The following is the third in a series of articles that profile department chairs who have joined the school in recent years, as well as highlight the goals they have set and notable achievements they have attained in collaboration with faculty and staff. Should you wish to contact chairs profiled in this series, we invite you to do so by e-mailing them at the address provided at the end of each article.

—S. A. Unger

The BEST *in* MIND

By S. A. Unger

Steven Dubovsky, MD, leads the Department of Psychiatry

When Steven Dubovsky entered medicine in the late 1960s and decided to specialize in psychiatry, he wasn't exactly swimming against the tide, personally or professionally, since both his father and grandfather were physicians, and almost 15 percent of medical students in his graduating class nationwide were choosing to enter the same specialty.

Despite his late-blooming tendencies in terms of "doing his own thing," once he got going, Dubovsky quickly made a name for himself as one of the most innovative clinicians and researchers in his field.

In 2004, when he accepted the position as chair of the UB Department of Psychiatry, Dubovsky had a curriculum vitae that amply demonstrated he was a physician-scientist who put the spirit of inquiry first, and if accolades and recognition followed, then so be it.

PHOTO BY DOUGLAS LEVERE

Steven Dubovsky, MD

Today, he is probably best known for his trailblazing investigations into the biochemical underpinnings of psychiatric disorders, a pursuit that the majority of his colleagues 40 years ago deemed misdirected when compared to what they thought could be accomplished solely through talk therapy and psychoanalysis.

In the early 1980s, Dubovsky was the first to demonstrate that individuals with bipolar disorder had increased cellular calcium-ion signaling. In doing so, he and his group further discovered that one reason why lithium and other medications work for this disorder is that they normalize calcium balance within cells.

In addition to his accomplishments as a basic researcher, Dubovsky is highly regarded for his clinical expertise in treating what are called "complex cases"—individuals who have both medical and psychiatric problems, or who have psychiatric problems that are resistant to treatment. His clinical practice focuses on the treatment of physicians and psychiatrists, and prior to coming to UB he consulted on as many as 10 such cases a day from around the world.

Throughout his career, Dubovsky also has been tapped to take on special administrative assignments. At UB, he has continued to excel in this type of work and was recently selected to chair a committee whose task is to work out the details for how best to consolidate the school's 18 separate specialty practice plans under one clinical practice group, called UBMD.

The Systematic Approach

While it may appear that Dubovsky has a knack for being in more than one place at a time, his career has been marked by a geographic stability unusual for a man with his academic talents and track record.

He was born and raised in Colorado, a place where his father, a pediatrician from New York City, had been transferred by the U.S. Army.

Dubovsky earned both his undergraduate degree (magna cum laude) and his medical degree from New York University. He interned in medicine at Vancouver General Hospital in Vancouver, British Columbia, and completed psychiatry residency training at the University of Colorado Medical Center, where he served as a chief resident.

Once out of residency, he joined the faculty of the University of Colorado, where he stayed for 31 years until accepting the chair position at UB.

Dubovsky's research career began unexpectedly during his residency, when he encountered a female patient with schizophrenia who had psychogenic polydipsia, a condition in which a person drinks excessive amounts of water. Normally, drinking a lot of water does not dilute the blood, but in this case it did, indicating that there also was an abnormality of water metabolism.

Dubovsky was intrigued by her case and sought the advice of Robert Schrier, MD, a world-renowned nephrologist who was then head of the Division of Nephrology at the University of Colorado and who later went on to chair the school's Department of Medicine, building it into one of the top programs in the country.

"At that time, the psychiatry department at Colorado was mostly focused on psychoanalysis, and I was interested in other types of research, and I couldn't get any mentoring for that in our department," recalls Dubovsky during a recent interview in his office at Erie County Medical Center.

"The majority of people who were in psychiatry then felt that you could figure out from someone's psychology how to treat most mental problems and many physical problems, as well," he continues. "In fact, when I was a resident, if you gave a patient medicine for anything, you were considered to have failed."

As a result, Dubovsky gravitated toward Schrier, whom he thought could help him puzzle out why his patient was developing water intoxication.

