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FOR FRIENDS AND SUPPORTERS



David Borsook, MD, PhD, director of McLean's P.A.I.N. Group, is exploring the relationship between the brain and chronic pain syndrome.

Pathways of Pain: Brain Imaging Technology Helps Researchers Understand Chronic Pain Syndrome

Pain can disrupt anyone's life, but for those with complex regional pain syndrome (CRPS), it can be devastating. According to David Borsook, MD, PhD, director of McLean's Pain and Analgesia Imaging and Neuroscience (P.A.I.N.) Group, CRPS affects nearly seven million Americans, many of them children. The disorder causes severe, chronic pain, hypersensitivity to touch and neurovascular symptoms, such as coldness and poor circulation. In extreme cases, patients become severely disabled because even the smallest sensation, such as a breath of air, is excruciating.

Despite its prevalence and debilitating effects, little is known about CRPS other than its unusual pathology. Typically triggered by a minor injury to a peripheral nerve region, such as an arm or leg, CRPS progresses to other areas of the body and affects the brain. Patients experience pain disproportionate to the original injury and not limited to the original injury site. Unfortunately, researchers have yet to find therapies that effectively treat or cure the disorder.

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Fellowship in
Neuropsychology
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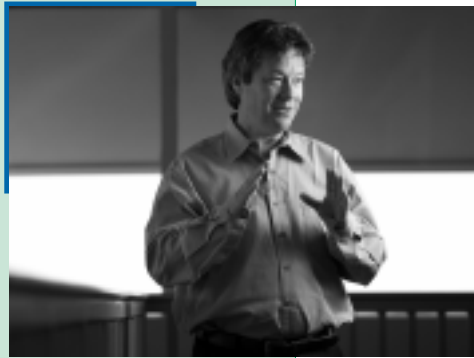
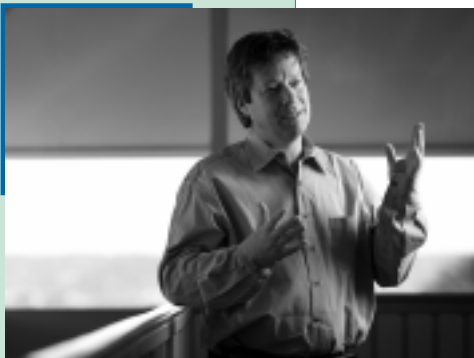
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One thing physicians have found, however, is a compelling parallel between pain and emotion. “We’ve known for a long time that pain is both a sensory and emotional experience,” Borsook says.



“We’ve known for a long time that pain is both a sensory and emotional experience.”

David Borsook, MD, PhD

Borsook and his colleagues at McLean are now using fMRI (functional magnetic resonance imaging) to map the pathways of pain. Because pain has an emotional component—and because fMRI technology gives researchers a window into the activity of the brain—Borsook feels this non-invasive procedure will help reveal the neural pathways involved in CRPS. He hopes to better understand the disease’s etiology and perhaps develop improved methods for treatment.

Mapping a Model of Chronic Pain

With a \$105,581 grant from the Mayday Fund in New York, Borsook, along with Charles Berde, MD, PhD, and Alyssa Lebel, MD, from Children’s Hospital Boston, and Ellen Grant, MD, from Massachusetts General Hospital, are using fMRI technology to study children with CRPS. Functional MRI offers a particularly powerful method for studying pain in pediatric patients because very young children cannot accurately express their pain. It is an objective test that uses a

painless, relatively non-stressful, non-invasive method that can quantify pain.

Over a period of months, Borsook and his team have conducted fMRIs on several children with CRPS, looking for changes in the brain’s pain circuitry in response to various stimuli. Borsook is optimistic that his findings will help researchers learn more about the onset and mechanisms of chronic pain.

According to Borsook, young people provide an ideal population for pain research because their CRPS symptoms tend to wax and wane, whereas in adults, symptoms tend to be chronic. “Children

with CRPS allow us to see the disease in both a symptomatic and non-symptomatic state. We hope this model will help us garner tremendous insight into the disease and apply that insight to the adult population,” he says.

