



THE CHARLES A. DANA FOUNDATION

1999 ANNUAL REPORT



**By honing the cutting edge
of neuroscience, we will one day penetrate
the secret of ourselves.**

—DAVID J. MAHONEY

The Charles A. Dana Foundation is a private philanthropic foundation 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. His abiding beliefs were in the capacity and responsibility of individuals to advance their lives and in the singular role of philanthropy in helping them to do so.

Applications to the Charles A. Dana Foundation are reviewed in accordance with the guidelines at the end of this annual report.



THE CHARLES A. DANA FOUNDATION

1 9 9 9 A N N U A L R E P O R T

Contents

Directors, Officers, and Administration	2
Chairman's Statement	9
The Dana Alliance for Brain Initiatives	12
Grants	18
Publications and Media	25
Dana Awards	30
Appropriations and Payments	34
Auditors' Opinion and Financial Statements	46
Grant Guidelines	54
Publications Available	58

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(as of July 1, 2000)

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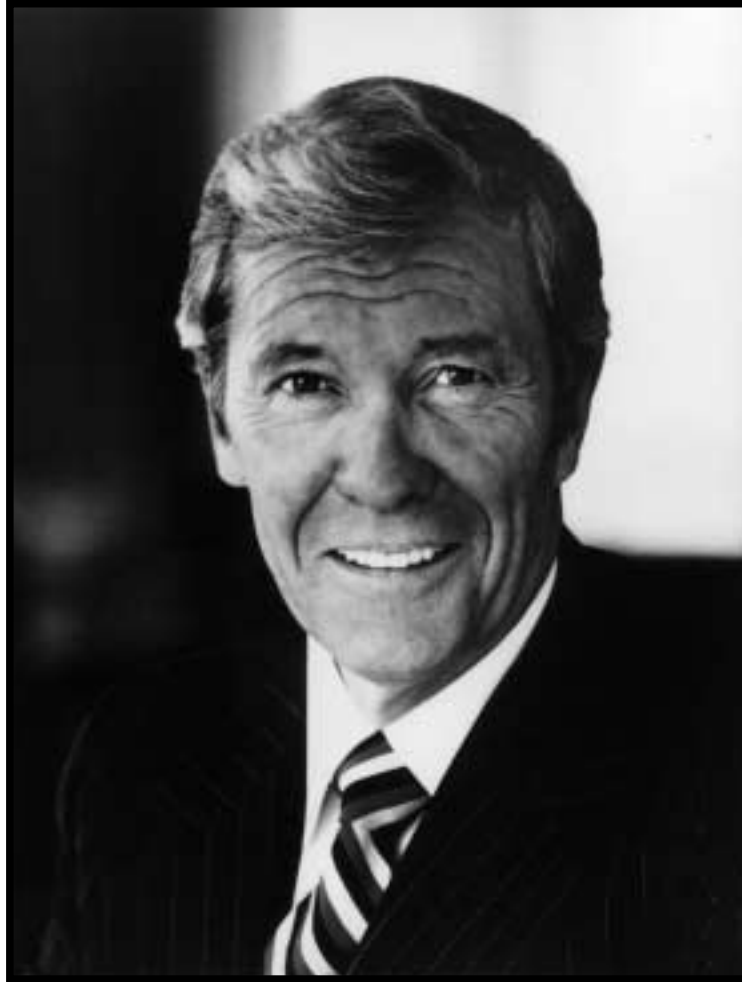
Controller

Sarah Wilson

Public Affairs Assistant



REPORT ON 1999



DAVID J. MAHONEY

May 17, 1923 – May 1, 2000

David J. Mahoney, chairman of the Charles A. Dana Foundation and Dana Alliance for Brain Initiatives, died May 1 at his home in Palm Beach, Florida. He was 76.

Mr. Mahoney had been selected by the Albert and Mary Lasker Foundation to receive a Mary Woodward Lasker Public Service Award, presented for the first time this year to commemorate the 100th anniversary of Mary Lasker's birth. The award to Mr. Mahoney, for Leadership in Philanthropy, recognized his "visionary leadership in educating the public and the donor community about the importance of brain research, and for directing funds for the support of neuroscience."

At the May 9 awards ceremony, William Safire, newly-elected chairman of the Dana Foundation and a longtime friend and colleague of David Mahoney's, read these acceptance remarks that had been prepared by Mr. Mahoney:

For anyone dedicated to stimulating private and public support of medical science, to be honored with the Lasker Award is one of life's crowning achievements. I am profoundly grateful.

This award has special meaning to me for two reasons. First, because Albert Lasker made his first success in the advertising business. He was able to apply some of the techniques he pioneered there, as well as to put to public service the fortune he earned there, in his far greater success in the world of philanthropy. That was one of my inspirations.

Another was the example set by Mary Lasker in directing their foundation. She did far more than give away; she led the way. She infused others with enthusiasm for a great cause—the public health—and when she put her imprimatur on a project, other supporters who trusted her judgment and her associates' expertise soon followed suit. That chain reaction of trust in her leadership was another inspiration.

The other day someone asked me how I happened to choose brain science to be the central concern of the Charles A. Dana Foundation.

The answer is personal. For years, in high-powered executive suites, I saw firsthand the impact of stress on managers and their families. Looking further, I could see the need for a

new understanding of the mental health needs of other employees, and the urgent requirement of new treatments for physical disorders so often rooted in the brain.

At the same time, all of us who started in advertising remember one of the great insights of Albert Lasker when he was in the business: focus on the new. In all of medical science, no field was about to break out into new discoveries like the field of neuroscience. Some of the great minds in that world told me that this generation's great action would be in brain science—if only the public would invest the needed resources.

And so that became my second and most personally rewarding career: to apply the resources and creative talents of the Dana Foundation in a crusade for public awareness of the vast potential of brain science.

We formed an alliance of many of the greatest neuroscientists in the world; we persuaded and cajoled them to speak in terms the lay public could understand, and then published and disseminated their works. We asked them to toss their caps over the wall and to predict what diseases and disorders could realistically be overcome in the current decade. And then we helped these ingenious men and women to get support for their research, not just from Dana but from other foundations and from public sources aroused by newly hopeful people.

My own goal at Dana has been to add impetus to our understanding of the potential of the human brain, and thereby to help cure or treat its disorders, improve its memory and stretch its capacity. By honing the cutting edge of neuroscience, we will one day penetrate the secret of ourselves.

Every high-school physicist knows that mass times velocity equals momentum. Thanks to the latest imaging techniques that show the brain in action, the mass of information about what happens inside our heads is growing exponentially. Thanks to computer technology, the velocity of our processing of this information is gaining speed every day. As a result, brain science has a momentum that could hardly be imagined only a generation ago.

I like to think we played a part in gaining that unstoppable creative momentum. That's what makes me so proud to accept the Lasker Award. ■

CHAIRMAN'S STATEMENT

Mr. Mahoney prepared the following Chairman's Statement for the Annual Report before he died.

In 1999, the Dana Foundation launched its 50th anniversary year with a tribute to five extraordinary women: America's former First Ladies. Each has charted a course for change in some vital area of our national life; each has displayed authentic commitment, a robust "stick-to-itiveness," in lifting awareness of that need across the land and often across decades. Barbara Bush, Nancy Reagan, Rosalynn Carter, Betty Ford, and Lady Bird Johnson have provided us with some of our finest examples of public service.

This same tradition of long-term commitment to priority problems, an investment of energy and financial resources for the long haul, has distinguished the Dana Foundation's history as a philanthropic organization for five decades. In the 1950s, as World War II veterans came home to new opportunities under the GI Bill of Rights, the Foundation devoted millions of dollars to building education facilities—from laboratories to dormitories—at colleges and universities across America. Associated with this was endowment for buildings or wings at major libraries and cultural institutions. In time, the Foundation moved on to funding research

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and experimental programs in health and education at many of these institutions.

Today, the Dana Foundation devotes the majority of its resources to research on the most challenging frontier—understanding the human brain—and works with leading scientists to focus global attention on the promise of research for progress against brain diseases and disorders that still afflict us. We have learned that greater longevity brings sobering challenges to our health and quality of life. We are convinced that as we understand more about the workings of the human brain many of these challenges will be surmounted by new approaches to learning, aging, and to preventing disease.

Our commitment is twofold. The first is direct support of cutting-edge research on brain function and disorders. The second is support of public education about the brain through our publishing and media programs and our two organizations of scientists: the Dana Alliance for Brain Initiatives and the European Dana Alliance for the Brain.

Grant Making

Supporting imaginative research has been a hallmark of the Dana Foundation. Today we help primarily through our Clinical Hypotheses in Neuroscience Research program, which underwrites the testing of innovative ideas in clinical settings. The program helps investigators gather pilot data on promising research hypotheses, data that can lead to large-scale funding from other sources if the ideas show merit, and to new understanding when ideas fail to be confirmed by rigorous research. In 1999, the Clinical Hypotheses program emphasized two areas of inquiry: neuroimaging and brain-body interaction. This included studies on the relationship between brain function and three of the major killers in the industrialized world: heart disease, cancer, and stroke.

Dana continues to sponsor innovative approaches to education. Through its support for the Charles A. Dana Center for Educational Innovation at the University of Texas at Austin and for organizations such as Public Agenda, the Foundation advances programs that inform and improve K-12 education.

