Ti V Cr Mn Fe Co Ni Cu Rh Zr Nb Mo Tc Ru Pd lr. Ta Lu Pt Au Db Ds Rg Gd La Ce Pr Eu Na CI Ac Th Pa Am Cm Bk

Turning what we know - into what we do

THE PATRICK AND CATHERINE WELDON DONAGHUE MEDICAL RESEARCH FOUNDATION 2006 ANNUAL REPORT



Turning what we know

We know that at the molecular level salt is the combination of two elements – sodium and chloride. But it is the use of this remarkable substance that really matters to so many people. From manufacturing processes and the production of chemicals, to the preservation and enhancement of food, to de-icing roads, salt is a valuable commodity.

What does this have to do with medical research? At the Donaghue Foundation, our highest priority is to help move the important medical knowledge created by researchers from the laboratory into the world of health practice and policy, where it can be put to use in doctor's offices, health care facilities, and our everyday lives to prevent disease and heal illness.

In the end, it's all about getting the NaCl into the salt shaker.

into what we do



The Patrick and Catherine Weldon Donaghue Medical Research Foundation is a charitable trust created pursuant to the will of Ethel F. Donaghue, late of West Hartford, Connecticut. The Foundation, which began operations in 1991, is governed by Bank of America and Raymond S. Andrews, Jr., Trustees. The Foundation is exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code of 1986, is a private foundation within the meaning of Code Section 509(a), and is subject to the jurisdiction of the Probate Court for the District of West Hartford.

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"ALL DURING 2006, DONAGHUE'S WORK WAS GUIDED BY THE RECOGNITION THAT WE NEED TO SPEAK – AND SPEAK CLEARLY – WITH THOSE WE PROFESS TO BENEFIT. ONLY THEN CAN WE EXPECT THEM TO TAKE UP AND EFFECTIVELY USE THE KNOWLEDGE OUR RESEARCHERS' EFFORTS PRODUCE."

A Message from

The Trustees

Of Tugboats and Nuggets ... and Salt

Tugboats

Several years ago, the Donaghue Foundation annual report focused on the internal work we had done throughout 1997 to refine our mission and manner of pursuing it. We saw ourselves as helping to change the status quo through teamwork with our research institutions, so we picked as our theme the tugboat, a mighty little vessel designed for work and adept at guiding much larger vessels. During 2006 we spied a few other little tugboats out there, pushing the status quo in health research, and we enthusiastically endorsed their contributions by providing grant support to the Myelin Repair Foundation and the Multiple Myeloma Research Foundation.

Nuggets

Last year, at our annual meeting, the subject of nuggets came up, with a metaphorical representation of new knowledge as nuggets of discovery that must be carried from the mine if they are to produce value. Throughout 2006 the Donaghue trustees – and especially the staff – devoted lots of time and effort to what we call Knowledge Uptake, examining what others are doing, what learning from other domains can be imported into our work, and what obstacles need to be overcome to get us all to Miss Donaghue's vision of practical benefit to human life.

Salt

This year we have a salt shaker on the cover of our 2006 report. What's this all about? At our meeting in 2005, Rima Rudd, DSc spoke about the communication gap between health professionals and the public, admonishing us to bridge that gap in order to deliver health benefit. Dr. Rudd graphically illustrated her point by alluding to the nutritional information commonly affixed to packages of food and pointing out that many people, unschooled in chemistry, don't know that the sodium mentioned on the labels is the salt that's on our tables. All during 2006, Donaghue's work was guided by the recognition that we need to speak – and speak clearly – with those we profess to benefit. Only then can we expect them to take up and effectively use the knowledge our researchers' efforts produce.

Putting them all together

Another piece of key work was undertaken by the trustees in 2006: the reassessment of our statements – and, of course, the substance – of vision, mission, values and goals. Miss Donaghue gave us a fixed purpose, but it rests with us to translate that purpose into an expression that is current, relevant, and appropriate for the times. Many hours of reflection and debate culminated in a very different set of statements embodying our view of our role and priorities for the years ahead. We encourage the reader to scrutinize in the pages that follow what we've developed as our best expression of what Donaghue stands for and is committed to do.

Encouraged by our 2006, we anticipate more tugboat activity and more nuggets carried to town in 2007 and beyond. So — pass the sodium chloride — *salt*.

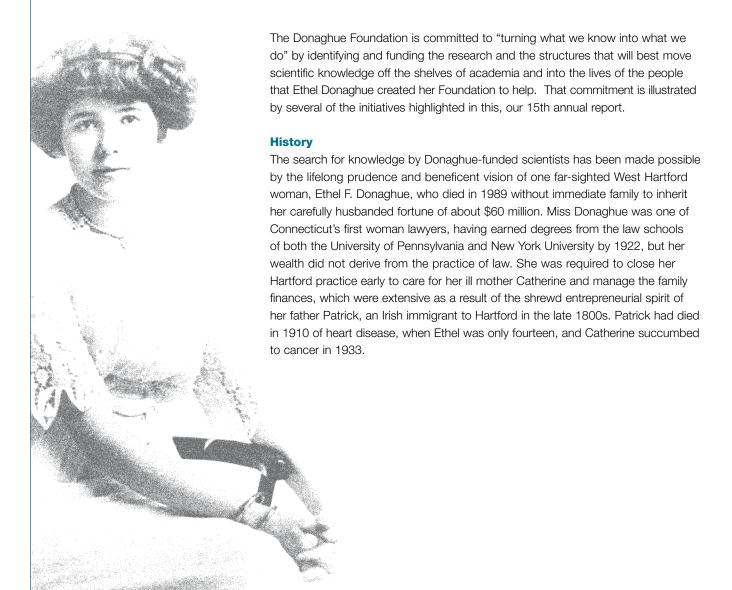
Raymond S. Andrews, Jr.

