

Scientific Activities of the
California Pacific Medical Center Research Institute

2003 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 the recent manuscripts published in the peer-reviewed literature that describe their activities. For convenience, we have listed them by the laboratory, research group, or Principal Investigator (PI). We appreciate the contributions of many other scientists (including post-doctoral fellows and technicians) in the Research Institute.

Mary Abood, PhD (mabood@cooper.cpmc.org)

Dr. Abood's laboratory studies cannabinoid receptors on the surface of neurons and other cells. A paper by Sean McAllister, written when he was a post-doctoral fellow in her laboratory, describes some of their recent work.

See Sean McAllister

Saleh Adi, MD (adis@sutterhealth.org)

Dr. Adi is a pediatric endocrinologist who recently joined CPMC to pursue both clinical and research interests. He is studying the differentiation and development of muscle cells. This paper describes work, performed while he was on the faculty at Johns Hopkins, suggesting that two different molecular pathways have similar properties.

Dowell P, Otto TC, **Adi S**, Lane MD. Convergence of peroxisome proliferator-activated receptor gamma and Foxo1 signaling pathways. *J Biol Chem* 2003;278(46):45485-91.

John Astin, PhD (jastin@cooper.cpmc.org)

Dr. Astin's work involves an examination of barriers to the integration of psychosocial factors in medical training and practice. The first paper listed below reports the results of a clinical trial which found that treating fibromyalgia patients with a combination of mindfulness meditation and Qigong was not more effective than a control treatment.

Astin JA, Berman BM, Bausell B, Lee WL, Hochberg M, Forsys KL. The efficacy of mindfulness meditation plus Qigong movement therapy in the treatment of fibromyalgia: a randomized controlled trial. *J Rheumatol* 2003;30(10):2257-62.

Astin JA, Shapiro SL, Eisenberg DM, Forsys KL. Mind-body medicine: state of the science, implications for practice. *J Am Board Fam Pract* 2003;16(2):131-47.

Dusek JA, **Astin JA**, Hibberd PL, Krucoff MW. Healing prayer outcomes studies: consensus recommendations. *Altern Ther Health Med* 2003;9(3 Suppl):A44-53.

James L. Bennington, MD (jlbenn@cooper.cpmc.org)

Dr. Bennington is a clinical pathologist at California Pacific Medical Center and works closely with many of our PI's in cancer research. His work with Dr. Desprez is reported in two manuscripts describing the role of specific proteins (Id-1 and Id-2) in breast cancer.

See Pierre Desprez

Warren Browner, MD, MPH (warren@cooper.cpmc.org)

Dr. Browner studies the epidemiology of cardiovascular disease and osteoporosis. The first paper below presents the results of a study which found that postmenopausal women who had fractures were less likely to have recurrent coronary events.

Varosy PD, Shlipak MG, Vittinghoff E, Black DM, Herrington D, Hulley SB, **Browner WS**. Fracture and the risk of coronary events in women with heart disease. *Am J Med* 2003;115(3):196-202.

Ansari M, Shlipak MG, Heidenreich PA, Van Ostaeyen D, Pohl EC, **Browner WS**, et al. Improving guideline adherence: a randomized trial evaluating strategies to increase beta-blocker use in heart failure. *Circulation* 2003;107(22):2799-804.

Beattie MS, Shlipak MG, Liu H, **Browner WS**, Schiller NB, Whooley MA. C-reactive protein and ischemia in users and nonusers of beta-blockers and statins: data from the Heart and Soul Study. *Circulation* 2003;107(2):245-50.

Ruo B, Rumsfeld JS, Hlatky MA, Liu H, **Browner WS**, Whooley MA. Depressive symptoms and health-related quality of life: the Heart and Soul Study. *JAMA* 2003;290(2):215-21.

Ziv E, Kahn A, Cauley J, Morin P, Saiz R, **Browner W**. No association between the TGF-beta 1 Leu10Pro polymorphism and osteoporosis among white women in the United States. *Am J Med* 2003;114(3):227-31.

See also Steve Cummings

Steve Cummings, MD, FACP (cummings@cooper.cpmc.org)

Dr. Cummings, who joined CPMC in 2003, does research in women's health, especially breast cancer and osteoporosis. For example, last year he published an article in *JAMA* (listed first) which reported that isoflavone-containing herbal medicines had minimal, if any, effects on menopausal symptoms.