Information Programs

In 1999, the Foundation's interest in educating the public about the progress and promise of brain research accelerated with an array of print and Internet publications and public awareness programs. Their common objective is to enable lay audiences to make more informed decisions about personal health care and about the need to fund medical research.

Brain Awareness Week, in its fourth year, reached global proportions. Neuroscientists and educators throughout the United States and Europe—more than 875 partner organizations—took to classrooms, community centers, churches, synagogues, and town halls to explain the brain to audiences of all ages and walks of life. New television and radio programs reached their largest audiences ever, with several of the programs taking industry awards. Two new books, the paperback version of *The Longevity Strategy: How to Live to Be 100 Using the Brain-Body Connection*, and a hardcover edition of *States of Mind: New Discoveries About How Our Brains Make Us Who We Are*, were added to the Dana Press offering of periodicals, books, and reference works on the brain, brain research, and brain diseases and disorders. Issues-oriented readers were able to explore the ethical, legal, and social

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implications of discoveries and advances in brain research in new issues of the quarterly journal, *Cerebrum: The Dana Forum on Brain Science*, completing its first full year in print.

The Dana Alliance for Brain Initiatives continued to provide accurate, up-to-date information about brain research to opinion leaders throughout the United States. This included the release of the Alliance's fifth report on the field, *Delivering Results: A Progress Report on Brain Research, Update 1999*. Throughout 1999, the Dana Alliance team helped inform the issues shaping policy debate, focusing not on any legislative agenda but on the specifics of

what brain science is achieving today and its promises for tomorrow. New television and radio programming continued to carry this message to audiences across America.

The European Dana Alliance for the Brain galvanized neuroscientists and professional scientific associations across Europe to communicate their knowledge about the brain to the public. The breadth of brain-related programming in the 1999 Brain Awareness Week campaigns heralds a vigorous future for these public education efforts.

In Conclusion

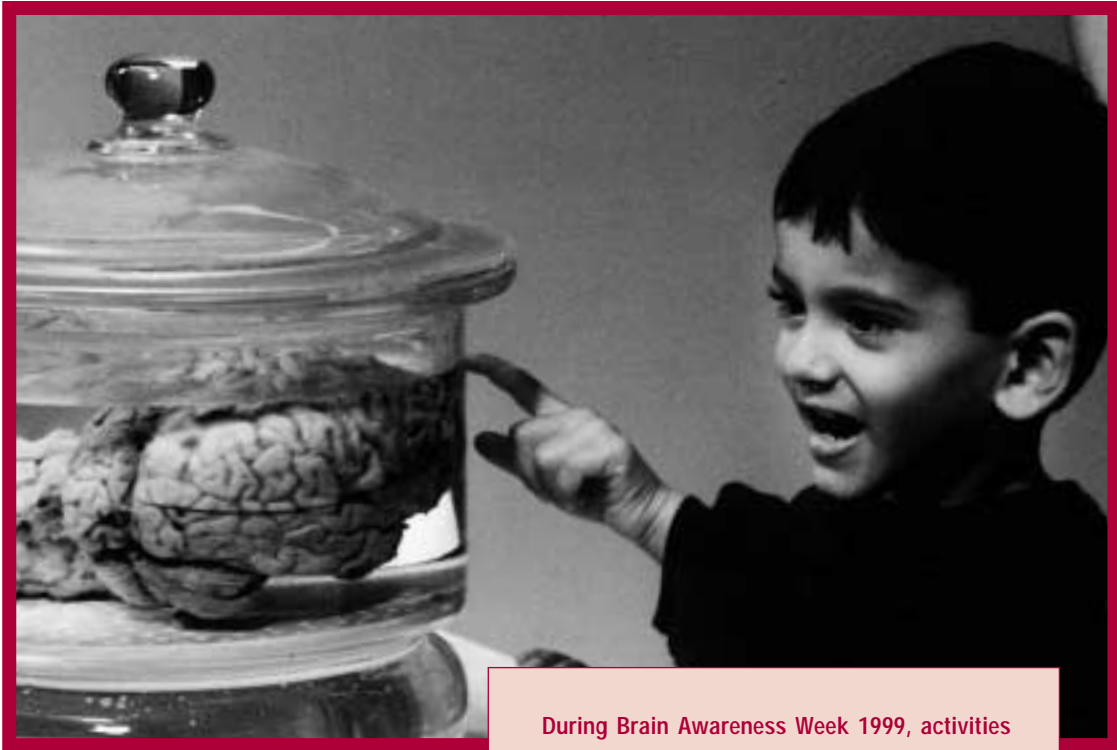
As indicated in the financial statements that begin on page 33, the Foundation in 1999 made appropriations for programs and grants during the year of \$9 million and payments of \$5 million. In the course of its 50-year history, the Foundation has appropriated more than \$272 million for philanthropic purposes.



David Mahoney
Chairman and Chief Executive Officer

SPEAKING OUT ON THE PROMISE OF BRAIN SCIENCE

Dana Alliance Links Scientists and the Public



During Brain Awareness Week 1999, activities all over the globe inspired and excited children and adults.

Never before has it been so essential for those of you in the scientific community to explain your work, to discuss the pace of discovery." Speaking at the 1999 Brain Awareness Week partners luncheon, organized by the Dana Alliance for Brain Initiatives, Senator Ted Stevens (R-AK) delivered a challenge to scientists engaged in brain research: "I urge you not to remain silent about what you are doing. The American public and their representatives that I work with here do not understand the importance of the research and scientific progress. We and our children and our grandchildren are depending upon your achievements."

Bringing neuroscientists together to share information and to inform the public about their exciting discoveries, the Dana Alliance for Brain Initiatives is an essential forum for that public education. In 1999, its activities, media resources, and publications continued to advance that mission.

Through Alliance-sponsored outreach efforts, including public forums, national television and radio broadcasts and media briefings, these scientists build public awareness and maintain confidence in the progress being made in brain research.

Membership Increases

With the quickening pace of scientific progress, it becomes more challenging to keep public knowledge of the brain and brain research up to date; only in that way can everyone appreciate the promise of research for new, more effective treatments to benefit millions of Americans.

Under the leadership of members of the Dana Alliance for Brain Initiatives, brain scientists are explaining their work and their goals in understandable terms. By the close of 1999, more than 190 scientists, including seven Nobel laureates and other prominent researchers and medical specialists, were chosen to be members of the Dana Alliance in North America. This active membership has accepted responsibility for educating the public, the media, and policymakers on the meaning and benefits of their achievements. Through Alliance-sponsored outreach

efforts, including public forums, national television and radio broadcasts and media briefings, these scientists build public awareness and maintain confidence in the progress being made in brain research.

Throughout the year, Dana Alliance members supplied their expertise and enthusiastic support for activities such as a “Day of Dialogue on the Brain,” which yielded recommendations for brain-related exhibits, outreach programs, and educational activities at the National Health Museum planned for opening in 2004. In 1999, as part of the Alliance’s annual lecture series with the Smithsonian Associates, a seminar entitled “Brain-Body Science and the Human Personality” attracted a large audience to hear talks by members of the Dana Alliance and the European Dana Alliance. Alliance members also participated in “Understanding Our Selves: The Science of Cognition,” a conference sponsored by the Charles A. Dana Foundation and organized by the Library of Congress and the National Institute of Mental Health.

A dinner for members of the Dana Alliance for Brain Initiatives and the European Dana Alliance for the Brain and other invited guests was held on October 23, 1999, during the Society for Neuroscience’s annual meeting. Guests participated in a discussion of common goals and future activities in

Europe and the United States. W. Maxwell Cowan, M.D., Ph.D., vice chairman, presented a progress report on the Alliance’s original 10 research objectives, and TV producer David Grubin, on hand to discuss a new 5-part PBS series on the brain to air in 2001, emphasized the continuing importance of cooperation from Alliance members.

Brain Awareness Week: A Growing Impact

From its launch in 1996 by the Dana Alliance, the annual Brain Awareness Week campaign has steadily grown in prominence and scope. During the week of March 15-21, 1999, more than 875 participating organizations reached an audience of millions in the United States and in Europe. Brain Awareness Week has become an international effort, with events in 27 countries coordinated and publicized by the Dana Alliance and the European Dana Alliance. Countries in Africa and Asia participated with innovative local activities.

Partner organizations included universities and hospitals, outreach groups, professional and research organizations, government agencies, corporations, and TV stations. To convey the range of these activities, here is a sample of Brain Awareness Week events around the globe.

- In Bethesda, Maryland, a symposium organized by the National Institutes of Health on “Neuroimaging: Glimpses into the Working Brain” brought together scientists and the general public to explore neuroscience and mental health issues.
- In London, the Wellcome Trust organized “Mind Games” to educate participants about the brain through novel exercises involving such techniques as inverted goggles and changing visual fields.
- In Washington, DC, the first National Brain Bee honored the winning student and other finalists during Brain Awareness Week.
- Throughout Switzerland, more than 35 public forums and conferences were held where a “café scientifique” attracted hundreds of participants and spectators.

- At Vanderbilt University in Nashville, Tennessee, 1,800 attendees explored laboratories, heard discussions, and tried interactive hands-on exhibits at a local museum.
- At Cape Town University in South Africa, a public lecture series presented topics such as “Memory and Aging and Alzheimer’s Disease,” “How the Brain Sees,” and “Anxiety and the Anxiety Disorders.”