Trustee

Sheilah B. Rostow Senior Vice President Bank of America

History Purpose

Generally, research institutions are not well structured to put medical knowledge to practical use. They know how to discover the elements and, perhaps, even combine them into a useful product – like the salt on the cover of this report. But when it comes to converting their discoveries to applications for use, they often face significant barriers.



DONAGHUE FACT:

In addition to the Foundation named for her parents, Miss Donaghue created two other foundations during her lifetime. Both of these small charities were also created to fund medical research.

Although Miss Donaghue enjoyed enviable wealth and was able to travel widely for many years, she lived those years alone in her West Hartford mansion, with only household help for companionship. Spurred on by living through several family health problems and outliving her entire immediate family by over three decades, Miss Donaghue developed an abiding interest in health care and research. She often contributed to hospitals and established two trusts during her lifetime to support research. Her commitment to advancing human health culminated in a trust created under Article Fourteenth of her will and devoting the bulk of her estate to The Patrick and Catherine Weldon Donaghue Medical Research Foundation, which honors the memory of her parents and is now reporting on the completion of its fifteenth year of grantmaking.

Purpose

The testamentary intent of Ethel Donaghue is the immutable mandate for the Donaghue Foundation trustees, who have developed statements of vision, mission and goals (set forth elsewhere in this report) to give ongoing current meaning to Miss Donaghue's beneficent purpose. Miss Donaghue said in her will that her trustees should seek out useful health knowledge through research. She envisioned a steadfast pursuit of knowledge that would be of practical benefit to human life, and the trustees have adopted Practical Benefit as a policy and operations compass.

Prominent among Ethel Donaghue's traits were a strong will, a championing of women's causes, a keen sense of the practical, and a healthy dose of common sense. These traits loom large in the trustees' reading of her words, particularly her urging that they undertake unusual and non-standard activities in furtherance of her purpose. A frequent question in trustee discussions of policy and program design is "What would Miss Donaghue do, were she here and in possession of the facts we have?" Nearly as important to the ongoing work of the Donaghue Foundation as what we are to do is how we are to go about it. That is expressed at length in our statement of goals and has characterized our work up to and including the just-completed year of 2006.



Our Vision for Donaghue

We envision constant improvement both in people's health and in the way research is converted into practical benefit.

The Mission of Donaghue

We will give the vision of Ethel Donaghue its best expression and thereby honor her and her family as an engaged, imaginative and collaborative participant in the process that begins with rigorous health research and ends in realized health benefits.



Goals

Donaghue's Goals

Promote knowledge uptake of health research into the realms of health care delivery, practice and policy.

Strengthen and widen understanding of the Foundation's mission by other people and organizations who have the potential to improve health.

Ensure that our grantmaking programs are structured to support rigorous research that more directly leads to a positive impact on health.

Support promising researchers whose work specifically encompasses the principles of knowledge uptake.

Create networks and collaborations to test innovative ideas related to health research and health outcomes.



Values

Donaghue's Values

Steadfast in our commitment

The purpose entrusted to us by Miss Donaghue in her will is an immutable mandate for us, and we will be unwavering in our resolve to give her vision its proper meaning and best expression in a context of changing facts and conditions.

Principled and practical

Guided by the balance between Miss Donaghue's lofty vision and her common sense practicality, we will ground our execution of her trust upon solid principles while applying them in ways that focus on the practical. While being ready to risk in our search for ways to make a difference in health, we will maintain the integrity and the prudence that mark the work of a fiduciary.

FROM LEFT TO RIGHT NANCY YEDLIN, MPH, DIRECTOR OF PROGRAM COMMUNICATIONS & MANAGEMENT DIANA MARTENS, ADMINISTRATIVE ASSISTANT LYNNE GARNER, PHD, EXECUTIVE DIRECTOR SHEILAH ROSTOW, BANK OF AMERICA, TRUSTEE RAY ANDREWS, TRUSTEE

Engaged to the point of effect

Our method of operation will be active engagement with those involved in seeking to benefit human health. As a complement to our research funding we will collaborate with others to promote uptake of health knowledge. Somebody should be seeing to it that scientific advances are actually taken up by users – and we are somebody.

Respectful and reflective

We respect not only Miss Donaghue's intent but also, through an integration of ethics and science, the human subjects of research and those with whom we work for the betterment of human health. We will strive to balance: our pursuit of new knowledge with its translation into actual use; scientific exploration with thoughtful reflection upon the implications of discovery; and the gaining of knowledge with the pursuit of wisdom to temper its use for practical benefit to human life.



"IT HAS BECOME EVIDENT THAT MEETING THE CHALLENGE
OF KNOWLEDGE UPTAKE WILL REQUIRE US TO DEVELOP
NEW SKILLS AND TO HAVE THE PATIENCE AND TO DEVOTE
THE RESOURCES FOR A SUSTAINED EFFORT."

A Message from the

Executive Director

During 2006 our work at the Foundation included launching new initiatives as well as continuing our ongoing stewardship of existing grant programs. Both of these activities were aimed at furthering the Foundation's mission of funding rigorous health research that ends in realized health benefits. One of these initiatives, a \$1 million commitment to fund leadership-driven patient safety research, was the first time Donaghue used a competitive Request for Proposal process within the Practical Benefit Initiatives grant program. We received 39 research proposals from acute care hospitals representing each of the six New England states. After review by our Patient Safety Advisory Committee, a panel of national experts convened specifically for this purpose, 19 institutions were invited to submit an application on their proposed research topic. Grant awards from these applications will be made in summer 2007.