Tice JA, Ettinger B, Ensrud K, Wallace R, Blackwell T, **Cummings SR**. Phytoestrogen supplements for the treatment of hot flashes: the Isoflavone Clover Extract (ICE) Study: a randomized controlled trial. *JAMA* 2003;290(2):207-14.

Bent S, Xu L, Lui LY, Nevitt M, Schneider E, Tian G, Guo S, **Cummings, S**. A randomized controlled trial of a Chinese herbal remedy to increase energy, memory, sexual function, and quality of life in elderly adults in Beijing, China. *Am J Med* 2003;115(6):441-7.

Cauley JA, Zmuda JM, Lui LY, Hillier TA, Ness RB, Stone KL, **Cummings SR**, et al. Lipid-lowering Drug use and breast cancer in older women: a prospective study. *J Women's Health (Larchmt)* 2003;12(8):749-56.

Cauley JA, Zmuda JM, Danielson ME, Ljung BM, Bauer DC, **Cummings SR**, et al. Estrogen metabolites and the risk of breast cancer in older women. *Epidemiology* 2003;14(6):740-4.

Cauley JA, Robbins J, Chen Z, **Cummings SR**, Jackson RD, LaCroix AZ, et al. Effects of estrogen plus progestin on risk of fracture and bone mineral density: the Women's Health Initiative randomized trial. *JAMA* 2003;290(13):1729-38.

Chapurlat RD, Bauer DC, Nevitt M, Stone K, **Cummings SR**. Incidence and risk factors for a second hip fracture in elderly women. *The Study of Osteoporotic Fractures. Osteoporosis Int* 2003;14(2):130-6.

Ensrud KE, Ewing SK, Stone KL, Cauley JA, Bowman PJ, **Cummings SR**. Intentional and unintentional weight loss increase bone loss and hip fracture risk in older women. *J Am Geriatric Soc* 2003;51(12):1740-7.

Fink HA, Ensrud KE, Nelson DB, Kerani RP, Schreiner PJ, Zhao Y, **Cummings SR**, et al. Disability after clinical fracture in postmenopausal women with low bone density: the fracture intervention trial (FIT). *Osteoporosis Int* 2003;14(1):69-76.

Gregg EW, Cauley JA, Stone K, Thompson TJ, Bauer DC, **Cummings SR**, et al. Relationship of changes in physical activity and mortality among older women. *JAMA* 2003;289(18):2379-86.

Hillier TA, Rizzo JH, Pedula KL, Stone KL, Cauley JA, Bauer DC, **Cummings SR**. Nulliparity and fracture risk in older women: the study of osteoporotic fractures. *J Bone Miner Res* 2003;18(5):893-9.

Kado DM, Duong T, Stone KL, Ensrud KE, Nevitt MC, Greendale GA, **Cummings SR**. Incident vertebral fractures and mortality in older women: a prospective study. *Osteoporosis Int* 2003;14(7):589-94.

Lane NE, Williams EN, Hung YY, Hochberg MC, **Cummings SR**, Nevitt MC. Association of nitrate use with risk of new radiographic features of hip osteoarthritis in elderly white women: the study of osteoporotic fractures. *Arthritis Rheum* 2003;49(6):752-8

Modelska K, **Cummings S**. Female sexual dysfunction in postmenopausal women: systematic review of placebo-controlled trials. *Am J Obstet Gynecol* 2003;188(1):286-93.

Sim I, **Cummings SR**. A new framework for describing and quantifying the gap between proof and practice. *Med Care* 2003;41(8):874-81.

Stone KL, Seeley DG, Lui LY, Cauley JA, Ensrud K, **Browner WS**, Nevitt MC, **Cummings, SR**. BMD at multiple sites and risk of fracture of multiple types: long-term results from the Study of Osteoporotic Fractures. *J Bone Miner Res* 2003;18(11):1947-54.

Tice JA, **Browner W**, Tracy RP, **Cummings SR**. The relation of C-reactive protein levels to total and cardiovascular mortality in older U.S. women. *Am J Med* 2003;114(3):199-205.

Shanaz Dairkee, PhD (shanaz@cooper.cpmc.org)

Dr. Dairkee and her colleagues study the characteristics of breast cancer cells. This manuscript describes work done with her colleagues looking at genetic differences in two types of breast cancer.

