

VETERANS HEALTH ADMINISTRATION
OFFICE OF RESEARCH & DEVELOPMENT

DEPARTMENT OF VETERANS AFFAIRS



A MESSAGE FROM OUR LEADERSHIP



Jonathan B. Perlin, M.D., Ph.D.

Acting Under Secretary for Health

As part of the United States' largest integrated health care system, VA research has unique opportunities to address some of the most critical issues in health care today. In particular, it is important to focus on issues that will broaden the clinical research portfolio and directly affect clinical practice. VA researchers have a proud record of accomplishments, and their efforts will be central in helping our nation successfully meet the health care challenges of tomorrow.

In addition to focusing on the many different diseases and conditions that affect veterans, research also looks at ways to improve the organization, management and financing of the Veterans Health Administration. Overall, research is a vital force in improving veterans' health care and shaping the future of the VA health care system.



Stephan D. Fihn, M.D., M.P.H.

Acting Chief Research and Development Officer

The discoveries of VA researchers continue to provide benefit to veterans and all Americans. Today, our researchers are on the leading edge of health research, in areas ranging from genetics and molecular biology to clinical trials, rehabilitation medicine and health services studies. VA Research remains a vibrant and dynamic program that is inextricably interwoven into the VA health care system. We are committed not only to conducting the highest quality, most innovative research, but also to training a new generation of investigators who will be prepared to carry on this critically important work. At a time when the nation is more cognizant than ever of the sacrifices that have been made by our veterans, VA Research is producing the knowledge necessary to give them the best health care possible.

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VA Office of Research and Development (ORD) supports health research at more than 115 VA facilities nationwide. The majority of VA studies are conducted at our medical centers and clinics, while others take place in the broader community as we collaborate with other health-care providers. Specially designated VA research centers conduct basic and clinical studies that support concentrated efforts by groups of scientists studying diseases such as acquired immunodeficiency syndrome (AIDS), alcoholism, schizophrenia, and rehabilitation efforts. In addition, Research Enhancement Award Programs (REAPs) fosters additional multidisciplinary research, pilot studies, and research training for teams of scientists exploring a wide variety of topics. Our goal is to improve the health of our military veterans and lay the groundwork for improved patient care within VA. This often contributes to significant health care advances throughout the United States and the world.

ORD has a tremendous responsibility and privilege to conduct research that focuses on those who have served us. Our research enterprise is comprised of studies relating to diseases and disabilities of the nearly 3.5 million veteran patients we serve each year. VA provides a unique setting for researchers to see their results incorporate into better patient care as nearly 80 percent of them are also clinicians.

There are four distinct services within ORD. Together they form a cohesive whole that explores all phases of veterans health care. They include,

CLINICAL SCIENCE RESEARCH AND DEVELOPMENT (CSR&D), previously referred to as Cooperative Studies Program, conducts centralized proposal review and administrative coordination for VA research that focuses on multi-center clinical trials. Clinical research on health issues are vital to our nation's veterans as it determines the effectiveness of new treatments and therapies.

BIOMEDICAL LABORATORY RESEARCH AND DEVELOPMENT (BLR&D), previously referred to as Medical Research Service, conducts research that explores basic biological or physiological principles in humans or animals. Studies focus on the development, diagnosis, causes, and treatments of diseases prevalent among veterans. Clinical and non-clinical scientists are