In addition to distributing resource kits and providing an information clearing house for partner organizations through its Web site, the Dana Alliance also supports Brain Awareness Week activities in Washington, DC. In 1999, policy makers and partner organizations came together on March 17 for presentation of the annual *Progress Report on Brain Research* on Capitol Hill.

The Alliance presented the “Talking Science” series of panel discussions to Brain Awareness Week partners. “Talking Science to the Public,” “Talking Science to Policy Makers,” and “Talking Science to the Media,” moderated by Alliance members Robert M. Cook-Deegan, M.D., and Guy M. McKhann, M.D., and news broadcaster Garrick Utley, focused on communicating science effectively to non-scientific audiences.

A Continental Perspective: The European Dana Alliance

The two-year-old European Dana Alliance for the Brain widened its efforts to inform the public about the necessity of brain research. In London, EDAB hosted a dinner with the goal, as EDAB chief executive Colin Blakemore put it, of “doing what our brains do so effectively—making connections.” At this dinner, EDAB was formally introduced to government representatives, medical charities, academic societies, medical and health organizations, the corporate sector, and the media. Speakers included the British television personality Julia Sommerville, herself a brain tumor survivor; Dr. Blakemore; Dana Vice-Chairman William Safire; and Minister for Science, Lord Sainsbury.

From its Lausanne office, EDAB distributes *EuroBrain*, a multi-lingual publication for scientists, journalists, and the public with information on topics such as addiction and sex differences in the brain. The Lausanne office also prepared German, French, and Italian translations of the latest edition of the Dana Alliance *Progress Report, Update 1999: New Connections*.

The European Alliance’s new Web sites (www.edab.net and www.unil.ch/edab), launched in 1999, offer information in English, French, German, and Italian and links to the Dana Alliance site in the United States.

*Brain research affects everyone,
through discoveries that
can help people lead happier,
healthier lives.*

Broadcasting To A National Audience

The Dana Alliance sponsors television and radio broadcasts that add impact and entertainment value to its message that brain research affects everyone, through discoveries that can help people lead happier, healthier lives.

The fourth installment of *Exploring Your Brain*, the public television series produced by WETA-TV in association with the Dana Alliance, premiered in 1999. “Stress, Trauma and the Brain” was first broadcast March 28 as an extension of Brain Awareness Week activities. It reached an initial audience of three million; subsequent airings are extending this reach. The program has won four major awards, including one in Time Inc. Health’s 1999 International Health and Medical Film Competition. *Exploring Your Brain* programs ranked in the top 200 out of 9,500 titles distributed by Films for the Humanities and Sciences. Previous one-hour episodes in the TV series include “Memory,” “Fear and Anxiety,” and “Men, Women and the Brain.”

In fall 1999, "Stress and the Brain," the 10th episode of *Gray Matters*, the Dana Alliance public radio series, was broadcast. Hosted by Robert MacNeil, former executive editor and co-anchor of the *MacNeil/Lehrer Newshour* on PBS, "Stress and the Brain" joins previous broadcasts covering topics such as "The Teenage Brain," "Music and the Brain," and "Fitness and the Brain." These broadcasts have also been honored with awards for excellence in programming by broadcasting associations and advocacy groups.

In addition to these public broadcasts sponsored by the Dana Alliance, member scientists provide authoritative information on brain topics to television, radio, and print journalists through the Dana Press Office (see page 26). Dana Alliance publications, produced through The Dana Press (see page 27), span a broad range of interests and knowledge levels. They include the annual *Progress Report* updates on brain research; *Brain Connections*, a regularly updated reference guide to organizations that provide information on specific brain diseases and disorders; *Answering Your Questions About Brain Research*, a general-interest pamphlet highlighting various areas of brain research; and the quarterly *Dana Alliance Member News* for members of the Dana Alliance and European Dana Alliance.

The Essential Work To Be Done

In November, 1992, a group of 30 distinguished scientists came together at Cold Spring Harbor. Nobel laureate James D. Watson, Ph.D., and Charles A. Dana Foundation chairman David Mahoney urged the scientists to take the bold step to develop and sign a declaration of "10 Achievable Goals In Brain Research" that might reasonably be reached by the end of the decade. Out of this historic meeting, the Dana Alliance for Brain Initiatives was formed, and in the following years, progress has been made on many of those original goals. Dana Alliance members are now in the process of identifying new research objectives that represent some of the most pressing issues in brain research. We will continue to spell out the benefits and rewards of this ongoing research, linking many independent discoveries into a single compelling story of progress and achievement. ■

FOUNDATION GRANTS DIRECT SUPPORT ACROSS DISCIPLINES, INSTITUTIONS, AND BORDERS

Health and Education are Enduring Priorities



With Foundation support, researchers are studying whether mentally and visually rehearsing physical skills in the mind is more effective than standard occupational therapy alone in improving a stroke patient's ability to move her affected arm.

Two decades after Danish researchers studying thousands of cardiac disease patients found that those who were depressed were far more likely to die from heart disease than those who were not, scientists have amassed a strong body of evidence indicating that depression is as great a risk factor in heart disease as smoking, stress, or diet.

Researchers have reported that people with major depression who are otherwise healthy are four times as likely as those without depression to have a heart attack. Similarly, congestive heart failure patients who also have major depression have a four-fold higher risk of dying within two years after their initial heart problems compared to non-depressed patients.

Spurred by these and other compelling findings, in 1998 the Foundation extended its Clinical Hypotheses Program to include research on the interaction between brain-derived states—such as depression, stress, or anger—and the nation’s biggest killers, heart disease, stroke, and cancer. The Foundation also established the Adjunct Clinical Studies Program to add research questions on brain-body interactions to ongoing large clinical trials or epidemiological studies. In 1999, 17 new grants under these programs explored questions from how electroacupuncture affects the heart in patients experiencing psychological or physical stress to whether treatment with an antidepressant can lead to improved functional recovery in patients after a stroke.

The Foundation’s grant program in health, as part of its overall mission to advance

understanding of brain function in human health and disease, also continued in 1999 to support research on applications of brain imaging technologies and multi-institution collaborations focused on major health problems. The education grant program continued to support programs improving education for children, particularly in disadvantaged communities. In both health and education, these programs often opened new ground across disciplinary, institutional, and geographic boundaries.

Clinical Hypotheses Program

With a rapid timetable from application to funding, the Clinical Hypotheses Program lets investigators quickly test innovative hypotheses. Scientists with promising pilot data can then compete for larger-scale funding from other sources. In 1999, the Foundation continued the Clinical Hypotheses Program in brain-body interaction and in neuroimaging.

Brain-Body Interaction

Clinical Hypotheses Program grants are accelerating the search for associations and actual biological links between the brain and heart disease, stroke, and cancer. Through 1999, 23 researchers have received support to test hypotheses in this area; their projects are described on the Foundation’s Web site (www.dana.org). Below are summaries of grants awarded in 1999.

The Brain and Heart Disease

- Harvard University researchers are testing the hypothesis that increased levels of the stress hormone cortisol, known to be associated with heart attack severity and death, may be the physiological link between social isolation and increased rates of death from coronary heart disease.
- Montreal Heart Institute researchers are examining the possibility that depression increases heart disease risks by stimulating the reactivity of blood platelets, which accelerates blood coagulation, and are looking for a genetic basis for the co-occurrence of depression and coronary artery disease.
- University of Washington researchers are studying the role of natural chemicals in the body—neurohormones, cytokines, and chemokines—in the progression of heart disease and depression.
- Washington University researchers are determining whether the presence of depression in patients with congestive heart failure explains why they perform more poorly on functional tests of the severity of their condition than their physical status alone would suggest.
- Yale University researchers are performing PET scans on patients with coronary heart disease and depression while they undergo a stress test to identify brain-related stress mechanisms that may underlie an increased risk of death.
- University of California at Irvine researchers are exploring how electroacupuncture affects the heart in patients experiencing psychological and exercise stress.
- Researchers at the Uniformed Services University of Health Sciences are investigating how depression alters the activity of the autonomic nervous system and how this change may predict poor long-term prognoses after coronary angioplasty.
- University of Utah investigators are examining the potential link between electrical signals from the heart and brain and sudden death from arrhythmias in patients with inherited “long QT syndrome,” by simultaneously measuring both signals using brain electroencephalograms and heart electrocardiograms.
- Washington University researchers are testing the hypothesis that depressed patients without clinical manifestations of heart disease have more biological evidence of early atherosclerosis than non-depressed people.

The Brain and Cancer

- By examining patients with intractable epilepsy who undergo surgery on only one side of the brain, researchers at the Medical College of Georgia are determining if differences in immune function after brain damage depend on which side of the brain is damaged.
- A team of Ohio State University researchers are testing their hypothesis that psychological stress, by altering the immune response, can accelerate initiation or progression of basal cell carcinoma of the skin.
- An M.D. Anderson Cancer Center researcher is seeking to determine whether electroacupuncture increases the immune system's production of interferon-gamma, which kills certain prostate cancer cells and may make tumor cells more susceptible to destruction.
- Ohio State University researchers are building on their previous research to find the mechanisms that determine how stress is associated with immune dysfunction in breast cancer patients.

The Brain and Stroke

- Researchers at Columbia University are studying the possibility that decreased blood flow to the brain during carotid endarterectomy causes the mental deficits that often occur following this surgery, which is widely used to prevent stroke.

