

What sets us apart.

The Patrick and Catherine Weldon Donaghue Medical Research Foundation 2004 Annual Report — Number 13

Attitudes

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 Fleet Bank 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.

The Foundation's Purpose

The Foundation established hereunder is created and shall be operated solely for the purpose of providing financial assistance for research in the fields of cancer and heart disease and/or other medical research to promote medical knowledge which will be of practical benefit to the preservation, maintenance and improvement of human life.

From the Will of Ethel F. Donaghue (1896-1989)



Table of Contents

- I Mission, Vision and Goals
- 2 Letter from the Trustees
- 4 Purpose and Prologue
- 6 Letter from the Executive Director
- 8 Commentary: A Willingness to Listen and Learn
- 9 Donaghue Investigator Program
- 11 Commentary: Listening to Miss Donaghue
- 12 Clinical and Community Health Program
- 16 Commentary: Valuing Scientific Excellence
- 17 Programs
- 18 Commentary: Thinking Outside the Box
- 19 Grants
- 20 Awards
- 22 Committees
- 23 Commentary: To Make a Difference
- 24 Financials
- 25 Leave a Legacy

What sets us apart.

Our Vision

We will be an exemplary participant in the ongoing conduct and continuing advancement of useful health research in Connecticut and beyond.

Our Mission

We will benefit human life and the individual lives of people as an active, imaginative, and collaborative supporter of useful health research, primarily in Connecticut, and we will thereby honor the memory of Ethel Donaghue and her family.

Our Goals

Fidelity to Purpose

We will faithfully carry out the charitable intentions of Ethel Donaghue as expressed in her will, being careful to give her words their proper meaning and best expression in a context of changing facts and conditions.

Grantmaking

We will develop and manage a flexible and well-rounded program of grantmaking initiatives. In so doing:

(1) We will reflect our Connecticut roots, the Hartford derivation of the Donaghue fortune, and the current health needs of the people of Hartford, Greater Hartford, and Connecticut, with appropriate regard for the underserved, understudied, and disadvantaged. (2) We will use and help to develop Connecticut talent in health research, fostering teamwork between investigators and clinicians and among individual researchers, disciplines, and institutions throughout Connecticut's complement of research resources.

(3) We will be alert to opportunities and needs for responsive and imaginative focusing of our resources upon targets of importance, with particular thought to those which, but for our involvement, might find inadequate financial support.

(4) We will strive for a balance between the pursuit of new knowledge and its translation into useful forms, between scientific exploration and thoughtful reflection upon the implications of discovery, and between the gaining of knowledge and the pursuit of wisdom to temper our use of it for practical benefit to human life;

(5) We will make full use of our skills and our independence of judgment in seeking out, evaluating, and taking on challenges, being always willing to effect beneficial change through our research funding.



The Patrick and Catherine Weldon Donaghue Medical Research Foundation was founded by Ethel Donaghue in loving memory of her parents.

(6) We will promote public awareness of research activities and accomplishments and an appreciation of the value of steady and continued support of skilled inquiry into problems affecting human health.

Community Responsibility

We will work actively and collaboratively within the community of philanthropic organizations in Connecticut to promote responsible service of the public interest, particularly in the field of health research, and we will work to build a strong and enduring bond of understanding, respect and teamwork among those in Connecticut who engage in health research and those who finance their efforts.

Our Values

Purpose Principle Practicality Prudence

As updated by the Trustees August 29, 2000



The attitude one brings to a challenge often makes all the difference.



Donaghue Raymond S. Andrews, Jr. Fleet Bank

Sheilah B. Rostow

During this past wrestling season, one of the Trustees visited his old secondary school to see a match. In the gym, on a memorial plaque honoring a long-time athletic director, was the saying, "It's not the size of the dog in the fight. It's the size of the fight in the dog." The words called to mind a motivational sign that had been strategically mounted on the wrestling room ceiling many years ago, for struggling grapplers to read: "It's not your aptitude it's your attitude."

Aptitude may be essential to success but it alone is insufficient to ensure it. The attitude one brings to a challenge often makes all the difference. For this year's annual report we at Donaghue have chosen to focus on attitudes, not in the negative dictionary sense (a negative or hostile state of mind; a cocky or arrogant manner) but in the positive sense (a position assumed for a purpose; a mental position, emotion or feeling with regard to a fact or state).

Donaghue has attitude, and the Foundation's attitude - perhaps best embodied in the old Army slogan "Be all that you can be" - is a mosaic of those held by the people who serve it. "Ask why not." "Focus on possibilities." "Pursue the harder right." "Keep your eyes on the job to be done." We think all of these distinguish Donaghue. Not only are we a testamentary charitable trust, which alone makes us unusual among foundations, but the way we approach the purpose entrusted to us sets us apart. We're not content to emulate others (even those that are exemplary) because in one important way or another no other foundation is what we should and can be.

The pages that follow offer not only facts about 2004 but also some of the thoughts of people we work with on the subject of Donaghue's attitudes – and their own attitudes about us and our work. We hope this report helps you better understand and appreciate Ethel Donaghue's gift of practical benefit through research – and our determined efforts to make it real and enduring.

Raymond S. Andrews, Jr. Trustee

Sheilah B. Rostow Senior Vice President Fleet Bank



Purpose Prologue

At first glance, the theme of the Patrick and Catherine Weldon Donaghue Medical Research Foundation's 13th annual report – "Attitudes"– might strike some as a bit feisty. We think not. In fact, we believe that the views, perspectives and values we bring to our work – our attitudes, if you will, – are, ultimately, "what sets us apart."

