



THE 2003 Annual Report  
DANA  
FOUNDATION

**T**

he Dana Foundation is a private philanthropic organization with principal interests in science, health, and education. Charles A. Dana, a New York State legislator, industrialist, and philanthropist, was president of the Dana Foundation from 1950 to 1966 and actively shaped its programs and principles until his death in 1975.

Grants applications to the Dana Foundation are reviewed in accordance with the guidelines at the end of this annual report.



THE  
**DANA**  
FOUNDATION

**2003 Annual Report**

**Contents**

---

Directors, Officers, and Administration	<b>2</b>
Chairman's Letter	<b>6</b>
Grants	<b>14</b>
The Dana Alliance for Brain Initiatives	<b>22</b>
Dana Press	<b>27</b>
News and Internet Office	<b>32</b>
Auditors' Opinion and Financial Statements	<b>36</b>
Grant Guidelines	<b>46</b>
Publications Available	<b>48</b>

## BOARD OF DIRECTORS, OFFICERS, AND ADMINISTRATION

(as of May 15, 2004)

### Directors

---



*William Safire, Chairman*



*Edward F. Rover, President*



*Edward Bleier*



*Wallace L. Cook*



*Charles A. Dana III*



*Ann McLaughlin Korologos*



*LaSalle D. Leffall, Jr., M.D.*



*Hildegarde E. Mahoney*



*Donald B. Marron*



*L. Guy Palmer, II*



*Herbert J. Siegel*



*Clark M. Whittemore, Jr.*

### Honorary Directors

---

*Edward C. Andrews, Jr., M.D., Carlos Moseley*

### Executive Committee

---

*William Safire, Chairman*

*Edward F. Rover*

### Investment Committee

---

*Wallace L. Cook, Chairman*

*Edward Bleier*

*Charles A. Dana III*

*Hildegarde E. Mahoney*

*L. Guy Palmer, II*

*Herbert J. Siegel*

### Budget Committee

---

*LaSalle D. Leffall, Jr., M.D., Chairman*

*Ann McLaughlin Korologos*

*Edward F. Rover*

*William Safire*

### Audit Committee

---

*Ann McLaughlin Korologos, Chairman*

*Wallace L. Cook*

*L. Guy Palmer, II*

*Clark M. Whittemore, Jr.*

### Compensation Committee

---

*William Safire, Chairman*

*Edward Bleier*

*Wallace L. Cook*

*Herbert J. Siegel*

## Administration

---

**William Safire**  
Chairman

**Edward F. Rover**  
President

**Barbara E. Gill**  
Vice President, Public Affairs; Executive  
Director, Dana Alliance for Brain Initiatives

**Burton M. Mirsky**  
Vice President, Finance

**Jane Nevins**  
Vice President; Editor in Chief, Dana Press

**Barbara Rich, Ed.D.**  
Vice President; Director, News and  
Internet Office

## Dana Alliance for Brain Initiatives/ Public Affairs

---

**Barbara D. Best**  
Director, Member Relations

**Leah Donaldson**  
Public Affairs Assistant

**Karen Graham**  
Program Associate, Special Projects

**Laura Reynolds**  
Project Manager

**Kathleen M. Roina**  
Project Manager

**Karen A. Smith**  
Assistant Projects Manager

## Dana Press

---

**David Balog**  
Editor

**Leticia Barnes**  
Director of Marketing

**Donna Deaton**  
Executive Assistant

**Walter Donway**  
Director

**Jennifer Gilmartin**  
Editorial Intern

**Dan Gordon**  
Editor

**Bridget Horne**  
Administrative Assistant, Marketing

**Cynthia A. Read**  
Associate Director

**Randy Talley**  
Director of Production

## Finance and Administration

---

**Josephine C. Donahue**  
Director of Administration

**Brigida C. Gay**  
Controller

**Mary M. Lucas**  
Executive Assistant to Chairman

**Patricia Mangini**  
Assistant Treasurer

**Christian Medina**  
Accounts Payable Assistant

**Barbara Peterson**  
Executive Assistant to Board of Directors

**F. Jose Rendon**  
Office Assistant

**Ana Y. Somarriba**  
Receptionist

**Michael Wynn**  
Office Assistant, The Dana Center

## Grants

---

**Rebecca Husman**  
Program Assistant

**Abby Slovonick**  
Program Associate

## News and Internet Office

---

**Tamina Davar**  
Press Information Officer

**Rebecca Luib**  
Project Manager, Arts Education

**Isaac Sashitzky**  
Internet Associate

**Martha Sparks**  
News Office Associate

**Ann Whitman**  
News Office Associate

## Consultants

---

**Carolyn Asbury, Ph.D.**

**Janet Eilber**

**Guy M. McKhann, M.D.**

**Ralph M. Steinman, M.D.**

**Philip Uri Treisman, Ph.D.**

## CHAIRMAN'S LETTER



William Safire, Chairman

### Dana's Character and Mission

What sort of philanthropic foundation are we, anyway? I've been with Dana—as adviser, board member and lately CEO—for only a dozen of its 50 years, but long enough to get a sense of its mission, a feel for its character, and a handle on its hybrid method of operation.

There are all kinds of philanthropic foundations. Here are the four main types:

1. The *family foundation* is one whose founders and members of their family direct grants to a variety of their individual philanthropic interests. Today we have only one member of the Dana Family on the board and we solicit recommendations from all 12 of our board members, who are involved in a variety of charities, civic and cultural organizations, to recommend specific grants up to a limited

amount, which results in diverse grantmaking. These account for seven percent of our grantmaking.

2. Another category is the *independent foundation*, unconnected to its original source of funds. Its directors decide on general areas of interest, invite proposals, judge their worth with the advice of consultants, and make grants. Dana does some of that, too.

3. On the activist end of the spectrum is the *operating foundation*. It decides on the project, hires the staff, and (a) directly does the charitable work or (b) builds the research facility and runs it or (c) otherwise provides hands-on support to the good works in schools, civic and professional associations and the like. Dana can be considered partly in the operating category, with our Dana Press publications program, and other activities that advance the cause of medical research. The Dana Alliance for Brain Initiatives and its European sibling, the European Dana Alliance, while separate entities, are fully funded by the Dana Foundation and use many Dana employees and consultants to carry on public awareness campaigns. The Alliances rely upon the volunteer work of the neuroscience members and answers to an Executive Committee of stellar neuroscientists.

4. Then, somewhere in the middle of the world of giving, is the *value-added foundation*. (The compound adjective comes from tax policy: a "value-added tax" is one placed on the additional worth given a product.) Adding value to our grants—helping our grantees make the most of our philanthropic

investments, and generating interest to support our chosen fields—describes most of what Dana does.

Here's an example of the way we enlarge our largess. In the early 90s, the government-sponsored "Decade of the Brain," after much fanfare and high expectations, was going nowhere. Then Dana Chairman David Mahoney hooked up with Jim Watson, the Nobel laureate famed as the co-discoverer of the structure of DNA, to raise public awareness of the need to support the promising work of brain scientists.

They enlisted a few dozen of the leading minds in the field to form the Dana Alliance for Brain Initiatives, which then dared to set down some of the achievable goals in the field. David then roped me in to start the Dana Press and help call attention to the underappreciated work of neuroscientists. Through operations like the annual Brain Awareness Week, hundreds of scientists willingly left their ivory towers to become accessible to the media and schools in local communities. In time, their vital research gained its proper attention, which led to increased private and public funding for research and treatment, and attracted thousands of medical students to this exciting field.

At the same time, Dana put its research grant money where its mouth was. We retained top scientific consultants to set up review panels, sent out requests for proposals in the areas of most productive research. Our commitment to brain research continues to this day: grants in 2003 in neuroimmunology,

clinical neuroscience research, and imaging of brain tissues, cells and molecules, of such importance to neuroscience, totaled \$3 million.

That illustrates how our Foundation staff of 35 in New York, Washington—and now in London, new headquarters of the European Dana Alliance—adds value to the work of our grantees in the research labs and the outreach organizations. Our Alliance members (including 10 Nobel laureates in the Dana Alliance and five Nobel laureates in the European Alliance) guide our outreach efforts and keep us informed of the most leading-edge research. Our scientific consultants and peer-review panels seek out the best proposals and investigators for grants, and on occasion arrange consortia of hospitals and universities that would otherwise not have the chance to work together.

Their success in the use of Dana's seed money often leads to major public grants and other private support, often resulting in the treatment of, and progress toward the cure of, brain-related illnesses. At the same time, we communicate information about brain science through the original books, magazine articles, and newspaper reports commissioned or distributed by the Dana Press, furthering the goals of the field.

Here's a more recent example of starting a value-adding activity. In early 2000, after a session at the World Economic Forum in Davos, Switzerland, about the vulnerability of populations to the threat of biological warfare from terrorists, Dana began to explore the

potential of improving the human immune system. It was natural that one of the research institutions we turned to was the laboratory of immunology at the Dana-Farber Cancer Institute in Boston, a world-reknowned facility that we have helped support for more than three decades.

Recently, Dana President Edward Rover attended a Science Committee session at Dana-Farber. Dr. Ellis Reinherz, chief of the lab and a professor of medicine at Harvard Medical School, told of the experimental work he had launched to identify the specific parts of proteins within the smallpox virus that cause the disease. Reinherz told how this study, which had been financed by Dana's modest initial investment in 2001, suddenly generated great interest after the terrorist attacks of 9/11. With that head start afforded by his initial Dana encouragement, and now with substantial U.S. Government support, Reinherz and his colleagues at Dana-Farber may well be on their way to new techniques to develop treatments or vaccines to defend against this and other deadly viruses, both natural and potentially terrorist-made.

One success can lead to another. Here was Dana, a foundation that had earned the trust of brain scientists, drawn into action as grantmakers in immunology as well. It took no genius for us to observe that the brain's nervous system and the body's immune system had at least one great capacity in common: memory. Just as the brain can remember, so can white blood cells

*Between the basic researcher's bench and the patient's bedside is the area of action that most concerns and excites us today. By continuing our neuroscience interest and following it into neuroimmunology and neuroethics, we broaden our scope without losing our focus.*

recognize and kill germs they have been exposed to before. The immune system and nervous system interact in mysterious ways. That led Dana into neuroimmunology, a relatively new field that our scientific consultants have convinced us will soon create breakthroughs in enhancing the body's self-defense.

That's how Dana adds value to much of the research it funds. First, we see the new opportunity in a field; next, we approach the best minds we can find to identify the questions to be answered; then we enlist the interest of medical schools and research institutions and brilliant individual investigators, which lead to our peer-reviewed grants. Finally, through our many publications and sustained support of the scientists' professional interaction, we report to the scientific community and the general public on the progress of their valuable work. That triggers

wider interest, new collaborations and greater public and private financial support.