Korkola JE, DeVries S, Fridlyand J, Hwang ES, Estep AL, Chen YY, Chew KL, **Dairkee SH**, et al. Differentiation of lobular versus ductal breast carcinomas by expression microarray analysis. *Cancer Res* 2003;63(21):7167-75.

Robert Debs, MD (debs@cooper.cpmc.org)

Dr. Debs studies the delivery of genes to specific cells and tissues. In a paper published in *PNAS*, his laboratory used gene transfer techniques to determine the function of two related genes in cancer. Drs. Liu, Fong, and Maibaum were post-docs in his laboratory; Eric Alonzo was a research assistant.

Fong S, Mounkes L, **Liu Y**, **Maibaum M**, **Alonzo E**, **Desprez PY**, Thor AD, Kashani-Sabet M, **Debs RJ**. Functional identification of distinct sets of antitumor activities mediated by the FKBP gene family. *Proc Natl Acad Sci U S A* 2003;100(24):14253-8.

Liu Y, **Fong S**, **Debs RJ**. Cationic liposome-mediated gene delivery in vivo. *Methods Enzymol* 2003;373:536-50.

See also Pierre Desprez

Pierre Desprez, PhD (pdesprez@cooper.cpmc.org)

In the Desprez laboratory the early changes that occur in cancer cells are studied. Dr. Desprez and his colleagues have been working with the Id-1 and Id-2 proteins for several years; last year, he reported in *PNAS* that Id-1 is an important regulator of breast cancer metastasis. Drs. Fong, Itahana, Sumida, Singh, and Liu were all post-docs working in various labs at California Pacific Medical Center Research Institute. Jean Paul Coppe was a graduate student, and Andy Smith was a research associate.

Fong S, **Itahana Y**, **Sumida T**, **Singh J**, **Coppe JP**, **Liu Y**, Richards PC, **Bennington JL**, **Lee NM**, **Debs RJ**, **Desprez PY**. Id-1 as a molecular target in therapy for breast cancer cell invasion and metastasis. *Proc Natl Acad Sci U S A* 2003;100(23):13543-8.

Coppe JP, **Smith AP**, **Desprez PY**. Id proteins in epithelial cells. *Exp Cell Res* 2003;285(1):131-45.

Desprez PY, **Sumida T**, **Coppe JP**. Helix-loop-helix proteins in mammary gland development and breast cancer. *J Mammary Gland Biol Neoplasia* 2003;8(2):225-39.

Itahana Y, **Singh J**, **Sumida T**, **Coppe JP**, Parrinello S, **Bennington JL**, **Desprez PY**. Role of Id-2 in the maintenance of a differentiated and noninvasive phenotype in breast cancer cells. *Cancer Res* 2003;63(21):7098-105.

See also Robert Debs

Robert Gish, MD (gishr@sutterhealth.org)

Dr. Gish does clinical research in patients with hepatitis and other forms of liver disease. In a report published in the *Journal of Hepatology*, he and his colleagues reported the results of a clinical study showing that obtaining routine biopsy specimens more often than every 4 to 5 years was not necessary in patients with hepatitis C. Other CPMC physicians include Drs. Wakil and Garcia-Kennedy.

Berenguer M, Crippin J, **Gish R**, Bass N, Bostrom A, Netto G, et al. A model to predict severe HCV-related disease following liver transplantation. *Hepatology* 2003;38(1):34-41.

Di Bisceglie AM, Lyra AC, Schwartz M, Reddy RK, Martin P, Gores G, Lok AS, Hussain KB, **Gish R**, et al. Hepatitis C-related hepatocellular carcinoma in the United States: influence of ethnic status. *Am J Gastroenterol* 2003;98(9):2060-3.

Kato H, Orito E, Sugauchi F, Ueda R, Koshizaka T, Yanaka S, **Gish R**, et al. Frequent coinfection with hepatitis B virus strains of distinct genotypes detected by hybridization with type-specific probes immobilized on a solid-phase support. *J Virol Methods* 2003;110(1):29-35.

Poordad F, **Gish R**, **Wakil A**, **Garcia-Kennedy R**, Martin P, Yao FY. De novo non-alcoholic fatty liver disease following orthotopic liver transplantation. *Am J Transplant* 2003;3(11):1413-7.

Sugauchi F, Orito E, Ichida T, Kato H, Sakugawa H, Kakumu S, Ishida T, Chutaputti A, Lai CL, **Gish RG**, et al. Epidemiologic and virologic characteristics of hepatitis B virus genotype B having the recombination with genotype C. *Gastroenterology* 2003;124(4):925-32.

