prostate cancer progression. *Clin Cancer Res* 2004;10(6):2044-51.

Fong S, Debs RJ, Desprez PY. Id genes and proteins as promising targets in cancer therapy. *Trends Mol Med* 2004;10(8):387-92.

Joanna Fanos, PhD (fanosj@sutterhealth.org)

Dr. Fanos studies the effects of genetic testing on patients' psychological health; a recent paper discusses the attitudes of members of families that have a hereditary form of ALS.

Fanos JH, Gelinis D, Miller R. You have shown me my end. Attitudes toward presymptomatic testing for familial amyotrophic lateral sclerosis. *Amer J Med Genet* 2004; 129A:248-253.

Andrew Freinkel, MD (freinkaj@sutterhealth.org)

See Garret Yount

Gantt Galloway, PharmD (gallowg@sutterhealth.org)

Dr. Galloway studies why people get addicted to drugs and what we can do about it. In the first paper he discusses studies of Motivational Enhancement Therapy in improving motivation for change and decreasing substance use. Michelle Salinardi is a research associate in the Addiction Pharmacology Research Laboratory (APRL).

Polcin DL, **Galloway GP**, Palmer J, Mains W. The case for high-dose motivational enhancement therapy. *Subst Use Misuse* 2004;39(2):331-43.

Anton RF, Pettinati H, Zweben A, Kranzler HR, Johnson B, Bohn MJ, McCaul ME, Anthenelli R, Salloum I, **Galloway G**, et al. A multi-site dose ranging study of nalmefene in the treatment of alcohol dependence. *J Clin Psychopharmacol* 2004;24(4):421-8.

Zweben JE, Cohen JB, Christian D, **Galloway GP**, **Salinardi M**, Parent D, et al. Psychiatric symptoms in methamphetamine users. *Am J Addict* 2004;13(2):181-90.

Rawson RA, Marinelli-Casey P, Anglin MD, Dickow A, Frazier Y, Gallagher C, **Galloway GP**, et al. A multi-site comparison of psychosocial approaches for the treatment of methamphetamine dependence. *Addiction* 2004;99(6):708-17.

Kranzler HR, Wesson DR, Billot L, for the DAS Naltrexone Depot Study Group (2004). Naltrexone Depot for Treatment of Alcohol Dependence: A Multi-Center, Randomized, Placebo-Controlled Clinical Trial (**GP Galloway** listed as DAS Naltrexone Depot Study Group [2004] participant). *Alcoholism: Clinical and Experimental Research*, 28(7):1051-1059.

Polcin DL, **Galloway G**, Taylor K, Benowitz-Fredericks A (2004). Why we need to study sober living houses. *Counselor*, 5(5):36-41.

Deborah Gelinas, MD (gelinad@sutterhealth.org)

Dr. Gelinas studies the causes and effects of ALS. This paper suggests that N-acetylaspartate (NAA) may not be a useful surrogate marker for treatment trials of ALS.

Rule RR, Suhy J, Schuff N, **Gelinas DF**, **Miller RG**, Weiner MW. Reduced NAA in motor and non-motor brain regions in amyotrophic lateral sclerosis: a cross-sectional and longitudinal study. *ALS & Other motor neuron discords*. 2004;5:141-149.

See also Joanna Fanos and Robert Miller.

Robert Gish, MD (gishr@sutterhealth.org)

Dr. Gish does clinical research in patients with hepatitis and other forms of liver disease. The first article reports the effects of interferon alpha and ribavirin combination therapy on blood counts. Dr. Wakil is a colleague at CPMC.

Sulkowski MS, Wasserman R, Brooks L, Ball L, **Gish R**. Changes in haemoglobin during interferon alpha-2b plus ribavirin combination therapy for chronic hepatitis C virus infection. *J Viral Hepat* 2004;11(3):243-50.

Gish RG, Wakil A. Hepatitis B in liver transplant recipients as a special model of antiviral drug development. *Methods Mol Med* 2004;96:319-41.

Jazayeri M, Basuni AA, Sran N, **Gish R**, Cooksley G, Locarnini S, et al. HBV core sequence: definition of genotype-specific variability and correlation with geographical origin. *J Viral Hepat* 2004;11(6):488-501.

Sugauchi F, Kumada H, Acharya SA, Shrestha SM, Gamutan MT, Khan M, **Gish RG**, et al. Epidemiological and sequence differences between two subtypes (Ae and Aa) of hepatitis B virus genotype A. *J Gen Virol* 2004;85(Pt 4):811-20.