The Foundation veered from its usual course in another way this year by providing funding to two research foundations – a first in its 15-year history. During the next three years Donaghue will be giving over half a million dollars to the Multiple Myeloma Research Foundation and the Myelin Repair Foundation; these foundations will in turn use this funding to advance research to develop treatments for multiple myeloma and multiple sclerosis. We broke with our usual funding practice because we were impressed with the innovative structures and highly practical, time-critical approaches they have developed for funding research focused on solving a specific health problem. Donaghue sought to recognize their accomplishments with our funding, and we hope to learn from their approach during our association with them over these three years.

Woven into these initiatives and Donaghue's other grant programs is our continuing study of the Foundation's role in promoting knowledge uptake from the research we fund. One of our early lessons is that moving from knowledge to action is difficult work and there are many structural reasons why the findings of clinical trials or health services research move slowly to improve health. It has become evident that meeting the challenge of knowledge uptake will require us to develop new skills and to have the patience and to devote the resources for a sustained effort. This new learning is exciting to us and we find these new ventures engaging.

Of course much of our 2006 grantmaking would not be possible without our science and policy advisers, and they have our heart-felt thanks for assisting us in our work. One of the "Donaghue Facts" found in this report estimates the number of person-hours spent reviewing each grant application at an impressive fifteen hours. In addition to acknowledging the members of our standing review committees and the Policy Advisory Committee, our annual report this year notes the many scientists who have assisted us by being an adjunct reviewer when an applicant's topic or methods requires us to stretch outside our standard committee. In all, the Foundation's work was supported this year through the efforts of nearly 50 advisers and reviewers.

On a different front, my report on the Foundation's activities for the year would not be complete without mentioning the expansion and renovation of our office space last summer. We are pleased to now have this comfortable place to hold our review and advisory meetings on site; it has also enabled us to host meetings and engage more frequently with other organizations, helping us to strengthen our collaborations.

In addition to the activities and accomplishments mentioned above, this report also gives readers a brief summary of the specific grants that the Foundation awarded in 2006, made possible by Miss Donaghue's foresight and gift. I invite you to take a few minutes to read about the fascinating work of our investigators and the health benefits they hope to achieve.

Lynne Garner, PhD Executive Director

hyune Garner

THE DONAGHUE INVESTIGATOR PROGRAM SUPPORTS PARTICULARLY PROMISING MEDICAL RESEARCHERS HOLDING FACULTY APPOINTMENTS AT CONNECTICUT INSTITUTIONS. THE PROGRAM EMPHASIS IS UPON THE RESEARCHER RATHER THAN UPON SPECIFIC RESEARCH.

Donaghue Investigators

By focusing on the investigator's research program, the Donaghue Investigator program provides freedom to researchers to explore new ideas and expand the breadth of research at a relatively early stage in one's career. This distinctive characteristic of the Donaghue Investigator program has fostered the creation of new, successful and highly visible research programs across the



state. Moreover, the Investigators make a commitment to pursue their work in Connecticut, so state residents are the first beneficiaries of new knowledge generated through this mechanism. In this regard, one of the main responsibilities of Donaghue Investigators is to build bridges between their academic centers and the public for the application and dissemination of new scientific insights. This feature is at the heart and soul of this program. As a clinician investigator, I owe a great deal of gratitude to this award. It made possible a new program of research

and clinical care in pediatric skeletal health at Connecticut Children's Medical Center. As the last round of new grants will be made this fall, a dialogue between past and present Investigators and the Foundation will help to sculpt a new program, which no doubt will be successful, too.

FRANCISCO SYLVESTER, MD
ASSOCIATE PROFESSOR OF PEDIATRICS
CONNECTICUT CHILDREN'S MEDICAL CENTER
2003 DONAGHUE INVESTIGATOR

DONAGHUE FACT:

During its nine years, the Donaghue Investigator program has spent nearly \$16 million in grant funding for health-related research in Connecticut.

Hal Blumenfeld, MD, PhD, Associate Professor, Director of Medical Studies in Clinical Neuroscience, Yale University School of Medicine Impaired Consciousness in Epilepsy: Mechanisms and Consequences

With his Donaghue Foundation grant, Hal Blumenfeld hopes to enhance driving safety for people with epilepsy. "Many patients with epilepsy can't drive because they lose consciousness during seizures, while others remain fully awake and are permitted to drive," says Blumenfeld. "The difference between seizures that do or do not cause impaired consciousness is not known."

Using a video driving game to test alertness and reaction time in epilepsy patients, Blumenfeld will construct maps of brain electrical activity and perform imaging of brain metabolic activity during and after seizures to pinpoint which regions of the brain are affected when patients lose consciousness. "Knowing the difference between seizures that impair consciousness and those that don't will make it easier to advise patients as to whether or not they can drive - an important quality-of-life issue," adds Blumenfeld. In addition to providing that very practical benefit for the approximately 45,000 people with epilepsy in Connecticut, Blumenfeld believes his five-year research project has potential to deliver an even greater benefit down the road. "If we know which areas of the brain cause loss of consciousness, we can develop new treatments targeted at preventing impaired consciousness in epilepsy."

Becca Levy, PhD, Associate Professor of Epidemiology and Psychology, Yale University, School of Public Health

Promoting Older Individuals' Health Behaviors through Positive Age Beliefs

Approximately 50 percent of all deaths in America can be attributed to "unhealthy behaviors," and older individuals are at still greater risk. With her Donaghue Foundation grant, Becca Levy will conduct a series of studies aimed at improving health behaviors – and, consequently, the health – of older people, with a focus on social-psychological factors. "The elderly tend to have low participation rates in a number of health-promotion behaviors, like keeping active and eating

healthy meals," explains Levy. "These numbers are even more troubling among older minority populations. In addition, we have found that the majority of intervention studies have excluded older participants – and *none* promoted positive views of aging."