Westland C, Delaney Wt, Yang H, Chen SS, Marcellin P, Hadziyannis S, **Gish R**, et al. Hepatitis B virus genotypes and virologic response in 694 patients in phase III studies of adefovir dipivoxil. *Gastroenterology* 2003;125(1):107-16.

Zarski JP, Mc Hutchison J, Bronowicki JP, Sturm N, **Garcia-Kennedy R**, Hodaj E, Truta B, Wright T, **Gish R**. Rate of natural disease progression in patients with chronic hepatitis C. *J Hepatol* 2003;38(3):307-14.

Dieter Gruenert, PhD (dieter@cooper.cpmc.org)

Dr. Gruenert studies how to correct genetic errors like cystic fibrosis using small fragments of DNA. This method is reviewed in an article he published in the *Journal of Clinical Investigation*.

Gruenert DC, Bruscia E, Novelli G, Colosimo A, Dallapiccola B, Sangiuolo F, et al. Sequence-specific modification of genomic DNA by small DNA fragments. *J Clin Invest* 2003;112(5):637-41.

Semprini S, Collins CC, Goncz KC, Novelli G, **Gruenert DC**. Construction and purification of pSABR 01, a pUC19-derived vector optimized for cloning full-length cDNA. *Biotechnol Lett* 2003;25(15):1275-80.

Xu Z, Colosimo A, **Gruenert DC**. Site-directed mutagenesis using the megaprimer method. *Methods Mol Biol* 2003;235:203-7.

**Infection and Immunology Laboratory:
Luiz Bermudez, MD (luizb@cooper.cpmc.org) and
Lowell Young, MD (kiaid@cooper.cpmc.org)**

Members of the Infection and Immunology laboratory study the effects of different antibiotics on mycobacteria (including tuberculosis and *Mycobacterium avium*, a common cause of infection in patients with AIDS). A paper published in the *Journal of Infectious Diseases* suggested an alternative regimen for the treatment of *M. avium*. Peter Kolonoski, Mary Petrofsky and Martin Wu are research associates in the laboratory.

Bermudez LE, Kolonoski P, Petrofsky M, Wu M, Inderlied CB, Young LS. Mefloquine, moxifloxacin, and ethambutol are a triple-Drug alternative to macrolide-containing regimens for treatment of *Mycobacterium avium* disease. *J Infect Dis* 2003;187(12):1977-80.

Bermudez LE, Reynolds R, Kolonoski P, Aralar P, Inderlied CB, Young LS. Thiosemicarbazole (thiacetazone-like) compound with activity against *Mycobacterium avium* in mice. *Antimicrob Agents Chemotherapy* 2003;47(8):2685-7.

Kenneth Laxer, MD (laxer@cooper.cpmc.org)

Dr. Laxer studies the use of modern technologies like magnetic resonance imaging (MRI) in the diagnosis and treatment of epilepsy. He and his colleagues used MRI to suggest that recurrent seizures can damage parts of the brain that were normal initially (see first paper below).

Vermathen P, **Laxer KD**, Schuff N, Matson GB, Weiner MW. Evidence of neuronal injury outside the medial temporal lobe in temporal lobe epilepsy: N-acetylaspartate concentration reductions detected with multisection proton MR spectroscopic imaging--initial experience. *Radiology* 2003;226(1):195-202.

Alsaadi TM, Bateman LM, **Laxer KD**, Barbaro NM, Austin EJ, Garcia PA. Potentially misleading extratemporal lobe lesions in patients with temporal lobe epilepsy. *J Neurol Neurosurgery Psychiatry* 2003;74(5):566-9

Assaf BA, Karkar KM, **Laxer KD**, Garcia PA, Austin EJ, Barbaro NM, et al. Ictal magnetoencephalography in temporal and extratemporal lobe epilepsy. *Epilepsia* 2003;44(10):1320-7.

Mueller SG, **Laxer KD**, Suhy J, Lopez RC, Flenniken DL, Weiner MW. Spectroscopic metabolic abnormalities in mTLE with and without MRI evidence for mesial temporal sclerosis using hippocampal short-TE MRSI. *Epilepsia* 2003;44(7):977-80.

Nancy M. Lee, PhD (nml@cooper.cpmc.org)

Dr. Lee and her colleagues study how the opioid receptors work. A recent paper summarizes this work. Andy Smith was a research associate working with her.