- A Kessler Foundation researcher is determining whether occupational therapy that uses imagery (visually and mentally rehearsing physical skills in the mind) is more effective than standard occupational therapy in improving stroke patients' ability to move their affected arm.
- Duke University investigators are determining whether treatment with the anti-depressant sertraline can prevent mildly depressed post-stroke patients from becoming seriously depressed, and whether this prevention leads to improved functional recovery.

Neuroimaging

The Clinical Hypotheses Program has supported research on applications of neuroimaging since 1994. Neuroimaging technologies, such as PET and MRI, have transformed brain research by providing a new window to study the brain's structure and functions in health and disease and are making possible new ways to diagnose, treat, and prevent devastating brain diseases and disorders. Through 1999, the Foundation has supported 43 neuroimaging projects. All funded projects are described on the Foundation's Web site, and the 1999 grants are described below.

- Johns Hopkins University researchers are using MRI to test their hypothesis that a particular part of the brain's cortex functions differently when a movement is self-generated

rather than elicited by an outside stimulus and that this difference is more pronounced in patients with Parkinson's disease.

- Yale University researchers are exploring the hypothesis that electroconvulsive therapy is effective in treating major depression because it increases brain concentrations of the neurotransmitter GABA. They are testing this through an imaging technique that enables them to measure brain GABA levels directly.
- Researchers at Oregon Health Sciences University are using fMRI to image the brains of people who are blind and those with normal vision to see how the brain of a blind person reorganizes itself to make use of auditory information.
- MIT researchers are using a novel computerized learning system, which combines imaging and rehabilitation techniques, to retrain stroke patients to use their motor skills.
- University of Pennsylvania investigators are using MRI in patients with carotid artery disease to examine cholesterol-related plaque build-up and to evaluate how effective two drug therapies are in shrinking the plaque and changing its chemical composition.
- Duke University researchers are using MRI to identify those characteristics of complex fever-related seizures in children that may account for why some of these children develop hippocampal scarring and others do not.
- UCLA researchers are validating the effectiveness of a new molecular probe that can be used with PET scans to reveal tiny brain lesions that characteristically form in patients with Alzheimer's disease.
- A Yale University researcher is using SPECT to develop a model system that may help clinicians identify patterns of seizure origin and spread in people with epilepsy.
- University of Texas investigators are using fMRI to determine how the drug risperidone, which has been associated with improvements in the memory of patients with schizophrenia, produces changes in the brain circuits associated with working memory.
- Medical College of Wisconsin investigators are using fMRI to study Parkinson's disease patients before and after surgery to develop criteria that may help predict which patients are most likely to benefit from surgery.

Adjunct Clinical Studies

Through the Adjunct Clinical Studies Program, a few invited investigators are adding key questions about the link between the brain and physiological health to ongoing studies that track disease trends and risk factors in

large populations. To date, three adjunct clinical studies have been supported, including one in 1999. In this study, Stanford University researchers are determining whether breast cancer patients with stress have a disruption in normal hormonal regulation that is associated with immune system dysfunction, negatively affecting the progression and prognosis of their disease.

The Dana Consortia in Neuroscience

In 1992, the Foundation began a program supporting consortia of major research institutions that would collaborate in studying aspects of brain disorders. Five consortia received multi-year support: Therapy for HIV Dementia, Memory Loss and Aging, Language-Based Learning Disabilities, Neuroimaging Leadership Training, and the Genetic Basis of Manic-Depressive Illness. For information on their research, still underway, see the Foundation's Web site, www.dana.org.

Education

While lawmakers and education experts have put charter schools and school vouchers on the map across the country, Foundation grantee Public Agenda reported this year that most of the public has only a vague notion of what these programs involve. Sampling 1,200 adults and a subset of parents and community leaders, Public Agenda found that even in Minnesota, Ohio, Arizona,

Investigators are adding key questions about the link between the brain and physiological health to ongoing studies that track disease trends and risk factors in large populations.

and Michigan—where such innovations are underway—most parents said they know nothing or at best little about these proposed alternatives to traditional public schools.

Public Agenda's survey, which was the basis for the report *On Thin Ice: How Advocates and Opponents Could Misread the Public's Views on Vouchers and Charter Schools*, is one of the Foundation's education grant program activities designed to help improve K-12 education. Through these grants, the Foundation has been fostering dissemination of innovative strategies designed to educate and nurture children in public schools, particularly those in disadvantaged communities.

The Foundation continued its support of the Charles A. Dana Center for Educational Innovation at the University of Texas at Austin. Directed by Dana Award winner Philip Uri Treisman, Ph.D., the Center has received Foundation support since 1992 to carry out its commitment to raising academic standards and improving student achievement throughout the nation.

This past year, the Center's applied research and policy work has furthered efforts to improve early childhood care and education, K-12 curricular innovation, and new initiatives in higher education and teacher preparation. For example, the Dana Center:

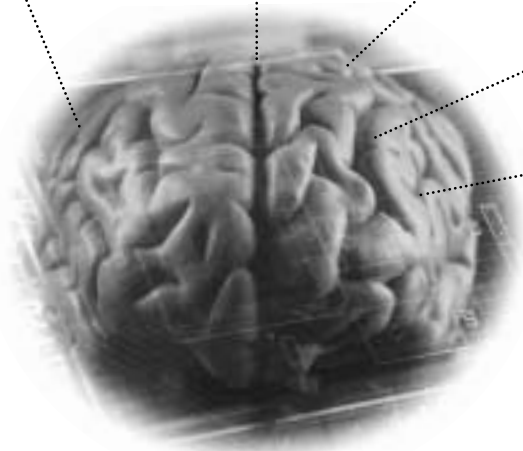
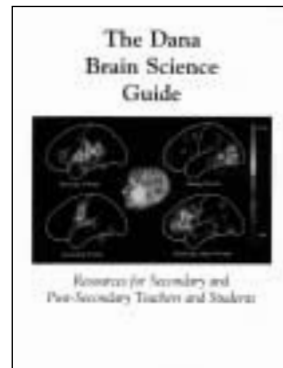
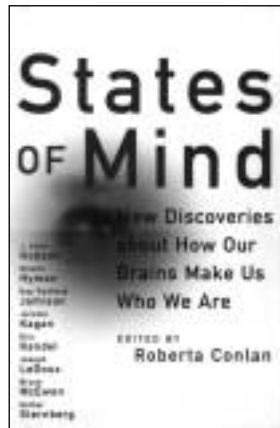
- Extended assistance in developing literacy to homeless and disadvantaged children through SHELTRS (Support for Homeless Education: Linking Technology Resources to Shelters).
 - Continued the Emerging Scholars Program, a multiethnic honors-level program for freshman calculus students designed to help ensure that the future pool of mathematicians and scientists reflects the diversity of the American people.
 - Collaborated with three other organizations to respond to a Texas legislature request to identify variations in known costs of education and related resources that are beyond the control of Texas school districts and to recommend methods for adjusting state education funding accordingly.
- Barbara Bush directed funds to the Barbara Bush Foundation for Family Literacy for literacy programs across the country; the Barbara Bush Children's Hospital to provide development programs for pediatrics faculty and for nurses involved in bone marrow transplants; and the Mayo Clinic Child Development and Learning Disorders Research Group to assist in completing comprehensive, population-based studies of the major childhood developmental disorders.
 - Rosalynn Carter directed funds to the Carter Center in Atlanta to support mental health programs for children and adults.
 - Betty Ford directed funds to the Betty Ford Center at Eisenhower Medical Center in California for the Patient Assistance Fund and for creation of the Charles A. Dana Scholars training program for clinical care in addiction.
 - Lady Bird Johnson directed funds to the Lady Bird Johnson National Wildflower Center for environmental education and nature programs for children and teachers.
 - Nancy Reagan directed funds to the Ronald Reagan Presidential Foundation for the development of K-12 educational programs to study the American Presidency. ■

First Ladies Grants

As part of "A Salute to the Nation's First Ladies: Voices for a Healthy America" (see page 30), each of the First Ladies receiving the Distinguished Achievement Award designated \$100,000 for institutions championing the causes to which they have been devoted.

REACHING FOR THE MOST PEOPLE WITH THE BEST INFORMATION

Publications and Media Division Offers New Publications, A Lively Web Site, and Growing Media Presence



The Dana Press, Dana Press Office, and Dana Web site offer print and electronic news about the brain to audiences from journalists to educators to patients.

The Publications and Media Division offers the public the best, latest, and most useful information about the Foundation's chosen fields, brain research and education. To reach the most people with information in forms they can use, the division operates four print and electronic programs: a Web site, a service for journalists, periodicals, and books and educational materials.

In 1999, a surprise winner with educators was the new publication, *The Dana Brain Science Guide: Resources for Secondary and Post-Secondary Teachers and Students*. The initial 10,000-copy printing of this compact, 136-page introduction to the brain ran out within two months of release; new printings are keeping up with demand.

The Foundation's Web site, too, proved a lively spot. During the year, it offered its 2.3-million wired visitors several new sections and new video capability. A special attraction, late in 1999, was video of the Foundation's gala Awards dinner, "A Salute to the Nation's First Ladies: Voices for a Healthy America." Visits to the site grew more than 40 percent over 1998.

The Foundation Press Office's Resource Service wrote and distributed to journalists packages of background information on new neuroscience research, resulting in stories in newspapers, on TV news programs, and on television and newspaper Internet sites.