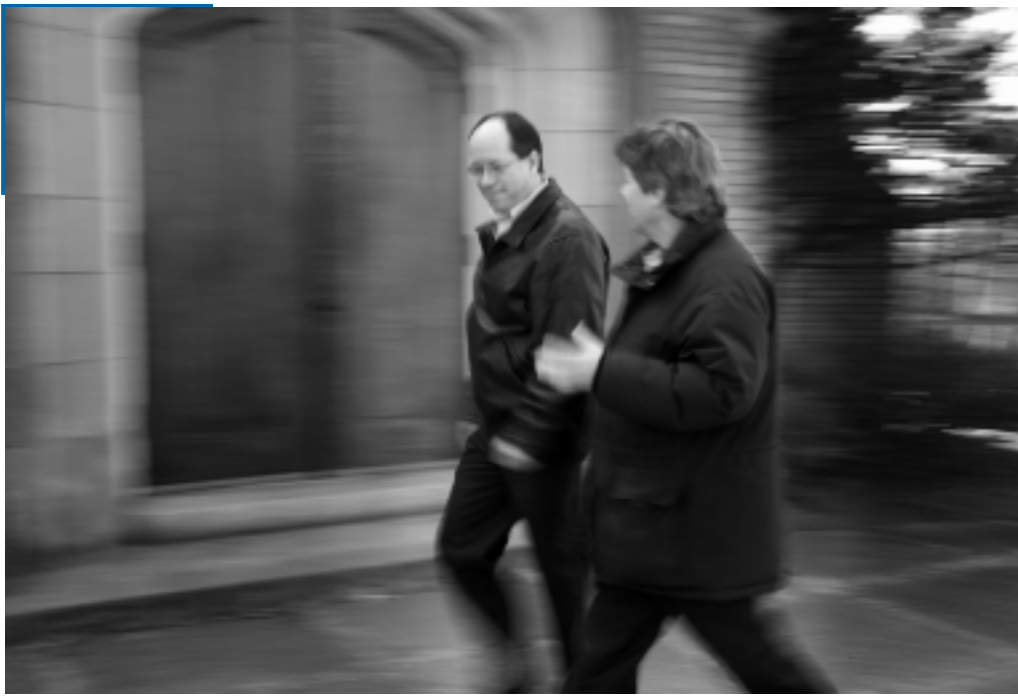
Mayday: A Response to Pain Sufferers’ “SOS”

In the late 1990s, Borsook’s interest in finding new and better ways to treat pain caught the attention of the Mayday Fund, a small family foundation “dedicated to alleviating the incidence, degree and consequence of human physical pain.” The Mayday Fund supports research that promises to improve the treatment of pain at the bedside, in children, in nonverbal populations and within emergency medicine.

The Mayday Fund strives to be a “nimble” foundation—one that supports pioneering research on pain and takes a chance on novel approaches. According to Executive Director Christina Spellman, PhD, “Chronic pain is a frightening condition and the stakes are high. It’s important to give innovative projects a chance.”

Mayday funded Borsook when his team was conducting fMRI research at Massachusetts General Hospital (MGH) in 2000. A year later, the four-person Mayday board invited Borsook to share his insights into how the foundation could best make a constructive contribution to the field. In 2002, Borsook and leading pediatric pain specialist Charles Berde visited the board to explain a unique opportunity to study CRPS as a team. For Mayday, this project offered the chance to support work that bridged pediatric pain with the Fund’s interests in pain and the brain.

According to Spellman, fMRI research on CRPS appeals to Mayday because it “merges David’s insights into how the brain works and the use of critical new technologies with Alyssa LeBel and Chuck Berde’s exceptional competence in pediatric pain and Ellen Grant’s leadership as head of pediatric neuroradiology at MGH. We believe this work will result in clinical interventions that can reduce the toll pain takes on children and adults.”



Lino Becerra, PhD, and David Borsook, MD, PhD, work together at the P.A.I.N. Group to create a picture of chronic pain.

“By exploring the pathways of pain, we may be able to develop a model for the relationship between pain and psychiatric illnesses.”

David Borsook, MD, PhD

A Good Home for Pain Research

Borsook credits the Mayday Fund with getting his research off the ground five years ago and for helping to secure National Institutes of Health (NIH) funding for other pain projects.

“Mayday has consistently fostered research in innovative domains where it is initially difficult to get funding. The NIH has great interest in pain research and I believe Mayday’s support of this work will help draw NIH attention,” he says.

Although CRPS is a “difficult condition to understand,” Borsook believes that with funding from NIH and other sources, he can make great strides in understanding and treating this challenging disorder. “So far, there has been no breakthrough in therapy for these patients,” he says. “If fMRI can help us characterize and quantify the stages and severity of this disease, we may, for the first time ever, be able to tell how pain manifests itself in the brain and eventually develop better treatments.” ♦

P.A.I.N. Relief

For David Borsook, MD, PhD, and his colleagues at McLean’s Pain and Analgesia Imaging and Neuroscience (P.A.I.N.) Group, creating a “picture” of pain is paramount to understanding its origins and treatments.