When he met with Schrier, he sounded him out on his hypothesis: Could it be that the patient was secreting abnormally high levels of vasopressin, a stress hormone that, among other things, causes the kidneys to retain water?

"There wasn't much written on this, so we did a little research," explains Dubovsky. "We did some tests to show that the patient had a reversible syndrome of inappropriate release of vasopressin (antidiuretic hormone) that went away when she wasn't psychotic anymore.

"We did more research and wrote an article together about it, and subsequently there was even more research done on it, and now there is a standard approach to diagnosing and treating this, and it's established that the syndrome of inappropriate secretion of antidiuretic hormone can be caused by psychosis."

This experience made Dubovsky realize that he did not have enough training in research methods, so when he joined the faculty, he asked Schrier if he would teach him how to be more systematic in his approach to investigating questions of interest to him.

Schrier assigned one of his fellows to work with Dubovsky and arranged for them to develop studies in the school's general clinical research center.

The next order of business was, What to study?

Dubovsky recalls how Schrier made short work of this question while providing him with a memorable lesson in systematic thinking.

"He said to me: I'm a nephrologist. We study the kidney. You're a psychiatrist. Lithium is an established treatment in psychiatry. Let's study the effect of lithium on the kidney."

The first thing Dubovsky looked at was, What happens to patients' kidneys when they take lithium?

"One of the things we saw right away was that the amount of calcium in their urine decreased," recalls Dubovsky. "I was doing a lot in internal medicine, so I said, 'Well, what makes urinary calcium excretion decrease? And I realized it's because you're retaining more calcium. Why would you do that? Because your parathyroid glands are hyperactive."

Following this intuition, Dubovsky then did a study that showed that most patients taking lithium develop hyperparathyroidism, even if it is not clinically apparent.

The question then followed: How could that be?

"I was brainstorming this question with Bob Schrier and I said, 'Lithium must be getting into the parathyroid cells and jamming up the calcium-signaling mechanism so that the parathyroid thinks you don't have enough calcium in your blood. If that's true, maybe bipolar people have a hyperactive intracellular-calcium signal that is normalized by lithium. So we decided to see if we could measure the actual level of intracellular calcium in bipolar patients on and off of lithium."

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THE ENSUING RESEARCH, which eventually led to Dubovsky's breakthrough finding on the role of calcium-ion signaling in bipolar disorder, took years to unfold and, by that time, he was supporting his own lab and developing an international reputation for his work.

Building on these early successes, Dubovsky has continued to conduct innovative research on the interactions of medical and psychiatric disorders and has contributed to the development of new medications, including those aimed at treating individuals who have been traumatized by extreme events.

When asked to clarify, in retrospect, just how novel his early investigations were, he states: "To my knowledge, ours were the first studies of the cell biology of bipolar illness. There had been a lot of chemistry studies on many things over the years, but our studies were the first to look at what happens inside the basic machinery of the cell to throw it out of kilter in this type of mood disorder.

"At the time I started doing the research, there were very few people in psychiatry interested in it; they were more interested in connections between neurons and synapses. Now, a lot of people are interested in the cell biology of bipolar disorder, and there's a lot of data coming out."

Leadership Roles

As if managing a thriving research program and clinical practice weren't enough, during the time he was at Colorado, Dubovsky developed yet another persona, that of "go-to" guy for a wide variety of key administrative positions. Among the roles he filled were vice chair for clinical affairs for the Department of Psychiatry (the position he held prior to being recruited to UB), associate dean of student affairs, associate dean for academic and faculty affairs, associate medical director of the general clinical research center and medical director of the transplant service (where the world's first liver transplant was done), associate medical director of the clinical research center, and even a two-month stint as acting dean of the medical school.

DUBOVSKY BEGAN in these roles when the first chairman he worked for, named Herbert Pardes—who later went on to head the National Institute of Mental Health and who today serves as president of Columbia Presbyterian Hospital in New York City—assigned him to be the director of medical student education at Colorado. His work in that capacity led to his being asked to serve as associate dean for student affairs for the medical school.

By the time UB came calling, Dubovsky had developed a reputation as an administrator who could work effectively with a wide variety of people in complex environments.

