Minding Time: UC San Diego's Department of Psychiatry Marks 50 Years

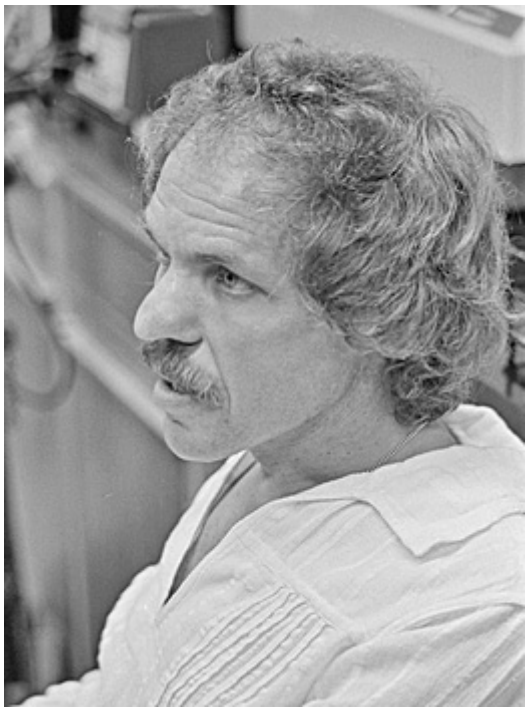
By Scott LaFee | April 03, 2019

Nineteen-hundred-and-sixty-nine was a famously memorable year. It was the year of Woodstock and the first man on the moon, of the Cuyahoga River in Cleveland catching fire and the last public performance by The Beatles — an impromptu concert atop Apple Records in London.

It was the debut of The Brady Bunch and square hamburgers from a new restaurant called Wendy's. The University of California San Diego wasn't yet even a teen; the School of Medicine was even younger, founded just one year earlier.

Nineteen-hundred-and-sixty-nine also marked the beginning of the School of Medicine's Department of Psychiatry. This year marks its 50th anniversary.

From the beginning, the department was different, and equally memorable. Its founding chair was Arnold J. Mandell, MD, a 35-year-old neuroscientist and psychiatrist who was, at the time, the youngest physician ever appointed chair of a medical school psychiatry program in the United States.



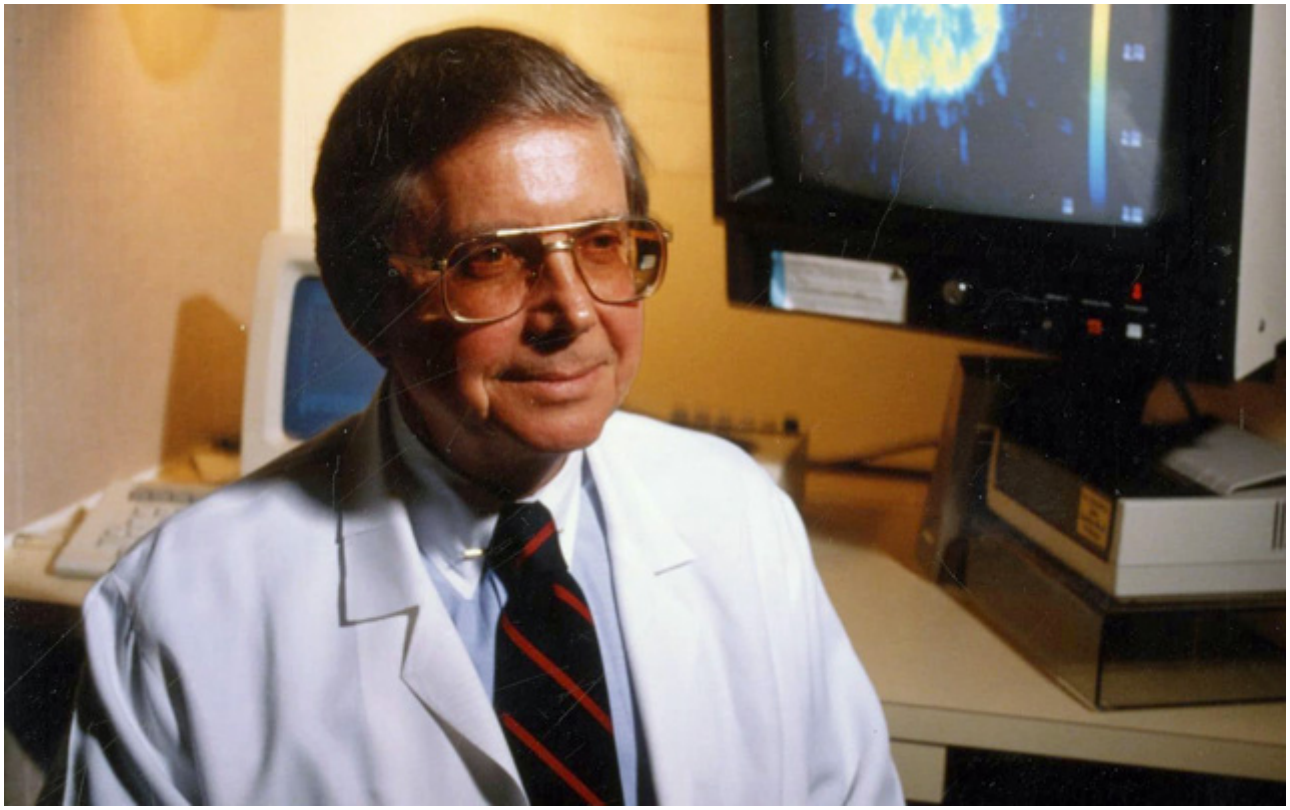
Arnold J. Mandell, MD. Health Sciences Communications Public Relations Materials, Special Collections and Archives, UC San Diego.

