Scientific Activities of the
California Pacific Medical Center Research Institute

A Compendium of Peer-Reviewed Publications

Fall 2001 through 2002
Scientists at the California Pacific Medical Center Research Institute are involved in a variety of laboratory and clinical research projects. This report includes a brief description of some of the recent manuscripts published in the peer-reviewed literature that describe their activities.

For convenience, we have listed work by the relevant 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.

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

Dr. Abood’s laboratory studies cell-surface receptor function. A recent project, led by Sean McAllister, PhD, a post-doctoral fellow in the lab, identified which amino acids in the cannabinoid receptor are essential for receptor function.


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

Dr. Astin joined us last year from the University of Maryland. He is a health psychologist, whose work involves an examination of barriers to the integration of psychosocial factors in medical training and practice. He studies whether treatments involving complementary and alternative medicines are effective in common medical conditions, such as headache and rheumatoid arthritis.


**PI: Eric Beattie, PhD.** ([beattie@cooper.cpmc.org](mailto:beattie@cooper.cpmc.org))

Dr. Beattie studies the regulation of receptors in nerve cells (neurons). His research focus involves determining how a particular chemical messenger, called tumor necrosis factor (TNF)-alpha, affects the strength of the “connection” between neurons.


**PI: Luiz Bermudez, MD** ([luiz.bermudez@oregonstate.edu](mailto:luiz.bermudez@oregonstate.edu))

Dr. Bermudez studies how mycobacteria (like *M. tuberculosis* and *M. avium*) and other organisms can penetrate the body to cause disease. Dr. Bermudez’ primary appointment is as a Professor in the Department of Biomedical Sciences at Oregon State University. Mary Petrofsky and Peter Kolonoski are CPMC research associates working with Dr. Bermudez.


Li YJ, Petrofsky M, Bermudez LE. Mycobacterium tuberculosis uptake by recipient host macrophages is influenced by environmental conditions in the granuloma of the infectious individual and is associated with impaired production of interleukin-12 and tumor necrosis factor alpha. Infect Immun 2002;70(11):6223-30.


**PI: Kenneth Binmoeller, MD** ([binmoek@sutterhealth.org](mailto:binmoek@sutterhealth.org))

As a gastroenterologist, Dr. Binmoeller has earned national and international distinction through his contributions to both research and clinical care, particularly in advanced endoscopic techniques.


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

Dr. Browner studies the association between osteoporosis and cardiovascular disease, as well as factors that affect the outcomes of care in patients with cardiovascular disease.


Beattie MS, Shlipak MG, Liu H, Browner WS, Schiller NB, Whooley MA. C-reactive protein P and ischemia in users and non-users of beta blockers and statins: Data from the Heart and Soul Study. Circulation; 2003; 107: 245-250.

PIs: Harry Buncke, MD and Greg Buncke, MD (See Microsurgical Laboratory.)

PI: Natalie Bzowej, MD (See Hepatology Research.)

PI: Ling-Chun Chen, PhD (ling@cooper.cpmc.org)

Dr. Chen’s lab studies the intracellular events in the development and progression of tumors.


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

Dr. Dairkee’s lab studies changes in breast cancer cells. A recent report from her laboratory showed that the risk of local recurrence of breast cancer was greater in women in which apparently normal cells around the tumor had evidence of genetic changes. Chandrasekaran Raman, PhD and Zhenhang Meng, MD are research associates in her lab.
PI: Robert Debs, MD (debs@cooper.cpmc.org)

Dr. Debs’ laboratory studies how to deliver genes to specific cells and tissues. The laboratory is particularly interested in what controls the efficiency of this process, known as “transfection.” Yong Liu, MD, Chak Handumrongkul, PhD and Sylvia Fong PhD are post-doctoral fellows in the laboratory.


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

The Desprez laboratory studies the late changes that occur in breast cancer cells, in particular the effects of a group of proteins, called Id-1 and Id-2, and how they are involved in the regulation of invasion and metastasis. Jarnail Singh was a post-doctoral fellow in the laboratory. Yoko Itahana is a research assistant.


PI: Daryl Drummond, PhD (See Liposome Laboratory.)

PI: Deborah Gelinas, MD (See Neuroscience Clinical Research.)
PI: Robert Gish, MD  (See Hepatology Research.)