In addition to studying complex regional pain syndrome (CRPS), members of the P.A.I.N. Group, including Borsook, Lino Becerra, PhD, and Marnie Shaw, PhD, are using fMRI technology to examine a wide range of pain-related issues. They hope to better define the brain circuits involved in pain processing and develop effective models of pain and analgesia.

Borsook and colleagues are also studying the role of opiates in relation to pain, depression and addiction. “Neuroimaging can help us map the brain circuits involved to better understand the overlapping connections among these experiences,” Borsook says.

He points to compelling research that links chronic pain to psychiatric disease. According to Borsook, 60 percent of patients with depression experience chronic pain, while 30 to 40 percent of patients with pain also experience depression. “We feel there is a close connection between pain and depression,” Borsook says. “By exploring the pathways of pain, we may be able to develop a model for the relationship between pain and psychiatric illnesses.”

Better models lead to better understanding—and improved treatment.

For more information on ongoing research, go to www.mclean.harvard.edu/research

“Sidney really believed in doing something with his money that would alleviate the suffering of those like himself.”
George Handran



McLean’s Chief of Neurology, Bruce Price, MD, hopes the new fellowship will train young professionals, like former fellow Michele Masi, MD (right), to integrate psychiatry, neurology, and neuroscience in their practices.

New McLean Fellowship Honors the ‘Charming and Challenged’ Sidney Baer

Sidney R. Baer, Jr. was a brilliant, visionary man whose life oscillated between moments of frenetic industry and near-catatonic despair.

According to long time lawyer, confidant and friend George B. Handran, Baer suffered from psychiatric illness from a young age. He experienced his first major psychotic episode in college and spent his life battling psychosis and depression.

Baer was a scion of the Sigmond Baer family, which had been prominent in St. Louis for founding the successful department store Stix Baer & Fuller. His maternal family had a history of mental illness. However, according to Handran, no one really recognized Baer’s illness. With the capacity to be both charming and challenging—and labeled “difficult” and “a failure”—Sidney Baer was vastly misunderstood.

Handran recalls a time when a co-worker said to Baer, “Just pull yourself up by the bootstraps.” But, Handran says, “Sidney didn’t have any bootstraps.

This was a disease. He didn’t just wake up one morning and choose to have a psychiatric illness.”

When Handran met Baer in the early 1980s, Baer was living in Boston’s Copley Plaza Hotel and looking for a lawyer to help him with his personal legal affairs. “Here was this funny little man, lying in bed and dreaming about all the things he wanted to do,” Handran recalls. A few years later, Handran witnessed Baer “fall apart in front of my eyes.” Baer admitted himself to a psychiatric hospital and for nearly three years, wouldn’t see or talk to anyone. “He would slam the door in my face when I came to see him,” Handran says.

Over the years, Handran arranged for Baer’s caregivers and became his decision-maker and only friend. “I think he trusted me because I didn’t blame him for his illness,” Handran says.

Later in life, Baer experienced some relief from his symptoms with Clozapine, but by then, “It was too late. He was already beaten,” Handran says. Yet, the drug

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offered Baer a glimmer of understanding that there was help out there for people with psychiatric illness. Two years before his death in August 2002, Baer established and partially funded the Sidney R. Baer, Jr. Foundation, designed to support education, research and direct care in the mental health field. “Sidney really believed in doing something with his money that would alleviate the suffering of those like himself. When we established the foundation, he told his doctor, ‘I’ve finally signed papers to allow my money to be used to give people the help I never got,’” Handran says.

Today, Handran is co-trustee of the foundation with the U.S. Bank. Along with bank officers Ann Carroll Wells and Scot W. Boulton, he is responsible for deciding where the Baer Foundation money should go. “I am in the enviable position of being able to say, ‘I knew Mr. Baer and I think this is a project he would have chosen,’” Handran says.

Recently, among the hundreds of grant applications he receives each year, Handran selected a fellowship and research opportunity at McLean. With \$321,000 over three years, the Baer Foundation is supporting the Sidney R. Baer Fellowship in Behavioral Neurology/Neuropsychiatry, designed to help bridge the gap between the fields of neurology and psychiatry; an additional \$135,000 is being used to fund research in this integrative specialty.

In a January 2000 paper in the journal *Neurology*, Bruce Price, MD, chief of Neurology at McLean, and colleagues argued that there is a schism between psychiatry and neurology that affects patient care, medical education and clinical research. This divide persists despite the fact that many boundaries separating psychiatry and neurology have dissolved as a result of an expansive growth in neuroscience, brain imaging and the knowledge that most brain diseases have neurological and psychiatric consequences. Price’s work at McLean strives to close this “great divide” with the Neuropsychiatry and Behavioral Neurology (NBN) Inpatient Consult Service and Fellowship, a single research, educational and clinical care setting that brings together neurologists, psychiatrists and neuropsychologists.