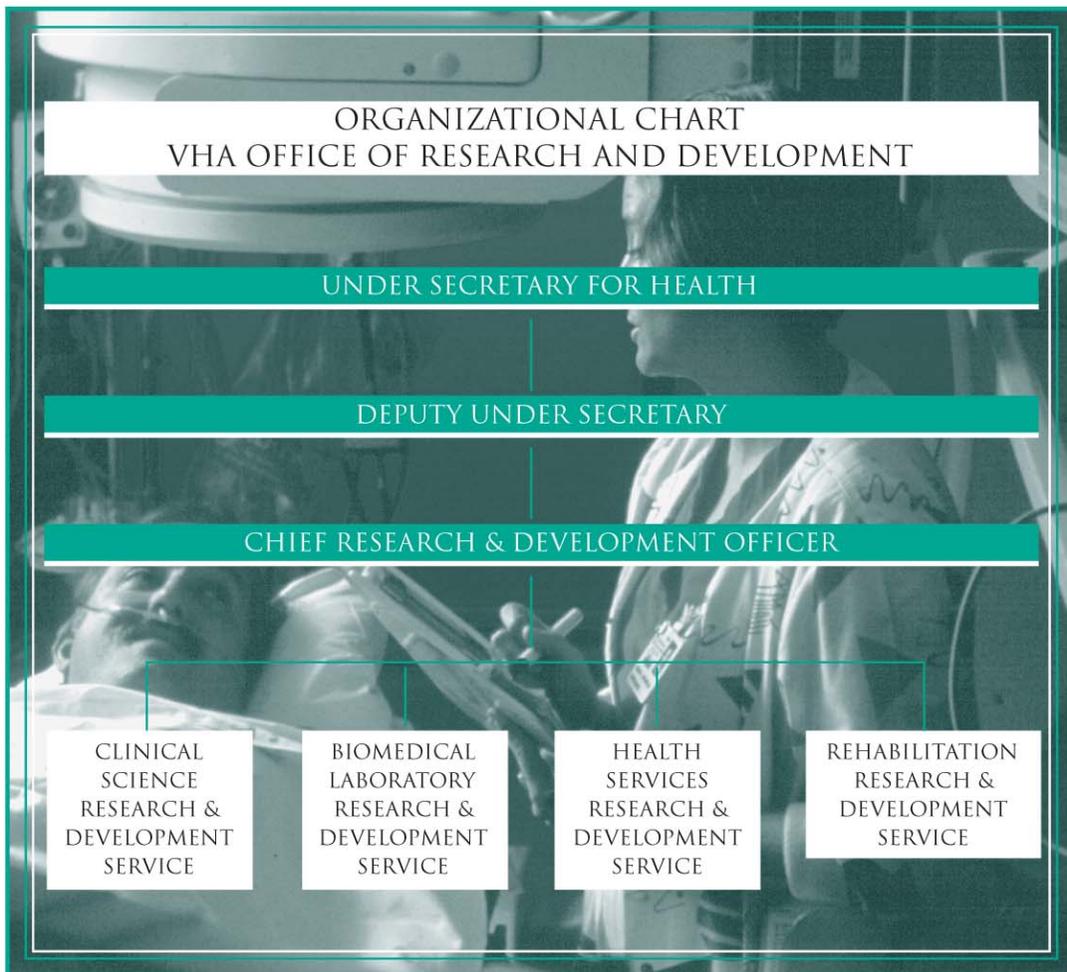
supported as they focus on finding cures for heart disease, cancer, neurological disorders, osteoporosis, diabetes, and other ailments.

HEALTH SERVICES RESEARCH AND DEVELOPMENT (HSR&D) identifies and promotes effective and efficient strategies to improve the organization and delivery of health care at the patient and system levels. HSR&D programs and initiatives focus on a wide range of health care issues and examine the effects of organization, costs, and management on health care outcomes.

REHABILITATION RESEARCH AND DEVELOPMENT (RR&D) conducts research that explores and identifies treatments and prosthetic devices that address the needs of veterans with amputations, spinal cord injury, vision and

hearing loss, stroke impairments, or other disabilities and rehabilitation needs. RR&D researchers work to promote greater functional independence for disabled veterans and to improve their overall quality of life.

A key responsibility of ORD is to protect the veterans who volunteer to take part in our studies. We must ensure that veterans who participate in our studies receive every protection possible, and that all aspects of our program adheres to the highest ethical standards. This year, ORD established the Program for Research Integrity Development and Education (PRIDE) to promote this goal. This program oversees education, training, and policy development related to human-subject protection in VA research. PRIDE works closely with VA facilities to prepare them for accreditation with the National Committee on Quality Assurance (NCQA). In 2000, when VA contracted with NCQA to accredit its medical centers, it became the nation's first research institution to require independent and external accreditation for all its sites that conduct human studies. All VA sites that conduct research are expected to be NCQA accredited by 2005.





VA researchers made significant contributions to the advancement of medical science and health care in 2003, as they have throughout the history of our program. Following are a few selected achievements of our VA research accomplishments this year. An extensive list of our research highlights appears on our website at www.va.gov/resdev.

In a six-month study, **obese patients** on a low-carbohydrate diet lost more weight and fared better on certain cardiovascular and diabetes measures than patients on a low-fat, calorie-restricted diet. Even though all the study subjects remained extremely overweight, those in the low-carbohydrate group significantly reduced their risk factors for diabetes and heart disease. The study findings may figure prominently in the national discourse over low-fat and low-carbohydrate diets.

Biomedical Laboratory R&D

New England Journal of Medicine, May 2003

An ongoing, seven-year clinical trial of more aggressive treatments for **type 2 diabetes** has revealed that VA patients with diabetes are achieving surprisingly good control of their blood pressure. At the time of the analysis, more than 1,500 VA patients were enrolled in this VA diabetes trial with an initial average blood pressure of 131/77. Patients followed for six months lowered their pressure to an average of 127/74, readings “well below average for most diabetic populations,” according to the researchers. High blood pressure often accompanies diabetes and is a key risk factor for heart attack, stroke, eye disease and other diabetes complications.

Clinical Science R&D

Presentation at Annual Meeting of the Endocrine Society, June 2003

In one of the first large studies to focus on the benefits of dietary fiber for the elderly, participants who ate the most cereal fiber were 21 percent less likely than those eating the least cereal fiber to suffer **cardiovascular disease**. Fruit and vegetable fiber, however, had little effect in warding off heart attack or stroke. Researchers said the study showed that dietary habits may affect cardiovascular risk beyond young adulthood and middle age, when disease has often already developed.