Another way Dana adds value is by stimulating scientists to think about ethical values. When advances in molecular and other sophisticated imaging techniques enable scientists to examine brain cells and immune cells in action, moral questions are raised—by patients, doctors, and researchers alike—about the wisdom of manipulating minds in hope of treating or enhancing the brain. Dana sponsored a symposium by scientists and philosophers at Stanford and the University of California at San Francisco to map a new field of “neuroethics.” In 2003 we produced a book of that conference's proceedings that has stimulated further soul-searching and head-scratching among those concerned with the life and health of the mind.

In the course of Dana's contact with scientists over the past few years, we found that one unfamiliar adjective kept popping up: translational. Eric Kandel, M.D., who serves with his fellow Nobel laureate, James Watson, as a vice chairman of the Dana Alliance, used that word in his introduction to the Alliance's annual *Progress Report* (prepared in 2003, distributed early in 2004 as part of Brain Awareness Week). “Translational research is no longer a limited category of research carried out by a few people in white coats,” wrote Kandel. “Rather, it is the underlying motif that guides much of current research in neuroscience. During the 1990s, referred to as the Decade of the Brain, we all became translational researchers.”

As a longtime language maven, I sent Eric a note asking for a definition of that phrase. Here it is: “Translational research is the process of applying ideas, insights, and discoveries generated through basic scientific inquiry to the treatment or prevention of human disease.”

Between the basic researcher's bench and the patient's bedside is the area of action that most concerns and excites us today. By continuing our neuroscience interest and following it into neuroimmunology and neuroethics, we broaden our scope without losing our focus. Dana uses the techniques developed in adding value to our grantmaking—communicating among scientists and with the public, creating consortia among hospitals and researchers—to follow our primary neuroscience interests into new fields, including human immunology. I'll hint at another value-adding field we're thinking about for 2004 at the end of this letter, but first to an overview of the topics to be covered in this 2003 *Annual Report*.

### Grants in Science

---

Dana reaffirmed its support of the Dana-Farber Cancer Institute with a multi-year, \$10 million research grant. This is in the tradition of the \$43 million granted the Institute by the Foundation since 1960. The new funding will help endow clinical and translational (there's that word again) research aimed at developing new disease

therapies as well as methods of prevention. Through genetics, molecular biology, and chemistry, researchers will investigate the relationship of the brain, the immune system, and cancer, complementing the work now being done at the Dana-funded David Mahoney Center for Neurooncology.

We organized a Clinical Neuroscience Research effort to encourage the development of treatments for patients with debilitating brain traumas and diseases. A series of three-year grants, up to \$300,00 each, is aimed at helping translational research physicians evaluate the effectiveness of treatment that may lead to the recovery of patients' brain functions.

Dana extended and expanded its grants to studies of "human immunology." Experienced investigators with the same three-year funding are measuring the immune responses of patients under varying treatments. The goal is to better understand how to treat allergic, infectious, autoimmune, and inflammatory diseases. At the same time, we have joined with another foundation to undertake a clinical immunology training program to attract new investigators into the field to study immune-related ailments, including asthma and lupus. Again, this application of basic research to clinical needs—with the measurements taken, under proper safeguards, to inform the research—fits into the realm of translational science.

Dana this year continued to advance public understanding and discussion of science, especially neuroscience. Dana

expanded its international operations with that mission, too, with the opening in November 2003 of the Dana Centre in London. Through it, the European Dana Alliance is joining with leading philanthropic and scientific organizations in the United Kingdom to stimulate public interest in science and invite open discussion and debate. For people who cannot come in person to this remarkable new facility in Queensgate, near Buckingham Palace and adjacent to London's Science Museum, there are Web-based and satellite links for "virtual" participation.

Other work in neuroethics and public discussion of science are described elsewhere in this report. Some took place at the new Dana Center in Washington, DC, which, like its counterpart in London, is a venue that welcomes exploration of controversial issues. (In DC, we have a Center; in London, a Centre.) In 2003, these initiatives brought insights from brain science to bear on law, education, special health concerns of women, and even architecture.

### Grants in Arts Education

---

Dana has from its earliest days had a strong interest in education. Over the years we have funded and actively worked with graduate and undergraduate schools, high schools, middle schools, nursery schools, and educational research organizations. We continue to support the innovative work of the Dana Center for Educational Innovation at the

University of Texas. Recently, we have sharpened our focus and today our major work in this area is with organizations that train performing artists how to introduce young pupils to the worlds of music, dance, and drama. Tight school budgets that led to an emphasis on "accountability" constrain arts education in the public schools, especially in light of the difficulty of measuring the overall educational advantage of learning the arts.

There are now far too few well-trained artist-teachers in the performing arts. One challenge is to improve the opportunities for professional development. Dana began in 2001 to support workshops, training forums, and institutes for professional development of both in-school arts specialists and artists willing to teach. That has grown to 14 new grants this year, described elsewhere in this report.

Meanwhile, Dana works to bring more public attention to arts education, its value for students, and innovative ways that schools can provide it. A conference in 2002 resulted in our free handbook, *Planning an Arts-Centered School*, now in its second printing of 10,000, directed to educators and local communities. A second arts symposium, in 2003, called "Acts of Achievement: The Role of Arts Presenters in Education," was held in Washington, DC, with the Association of Performing Arts Presenters and the Kennedy Center for the Performing Arts. Based on that conference, another much-needed book available free to arts organizations is being published. Both volumes, with information on how to obtain them through our Web site, are described on page 49.

### The Dana Alliance

---

The Dana Alliance continued to enlarge its network of partner organizations around the world to raise awareness of progress in brain science. In the United States, the Alliance joined with like-minded organizations to launch a neuroeducation initiative that will augment education about the brain in K-12 classrooms. In the area of neuroethics, we heled to facilitate discussion among scientists and between scientists and the public about ethical questions posed by advances in brain research. In the United Kingdom, with the opening of the Dana Centre, the European Alliance joined forces with the British Association for the Advancement of Science and the Science Museum to mount events that increase public interest in science and encourage open discussion.

### Publishing

---

Dana Press, the publishing division of the Foundation and of the Dana Alliances, produces trade books, special reports, a quarterly journal, newspapers, and newsletters that support Dana work in all our fields of interest. For example, the Press's newest periodical is the quarterly *Arts Education in the News*, an eight-page, tabloid-format publication with a print run of 15,000. It follows the successful format of *The Brain in the News*, launched in 1994, and *Immunology in the News*, started in 2001. In all cases,

# REPORT ON 2003

the goal is to bring together in a single publication the best coverage of a field by the nation's newspapers.

In the field of neuroscience, long the focus of the Dana Press, we hit full stride in 2003 with five books, including *The Bard on the Brain: Understanding the Mind Through the Art of Shakespeare and the Science of Brain Imaging*, and the landmark *Dana Guide to Brain Health*, a 768-page reference with contributions by more than 100 top scientists and extensive illustrations. Dana Press books are available in bookstores.

In support of Dana's work in science and health, the Dana Press in 2003 published the books *Neuroethics: Mapping the Field*, and our edition, with expanded comments, of *Beyond Therapy: Biotechnology and the Pursuit of Happiness, A report of the President's Council on Bioethics*. A report on Neuroscience and the Law, a conference held at the Dana Center in Washington, DC, will be available as a Dana Press book in 2004.

## On the Web

---

Our Web site, [www.Dana.org](http://www.Dana.org), a source of information and insight about fields of concern to Dana, kept growing in 2003. It provides information to both journalists and the public. The Web site has a new section, "Brain Resources for Seniors," and six new publication sections that contain the latest data from the Dana Press. Sample articles from our quarterly journal, *Cerebrum: The Dana Forum*

on *Brain Science*, can be found on the Web site, along with all available issues of many of our other publications.

## Finances

---

With our outlays for direct grants and value-adding activities running about seven percent of our corpus, we remain at about \$300 million dollars in assets. That makes us a medium-sized foundation, ranking about 150th. The financial statements that begin on page 35 report that Dana made appropriations for programs and grants during 2003 of \$27 million and payments of \$20 million. Since its formation, the Foundation has appropriated more than \$340 million for philanthropic purposes.

## New Directions

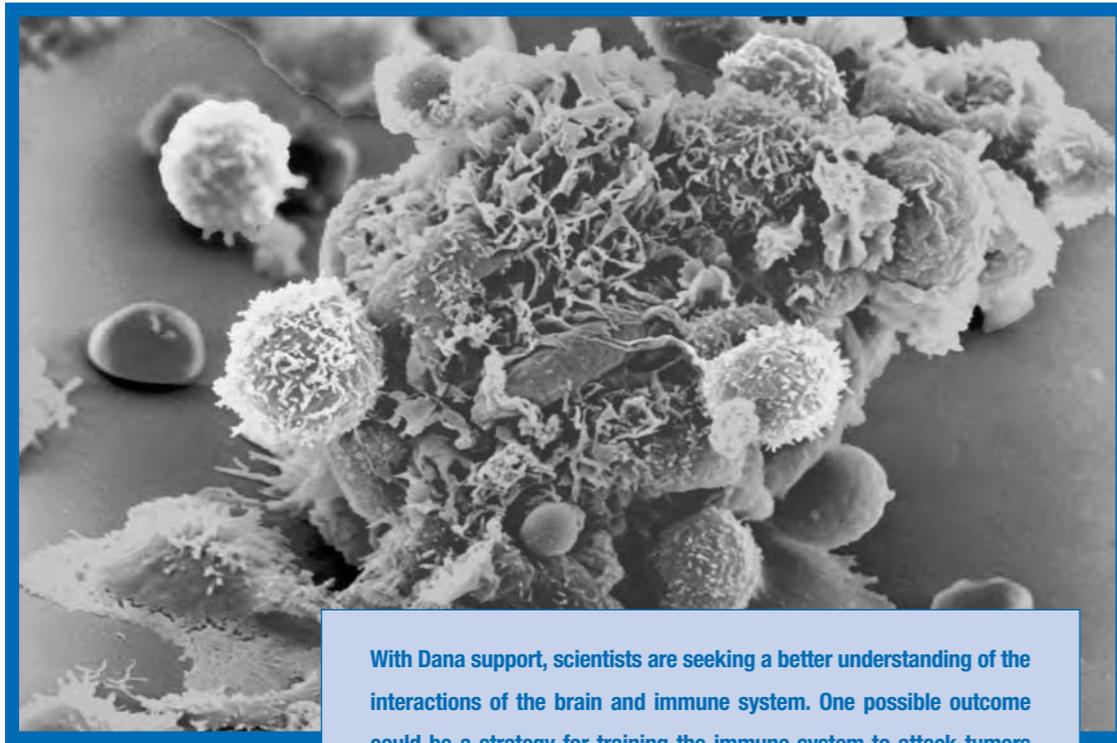
---

Just as our neuroscience background led us into neuroimmunology, our work in arts education is leading us into studies of how early learning of performing arts may affect the brain's ability in other activities. In 2004, we intend to extend our interest into the impact of arts study on cognitive development. Stay attuned.