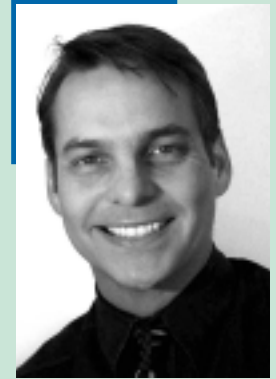
According to Price, this academic forum and training ground offers “a bold, revolutionary model for the future of neurology, psychiatry and neuropsychiatry.” Price wonders if Sidney Baer’s case might have been different if he had received integrated care, a multidisciplinary approach to treatment that focuses on psychological, psychiatric and neurological symptoms. “In tribute to Sidney—and in learning lessons from him and others like him—we are trying to make patient care more seamless,” he says.

Cross-training is an integral part of the process. The program works with more than 50 professionals a year from the fields of psychiatry, neurology and neuroscience, all of whom learn about the intersections among their disciplines. According to Price’s colleague Miles Cunningham, MD, PhD, “We consult on patients who are puzzling to the team because their issues lie along the interface between neurology and psychiatry. Together we look at all the relevant data and come up with unified treatment plans that both help patients and cross-train clinicians.”

Price and Cunningham hope that NBN’s approach will help train young professionals to reject the polarization of neurology and psychiatry. “We hope these future leaders within neuroscience, neurology, and psychiatry will help perpetuate an integrated model of patient care,” Price says.

For George Handran, Price and Cunningham’s research offers an innovative multidisciplinary approach to psychiatric illness. The Baer Fellowship promises to train professionals to understand and treat patients in ways Baer could not have dreamed of.

“I often wonder what Sidney’s life would have been like if he had received integrated care,” Handran muses. “What better way is there to keep Sidney’s memory alive than to use his money to help humanity in ways he could not be helped? Sidney has left a legacy in mental health that I hope will go on forever.” ♦



Miles Cunningham, MD, PhD

“What better way is there to keep Sidney’s memory alive than to use his money to help humanity in ways he could not be helped? Sidney has left a legacy in mental health that I hope will go on forever.”

George Handran



Price believes the Sidney R. Baer Fellowship will help close the “great divide” that persists between neurology and psychiatry.

Women's Treatment Program Puts Women on the Path of Recovery

When Susan completed the Women's Treatment Program (WTP) at McLean, she knew she had received life-altering care. In her exit interview she recalls, "Had I not been in the program, a great darkness would have consumed me." For many women like Susan, the WTP is a guiding light.

One of only a few such programs nationwide, the WTP is a group residential and partial hospital treatment program designed for women who need more structure and intensive therapy than is possible on an outpatient basis. The program offers psychiatric and psychological services to women facing a wide range of issues, including mood disorders, anxiety disorders and trauma-related illnesses, such as post-traumatic stress syndrome and dissociative disorders. In particular, the WTP specializes in treating women who have experienced childhood sexual abuse.

According to Clinical Director Sherry Winternitz, MD, many patients at the WTP, especially those recovering from the trauma of childhood sexual abuse, have difficulty with issues of trust, interpersonal relationships and general life skills. "Our goal is to first help them feel safe and empowered, then help them learn coping and vocational skills," she says.

Philosophically, the program respects the central importance of relationships in women's lives. Groups cover a wide range of issues, including those related to parenting, substance abuse, anger management, family dynamics, eating disorders and impulse control. Skills training is based on the principles of psychologist Marsha Linehan's dialectical behavioral therapy, a treatment that focuses on mindfulness, emotion regulation, distress tolerance and interpersonal effectiveness.



(From left) Sherry Winternitz, MD, Claudia Nolan, MEd, LMHC, and Melanie Richardson, APRN, BC, offer specialized psychiatric services to women at the WTP.

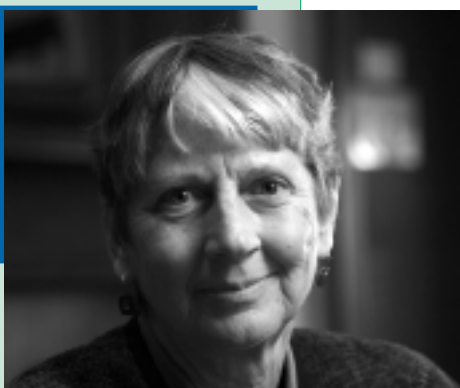
According to Winternitz, the WTP provides a flexible model that offers either a "stepping stone for patients just released from the hospital or an 'instead of' option for those wanting to avoid hospitalization." Women in treatment can stay in one of the program's 16 residential beds or live at home and participate in treatment during the day.

