McLEAN HOSPITAL

Campaign Chronicle

An Update on the Capital Campaign

Joan M. Collins Investigator Endowment Fund Established

Joan M. Collins, a longtime hospital volunteer and benefactor, has established the Joan M. Collins Investigator Endowment Fund at McLean. Income from the endowment will support an investigator researching affective disorders, conducted primarily at the hospital's Brain Imaging Center and its other research centers .

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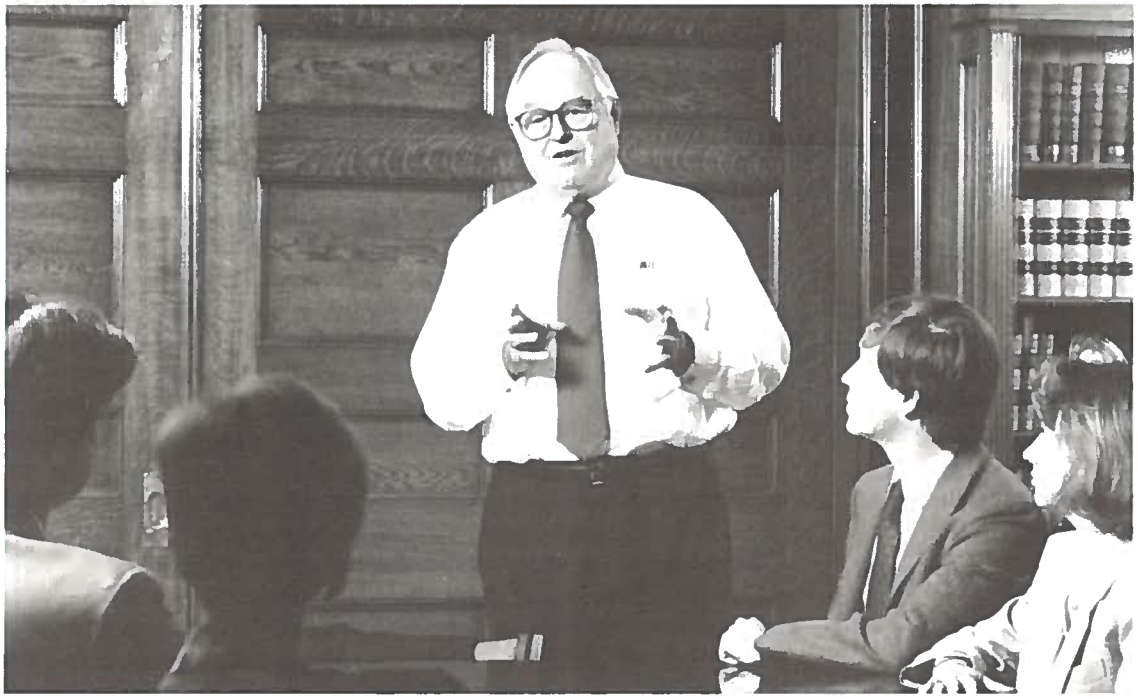
Legacy of a Leader



In Support of the Future: Shervert H. Frazier, M.D., psychiatrist in chief emeritus, has always encouraged McLean researchers to pursue their goals as a means for reaching a greater understanding of psychiatric disorders. The endowment funds of the Frazier Research Institute, established in Dr. Frazier's honor, will assure McLean's continued leadership in psychiatric research. The fund will support basic and clinical research into the causes, treatment, and prevention of major psychiatric disorders. To date, in excess of $5 million of the $10 million endowment goal has been raised.

Shervert H. Frazier, M.D., psychiatrist in chief emeritus, has always had a clear vision of the contribution McLean could make to psychiatric research. As psychiatrist in chief from 1972 to 1988, he guided the hospital through the largest expansion of research programs and facilities in its history. Now, as McLean once again expands its research capacity, we asked Dr. Frazier to reflect on research at McLean and on the goals of the Shervert H. Frazier Research Institute, an endowment fund recently established in his honor.

Does McLean have a unique contribution to make to psychiatric research?

Absolutely. If you have basic scientists who are exploring the great wonders of the brain working at the same place as clinical researchers who are intimately familiar with psychiatric disorders, you have a great advantage. The clinical people help the basic researchers keep the problems being researched relevant, and the basic scientists have a way of thinking, of collecting data, and of keeping things objective, that inform the clinical side.