Health Services R&D

Journal of the American Medical Association, April 2003

Prostate cancer screening was found to be more common than colorectal-cancer screening among men aged 50 and older, even though the benefits of colorectal screening are backed by far more studies. VA researchers analyzed data from a Centers for Disease Control and Prevention survey of over 49,000 men from 50 states. More than 75 percent of those surveyed had undergone prostate screening, versus only 63 percent for colorectal screening. The findings should alert physicians to the need to better educate men on the benefits of screening for colorectal cancer.

Health Services R&D

Journal of the American Medical Association, April 2003

A study led by VA, National Cancer Institute, and Harvard researchers showed that proper intake of cereal fiber and vitamin D are among the best ways to prevent the serious colon polyps that may lead to **colorectal cancer**. The study, which included more than 3,000 veterans at 13 VA medical centers, provided the strongest evidence yet of the role of vitamin D in the possible prevention of the disease.

Health Services R&D

Journal of the American Medical Association, Dec. 2003

A VA study found little difference in effectiveness between a pennies-a-day **schizophrenia** drug and a newer, far more expensive medication. Researchers compared haloperidol, given with a drug to minimize its side effects, to olanzapine, the most expensive among the newer anti-psychotics. The study showed little difference in the overall effectiveness of the drugs, despite the huge price difference. Olanzapine costs VA more than \$8 per day per patient, compared to about 10 cents per day for the haloperidol combination.

Clinical Science R&D

Journal of the American Medical Association, Nov. 2003



The Cleveland Functional Electrical Stimulation (FES) Center, a VA-cosponsored program that has pioneered the use of functional electrical stimulation to restore motor function to those with paralysis and other disorders, received \$7.9 million from the State of Ohio as part of an initiative to advance the state's biotechnology industry. The center pioneered the development of "Freehand," an **artificial nerve system** that enables a user with upper-limb paralysis to grasp objects. In 2003 a diaphragm stimulator system was implanted in actor Christopher Reeve to help him breathe for extended periods without a ventilator.

Rehabilitation R&D

A new collaborative model for treating **depression** in older adults, evaluated at two VA clinics, was cited by the President's New Freedom Commission on Mental Health as a potentially life-saving approach that should be widely used in primary care settings and reimbursed by public and private insurers. The new approach involves psychologists, psychiatrists, and specially trained nurses working closely with primary-care physicians. In one analysis of the new model, researchers learned that improving depression care also leads to less pain and better functioning in patients with arthritis.

Health Services R&D

Journal of the American Medical Association, Nov. 2003

VA scientists and colleagues provided the first detailed look at how human antibodies, proteins critical for the body's defense against invading pathogens, may actually drive the human immunodeficiency virus (**HIV**) to mutate and escape detection by the immune system. Researchers cloned the virus from HIV patients and genetically modified it to produce a glowing enzyme that would help them track its replication. They incubated periodic virus samples with periodic blood plasma samples from the same patients. The virus consistently evolved faster than the antibody response. Antibodies from previous months' blood samples were found

ineffective against new virus from the same patient.

Biomedical Laboratory R&D

Proceedings of the National Academy of Sciences, March 2003

An increased use of potent combinations of anti-HIV drugs has led to a sharp decline in the number of **AIDS**-related deaths since 1996. These drugs, however, can also cause serious side effects to the heart, blood, kidneys, liver and nervous system. A recent study of nearly 37,000 HIV patients, the largest of its kind to date, indicate a steady decline in deaths and hospital stays due to vascular problems even as use of highly active antiretroviral therapy (HAART) increased. The study may serve to reassure doctors and patients who see benefits from HAART but worry about vascular complications.

Health Services R&D

New England Journal of Medicine, Feb. 2003

Researchers announced successful test results for two versions of an oral drug that halts the deadly action of the **smallpox** virus and related orthopox viruses. The compounds, analogs of the drug cidofovir, were tested in mice and tissue cultures. The new drugs must undergo additional animal testing and safety trials in healthy people before they can be approved for use. Quick-acting oral drugs against smallpox may be of extreme value in the event of a bioterrorist emergency, or as an alternative for those who cannot receive the standard smallpox vaccination due to skin conditions or other health problems.

Biomedical Laboratory R&D

American Society for Microbiology Biodefense Symposium, March 2003

VA created a national registry of veterans with **Amyotrophic Lateral Sclerosis (ALS)**, also known as Lou Gehrig's disease. The registry will identify veterans with this progressive neurological disorder and track their health status, regardless of when they served in the military. A VA and Department of Defense collaborative study published in 2003 found that veterans

who served in the Persian Gulf in 1990 and 1991 have a nearly two-fold risk of ALS compared to veterans of the same era who did not serve in the Gulf.

Clinical Science R&D

Neurology, Sept. 2003.

Researchers at the Seattle VA have developed a three-dimensional model of the **foot and ankle** in order to understand, treat, and prevent foot disease that leads to amputation. Musculoskeletal models of the human body are increasingly used to study biological structures—the lower limb in particular as it is the primary physical interaction between the body and the environment during locomotion. This model was generated as an anatomically detailed 3-D reconstruction from 286 computerized topographic (CT) images. Computational models such as this provide crucial data on internal stresses and strains.