PI: William Goodson, MD (whg3@cooper.cpmc.org)
Dr. Goodson studies better ways to diagnose and treat women with breast cancer. Along with biostatistical support from Dan Moore, PhD, he investigated factors associated with a delay in the diagnosis of breast cancer.


Heart Failure Research.  PIs: J. Donald Hill, MD (jdhill@cooper.cpmc.org) and Steven Reichenbach, PhD (reichen@thoratec.com)
Drs. Hill and and Reichenbach study heart failure, especially the use of artificial heart devices.


Hepatology Research. PIs: Natalie Bzowej, MD  (bzowejn@sutterhealth.org) and Robert Gish, MD  (gishr@sutterhealth.org)
This group studies the virology of hepatitis, which can be caused by several different viruses that may interact in some patients. They are also actively involved in identifying new treatments for patients with hepatitis infections.


PI: J Donald Hill, MD  (See Heart Failure Research.)
PI: Steve Katznelson, MD *(katznes@sutterhealth.org)*

Dr. Katznelson’s research involves the prevention of vascular disease in transplanted organs.


PI: Dmitri Kirpotin, PhD  *(See Liposome Laboratory.)*

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

Dr. Laxer studies the diagnosis and treatment of epilepsy and other brain disorders.


PI: Nancy M Lee, PhD *(nml@cooper.cpmc.org)*
Dr. Lee does research in opiate receptors in the brain in order to understand how pain and pain-relievers work. Andrew Smith, PhD works in her lab and Yong Ben, MD is a post-doctoral fellow there.


**PI: Ellen Levine, PhD (elevine@cooper.cpmc.org)**

Dr. Levine studies psychosocial influences on well-being in patients with severe illness, especially breast cancer. Several of her studies were done in collaboration with Dr. Elisabeth Targ, who passed away July 18, 2002.


**Liposome Laboratory. PI’s: Dmitri Kirpotin, PhD (dkirpo@cooper.cpmc.org), and Daryl Drummond, PhD (drummond@cooper.cpmc.org)**

The Liposome Laboratory develops new ways to package medications and genes to avoid toxicity and improve delivery. The liposomes (for drugs) or lipid-DNA complexes (for genes and oligonucleotides) are targeted to growth factor receptors that are overexpressed on the surface of certain cancer cells. This enhanced selectivity may result in reduced toxicity and increased efficacy, as described in several recent papers.


**Zhai X, Srivastava A, Drummond DC, Daleke D, Lentz BR.** Phosphatidylserine binding alters the conformation and specifically enhances the cofactor activity of bovine factor Va. Biochemistry 2002;41(17):5675-84.


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

Dr. Liu, who recently joined CPMCRI from the University of California San Diego, studies the causes of ALS (Lou Gehrig’s disease).


PI: Robert Miller, MD  (See Neuroscience Clinical Research.)

PI: John Mendelson, MD (jmendel@cooper.cpmc.org)

Dr. Mendelson studies the pharmacokinetics and toxic effects of drugs of abuse. Matt Baggott is a research associate in Dr. Mendelson’s lab.


Microsurgical Laboratory. PIs: Harry Buncke, MD (bunckeh@sutterhealth.org) and Greg Buncke, MD (bunckeg@sutterhealth.org)

The Buncke Clinic specializes in microsurgery, especially to the hand and other extremities. They are particularly well-known for their toe-to-thumb transplantation.


**PI: David Minor, MD (minord@sutterhealth.org)**

Dr. Minor has been studying new treatment for patients with kidney cancer.


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

Dr. Moore works with many scientists in the Research Institute to provide advanced statistical assistance.


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

Dr. Muschler and his associates study how breast cancer cells interact with their local environment.


**Neuroscience Clinical Research. PI’s: Robert Miller, MD** *(rmiller@cooper.cpmc.org)* **and Deborah Gelinas, MD** *(dgelinas@cooper.cpmc.org)*

Drs. Miller and Gelinas study how to care for and treat patients with neuromuscular disorders such as ALS (Lou Gehrig’s disease).

Borasio GD, **Miller RG**. Clinical characteristics and management of ALS. Semin Neurol 2001;21(2):155-66.


PI: Steven Reichenbach, PhD  (See Heart Failure Research.)

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

Dr. Yang develops and evaluates new treatments for cancer. Hui-Juan Wang is a senior research associate in Dr Yang’s laboratory.