What does it take to transform the promise of this type of collaboration into the reality of progress?

First, you need a critical mass of research scientists so that the cross-fertilization of ideas that leads to insight can happen. Then, of course, you need the facilities and tools that let them pursue their ideas. We have the critical mass now, but we still don't have enough lab space.

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"I hope that by supporting research today we can help future generations of patients."

Ms. Collins knows the value of psychiatric research first-hand. "I have a depressive illness and am benefiting from drugs researched 10 to 15 years ago," she says. "I couldn't tolerate the older class of drugs. I hope that by supporting research today we can help future generations of patients."

The endowment is just the latest example of Ms. Collins's generous support of McLean. She has not only given financial support in the past but has also volunteered hours of her time through The Friends of McLean. She helped establish, then chaired, the admissions desk project, providing comfort and coffee to patients and their families awaiting admission. "We helped take some of the stigma and anxiety away and got a lot from knowing we'd helped," she says.

Family Philanthropy

Mauricio Tohen, M.D., Dr.P.H, clinical director of the Bipolar and Psychotic Disorders Program, and Alex Vuckovic, M.D., psychiatrist in charge of East House I, a primary treatment unit of the program, treat some of the most severely ill patients admitted to McLean. They experience the pleasure of seeing many of their patients improve but also confront the frustration of knowing that for some, even the best available medications won't be good enough. Some of their patients will experience intolerable side effects, while others will not respond adequately. The reasons? We don't know.

And, therein lies more frustration. Without more research into the underpinnings of mental illness we won't have enough knowledge of who gets sick, and why, to develop better and more targeted treatments or to identify the preventive measures that could make treatment unnecessary. But, funding for such research is scarce and growing scarcer. "In this economy you can't rely solely on Federal funding anymore," explains Dr. Tohen.

The belief that more research will yield better treatment motivates Drs. Vuckovic, Tohen, and other McLean clinicians to support the hospital's fund raising effort by putting interested patients and families in touch with the Development Department. "It's an American tradition to donate to what one feels is important," says Dr. Tohen, "and families very much want to help."

"Patients and families have a unique perspective on mental illness and the incentive to help in research efforts," adds Dr. Vuckovic. "We have very few treatments for the major bipolar and psychotic disorders that provide an acceptable risk-benefit ratio, and families know this. They want better treatments—if not for themselves, then for future generations."

Research Matters: Much of the research conducted by McLean researchers such as Alexander Vuckovic, M.D. (left) and Mauricio Tohen, M.D., Dr. P.H., benefits from the generous support of grateful patients and their families. Here, the two doctors discuss projects in progress.

Numerous former patients or their families have supported the Campaign for McLean, making a much needed and valued contribution to the hospital's efforts to combat mental illness through greater understanding. Dr. Tohen points out that the act of giving can benefit the families as well. "So many families feel helpless in the face of their loved one's illness," he says. "This is a way for family members to feel that they are doing something. Even if they don't benefit directly, they feel good about making a contribution that may someday help others experiencing the same pain."

First recipients of the McLean Award: Between them, (from left) Alfred Pope, M.D., Shervert H. Frazier, M.D., and Paul Howard, M.D., have given more than 120 years of service to McLean Hospital. In recognition of their extraordinary achievements and selfless contributions to the hospital's mission, the McLean Hospital Board of Trustees recently honored Drs. Pope, Frazier, and Howard at a special dinner.

Inner Vision

Images That Lend Insight: In McLean's magnetic resonance imaging (MRI) facility, Perry Renshaw, M.D., Ph.D., explains the MRI procedure.

For the past five years, McLean's magnetic resonance imaging (MRI) scanner has enabled clinicians and researchers to study the anatomy and biochemistry of the living human brain. Now, the addition of an echo-planar coil has transformed McLean's MRI into one of only seven ultrafast scanners in the country and opened an entirely new area of study. With the echo-planar coil, researchers can image blood flow in the working brain and thereby determine which areas of the brain are active and when. Such information can reveal crucial differences in brain functioning between sickness and health.

