

Prostate Cancer Research and Clinical Database

Center for Prostate Disease Research (CPDR), a U.S Department of Defense program

CPDR Fact Sheet

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The Center for Prostate Disease Research (CPDR), a U.S Department of Defense program established in 1991 by the United States Congress, is one of the most successful and competitive academic organizations in the nation in the field of prostate cancer clinical and basic science research. It has the largest prostate cancer clinical center (WRAMC) and the largest and most comprehensive clinical database in the nation. The unique tissue bank, serum bank, cell bank, and the CPDR National Database have become national resources available for the benefit of the military and civilian world. The unique feature of CPDR is to integrate basic and clinical science to develop promising techniques in public screening, early diagnosis, optimal treatment, complication management, and outcome predictions of prostate disease.

The CPDR is unique in that it incorporates four distinct areas of prostate disease research into one comprehensive program. For more information about any of these CPDR Programs, please contact Justine Cowan, CPDR Communications Specialist, at (240) 453-8955 or jcowan@cpdr.org.

Basic Science Research Program – Headed by Dr. Shiv Srivastava, the Basic Research Program of the CPDR now includes twenty-five plus cancer researchers including an Associate Director, five Senior Investigators, a Laboratory Manager, Post-doctoral fellows, WRAMC Urology Residents, Research Assistants, and USUHS graduate medical students. The Basic Research Program team has developed a vigorous long-term research program and unique bio-resources with a team of dedicated researchers addressing molecular genetic alterations during onset or progression of prostate cancers. Collaborative efforts between molecular biologists, urologists and pathologists have led to the integration of basic and clinical research activities at CPDR. This allows rapid translation of basic research discoveries in the clinical arena e.g., evaluation of biomarkers for prostate cancer progression and identification of new targets for therapy. Also, prostate cancer gene discovery efforts using state-of-the-art global gene expression profiling and positional cloning strategies at CPDR are uncovering novel gene alterations in prostate cancer.

Recent Developments – Notable 2001 highlights include continued research on *PCGEM1*, a novel prostate-specific gene originally identified by CPDR researchers as a CaP-associated transcript. A comprehensive 3-year study of *PCGEM1*, supported by an NIH RO1 grant, (May 2000 – May 2003) is currently underway.

Another highlight is the discovery of *PSGR*, a highly prostate tissue-specific G-protein coupled receptor. Recently, CPDR was awarded a 3-year (1/2002 – 1/2005) DoD PCRP (Prostate Cancer Research Program) Grant for further studies of the structure and functions of *PSGR*.

Scientists at CPDR are also focusing on continuing work in the areas of definition of androgen signaling in CaP. Expression profiling of androgen regulated genes by SAGE and Gene Chips have defined a novel component of androgen signaling.

Prostate Cell Center of the Basic Research Program – Under the direction of Dr. John S. Rhim, Associate Scientific Director, CPDR, the Cell Center continues facilitating studies of new prostate cell lines. CPDR research has been reported in leading cancer journals including Cancer Research, Oncogene, Clinical Cancer Research, PNAS and JBC.

Clinical Research Center – The Clinical Research Center at WRAMC offers military healthcare beneficiaries the opportunity to participate in clinical trials for the treatment of prostate disease (particularly prostate cancer and benign prostatic hyperplasia), and the side effects of prostate cancer surgery (erectile dysfunction, impotence, and incontinence), as well as hormonal therapy (bone mineral density studies). Under the leadership of CPDR Directors, COL Judd W. Moul and COL David G. McLeod and their team, CPDR at WRAMC currently has over 60 ongoing clinical trials, including the database, serum, and tissue bank protocols. In addition, CPDR is collaborating with other institutions such as Walter Reed Army Institute of

Research, the Armed Forces Institute of Pathology, the National Institutes of Health, and the Riverside Research Institute at Memorial Sloan-Kettering Cancer Institute.

Recent Developments – CPDR at WRAMC recently began recruiting patients for the Selenium and Vitamin E Chemoprevention Trial (SELECT) trial, a well-known national clinical trial sponsored by the Southwest Oncology Group. With this trial, researchers hope to assess the effect of selenium and vitamin E alone and in combination on the clinical incidence of prostate cancer.

This spring, the CPDR at WRAMC also had the opportunity to become one of two sites in the United States to take part in a clinical trial using thermal ablation for the treatment of residual prostate cancer following external beam radiation therapy. CPDR at Walter Reed and the University of California San Francisco will be participating in this trial.

Tri-Service Multicenter Longitudinal National Prostate Cancer Outcome Database – Headed by Leon Sun, MD, PhD. The CPDR National Database was implemented in nine military hospitals across the country with the Water Reed Army Medical Center as the alpha site. There are more than 40 team members, including military physicians, nurses, clinical coordinators, biostatisticians, developers, data analysts, and regulatory affairs officers in addition to one or more professional data managers in each site. As of the end of April 2002, it contains 380,388 records on over 15,956 patients, the largest and most comprehensive prostate cancer database in the nation and world.

The CPDR database has become a national treasure for clinicians, scientists and policy makers in the field of prostate cancer research and management, with the main mission of data collection and study on prostate cancer screening, early detection, optimal primary treatment, optimal recurrence treatment, evaluation of treatment efficacy, management of complications and recurrence, and predictions of outcome. It also provides the clinical information on molecular biology findings in the CPDR Basic Science Program in order to directly analyze the clinical effect of the biomarkers. This direct reporting between interrelated branches is a unique feature of CPDR.

Since its establishment, more than 100 publications and numerous abstracts have been published that use the CPDR National Database data sets. Among the major findings is an Internet-accessible prediction model (www.cpd.org) that provides risk of recurrence after radical prostatectomy and a large study of hormonal therapy use in men who experience biochemical PSA recurrence after radical prostatectomy. In addition to CORE DoD funding, the CPDR Database has been awarded a grant from the DoD PCRP and a number of industry grants.

In addition to work closely with military physicians in the nine hospitals, the CPDR National Database has many collaborators from government agencies, academic institutions, non-profit and for profit organizations, and industry nationwide and worldwide. Currently, it is one of the most active and recognized organizations in urology and the cancer field.

Education and Training – The CPDR fosters training and educational programs to raise public awareness on prostate disease. It sponsors the US TOO, Inc. patient support group at WRAMC, which holds monthly meetings where patients' concerns and questions about prostate disease are addressed. The US TOO, Inc. monthly newsletter is also published on the CPDR website which can be found at www.cpd.org.

The CPDR also provides molecular biology education and training for military urology residents and medical and graduate students of the USU. Various internships in the Basic Science Laboratory and the Multicenter Database are also available to qualified local high school and university students interested in careers in the cancer research field.

The CPDR, with over 81 researchers and team members, 15 active duty military and 66 civilians, is becoming even more widely recognized as one of the most prominent prostate cancer research programs in the country and in the world.

Center for Prostate Disease Research – The CPDR is a program of the Uniformed Services University of the Health Sciences (USU) in Bethesda, Maryland and is affiliated with the Armed Forces Institute of Pathology (AFIP) in Washington, D.C. as well as nine tri-service military medical centers around the country including Walter Reed Army Medical Center. The CPDR is administered by the Henry M. Jackson Foundation for the Advancement of Military Medicine.

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