While discussing this aspect of his career, however, he emphasizes that he has never been solely an administrator. "I've always done clinical work, research and teaching at the same time, to varying degrees."

Building on Strengths

Not surprisingly, Dubovsky had been consistently recruited over the years by schools from around the country, yet each time, he and his wife, also a native of Colorado, decided to stay put and raise their two daughters in Boulder.

PHOTO BY K.C. KRATT

DEPARTMENT VICE CHAIRS **Kenneth Leonard, PhD,** LEFT, **and Yogesh Bakhai, MD**

When Dubovsky was approached about the position at UB, however, the couple was newly motivated to consider a move east in part because their daughters had both settled in New York City (one has since moved to Boston, where she is in residency at Harvard Medical School after earning a medical degree from New York University).

"When I came out here to Buffalo [for an interview], it was really nice," recalls Dubovsky. "Everyone was extremely friendly, which contributed a lot to my agreeing to a second visit."

The second interview only confirmed the initial positive impressions, and so he and his wife decided to make the move. By the fall of 2004, they had bought a house in Eggertsville, near the South Campus, and began settling into their new life in Western New York.

In describing the approach he has taken to leading the UB Department of Psychiatry for the last four years, Dubovsky explains that "an academic department should be doing several things: Number one, it should be at the forefront of developing knowledge. Second, it should be at the highest level of clinical practice; it should set the standards that all practitioners aspire to.

"I want people to think of Buffalo as the place to go—the place everyone in the country looks to—for the most advanced care in the things that we have expertise in, such as mood disorders, obsessive-compulsive disorder, post-traumatic stress disorder [PTSD] and neuropsychiatry."

With regard to education, he says, "I want to keep our students excited and informed about our field and to turn out a generation of new psychiatrists that goes out and becomes leaders."

Key to these goals, he emphasizes, is the department's faculty, which he characterizes as "excellent."

"Our faculty are very enthusiastic about teaching," he explains. "They like the students. They pay attention to them and value them. Too, we also try to model good care, and that has a big impact on the students."

Those leading educational efforts in the department include, Cynthia Pristach, MD, residency program director, Linda Pessar, MD, director of medical student education, and David Kaye, MD, director of training in child and adolescent psychiatry. Leadership also is provided by Yogesh Bakhai, MD, vice chair for clinical affairs, and Kenneth Leonard, PhD, vice chair for research affairs.

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Clearly the students are responding to this teaching environment, as currently about 7 to 10 percent of each UB graduating class chooses to enter psychiatry, whereas nationally the numbers are about 2 to 3 percent.

"Also, UB students are getting into really good programs around the country, such as Harvard, Johns Hopkins, University of Washington, Columbia and Cornell—you name it," says Dubovsky. "And a number of our students who could go elsewhere are choosing to stay and train in Buffalo."

EACH YEAR, ON AVERAGE, the Psychiatry Residency Program at UB trains 25 adult and six to eight child psychiatry residents.

Recently, the department established a geriatric fellowship, with the aim of addressing the severe shortage of trained professionals in this subspecialty.

The initiative to begin the fellowship came from Marion Zucker Goldstein, MD, a professor in the department and director of its Division of Geriatric Psychiatry.

"Marion came to me about developing this fellowship, so I got some other people involved and we put it together," Dubovsky explains. "It's a good fellowship, and now I'm thinking the next step will be either a forensic fellowship or one in substance abuse. We're still not sure yet which we'll do first."

Currently, the department has 55 faculty members, about 20 of whom have been recruited since Dubovsky stepped in as chair, including four who joined the department last year.

The hires are strategic, as Dubovsky is looking toward building strengths in the areas in which the department excels in terms of both clinical care and research; for example, mood disorders, PTSD, psychosis "and people who are interested in metabolic disorders and getting some research going in that area," he notes.

Asked what his philosophy is regarding faculty conducting research, Dubovsky is surprisingly circumspect, especially given his own track record in the area. "My belief is that everyone in the department ought to maximize his or her potential to do what they do best," he says. "So, I'm not going to say that everyone has to do research, because some people like to do it and some don't. But what I do want to do is to have more of a research ethic in the department and to develop more systematic investigations in areas where the faculty has interest and we can build on that interest, and to have every clinician adopt a scientific attitude toward clinical work."