When Levy's body of research is completed in five years, she expects to have found effective ways to enhance the health behaviors of seniors and disseminate those findings to community groups, academics and healthcare providers, through such vehicles as workshops and the publication of a "user-friendly" manual. "Our previous research has provided evidence that positive stereotypes can improve the physical and cognitive functioning of the elderly," she says. "It is exciting to have the opportunity to build on those findings and apply them to a real-world setting."

Quing Zhu, PhD, Associate Professor, Biomedical Engineering Program, University of Connecticut

Novel Imaging Devices for the Diagnosis and Treatment of Breast Cancers

According to the American Cancer Society, each year approximately 2,000,000 women have breast biopsies on tumors that turn out to be normal or benign. Using an innovative hand-held probe that combines ultrasound and optical technologies, Quing Zhu aims to dramatically improve the accuracy of the tumor imaging process and, in doing so, reduce the number of unnecessary biopsies. "We expect that many women will benefit from our technique because the accuracy of our technology in the diagnosis of solid lesions far exceeds ultrasound alone," says Zhu.

As part of her five-year research project, Zhu also hopes to use her imaging technology to monitor the effectiveness of chemotherapy in breast cancer patients. "Optical systems are cost-effective and can be easily coupled with clinical ultrasound systems for repeated imaging," she says. "We expect that many patients undergoing chemotherapy will benefit from our combined technique." Looking ahead, Zhu emphasizes that her Donaghue Foundation grant will enable her to accelerate the transfer of her novel technology from the lab to the world of clinical practice and "directly benefit millions of women who suffer from unnecessary beast biopsies, as well as breast cancer diseases."



HAL BLUMENFELD, MD, PHD



BECCA LEVY, PHD



QUING ZHU, PHD

Clinical & Community Health

THE CLINICAL AND COMMUNITY
HEALTH ISSUES PROGRAM IS FOR
HEALTH-RELATED RESEARCH
PROJECTS THAT ADDRESS MAJOR
MEDICAL CONDITIONS AND SOCIAL
PROBLEMS AFFECTING THE HEALTH
OF INDIVIDUALS, GROUPS AND
COMMUNITIES.

If someone were to ask me "What makes the Clinical and Community Health Issues program most notable?" adjectives such as visionary, risk taking, responsive, and flexible would immediately flood my mind. The Clinical and Community Health Issues program provides an opportunity for Connecticut scientists to conduct research in areas that other agencies like the National



Institute of Mental Health (NIMH) or the National Institute of Nursing Research (NINR) might not be interested in funding. Of course, good science is a must, but over and above that, alleviating human suffering and enhancing quality of life of the citizens of Connecticut and beyond are the true benchmarks for the success of the Clinical and Community Health Issues program. I can provide a first hand account of this benefit that is the cornerstone of the Clinical and Community Health Issues program; through a grant from this program, I was able to develop the

Postpartum Depression Screening Scale (PDSS) and to assess its psychometrics. Currently the Connecticut Department of Public Health is pilot testing a protocol using the PDSS to screen new mothers for this devastating mood disorder that has been called "the thief that steals motherhood."

CHERYL BECK, DNSc

PROFESSOR OF NURSING

UNIVERSITY OF CONNECTICUT

POLICY ADVISORY COMMITTEE MEMBER AND

FREQUENT DONAGHUE REVIEWER







KALPANA GUPTA, MD, MPH



CHIRAG PARIKH, MD, PHD

Randomized Controlled Trial for Obesity and Binge Eating in Monolingual Hispanic Persons Carlos M. Grilo, PhD, Professor of Psychiatry, Yale University School of Medicine

Obesity is one the most serious public health problems in the U.S., particularly among Hispanics, where obesity rates and associated medical problems (such as type-II diabetes) are higher and increasing faster than among Caucasians. "Because Hispanics tend to be under-represented in research, little is known about the effectiveness of behavioral weight loss (BWL) and medication treatments in the large segment of persons in the U.S. who speak only Spanish," says Carlos Grilo, whose research will address this problem over the next three years. "Moreover, the effectiveness of BWL for binge eaters in this monolingual patient group remains uncertain."

Grilo's study will evaluate whether adding orlistat (an FDA-approved obesity medication) to BWL treatment enhances outcomes among obese monolingual Hispanics, and whether binge eaters require different care than those who do not binge. "Because our study will be conducted at a facility that trains Latino clinicians in the delivery of services to fellow Latinos, it represents a unique opportunity to expose those clinicians to the importance of sensitively recognizing – and addressing – obesity problems in Hispanics," Grilo explains. "We also hope to...gain a more comprehensive understanding of the behavioral and psychological needs of Latinos who are obese."

Cranberry for Urinary Tract Infection Prevention in Nursing Home Residents

Kalpana Gupta, MD, MPH, Assistant Professor of Medicine, Yale University School of Medicine

With her Donaghue Foundation grant, Kalpana Gupta will conduct a longitudinal cohort pilot study to evaluate the feasibility of using cranberry to prevent urinary tract infections (UTI) in nursing homes, where UTI results in significant morbidity among residents.

"The study has the potential to provide direct practical benefits to nursing home residents in Connecticut, as well as this population on a larger scale, by evaluating a strategy that may markedly change the epidemiology and incidence of, as well as the morbidity and mortality attributable to, UTIs in the long-term care setting," she says.