So where do these attitudes come from? Clearly, they have their roots in Ethel F. Donaghue's will, which stipulated that nearly all of her family's considerable wealth be devoted to the search for "medical knowledge...of practical benefit to ... human life." Think about that phrase medical knowledge of practical benefit to human life - and then think about it without the word "practical." As Mark Twain (whose Hartford home is the site of this year's annual meeting) once wrote, "The difference between the right word and almost right word is the difference between lightning and a lightning bug." That's attitude - and Mr. Twain and Miss Donaghue both had it.

To carry out the search for useful knowledge of "practical benefit to ... human life," Miss Donaghue, who died in 1989, created a charitable trust of more than \$53 million in honor of her parents, Patrick and Catherine Weldon Donaghue. Since then, her will has directed our efforts to address the needs of those underserved by the health care community by providing substantial financial resources - in excess of \$59 million to date - to help fund important medical research being pursued by talented researchers, including those featured in this report. While their areas of expertise and research are quite diverse, Donaghue-funded investigators and collaborators share strong principles, feelings and, yes, attitudes about the ways in which their research - no matter how difficult the barriers - can help realize Miss Donaghue's vision.

As one of Connecticut's first woman lawyers, Ethel Donaghue must have dealt with many a preconceived view about her abilities. There is little doubt that those attitudes only galvanized her resolve to "make a difference." Put another way, if Miss Donaghue were still alive, she would understand how difficult carrying out the wishes in her will might be for all involved, especially in today's complex health care environment. What she would not understand is a failure to give it our best at all times – to have anything less than a "never say never" attitude.

It is with that spirit that another group of researchers is working to carry out Miss Donaghue's vision to benefit the people in the Hartford area who need it most. This year, those "who need it most" include older people susceptible to infectious diseases, pregnant women whose smoking habit puts their babies at risk, mothers with postpartum depression, young women with sexually transmitted diseases, diabetics suffering from painful neuropathy, and people with major depressive disorder. As always, the work of our investigators will be taking place at several of Connecticut's leading hospitals, universities and research laboratories - and in our communities as well. Most importantly, the results of their efforts promise to find their way into the homes and neighborhoods of underserved and understudied populations: the very people whose attitudes - and lives - will be most positively affected by their research.

As we have noted in the past, Miss Donaghue's will expressly anticipates the spending of trust principal for "unusual" and "non-standard" activities, empowering her trustees to "do whatever they deem necessary or desirable" to further her purpose. That is a considerable weight to place on the shoulders of those entrusted with carrying out her wishes. In some ways, it is much like Mark Twain's character, Pudd'nhead Wilson, telling readers to "Put your eggs in one basket, and WATCH THAT BASKET." Not the usual or standard advice – especially from the standpoint of financial advisers – but advice worth heeding nonetheless, despite the risks and pressures involved in carrying it out.

And speaking of financial advisers, readers will note that this report includes a series of personal comments from people "behind the scenes" – people who help us in so many ways, including managing our investments, providing science reviews of grant applications, even writing and designing our newsletter. Their attitudes about the Donaghue Foundation – as well as their take on the Foundation's own attitudes – help ensure that the work that all of us do is true to Ethel Donaghue's vision for a better, healthier community. To our way of thinking, that is what sets us apart.

The difference between the right word and almost right word is the difference between lightning and a lightning bug.

Mark Twain

It is a challenge to communicate what we have done during the year while creating an image of what we strive to be.



Executive Director

During 2004, the Foundation continued in the Trustees' stated priority areas pursuing research opportunities that place greater emphasis on the perspective of the patient and underscore the role of behavior in health and health care - and we continued our tradition of research which is strong on practicality. For the first time, applications for the Donaghue Investigator program were limited to research topics which reflect these priorities but not yet represented by previous grant winners. After a successful application cycle, the decision was made to keep the program limited to these specific research topics for the next few years so we can fill out our mosaic of coverage.

Two rounds of applications to the Clinical and Community Health Issues program resulting in four grants totaling over \$940,000 during the next three years also reflect this commitment. As you will read in these pages, our awards in this program also focused on these priorities – reducing pain, using nutrition to prevent depression, understanding the transmission of sexually transmitted diseases, and improving response to treatment for depression.

2004 was also a year in which the Trustees' plan for the long-term financial strength of the Foundation made an impact on overall spending. Though the prudent "spend less money" decision was made in 2002, our commitment to multi-year projects with relatively high price tags meant that spending in 2003 stayed at about the same level as it had before. Many of these projects ended last year, and with no new Practical Benefit Initiatives begun in 2003, our spending was nearly \$3 million less than last year. Even with this decrease, the amount we spent on grants was still above 5% of assets, a figure many foundations use as a benchmark for their spending.

This year, as has been the case in past years, our advisers provided us with hundreds of hours of their expertise. During 2004 over 40 science reviewers, some on our standing committees and some serving as ad hoc reviewers, along with ten policy advisers provided essential guidance. A special word of thanks is in order to the chairs of our three committees – William B. White, MD; TV Rajan, MD, PhD; and the Honorable Alvin Thompson – who show their generosity by providing additional support to the Foundation not only with time but invaluable insight.

Finally, one activity we look forward to each year is the planning and production of our annual report, our public record of the Foundation's activities that you are now reading. It is a challenge to communicate what we have done during the year while creating an image of what we strive to be. To help express this year's theme of "attitudes," we asked five people who have known the Foundation for several years to share with you their attitude about the Donaghue Foundation or the work it does. Five different voices share their perceptions of the Donaghue attitude, and in doing so help us to describe what makes our path different – what sets us apart – from other medical research funders. We hope you will enjoy reading the commentaries they have graciously shared.

Lynne Garner, PhD Executive Director





Peter J. Deckers, MD Executive Vice President for Health Affairs and Dean School of Medicine University of Connecticut

Commentary: A willingness to listen and learn

A key question – if you had sufficient resources to significantly and durably enable biomedical and biosocial research, what would you demand of the scientists you benefit? The answer to this question would, I think, clearly condition the value of the investment made short and long term.