The Dana Press, after the late 1998 distribution of the pilot issue of *Cerebrum: The*

To reach the most people with information in forms they can use, the division operates four print and electronic programs.

Dana Forum on Brain Science, established this journal as a quarterly paid subscription publication, which is beginning to attract a solid subscriber base. The free periodicals of The Dana Press also continued to gain readership, with *BrainWork* topping 21,000 (up 24 percent) and *The Brain in the News* reaching 14,500 (up 32 percent) at the year's end. The Dana Press book program published a second popular book, *States of Mind*, and signed several others for publication beginning in 2001.

The Foundation Press Office

The Internet helped to make a productive year for the Press Office even more so. As newspapers and television stations hastened to launch Internet editions, stories about the brain reached millions of new readers. For example, the *Today Show* featured a story from the Press Office's bi-monthly newsletter for journalists, *Dana Brain Daybook*, and

interviewed a Dana Alliance scientist who was featured in the piece. Later that day, the segment appeared on the MSNBC Web site, with a direct link to the Dana Web site.

Former First Ladies Barbara Bush, Rosalynn Carter, Betty Ford, Lady Bird Johnson, and Nancy Reagan were honored at the 1999 Dana Awards ceremony (see page 30). Prior to the ceremony, the Press Office held a photo session leading to widespread coverage. Major newspapers, including the *Washington Post*, also found feature material of interest to their readers in *Cerebrum: The Dana Forum on Brain Science*, as well as in the Dana Press books *The Longevity Strategy* and *States of Mind*.

The Press Office Resource Service provides journalists with objective, non-commercial background materials and referral to experts in brain science. In addition to *Dana Brain Daybook*, the Press Office publishes two annual reviews for reporters. One, the 1999 *Brain Beat Guide*, looked at brain-body relationships. The other, *Advances in Brain Research*, provided journalists with a digest of briefings by a panel of neuroscientists at the Dana Alliance's annual Washington, DC, *Progress Report* event (see page 15). The Press Office also published briefing papers on pain and on genetics.

Internet

In 1999, Internet users made more than 2.3 million visits to the Foundation's expanded Web site. Throughout the year, preparations were made for a redesigned Brain Awareness Week section for 2000. The new section, which went online in December 1999, gives participating organizations online access to all Brain Awareness Week resource materials, including graphics, the resource kit, and media information; and a new international calendar enables partners worldwide to post events. The section also links to partners' Web sites.

The addition of video capability to the Dana site in 1999 made it possible for the first time to view segments of the *Exploring Your Brain* television series, presented through WETA-TV in association with the Dana Alliance for Brain Initiatives.

The Dana Press

The Dana Brain Science Guide: Resources for Secondary and Post-Secondary Teachers and Students

In fall 1999, a Dana Press project intended to be exploratory captured the imagination of secondary and post-secondary teachers around the country. *The Dana Brain Science Guide: Resources for Secondary and Post-Secondary Teachers and Students* is a 136-page, soft-cover book written in clear,

concise language, with illustrations, explaining how the brain works and discussing some common brain-related problems. *The Guide* provides additional resources for information about the brain and its disorders, including high-quality extra reading opportunities. Profiles of a research scientist and a neurosurgeon open the book, giving educators and students insight into the compelling human stories behind this intellectually exciting area.

A typical classroom package consists of 30 copies of the *Guide* together with video and audio tapes from the Dana Alliance public television and radio broadcast series, *Exploring Your Brain* (PBS) and *Gray Matters* (Public Radio International). The Dana Press launched the *Guide* in September 1999, offering the instructional package free to teachers at approximately 250 schools.

Cerebrum: The Dana Forum on Brain Research

After a successful pilot issue in 1998, a new interdisciplinary journal of opinion from The Dana Press, *Cerebrum: The Dana Forum on Brain Research*, began publishing as a paid subscription quarterly. The first regular issues in 1999 immediately began attracting a core of interested subscribers to its handsome four-color design and mix of straightforward analysis of the ramifications of brain research and provocative challenges to the new wisdom and assumptions flowing from that research.

As part of its introduction, *Cerebrum* was made available free at newsstands serving

airline shuttle passengers traveling between New York City, Washington, and Boston, and a direct mail campaign accompanying each issue offered 25,000 potential readers a free sample issue and trial subscription.

Free Periodicals

To serve a spectrum of reader interest in the brain and brain research, The Dana Press publishes several free periodicals. The first of these, *BrainWork*, a bi-monthly newsletter on the science behind brain health, entered its 10th year in 1999. In 1997, The Dana Press ended unsolicited mailings of *BrainWork*, cutting circulation back to 9,000. Today circulation based on specific requests from readers has risen to more than 21,000. As 1999 ended, plans were being made for an on-line weekly *BrainWork* bulletin, due to launch in Summer 2000.

A more recent publication, *The Brain in the News*, entering its fifth year in 1999, increased circulation 32 percent, bringing its mailing list to 14,500. *The Brain in the News* is a bi-weekly that reprints well-researched, well-written articles about the brain and brain science from newspapers in the United States and Canada.

Two special Dana Press publications are the *Dana Alliance Member News*, published bi-monthly, and the annual *Delivering Results*:

A Progress Report on Brain Research.

The Member News keeps scientists in North America and Europe up-to-date with their colleagues' activities in providing public information and education about the brain. *Delivering Results* is a report by Dana Alliance scientists to those directly concerned with brain research: policy makers, professionals in brain research and its allied fields, patients and their families and advocates, and the health, science, and general media. More than 40,000 copies are released during Brain Awareness Week and distributed throughout the year to many audiences, including those at the World Economic Forum in Davos, Switzerland. *Delivering Results* reviews the preceding year's research, highlighting work likely to advance knowledge of the brain and its disorders. The European Dana Alliance issues another 4200 copies incorporating these and other results in European editions of the report in French, German, and Italian.

Books from The Dana Press

In May 1999, The Dana Press, with its co-publisher, John Wiley & Sons, Inc., published the second book in its program, *States of Mind: New Discoveries About How Our Brain Make Us Who We Are*, edited by Roberta Conlan. The book presents eight updated and edited public lectures on the brain that were originally presented by the Dana Alliance and the Smithsonian Associates. Experts in

Straightforward analysis of the ramifications of brain research and provocative challenges to the new wisdom and assumptions flowing from that research.

the field included in the book are J. Allan Hobson, Steven Hyman, Kay Redfield Jamison, Jerome Kagan, Eric Kandel, Joseph LeDoux, Bruce McEwen, and Esther Sternberg. Also in early 1999, Wiley published the paperback edition of the Dana/Wiley book, *The Longevity Strategy: How to Live to 100 Using the Brain-Body Connection*, by Dana chairman David Mahoney and best-selling brain author Richard Restak, M.D. Agreements on foreign rights also were made to publish *The Longevity Strategy* in Spanish, Chinese, Japanese, and Czech.

Contract negotiations were underway at year's end for the publication in 2001 of books ranging from a home reference guide on brain health to a book about the race to find a cure for spinal cord injury. ■

FIVE FIRST LADIES WHO CHANGED HEALTH AND EDUCATION IN AMERICA

1999 Dana Awards Honor Leadership in Critical Areas



Former First Ladies (l. to r.) Betty Ford, Barbara Bush, Lady Bird Johnson, and Rosalynn Carter, along with Nancy Reagan, received the Dana Distinguished Achievement Award at a gala celebration of the Foundation's 50th anniversary.

The Dana Foundation began celebrating its 50th anniversary year with the presentation of its 1999 Distinguished Achievement Award to five First Ladies of the United States: Barbara Bush, Nancy Reagan, Rosalynn Carter, Betty Ford, and Lady Bird Johnson. All are women representing leadership in the two fields—health and education—at the core of the Foundation’s mission.

In selecting these outstanding women for the annual Distinguished Achievement Award, the Foundation extended a 14-year roster of recipients whose work in health or education has been distinguished by an uncommon effort, vision, and commitment.

These five First Ladies have set an example of tireless contribution. In public as well as in private, each has charted a course to bring about needed change and new awareness of matters that shape our lives. Their efforts have changed how we look at educating our young people, at the realities of breast cancer, and at the devastating effects that addiction, mental illness, and Alzheimer’s disease can have on ourselves and our loved ones.

As First Ladies, they have turned a national spotlight on these problems. Their personal attention, their persistent effort beyond the White House, has made them heroes by their own deeds.

These five First Ladies have set an example of tireless contribution. In public as well as in private, each has charted a course to bring about needed change and new awareness of matters that shape our lives.

The Charles A. Dana Foundation Distinguished Achievement Award was presented to:

Barbara Bush, for her quest to raise the literary skills of young people and their families, giving them the tools to meet the challenges of contemporary society, and for her continuing support for research on and treatment of cancer.

Mrs. Bush directed that her award of \$100,000 be divided equally among the Maine Family Literacy Initiative, the Barbara Bush Foundation for Family Literacy, the Mayo Clinic Foundation, and the Barbara Bush Children’s Hospital at Maine Medical Center.

Nancy Reagan, for a life of dedication to building initiatives for those debilitated by emotional, mental, and physical challenges, unstinting efforts to combat drug and alcohol use by young people, and brave dedication to finding a cure for Alzheimer's disease through awareness and research programs.

Mrs. Reagan designated her award of \$100,000 for the Ronald Reagan Presidential Foundation for its educational programs.

