



Life Sciences

DISCOVERY FUND

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Life Sciences Fund Grants Awards to Launch Health Research Initiatives

Seattle - (April 17, 2008) - The Life Sciences Discovery Fund (LSDF) has today awarded \$22 million in grant funding to 5 Washington State-based life sciences organizations and their partners. The newly-funded health research initiatives focus on the areas of medical genetics, autoimmunity, cancer clinical trials, proteomics-based diagnostics and early learning and brain development ([See Background Information](#)).

The grant awardees are: Gail Jarvik, University of Washington; Gerald Nepom, Benaroya Research Institute at Virginia Mason; Martin Cheever, Fred Hutchinson Cancer Research Center; Richard Smith, Battelle, Pacific Northwest National Laboratory; and Patricia Kuhl, University of Washington.

The grantees were selected by the LSDF Board of Trustees from among 75 submitted proposals that had been evaluated by national experts convened by the American Association for the Advancement of Science.

Funding for these grant programs comes from Washington's allocation of bonus payments under the Master Tobacco Settlement, revenues arising from multi-state litigation with tobacco product manufacturers. This group of awardees is the first to be funded through this mechanism.

"This has been a highly-competitive process. The proposals were weighed on their scientific merits and their abilities to utilize this funding to provide statewide economic returns, to build a competitive life sciences industry and to advance the health of, and health care for, our citizens. These newly-awarded grants will leverage substantial additional investment in Washington State by a variety of other funders such as federal agencies and philanthropic organizations," said LSDF Executive Director Lee Huntsman.

The new scientific endeavors, enabled by the LSDF grants, are assets to our state, according to LSDF Board Chair Lura Powell. "The Board is very impressed by the high quality of both the teams and the exciting research represented by these awards," she said. "As with the projects chosen in LSDF's inaugural competition last

September and supported with donor funds, these new programs show great promise to enhance the health of our citizens and the growth of our economy for years to come."

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Backgrounder Information

LSDF 07-02 Program Proposals

Martin Cheever, Fred Hutchinson Cancer Research Center, \$2,237,265

Program title: *Fred Hutchinson/University of Washington Cancer Consortium Phase 1 Clinical Trials Program*

Program focus: To develop a phase 1 cancer clinical trials program for accelerating the development of new cancer-fighting drugs.

The development and testing of new drugs to treat adult and pediatric cancers is a pressing national and global need. In recent years the effectiveness of targeted cancer drugs and the need to test and modify these medications and associated treatment regimens in humans has proven critical. The investigators will evaluate the promise of new cancer therapeutic agents through early stage clinical trials. The program will make new and possibly more effective cancer therapy agents available to people living in Washington State earlier than otherwise possible, especially for common cancers for which conventional therapy is now largely ineffective. Washington-based physicians will also receive training on the newer therapies. The team's efforts will hasten the biotechnology and pharmaceutical industry's development of cancer drugs and therapy regimens while allowing a greater proportion of the development to remain within Washington State.

Organizations collaborating in this research are: Wenatchee Valley Medical Center, Olympic Medical Center (Port Angeles), Skagit Valley Hospital (Mount Vernon), and Clinic Cancer Care (Great Falls, MT).

Gail Jarvik, University of Washington, \$5,339,742

Program title: *Institute for Genetic Medicine*

Program focus: To build a new infrastructure that will enable clinical investigation using rapid, high-volume analysis of genomic data in the area of medical genetics.

The investigators will work to enhance cutting-edge research in the etiology, prevention, and treatment of common human disease and treatment outcomes. This will provide the framework to conduct translational genetics research. They will coalesce resources in human genetics at the basic, technological, and

computational levels; identify and fill gaps in data availability and analysis; and provide staff and expertise to support and sustain the use of these resources. Their objective is to optimize these resources for use in translational studies aimed at developing new gene-based diagnostics, prevention strategies, and treatment plans. In the long term it is expected this team will identify a large number of disease-related biomarkers, each with a potential for development of new diagnostic and/or therapeutic agents. Forming a foundation for genetic discovery and associated improved personalized care, prevention, and better health outcomes will increase Washington State's research competitiveness and fuel the growth of related biotechnology companies.