I believe the Patrick and Catherine Weldon Donaghue Medical Research Foundation has the correct "attitude" relative to this question. Funded research endeavors should in their opinion and mine:

- I. Answer or advance fundamental biomedical/biosocial questions
- 2. Be creative, imaginative and collaborative
- Be of rigorous scientific design such that valid results that are transferable can reasonably be expected
- Enable young investigators of exceptional promise as they start their research careers
- 5. Be useful by benefiting human life
- 6. Address critical public health policy and bioethical issues of contemporary concern
- 7. Advance wellness and disease prevention strategies in populations at risk
- Facilitate the translation of new discoveries into everyday practical use and benefit

- 9. Be inclusive rather than exclusive of all ages and conditions
- Be enabling of a systems-based approach to healthcare delivery and healthcare quality enhancement
- Create a book of "new knowledge" that is the foundation for the education of the next generation of physicians, dentists and biomedical scientists
- Promote safety and quality-based, evidenced-based medicine in the delivery of healthcare at all levels
- Be easily communicated to the lay public to, at the least, enable their involvement in critical healthcare decision making

And finally, the Trustees of the Foundation have through all of the above been more than faithful to the will and belief of Ethel Donaghue, the donor. Their attitude in the conduct of the Foundation's mission is governed by honesty, a willingness to listen and learn, even-handedness, altruism and a sense of duty – key attributes of professionalism. Few others can so capably make this claim! My vision is to compress morbidity to the end of life by targeting disabling, yet preventable, diseases in older people.

A Strategy to Optimize Vaccine Efficacy in Older Adults

Janet E. McElhaney, MD, FACP, Assistant Professor of Medicine at the University of Connecticut School of Medicine's Center for Immunotherapy of Cancer and Infectious Diseases and the UConn Center on Aging, is using her Donaghue Investigator grant to embark on a new direction in her ambitious research to develop methods for testing new vaccines against certain infectious diseases in seniors. "My vision is to compress morbidity to the end of life by targeting disabling, yet preventable, diseases in older people," says



Donaghue Janet E. McElhaney, MD, FACP INVESTIGATOT

McElhaney. "The recognized benefits of influenza vaccination for preventing pneumonia – and even heart disease and stroke – suggest that the inflammation caused by a viral illness is an important cause of disability in older people. My previous work on influenza provides a foundation for future studies on how the immune system changes with aging and increases susceptibility to other important viral illnesses."

McElhaney says that further discoveries about how the immune system changes with age and how immune fitness can be restored through vaccination pose significant challenges to her and her collaborators. Through her partnership with Dr. Jean J. Schensul and the Institute of Community Research, targeted interventions will be developed to increase influenza vaccination rates among (primarily) minority lowincome seniors living in apartment settings in Hartford. In addition, McElhaney will collaborate with Dr. John Shanley, an infectious disease specialist in UConn's Department of Medicine, to examine how the immune response to herpes zoster changes with age, as well as the potential for a herpes zoster vaccine to prevent shingles.

Through her research, McElhaney expects to understand the mechanism by which older people become more vulnerable to infectious diseases - including influenza, respiratory syncytial virus (a flu-like illness with similar hospitalization and death rates) and herpes zoster - and how vaccines may reduce the risk and disabling consequences of these illnesses. Ultimately, she hopes that her findings will be used to design vaccines against viral diseases and cancer that are specific to the immune systems in older people."I want to translate the basic science of vaccinepreventable diseases to application in the community," she says.

Maternal Genetics, Cigarette Smoking, and Infant Birth Weight

According to Donaghue Investigator Cheryl Oncken, MD, MPH, Associate Professor of Medicine, Obstetrics and Gynecology at the University of Connecticut Health Center, while the overall prevalence of smoking is declining, smoking rates among women are declining less rapidly than they are in men -a problem exacerbated by the fact that women are at additional risk for some of the deleterious health effects of smoking, including pregnancy-related problems. With her five-year research grant, Oncken will bring together her previous work in the area of smoking cessation in pregnancy with genetic research. "We propose to examine whether allelic variation in maternal genes encoding phase I and 2 enzymes of drug metabolism predict low birth weight infants in pregnant smokers," says Oncken. "Since these gene polymorphisms are common, findings from this research may eventually be important for clinicians with regard to identifying individuals who are susceptible to delivering a low birth weight baby if they smoke, thereby allowing the tailoring of smoking treatment strategies based on that individual's genotype. Our research also may lead to further research that could better identify the mechanisms by which smoking causes low birth weight babies."



Investigator

Specifically, the Donaghue Foundation grant will enable Oncken to expand her current research, which includes a largescale clinical trial at Hartford Hospital and New Britain General Hospital to determine the whether nicotine gum improves smoking cessation rates during pregnancy. "Together with a parallel study being conducted at Duke University, we anticipate recruiting an adequate sample to evaluate the genetic predictors of birth weight reduction as a consequence of smoking in white, black and Hispanic women," she says.

Oncken emphasizes that the Donaghue Foundation grant provides her with added freedom to not only complete her proposed research project, but also to develop new projects. "I feel very fortunate to have received the grant. I am excited to be moving into a relatively new field of research – genetics – which builds on existing research that I have been doing. It is also exciting to be studying something that not only has scientific merit, but may also have direct clinical applications." We propose to examine whether allelic variation in maternal genes encoding phase 1 and 2 enzymes of drug metabolism predict low birth weight infants in pregnant smokers.

Commentary: Listening to Miss Donaghue

Jeff Mills

J.M..Communications Producer of the Foundation's newsletter *Practically Speaking* During one of my earliest interactions with Donaghue — a project in 1997 that involved the design and production of a booklet called Two Boxes, Three Trusts: The Legacy of Ethel Donaghue — Trustee Ray Andrews confided in me from across his desk that he "talks to Miss Donaghue" all the time, and he produced a lengthy letter he was in the process of writing to the Foundation's benefactor.