Rosalynn Carter, for her enduring efforts on the national and world stages to bring mental health issues into the light of public discourse—challenging the stigma of mental illness through more effective research and humane community-based health care.

Mrs. Carter designated her award of \$100,000 for the Carter Center, Mental Health Program.

Betty Ford, for her strength and candor in fighting for greater awareness of the impact that breast cancer, alcoholism, and drug addiction have on women and their families and for her commitment to effective treatment and support programs that combat their devastating effects.

Mrs. Ford designated her award of \$100,000 for the Betty Ford Center at Eisenhower Medical Center.

Lady Bird Johnson, for her commitment to children, from early learning and nutrition programs for the disadvantaged to her national efforts to bring young people into direct and lifelong contact with nature through education about the natural environment.

Mrs. Johnson designated her award of \$100,000 for the Lady Bird Johnson National Wildflower Center for its education programs. ■

FINANCIAL REPORT

SUMMARY OF APPROPRIATIONS AND PAYMENTS IN 1999

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
Health	\$ 2,573,112	\$ 7,717,288	\$ 4,150,448	\$ 6,139,952
Education	1,288,415	506,080	302,580	1,491,915
Cultural and Civic	100,000	571,300	346,300	325,000
Awards Program	0	471,629	471,629	0
TOTALS	\$ 3,961,527	\$ 9,266,297	\$ 5,270,957	\$ 7,956,867

HEALTH

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>University of Alabama School of Medicine</i>				
<i>Birmingham, AL</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	\$ 33,000	\$ 13,477	\$ 33,000	\$ 13,477
<i>American Association for Advancement of Science</i>				
<i>Washington, DC</i>				
Feasibility study for electronic management of scientific information	0	400,000	0	400,000
<i>Association for Research in Nervous & Mental Diseases</i>				
<i>New York, NY</i>				
Support for conference	0	8,500	8,500	0
<i>The Barbara Bush Foundation for Family Literacy</i>				
<i>Washington, DC</i>				
Establishing family literacy programs	0	50,000	0	50,000
<i>Baylor College of Medicine</i>				
<i>Houston, TX</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	60,640	0	0	60,640
<i>Betty Ford Center at Eisenhower</i>				
<i>Rancho Mirage, CA</i>				
Supporting patient assistance fund	0	100,000	0	100,000
<i>Brown University</i>				
<i>Providence, RI</i>				
Studies of brain tissues and computer modeling techniques	150,000	0	150,000	0
<i>The Carter Center</i>				
<i>Atlanta, GA</i>				
Support for mental health program	0	100,000	0	100,000

Health

***Childrens Hospital
Boston, MA***

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
Clinical Hypotheses in Neuroscience Research: Imaging	\$ 33,000	\$ 0	\$ 33,000	\$ 0

***Columbia University College of Physicians
& Surgeons
New York, NY***

For Endowment in neuroscience research	0	500,000	0	500,000
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Clinical Hypotheses in Neuroscience Research: Imaging	33,000	0	0	33,000
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Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	100,000	50,000	50,000
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***Dana Alliance for Brain Initiatives, Inc.
New York, NY***

Public education campaign on neuroscience research	0	2,184,323	2,184,323	0
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***Dana Farber Cancer Institute
Boston, MA***

Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	50,000	0	0	50,000
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***Duke University School of Medicine
Durham, NC***

Clinical Hypotheses in Neuroscience Research: Imaging	33,000	95,625	0	128,625
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Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	99,535	0	99,535
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Health

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>Emory University School of Medicine</i>				
<i>Atlanta, GA</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	\$ 50,000	\$ 0	\$ 0	\$ 50,000
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	50,000	0	0	50,000
<i>Georgetown University School of Medicine</i>				
<i>Washington, DC</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	67,000	0	0	67,000
<i>Harvard Medical School</i>				
<i>Cambridge, MA</i>				
Support for book on philosophy of learning medicine	0	150,000	75,000	75,000
<i>Harvard School of Public Health</i>				
<i>Cambridge, MA</i>				
Research on emotional support and heart rate variability	101,864	0	0	101,864
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	99,451	99,451	0
<i>Harvard Medical School</i>				
<i>Boston, MA</i>				
Endowment of Harvard-Mahoney Neuroscience Institute	0	500,000	0	500,000

Health

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>Johns Hopkins University</i>				
<i>Baltimore, MD</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	\$ 33,000	\$ 100,000	\$ 83,000	\$ 50,000
<i>Kessler Medical Rehabilitation Research and Education Corporation</i>				
<i>West Orange, NJ</i>				
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	83,893	50,000	33,893
<i>Lady Bird Johnson National Wildflower Center</i>				
<i>Austin, TX</i>				
Support for education programs	0	100,000	0	100,000
<i>Library of Congress/National Institute of Mental Health</i>				
<i>Washington, DC</i>				
Enhancing the Decade of The Brain	75,000	0	75,000	0
<i>Maine Medical Center</i>				
<i>Portland, ME</i>				
Outreach education programs	0	25,000	0	25,000
<i>Massachusetts Institute of Technology</i>				
<i>Cambridge, MA</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	66,000	100,000	50,000	116,000
<i>The Mayo Foundation</i>				
<i>Rochester, MN</i>				
Support for child development & learning disorders group	0	25,000	0	25,000

Health	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>Medical College of Georgia Augusta, GA</i>				
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	\$ 0	\$ 99,990	\$50,000	\$ 49,990
<i>Medical College of Wisconsin Milwaukee, WI</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	0	99,924	0	99,924
<i>National Health Museum Washington, DC</i>				
Support for "Day of Dialogue on The Brain" workshop	0	12,300	12,300	0
<i>New York Hospital-Cornell Medical Center New York, NY</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	50,000	0	0	50,000
<i>New York University Medical Center New York, NY</i>				
Dana Consortium on Language-Based Learning Disabilities	200,000	0	0	200,000
<i>Ohio State University Columbus, OH</i>				
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	100,000	0	100,000
<i>Ohio State University Research Foundation Columbus, OH</i>				
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	100,000	100,000	0

Health

***Oregon Health Sciences University
Portland, OR***

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
Clinical Hypotheses in Neuroscience Research: Imaging	\$ 49,816	\$ 100,000	\$ 50,000	\$ 99,816

***Ronald Reagan Presidential Foundation
Simi Valley, CA***

Support for Presidential Learning Center	0	100,000	0	100,000
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***Stanford University
Stanford, CA***

Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	50,000	143,774	63,360	130,414
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***Thirteen/WNET
New York, NY***

Support for educational outreach programs	0	229,400	0	229,400
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***University of California, Irvine
Irvine, CA***

Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	100,000	0	100,000
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***University of California, Los Angeles
Los Angeles, CA***

Clinical Hypotheses in Neuroscience Research: Imaging	0	100,000	0	100,000
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***University of California, San Francisco
San Francisco, CA***

Clinical Hypotheses in Neuroscience Research: Imaging	48,484	0	0	48,484
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***University of Iowa College of Medicine
Iowa City, IA***

Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	50,000	0	0	50,000
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Health

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>University of Michigan, Medical Center Ann Arbor, MI</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	\$ 49,642	\$ 0	\$ 0	\$ 49,642
<i>University of Montreal Montreal, Quebec</i>				
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	110,000	55,000	55,000
<i>University of Pennsylvania Philadelphia, PA</i>				
Review of grant program	0	116,800	116,800	0
Clinical Hypotheses in Neuroscience Research: Imaging	0	100,000	0	100,000
<i>University of Pittsburgh Medical School Pittsburgh, PA</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	67,000	0	67,000	0
<i>Uniformed Services University of Health Science Bethesda, MD</i>				
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	99,950	0	99,950
<i>University of Texas Medical School at Houston Houston, TX</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	0	99,534	0	99,534
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	97,079	50,000	47,079

Health

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>University of Texas Medical School at San Antonio San Antonio, TX</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	\$ 40,000	\$ 0	\$ 40,000	\$ 0
<i>University of Utah Salt Lake City, UT</i>				
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	100,000	0	100,000
<i>University of Washington School of Medicine Seattle, WA</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	33,000	0	0	33,000
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	0	100,000	50,000	50,000
<i>University of Wisconsin Madison, WI</i>				
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	100,000	0	50,000	50,000
<i>Washington University School of Medicine St. Louis, MO</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	66,666	0	33,333	33,333
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	50,000	198,191	50,000	198,191
<i>Weill Medical College of Cornell University New York, NY</i>				
Fellowships in neuroscience	800,000	0	152,381	647,619

Health

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>Yale University School of Medicine New Haven, CT</i>				
Clinical Hypotheses in Neuroscience Research: Imaging	\$ 33,000	\$ 196,842	\$ 83,000	\$ 146,842
Clinical Hypotheses in Neuroscience Research: Brain-Body Interaction	50,000	92,700	50,000	92,700
<i>Other Health Grants</i>	<u>0</u>	<u>386,000</u>	<u>186,000</u>	<u>200,000</u>
TOTAL HEALTH GRANTS	<u>\$ 2,573,112</u>	<u>\$ 7,717,288</u>	<u>\$ 4,150,448</u>	<u>\$ 6,139,952</u>