Currently, there is very little published data on the feasibility of using cranberry for UTI prevention in the nursing home environment. "The most exciting aspect of my work is its potential to provide the rationale and evidence for a simple, inexpensive approach to improving the health status of a large segment of the population," says Gupta, who hopes to use the data from her two-year pilot study to obtain a grant for a larger scale placebo-controlled clinical trial. "Such a trial could significantly impact clinical guidelines for the management and prevention of UTI in the long-term care setting."

Novel Biomarkers to Detect Delayed Graft Function

Chirag Parikh, MD, PhD, Assistant Professor of Medicine, Yale University School of Medicine

There are more than 100 kidney transplants performed in Connecticut every year. Unfortunately, many of these transplants are destined to fail prematurely as a result of delayed graft function (DGF), a common post-surgical complication that is difficult to diagnose in a timely manner. With his Donaghue Foundation grant, Chirag Parikh will continue his promising study as to how two proteins found in urine - IL-18 and NGAL - may serve as biomarkers for the early and accurate detection of DGF. "These biomarkers have the potential to accurately diagnose delayed graft function in the first six to twelve hours after transplantation," exclaims Parikh. "Our pilot study will give us the framework to conduct a much larger, multi-center study... encourage clinical trials of promising therapies... and give us the tools we need to perfect these biomarkers."







MEREDITH H. STOWE, PHD



SRIJAN SEN, MD

DONAGHUE FACT:

EACH APPLICATION TO

DONAGHUE'S CLINICAL AND

COMMUNITY HEALTH ISSUES

PROGRAM RECEIVES APPROXIMATELY 15 PERSON-HOURS OF

REVIEW BY THREE ASSIGNED

REVIEWERS PRIOR TO THE

REVIEW MEETING AND BY THE

ENTIRE COMMITTEE DURING

THE MEETING.

According to Parikh, cooperating researchers in the U.S. and Canada have embraced his project with dedication and vigor. "Their enthusiasm and efforts afford a tremendous amount of promise for finding an early and objective diagnosis that would eventually lead to a therapeutic intervention for DGF," he says. "The prospect for attaining our research goals is very favorable."

Reducing Isocyanate Exposure in the Connecticut Auto Body Industry

Carrie A. Redlich, MD, MPH, Professor of Medicine, Yale University School of Medicine; Meredith H. Stowe, Associate Research Scientist, Yale University School of Medicine

With their Donaghue Foundation grant, Carrie Redlich and Meredith Stowe will develop, test and implement a DVD-based training program to reduce isocyanate exposure – a common cause of adult onset asthma – in the Connecticut auto body repair and refinishing industry, where this family of chemicals is widely found in paints and polyurethanes. "In developing our education materials (which also will include a Web site), we have consulted frequently with industry members, who have been extraordinarily helpful and enthusiastic about the project," says Redlich.

By the end of their three-year study, Redlich and Stowe expect to have widely distributed their training program for reducing exposure to isocyanates, as well as solvents, dusts and metals that can contribute to the asthma problem. "We anticipate a significant increase in these workers' knowledge about health hazards associated with their work environment, as well as strategies for reducing their risk of health effects," adds Stowe. "Armed with this knowledge, we anticipate that workers will use more protective equipment and follow better work practices." The bottom line: An improvement in the health and quality of life for workers in Connecticut's auto body industry.

The Roles of Genes and Stress in Medical Intern Depression

Srijan Sen, MD, PhD, Psychiatry Resident and Research Fellow, Department of Psychiatry, Yale School of Medicine

Depression is among the leading causes of disability in Connecticut and around the world. Unfortunately, the medical community does not have a complete understanding of the factors important in the development of depression, a situation Srijan Sen aims to change through a two-year study of medical residents, who have confirmed the depth of the problem among their peers. "Residents show a rate of depression many times higher than the general population," says Sen. "In our project...we will follow residents through their careers to understand the factors important in the development of depression and how genes and stress interact in that...process."

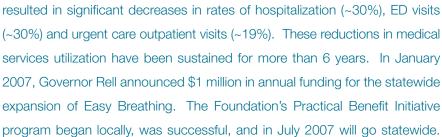
Noting that studies have demonstrated a link between depression and work performance, Sen hopes that improving the mental health of residents will enhance their ability to provide improved care to their patients. "A longer term goal is to further our understanding of depression...and develop better treatment for those already suffering. With the cooperation of resident programs in the state and the generosity of the Donaghue Foundation, I am hopeful that this project will make a real change in the residency experience and the lives of people in Connecticut."

The Practical Benefit Initiatives program helps to initiate research projects showing particular promise for producing practical benefit to human health.

Practical Benefit Initiatives

Easy Breathing, a disease management program for primary care physicians, is an excellent example of what the Donaghue Foundation's Practical Benefit Initiatives program is designed to achieve. The goals of Easy Breathing are to help primary care physicians to develop strategies and efficiencies to better manage asthma while at the same time improving diagnosis and management

of childhood asthma. The program began in 1998 in Hartford with a grant from the Donaghue Foundation as part of the Foundation's Practical Benefit Initiatives program. Although the grant had ended, due to the success of the research, Easy Breathing expanded into private practices in Hartford in 2000, and in 2002 it expanded again into five additional communities in Connecticut. To date, 70,000 children in Connecticut are enrolled in Easy Breathing. Adherence to the national asthma guidelines and use of a written asthma treatment plan have







Improving the Quality of Care for Atrial Fibrillation by Promoting Patient-Centered Decision-Making

Liana Fraenkel, MD, MPH, Associate Professor of Medicine, Yale University School of Medicine; Terri Fried, MD, Associate Professor of Medicine, Yale University School of Medicine

With their Donaghue Foundation grant, Liana Fraenkel and Terri Fried will conduct a randomized controlled trial to determine how patients with atrial fibrillation can be empowered to participate in the decision-making process regarding their treatment. "There are several treatment options available for atrial fibrillation," says Fried, "each with its own distinct risks and benefits. Choosing the right option depends on how patients value these risks and benefits."