Rehabilitation R&D

Journal of Rehabilitation Research & Development, May-June 2002.

Researchers from the Portland VA medical center have studied the techniques and instrumentation for the early detection of ototoxicity, a condition where exposure from chemical sources damages the cochlea or vestibular apparatus (inner ear), and may result in irreversible **hearing loss**. Patients treated with well known pharmacologic agents, ranging from chemotherapeutic agents to antibiotics, may incur ototoxic hearing loss as a treatment side effect. Study efforts have led to developing new techniques for detecting ototoxicity that do not rely on a patient's active response. Outcomes of this study have resulted in national guidelines for ototoxicity monitoring – endorsed and published by the American Speech-Language-Hearing Association. It will lead to further standardization to make ototoxicity monitoring a standard level of healthcare for veterans and those across the nation who receive therapy with ototoxic drugs.

Rehabilitation R&D

Journal of the American Academy of Audiology, Oct. 2003



VA researchers are in a unique position to find solutions to some of today's most urgent health challenges. As the Nation's largest health care system, VA provides a nationwide pool of remarkably altruistic research volunteers willing and eager to serve their fellow Americans. VA scientists, while strictly adhering to appropriate privacy safeguards, can utilize VA's integrated patient-data systems as a rich source of clinical and demographic data that can help them better understand a wide range of diseases.

Still, we must look beyond our own program to increase the impact of our work through collaborations with organizations that share our interests. Most VA researchers, in addition to their VA appointment, serve on the faculty of a VA-affiliated university. They may also acquire grants for VA research from nonprofit organizations, pharmaceutical or biotechnology firms, as well as other federal agencies.

Below are current organizations VA collaborates with to conduct research to meet our veterans health care needs. They include, but are not limited to, government, nonprofit, and private-industry entities.

Tri-National Collaboration – United States, Canada, United Kingdom

Researchers from VA and the national health-research agencies of Canada and the United Kingdom are conducting a clinical trial to determine the best treatment for HIV patients for whom highly active antiretroviral therapy has failed. The benefits of this type of international collaboration include increased efficiency, minimization of duplicative research, and greater potential for global application of results.

Centers for Medicare & Medicaid Services (CMS)

ORD is leading an effort to merge VA and CMS health-utilization data within the VHA research community with support from the Office of the Assistant Deputy Under Secretary for Health (ADUSH). Understanding, knowledge, experience, and findings that result from working together will allow the two offices to better analyze and plan for the use of health services by veterans, both within and outside the VA health system. It will also streamline the process by which VA researchers with approved projects can access Medicare enrollment and claims data.

National Cancer Institute (NCI)

Nearly 40 VA sites and 6,000 patients are part of a 12-year NCI study to determine if Vitamin E and selenium can help prevent prostate cancer. VA/NCI partnership has also led to the establishment of a new QUERI center at the Minneapolis VA Medical Center that focuses on colorectal cancer.

National Institute of Diabetes, Digestive & Kidney Disorders (NIDDK)

VA and NIDDK are testing whether intensive therapy, including more frequent dialysis is more effective than conventional therapy for patients with acute renal failure. Researchers will compare the two strategies for mortality, duration of renal support, hospital usage, and other patient outcomes.

Centers for Disease Control and Prevention (CDC)

The VA Quality Enhancement Research Initiative (QUERI) on diabetes is collaborating with the CDC on a project titled “Translating Research into Action for Diabetes” (TRIAD). Researchers will analyze diabetes care within VA, looking at factors such as glycemic control and testing, eye exams and foot care, and compare it to diabetes care in six managed health care organizations. Special attention will be focused on the organizational factors that affect the delivery of diabetes care.

Quality Interagency Coordination Task Force (QuIC)

QuIC, established by presidential directive in 1998, ensures that all federal agencies that provide, study or regulate health care are working in a coordinated manner to improve the delivery and quality of care. VA researchers are among the leaders of workgroups on clinical care, patient safety, and information systems.

Department of Defense (DoD)

VA and DoD have collaborated on numerous research projects in recent years. Among the most significant collaborations is the Millennium Cohort Study, a 21-year study that will track the health of up to 140,000 military personnel. The project is the largest study of its kind ever conducted. In 2003, the two agencies also initiated a number of collaborative projects concerning amputation and prosthetics care, such as a clinical trial of a state-of-the-art artificial leg.

American Diabetes Association (ADA)

The VA clinical R&D program is conducting research with support from the ADA and several pharmaceutical companies on a seven-year, \$57-million clinical trial to determine whether intensified blood-sugar control can help prevent macrovascular complications from diabetes, such as heart disease and stroke. These complications account for the majority of diabetes-related hospitalizations and deaths in the United States.

Alfred E. Mann Foundation (AEMF)

VA and AEMF, a California-based nonprofit organization, have signed an agreement to explore and develop BION technology. BIONs, a trademarked name for bionic neurons, are wireless, implantable stimulating devices that may one day play a vital role in treatments for patients with spinal cord injury, bowel and bladder disorders, swallowing and vocal control difficulties, chronic pain and many other conditions.