Dieter Gruenert, PhD (gruededc@sutterhealth.org)

Dr. Gruenert studies how to correct genetic errors in diseases such as cystic fibrosis using small fragments of DNA. The first article discusses the benefits of the development of immortalized cell lines.

Gruenert DC, Willems M, Cassiman JJ, Frizzell RA. Established cell lines used in cystic fibrosis research. *J Cyst Fibros* 2004;3 Suppl 2:191-6.

Gruenert DC, Kunzelmann K, Novelli G, Colosimo A, Kapsa R, Bruscia E. Oligonucleotide-based gene targeting approaches. *Oligonucleotides* 2004;14(2):157-8; author reply 158-60.

Kenneth Laxer, MD (laxerkd@sutterhealth.org)

Dr. Laxer studies the use of modern technologies like magnetic resonance imaging (MRI) in the diagnosis and treatment of epilepsy. The first paper investigated the role of magnetoencephalography (MEG) in localizing the seizure focus in predicting outcomes.

Assaf BA, Karkar KM, **Laxer KD**, Garcia PA, Austin EJ, Barbaro NM, et al. Magnetoencephalography source localization and surgical outcome in temporal lobe epilepsy. *Clin Neurophysiol* 2004;115(9):2066-76.

Sloviter RS, Kudrimoti HS, **Laxer KD**, Barbaro NM, Chan S, Hirsch LJ, et al. "Tectonic" hippocampal malformations in patients with temporal lobe epilepsy. *Epilepsy Res* 2004;59(2-3):123-53.

Mueller SG, **Laxer KD**, Cashdollar N, Flenniken DL, Matson GB, Weiner MW. Identification of abnormal neuronal metabolism outside the seizure focus in temporal lobe epilepsy. *Epilepsia* 2004;45(4):355-66.

Nancy M. Lee, PhD (leenm@sutterhealth.org)

Dr. Lee and her colleagues study how opioid receptors work. This paper concludes that a high degree of tolerance to certain chemicals develops in the spinal cord but not the brain, and cannot be accounted for by changes in expression of opioid receptors or opioid peptides in these tissues. Dr. Ben was a postdoctoral candidate in Dr. Lee's lab. Andy Smith is a research associate.

Ben Y, Smith AP, Schiller PW, Lee NM. Tolerance develops in spinal cord, but not in brain with chronic [Dmt1]DALDA treatment. *Br J Pharmacol* 2004;143(8):987-93.

See also Ling-Chun Chen

Vishwanath (Vishu) Lingappa, MD, PhD (lingapv@sutterhealth.org)

Dr. Lingappa studies how protein folding can lead to disease. This paper reveals previously unappreciated relationship between signal sequences and transmembrane integration.

Ott CM, **Lingappa VR.** Signal sequences influence membrane integration of the prion protein. *Biochemistry* 2004;43(38):11973-82.

Jian Liu, PhD (liuj@sutterhealth.org)

Dr. Liu studies the process of neurodegeneration in ALS. This paper discusses the mechanism of toxicity to motor neurons in ALS.

Liu J, Lillo C, Jonsson PA, Vande Velde C, Ward CM, Miller TM, et al. (2004) Toxicity of familial ALS-linked SOD1 mutants from selective recruitment to spinal mitochondria. *Neuron* 43:5-17.

Elliott Main, MD (maine@sutterhealth.org)

Dr. Main studies how to improve the outcomes of pregnant women. The first paper listed below reflects the results of a study of the consistency of maternal and neonatal measures in various Sutter Health medical centers.

Main EK, Bloomfield L, Hunt G. Development of a large-scale obstetric quality-improvement program that focused on the nulliparous patient at term. *Am J Obstet Gynecol* 2004;190(6):1747-56; discussion 1756-8.

Gould JB, Danielsen B, Korst LM, Phibbs R, Chance K, **Main E,** et al. Cesarean delivery rates and neonatal morbidity in a low-risk population. *Obstet Gynecol* 2004;104(1):11-9.

Sean McAllister, PhD (mcallis@sutterhealth.org)

Dr. McAllister does research on the cannabinoid receptor. This paper reports a detailed functional analysis of certain mutant receptors in stable cell lines in which the mutant proteins were expressed transiently.

McAllister SD, Hurst DP, Barnett-Norris J, Lynch D, Reggio PH, Abood ME. Structural mimicry in class A G protein-coupled receptor rotamer toggle switches: the importance of the F3.36(201)/W6.48(357) interaction in cannabinoid CB1 receptor activation. *J Biol Chem* 2004;279(46):48024-37.