Organizations collaborating in this research are: Group Health Cooperative, Rosetta Inpharmatics LLC, and Children's Hospital & Regional Medical Center.

Patricia Kuhl, University of Washington, \$4,033,304

Program title: *Early Learning and Brain Development: MEG Brain Imaging Center for Infants and Children*

Program focus: To establish a regional child brain imaging center to utilize the latest in brain imaging technology to measure the young brain in action and explore the basic mechanisms, and the potential underlying problems, that drive early learning and lay the foundation for life-long learning.

Children's brain responses to events such as thinking, listening to language and music, and social interactions have been linked to their subsequent development and learning capacity. The investigators will use magneto-encephalography (MEG), a technology which is new to Washington State. MEG measures brain waves at the surface of the scalp in a non-invasive, noiseless process. This will be the only MEG in the world devoted to children. The behaviors, syndromes, and disabilities that will be addressed by the team represent unmet medical needs and are all prevalent in Washington State and worldwide. Improved understanding of the causes and possible treatment of autism, ADHD, dyslexia, learning difficulties and other diseases with early childhood onset will have profound implications for both the educational and health-care systems.

Gerald Nepom, Benaroya Research Institute at Virginia Mason, \$5,575,200

Program title: *Program for Autoimmune Disease Intervention (PADI)*

Program focus: To apply genetic and immunologic discoveries to benefit people with autoimmune diseases, such as Type 1 diabetes, multiple sclerosis (MS) and systemic lupus erythematosus (lupus).

The investigators will pioneer immunologic staging or profiling as a tool for early diagnosis, selection of treatment, monitoring of therapeutic response, and prediction of prognosis for Type 1 diabetes, MS, and lupus, diseases of particularly high prevalence in Washington State. By suppressing an immune response common to these three diseases, the investigators hope to improve basic diagnostic and treatment capabilities. Disease management in Type 1 diabetes, MS, and lupus can only be done with general immunosuppressive regimens that often create devastating side effects. Both regional and global markets are desperately in need of new therapeutic options for treating autoimmunity. Profiling will also be used to group those individuals eligible for clinical trials and therapies, create new therapeutic options, and

generate economic development in Washington State for new biotechnology opportunities. The investigators will also expand outreach to physicians and people in Washington State who have Type 1 diabetes, MS and lupus to enhance access to innovative therapeutic clinical studies.

Organizations collaborating in this research are: University of Washington.

Richard Smith, Battelle, Pacific Northwest National Laboratory, \$4,830,000

Program title: *Next Generation Clinical Proteomics to Target Human Health Challenges*

Program focus: To develop a new proteomics (the large-scale identification of all the proteins in a sample, e.g., blood) technology and apply it in search of blood biomarkers for liver disease and in subsequent use as a powerful tool in the study of cancer, diabetes, and other conditions.

The investigators will develop and apply new technology to find blood proteins that reveal the earliest signs of chronic liver disease. The goal is to establish a safer, non-invasive, easier diagnostic process for liver fibrosis than liver biopsy, allowing an earlier intervention at lower cost and reduced levels of illness and patient discomfort. In Washington State, more than 4,000 people are diagnosed annually with liver disease caused by hepatitis C virus (HCV). About half are cured with a cost of \$13 million for diagnosis. This team's technology platform would enable earlier diagnosis of HCV and is projected to increase successful treatment rates by nearly ten percent. Integral to this program is the extension of the technology platform to address problems in other diseases and to make it commercially available for broad clinical use.

Organizations collaborating in this research are: University of Washington.

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The Life Sciences Discovery Fund, a Washington State agency established in May 2005, makes grant investments in innovative life sciences research to benefit Washington and its citizens.

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