United Spinal Association (USA)

USA, in partnership with VA's Rehabilitation Research and Development Service, established the USA Scholar Award in 2000 to promote spinal cord injury research at VA facilities. USA provides up to \$75,000 per year to support the program. The 2003 recipient of the award, Dr. Hajime Tokuno of the West Haven VA Medical Center, is studying the restoration of spinal cord function after Schwann cell transplantation in animals.

Paralyzed Veterans of America (PVA)

Two new VA Centers of Excellence in Multiple Sclerosis have been designated in Baltimore and Portland/Seattle. PVA promotes research and provides funding to support VA scientists' participation in the National MS Consortium, and together they share an interest in promoting studies in multiple sclerosis (MS). Researchers at the Baltimore and Portland/Seattle VA medical centers will address best practices and relevant knowledge to the challenges of MS care across the VA system.



Private Industry

There are numerous companies that support VA research, including a number of leading pharmaceutical and biotechnology companies. These businesses supply medications and devices or other support for clinical trials.

Abbott Diagnostics	Key
Abbott Laboratories	King
Accusure	Knoll Pharmaceuticals
Amgen, Inc.	KOS Pharmaceuticals
AstraZeneca LP	Lilly
AstraZeneca – US	Merck & Co. – US
AstraZeneca - Canada	Merck - Canada
Aventis Pharmaceuticals	Medtronic Neurological
AVIRON	Miles Diagnostics
Bayer Corp.	MRC Canada
BD (Becton-Dickinson)	Mylan
Berlex Laboratories, Inc.	Noblepharma USA, Inc.
Bioiberica	Norvartis Pharmaceutical Corp.
Bio-Technology General Corporation	Novo Nordisk Pharmaceuticals, Inc.
Boehringer Ingelheim Pharmaceutical, Inc.	Nycomed Amersham
Bristol-Myers Squibb Company	Ortho Biotech, Inc.
Britannia Pharmaceuticals Limited	Pan American Laboratories, L.L.C.
Can-Am Care	Parke-Davis
Caraco	Perrigo
Carolina Medical Products	Pfizer US Pharmaceutical Group
Core-Vent Corporation	Pfanstiehl Laboratories
Chiron Therapeutics	Pharmacia & Upjohn Consumer Healthcare
Datascope	Pilva
Dialysis Solutions, Inc.	Quality Assured Services, Inc.
DuPont Pharmaceuticals Co.	Reckitt Benckiser
Eli Lilly and Co.	Rhone-Poulenc Rorer Pharmaceuticals, Inc.
Eon	Roche Diagnostics
Evans-Medeva	Roxane Laboratories, Inc.
First Horizon	Sanofi-Bristol/Myers Squibb
Forrest	Sanofi-Synthelabo, Inc.
Fujisawa Healthcare, Inc.	Savient Pharmaceuticals, Inc.
Gambro Renal Products	Schein Pharmaceutical, Inc.
GlaxoSmithKline, Inc.	Sioux Pharm
Hoechst-Marion Roussel	SmithKline Beecham Consumer Healthcare
Hybritech	Solvay Pharmaceuticals
Integrated Therapeutics, Inc.	Somerset Pharmaceuticals
Intercardia, Inc.	Schwartz Pharma
Interpore Cross International	The University of Iowa
International Technidyne Corporation	Warrick Pharmaceuticals
ITG	WRC
Johnson & Johnson Consumer & Personal Products WW	Wyeth-Ayerst Laboratories



As the nation's largest health care system, VA must be a leader in meeting the challenges facing health care today.

In pursuing its vision, ORD emphasizes research in areas of greatest concern to veterans, such as diabetes, heart disease and cancer. Furthermore, our vision to promote research results expeditiously into clinical trials and bedside practice is essential. Following are areas that ORD services will primarily focus on to achieve our goals and objectives.

The establishment of additional core facilities will be promoted by our Biomedical Laboratory Research and Development Service, such as laboratories with DNA sequencers that will serve multiple other laboratories. This arrangement encourages cost savings for high-tech equipment and yet provides researchers with easy access to efficient, high-quality resources. Similarly, ORD will promote equipment-sharing between VA medical centers and their university affiliates, and encourage agreements with academic or private partners to share the costs of building or renovating facilities. Incentives will be provided to researchers to leverage their VA funding by obtaining grants from other federal agencies or private and nonprofit sources. In addition, special funding will be provided for laboratory scientists to collaborate with clinical colleagues in “bench to bedside” research.

An expansion of the clinical research portfolio is planned by the Clinical Science Research and Development service and will focus on studies providing knowledge to support evidence-based medicine. A national network of Clinical Research Centers of Excellence will be established to define clinical research areas and to mentor and train the next generation of clinical-research leaders. The Centers will combine research methodologies and promote partnerships with existing university-based General Clinical Research Centers. Sixteen integrated Clinical Practice Networks will support the rapid launching of clinical trials, the development of new ideas for research studies, and systematic data and tissue collection.