According to Fraenkel and Fried, the three-year study will develop and test a new way of improving decision-making by: a) providing patients and physicians clear and easily understood information regarding the relative risks and benefits of the different treatments, b) enabling patients to articulate their preferences on the trade-offs between risks and benefits, and c) encouraging physicians to base their recommendations on patients' values. "Our ultimate goal is to ensure that the measures used to assess





LIANA FRAENKEL, MD, MPH AND TERRI FRIED, MD

the quality of medical care for patients with atrial fibrillation include an evaluation of whether patients' preferences are included in the decision-making process," adds Fraenkel. "Our study represents the first step toward this goal."

Guidelines on End-of-Life Care

Nancy Berlinger, PhD, MDiv, Deputy Director and Research Associate, The Hastings Center

The Hastings Center – an independent bioethics research institute that addresses fundamental and emerging issues in the areas of health care, biotechnology and the environment – has been a recipient of previous Donaghue Foundation grants. Once again, the Center's important work will be supported by the Foundation, this time for the updating of *Guidelines on the Termination of Life – Sustaining Treatment and the Care of the Dying*, a highly important and influential publication first developed in 1987.

"Guidelines on End-of-Life Care (Guidelines 2) will have new sections on futility, diversity, palliative and hospice care, surrogacy, disability, and many other important topics," says Nancy Berlinger, who will direct the project. "The two-year research phase will include significant attention to knowledge uptake to ensure that the finished product reaches and is

NANCY BERLINGER, PHD, MDiv

attentive to the needs and practical considerations of those who will use it." The updated publication, which is expected to be disseminated in 2008-2009, will be available in print and electronic formats to facilitate maximum ease of use by target audiences, which include professional caregivers, medical and nursing school faculty, clinical ethicists and ethics educators, the end-of-life care community, and lawmakers and policymakers.

Developing a Center for Translational Health Services Research

Judith Fifield, PhD, Professor of Family Medicine, University of Connecticut School of Medicine

Thanks in part to her Donaghue Foundation grant, Judith Fifield is forming an interdisciplinary research center – known as the Ethel Donaghue Center for Translating Research into Practice and Policy (TRIPP) – which she hopes will accelerate the uptake and transfer of knowledge discovered in academic settings to its use in the wider community. "Despite recommendations to close the gap between research and practice, there is little agreement on the most

DONAGHUE FACT:

Donaghue's Practical Benefit Initiatives have fostered collaborations among more than 75 health-related institutions.



(L-R) LESLIE CURRY, PHD, MPH; JUDITH FIFIELD, PHD, RN; AND MELANIE PEELE, MA

cost-effective health care models to adopt, and how to implement effective models across diverse groups," asserts Fifield. "The Center's mission is to facilitate health services and practice-oriented translational research (T2) of benefit to the University of Connecticut, primary care providers, patients, health systems and policy organizations."

The TRIPP Center (which is expected to be self-sustaining in five years) will nurture collaborative T2 research across a wide range of researchers. "We are working with clinicians who identify critical research questions but lack the infrastructure to study the question, promising junior researchers who are still being mentored, and senior level faculty with established T2 research programs," says Fifield. "In a few years, we hope to have a vibrant, service-oriented Center that serves as a resource for the entire region."

For the first time in its history, in 2006 the Donaghue Foundation awarded grants to support the work of other research foundations, namely, the Multiple Myeloma Research Foundation (MMRF) and Myelin Repair Foundation (MRF). Why? The MMRF and MRF share our commitment to moving research from the lab into practice as quickly and effectively as possible. In seeking solutions to specific medical problems, both foundations use collaborative, business-based models with potential to change the way medical research is conducted. And, finally, they are doing important, wonderful work.

The Multiple Myeloma Research Foundation was founded by Kathy Giusti shortly after she was diagnosed with multiple myeloma - an incurable blood cancer - in 1997. To date, the MMRF has raised over \$60 million in an aggressive effort to discover treatments for patients at all stages of the disease. Among the MMRF's important initiatives is the Multiple Myeloma Research Consortium (MMRC), a unique model geared to breaking down barriers to traditional medical research. "The MMRF and MMRC are proud to share the Donaghue Foundation's commitment to promoting cutting-edge medical research with potential to improve health and, ultimately, save lives," says Giusti. "Since the organizations' inceptions, we have pioneered a collaborative research model spanning 13 leading research institutions, industry and private philanthropy; established a web-based, disease-specific clinical trials database; built a state-of-the art tissue bank to rapidly validate





Collaboration, Acceleration, Results.

Damage to the myelin – the protective coating that facilitates the transmission of nerve impulses – is common to everyone with multiple sclerosis. Using a unique, outcome-driven research model, known as "Accelerated Research Collaboration ™," the Myelin Repair Foundation focuses all of its efforts on the discovery and development of myelin repair treatments in order to dramatically improve the lives of those suffering with MS. "Repair to the myelin is far better than any alternative...on the horizon," says MRF founder and CEO Scott Johnson, who was diagnosed with MS 30 years ago. "Everyone feels like we are on a mission."