Smith AP, Lee NM. Opioid receptor interactions: local and nonlocal, symmetric and asymmetric, physical and functional. *Life Sci* 2003;73(15):1873-93.

See also Pierre Desprez

Jian Liu, PhD (jjliu@cooper.cpmc.org)

Dr. Liu studies the process of neurodegeneration, especially for amyotrophic lateral sclerosis (ALS, or Lou Gehrig's disease). This paper describes pathways involved in the death of nerve cells that secrete dopamine.

O'Malley KL, **Liu J**, Lotharius J, Holtz W. Targeted expression of BCL-2 attenuates MPP+ but not 6-OHDA induced cell death in dopaminergic neurons. *Neurobiology Dis* 2003;14(1):43-51.

Sean McAllister, PhD (mcallis@sutterhealth.org)

Dr. McAllister is our newest investigator; he is studying the effects of the cannabinoid receptor in cancer cells. This paper describes his work showing that the cannabinoid receptor-1 (CB-1) has more than one "active site" (the region of a receptor that binds compounds). Dr. Anavi-Goffer was also a post-doc in Dr. Abood's lab.

McAllister SD, Rizvi G, **Anavi-Goffer S**, Hurst DP, Barnett-Norris J, Lynch DL, Reggio PH, **Abood ME**. An aromatic microdomain at the cannabinoid CB(1) receptor constitutes an agonist/inverse agonist binding region. *J Med Chem* 2003;46(24):5139-52.

Robert Miller, MD (rmiller@cooper.cpmc.org)

Dr. Miller studies treatments for ALS. Two of his papers review the current evidence about riluzole, the most common treatment for the disease.

Miller R. Riluzole for ALS: what is the evidence? *Amyotrophic Lateral Sclerosis Other Motor Neuron Disorder* 2003;4(3):135.

Miller RG, Mitchell JD, Lyon M, **Moore DH**. Riluzole for amyotrophic lateral sclerosis (ALS)/motor neuron disease (MND). *Amyotrophic Lateral Sclerosis Other Motor Neuron Disorder* 2003;4(3):191-206.

Bryan WW, Hoagland RJ, Murphy J, Armon C, Barohn RJ, Goodpasture JC, **Miller RG**, et al. Can we eliminate placebo in ALS clinical trials? *Amyotrophic Lateral Sclerosis Other Motor Neuron Disorders* 2003;4(1):11-5.

Dan Moore, PhD (moore@cooper.cpmc.org)

Dr. Moore is a biostatistician who works with many CPMCRI investigators and physicians. For example, he worked with Dr. Hightower on her report of the toxic effects of consuming fish that contain high levels of mercury.

Hightower JM, Moore D. Mercury levels in high-end consumers of fish. *Environ Health Perspect* 2003;111(4):604-8.

Benz CC, Clarke CA, **Moore DH, 2nd.** Geographic excess of estrogen receptor-positive breast cancer. *Cancer Epidemiology Biomarkers Prev* 2003;12(12):1523-7.

Benz CC, Thor AD, Eppenberger-Castori S, Eppenberger U, **Moore D, 2nd.** Understanding the age dependency of breast cancer biomarkers. *Adv Gerontol* 2003;11:117-20.

Edgerton SM, **Moore D, 2nd,** Merkel D, Thor AD. erbB-2 (HER-2) and breast cancer progression. *Appl Immunohistochem Mol Morphol* 2003;11(3):214-21.

Eskenazi B, Wyrobek AJ, Slotter E, Kidd SA, Moore L, Young S, **Moore D.** The association of age and semen quality in healthy men. *Hum Reprod* 2003;18(2):447-54.

Kerlikowske K, Molinaro A, Cha I, Ljung BM, Ernster VL, Stewart K, Chew K, **Moore DH 2nd,** et al. Characteristics associated with recurrence among women with ductal carcinoma in situ treated by lumpectomy. *J Natl Cancer Inst* 2003;95(22):1692-702.

Mitsumoto H, Davidson M, **Moore D,** Gad N, Brandis M, Ringel S, et al. Percutaneous endoscopic gastrostomy (PEG) in patients with ALS and bulbar dysfunction. *Amyotrophic Lateral Sclerosis Other Motor Neuron Disorders* 2003;4(3):177-85.