Okay, I thought: the guy talks to dead people — this is going to be interesting...

It didn't take long for me to confirm that Mr. Andrews hadn't gone batty, but was simply passionate about being a good Trustee. The "conversations" were a metaphor — a way of accounting for the Trustees' actions and decisions as they impacted the endowment set aside by Miss Donaghue to benefit the preservation, maintenance and improvement of human life. Donaghue loves a good metaphor, and it's one reason why working with the Foundation on its newsletter and some of its earlier annual reports has been a rewarding assignment for this communications professional. You need only look at the covers of a few of its publications, or visit the Foundation's offices, to know how objects like tugboats and bridges, or concepts like words, promises — and yes, attitudes — are used to illustrate Donaghue directions and core beliefs. That letter to Miss Donaghue, by the way, became a newsletter feature article.

While discussing its small corner of the medical research universe, Donaghue also asks us to think about the big ideas — about patient safety or quality of life for pain sufferers, for instance — ever mindful of the goal of creating practical benefit from the knowledge gained through grant-making.

Powerful stuff, these metaphors.





Robert D. Kerns, PhD Clinical & Community HEALTH

Cognitive Behavior Therapy for Painful Diabetic Neuropathy

Diabetes often leads to serious and painful complications, including neuropathy - the deterioration of the nervous system. Robert D. Kerns, PhD, Professor of Psychiatry, Neurology and Psychology at Yale University and Chief, Psychology Service, at the VA Connecticut Healthcare System's West Haven campus, will use his Clinical and Community Health Issues Program grant to undertake the first randomized controlled trial of a psychological intervention - cognitive-behavior therapy (CBT) - for diabetic neuropathy, a highly prevalent and disabling condition among Connecticut residents."Given the limited effectiveness of pharmacological and other medical approaches to this problem, the availability of an effective psychological intervention will have important implications for the management of this condition," says Kerns."Improved pain relief and avoidance of the disability and depression commonly associated with chronic pain are valuable

benefits to individuals with diabetic neuropathy. Our research will provide a potentially effective tool for addressing a common chronic complication of an increasingly prevalent disease."

In addition to formally evaluating the efficacy of cognitive-behavior therapy – a promising psychological intervention that involves teaching and encouraging the practice of adaptive pain coping skills, such as relaxation skills, activity pacing, and positive self-statements – Kerns expects that his research will add significantly to existing knowledge about the psychosocial aspects of painful diabetic neuropathy. "Beyond that," he says, "the most exciting aspect of the study is that we are using a proven method and extending it to a population of persons who do not receive relief from currently available methods." If successful, Kerns' approach will encourage the adoption of CBT as a viable treatment for painful neuropathy for diabetics who are not responsive to standard treatments. In addition, trained mental health providers who already use CBT treatments for other patient populations will be able to quickly adopt the treatment protocol used in his study. "If successful, it is likely that cognitive-behavior therapy can be used widely due to its cost-effectiveness, non-invasive nature and low incidence of adverse side effects," Kerns says.

Docosahexaemoic Acid in Pregnancy: Postpartum Depression

Each year in the United States hundreds of thousands of women – and their families – are impacted by depressive mood disorders after the birth of a child. In Connecticut, 13 percent of pregnant women are at risk for post partum depression, while 80 percent of all pregnant women suffer from other mood alterations associated with the



Clinical & Carol J. Lammi-Keefe, PhD HEALTH postpartum period. With her Clinical and Community Health Issues Program grant, **Carol J. Lammi-Keefe, PhD,** Professor of Nutritional Sciences at the University of Connecticut in Storrs, will further examine how certain fats (docosahexaemoic acid, or DHA) found in cold-water fish – such as salmon, herring, mackerel and light tuna (canned) – lessen the risk for postpartum depression. "The evidence for the role of these fats in decreasing the risk for postpartum depression is compelling," says Lammi-Keefe. "Therefore, there is a need to test if such fats can reduce major postpartum depression symptoms."

Under the trials to be undertaken by Lammi-Keefe, participating women will consume either a DHA-cereal bar, capsule or a placebo during pregnancy. At specific intervals after giving birth, participants will be screened for symptoms of depression, using a scale that Lammi-Keefe says can assess new mothers suffering from postpartum depression in less than 15 minutes. "Women with positive screens...will be referred for a clinical diagnostic interview," she explains. "If it can be demonstrated that increasing DHA consumption can decrease the incidence of postpartum depression and the severity of symptoms, women can be counseled to include DHA foods in their diets."

At this point in her research, Lammi-Keefe is most excited that a simple change in diet during pregnancy has the potential for decreasing both the incidence and severity of symptoms for postpartum depression. "The expectation is that our research will provide the foundation for proposals to federal agencies for establishing the amounts and the timing for the dietary changes, as well as contribute to recommendations for appropriate public health policies with respect to the inclusion of foods high in the effective fat during pregnancy and after childbirth."

Clinical & Community

Risk in Partnerships for Repeat Sexually Transmitted Infections According to Linda Niccolai, PhD, Assistant Professor, School of Epidemiology and Public Health, Yale University School of Medicine, sexually transmitted infections (STIs) are "hidden epidemics" because their scope and impact are under-recognized, and because social factors associated with STIs are not fully appreciated. With her Clinical and Community Health Issues Program grant, Niccolai and her collaborators from Yale and Planned Parenthood of Connecticut will conduct a three-year study that will address Chlamydia trachomatis (chlamydia) - the most commonly reported sexually

transmitted infection among young women. "While chlamydia is an infection of major medical importance due to its impact on reproductive health – it can cause infertility, ectopic pregnancies, and pelvic inflammatory diseases – it also is a 'social' problem because of the potential for harm it may cause in sexual relationships," says Niccolai. "The purpose of our study is to examine the changes that occur in sexual relationships after a diagnosis that put young women at risk for repeat infections."