"As our tools get better, we should be better able to understand ways in which the brain is acting well or badly," says Perry Renshaw, M.D., Ph.D., director of research at McLean's Brain Imaging Center. Those tools include not only the scanner itself but also the computers needed to analyze the images it produces. Thanks to an equipment grant from the Digital Equipment Corporation, the Brain Imaging Center now has the computing power necessary to efficiently and effectively store, retrieve, and analyze the thousands of images each scan produces. A single scan can last anywhere from 25 minutes to one or two hours. Since the ultrafast scanner can produce an image every 50 to 100 milliseconds, even a short session can produce up to 10,000 brain images.

These images provide more detailed information than those available through any other brain scanning technique. Since MRI uses radio waves rather than potentially harmful radiation to create images, it poses no known risk to subjects, and is thus ideal for doing repeated scans of one individual over time, for studying children, and for gathering comparative data on brain function in relatives of patients and healthy volunteers.

"It's very important to know how different areas of the brain are working relative to each other, how function changes over time, and how brain function and structure differ in healthy and ill individuals," says Dr. Renshaw. "Now that we have the tools, we can embark on the studies that may give us the answers."

Those studies will examine illnesses as diverse as schizophrenia and Alzheimer's disease. They will enable researchers to observe medication-induced changes in brain chemistry and function. They will build data bases of brain images to support research not just at McLean but throughout the world. But regardless of the specific study a researcher undertakes, his or her goal is always the same: to improve treatment of mental illness through better understanding.

About the Research

Numerous private grants are supporting research at the Brain Imaging Center. Among them:

- Equipment from Digital Equipment Corporation is enabling researchers to build a data base of brain images of patients with Alzheimer's disease. Researchers here hope to detect brain abnormalities that may explain why some patients with Alzheimer's disease experience behavior, thought, and mood disturbances as well as memory loss.

- A grant from the Charles H. Hood Foundation is funding a prospective study, in collaboration with Children's Hospital, Boston, that will develop a data base of scans of healthy children. Researchers will use this data base to document changes in normal brain development and to detect abnormal changes in the brains of those children who later develop depression.

- A grant from the John W. Alden Trust will enable researchers to analyze the records of all children with Attention Deficit and Hyperactivity Disorder. Researchers will seek to explain why some of these children respond well to stimulants, while others improve on antidepressants.

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- A grant from the Scottish Rite Schizophrenia Research Program will support the application of the newly developed technique of echo–planar magnetic resonance imaging (EPMRI), to study brain activity in patients who have schizophrenia.
- The National Alliance for Research on Schizophrenia and Depression (NARSAD) and the Theodore and Vada Stanley Foundation are funding magnetic resonance spectroscopy (MRS) studies of the biochemical changes in the brain that are associated with psychosis and depression.

Young Scientists Recognized by NARSAD: Recently, four McLean researchers were among the 70 scientists selected to receive the 1993 Young Investigators Award from the National Alliance for Research on Schizophrenia and Depression (NARSAD). Pictured (at left) with their NARSAD project mentor Bruce Cohen, M.D., Ph.D., (second from left) are McLean's Young Investigators Award recipients: (from left) Perry Renshaw, M.D., Ph.D., David Ennulat, Ph.D., Deborah Yurgelun-Todd, Ph.D., and Andrew Stoll, M.D.

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How about the tools?

McLean continues to invest in imaging, computing, and molecular biology technologies. These new technologies make what was mysterious before available for study. We're mapping the function and structure of the brain and decoding human genes, and new knowledge has already changed the treatment and diagnostic capacities of the hospital for the better. We're replacing conjecture with insight. The final insight isn't in yet, but we're getting there.

How will the Shervert H. Frazier Research Institute contribute to this effort?

One of the most important ways will be to make it possible for promising young researchers to enter the field. The government provides little support for researchers until they have a track record of successful grant applications, so the first few years out of graduate school are very difficult. A private endowment can support promising men and women during the critical early stages of their careers.

Will the Institute support established researchers as well?

Yes. This wasn't important before the government started cutting down on research funding, but now some very good research scientists have quiet phases between grant projects. Institute funding will help them keep their research going and provide the predictable flow of income that they, like anyone, need.

How else do you plan to use endowment funds?

We'll be supporting research seminars and symposia. It's not fair to spend people's money and not let the world know about the knowledge you gain. That's like having Bach for only one person. Knowledge has to be transferred to the people who practice. That, after all, is our real goal — to help clinicians do better by patients.

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