See also Mary Abood

John Mendelson, MD (mendelje@sutterhealth.org)

Dr. Mendelson studies the pharmacokinetics of substance abuse. The first paper below discusses how plasma buprenorphine concentrations are related to its pharmacodynamic effects. Dr. Mendelson is the Director of the Addiction Pharmacology Research Laboratory (APRL).

Harris DS, **Mendelson JE**, Lin ET, Upton RA, Jones RT. Pharmacokinetics and subjective effects of sublingual buprenorphine, alone or in combination with naloxone: lack of dose proportionality. *Clin Pharmacokinet* 2004;43(5):329-40.

Uemura N, Nath RP, Harkey MR, Henderson GL, **Mendelson J**, Jones RT. Cocaine levels in sweat collection patches vary by location of patch placement and decline over time. *J Anal Toxicol* 2004;28(4):253-9.

Robert Miller, MD (millerrx@sutterhealth.org)

Dr. Miller studies treatments for ALS. The first paper below reports the results of two double-blind, randomized, placebo-controlled feasibility trials.

Gordon PH, **Moore DH**, **Gelinas DF**, Qualls C, Meister ME, Werner J, Mendoza M, Mass J, Kushner G, **Miller RG**. Placebo-controlled phase I/II studies of minocycline in amyotrophic lateral sclerosis. *Neurology* 2004. 62(10):1845-1847.

Ng A, Kent-Braun JA, **Miller RG** et al. Functional relationships of central and peripheral muscle alterations in multiple sclerosis. *Muscle Nerve* 2004; 29:843-852.

Annane D, **Miller R**, Barnes P. Psychostimulants for hypersomnia (excessive daytime sleepiness) in myotonic dystrophy (Cochrane Review). In: *The Cochrane Library*, Issue 2, 2004. Chichester, UK: John Wiley & Sons, Ltd. CD003218.

Miller RG, Mitchell JD, Lyon M, **Moore DH**. Riluzole for amyotrophic lateral sclerosis (ALS)/motor neuron disease (MND). *Cochrane Neuromuscular Disease Group Cochrane Database of Systematic Reviews*. 2, 2004.

See also Joanna Fanos, Deborah Gelinas and Dan Moore.

Dan Moore, PhD (mooredx@sutterhealth.org)

Dr. Moore is a biostatistician who works with many CPMCRI investigators and physicians. For example, he worked with Dr. Miller to describe designs for clinical trials in ALS including two that are more efficient than the standard two-arm, parallel design.

Moore DH, 2nd, Miller RG. Improving efficiency of ALS clinical trials using lead-in designs. *Amyotroph Lateral Scler Other Motor Neuron Disord* 2004;5 Suppl 1:57-60.

Hwang ES, DeVries S, Chew KL, **Moore DH, 2nd**, Kerlikowske K, Thor A, et al. Patterns of chromosomal alterations in breast ductal carcinoma in situ. *Clin Cancer Res* 2004;10(15):5160-7.

Kosanke S, Edgerton SM, **Moore D, 2nd**, Yang X, Mason T, Alvarez K, et al. Mammary tumor heterogeneity in wt-ErbB-2 transgenic mice. *Comp Med* 2004;54(3):280-7.

Ljung BM, Chew KL, **Moore DH, 2nd**, King EB. Cytology of ductal lavage fluid of the breast. *Diagn Cytopathol* 2004;30(3):143-50.

Nakao K, Mehta KR, Fridlyand J, **Moore DH**, Jain AN, Lafuente A, et al. High-resolution analysis of DNA copy number alterations in colorectal cancer by array-based comparative genomic hybridization. *Carcinogenesis* 2004;25(8):1345-57.

Strohmeier DM, Berger AP, **Moore DH, 2nd**, Bartsch G, Klocker H, Carroll PR, et al. Genetic aberrations in prostate carcinoma detected by comparative genomic hybridization and microsatellite analysis: association with progression and angiogenesis. *Prostate* 2004;59(1):43-58.

Gordon PH, **Miller RG, Moore DH**. ALSFRS-R. *ALS & Other Motor Neuron Disorders* 2004; 5 Suppl 1:90-93.

See also Mary Abood, Ling-Chun Chen, Shanaz Dairkee, Pierre Desprez, Robert Miller, and Garret Yount

John Muschler, PhD (muschldl@sutterhealth.org)

Dr. Muschler conducts research on how cells interact with their surroundings. The first paper below suggests how alterations in a particular protein (dystroglycan) occur in cancer cells. Dr. Singh was a post-doc in Dr. Muschler's lab; Yoko Itahana was a graduate student.