Health Services Research and Development will take the lead in applying research advances to patient care. They aim to shorten the timeframe that it takes research to be translated to improved patient care. The newly created Research Implementation Program will oversee a variety of efforts in this area, including the coordination with field-based researchers, clinicians, and project leaders. New plans include establishing Centers of Excellence in the areas of implementation research and partnership funding between VISNs and researchers to implement and evaluate evidence-based interventions. By recruiting and training new scientists in this area, ORD will expand its overall implementation of its science capacity.

Rehabilitation Research and Development is seeking to expand its portfolio in emerging technologies such as tissue engineering, robotics and microtechnology. It is also encouraging close collaborations among scientists, engineers and clinicians so as to promote rehabilitation solutions that are truly compatible with patients' needs and are practical to implement in the clinic. A continuing shift in rehabilitation research from case histories and small observational studies to larger, rigorous clinical trials will yield meaningful data with the potential for a direct impact on clinical practice.

The prospect of seeing advances in medical science and health care is tremendously exciting for the Office of Research and Development. Our success continues to rely on the successful recruitment, education, and training of our scientists and research leaders. We will eagerly seek and capture opportunities to study critical health concerns and find new and better ways to serve our veterans and the nation.

The Office of Research and Development (ORD) administers the research appropriation for all four services, supporting studies by more than 3,000 scientists at more than 115 VA medical centers. Recent growth in the VA research budget appropriation is reflected in **Figure I**. Medical care funds are provided for research infrastructure and indirect costs such as clinician salaries, laboratory facilities and support services. VA researchers increase their research support with grants from other federal agencies, as well as private and nonprofit sources. **Figure II** shows the total VA research financial resources for the past several years and a projection for fiscal year 2004 (in millions).

The largest portion of ORD funds is devoted to researcher-initiated studies. **Figure III** illustrates how VA research funds were expended in 2003.

Fig. I

Year	Funding (million)
1999	\$316
2000	\$321
2001	\$350
2002	\$368
2003	\$392
2004 (est.)	\$406

Fig. II

Year	1999	2000	2001	2002	2003	2004 (est.)
Appropriation	315.7	321.0	350.2	367.7	392.4	405.6
Medical Care	326.0	344.8	355.6	388.2	419.2	414.2
Non-VA Sources	480.6	504.6	595.0	640.4	762.0	790.0
Total	1,122.3	1,170.4	1,300.8	1,396.3	1,573.6	1,609.8

Fig. III

Fund Allocations	Percent
Researcher Initiated	68%
Centers of Excellence	7%
Multi-Site Trials	13%
Career Development	8%
Service Directed	1%
Special Initiatives	3%

SPECIAL RESEARCH AWARDS IN 2003

Our scientists and research leaders are the greatest resource of our program. We are proud to have some of this nation's best scientific minds working with us in service to our veterans. Each year, we honor those who truly exemplify excellence. The awards and most recent recipients are listed below.

Paul B. Magnuson Award

This award is VA's highest honor for rehabilitation researchers. It is presented annually to a VA scientist who exemplifies dedication to veterans, innovations in practice and research, and humanitarianism.

RORY COOPER, PHD
VA Pittsburgh Health Care System

A leading authority on mobility, Dr. Cooper is recognized for his pioneering work in wheelchair and related technology and for his role in building the careers of young VA scientists. Cooper has designed manual and electric-powered wheelchairs, developed wheelchair standards, promoted the understanding of secondary disabilities among wheelchair users, and improved the social integration of people with disabilities.

William S. Middleton Award

The Middleton Award recognizes biomedical or behavioral researchers for major achievements in areas of critical importance to VA's research mission.

ANDREW H. KANG, MD
Memphis VA Medical Center

Dr. Kang is perhaps the world's foremost expert on collagen, the main protein in cartilage, bone and other connective tissues. Over the past 35 years, his research has provided much of the basic knowledge of the various

collagen molecules. In the late 1970s he developed a model of collagen-induced arthritis in mice that has since figured in thousands of studies on rheumatoid arthritis. His original publications on the model have been cited in more than 23,000 scientific papers. Today his work involves cloning and engineering collagen genes to develop an effective immunotherapy for rheumatoid arthritis.

Presidential Early Career Award for Scientists and Engineers

This award recognizes young scientists and engineers who show exceptional potential for leadership at the frontiers of scientific knowledge. Recipients for 2003 are:

GARY E. BRYSON, PHD
West Haven, CT, VA Medical Center

Dr. Bryson is a rehabilitation researcher whose outstanding research will improve treatment of schizophrenic patients within the VA Health Care system as well as for the general population. Precision learning rehabilitation techniques combined with computerized drills are designed to improve overall cognitive and social functioning.

RICHARD Z. LIN, MD
Northport, NY, VA Medical Center

Dr. Lin is a board-certified internist with subspecialty

training in hematology and clinical pharmacology. His research interest focuses on how to uncover the molecular mechanisms in the body's aging cells. His research describes how the sensitivity of vascular smooth muscle cells is increased when exposed to growth factor stimulation as compared to younger cells. These basic research results can have implications for the development of novel therapeutic or preventive interventions to reduce the risk of developing atherosclerosis in the elderly.