Shim V, Gauthier ML, Sudilovsky D, Mantei K, Chew KL, **Moore DH,** et al. Cyclooxygenase-2 expression is related to nuclear grade in ductal carcinoma in situ and is increased in its normal adjacent epithelium. *Cancer Res* 2003;63(10):2347-50.

Tucker JD, **Moore DH, 2nd,** Ramsey MJ, Kato P, Langlois RG, Burroughs B, et al. Multi-endpoint biological monitoring of phosphine workers. *Mutat Res* 2003;536(1-2):7-14.

See also Robert Miller

John Muschler, PhD (muschler@cooper.cpmc.org)

Dr. Muschler does research on how the extracellular matrix interacts with its surroundings. The first paper, written with Lynn Weir, a post-doc in his lab, reviews some of this work.

Weir ML, Muschler J. Dystroglycan: emerging roles in mammary gland function. *J Mammary Gland Biol Neoplasia* 2003;8(4):409-19.

Chevalier-Mariette C, Henry I, Montfort L, Capgras S, Forlani S, **Muschler J,** Nicolas JF. CpG content affects gene silencing in mice: evidence from novel transgenes. *Genome Biol* 2003;4(9):R53.

Tom Musci, MD (muscit@sutterhealth.org)

Dr. Musci studies neonatal genetics and other perinatal issues. Last year, he published a paper in *The American Journal of Obstetrics & Gynecology* on a common cause of infections in women giving birth.

Tran SH, Caughey AB, **Musci TJ**. Meconium-stained amniotic fluid is associated with puerperal infections. *Am J Obstet Gynecol* 2003;189(3):746-50.

Cotter PD, **Musci TJ**, Norton ME. Rapid prenatal diagnosis in translocation carriers by interphase FISH with chromosome-specific subtelomere probes. *Am J Med Genet* 2003;122A(1):1-5.

Tom Nuckton, MD (nuckton@cooper.cpmc.org)

Dr. Nuckton does clinical research in patients with lung disease. He and his colleagues reported the result of their study looking at lung fluid obtained from patients with severe lung disease.

Cheng IW, Ware LB, Greene KE, **Nuckton TJ**, Eisner MD, Matthay MA. Prognostic value of surfactant proteins A and D in patients with acute lung injury. *Crit Care Med* 2003;31(1):20-7.

Larry Scherwitz, PhD (larrys@cooper.cpmc.org)

Dr. Scherwitz studies the effects of complementary medicine. His paper in the *American Journal of Public Health* discussed the experience of patients seen at the Institute for Health and Healing clinic at CPMC. Pamela McHenry was a research assistant for Dr. Scherwitz.

Scherwitz L, Stewart W, **McHenry P**, Wood C, Robertson L, Cantwell M. An integrative medicine clinic in a community hospital. *Am J Public Health* 2003;93(4):549-52.

Koertge J, Weidner G, Elliott-Eller M, **Scherwitz L**, Merritt-Worden TA, Marlin R, et al. Improvement in medical risk factors and quality of life in women and men with coronary artery disease in the Multicenter Lifestyle Demonstration Project. *Am J Cardiol* 2003;91(11):1316-22.

Marilyn Schlitz, PhD (schlitz@noetic.org)

Dr. Schlitz studies unconventional therapies, such as distant healing. Her paper discusses criteria for evaluating studies in this area of research.

Schlitz M, Radin D, Malle BF, Schmidt S, Utts J, **Yount GL**. Distant healing intention: definitions and evolving guidelines for laboratory studies. *Altern Ther Health Med* 2003;9(3 Suppl):A31-43.

Li-Xi Yang, MD, PhD (yang@cooper.cpmc.org)

Dr. Yang is investigating the effects of novel chemotherapeutic agents to enhance the effects of radiotherapy for the treatment of cancer. This publication reports on how certain new drugs can kill cancer cells. Drs. Zhu and Wang were post-docs in Dr. Yang's laboratory.

Yang LX, Zhu J, Wang HJ, Holton RA. Enhanced apoptotic effects of novel paclitaxel analogs on NCI/ADR-RES breast cancer cells. *Anticancer Res* 2003;23(4):3295-301.

Garret Yount, PhD (yount@cooper.cpmc.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. His paper presents evaluation criteria for studies of bioenergy.

Hintz KJ, **Yount GL**, Kadar I, Schwartz G, Hammerschlag R, Lin S. Bioenergy definitions and research guidelines. *Altern Ther Health Med* 2003;9(3 Suppl):A13-30.

See also Marilyn Schlitz