Singh J, Itahana Y, Knight-Krajewski S, Kanagawa M, Campbell KP, Bissell MJ, **Muschler J**. Proteolytic enzymes and altered glycosylation modulate dystroglycan function in carcinoma cells. *Cancer Res* 2004;64(17):6152-9.

Kanagawa M, Saito F, Kunz S, Yoshida-Moriguchi T, Barresi R, Kobayashi YM, **Muschler J**, et al. Molecular recognition by LARGE is essential for expression of functional dystroglycan. *Cell* 2004;117(7):953-64.

Tom Musci, MD (muscit@sutterhealth.org)

Dr. Musci studies neonatal genetics and other perinatal issues. This paper studies rates of pregnancy complications.

Caughey AB, **Musci TJ**. Complications of term pregnancies beyond 37 weeks of gestation. *Obstet Gynecol* 2004;103(1):57-62.

Tom Nuckton, MD (nucktot@sutterhealth.org)

Dr. Nuckton does clinical research in patients with lung disease. This paper reports results of a study on patients with acute lung injury who received mechanical ventilation.

The National Heart, Lung, and Blood Institute ARDS Clinical Trials Network. Higher versus lower positive end-expiratory pressures in patients with the acute respiratory distress syndrome. *N Engl J Med*. 2004; 351(4): 327-336.

Marilyn Schlitz, PhD (schlitz@noetic.org)

See Garret Yount

Cassandra Vieten, PhD (vietenc@sutterhealth.org)

Dr. Vieten studies how the mind influences the body. This paper reports on a study designed to identify genetic influences on alcohol dependence and related phenotypes.

Vieten C, Seaton KL, Feiler HS, Wilhelmsen KC. The University of California, San Francisco Family Alcoholism Study. I. Design, methods, and demographics. *Alcohol Clin Exp Res* 2004;28(10):1509-16.

Seaton KL, Cornell JL, Wilhelmsen KC, **Vieten C**. Effective strategies for recruiting families ascertained through alcoholic probands. *Alcohol Clin Exp Res* 2004;28(1):78-84.

Li-Xi Yang, MD, PhD (yangl@sutterhealth.org)

Dr. Yang is investigating the effects of novel chemotherapeutic agents to enhance the effects of radiotherapy for the treatment of cancer. The first paper below discusses how antitumor activity was evaluated on cancer cells in vitro. Dr. Wang works in Dr. Yang's laboratory.

Yang LX, Pan X, **Wang HJ**. Novel camptothecin derivatives. Part 1: oxyalkanoic acid esters of camptothecin and their in vitro and in vivo antitumor activity. *Bioorg Med Chem Lett* 2002;12(9):1241-4

Ro S, **Yang LX**. Centrosomes--their role in tumors and cancer therapy. *Anticancer Res* 2004;24(5B):3269-73.

Wang CY, Pan XD, Liu HY, Fu ZD, Wei XY, **Yang LX**. Synthesis and antitumor activity of 20-O-linked nitrogen-based camptothecin ester derivatives. *Bioorg Med Chem* 2004;12(13):3657-62.

Lowell Young, MD (younglx@sutterhealth.org)

Dr. Young studies treatments for mycobacterial infection. This paper describes the effects of different antibiotics on blood cells.

Young LS. Hematologic effects of linezolid versus vancomycin. *Clin Infect Dis.* 38;1065-6, 2004

See also Luiz Bermudez.

Garret Yount, PhD (yountg@sutterhealth.org)

Dr. Yount is exploring how promising complementary and alternative medical therapies might be integrated with conventional medicine in the treatment of patients with cancer. The

first paper below reports the results of studies on human brain cells. Ryan Taft and Jeremy West worked in Dr. Yount's laboratory.

Radin D, **Yount G**. Effects of healing intention on cultured cells and truly random events. *J Altern Complement Med* 2004;10(1):103-12.

Yount G, Solfvin J, **Moore D**, **Schlitz M**, Reading M, Aldape K, et al. In vitro test of external Qigong. *BMC Complement Altern Med* 2004;4(1):5.

Yount G, Qian Y, **Moore D**, Basila D, West J, Aldape K, et al. Berberine sensitizes human glioma cells, but not normal glial cells, to ionizing radiation in vitro. *J Exp Ther Oncol* 2004;4(2):137-43.

Yount G, Smith S, Avanozian V, West J, **Moore D**, **Freinkel A**. Biofield perception: a series of pilot studies with cultured human cells. *J Altern Complement Med* 2004;10(3):463-7.

Yount G, **Taft R**, **West J**, **Moore D**. Possible influence of infrasound on glioma cell response to chemotherapy: a pilot study. *J Altern Complement Med* 2004;10(2):247-50.