William Safire  
Chairman

## BRINGING TOGETHER NEUROSCIENTISTS AND IMMUNOLOGISTS, PERFORMING ARTISTS AND PUBLIC SCHOOL TEACHERS: DANA GRANTS CATALYZE COLLABORATION



With Dana support, scientists are seeking a better understanding of the interactions of the brain and immune system. One possible outcome could be a strategy for training the immune system to attack tumors inside the brain the way it does outside, as in this scanning electron micrograph of a large cancer cell being attacked by many small tumor-infiltrating lymphocytes.

The year 2003 saw not only the first U.S. case of bovine spongiform encephalopathy (mad cow disease), in which misfolded proteins, called “prions,” cause fatal brain degeneration, but also preliminary indications that prion-like proteins may be pivotal in storing long-term memories. Both Stanley Prusiner, M.D., who discovered the role of prions in illness, and Eric Kandel, M.D., who recently found evidence of their possible positive role, are Nobel laureates, winners of the Dana Award for Pioneering Achievement in Health, members of the Dana Alliance for Brain Initiatives, and recipients of grants from the Dana Foundation.

What makes disease-causing prions especially deadly is that the immune system, which usually identifies and fights off disease-producing agents, does not recognize prions as dangerous and thus does not attack them when they invade the central nervous system. Why? To phrase the question in more general terms: How do these two powerful systems—nervous and immune—function, and how do they interact in health and disease? Understanding this, particularly on the level of cells and systems, is the focus of the Dana Foundation’s grants program in science and health.

The Foundation’s other, equally long-standing interest is in education. The current goals of the education grants program are discovering and disseminating the best practices for professional development of teaching artists in the public schools and fostering innovation in mathematics and science education for K-12 schoolchildren.

### Science and Health

The Foundation’s primary strategy for contributing to improvement of human health is to support the application of basic research results to studies on the clinical level. A complementary approach, also occasionally supported by the Foundation, is to take hypotheses arising out of clinical experience and test them in basic research studies. This interplay of basic and clinical investigations is called translational research.

In 2003, the Foundation contributed \$10 million to the endowment of the Dana-Farber Cancer Institute in Boston for its Program in Clinical and Translational Research, which ultimately will have a dedicated \$30-million endowment. A sustained commitment to multi-disciplinary, collaborative translational research is an important aspect of Dana-Farber’s drive to develop effective therapeutic interventions for every major form of human cancer within the next decade. The Foundation’s \$10-million grant brings its total, 40-year financial commitment to Dana-Farber’s cancer research mission to more than \$43 million.

### Immunology

Understanding and treating human cancers is just one goal of Dana’s Immunology program, initiated in 2001 to support the search for ways to enhance the human immune system’s ability to protect us from naturally occurring or intentionally inflicted bacteria, viruses, fungi, and parasites. Enhancing the

immune system requires understanding and improving its two basic lines of defense. The first, consisting of innate immune cells, enables the body to mount an immediate, generalized, but short-lived, attack. When summoned by certain of these innate immune cells, the second line of defense, which consists of adaptive “T” and “B” cells, mounts a sustained and highly targeted attack. Foundation-supported research also emphasizes preventing and treating autoimmune diseases such as multiple sclerosis, rheumatoid arthritis, and juvenile diabetes, which occur when our immune system malfunctions and directs its attack against our body’s own cells.

These three targets of grant making through the Immunology program, plus a human immunology training effort initiated this year, all focus on enhancing innate and adaptive immunity, preventing autoimmune diseases, and assessing the effectiveness of immuno-therapies.

- **Immuno-defense**

Since September 2001, Dana has supported some of America’s foremost scientists in working to improve our protection against deadly pathogens used as weapons of mass destruction. These scientists seek to enhance innate human immunity; block pathogens that do enter the body from attaching to and attacking the body’s cells; and improve immune response to cells under attack. Of course, research under the Human

Immunology program, described below, also has application to protecting us against intentionally inflicted pathogens.

- **Human Immunology**

While basic and animal research have yielded indispensable insight into immune system processes, only studies in humans can show how the human immune system functions. Dana launched its Human Immunology program in 2002 to help catalyze this field. Leading immunologists are invited to compete for three-year, \$300,000 grants to enlarge understanding of cancers and inflammatory, allergic, auto-immune, and infectious diseases and to measure the immune responses of patients receiving various types of therapies.

This year, a question posed by several of the seven funded investigators is why some immune-related diseases vary so much from person to person. For instance, one study is investigating why only a small percentage of people exposed to tuberculosis-causing bacteria develop this disease. Another study looks at the different effects of environment and genes in asthma, which begins as an allergy. The scientists conducting this project are studying a genetically homogeneous population with a high prevalence of asthma that migrated from India to Israel. Some settled in the desert, others in the moist mountains. Do the two groups now have different asthma prevalence rates? A third study asks whether a

particular gene causes adaptive immune B cells to attack the body in patients with the autoimmune disease lupus.

- **Clinical Immunology Training**

As the range of these studies suggests, human immunology is a wide open field. One challenge, however, is to interest both established and new immunologists in clinical research opportunities. To do so, Dana will mount two symposia at the July 2004 meeting of the Federation of Clinical Immunology Societies. To further stimulate interest among promising new investigators, the Foundation in 2003 started a new clinical immunology training program jointly with the Irvington Institute for Immunological Research, with the goal of exciting talented new investigators about the research opportunities for understanding and treating immune-related diseases. Prospective fellows will work with a mentor to undertake specific research projects. From a pool of some 50 applicants, the first three Dana-Irvington Clinical Immunology Research Fellowships were awarded. Two of the mentors are Dana Human Immunology grantees, but the fellows’ projects are distinct from the Dana-funded studies.

- **Neuroimmunology**

Brain and immune cells share several salient characteristics. For example, certain cells in both systems have memory. Nerve cells communicate through synapses

and, it turns out, immune cells also use synapse-like connections. Cells in the two systems share some molecules in common, and recent research suggests that cells in one system can influence those in the other. Indeed, it appears that nerve and immune cells interact continuously, but what are they accomplishing? To answer that question, the Neuroimmunology program invites seasoned neuroscientists and immunologists to collaborate on three-year studies funded by the Foundation for up to \$300,000. This year, Dana encouraged further exchange of ideas among top scientists by supporting the New York Academy of Sciences in setting up a Neuroimmunology Discussion Group.

While many applicants for Dana grants propose human studies, this year’s four grants were made for research using animals. Two projects explore autoimmune brain disease, with one asking if autoantibodies somehow elude the blood-brain barrier and attack brain tissue, and the other asking if a usually benign type of herpes virus produces a multiple sclerosis-like disease in monkeys. Another study will use two-photon microscopy imaging to probe how immune reactions in the brain influence cell-to-cell connections.

**Brain and Immuno-imaging**

Imaging technology is transforming our ability to understand human brain function and the actions of brain and immune cells. For example, new cellular and molecular

imaging techniques are enabling scientists to track the actions of individual nerve and immune cells within their larger systems. Although indispensable for all Dana-supported research, imaging itself is the theme of the Brain and Immuno-imaging program.

For a decade, Dana's Clinical Hypotheses in Imaging program has encouraged researchers to pilot-test novel hypotheses so that, if their ideas prove promising, they will have a sound basis on which to compete for bigger grants from other sources. With the emergence of cellular and molecular imaging techniques, in 2001 Dana added an immuno-imaging program to zero-in on immune cell actions. When it became clear that these imaging techniques could track brain cells as well, Dana created a combined Brain and Immuno-imaging program. Under this initiative, a Request for Proposals is sent to U.S. medical schools and selected free-standing research institutions, which choose imaging investigators to compete for three-year Dana grants of up to \$100,000 each. The goal can be to image normal brain or immune functioning (or their interaction), disease processes, or the effects of therapies. Other projects seek to improve diagnosis or refine imaging technologies themselves.

Four of the 16 projects supported this year concern brain tumors. One uses PET and MRI to test the accuracy of a mathematical model for predicting where deadly brain glioma cells will spread; a second uses the same technologies to see if there is a correlation between areas of mild radiation

therapy-induced cell damage and cognitive and motor deficits in patients being treated for lymphoma. Another set of imaging projects explores psychiatric disorders, including the association between the immune system and depression.

Recognizing the increased costs of cellular and molecular technology, Dana in 2004 will offer two levels of support: \$100,000 each for projects in brain systems imaging and up to \$300,000 each for projects in cellular/molecular imaging.

#### **Clinical Neuroscience Research**

A new initiative in 2003, the Clinical Neuroscience Research program is supporting the first studies of diagnostic or therapeutic interventions in patients with intractable brain diseases, using approaches that have shown promise in animal studies. One of these projects straddles the fields of neuroscience and ethics. Investigators are working out ethical guidelines to assist those participating in a clinical study designed to determine whether deep brain stimulation produces cognitive benefits in patients who are in a minimally conscious state. The grant reflects Dana's multifaceted involvement in neuroethics, also pursued through two conferences on neuroethics in 2003 (see p. 25).

In 2004, the Clinical Neuroscience Research program will invite more such projects and also encourage development of prognostic data on treatments and their outcomes in patients suffering from severe brain trauma. This could improve understanding of

the factors that are critical to functional brain recovery and assist doctors and families in making difficult treatment decisions. All studies under this program will continue to be funded at up to \$300,000 over three years.

## **Education**

---

### **Arts Education**

The Arts Education program supports innovation in the professional development of public-school teachers of the performing arts. During its third year, the program continued to emphasize the training of artists and in-school arts specialists as teachers. Grants are restricted to projects that originate within a 50-mile radius of New York City, Los Angeles, or the District of Columbia. In all, 14 new grants were made, four of them renewals from 2001 and 2002, and several related projects and publications brought the arts education program national recognition.

The 2003 cycle of grant making was invitational. Letters of Intent from invited organizations were submitted electronically through the new GrantsOnline system on the Dana Web site. Decisions were based on the announced guidelines, with concern for diversity, appropriate compensation for artists who teach, suitability of programming for young people, and provisions for mentors and assessment of success.

The new grants will support initiatives such as professional development workshops, training forums, and institutes for

professional development. For example, a New York dance company is providing professional development for teaching artists and company members, who will then teach in 30 New York City schools, while another organization in New York is offering intensive workshops and leadership training in music education. A community college outside Washington, DC, is hosting workshops for K-12 band, orchestra, and chorus leaders and will also guide replication of the workshops by community colleges across the country, while the Los Angeles County Arts Commission has received support for its teaching artist training program designed to help students in the county public schools receive a sequential K-12 arts education.