Dubovsky emphasizes that UB is an exceptionally good place to conduct research because of its collaborative environment, not just within the school of medicine, but university wide as well.

"When I first came here, I was amazed at how collaborative everyone is, and I still am," he says. "Most of my work over the years has been with people in different disciplines in medicine, but here at UB, it's a whole order of magnitude greater than anything I have seen anywhere else.

"Right now, for example, I have collaborations with [faculty in] the schools of architecture and planning, engineering, management, arts and sciences, public health, and the psychology department. It's remarkable how interested everyone is in this type of interaction. It's really been encouraging."

Overcoming Inertia

Less encouraging, is the clinical practice environment in Buffalo, which poses one of Dubovsky's biggest challenges.

To begin with, there is an acute shortage of psychiatrists in the city (only 8 such specialists per 100,000 people, compared to approximately 35 per 100,000 in New York City).

Compounding this problem is what Dubovsky refers to as "a very bad funding problem."

Elaborating on this, he explains that "essentially, the insurance companies have done their best to destroy the practice of psychiatry in this region because they only pay for very brief visits —about 15 minutes—which is not even enough time to check on medicines responsibly, let alone to provide psychological therapies."

The same thing holds true for the public mental health system, where, according to Dubovsky, "the reimbursement model encourages psychiatrists to spend a lot of time writing prescriptions or supervising other professionals, such as nurse practitioners, but not a lot of time providing integrated care.

"For some people it works quite well," he adds, "but for others, it's quite frustrating."

Further confounding to Dubovsky is the fact that funding is very generous in Buffalo for inpatient hospital stays. "So you have insurance funding that allows a patient to be seen every few months by a psychiatrist as an outpatient, and a rich public-funding system that promotes hospital stays, and not a lot in between," he concludes. "What you end up with are people being admitted to the hospital because they couldn't get their medicine refilled."

Dubovsky, along with others, is exploring ways to change these funding dynamics, and although he has made it one of his priorities since coming to Buffalo, he says he is consistently hobbled by a phenomenon that plagues all his best efforts—"inertia."

DAVID KAYE, MD, director of training in child and adolescent psychiatry

"When I first came to Buffalo and would talk to people about my concerns about the funding, they would tell me, 'Well, that's the way it is; there's nothing you can do.' And I would say, 'Nothing you can do—what are you talking about?' And, since then, a lot has changed. It's just a matter of getting people to step back and get a different perspective on things."

One victory against the forces of inertia that Dubovsky took a keen interest in both professionally and personally was the hospital settlement in Buffalo last summer, which broke a deadlock in negotiations between Kaleida Health and Erie County Medical Center and opened the way for a reengineering of the health-care delivery system in the city.

Although he had a hand in the negotiations that led to the settlement, Dubovsky is quick to give full credit to two of his fellow department chairs at UB—Lawrence Bone (orthopaedic surgery) and Merril Dayton (surgery)—for taking a lead on this issue.

"Everyone was saying, 'No, no . . . you can't do anything about the situation, but these two doctors stepped forward and got things started. They said, 'We just can't let this happen. We've got to keep working on this,' and in the end, they got it worked out."

The lesson that Dubovsky draws from this positive development for the Buffalo medical community seems to be one that rings true for all the challenges he has tackled in his career, past and present.

"To me," he says, "what this [settlement] ought to be telling people is you can change things. You've just got to get a little energy going. You can't just sit around waiting for things to change; you've got to make it happen." BP

For more information on the Department of Psychiatry or to contact Dr. Dubovsky, email Margaret Uebler-Otoka, assistant to the chair, at mmu3@buffalo.edu.

PHOTO BY K.C. KRAFT

FROM LEFT: Cynthia Pristach, MD, psychiatry residency program director; Linda Pessar, MD, director of medical student education; and Marion Zucker Goldstein, MD, division and program director of geriatric psychiatry

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