Under Secretary's Award for Outstanding Achievement

The Under Secretary's Award is the highest honor for a VA health services researcher. Recipients are VA researchers whose work has contributed significantly toward improved health care for veterans.

MORRIS WEINBERGER, PHD

Durham VA Medical Center

Dr. Weinberger is a researcher with VA's Center for Health Services Research in Primary Care. A medical sociologist, he is noted for his innovative studies to improve care for chronic health conditions, especially those prevalent among veterans and older adults. Among his studies published in 2003 was a clinical trial examining the benefits of integrating clinical nurse specialists into the care teams of VA patients with depression.

CAREER DEVELOPMENT AWARDS

Career development is a cornerstone of VA's research enterprise. Nurturing and supporting the development of researchers in the early, mid and advanced stages of their careers continues to be a high priority for the Office of Research and Development. Career development awards provide salary support for researchers so they have protected time to pursue their research or specific training to enhance their research skills. Following is a list of the 2003 recipients for VA career development awards.

Rehabilitation Research & Development

Akin, Faith, Ph.D., Mountain Home, TN
Bryson, Gary J., Psy.D., West Haven, CT
Burks, David, M.D., Gainesville, FL
Crucian, Gregory, Ph.D., Gainesville, FL
Daniels, Stephanie, Ph.D., New Orleans, LA
Fann, Alice, M.D., Little Rock, AK
Forrester, Larry, Ph.D., Baltimore, MD
Gironda, Ronald, Ph.D., Tampa, FL
Gold, Garry E., M.D., Palo Alto, CA
Hall, Courtney, Ph.D., P.T., Decatur, GA
Harrow, Jeffrey, M.D., Ph.D., Tampa, FL
Ho, Chester H., M.D., Cleveland, OH
Holley, Sandra, M.S., Tampa, FL
Kendall, Diane L., Ph.D., Gainesville, FL
Konrad-Martin, Dawn, Ph.D., Portland, OR
Lew, Henry, M.D., Ph.D., Palo Alto, CA
Lo, Albert, Ph.D., West Haven, CT
McQuade, Kevin J., Ph.D., Baltimore, MD
Moore, Anna, Ph.D., Gainesville, FL
Nield, Margaret, Ph.D., W. Los Angeles, CA
Pape, Theresa, Dr. P.H., Hines, IL
Patten,Carolynn, Ph.D., P.T., Palo Alto, CA
Perell, Karen, Ph.D., W. Los Angeles, CA
Ross, Katherine B., Ph.D., Phoenix, AZ
Shelton, Fatima, Ph.D., Oklahoma City, OK
Tokuno, Hajime, M.D., West Haven, CT
Young, Mary Ellen, Ph.D., Gainesville, FL
Zinn, Sandra, Ph.D., Durham, NC

Health Services Research & Development

Ansari, Maria, M.D., San Francisco, CA
Arozullah, Ahsan, M.D., M.P.H., Chicago, IL
Asch, Steven, M.D., M.P.H., W. Los Angeles, CA
Au, David, M.D., M.S., Seattle, WA
Bastian, Lori, M.D., M.P.H., Durham, NC
Beyth, Rebecca, M.D., M.Sc., Houston, TX
Braun, Ursula, M.D., Houston, TX
Bravata, Dawn, M.D., West Haven, CT
Butterfield, Marian, M.D., M.P.H., Durham, NC
Casarett, David, M.D., M.A., Philadelphia, PA
Chodosh, Joshua, M.D., M.S.H.S.,
W. Los Angeles, CA
Davila, Jessica, Ph.D., Houston, TX
El-Serag, Hashem, M.D., M.P.H., Houston, TX
Fan, Vincent, M.D., M.P.H., Seattle, WA
Ferreira, Maria, M.D., M.A.P.P., Chicago, IL
Finlayson, Samuel, M.D., M.P.H.,
White River Junction, VT
Flach, Stephen, M.D., Ph.D., Iowa City, IA
Flannery, Kathleen, Pharm.D., Baltimore, MD
Fraenkel, Liana, M.D., M.P.H., F.R.C.P.(C),
West Haven, CT
Frayne, Susan, M.D., M.P.H., Palo Alto, CAT
Freeman, Vincent, M.D., M.P.H., Hines, IL
Fu, Steven, M.D., M.S.C.E., Minneapolis, MN
Gifford, Allen, M.D., San Diego, CA
Gordon, Adam, M.D., M.P.H., Pittsburgh, PA

Gordon, Howard, M.D., Houston, TX
Gould, Michael, M.D., M.Sc., Palo Alto, CA
Gralnek, Ian, M.D., M.S.H.S., W. Los Angeles, CA
Haidet, Paul, M.D., M.P.H., Houston, TX
Hedrick, Susan, Ph.D., Seattle, WA
Heidenreich, Paul, M.D., M.S., Palo Alto, CA
Ibrahim, Said, M.D., M.P.H., Pittsburgh, CA
Johnson, Michael, Ph.D., Houston, TX
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Biomedical Laboratory Research & Development