### **Arts Education Events and Publications**

In 2003, Dana sponsored its second arts symposium, "Acts of Achievement: The Role of Arts Presenters in Education," held in Washington, DC, April 9-10, 2003, in partnership with the Association of Performing Arts Presenters and the John F. Kennedy Center for the Performing Arts. Almost 150 arts presenters, funders, arts administrators, educators, and artists (including many Dana grantees) attended. Opening remarks were by Michael Kaiser, president of the Kennedy Center, and Alma Powell, vice-chairman of the Kennedy Center trustees. Warren Simmons, executive director of the Annenberg Institute for School Reform at Brown University, was in the question-and-answer keynote discussion with Dana

## SUMMARY OF PROGRAM GRANT APPROPRIATIONS IN 2003

Chairman William Safire. Simmons discussed his perspective on the importance of arts in education. Panel discussions examined the role of artist residencies, the preparation of teaching artists, and professional development for K-12 teachers.

The Foundation's News Office published a report on the conference, *Acts of Achievement: The Role of Arts Presenters in Education*, which includes a compilation of promising practices in the field of arts residencies. It is the first volume of its kind, intended to be useful for organizations beginning or revamping work in arts education (see p. 30). In 2003, Dana Press also began to publish a new, free quarterly publication, *Arts Education in the News* (see p. 29).

The Foundation continues to build on its first free arts education publication, *Planning an Arts-Centered School: A Handbook*, released in 2002. A daylong professional development workshop for arts supervisors in selected New York City public schools was produced in October, 2003. Anticipating a similar demand for *Acts of Achievement*, the Foundation supported several key professional events connected with its distribution, including a Breakfast Roundtable discussion at the annual Grantmakers in Education conference and representation at the Grantmakers in the Arts conferences, "Arts Education Face to Face" and "Crossing Paths." Follow-up events will continue in 2004.

A PrimeTime Radio program, produced by the AARP and featuring the Foundation's arts education efforts, aired nationally over

National Public Radio. It is available on the AARP Web site ([www.aarp.org/leisure/radio/](http://www.aarp.org/leisure/radio/)) or from a link on the Dana Web site arts education resources page ([www.dana.org/grants/artseducation/resources.cfm](http://www.dana.org/grants/artseducation/resources.cfm)).

### K-12 Education

In recent years, the Foundation has directed most of its other K-12 grant making to the Charles A. Dana Center for Educational Innovation at the University of Texas in Austin. Directed by Philip Uri Treisman, Ph.D., a winner of the Dana Award for Pioneering Achievement in Education, the Center undertakes a range of programs designed to improve the teaching of mathematics, science, and reading in schools in Texas and across the county. One such effort, the AP (Advanced Placement) Equity Initiative, was expanded in 2003 to provide Web-based resources that enable teachers to help a larger and more diverse group of students to succeed in advanced placement calculus and statistics courses.

In 2003, Dana also collaborated with the New York Hall of Science to enhance neuroscience education for K-12 students. Carefully selected middle- and high-school science teachers will work with neuroscientists, including members of the Dana Alliance, and educators at the Hall of Science to create inquiry-based neuroscience curriculum units for their students. ■

### Brain and Immuno-imaging

Brown University—Providence, RI  
Center for Blood Research, Inc.—Boston, MA  
Cold Spring Harbor Laboratory—Cold Spring Harbor, NY  
Emory University School of Medicine—Atlanta, GA  
Hadassah Hebrew University—Jerusalem, Israel  
Johns Hopkins University—Baltimore, MD  
M.D. Anderson Cancer Center—Houston, TX  
University of California-San Francisco—San Francisco, CA  
University of Illinois Medical Center—Chicago, IL  
University of Michigan Medical School—Ann Arbor, MI  
University of Washington School of Medicine—Seattle, WA  
Washington University School of Medicine—St. Louis, MO  
Wayne State University School of Medicine—Detroit, MI  
Yale University School of Medicine—New Haven, CT

### Neuroimmunology

Columbia College of Physicians & Surgeons—New York, NY  
New York University School of Medicine—New York, NY  
Oxford University—Oxford, UK  
University of California-San Francisco—San Francisco, CA  
University of Kentucky—Lexington, KY

### Clinical Neuroscience Research

American Cancer Society—New York, NY  
Weill Medical College of Cornell University—New York, NY

### Human Immunology

Baylor College of Medicine—Houston, TX  
Columbia College of Physicians & Surgeons—New York, NY  
Hospital for Special Surgery—New York, NY  
Irvington Institute for Immunological Research—New York, NY  
North Shore-Long Island Jewish Health System—Great Neck, NY  
Rockefeller University—New York, NY  
Stanford University—Palo Alto, CA  
The Hebrew University of Jerusalem—Jerusalem, Israel  
University of Alabama School of Medicine—Birmingham, AL  
University of Miami School of Medicine—Miami, FL

### Arts Education

Anne Arundel Community College—Arnold, MD  
Arts Connection—New York, NY  
Ballet Hispanico—New York, NY  
Community Word Project—New York, NY  
Dance/USA—Washington, DC  
Education Through Music—New York, NY  
Los Angeles County Arts Commission—Los Angeles, CA  
Los Angeles Unified School District—Los Angeles, CA  
National Dance Institute—New York, NY  
Performing Arts Center of Los Angeles—Los Angeles, CA  
Theatre for a New Audience—New York, NY  
University of California, Irvine—Irvine, CA  
Washington Performing Arts Society—Washington, DC  
Young Dancers in Reperatory—Brooklyn, NY

## DANA ALLIANCE OPENS INTERNATIONAL DIALOGUE ON THE IMPORTANCE AND IMPLICATIONS OF BRAIN RESEARCH



Guests at the opening of the new Dana Centre in London, which will provide a venue for increasing public interest in science and for open discussion and debate on important issues raised by research, were addressed by Lord May of Oxford, President of the Royal Society of London.

The Dana Alliance for Brain Initiatives, an organization dedicated to raising public awareness of the progress and promise of brain research, entered its second decade in 2003. The enthusiasm and commitment of its more than 235 members, including 10 Nobel laureates, makes the Dana Alliance a recognized leader in science communication, and the mission and message of the Alliance are as vital today as in 1992.

### Public Programming

During 2003, the Alliance partnered with a broad range of organizations to offer a variety of programs, events, and publications.

### Brain Awareness Week 2003

During the eighth annual celebration of Brain Awareness Week, March 10-16, 2003, organizations and institutions throughout the world brought a sense of the excitement of brain science to the public. Leading universities and research centers opened their doors to the public, and scientists ventured beyond their laboratories to address eager audiences about the brain and nervous system. Through creative programs, organizations worldwide broadened awareness about the importance of brain research and its critical role in helping people lead healthier and more productive lives.

Coordinated by the Dana Alliance, Brain Awareness Week has become a powerful global initiative with more than 1,600 partners

*Through creative programs, organizations worldwide broadened awareness about the importance of brain research and its critical role in helping people lead healthier and more productive lives.*

in 57 countries. Many Brain Awareness Week partners are increasing public awareness about the advances brain research has made in understanding once intractable diseases and disorders. Other partners stress how central the brain is to every aspect of life. The collaborative effort of Brain Awareness Week offers partners a rare opportunity to focus national and international attention on common interests. In 2003, programs ranged from simple endorsements of the campaign to public lectures, concerts, exhibitions, films, forums, plays, and brain fairs.

### Public Forums

Dana Alliance members bring the message of the importance of brain research to diverse audiences. In 2003, *Keep Your Brain Young*, the Dana Press book by Marilyn Albert, Ph.D., and Guy McKhann, M.D., was the topic of a program presented by the Alliance and the Smithsonian Associates to an audience of more than 500 people. The Alliance also partnered with the Institute for the Study of Aging for a breakfast discussion

for women executives, “Hormones and Dementia: Fact or Fiction?” with guest speaker Alliance member Bruce S. McEwen, Ph.D.

Another joint initiative was the neuroscience and architecture meeting organized by the Alliance, the Academy of Neuroscience for Architecture, the American Association for the Advancement of Science, and the Society for Neuroscience. Following a screening of the film *Beyond Intuition*, Alliance member Fred Gage, Ph.D., led a panel discussion on how neuroscience can contribute to the development and improvement of architectural environments. The following day, at the Dana Center in Washington, 20 neuroscientists and architects explored links between their two fields and began to chart a course for possible research in this area.

### DNA 50th Anniversary Gala

On February 28, 2003, New York City joined the worldwide celebration of the 50th anniversary of the discovery of the structure of the DNA double helix by Nobel laureates Francis Crick, Ph.D., and James Watson, Ph.D. Nearly 800 guests, including 13 Nobel laureates, from the scientific, academic, business, and media communities, attended a gala organized by Cold Spring Harbor Laboratory, Columbia University, Rockefeller University, and the Dana Alliance. The gala concluded a week-long celebration that featured exhibits, lectures, and a major scientific meeting on the “Biology of DNA.” Mayor Michael Bloomberg proclaimed the week of February 24 “DNA Week” in New York City.

### Radio and Television Broadcasts

Dana’s *Gray Matters* series seeks to produce informative, engaging, and thought-provoking radio programs on the latest in neuroscience. In the fall of 2003, a 13-part *Gray Matters* series was broadcast on more than 100 public radio stations. The series included two new shows. *On the Edge of Discovery: The Immune System and the Brain* reviewed breakthroughs in the interactions between the nervous system and the immune system; and *Neuroethics* examined the individual and societal implications of contemporary brain research. Seven Alliance members participated.

The PBS special *The Secret Life of the Brain*, partially funded by the Dana Foundation, won a 2003 Emmy Award in the Outstanding Science, Technology, and Nature Programming category. More than 30 Alliance members participated in creation of the series.

### Neuroeducation

Neuroeducation is a Dana Alliance and Dana Foundation initiative aimed at increasing neuroscience education in K-12 classrooms. Through the Foundation’s own outreach, and in collaboration with other organizations, the goal is to provide students with a solid understanding of the brain and brain research and perhaps spark the next generation of neuroscientists. The response to the neuroeducation initiative has been very promising.

The Brain Awareness Week Campaign now counts K-12 schools as its fastest growing category of participants. Schools participate in activities designed to teach students about the brain. A popular event is the International Brain Bee competition, which tests high school students’ knowledge about the brain and brain research. The Dana Alliance organizes Brain Bees in New York City and Washington, DC.