EDUCATION

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>Facing History and Ourselves</i>				
<i>Brookline, MA</i>				
Curriculum development and teacher training	\$ 129,801	\$ 0	\$ 0	\$ 129,801
<i>National Center for Family Literacy</i>				
<i>Louisville, KY</i>				
Family literacy program	140,900	0	0	140,900
<i>Parents as Teachers National Center, Inc.</i>				
<i>St. Louis, MO</i>				
Involvement of parents in early childhood education	167,714	0	0	167,714
<i>University of Texas at Austin</i>				
<i>Austin, TX</i>				
Charles A. Dana Center for Educational Innovation	850,000	0	0	850,000
Other Education Grants	<u>0</u>	<u>506,080</u>	<u>302,580</u>	<u>203,500</u>
TOTAL EDUCATION GRANTS	<u>\$ 1,288,415</u>	<u>\$ 506,080</u>	<u>\$ 302,580</u>	<u>\$ 1,491,915</u>

CULTURAL AND CIVIC

	UNPAID AT BEGINNING OF YEAR	APPROPRIATED DURING YEAR	PAID DURING YEAR	UNPAID AT END OF YEAR
<i>Museum of Modern Art</i>				
<i>New York, NY</i>				
Exhibitions to increase interest in the Museum's permanent collection	\$ 100,000	\$ 0	\$ 0	\$ 100,000
<i>New York Philharmonic</i>				
<i>New York, NY</i>				
Update archives database	\$ 0	\$ 150,000	\$ 150,000	\$ 0
Other Cultural and Civic Grants	0	421,300	196,300	225,000
TOTAL CULTURAL AND CIVIC GRANTS	\$ 100,000	\$ 571,300	\$ 346,300	\$ 325,000

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, 1999 and 1998, 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 generally accepted auditing standards. 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, 1999 and 1998, and the changes in its net assets and its cash flows for the years then ended, in conformity with generally accepted accounting principles.

***A. J. Signorile & Co.
New York, New York
February 24, 2000***

STATEMENTS OF FINANCIAL POSITION

December 31, 1999 and 1998

	1999	1998
Assets:		
Cash and cash equivalents	\$ 2,980,689	\$ 10,405,293
Accounts receivable (primarily security sales)	8,518,967	1,044,944
Accrued interest receivable	1,099,033	1,204,898
Investments (Note 1)	326,938,139	292,620,756
Fixed assets, at cost:		
Office furniture and equipment, net of accumulated depreciation: 1999: \$707,280; 1998: \$619,780	143,430	230,930
Leasehold improvements, net of accumulated amortization: 1999: \$549,135; 1998: \$454,409	354,935	449,661
Total Assets	<u>\$ 340,035,193</u>	<u>\$ 305,956,482</u>
Liabilities and Net Assets:		
Accounts payable and accrued liabilities (primarily security purchases in 1998)	\$ 604,896	\$ 1,740,668
U. S. excise tax payable (Note 2)	248,741	12,001
Deferred U. S. excise tax (Note 2)	931,243	671,202
Other deferred liabilities	395,652	527,042
Unpaid grant appropriations	7,956,867	3,961,527
Unpaid commitments for contributions of capital to limited partnerships (Note 1)	13,708,841	9,025,000
Unrestricted net assets	316,188,953	290,019,042
Total Liabilities and Net Assets	<u>\$ 340,035,193</u>	<u>\$ 305,956,482</u>

See accompanying notes.

STATEMENTS OF ACTIVITIES

For the years ended December 31, 1999 and 1998

	1999	1998
Investment Income:		
Dividends and interest	\$ 8,921,720	\$ 9,314,082
Income from limited partnerships	12,549,976	3,049,669
Net realized gain from sales and redemptions of securities	7,735,489	18,765,462
	<u>29,207,185</u>	<u>31,129,213</u>
Less: Investment management and custodian fees	<u>(961,055)</u>	<u>(934,760)</u>
Net realized investment income	<u>28,246,130</u>	<u>30,194,453</u>
Expenses:		
Grant appropriations	9,266,297	12,576,147
Direct charitable activities	3,930,077	3,568,401
General administration	1,087,835	1,042,798
Provision for U. S. excise tax (Note 2)	534,000	436,000
Total expenses	<u>14,818,209</u>	<u>17,623,346</u>
Excess of net realized investment income over expenses	13,427,921	12,571,107
Increase (decrease) in unrealized appreciation of marketable securities, net of deferred U. S. excise tax, 1999: provision \$260,041; 1998: (reduction) (\$146,720)	<u>12,741,990</u>	<u>(7,189,263)</u>
Increase in unrestricted net assets	26,169,911	5,381,844
Unrestricted net assets at beginning of year	<u>290,019,042</u>	<u>284,637,198</u>
Unrestricted net assets at end of year	<u>\$ 316,188,953</u>	<u>\$ 290,019,042</u>

See accompanying notes.

STATEMENTS OF CASH FLOWS

For the years ended December 31, 1999 and 1998

	1999	1998
Cash flows from operating activities:		
Increase in unrestricted net assets	\$ 26,169,911	\$ 5,381,844
Adjustments to reconcile change in unrestricted net assets to net cash provided (used) by operating activities:		
Depreciation and amortization	59,647	107,741
Realized (gains) on sales of investments	(7,735,489)	(18,765,462)
Unrealized (gains), losses on investments	(13,002,031)	7,335,983
Share of (income) from limited partnerships	(12,549,976)	(3,049,669)
(Increase) decrease in:		
Interest receivable	105,866	(193,072)
Accounts receivable	(7,474,024)	(875,627)
Increase (decrease) in:		
Accounts payable and accrued liabilities and unpaid commitments for contributions of capital to limited partnerships	3,539,258	789,636
Unpaid grant appropriations	3,995,340	(2,138,803)
U. S. excise tax payable	236,740	(124,000)
Deferred U. S. excise tax	260,041	(146,720)
Net cash provided (used) by operating activities	<u>(6,394,717)</u>	<u>(11,678,149)</u>
Cash flows from investing activities:		
Purchase of office furniture and equipment	—	(23,779)
Cost of leasehold improvements	—	(8,300)
Purchase of securities	(269,725,803)	(321,116,611)
Purchase of limited partnership interests	(13,501,601)	(15,007,452)
Proceeds from sales of securities	272,466,122	349,587,270
Proceeds from partnership distributions and withdrawal of investment in limited partnership	9,731,395	6,670,241
Net cash provided (used) by investing activities	<u>(1,029,887)</u>	<u>20,101,369</u>
Net increase (decrease) in cash	(7,424,604)	8,423,220
Cash balance at beginning of year	<u>10,405,293</u>	<u>1,982,073</u>
Cash balance at end of year	<u>\$ 2,980,689</u>	<u>\$ 10,405,293</u>

See accompanying notes.

SUMMARY OF APPROPRIATIONS AND PAYMENTS

For the years ended December 31, 1999 and 1998

	1999	1998
Unpaid grant appropriations at the beginning of the year	\$ 3,961,527	\$ 6,100,330
Grant appropriations during the year, net of grant refunds in the amount of \$15,162 for 1998	<u>9,266,297</u> 13,227,824	<u>12,576,147</u> 18,676,477
Payments:		
For grant appropriations, net of grant refunds in the amount of \$15,162 for 1998	<u>5,270,957</u>	<u>14,714,950</u>
Unpaid grant appropriations at end of year	<u>\$ 7,956,867</u>	<u>\$ 3,961,527</u>

NOTES TO FINANCIAL STATEMENTS

December 31, 1999 and 1998

NOTE 1 - INVESTMENTS

The Foundation's investment portfolio is summarized as follows:

	1999		1998	
	COST	FAIR VALUE	COST	FAIR VALUE
Fixed Income Securities:				
U.S. Government and Agency Obligations	\$ 29,598,084	\$ 28,567,013	\$ 44,674,272	\$ 46,355,712
Municipal Bonds	750,000	719,922	750,000	815,525
Foreign Government Obligations	326,216	314,607	—	—
Corporate Obligations	33,755,994	32,902,353	23,070,504	23,850,146
	<u>64,430,294</u>	<u>62,503,895</u>	<u>68,494,776</u>	<u>71,021,383</u>
Common Stock	54,797,443	60,436,377	50,830,040	58,625,995
Mutual Funds	98,249,231	141,098,842	93,156,982	116,394,535
Limited Partnerships	58,090,809	62,899,025	43,748,584	46,578,843
	<u>275,567,777</u>	<u>326,938,139</u>	<u>256,230,382</u>	<u>292,620,756</u>
Total				

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, 1999, under the provisions of certain venture capital limited partnership agreements, the Foundation has unpaid commitments to contribute \$13,708,841 in additional capital over the next 10 years.

NOTES TO FINANCIAL STATEMENTS *(continued)*

December 31, 1999 and 1998

NOTE 2 - U.S. EXCISE TAX

The Foundation is a private philanthropic foundation, chartered in 1950, with principal interests in the fields of 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, and on 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 year ended December 31, 1998, the Foundation satisfied this requirement and, accordingly, was subject to the 1% excise tax. However, during the year ended December 31, 1999, the Foundation did not satisfy the requirement and was, therefore, subject to the 2% 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's current lease provides for a rent-free period and contributions from the lessor intended to offset the cost of leasehold improvements. The accompanying statements of activities reflect rent expense recognized on a straight-line basis over the term of the Foundation's lease, reflective of the concession provisions of the lease agreement.