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Singal, Rakesh, M.D., Shreveport, LA

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Scranton, Richard, M.D., M.P.H., Boston, MA
Martell, Bridgett, M.D., M.A., West Haven, CT

CENTERS OF EXCELLENCE

Biomedical Laboratory Research & Development

Environmental Hazards Research Centers

Boston, MA
San Antonio, TX

AIDS Research Centers

San Antonio, TX
San Diego, CA

Alcoholism Research Centers

Omaha, NE
West Haven, CT

Schizophrenia Research Centers

Denver, CO
West Haven, CT

Research Enhancement Award Programs (REAPs)

Alzheimer's Disease and Dementia

San Diego, CA
Seattle, WA

Bone Diseases

Atlanta, GA
Little Rock, AR
San Francisco, CA

Cancer

Northport, NY
West Los Angeles, CA

Cardiovascular Disease

Charleston, SC
Brooklyn, NY

Diabetes

Detroit, MI
Iowa City, IA
Seattle, WA

Environmental Exposure

Durham, NC

Gastrointestinal Diseases

Chicago, IL

Hepatitis

Palo Alto, CA
Portland, OR

HIV-AIDS

New York, NY

Mental Health

West Haven, CT

Multiple Sclerosis
Portland, OR
Parkinson's Disease
Bedford, MA
Baltimore, MD
Denver, CO
Prostate Cancer
Iowa City, IA
San Francisco, CA

Pulmonary Disease
Ann Arbor, MI
Boston, MA
Cincinnati, OH
Renal Disease
Charleston, SC
San Antonio, TX
Rheumatic Disease
Memphis, TN

Schizophrenia
Brockton, MA
Stroke
San Francisco, CA
Baltimore, MD
Wound Healing
Long Beach, CA

Rehabilitation Research & Development

Center for Rehabilitation of Aging Veterans
with Vision Loss
Atlanta, GA
Center for Innovative Visual Research
Boston, MA
Center for Rehabilitative Auditory Research
Portland, OR VAMC
Brain Rehabilitation Center
Gainesville, FL
Center for Medical Consequences of SCI
Bronx, NY
Center for Restoration of Function in Patients
with SCI
Miami, FL
Center for Restoration of Function in SCI and

Multiple Sclerosis
West Haven, CT
Center for Functional Electrical Stimulation
Cleveland, OH
Center for Bone and Joint
Palo Alto, CA
Center for Limb Loss Prevention and
Prosthetics Engineering
Seattle, WA
Rehabilitation Outcomes Research Center
Gainesville, FL
Center for Wheelchair and Related Technology
Pittsburgh, PA

Research Enhancement Award Programs (REAPs)

Neural Repair
Hines, IL
Audiology and Vestibular Research
Mountain Home, TN
Tissue Engineering
Boston, MA
Technology for At-Risk Patients
Tampa, FL

Clinical Science Research & Development

Coordinating Centers
Hines, IL
Palo Alto, CA
Perry Point, MD
West Haven, CT

Clinical Research Pharmacy
Coordinating Center
Albuquerque, NM

Epidemiological Research and Information
Centers (ERICs)
Boston, MA
Seattle, WA
Durham, NC

Health Services Research & Development Service

Center for Practice Management and Outcomes Research

Ann Arbor, MI

Center for Health Quality, Outcomes, and Economic Research

Bedford, MA

Center for Health Services Research in Primary Care

Durham, NC

Midwest Center for Health Services and Policy Research

Hines, IL

Rehabilitation Outcomes Research Center

Gainesville, FL

Center for Quality of Care and Utilization Studies

Houston, TX

Center for Mental Healthcare and Outcomes Research

Little Rock, AR

Center for Chronic Disease Outcomes Research

Minneapolis, MN

Center for Healthcare Evaluation

Palo Alto, CA

Center for Health Equity Research and Promotion

Pittsburgh, PA

Veterans Evidence-Based Research Dissemination & Implementation Center

San Antonio, TX

Northwest Center for Outcomes Research in Older Adults

Seattle, WA

Center for the Study of Healthcare Provider Behavior

Sepulveda, CA

Resource Centers:

Management Decision and Research Center

Boston, MA

VA Information Resource Center

Hines, IL

Health Economics Resource Center

Menlo Park, CA

Research Enhancement Awards Program (REAPs)

Patient Safety: Safe Mobility

for Frail Elderly and Persons with Disabilities

Tampa, FL

Center for Quality Improvement Research

Cleveland, OH

Program for Interdisciplinary Research in Health Care Organization

Iowa City, IA

Information Management for Patient-Centered Treatment (IMPACT)

Indianapolis, IN

Enhancing VA Health Services Research in Patient Centered Care

San Diego, CA

Interdisciplinary Research Program to Improve Care for Older Veterans

San Francisco, CA

Thank you to all the outstanding men and women who currently serve our nation and those who have served the nation in the past through their participation in VA research. Their cooperation is vital to our efforts, and is a major factor in the achievements of our researchers. By volunteering to participate in our studies, they help create a brighter, healthier future for themselves, their fellow veterans, and for all Americans.



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