The Alliance also reaches students and teachers through collaborative efforts with professional organizations. The Alliance, with the Association of Science and Technology Centers, brought students from various cities together for a week-long session about brain research, and the support of the National Institutes of Health Office of Science Education made several teacher’s workshops possible. The Alliance has also worked with cultural centers, such as the 92nd St. Y in New York City, to provide resources and speakers for their science enrichment programs.

In addition, Dana publications, such as the *Dana Sourcebook of Brain Science: Resources for Secondary and Post Secondary Teachers* and *It’s Mindboggling!*, are used in educational programs and institutional outreach. “Brainy Kids,” a section on the Dana Web site, includes lab tours, lesson plans, puzzles, games, and links to brain-related information.

### Neuroethics

The Alliance is committed to facilitating the discussion, both within the scientific community and among the public, of the ethical issues associated with brain research. In 2003, the Foundation teamed with the American Association for the Advancement of Science to present the workshop “Neuroscience and the Law” at the Dana Center in Washington. Approximately 30 neuroscientists, legal experts, and ethicists attended the two-day workshop, where participants examined the legal implications of advances in neuroscience. Four papers were presented for discussion on the topics of: “Free Will in the 21st Century: A Discussion of Neuroscience and the Law”; “Neuroscience Developments and the Law”; “Prediction, Litigation, Privacy, and Property: Some Possible Legal and Social Implications of Advances in Neuroscience”; and “New Neuroscience, Old Problems.” The report of the meeting will be published by Dana Press.

The Dana Alliance also sponsored the Society for Neuroscience’s first lecture on neuroethics, entitled “Neuroethics: An Uncertain Future,” to 2,500 neuroscientists at the 2003 annual meeting of the Society for Neuroscience. Speaker Donald Kennedy, Ph.D., Editor-in-Chief of *Science*, addressed the ethical challenges confronting the rapidly growing field. He concentrated on the ethical implications of brain imaging technology, potential privacy issues, and the possibility

of pharmacological or genetic interventions in the functions of the brain.

### European Dana Alliance for the Brain

In 2003, the European Dana Alliance for the Brain, with members from 27 countries, continued to organize the Brain Awareness Week campaign outside the Americas, produce publications on the brain in five languages, and present public events. This year, the European Alliance joined the Federation of European Neuroscience Societies and the International Brain Research Organization to establish a committee on Public Awareness of Brain Research. The committee's purpose is to emphasize to the international neuroscience community the importance of participating in public awareness efforts, encourage greater participation from national neuroscience societies, and increase the overall number of outreach activities. The first initiative of the joint committee is a Web site, set to be launched in 2004, featuring a comprehensive inventory of brain-related publications aimed at the public, the languages in which they are available, and how to access each publication.

As part of the British Association's week-long Festival of Science, the European Alliance co-hosted a day-long session, "Inside Your Brain: Blue Skies to Better Lives." The session included talks, experiments, and demonstrations for students and

adults. Also in 2003, the European Alliance's annual public lecture, which is presented in a different country each year in association with that country's national neuroscience society, was given in Prague, Czech Republic, on "The Brain—Hopes and Facts."

### The Dana Centre

In November 2003, a week of events celebrated the opening of the Dana Centre in London. The Centre was made possible by support from the Dana Foundation, the Wellcome Trust, the Wolfson Foundation, and the Garfield Weston Foundation. Through the Dana Centre, the European Alliance, the British Association for the Advancement of Science, and the Science Museum will collaborate to increase public interest in science and to encourage open discussion and debate. Theater, film, music, humor, and visual art are some of the formats being used to reach the public. The facility features wired and wireless Internet connections, which encourage presenters to interact with the audience. "Virtual" visitors can participate via Web casting, and the Centre's satellite link makes possible live video conferencing with many institutions, including the Dana Center in Washington, DC. ■

## NEUROETHICS JOINS OTHER BRAIN SCIENCE TOPICS AND ARTS EDUCATION IN DANA PRESS PUBLICATIONS FOR A WIDE AUDIENCE



The Foundation's publishing division, Dana Press, produces periodicals and books for the general public on ideas important to the Foundation. The periodicals focus on the freshest news, trends, and debates from the worlds of neuroscience, immunology, and education in the performing arts, and the books delve into specific topics in these areas. Most of the periodicals and education books are available at no cost. The journal *Cerebrum: The Dana Forum on Brain Science* is sold by subscription, and books for general readers are available through local and online retailers.

Important to Dana Press's publishing in 2003 was the Foundation's newest area of interest, neuroethics, which considers the effects of advances in brain research on personal and societal values. In January, Dana Press began distribution of the book *Neuroethics: Mapping the Field*, the proceedings of a two-day conference of leaders in neuroscience, bioethics, law, divinity, and the media, held in San Francisco in 2002. Two books for general readers on neuroethics were placed under contract for publication in 2005: a wide-ranging exploration of the issues by cognitive neuroscientist Michael Gazzaniga and a searching look at the brain's moral capacities by lawyer-psychiatrist Laurence Tancredi.

In addition, contributors to *Cerebrum* wrote on subjects ranging from the plight of brain-injured patients in a minimally conscious state to the implications of brain science for criminal law and, in the fall,

Dana Press began production of the report of a conference, "Neuroscience and the Law," convened by the Foundation and the American Association for the Advancement of the Sciences at the Dana Center in Washington, DC. Lastly, in December, Dana Press published for retail sale *Beyond Therapy: Biotechnology and the Pursuit of Happiness*, the landmark report of the President's Council on Bioethics on using science to achieve personal enhancement. The Dana edition adds a special forward by the Council chairman, commentary by three scientist members of the Council, and an introductory essay by Dana Foundation Chairman William Safire.

In October, 2003, Dana Press entered the e-book market, with its previously printed *A Good Start in Life* by Elinore and Norbert Herschkowitz, M.D. The electronic version was made available in several formats, enabling the buyer to read the book either on a personal computer or a handheld device, such as a Palm Pilot. E-books are available online from retailers such as Amazon.com, Adobe.com, and NetLibrary.com.

The mailing lists for Dana Press free periodicals and publications grew from 32,645 to 42,711 at the end of 2003. Most of the additions to lists came from requests through the Dana Web site. Many Dana Press publications are available as PDF files.



When Dana began book publishing in 1998, its books were co-published with larger publishers. In 2003, concurrent with releasing its first books as an independent publisher, Dana Press redesigned its logo to a single, shadow-styled "D," and dropped "The" from its name. This design affords better placement on book spines and creates an identifiable iconic logo for readers and retailers.

## Periodicals

### **Cerebrum: The Dana Forum on Brain Science**

This quarterly paid-subscription journal publishes articles, book reviews, and book excerpts for lay readers and scientists interested in neuroscience and its implications for fields such as philosophy, medicine, anthropology, and the arts. Authors present fresh interpretations of recent brain science; trenchant commentary on controversial issues; and first-person perspectives. *Cerebrum* is popular with educators and articles are often cited in the press and reprinted.

### **BrainWork**

*BrainWork*, now in its 14th year, is the Foundation's oldest neuroscience publication. This free, eight-page, full-color bimonthly newsletter for general readers offers news and feature articles on basic and clinical research in neuroscience and neuroimmunology and implications for human health. Readership surged past 26,000 in 2003.

### **The Brain in the News**

Developed in 1994, *The Brain in the News* continues to be the Dana Press free periodical most requested by educators, health professionals, and lay readers, with readership at almost 20,000. Eight pages, tabloid sized, and published monthly, it reprints in their entirety articles from current newspapers and magazines in the United States and abroad.

### **Arts Education in the News**

The newest free Dana periodical was launched in 2003, reprinting arts education stories from newspapers, as well as articles from arts and education journals. It was warmly received by arts education advocates and organizations and announced in their newsletters and Web sites. The mailing list for the quarterly eight-page publication is 15,000.

### **Immunology in the News**

Launched in 2001, this free, eight-page quarterly publication includes articles from newspapers on the emerging field of immunology. Each issue also includes a featured article from a research journal.

## **Publications for Schools and Professionals**

---

### **Acts of Achievement: The Role of Performing Arts Centers in Education**

New in 2003 was this first study of K-12 education programs offered by performing arts centers nationwide, showcasing 74 centers that partner with their local schools. The book outlines the development of school residencies and offers checklists for arts organization coordinators, artists, teachers, and school coordinators planning to develop residencies.

### **Planning an Arts-Centered School: A Handbook**

Requests continued for this resource, published in 2002, for elementary and secondary educators and performing arts professionals in education. The handbook presents the best practices in curriculum development, governance, funding, assessment, and community participation from a dozen arts-centered schools.

### **The Dana Sourcebook of Brain Science: Resources for Secondary and Post-Secondary Teachers and Students (Third Edition)**

The revised third edition of this well-received publication was distributed as the 2003-2004 school year began. Some 54,000 copies of the 164-page, paperback guide on brain science have gone to more than 5,600 schools in all 50 states and 25 foreign countries since 1999. Distributed free to educators, the *Sourcebook* is notable for its concise language, illustrations, discussions

of brain-related problems, and glossary. It also lists other resources and introduces the lives of two neuroscience professionals. The teacher's edition includes a half-hour video program and two one-hour audio tapes. A DVD for easier teacher preparation and enhanced classroom presentations will be available in September 2004.

## **Dana Alliance for Brain Initiatives Publications**

---

### **A Progress Report on Brain Research**

Published every March for Brain Awareness Week, the annual *Progress Report* identifies investigations in basic and clinical brain research that advanced the field during the previous year and highlights an area of special interest. In 2003, that feature was "Neuroethics." About 25,000 copies of the 2003 edition were requested by organizations and the general public.

### **Brain Connections: Your Source Guide to Information on Brain Diseases and Disorders (Sixth Edition, 2003-2006)**

In 2003, Dana Press published and distributed the sixth edition of *Brain Connections*. This convenient 50-page booklet lists 278 organizations that provide information and services for patients and families affected by brain-related disorders and problems. Since the first edition seven years ago, 530,000 copies of *Brain Connections* have been distributed.

## **Dana Alliance Member News**

The *Dana Alliance Member News* is a bimonthly 8-page newsletter informing Dana Alliance members of the organization's activities and outreach by members. A monthly interview acquaints members with their colleagues' research and efforts in support of the Alliance's mission.

## **Dana Press Books Published in 2003**

---

### **Back from the Brink: How Crises Spur Doctors to New Discoveries about the Brain**

This book by science journalist, Ed Sylvester, endorsed by two-time Pulitzer prize winner, Jon Franklin, and the distinguished neurosurgeon, Benjamin S. Carson, M.D., explores pioneering work in a new specialty, neurointensive care, and introduces its doctors and nurses and the brain-injured patients they battle to save.