FATT

Niccolai notes that her work will be highly interdisciplinary and collaborative to ensure a better understanding of the complex interpersonal dynamics associated with STIs. "We are combining the research methods from epidemiology, molecular biology, psychology, and clinical medicine to best understand the trajectory of risk from an initial to a repeat infection," she says.



13



Clinical & Computing HEALTH

"We also are excited about working with the dedicated staff at the Planned Parenthood Health Center in New Haven and at their administrative offices."

Niccolai and her collaborators are particularly enthused about the ability of their findings to "directly and immediately affect the health of young women." Says Niccolai: "We believe that a better understanding of the sources and predictors of repeat chlamydia can direct the prevention messages that clinicians provide to their patients. As a result, young women who are appropriately counseled at the time of an initial diagnosis may be able to prevent any further infections. This, in turn, will result in the practical benefit of improved reproductive health for Connecticut residents."

Potential Predictor of Response to Cognitive Behavioral Therapy (CBT)

Major depressive disorder (MDD) is a disabling disorder that has a tremendous impact on individuals and families in Connecticut. According to Gerard Sanacora, MD, PhD, Chief of the Yale Depression Research Program and Assistant Professor at the Yale University School of Medicine, first-line treatment of major depressive episodes is usually considered to be either a course of antidepressant medication or a course of talk therapy. "For the most part, the decision as to which modality is to be used is based on the patient's personal preference and the clinician's specific orientation, not on any evidence-based practice," says Sanacora."As it is increasingly evident that MDD is a heterogeneous disorder comprising unique pathogeneses and pathophysiologies, this approach is likely to result in the unnecessary and ineffective use of medication in some individuals, and

an unnecessary delay in medicating others. The aim of our research is to identify patient markers (biological and psychosocial) that will help predict who will benefit from psychotherapy and who will benefit from pharmacotherapy as first-line treatments."

According to Sanacora, identification of patient characteristics that would predict response to therapies would have a significant clinical impact on MDD by providing data for evidence-based standards of care. "Our laboratory has identified a biological marker that may be useful in identifying a subgroup of depressed subjects that will show a selective response to these therapies," he says. "We hypothesize that depressed patients with a specific neurotransmitter abnormality will show a poorer response to CBT. Our study will explore the usefulness of this and several other measures in predicting the treatment response to CBT."

Sanacora sees the development of evidence-based guidelines geared to more effectively and rapidly treating individuals with MDD as the most promising aspect of his team's research. "In the next few years we expect to create a database of results that would justify a large multi-center trial, and to determine the clinical usefulness of the measures we are collecting for patienttreatment matching." Linda Bartoshuk, PhD Oral pain in cancer therapy: control with car

Martha L. Bruce, PhD Psychiatric status and onset, age, and outcomes of cancer

Harlan Krumholz, MD Acute myocardial infarction, cardiac procedures and outcomes in the elderly

John R. Murren, MD Clinical strategies to overcome chemotherapy resistance

Donald B. Oliver, PhD Isolation of novel antigens for Lyme disease diagnosis

Margaret Gaughan, PhD, RD A peer-mediated lipid modification program in Hispanic women

Carl Malchoff, MD, PhD Gene expression in thyroid neoplasms

Jean J. Schensul, PhD Measuring Latino children's activity levels

William B. White, MD Blood pressure variability in African-American patients

Dorothy Baker, PhD, MSN Depression in elderly Meals-on-Wheels recipients

Nancy Berliner, MD Factor V leiden and thrombotic risk of Tamoxifen therapy

Lawrence Brass, MD Stroke risk and management strategies in myocardial infarction

Joseph A. Grasso, PhD Studies of human siderblastic anem

Emily Richardson, PhD Cognitive effects of carotid stenosis and endarterectomy

Douglas Shenson, MD Can breast cancer screening rates be enhanced by linking mammography promotion to the delivery of flu vaccines?

Leslie Walker, MPH Disruptive behaviours associated with Alzheimer's disease

C. Bruce Baker, JD, MD Improving treatment of depression through treatment guidelines

Sidney Bogardus, MD A comprehensive model of care for patients with dementia

Albert B. Deisseroth, MD, PhD Cytosine, deaminase based gene therapy of prostate cancer

John H. Krystal, MD Cortical GABA regulation and the neurobiology of ECT

Deborah Lipschitz, MD Ann Rasmusson, MD Post-traumatic stress disorder in inner city adolescents

Gail Melkus, MS, EdD Nursing intervention for black women with NIDDM

Patricia Neafsey, PhD, RD Preventing drug interactions in active older adults

Susan Pitman-Lowenthal, MD, MPH Waterborne radon and colorectal cancer

Vincent J. Quagliarello, MD Surgery vs. medical therapy in native valve endocarditis David J. Schonfeld, MD Elementary school cancer prevention edu

Cheryl Tatano Beck, DNSc Improving detection of postpartum depression in the community

Walid Abi-Saab, MD Neuroleptics on cortical glutomate in schizophrenia

Tryfon Beazoglou, PhD Improving prenatal screening protocols

Debra Bessen, PhD Immunological alterations in neuropsychiatric disease

Elizabeth Bradley, PhD Minority elders and long-term care: Use and access

Thomas Carpenter, MD Effects of magnesium nutrition on bone health

Susan Cohen, DNSc Perimenopausal symptom management with acupuncture ______

John Concato, MD, MPH New clinical anatomic staging system for prostate cancer Robert Berman, MD Transcranial magnetic stimulation in refractory depression

Janet Brandsma, PhD Novel HPV probes to improve cervical cancer

Jonathan Covault, MD, PhD Markers of biological risk in schizophrenia

Anne Delany, PhD Association of osteonectin mutations with osteoporosis

C. Neill Epperson, MD The role of GABA in postpartum depression

Thomas Gill, MD Intervening events and functional decline in older persons

Gloria Gronowicz, PhD Effect of aging on human bone cell/implant interactions

Beth Anne Jones, PhD, MPH Mammographic patterns in African American & white women in CT

Song Lai, PhD Improved stroke outcome using quantitative functional MRI

Since its beginning in **1994**, the Clinical and Community Health Issues program has awarded over **\$11.8** million in grants for research in biomedical, behavioral and other healthrelated research project that address the major medical conditions and social problems influencing the health of individuals, groups and communities.

