Update from the Office of Research and Development...

New emphasis on technology transfer helps VA research, medical science

By John R. Feussner, MD, MPH
Chief R&D Officer

Until recently, VA took a “hands-off” approach to the intellectual property generated by its researchers. Researchers and, typically, local VA-affiliated universities were responsible for patenting, marketing and licensing of inventions in which VA played a substantial role. As a result, VA lost opportunities to show veterans, Congress and the public the tangible benefits of its research program.

That began to change last year when the Office of Research and Development (ORD) implemented a new technology transfer program that evaluates all inventions by VA researchers, informs inventors of their rights and obligations, obtains patents, and helps to commercialize new products. This effort helps VA to move discoveries from the laboratory to clinical practice in a timely manner and ensures that inventors and their medical centers receive appropriate advice, support, recognition and compensation.

The program will help move discoveries into clinical practice.

The program also ensures that veterans have access to new technologies resulting from our research.

ORD is working closely with the VA Office of General Counsel (OGC) on several aspects of the new technology transfer program. One key outcome of our collaboration with OGC has been the development of an inter-institutional agreement (IIA) for patenting and marketing of inventions owned jointly by VA and its university affiliates. So far, more than 25 percent of our major research affiliates have signed IIAs.

IIAs and other technology transfer issues were discussed by VA administrators, investigators and attorneys, along with university officials, at a conference April 12 – 13 in Virginia.

VA’s new technology transfer program will benefit the government and American taxpayers by developing, manufacturing and disseminating inventions resulting from federally funded research. It will also benefit the VA research program and medical centers by creating a royalty stream that will support additional studies. Most importantly, it will benefit our veteran patients and the nation by advancing medical science.

VA seeking feedback on draft standards for protecting human subjects

VA has taken a major step toward establishing the federal government’s first mandatory external accreditation process for human research programs.

Draft standards for protecting research subjects are now available for review and public comment on the website of the National Committee for Quality Assurance (NCQA), which is administering the accreditation program. The URL is: http://www.ncqa.org/Pages/Programs/QSG/VADRAFTSTDS.htm. Copies of the draft standards and instructions for submitting comments can also be obtained by calling NCQA at (888) 275-7585.

VA has directed NCQA to work with the Institute of Medicine, which is recommending standards for the Department of Health and Human Services. The goal is to establish a single set of accreditation standards for all human-subjects protection programs. When finalized, the new standards will apply to all VA medical centers conducting research on human subjects.

see STANDARDS on pg. 2
Recent publications

Below is a sampling of recent publications by VA investigators. Due to space constraints, only VA authors and affiliations are noted. Send notification of upcoming publications and presentations to R&D Communications at researchinfo@vard.org or (fax) (410) 962-0084.

“Acute and Chronic Urticaria.” Guha Krishnaswamy, MD; George Youngberg, MD. Mountain Home (Tenn.). Postgraduate Medicine, Feb. 2001.


“Educational Agendas for Interdisciplinary End-of-Life Curricula.” Richard A. Mularski, MD; Paul Bascom, MD; Molly L. Osborne, MD, PhD. Portland. Critical Care Medicine, Feb. 2001.

“Excess Mortality Due to Pneumonia or Influenza During Influenza Seasons Among Persons with Acquired Immunodeficiency Syndrome.” Joseph C. Lin, MD; Kristin L. Nichol, MD, MPH. Minneapolis. Archives of Internal Medicine, Feb. 2001.


“Postnatal and Pubertal Skeletal Changes Contribute Predominately to the Difference in Peak Bone Density Between C3H/HeJ and C57BL/6J Mice.” C. Richman; Apurva K. Srivastava, PhD; Jon E. Wertgedal, PhD; David J. Baylink, MD; Subburaman Mohan, PhD. Loma Linda. Journal of Bone and Mineral Research, March 2001.

“Upregulation of G Protein-Linked Receptor Kinases with Advancing Age in Rat Aorta.” William E. Schutzer, MS; John F. Reed; Michael Bliziotes, MD; Scott L. Mader, MD. Portland. American Journal of Physiology: Regulatory, Integrative and Comparative Physiology, March 2001.


On the Web...

New guidelines for contributors to VA’s Journal of Rehabilitation Research and Development are posted at www.vard.org. A shorter version of the web posting is included in each issue of the print journal. For more information on the journal, contact Tamara Sowell, editor, at (410) 962-1800, ext. 240, or tamara@vard.org.

A “PDF” version of this newsletter, VA Research Currents, is posted by approximately the 15th of each month on the “What’s New” page at www.va.gov/resdev.

Standards (cont. from pg. 1)

In a related effort, VA’s Office of Research and Development last month brought together more than 100 researchers, clinicians, policymakers and administrators from VA and elsewhere for a state-of-the-art conference on making informed consent meaningful. Ideas that emerged from this conference may lead to research that improves the process and practice of informed consent for research participants.

“These are just two examples of the strategies VA is employing to ensure that we hold ourselves to the highest standard in protecting veterans and informing them about research risks and benefits,” said VA’s Chief R&D Officer, John R. Feussner, MD, MPH. “We do not view such protections as procedural obstacles or a requirement that we must observe. We view them for what they are in fact—an essential part of the research process.”

R&D Hotline Conference Call

Next call: May 14, noon to 12:50 p.m. (EST). Dial (877) 230-4050.
Selected findings

**Synthetic estrogen grows bone tissue more safely**

By using a synthetic form of estrogen that promotes bone growth without affecting the reproductive system, researchers at the Central Arkansas Veterans Healthcare System and the University of Arkansas for Medical Sciences may have discovered a new way to treat osteoporosis. They reported their findings in the March 9 issue of the journal *Cell*.