### **Beyond Therapy: Biotechnology and the Pursuit of Happiness / A Report of the President's Council on Bioethics**

A special edition with a foreword by Leon R. Kass, M.D., chairman of the President's Council on Bioethics, comments by Council members Michael S. Gazzaniga, Ph.D., Elizabeth Blackburn, Ph.D., and Janet D. Rowley, M.D., and an introduction by William Safire. This 376-page volume explores the ethical risks of using biotechnology not only to treat illness, but also to perfect ourselves. The report is the culmination of the President's Council's 16-month inquiry.

## **The Bard on the Brain: Understanding the Mind through the Art of Shakespeare and the Science of Brain Imaging**

Described by the *Times Literary Supplement* as "a heady combination of old-fashioned Bard-worship and cutting-edge science" and the subject of a *USA Today* feature article, this illustrated book follows the paths the Bard pointed out in his plays to explore the mystery of the human mind and the workings of the brain. The co-authors are Paul Matthews, director of brain imaging at Oxford University, and Jeffrey McQuain, scholar of Shakespeare's language.

### **Striking Back at Stroke: A Doctor-Patient Journal**

Leading stroke clinician-researcher, Louis Caplan, M.D., joins stroke patient Cleo Hutton to give valuable advice about stroke, including home care, emotional support, physical recovery, and the medical system for patients, families, and care givers.

### **The Dana Guide to Brain Health**

This first major home medical reference on the brain was released in January. With contributions by more than 100 top scientists and clinicians and edited by Floyd E. Bloom, M.D., M. Flint Beal, M.D., and David J. Kupfer, M.D., the 768-page *Dana Guide* is extensively illustrated and offers the latest information and advice about more than 70 disorders as well as the brain's health and development. ■

## NEWS AND INTERNET OFFICE: REACHING THE MEDIA AND PUBLIC WITH DANA RESOURCES

DANA.ORG ABOUT DANA GRANT PROGRAMS BOOKS, PUBLICATIONS, & BROADCASTS PRESS BOX

Search Site Home Print

### Brain Resources for Seniors

(click on picture to browse section)

**HEALTH**  
The health section provides a detailed list of links to health information organizations, literature, and other materials for older adults and caregivers.

**EDUCATION**  
The education section provides links to online organizations specializing in education resources geared to older adults.

**AGING**  
The aging section provides links to organizations and articles covering different aspects of aging.

**GENERAL RESOURCES**  
The general resources section provides links to a rich source of organizations and government agencies offering information for seniors and caregivers.

The Dana Web site's new *Brain Resources for Seniors* provides information on health, aging, and education, as well as general resources for the increasing numbers of older Americans.

In 2003, the News and Internet Office extended its outreach to the media and the public with several publications, including two major books and a series of briefing papers; an expanded Web site, which includes a new section for seniors and six new publication sections; and its participation in the Foundation's newest initiative, arts education. The Office works closely with the rest of Dana Foundation, providing background information in brain research and immunology, coordinating communication with journalists, and alerting the public and media to Dana events.

### News Office

In April, the Foundation hosted a symposium in Washington, DC, on the role of performing art centers and performing artists in public school education (see p. 19). One outcome of the symposium was *Acts of Achievement: The Role of Performing Art Centers in Education*, a 168-page book edited and produced by the News Office for the Dana Press imprint. The book is also posted on the Dana Web site and downloadable in its entirety. *Acts of Achievement* is the first study of K-12 education programs offered by performing arts centers nationwide and showcases 74 performing arts center institutions, large and small, that have partnered with local schools. One key section of the book, "Artists Residencies: Evolving Education Experiences," outlines development of school residencies and offers separate checklists for arts-organization coordinators,

artists, teachers, and school coordinators planning to develop residencies.

Another major publication from the News Office was the *Resource Directory*. Published every two years, the *Directory* offers science and health journalists and editors a compendium of information about members of the Dana Alliance for Brain Initiatives. To give the media easy access to the Alliance's expertise, the *Directory* lists contact information, fields of research, publications, awards for each member and provides a photograph. This year, an interactive CD version is included with the *Directory*, enabling users to locate or browse Alliance members using five different search criteria: name, institution, geographic location (city or state), and field of expertise. Users can readily update their database online, adding the newest information for each Alliance member. There are plans to create a similar CD of European Dana Alliance members.

*Brain Beat Guide* is another free resource service for science journalists seeking experts and background information in all fields of brain research. The News Office publishes the *Guide* annually, choosing a different theme every year. In 2003, the theme was neuroimmunology, a rapidly growing new area both at the Foundation and in the field of neuroscience. The 2003 *Guide* has three components: Defining the Field (What is Neuroimmunology?); Neural-Immune Interactions (What has basic science discovered about neural-immune interactions?); and Neuroimmunology and Disease (What insights about disease has

# FINANCIAL REPORT

the field of neuroimmunology yielded? What clinical implications can be drawn from increased understanding of immune-system involvement in neurological disorders?).

In addition to the *Directory* and *Guide*, the News Office distributed two briefing papers for the media during Brain Awareness Week. One grew out of the Foundation's interest in neuroethics and examined topics such as cognitive enhancement therapies and the neural basis of moral behavior. A second paper dealt with how the brain controls and uses sleep.

As well as producing and distributing publications, the News Office continues to be the place to which journalists turn for information in brain research. Some leading media outlets requesting information in 2003 were the Associated Press, *Newsweek*, *Newsday*, *Time Magazine*, *Wall Street Journal*, *Nova*, NBC, and BBC-1.

## Internet

---

This year, the Dana Web site was expanded to include *Brain Resources for Seniors*, a section intended to serve as a one-stop portal to information on health, aging, education, and general resources. *Brain Resources* lists and provides links to more than 100 Web-based resources. To alert the public to availability of this information, a special card highlighting the section will be printed in 2004 and distributed to senior organizations, magazines, and Web sites. The site also added six new book and publication sections

to showcase new releases from Dana Press. The book pages for *Acts of Achievement*, *Bard on the Brain*, *Dana Guide to Brain Health*, *Neuroethics: Mapping the Field*, and *Striking Back at Stroke* feature a summary, a table of contents, author information, and a link to a purchase site. Book covers are also featured on the new Flash graphic on Dana's home page. Another new Dana Press publication, *Arts Education in the News*, a tabloid-style newspaper modeled after *Brain in the News*, has its own Web section featuring summaries of each issue's top stories.

Also expanded this year was the Web site's grants sections. In particular, a new Letter of Intent form in the arts education section enables prospective grantees to complete and submit the form online. All proposals to that program are now submitted electronically. Also developed was a new grants section, Brain and Immuno-imaging, which showcases a new Dana program combining previously separate grant efforts. The section includes short abstracts of each grant and identification of the primary investigator. The human immunology section includes not only abstracts, but lay summaries of the research and biographies of the primary investigators.

The Dana Web site continues to provide users with the latest on all Dana publications; audio and transcripts from the radio program, *Gray Matters*; and updates to *Brainy Kids Online* and *BrainWeb*. Expanded sections in arts education and neuroimmunology will be completed in early 2004. ■

## REPORT OF INDEPENDENT AUDITORS

### The Board of Directors The Charles A. Dana Foundation, Incorporated

We have audited the accompanying statements of financial position of The Charles A. Dana Foundation, Incorporated (the Foundation) as of December 31, 2003 and 2002, and the related statements of activities, statements of cash flows and summary of appropriations and payments for the years then ended. These financial statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of The Charles A. Dana Foundation, Incorporated as of December 31, 2003 and 2002, and the changes in its net assets and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

***A.J. Signorile & Co.***  
***New York, New York***  
***February 24, 2004***

## STATEMENTS OF FINANCIAL POSITION

*December 31, 2003 and 2002*

	2003	2002
<b>Assets:</b>		
Cash and cash equivalents (Note 7)	\$ 7,490,644	\$ 25,458,022
Accounts receivable (primarily security sales in 2002)	80,214	939,551
Accrued interest receivable	728,314	884,513
Prepaid U. S. excise tax	—	184,924
Investments (Note 1)	315,672,297	258,021,267
Fixed assets, at cost:		
Office furniture and equipment, net of accumulated depreciation:		
2003: \$878,332; 2002: \$836,261	—	42,070
Leasehold improvements, net of accumulated amortization:		
2003: \$437,659; 2002: \$143,607	2,698,322	2,827,376
Total Assets	<u>\$ 326,669,791</u>	<u>\$ 288,357,723</u>
<b>Liabilities and Net Assets:</b>		
Accounts payable and accrued liabilities		
(primarily security purchases)	\$ 1,718,250	\$ 978,351
U. S. excise tax payable (Note 2)	10,237	—
Deferred U. S. excise tax (Note 2)	593,073	138,556
Other deferred liabilities	1,094,966	1,029,306
Unpaid grant appropriations	21,682,574	14,256,186
Unpaid commitments for contributions of capital to limited partnerships (Note 1)	25,626,020	16,135,258
Unrestricted net assets	275,944,671	255,820,066
Total Liabilities and Net Assets	<u>\$ 326,669,791</u>	<u>\$ 288,357,723</u>

*See accompanying notes.*

## STATEMENTS OF ACTIVITIES

For the years ended December 31, 2003 and 2002

	2003	2002
Investment Income:		
Dividends and interest	\$ 4,837,681	\$ 5,721,435
Income (loss) from limited partnerships	19,922,679	(6,384,518)
Net realized gain from sales and redemptions of securities	2,598,376	1,987,568
	<u>27,358,736</u>	<u>1,324,485</u>
Less: Investment expenses	(983,628)	(842,608)
	<u>26,375,108</u>	<u>481,877</u>
Net realized investment income		
Expenses:		
Grant appropriations	21,441,372	10,363,118
Direct charitable activities	5,792,813	5,707,253
General administration	1,127,652	1,379,876
Provision for U. S. excise tax (Note 2)	160,000	—
	<u>28,521,837</u>	<u>17,450,247</u>
Total expenses		
Excess of expenses over net realized investment income	(2,146,729)	(16,968,370)
Increase (decrease) in unrealized appreciation of marketable securities, net of deferred U. S. excise tax, 2003: provision \$ 454,517; 2002: (reduction) \$(303,011)	22,271,334	(14,847,517)
	<u>20,124,605</u>	<u>(31,815,887)</u>
Increase (decrease) in unrestricted net assets		
Unrestricted net assets at beginning of year	255,820,066	287,635,953
Unrestricted net assets at end of year	<u>\$ 275,944,671</u>	<u>\$ 255,820,066</u>

See accompanying notes.