The Foundation's obligation under the current lease expires on August 31, 2003. Under the provisions of the lease agreement, the Foundation's future minimum annual rental payments, as of December 31, 1999, are as follows:

2000	\$ 597,162
2001	600,534
2002	617,582
January 1, 2003 through August 31, 2003	<u>423,212</u>
Total	<u>\$ 2,238,490</u>

The lease agreement requires additional payments to cover the escalation of maintenance costs and real estate taxes. Rental expense included in the statements of activities amounted to \$321,922 in 1999 and \$312,338 in 1998.

NOTES TO FINANCIAL STATEMENTS *(concluded)*

December 31, 1999 and 1998

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, 1999, retirement plan expense, included in the statements of activities, amounted to \$278,528. Similarly, for the year ended December 31, 1998, retirement plan expense amounted to \$270,819.

NOTE 5 - RELATED PARTY TRANSACTIONS

Two directors who also serve as officers of the Foundation are each associated with law firms which 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 \$2,184,323 for the year ended December 31, 1999 and the amount of \$4,941,620 for the year ended December 31, 1998. In addition, the Foundation and the Alliance share certain expenses including administrative services and office occupancy.

The Brain-Body Institute, L.L.C., an affiliate of the Foundation, was organized in 1998 as a not-for-profit entity whose mission is to advance knowledge about the relationship between physiological changes in the brain and the prevention and treatment of heart disease, cancer and stroke.

NOTE 6 - 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 1999 and 1998. (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 lease. (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 accordance with generally accepted accounting principles 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.

GRANT GUIDELINES

The Charles A. Dana Foundation is a private philanthropic foundation with principal interests in health and education. It was established in 1950 by Charles A. Dana, a New York State legislator, industrialist, and philanthropist. The Foundation's grants program's current areas of emphasis are described briefly below. Because these programs are the basis for decisions on grant applications, readers are encouraged to consult these descriptions before submitting a request.

General Policies

In general, the Foundation makes its grants in accordance with these policies. The Foundation:

1. Supports programs in health and education; carefully defined objectives in each field guide its grant making.
2. In many cases, requires grantee institutions 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, endowments, capital campaigns, purchase of equipment, or individual sabbaticals. Requests for support of facilities are seldom considered.

5. Does not consider unsolicited requests from organizations outside the United States.
6. Does not schedule meetings with applicants until the Foundation's staff has reviewed a written request from the applicant and determined that it relates to the Foundation's current grantmaking priorities.

Program Guidelines

Health Grants

Over the years, the Foundation's health grants program has developed a focus on spearheading clinically applied brain research that has the potential to improve human health and functioning. This focus evolved in the 1990s and continues to constitute the Foundation's health grants program goal. The emphasis on supporting clinically applied brain research followed upon 30 years of providing charitable gifts to voluntary health organizations and capital grants to support new, technologically updated research laboratories, and then in the 1980s on training a new cadre of clinical research leaders

in the fields of environmental health, epidemiology, aging, and neuroscience. The spectacular advances being made in neuroscience research techniques, and the opportunities these held for improving clinical diagnosis, prevention, and treatment of brain disorders and diseases, spurred the Foundation to concentrate solely on clinical neuroscience research in the 1990s. This continues to be the grantmaking focus for the new millennium.

Grant approaches in the 1990s took two forms. One was the support of Research Consortia, collaborations of leading institutions to apply multiple approaches and techniques to studying complex human diseases and disorders, including memory loss, HIV-related dementia, language-based learning disabilities, and manic-depressive illness. Work of these consortia has been largely completed. The second grant approach involved stimulating the development and testing of new hypotheses in clinically related brain research, through the competitive Clinical Hypotheses Program in Neuroscience Research. This program

includes clinical pilot studies applying rapidly evolving neuroimaging techniques to investigating brain function in health and disease; and, clinical pilot studies in a whole new field of science, understanding the relationship between the brain and the onset and outcome of the three major killer diseases in this country: heart disease, cancer, and stroke. Based on the impressive gains realized through this grantmaking mechanism, the Clinical Hypotheses Program now represents the Foundation's primary health grants program emphasis.

Current Program

Grants are awarded primarily for neuroimaging research and for exploration of the interaction between the brain and the body in the onset and outcomes of heart disease, cancer, and stroke. Grants in these two areas are made principally through the Clinical Hypotheses Program. This competitive grants program supports pilot testing of experimental and innovative ideas that have the potential of advancing clinical applications of neuro-imaging and of brain-body science. Requests for Proposals (RFPs) for the Imaging program are sent to the deans of all U.S. medical schools and other invited institutions. RFPs for Brain-Body Science are sent to all U.S. medical schools, schools of

public health, and other invited institutions. Inquiries about this program should be made directly to medical and public health schools deans' offices. Additional information on the Clinical Hypotheses Program and its currently funded grants is available through the Foundation's Web site (www.dana.org).

In Brain-Body Science, a few additional grants, most of which are initiated by the Foundation, are made as "Adjunct Clinical Studies" to examine factors that may be associated with the brain's interactions with heart disease, cancer, and stroke. Through these projects, key questions are appended onto ongoing large-scale epidemiological studies. Additional information on "Adjunct Clinical Studies" projects is available on the Foundation's Web site.

Individuals proposing other opportunities for advancing clinical applications of research in neuroscience or brain-body research interactions should describe their idea in a brief letter to the Foundation (see "Information About Applying"). Please be aware, however, that funds for projects considered outside of the Clinical Hypotheses competitive program are extremely limited.

Education

The Dana Foundation has supported advances in education throughout its history. A continuing goal is to invest limited financial resources in ways that achieve a significant, measurable impact. The Foundation's strategy has been to spread implementation of well-tested innovations that have the potential to strengthen education in American public schools, especially for students in their early years.

Although 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.

Information about Applying

Inquiries for grant support, apart from the competitive Clinical Hypotheses Program (please see Web site of medical school deans regarding how to apply), should be in the form of a two-page letter describing the following:

1. Goal(s) of the proposed project.
2. Need the project would meet and its fit with the Foundation's priorities in health or education.
3. Means to be used to achieve the project's goal(s).
4. Capabilities of the institution to undertake the project and the qualifications of the project's proposed director.
5. Estimated cost and proposed methods of financing the project, including the institution's intended contribution.

Additional information on these currently supported grant programs is available on the Foundation's Web site, www.dana.org. Letters of inquiry should be mailed to the Dana Foundation. No letters submitted by fax will be accepted. If the Foundation determines that an inquiry fits its interests, a full proposal will be requested. Supporting materials should not be submitted until requested. A full proposal should be accompanied by documents establishing the applicant's tax exempt status under Section 501(c)(3) of the Internal Revenue Code.

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New York, NY 10151
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e-mail: danainfo@dana.org
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PUBLICATIONS AVAILABLE

Dana Press Publications on the Brain

The Dana Press, publisher for the Charles A. Dana Foundation and the Dana Alliance for Brain Initiatives, produces periodicals, reports, reference works, and books in the fields of health—particularly the progress and promise of brain research—and early education. Most publications are available free of charge and may also be read on the Dana Web site. To order, send your written request by fax to (202) 737-9207 or by mail to The Dana Press, 1001 G Street NW, Suite 1025, Washington, DC 20001

Cerebrum: The Dana Forum on Brain Science

Paid subscription quarterly journal of ideas, with articles, debates, and reviews from top neuroscientists and other thinkers. Written for readers both with and without a scientific background who are stimulated by the ways in which brain science is reshaping world views. Request free sample issue.

BrainWork: The Neuroscience Newsletter (Bi-monthly) Lay-oriented articles dealing with the brain, its powers, and its problems.

The Brain in the News (Bi-weekly)
Reprinted articles from major newspapers about the brain and new research findings.

Brain Connections: Your Source Guide to Information on Brain Diseases and Disorders Reference guide for contacting organizations that deal with specific brain problems. More than 275 listings.

Delivering Results: An Annual Progress Report on Brain Research: Recap of the progress in all areas of brain research in the previous year. (Published every March.)

Answering Your Questions About Brain Research

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

The Dana Brain Science Guide: Resources for Secondary and Post-Secondary Teachers and Students offers a basic introduction to brain science, its history, our current understanding, new developments, and future directions. Includes classroom activities, a glossary, illustrations of key concepts, a list of resources available on the Internet, an annotated bibliography, and more.

Dana Foundation Publications on Brain-Body Science

Brain-Body Science: A Progress Report

Find out what researchers have been discovering about the brain-body connection. Written for the lay reader, this publication summarizes the most recent findings in brain-body science and their implications for personal health.

Books From the Dana Press and John Wiley & Sons, Inc.

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Internet

Web address: www.dana.org
www.edab.net

Many Dana Press publications, along with current news and information about the programs and activities of the Foundation and the Dana Alliance for Brain Initiatives may be found at the Foundation's Internet site.

While there, visit the *Dana BrainWeb: Great Sites for Information on Brain Diseases and Disorders*. A Neurosciences on the Internet "Best Bet" and a Lycos Top 5% site, the Dana Brain Web offers recommendations for Internet sites with validated current information useful for the lay person. Covering 23 common brain diseases and disorders, this guide will link Internet users to sites that provide descriptions of the disease, background for talking with a physician, treatment options, support for families and care givers, and sources of more information. www.dana.org/brainweb

Printing: The Langendorff Corp.

Photography Credits:

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A publication of the Charles A. Dana Foundation
produced and distributed by The Dana Press

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745 Fifth Avenue, Suite 700
New York, New York 10151