Peter DeLuca, MD Sylvia Ounpuu, MSc 10-year follow-up of orthopedic surgery in Cerebral Palsy

sminka llich, PhD odium intake and bone mass in postmenopausal

Carol Lammi-Keefe, PhD Pregnancy with diabetes: Infant neurobehavior

Patricia Neafsey, PhD Preventing drug interactions in older adults

Eva Sapi, PhD A novel model system for the development of ovarian carcinoma

David Schonfeld, MD Comprehensive elementary school cance prevention

Paul Thompson, MD Effect of E genotype on lipid response to exercise

Cheryl Tatano Beck, DNSc Screening Hispanic mothers for postpartum depression

Sandra Bellantonio, MD Quality care for assisted living persons living with dementia Robert Malison, MD Ketoconazole antagonism of cocaine-induced euphoria

Gerald Sanacora, MD, PhD Cortical GABA concentrations in depression

Francisco Sylvester, MD Crohn's disease and osteopenia

Pamela Taxel, MD Effect of estrogen therapy on men with prostate

Marietta Vazquez, MD Efficacy of Lyme vaccine in clinical practice

Charles Cortes, PhD Exercise and protein supplementation in heart failure pathogenesis

Ellen Dornelas, PhD Comprehensive treatment for low-income pregnant smokers

Caroline Easton, PhD Substance abuse/domestic violence treatment outcome study

Ralph Hoffman, MD Transcranial magnetic stimulation and hallucinated

Gerald Leonard, MD Non-invasive measures of auditory integrity in infants

Cheryl Oncken, MD, MPH Effects of nicotine on bone turnover in older women

Lois Sadler, RN, PhD Intensive counseling for teens with negative pregnancy test

Juan Salazar, MD, MPH Erythema migrans-window to Lyme disease pathogenesis

Victoria Seitz, PhD Effects of a mentoring program on maternal & child health

William White, MD Blood pressure measurement during pregnancy

Deepak D'Souza, MD D-serine treatment of negative symptoms in schizophrenia

Leighton Huey, MD Event-related functional MRI of adult ADHD

Beth Anne Jones, PhD, MPH Chemotherapy, race & cancer surviva

Tandy Miller, PhD Screen development to detect the schizophrenia prodome

David Tolin, PhD Behavior therapy for medical nonresponders with OCD

Quing Zhu, PhD 3-D ultrasound and NIR imaging for breast cancer detection

Tony George, MD Nicotinic antagonist augmentation of SSRI antidepressants

Karl Insogna, MD Dietary protein impacts calcium and bone metabolism

George Kuchel, MD Urinary incontinence in the elderly: A translational approach

Jeffrey Kahn, MD, PhD Epidemiological investigation of human respiratory viruses

Naveed Hussain, MBBS Regional database to study outcomes respiratory viruses

Richard Fortinsky, PhD Care consultation for families of dementia patients

George Mansoor, MD Effects of ascorbic acid on ambulatory blood pressure

Paul Thompson, MD Skeletal muscle gene expression in patients with statin-induced myalgia

C. Michael White, PharmD The atrial fibrillation suppression trial (AFIST III)

Samuel Varghese, MD The mechanisms of bone loss in inflammatory diseases _____

Robert Kerns, PhD CBT treatment for painful diabetic neurop

Carol Lammi-Keefe, PhD DHA functional food in pregnancy: Post-partum depression

Linda Niccolai, PhD Risk in partnerships for repeat sexually transmitted infections

Gerard Sanacora, MD Potential predictor to response to CBT



Commentary: Valuing scientific excellence

HONOR is the first word that comes to mind when I think of the Donaghue Foundation. This fundamental value is seen in the Donaghue Foundation's commitment to honor the wishes of Ethel Donaghue rather than carefully reading in meanings that may or may not exist.

Honoring Miss Donaghue's wishes led the foundation to marry medical research with practical benefit. This marriage greatly benefits the state of Connecticut as a statewide foundation supports the research community in Connecticut and pushes it with the ever-present question, "How will it benefit the residents of Connecticut?"

Valuing scientific excellence, the foundation seeks the advice of experts and scientists to inform and to guide the work to be undertaken. Yet this foundation does not stop with the science; rather, it looks for possible partnerships that take the tested interventions or findings and translate them into better health outcomes for Connecticut as seen in programs like Easy Breathing, an asthma program.

The Donaghue Foundation has taken a proactive role in initiating the examination and dialogue regarding the ethics of medicine in a very practical way, patient safety, looking at how the patient is engaged, how providers communicate in an honest, straightforward manner their best efforts and their mistakes, and how systems respond to correct medical error. It was a pleasure for the Connecticut Health Foundation to partner with Donaghue Foundation and the Connecticut Hospital Association to bring to the hospital community the reflections of patients, systems, and providers on how most effectively to address patient safety as a practical and ethical matter.

For the Connecticut Health Foundation, we look to the Donaghue Foundation as a leader in health philanthropy, a role model, and a potential partner to create sustainable interventions and change that improves the health outcomes for Connecticut residents. Patricia Baker President and CEO Connecticut Health Foundatior



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 scientific and policy review of statements 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.