The MRF channels the talents of some of the world's leading neuroscientists who approach the study of myelin from five separate perspectives — immunology, genetics, developmental biology, molecular biology and proteomics — in a more collaborative way. Since the MRF research team began its mission in 2004, ten targets have been identified, ten research tools have been developed, and ten patents have been filed – remarkable progress in a very short period of time. "We facilitate great science," says Johnson.



Trustee Initiatives

Through the Donaghue Foundation's Trustee Initiatives, the Trustees use a small percentage of each year's grant funding very flexibly on exploratory undertakings that further Foundation purposes.

During 2006, \$11,500 was allocated for two Trustee Initiatives in support of our goal of communicating and disseminating innovative ideas for improving health care.

Hartford Health Disparities Collaborative

For a second year, Donaghue provided funding to a collaboration of several Hartford-area health funders which have joined forces to reduce health disparities among Hartford residents through cooperative initiatives, shared information, and increased awareness among policy leaders and the general public. \$10,000 was provided by Donaghue, and again the Collaborative's efforts were focused on assistance to the Mayor's Healthy Community Initiative, a new Hartford health network designed to better serve the healthcare needs of the city's estimated 30,000 uninsured residents..

Connecticut Health Advancement and Research Trust

Donaghue provided \$1,500 to the Connecticut Health Advancement and Research Trust (CHART), a public charity largely supported by the Universal Health Care Foundation in Connecticut and dedicated to the health needs of Connecticut residents. Donaghue's contribution was in support of the CHART panel discussion in October of "The Politics of Universal Health Care in the New England States" with representatives from Maine, Vermont and Massachusetts discussing health care reforms in their states. Stan Simpson, Hartford Courant columnist, served as moderator for the discussion among the panelists and the audience.

2006 Awards

2006 NEW AWARDS

Clinical and Community Health Issues

Carlos M. Grilo, PhD

Yale School of Medicine

RCT for obesity and binge eating in monolingual Hispanic persons

Kalpana Gupta, MD, MPH

Yale School of Medicine

Cranberry for UTI prevention in nursing home residents

Chirag Parikh, MD, PhD

Yale School of Medicine

Novel biomarkers to detect delayed graft function

Sriian Sen. MD. PhD

Yale School of Medicine

The roles of genes and stress in medical intern depression

Meredith H. Stowe, PhD

Carrie Redlich, MD, MPH

Yale School of Medicine

Reducing isocyanate exposure in the CT autobody industry

Donaghue Investigator

Hal Blumenfeld, MD

Yale School of Medicine

Impaired consciousness in epilepsy: Mechanisms and consequences

Becca R. Levy, PhD

Yale School of Medicine

Promoting older individuals' health behavior through positive age beliefs

Quing Zhu, PhD

University of Connecticut

Novel imaging devices for diagnosis and treatment of breast cancers

Practical Benefit Initiatives

Nancy Berlinger, PhD, MDiv

The Hastings Center

End-of-Life Care Guidelines - II

Judith Fifield, PhD

University of Connecticut Health Center

The Ethel Donaghue Center for Translating Research into Practice and Policy

Terri Fried, MD

Liana Fraenkel, MD

Yale School of Medicine

Improving the quality of care for atrial fibrillation by promoting patient-centered decision-making

The Multiple Myeloma Research Foundation

The Myelin Repair Research Foundation

2006 CONTINUATION AWARDS

Research in Clinical & Community Health Issues

Michal Assaf, MD

Institute of Living/Hartford Hospital

Differential diagnosis of psychotic patients

Yifrah Kaminer, MD

University of Connecticut Health Center

Contingency management reinforcement for adolescent cannabis abuse

Anne Kenny, MD

University of Connecticut Health Center

Effects of Omega-3 fatty acids on bone and frailty

Robert Kerns, PhD

Yale School of Medicine

CBT treatment for painful diabetic neuropathy

Cheryl Beck, DNSc

University of Connecticut

DHA functional food in pregnancy: Post-partum depression

Ludo Max, PhD

University of Connecticut

Neurological bases of stuttering: Motor learning and control

Linda Mayes, MD

Yale School of Medicine

Minding the baby: Home visiting for young parents

Linda Niccolai, PhD

Yale School of Medicine

Risk in partnerships for repeat sexually transmitted infections

Rafael Perez-Escamilla, PhD

University of Connecticut

Breastfeeding education and support trial for obese women

Gerard Sanacora, MD

Yale School of Medicine

Potential predictor to response to CBT

Julie Ann Sosa, MD

Yale School of Medicine

Neurocognitive changes in primary hyperparathyroidism

Donaghue Investigator

Elizabeth Bradley, PhD

Yale School of Medicine

Quality improvement efforts in the care of older adults

Kevin Claffey, PhD

University of Connecticut Health Center

Mechanisms of MT1-MMP-dependent breast cancer metastasis

Lisa Dierker, PhD

Wesleyan University

Impact of child psychopathology and intervention on later substance use

Barbara Kazmierczak, MD, PhD

Yale School of Medicine

The role of epithelial cells in host defense against pathogens

Richard Marottoli, MD, MPH

Yale School of Medicine

Enhancing older driver safety and mobility

Cheryl Oncken, MD

University of Connecticut Health Center

Maternal genetics, cigarette smoking and infant birth weight

Francisco Sylvester, MD

Connecticut Children's Medical Center

Understanding bone loss in children with chronic gastrointestinal diseases

Practical Benefit Initiatives

Judith Fifield, PhD

Saint Francis Hospital and Medical Center

Hospitals and Churches - Partnership to Improve Health -

A One-Year Supplement

Anne Kenny, MD

University of Connecticut Health Center

The Donaghue Nutrition Research Competition

Robert J. Levine, MD

Yale University

Donaghue Initiative in Biomedical and Behavioral Research Ethics

Mary Tinetti, MD

Dorothy Baker, PhD

Yale School of Medicine

Connecticut Collaborative Fall Prevention Project

Scott Woods, MD

Yale School of Medicine

Donaghue Early Schizophrenia Initiative

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University of Connecticut Health Center Professor, Hypertension Medicine