## STATEMENTS OF CASH FLOWS

For the years ended December 31, 2003 and 2002

	2003	2002
Cash flows from operating activities:		
Increase (decrease) in unrestricted net assets	\$ 20,124,605	\$ (31,815,887)
Adjustments to reconcile change in unrestricted net assets to net cash provided (used) by operating activities:		
Depreciation and amortization	447,759	409,871
Realized (gains) on sales of investments	(2,598,376)	(1,987,568)
Unrealized (gains) losses on investments	(22,725,851)	15,150,528
Share of (gains) losses from limited partnerships	(19,922,678)	6,384,518
(Increase) decrease in:		
Interest receivable	156,199	117,833
Accounts receivable	859,337	(495,401)
Increase (decrease) in:		
Accounts payable and accrued liabilities and unpaid commitments for contributions of capital to limited partnerships	10,184,684	(2,238,269)
Unpaid grant appropriations	7,426,388	(2,660,271)
U. S. excise tax payable	195,160	(194,337)
Deferred U. S. excise tax	454,517	(303,011)
	<u>(5,398,256)</u>	<u>(17,631,994)</u>
Net cash provided (used) by operating activities		
Cash flows from investing activities:		
Cost of leasehold improvements	(164,998)	(1,674,209)
Purchase of securities	(193,089,346)	(184,153,242)
Purchase of limited partnership interests	(19,715,000)	—
Proceeds from sales of securities	176,004,134	212,634,843
Proceeds from partnership distributions and withdrawal of investments in limited partnerships	24,396,088	7,697,031
	<u>(12,569,122)</u>	<u>34,504,423</u>
Net cash provided (used) by investing activities		
Net increase (decrease) in cash	(17,967,378)	16,872,429
Cash balance at beginning of year	25,458,022	8,585,593
Cash balance at end of year	<u>\$ 7,490,644</u>	<u>\$ 25,458,022</u>

See accompanying notes.

## SUMMARY OF APPROPRIATIONS AND PAYMENTS

For the years ended December 31, 2003 and 2002

	2003	2002
Unpaid grant appropriations at the beginning of the year	<b>\$ 14,256,186</b>	\$16,916,457
Grant appropriations during the year, net of grant refunds in the amount of \$92,398 for 2003 and grant refunds and grant cancellations in the amount of \$132,833 for 2002	<u>21,441,372</u> <b>35,697,558</b>	10,363,118 27,279,575
Payments during the year for grant appropriations, net of grant refunds in the amount of \$92,398 for 2003 and grant refunds and grant cancellations in the amount of \$132,833 for 2002	<u>14,014,984</u>	13,023,389
Unpaid grant appropriations at end of the year	<b><u>\$ 21,682,574</u></b>	<u>\$14,256,186</u>

See accompanying notes.

## NOTES TO FINANCIAL STATEMENTS

December 31, 2003 and 2002

### NOTE 1 - INVESTMENTS

The Foundation's investment portfolio is summarized as follows:

	COST	2003 FAIR VALUE	COST	2002 FAIR VALUE
Fixed Income Securities:				
U.S. Government and Agency Obligations	<b>\$ 31,987,822</b>	<b>\$ 32,028,099</b>	\$ 33,490,079	\$ 34,325,783
State and Local Obligations	<b>5,829,066</b>	<b>5,907,365</b>	2,855,973	3,014,033
Corporate Obligations	<b>29,250,665</b>	<b>29,700,886</b>	28,423,230	29,453,284
	<u>67,067,553</u>	<u>67,636,350</u>	64,769,282	66,793,100
Common Stock	<b>20,677,054</b>	<b>29,477,726</b>	16,409,363	19,301,504
Mutual Funds	<b>83,958,395</b>	<b>104,242,618</b>	70,840,768	72,852,650
Limited Partnerships	<b>104,722,960</b>	<b>114,315,603</b>	103,236,320	99,074,013
Total	<b><u>\$ 276,425,962</u></b>	<b><u>\$ 315,672,297</u></b>	<u>\$255,255,733</u>	<u>\$258,021,267</u>

The Foundation's investments in marketable securities are carried at fair value which is measured by quoted market price. Realized gains and losses are computed as of trade date. Security costs are determined using the first-in first-out method. Costs of mutual fund shares are measured under the average cost method. Investments in limited partnerships are carried at fair value which

is based on the Foundation's interest in the aggregate fair value of the partnerships' net assets, as estimated by the general partner of each limited partnership. As of December 31, 2003, under the provisions of certain venture capital limited partnership agreements, the Foundation has unpaid commitments to contribute \$25,626,020 in additional capital over the next 10 years.

## NOTES TO FINANCIAL STATEMENTS *(continued)*

December 31, 2003 and 2002

### NOTE 2 - U.S. EXCISE TAX

The Foundation is a private philanthropic foundation, chartered in 1950, with principal interests in the fields of science, health, and education. The Foundation, by reason of its classification as a private foundation, is subject to a U. S. excise tax of 2% on investment income less investment expenses, including net realized gains on sales and redemptions of securities. However, pursuant to Section 4940(e) of the Internal Revenue Code, the tax is reduced to 1% if the Foundation satisfies certain requirements, as to the level of qualifying distributions. During the years ended December 31, 2003, and December 31, 2002, the Foundation satisfied these requirements and, accordingly, was subject to the 1% excise tax.

Deferred U. S. excise tax represents the anticipated future tax consequences attributable to the difference between the tax basis and fair value of marketable securities as of the respective dates of the statements of financial position.

### NOTE 3 - LEASE COMMITMENTS

The Foundation currently leases office space in New York City and in Washington, DC, under amended lease agreements. Both agreements provide for a rent-free period and contributions from the respective lessors intended to offset the cost of leasehold improvements. The accompanying statements of activities reflect rent expense recognized on a straight-line basis over the terms of the Foundation's leases, reflective of the concession provisions of the lease agreements.

The Foundation's obligation under the current New York City lease agreement expires on August 31, 2013, and its obligation under the current Washington, DC, lease agreement expires on August 31, 2012. Pursuant to the provisions of the lease agreements, the Foundation's future minimum annual rental payments, as of December 31, 2003, are as follows:

## NOTES TO FINANCIAL STATEMENTS *(continued)*

December 31, 2003 and 2002

### NOTE 3 - LEASE COMMITMENTS (CONCLUDED)

	NEW YORK	WASHINGTON	TOTAL
2004	\$ 898,788	\$ 596,893	\$ 1,495,681
2005	898,788	614,830	1,513,618
2006	898,788	633,272	1,532,060
2007	898,788	654,185	1,552,973
2008	898,788	677,667	1,576,455
2009 through:			
August 31, 2013	4,194,344		
August 31, 2012		2,660,691	6,855,035
Total	<u>\$8,688,284</u>	<u>\$5,837,538</u>	<u>\$14,525,822</u>

The lease agreements require additional payments to cover the escalation of maintenance costs and real estate taxes. Additionally, pursuant to the agreement, future minimum annual rental payments under the Foundation's New York lease were increased to fair rental market value, as of September 1, 2003. Allocated rental expense included in the statements of activities, amounted to \$1,050,227 in 2003 and \$895,755 in 2002.

### NOTE 4 - PENSION PLAN

The Foundation has a noncontributory defined contribution retirement plan covering all regular salaried employees who are at least 21 years of age and have completed six months of service. For the year ended December 31, 2003, retirement plan expense, included in the statements of activities, amounted to \$304,699. Similarly, for the year ended December 31, 2002, retirement plan expense amounted to \$321,015.

### NOTE 5 - RELATED PARTY TRANSACTIONS

Two directors who also serve as officers of the Foundation are each associated with law firms that respectively render legal services to the Foundation.

The Dana Alliance for Brain Initiatives, Inc., an affiliate of the Foundation, received grants aggregating the amount of \$3,313,366 for the year ended December 31, 2003, and the amount of \$3,077,503 for the year ended December 31, 2002. The Foundation and the Alliance share certain expenses including administrative services and office occupancy.

## NOTES TO FINANCIAL STATEMENTS *(concluded)*

December 31, 2003 and 2002

### **NOTE 6 - CONTRIBUTED SERVICES**

Certain officers of the Foundation provide services to the organization that are valued at an amount substantially in excess of compensation received. The valuation amount is not considered material with respect to the financial statements taken as a whole. Accordingly, the fair value of these services is not recognized in the accompanying financial statements.

### **NOTE 7 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The significant accounting practices of the Foundation are summarized as follows:

(1) Assets and liabilities and income and expenses are recorded on the accrual basis of accounting. (2) Cash and cash equivalents include money market deposits for 2003 and 2002.

(3) Expenditures for fixed assets and leasehold improvements are capitalized and depreciated using the straight-line method over the estimated useful lives of the assets or amortized over the term of the Foundation's leases.

(4) Appropriations are recorded and charged to operations when approved by the Board of Directors for a specific program, program expense or grant. (5) The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

# GUIDELINES

## GRANT GUIDELINES

The Dana Foundation, established in 1950 by industrialist, philanthropist, and legislator Charles A. Dana, is a private philanthropic foundation with principal interests in science, health, and education. The Foundation's current areas of emphasis are in immunology and neuroscience research and in K-12 education, particularly the training of arts educators. Specific grant making programs in these areas are the basis for decisions on grant applications. No applications are considered apart from these grant programs. Additional information on these current grant programs is available on the Foundation's Web site, [www.dana.org](http://www.dana.org).

### General Policies

---

The following general policies should be noted. The Foundation:

1. Supports programs in science, health, and education through specifically defined objectives in each field.
2. Requires grantee institutions, in many cases, to share the cost of a project or raise matching funds.
3. Makes no grants directly to individuals.
4. Does not support annual operating budgets of organizations, deficit reduction, capital campaigns, or individual sabbaticals.
5. Does not schedule meetings with applicants, other than by specific invitation initiated by the Foundation.

### Science and Health Grants

---

Through competitive grants programs, the Foundation supports research in immunology and neuroscience that has the potential to improve human health.

Grants in the Brain and Immuno-imaging Program are made through a competitive Request for Proposals process. This program supports pilot testing of clinical hypotheses using conventional brain imaging technologies and evolving techniques in molecular and cellular imaging. It includes research on the brain, on immune system cells, and on the interaction of brain and immune cells. Requests for Proposals (RFPs) are sent twice yearly to the deans of all U.S. schools of medicine and other invited biomedical research institutions.

The Foundation also supports several invitational competitive grants programs. One is designed to improve immune system responses to biological agents. Another, the Human Immunology Program, is designed to stimulate and facilitate studies that measure immune system functioning in health and disease, including the measurement of immune system responses to experimental therapeutic trials supported by other sources. A third, the Neuroimmunology Program, supports collaborating neuroscientists and immunologists to determine how the brain and immune system interact in health and disease. A fourth is the Clinical Neuroscience Research Program. This invitational program supports initial studies of therapeutic interventions that have shown

promise in prior laboratory research and are conducted in patients with untreatable brain diseases. The program also supports development of ethical guidelines emanating from research and care of patients with brain diseases and injuries, and the development of prognostic data on outcomes for patients with severe brain injuries or disorders.