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 communityfocused 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.

Commentary: Thinking outside the box

As the investment manager of the Foundation portfolio, I've been in the business for nearly thirty years. To be successful, I think it's necessary to "think outside of the box," as Trustee Ray Andrews enjoys doing.

I'll give you two examples from the investment world of what I mean. First, it's important to look at something that's doing well and ask yourself, "how and when will it end?" (It's never a question of "if.") Many people can look back to the stock market in the late 1990's and early 2000's and easily understand my point. Everything moves in cycles.

Second, it's also important to realize that even "bad news" creates opportunities. High oil prices? the energy companies will profit. Disease? the healthcare companies will provide the cure at a price. To be successful in the investment business (whether working with individuals or private foundations), usually our paramount goal is to preserve the spending power of the assets for the future.

I say usually because occasionally Ray will say he'd like to find a research project so perfectly aligned with Miss Donaghue's testamentary goals that he could spend the entire principal of the portfolio on it with a clear conscience. Now there I draw the line. As a preserver of wealth for my clients for all these years, I can't think that far out of the box! Gail White Vice President and Portfolio Manager Fleet Bank



Grants 315

Institution	New	Continuation	Total
Connecticut Children's Medical Center	0	I	I
Hartford Hospital/Institute of Living	0	2	2
St. Francis Hospital & Medical Center	0	2	2
University of Connecticut Health Center	2	9	11
University of Connecticut - Storrs	I	0	I
Wesleyan University	0	2	2
Yale University	0	I	I
Yale School of Medicine	3	8	11
Yale School of Nursing	0	I	I
Total	6	26	32

Funds Awarded by Grant Program for Grant Cycle Beginning in 2004

Research in Clinical & Community Health Issues

New (4)	\$ 317,685
Continuing (8)	\$ 290,846
	\$ 608,531
Donaghue Investigator Program	
New (2)	\$ 220,000
Continuing (12)	\$1,281,406
	\$1,501,406
Practical Benefit Initiative	
New (0)	
Continuing (6)	\$1,357,005

Funds awarded by Grant Program for Grant Cycle beginning in 2004: \$3,466,942 Research in Clinical & Community Health Donaghue Investigator Program Practical Benefit Initiatives

\$608,531

\$1,501,406

\$1,357,005

Awards

2004 Awards

Research in Clinical & Community Health Issues

Robert Kerns, PhD Yale School of Medicine CBT treatment for painful diabetic neuropathy

Carol Lammi-Keefe, PhD University of Connecticut DHA functional food in pregnancy: Post-partum depression

Linda Niccolai, PhD Yale School of Medicine Risk in partnerships for repeat sexually transmitted infections

Gerard Sanacora, MD Yale School of Medicine Potential predictor to response to CBT

Donaghue Investigator

Janet McElhaney, MD University of Connecticut Health Center A strategy to optimize vaccine efficacy in older adults

Cheryl Oncken, MD, MPH University of Connecticut Health Center Maternal genetics, cigarette smoking and infant birth weight

CONTINUATION AWARDS

Research in Clinical & Community Health Issues

Richard Fortinsky, PhD University of Connecticut Health Center Care consultation for families of dementia patients

Tony George, MD Yale School of Medicine Nicotinic antagonist augmentation of SSRI antidepressants

Naveed Hussain, MBBS University of Connecticut Health Center Regional database to study outcomes in premature babies

Jeffrey Kahn, MD, PhD Yale School of Medicine Epidemiological investigation of human respiratory viruses

George Mansoor, MD University of Connecticut Health Center Effects of ascorbic acid on ambulatory blood pressure

Paul Thompson, MD

Hartford Hospital Skeletal muscle gene expression in patients with statin-induced myalgia

Samuel Varghese, PhD

St. Francis Hospital and Medical Center The mechanism of bone loss in inflammatory diseases

C. Michael White, PharmD

Hartford Hospital The atrial fibrillation suppression trial (AFIST III)

Mark Twain House & Museum Site of the 13th Donaghue Foundation Annual Meeting

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 MTI-MMP-dependent breast cancer metastasis

Lisa Dierker, PhD

Wesleyan University Impact of child psychopathology and intervention on later substance use

Sandra Hewett, PhD

University of Connecticut Health Center Mechanisms of inflammatory central nervous system injury

Barbara Kazmierczak, MD, PhD

Yale School of Medicine The role of epithelial cells in host defense against pathogens

Stephen King, PhD

University of Connecticut Health Center Intracellular transport and the regulation of molecular motor-cargo interactions

Richard Marottoli, MD, MPH

Yale School of Medicine Enhancing older driver safety and mobility

Ishita Mukerji, PhD

Wesleyan University Structural studies of sickle cell hemoglobin fibers

Nancy Petry, PhD University of Connecticut Health Center Brief interventions for problem gamblers

Carol Pilbeam, MD, PhD

University of Connecticut Health Center Development of new therapies for increasing bone formation and treating osteoporosis

Robert Reenan, PhD

University of Connecticut Health Center Changes in ion channel and receptor function in brains of adults

Fransisco Sylvester, MD

Connecticut Children's Medical Center Understanding bone loss in children with chronic gastrointestinal diseases

Practical Benefit Initiatives

Sally Cohen, PhD, RN,

Yale School of Nursing Judith Krauss, MSN, RN, Yale School of Nursing Regina Cusson, PhD, RN, University of Connecticut School of Nursing Program for the study of health care relationships

Carolyn Mazure, PhD

Yale University School of Medicine Ethel Donaghue women's health investigator program

Judith Fifield, PhD

St. Francis Hospital & Medical Center Hospitals and churches: Partnership to improve health