Working with mouse bone cells, a team led by Stavros C. Manolagas, MD, PhD, found that an estrogen-like molecule could prolong the life of osteoblasts—the cells that build bone—without causing any of the side effects associated with estrogen replacement therapy. Estrogen replacement therapy, widely prescribed for menopausal women to prevent and treat osteoporosis, works by slowing bone loss. But it is associated with uterine cancer, continuous menstruation and other reproductive side effects.

**Brain impairment noted in young alcoholics**

Using functional MRI (fMRI), researchers at the San Diego VA Healthcare System and the University of California, San Diego, identified specific areas of the brain that were impaired by long-term alcohol abuse in women 18 to 25 years old.

Published in the February issue of the *Journal of Alcoholism: Clinical and Experimental Research*, the study was the first to identify the specific brain sites where impairment occurs in young adults.

“Our findings suggest that even young and physiologically healthy individuals risk damaging their brains through chronic, heavy use of alcohol,” said lead author Susan F. Tapert, PhD.

The study compared the brain scans of young women with and without histories of alcohol abuse as they performed memory tests. The women with a drinking history had less oxygenated blood in the frontal and parietal lobes of the brain. “These are areas needed for a variety of everyday tasks,” said Dr. Tapert.

Her team plans additional research to determine if the brain dysfunction noted in the young women is permanent, or if it might improve with abstinence. However the study authors note that three of the ten alcoholic women in the study had been sober for at least six months, yet they exhibited the same functional impairment as the women still drinking.

**Study identifies brain areas that govern timing**

Researchers at the VA Medical Center in Albuquerque and the Medical College of Wisconsin (MCW) have identified the areas of the brain that govern the perception of time over short intervals and thus enable people to perform everyday tasks such as playing music, catching a ball or driving a car. The findings appear in the March 2001 issue of *Nature Neuroscience*.

The study was the first to demonstrate that the critical areas for this timekeeping system are the basal ganglia, located deep within the base of the brain; and the parietal lobe on the right side of the brain. The findings may enhance current understanding of the timing disorders seen in patients with Parkinson’s disease, Huntington’s disease and Attention-Deficit/Hyperactivity Disorder (ADHD)—three conditions associated with abnormal function within the basal ganglia.

Using functional magnetic resonance imaging (fMRI), researchers tracked second-by-second brain activity as subjects compared the time intervals between two sets of tones. To ensure they were tracking only the perception of timing, the researchers administered control tasks that included listening to tones and estimating their pitch, but not making judgments about the time intervals between them.

**New use for lipid-lowering drug with heart patients**

In a multinational study led by a VA investigator, patients who received the cholesterol-lowering drug atorvastatin in high doses immediately after mild or threatened heart attacks—regardless of their cholesterol level—experienced fewer coronary events over the next four months than patients not on the medication. The findings are reported in the April 4 issue of *The Journal of the American Medical Association*.

The study, conducted at five VA medical centers and 117 other clinical centers across four continents, was led by Gregory G. Schwartz, MD, PhD, chief of cardiology at the Denver VA Medical Center.

Patients in the intervention group received 80 mg per day of the drug atorvastatin over four months, initiated within four days of their initial coronary event. They experienced 16 percent fewer deaths, repeat heart attacks and re-hospitalizations for chest pain than patients in the control group.
**Newsmakers**

Paul Clopton, MS, statistician and director of computer operations for research, San Diego, was quoted in a *Science* magazine article in February on math education. Dr. Clopton co-founded the group “Mathematically Correct.”

The Cleveland Functional Electrical Stimulation (FES) Center was among rehabilitation sites featured in a recent PBS documentary on spinal cord injury, titled “The Bionic Body” and hosted by actor Alan Alda. The center is a joint project of the Louis Stokes Cleveland VA Medical Center, Case Western Reserve University, and MetroHealth Medical Center.

Biomedical engineer Dennis R. Carter, PhD, and research scientist Gary S. Beaupré, PhD, of the VA Palo Alto Health Care System, are the authors of a just-published book on biomechanics titled *Skeletal Function and Form: Mechanobiology of Skeletal Development, Aging and Regeneration*. Published by Cambridge University Press, the text is a resource for health professionals and scientists concerned with the role of mechanics in the human skeletal system. The authors conduct research at the Center of Excellence on Mobility at the VA Palo Alto Health Care System, one of nine centers of excellence of VA’s Rehabilitation R&D program. Recent projects there include using robots to help in stroke recovery and developing new technologies for hip replacement.

**Lienhard Award for improving health services**

The Institute of Medicine is accepting nominations through May 18, 2001, for its Lienhard Award, recognizing individuals for outstanding achievements in improving personal health care services in the United States. The award comes with $25,000 and a medal. Details are available from Dot Brady at dot.brady@hq.med.va.gov or (202) 273-8873.

**Noteworthy new grants**

Spinal cord injury—VA researcher Michael L. Boninger, MD, Pittsburgh, will head the new Model Center on Spinal Cord Injury at the University of Pittsburgh, funded by a $1.6 million grant from the National Institute on Disability and Rehabilitation Research. The center, in collaboration with VA’s Pittsburgh-based Center for Wheelchair and Related Technologies, will conduct research on a new generation of wheelchairs and assistive devices.

Medical errors—Mark L. Graber, MD, chief of Medical Service at the Northport (NY) VA Medical Center, received the James S. Todd Memorial Award for Patient Safety from the National Patient Safety Foundation. Dr. Graber will head a study titled “Diagnostic Errors in Internal Medicine.” The study will define the various types of medical errors that occur, measure the frequency and impact of each type, and attempt to identify causes and possible solutions.