All other grants in the Science and Health Grant Program are made solely by invitation. Additional information on all programs, including funded grants, is available through the Foundation's Web site, [www.dana.org](http://www.dana.org).

### Education Grants

---

The Foundation's current interest in arts education is focused primarily on professional development that fosters improved teaching of the performing arts in public schools. Proposed projects must emphasize innovative training curricula for artists and in-school arts specialists and must originate in New York City, Washington, DC, or Los Angeles and their surrounding areas within a 50 mile radius. The application process currently takes place online. A Letter of Intent form and detailed arts in education guidelines are available on the Foundation's Web site.

The Dana Foundation has supported advances in education throughout its history. The Foundation's continuing interest in fostering innovations in K-12 education is maintained through grant support for the Dana Center for Education Innovation at the University of Texas in Austin. Other

Foundation support for select education projects is internally generated or invited.

While the education grants program is designed to benefit schools and school systems throughout the country, Foundation grants ordinarily are not made directly to individual schools.

### Publications Available

---

Dana Press, publisher for the Dana Foundation and the Dana Alliance for Brain Initiatives, produces periodicals, special publications, and books, chiefly in the field of health, particularly brain research. Many publications are available free of charge and may also be read on the Dana Web site. To order, send your written request to Dana Press, 900 15th Street, N.W., Washington, DC, 20005, or see the request form on [www.dana.org](http://www.dana.org).

#### *Cerebrum: The Dana Forum on Brain Science*

Paid subscription journal of ideas, with articles, debates, and reviews by top scientists and thinkers. Edited for readers who may or may not have a scientific background, but who are stimulated by the ways in which brain science is reshaping our world view. Request free sample issue. (Quarterly)

#### *BrainWork: The Neuroscience Newsletter*

Lay-oriented articles dealing with the brain, its powers, and its problems. Includes coverage of major conferences and scientific meetings, reports on the latest discoveries, and interviews with brain research experts. (Bi-monthly, by mail and online)

#### *The Brain in the News*

Reprinted articles from major newspapers about the brain and new research findings. (Monthly, by mail only)

#### *Immunology in the News*

Reprinted news stories and studies in the fields of immunology, neuroimmunology, and innate immunity. (Quarterly, by mail only)

#### *Arts Education in the News*

Reprinted articles and studies about arts education methods and their practical application in the classroom. (Quarterly, by mail only)

#### *The Dana Alliance for Brain Initiatives Annual Progress Report on Brain Research*

Annual highlights of progress in all areas of brain research in the previous year. Published every March. (By mail and online)

#### *Q&A: Answering Your Questions About Brain Research*

Pamphlet in question-and-answer format that illustrates how discoveries in brain research are giving us new hope for happier, healthier lives. (By mail and online)

### Education Resources

---

These publications are available online in downloadable format at [www.dana.org/books](http://www.dana.org/books). Print copies may also be ordered there.

#### *Acts of Achievement: The Role of Performing Art Centers in Education*

This book documents significant K-12 education practices by performing arts centers across the country, providing resource materials for educators, teaching artists, and others interested in arts education. 164 pages, paperback, full-color and black-and-white photographs, 8½ x 11.

#### *Planning an Arts-Centered School: A Handbook*

Artists and educators highlight best practices and offer approaches from their own varied experiences in the development of arts-centered schools. Designed to guide organizations in essential issues, including curriculum development, governance, funding, assessment, and community participation. 164 pages, paperback, full-color and black-and-white illustrations, 8½ x 11.

#### *The Dana Sourcebook of Brain Science: Resources for Secondary and Post-Secondary Teachers and Students Third Edition*

A basic introduction to brain science, its history, our current understanding, new developments, and future directions. Classroom sets include up to 30 copies of the

book and one copy each of an introductory video and two audios. 164 pages, paperback, full-color and black-and-white illustrations, 8½ x 11.

### Books From Dana Press

---

Available at retail and online bookstores.

#### *Beyond Therapy: Biotechnology and the Pursuit of Happiness / A Report of the President's Council on Bioethics*

*Beyond Therapy: Biotechnology and the Pursuit of Happiness* is the concluding report of the President's Council on Bioethics, created in November, 2001. This volume, prepared by Dana Press, includes an introduction by William Safire, a special foreword by Leon R. Kass, M.D., Ph.D., chairman of the Council, and added comments by Council members Michael S. Gazzaniga, Ph.D., Elizabeth Blackburn, Ph.D., and Janet Rowley, M.D., D.Sc. (Dana Press). 400 pages. Paper. \$10.95. ISBN: 0-1-932594-05-1

#### *Back From the Brink: How Crises Spur Doctors to New Discoveries About the Brain*

By Edward J. Sylvester  
This book unveils the world of the neurological intensive care unit, pioneered in the 1980s at Johns Hopkins Medical Centers, and reveals a world in which aggressive new treatments are saving critically brain-injured patients from once-devastating fates and giving neurology and neurosurgery residents

outstanding educations in the management of acute neurological emergencies. (Dana Press). 296 pages. \$25.00. ISBN: 0-9723830-4-2

*The Bard on the Brain: Understanding the Mind Through the Art of Shakespeare and the Science of Brain Imaging*

By Paul M. Matthews, Ph.D., and Jeffrey McQuain

This beautifully illustrated, full-color book explores the beauty and mystery of the human mind and the workings of the brain, following the paths Shakespeare pointed out in 35 of the most famous speeches from his plays. (Dana Press). 248 pages. \$35.00. ISBN 0-4723830-2-6

*Striking Back at Stroke*

By Cleo Hutton and Louis R. Caplan, M.D. *Striking Back at Stroke* is an autobiographical account of a stroke survivor, detailing her hard-won success rebuilding a life in ruins and overcoming difficulties she never imagined confronting, interwoven with medical and scientific commentary by Louis Caplan, M.D. (Dana Press). 240 pages. \$27.00. ISBN: 0-9723830-1-8

*The Dana Guide to Brain Health*

Edited by Floyd E. Bloom, M.D., M. Flint Beal, M.D., and David J. Kupfer, M.D.; *The Dana Guide* offers essential information about how the brain works along with health-preserving advice and the latest treatments for brain diseases. Edited by three of the

world's leading brain experts, the book is a collaboration of more than 100 distinguished scientists and clinicians. (Published by The Free Press, 2003. Dana Press directed the Dana Guide project.) 768 pages. \$45.00. ISBN: 0-743-20397-6

*Understanding Depression: What We Know and What You Can Do About It*

By J. Raymond DePaulo, Jr., M.D., with Leslie Alan Horvitz

Dr. DePaulo explains what depression is, who gets it and why, what happens in the brain, the troubles that come with the illness, and the treatments that work—or don't. (A co-publication of Dana Press and J. Wiley & Sons, Inc.) 296 pages. Paper. \$14.95. ISBN: 471-39552-8

*Keep Your Brain Young: The Complete Guide to Physical and Emotional Health and Longevity*

By Guy McKhann, M.D., and Marilyn Albert, Ph.D.

Prof. Albert and Dr. McKhann counsel us on the changes that take place in the aging brain, along with the illnesses that can occur. The authors discuss every aspect of aging—changes in memory, nutrition, mood, sleep, and sex, as well as problems that creep up in alcohol use, vision, hearing, and movement and balance. (A co-publication of Dana Press and J. Wiley & Sons, Inc.) 304 pages. Paper. \$15.95 ISBN: 471-40792-5

*The End of Stress As We Know It*

By Bruce McEwen, Ph.D., with Elizabeth Lasley

*The End of Stress as We Know It* provides readers with the “gold standard” in understanding how their bodies work under stress and why they have the power to avoid its debilitating effects. (A co-publication of Dana Press and Joseph Henry Press; June 2002) 239 pages. \$27.95. ISBN: 309-07640-4

*A Good Start in Life: Understanding Your Child's Brain and Behavior*

By Norbert Herschkowitz, M.D., and Elinore Chapman Herschkowitz

The authors distill a lifetime studying infants and children into an enchanting exploration of how brain development shapes a child's personality and behavior from birth to age six. (A co-publication of Dana Press and Joseph Henry Press). 283 pages. \$22.95. ISBN: 309-07639-0

*The Secret Life of the Brain*

By Richard Restak, M.D.

Best-selling author Richard Restak reveals what brain science is uncovering about the intricate magic of the brain from birth to old age. A comprehensive, beautifully illustrated companion to the 2003 Emmy Award winning PBS television series by producer David Grubin. (A co-publication of Dana Press and the Joseph Henry Press). 201 pages. \$35.00. ISBN 309-07435-5

*In Search of the Lost Cord: Solving the Mystery of Spinal Cord Regeneration*

By Luba Vikhanski

A riveting account of courage and conviction as top scientists and young acolytes fight their way toward vital advances in the understanding and treatment of spinal cord injury. (A co-publication of Dana Press and the Joseph Henry Press). 269 pages. \$27.95. ISBN: 309-07437-1

*The Longevity Strategy: How to Live to 100 Using the Brain-Body Connection*

By David Mahoney and Richard Restak, M.D. Foreword by William Safire

From the latest research about how the brain works and through the vital connection between the brain and body, here is your life plan for good health, fulfilling relationships, and financial security. (A co-publication of Dana Press and J. Wiley & Sons, Inc.) 272 pages. Paper. \$14.95. ISBN: 0-471-24867-3

*States of Mind: New Discoveries About How Our Brains Make Us Who We Are*

Edited by Robert Conlan

Contributors: J. Allan Hobson, Steven Hyman, Kay Redfield Jamison, Jerome Kagan, Eric Kandel, Joseph LeDoux, Bruce McEwen, and Esther Sternberg Eight leading brain scientists reveal how our health, behavior, feelings, and identities are influenced by what goes on inside our brains. (A co-publication of Dana Press and J. Wiley & Sons, Inc.) 224 pages. Paper. \$18.95. ISBN 0-471-29963-4

## Internet

---

Web address: [www.dana.org](http://www.dana.org)  
[www.edab.net](http://www.edab.net)  
[www.danacentre.org.uk](http://www.danacentre.org.uk)

Many Dana publications, along with current news and information about the programs and activities of the Foundation and the Dana Alliance for Brain Initiatives, will be found at the Foundation's Web site, [www.dana.org](http://www.dana.org).

Design: Dawn Rogala for Designbias, NYC  
Printing: Peake Printers / Maryland

Photography Credits:  
Page 14: © Jean Claude Revy—ISM / PhotoTake  
Page 22: © Derek Cattani



A publication of The Dana Foundation  
produced and distributed by Dana Press

DANA is a federally registered trademark



The Dana Foundation  
745 Fifth Avenue, Suite 900  
New York, New York 10151  
[www.dana.org](http://www.dana.org)