Robert J. Levine, MD

Yale University Donaghue initiative in biomedical and behavioral research ethics

Mary Tinetti, MD

Yale University School of Medicine **Dorothy Baker, PhD** Yale University School of Medicine Connecticut collaborative fall prevention project

Scott Woods, MD

Yale University School of Medicine Donaghue early schizophrenia initiative

Committees

THE SCIENTIFIC ADVISORY COMMITTEE

Clinical & Community Health Review Committee

William White, MD (Chair) University of Connecticut Health Center Professor, Hypertension Medicine

Karyl Burns, RN, PhD Hartford Hospital Research Scientist

Linda Frisman, PhD State of Connecticut, Mental Health & Addiction Services Director of Research

Michael Gaffney, PhD Pfizer, Inc. Director, Biometrics

Robert Kozol, MD University of Connecticut Health Center Professor, Department of Surgery

Mark Litt, PhD University of Connecticut Health Center Professor, Behavioral Sciences

Robert Muirhead, PhD Pfizer, Inc. Director, Statistical Research

Godfrey Pearlson, MD Institute of Living/Hartford Hospital Director, Olin Neurospsychiatry Research Center

Martha Radford, MD Yale-New Haven Health System Systems Director, Clinical Quality

Susan Ratzan, MD Connecticut Children's Medical Center Director, Endocrinology Lawrence Scahill, PhD Yale Child Study Center Associate Professor, Pediatric Mental Health

Jonathan Sporn, MD St. Francis Hospital & Medical Center Attending Physician, Hematology & Oncology

Howard Tennen, PhD University of Connecticut Health Center Professor, Community Medicine

Paul Thompson, MD Hartford Hospital Director, Preventive Cardiology

Donaghue Investigator Advisory Committee

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Howard L. Bailit, DMD, PhD University of Connecticut Health Center Professor Emeritus

Cheryl Tatano Beck, DNSc University of Connecticut Professor, School of Nursing

Ernesto Canalis, MD Saint Francis Hospital and Medical Center Director of Research

Michael Gaffney, PhD Pfizer, Inc. Director, Biometrics

George Heninger, MD Yale School of Medicine Professor of Psychiatry **Stanislav V. Kasl, PhD** Yale University School of Medicine Professor, School of Epidemiology and Public Health

David Knecht, PhD University of Connecticut Professor, Molecular and Cell Biology

Mark Litt, PhD University of Connecticut Health Center Professor, Behavioral Sciences

Robb Muirhead, PhD Pfizer, Inc. Director, Statistical Research Center

Jonathan G. Seidman, PhD Harvard Medical School Professor, Department of Genetics

Wilma Wasco, PhD Massachusetts General Hospital Associate Professor, Genetics and Aging

POLICY ADVISORY COMMITTEE

Honorable Alvin W. Thompson (Chair) Windsor Judge, US District Court, Hartford

Nancy Angoff, MD New Haven Associate Dean, Yale School of Medicine

Howard Bailit, DMD, PhD West Hartford Professor Emeritus, University of Connecticut Health Center (Science Advisor to the Trustees)

Cheryl Beck, DNSc Tolland Professor, University of Connecticut School of Nursing **George C. Hastings, Esq.** West Hartford Of Counsel, Robinson & Cole

Katherine C. III, MD Bristol President and CEO, Hospital for Special Care (Retired)

David Knecht, PhD Storrs Professor, University of Connecticut

Harlan Krumholz, MD, FACC Guilford Associate Professor, Yale University School of Medicine

David Ormstedt, Esq. Wethersfield Attorney (private practice)

Michael Rion, PhD West Hartford Principal, Resources for Ethics and Management

Commentary: To make a difference

Like review committees for federal funding agencies, grant reviewers for the Donaghue Foundation have high standards for project importance and quality of scientific design. We consider previous research in the area, potential threats to validity, and the likelihood that a project can be successfully accomplished. But these concerns are not unusual for review groups; they reflect standard review criteria. What is different about the Donaghue Foundation is its emphasis on immediate practical benefit. We ask, "How will this study improve the lives of Connecticut citizens? How will the work of this investigator advance health or medicine?" Focusing on these questions without forfeiting the more typical concerns of reviewers - is often very difficult. The

scientific part is hard enough, but we can take full advantage of the varied experience and expertise of the committee membership to weigh the merits of each proposal. For decisions concerning immediate practical benefit, we need to tap our collective understanding of health behavior and health systems. Moreover, we must employ a set of values that might be somewhat alien to scientists with a love of knowledge for its own sake. As new reviewers join our ranks, they come to appreciate the very special mission that was entrusted to us by Ethel Donaghue: to make a difference.

Linda Frisman, PhD Director of Research Connecticut Department of Mental Health & Addiction Services and Research Professor Department of Psychology University of Connecticut



23

Financials

2004 FINANCIAL INFORMATION

Statement of assets and fund balance as of December 31, 2004

Investment in marketable securities	\$	65,632,478
Cash and cash equivalent	\$	1,568,077
Other assets	\$	44,771
total assets and fund balance	\$0	67,245,326

Statement of income and expenditures for the twelve months ended December 31, 2004

Income	\$ 1,831,655
Expenditures	
Program	
Grants	
Clinical and Community Health	\$ 608,53 I
Donaghue Investigator	\$ 1,501,406
Practical Benefit Initiatives	\$ 1,357,005
Subtotal	\$ 3,466,942
Program Support	\$ 152,836
Management and General	\$ 450,758
Investment Management	\$ 99,070
Total Expenditures	\$ 4,169,606

Note I: In addition to this amount, the Foundation facilitated \$156,517 in research grants for foundations or philanthropic sources.

Note 2: In addition to these expenditures, an estimated amount of up to \$3,838,839 has been earmarked for future spending in support of ongoing grants. The figures listed above are unaudited. Fair market values are approximate.





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.



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