Staffed by a team of psychiatrists, social workers, expressive therapists and nurses, the WTP provides a unique, multidisciplinary approach to treating women. "McLean has the expertise to focus on the complex issues women face," Winternitz says.

Annually, there are, on average, 2.5 million reported cases of childhood abuse in boys and girls in the United States, and most likely many more that go unreported. Yet, according to Winternitz, the WTP is one of only a few residential treatment programs in the country that focuses on the complex psychological issues women face after a history of abuse; it is the only one she knows of in the Northeast. "Given the statistics, it's surprising that there aren't more programs out there. There are so few

"There are very few places to treat women with trauma-related disorders, even though trauma in women is amazingly common."

Sherry Winternitz, MD



For more information, visit www.mclean.harvard.edu/patient/adult/wt.php

services to treat this very large population,” she says.

Because of the rarity of similar programs, the WTP draws women from all over the country and is filled to capacity. Yet, staff, resources and funding are limited. The program operates exclusively on medical insurance and Medicare reimbursements and funds from unrestricted hospital sources.

Winternitz emphasizes the need for additional funding to help support and develop the WTP. She dreams of providing scholarships for women who have to leave the program before they have taken full advantage of it; many women must leave because they have no insurance or need

services beyond what their insurance will cover. She would also like to expand the WTP’s vocational training and art and expressive therapies.

Winternitz is grateful to those McLean donors who give unrestricted gifts to the hospital, allowing the WTP to fulfill this sorely needed service. “There is so little help out there for women,” she says. “We’re pretty special.”

Patients couldn’t agree more. Said one woman upon completion of the program, “Thank you for helping me enter back into my world unafraid.” ♦

Longtime Donor Creates a Legacy at McLean



Edith Bemis’s legacy gift—nearly 50 percent of her estate—will have a lasting impact on the hospital.

For more than 20 years, Edith Purdy Bemis gave modest yearly gifts to McLean. And more than 15 years ago, the nursing school alumna notified McLean that she had chosen to remember the hospital in her estate.

In 2002, Edith Bemis became one of the first members of the newly-formed John

McLean Society, which recognizes those who have made McLean part of their estate plans. Although she had given small contributions throughout her life, when Edith died in 2003, her estate included a sizable, unrestricted contribution to the hospital.

According to her nephew Clayton Bemis, Edith was a “loyal, hard worker” and decorated World War II veteran. After graduating from the McLean School of Nursing in 1943, she served in several battles overseas and was honorably discharged in 1946. Until her retirement, she worked as a nurse at the VA Hospital in Brockton, Massachusetts; she died in her house in West Bridgewater, where she had lived since she was a child.

Throughout her life, “my aunt always spoke very highly of McLean and was grateful for the good work the hospital is doing,” Clayton Bemis says. So it felt only natural to Edith to establish a legacy gift to McLean.

“She got a sparkle in her eye every time she talked about McLean. ‘Now that’s an organization worth supporting,’ she’d say.” – Clayton Bemis

That gift—nearly 50 percent of Edith Bemis’s estate—will have a lasting impact on the hospital. Both unrestricted bequests and lifelong donations like Edith’s help McLean

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defray the essential costs of providing care, teaching professionals and performing research; these gifts also provide a way for donors to make enduring contributions without creating an unmanageable burden on their current financial resources. Both kinds of gifts are crucial to McLean's ability to help those struggling with psychiatric disorders.

According to Clayton Bemis, "My aunt and uncle were from an era when money wasn't readily available, so they didn't spend a lot. They squirreled their savings away in every bank in town. But when it came to giving, Edith did what she thought was right. My aunt told me on many occasions how proud she was to have been trained at McLean and how important it was for her to contribute to the research and training that are going on there today. She got a sparkle in her eye every time she talked about McLean. 'Now that's an organization worth supporting,' she'd say." ♦



Edith Bemis (back row, far right) graduated in McLean's Nursing Class of 1943.

Planned gifts represent an important source of philanthropy for McLean Hospital. Each year, many donors choose to make a planned gift — either through a life income gift vehicle or by designating McLean Hospital as a beneficiary of their estate. Please contact the Development Office at 617.855.3571 if you would like information about our planned giving program.

For more information on planned giving, please visit www.mclean.harvard.edu/gift/planned

McLean Hospital is the largest psychiatric affiliate of Harvard Medical School.



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