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Director of Research

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Pfizer, Inc.
Director, Biometrics

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University of Toronto Professor and Head, Addiction Psychiatry Program

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Mark L. Metersky, MD

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University of Washington Department of Medical History and Ethics Associate Professor

Daniel Gerardi, MD

Saint Francis Hospital and Medical Center Pulmonary Medicine

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Yale School of Medicine Professor of Internal Medicine

Karen J. Maschke, PhD

The Hastings Center

Associate for Ethics & Science Policy

Michael Levene, PhD

Yale University

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University of Connecticut Health Center Professor of Psychiatry

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Professor, University of Connecticut Health Center

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West Hartford

Principal, Resources for Ethics and Management

2006 Grants

Institution	New	Continuation	Total	Funds Awarded by Grant Program for Grant Cycle Beginning in 2006		
Connecticut Children's Medical Center	0	1	1	Research in Clinical & Community Health Issues		
Hartford Hospital/Institute of Living	0	1	1	New (5)	\$	419,574
St. Francis Hospital and Medical Center	0	1	1	Continuing (11)	\$	988,120
Hastings Center	1	0	1			
University of Connecticut Health Center	1	5	6	Donaghue Investigator Program		
Multiple Myeloma Research Foundation	1	0	1	New (3)	\$	330,000
Myelin Repair Foundation	1	0	1	Continuing (7)	\$	799,570
University of Connecticut - Storrs	1	3	4			
Wesleyan University	0	1	1	Practical Benefit Initiative		
Yale University	0	1	1	New (4)	\$	717,992
Yale School of Medicine	7	10	17	Continuing (5)	\$	912,360
Total	12	23	35		\$4	I,167,616



2006 Financials

2006 Financial Information

Statement of assets and fund balance as of December 31, 2006

Investment in marketable securities	\$ 50,769,232
Cash and cash equivalent	\$ 2,102,590
Other assets	\$ 53,205
total assets and fund balance	\$ 52.925.027

Statement of income and expenditures for the twelve months ended December 31, 2006

Income	\$	2,091,324
Expenditures		
Program		
Grants		
Clinical and Community Health	\$	1,407,694
Donaghue Investigator		1,129,570
Practical Benefit Initiatives	\$	1,630,352
Subtotal	\$	4,177,616
Program Support	\$	268,756
Management and General	\$	508,566
Investment Management	\$	100,106
Total Expenditures		5,055,044

Note 1: In addition to this amount, the Foundation facilitated \$166,657 in research grants for foundations or other philanthropic sources.

Note 2: In addition to these expenditures, an estimated amount of up to \$7,246,559 has been earmarked for future spending in support of ongoing grants. The figures listed above are unaudited. Fair market values are approximate.



Programs

THE DONAGHUE FOUNDATION CONDUCTS SEVERAL PROGRAMS AND INITIATIVES IN SUPPORT OF CONNECTICUT-FOCUSED RESEARCH AND RELATED WORK.

Interested persons should contact the Foundation office for detailed program information and application forms.

Investigator-Initiated Research:

- (1) The Clinical and Community Health Issues Program is for health-related research projects that address major medical conditions and social problems affecting the health of individuals, groups and communities. Of particular interest are studies focusing on more effective methods of preventing, diagnosing, and treating illnesses and conditions that have a major impact on health in Connecticut. C&CH grants are up to \$240,000 over periods of one to three years. Applications are invited after review of letters of intent.
- **(2)** The Donaghue Investigator Program supports particularly promising medical researchers holding faculty appointments at Connecticut institutions. The program emphasis is upon the researcher rather than upon a specific research project. Awards of \$100,000 per year, for up to five years, are made. 2007 is the last year applications will be accepted for this program.

Practical Benefit Initiatives:

The PBI program has no specific timeline for applications and no pre-determined award amounts. The Foundation itself initiates research projects in an interactive process with prospective investigators. Funding is based upon promise of practical benefit to human life and a likelihood that but for the Foundation's support, the research might not be done.

- (1) Targets of Research Opportunity: The Foundation actively seeks funding opportunities for timely and needed research projects outside the parameters of investigator-initiated research programs.
- **(2) Focused Centers of Research:** The Foundation invites discussion of proposed programs of coordinated research effort. The Foundation prefers collaborative, multidisciplinary, integrative programs that are patient-oriented and/or community-focused and that target understudied fields or populations.
- **(3) Knowledge at Work:** The Foundation supports research focused specifically on improving the ways new discoveries are translated into useful knowledge and disseminated to the point of actual use.
- **(4) Trustee Initiatives:** In addition to the programs above, the Trustees are prepared to spend a small percentage of each year's grant funds on exploratory undertakings that further Foundation purposes and do not involve science reviews.



Leave a Legacy Connecticut

Ethel Donaghue's legacy would be even more meaningful if her Foundation's efforts prompted others to support health research as a part of their own philanthropic planning. The Donaghue Foundation supports the work of Leave a Legacy Connecticut and encourages people to include charitable bequests for health research purposes in their wills. While the Foundation will accept additional funds itself only if they are solely and expressly for Miss Donaghue's own testamentary purpose, we do believe strongly in the public value of committing private sector resources to the ongoing cause of health research.