Mandell was an early advocate of biological psychiatry, the concept that mental disorders could be studied and understood in terms of the underlying biological functions of the brain and nervous system. The approach encompasses multiple disciplines: neuroscience, psychopharmacology, biochemistry, genetics, epigenetics, physiology and more. It moved beyond the older practices of exploring a patient's state-of-mind through talk, dreams, free association and fantasies.

As a result, the Department of Psychiatry at UC San Diego School of Medicine became the first in the country with a biological orientation, an approach emphasizing the requirements and values of empirical science.

Mandell stepped down as chair in 1977 and later moved to the Cielo Institute, a North Carolina-based center for biophysical theory and applications, though he retains professor emeritus status at UC San Diego.

He was succeeded by one of his first recruits, Lewis Judd, MD. Like Mandell, Judd was a forceful expert in biological psychiatry, particularly regarding the idea that mental disorders like depression could be treated with appropriate, rigorously developed psychopharmaceuticals.



Lewis Judd, MD. U.S. National Library of Medicine

Judd devoted the rest of his career to building one of the country's finest psychiatry departments, based on research and evidence, elevating it to among the top three in National Institutes of Health funding. From 1987 to 1990, he served as director of the National Institute of Mental Health, the first active scientist to hold the job and helped launch the Decade of the Brain (1990-1999), an ambitious effort to raise public awareness of the benefits derived from brain research.

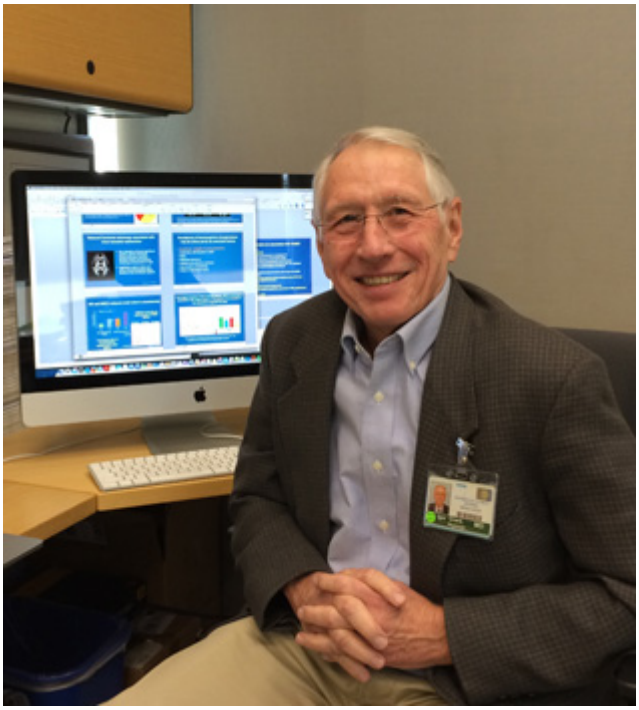
"The thing I'm most proud of is how psychiatry is becoming increasingly recognized as a real biomedical science," Judd said in 2013. "It used to be disdained. A broken mind wasn't as real as a broken bone. We lionized physical medicine, but dismissed brain biology, which has an enormous effect upon not just our behavior, but our bodies as well."

Judd retired in 2013 after 36 years as chair, serving an astounding 70 percent of the university's existence at the time. He died in 2018 at the age of 88.

Igor Grant, MD, became only the third chair of psychiatry in 2014. Grant, who joined UC San Diego faculty in 1972, embodies the department's extraordinary scope and depth of research. He is

director of the HIV Neurobehavioral Research Program, which includes the California NeuroAIDS Tissue Network, the Translational Methamphetamine AIDS Research Center, the HIV Neurobehavioral Research Center and the CNS HIV Anti-Retroviral Therapy Effects Research.

Under Grant, the department has seen a period of significant growth and change, most notably in the focus and expansion of the clinical enterprise, with significant advances in UC San Diego Health programs and quality, including patient access, satisfaction and experience.



Igor Grant, MD.

Several academic initiatives have also been launched, including a collaboration with UC San Diego's Jacobs School of Engineering to begin developing a Mental Health Technology Center. Recent years have also witnessed new faculty recruitments in basic and translational science, as well as expansion of multidisciplinary training.

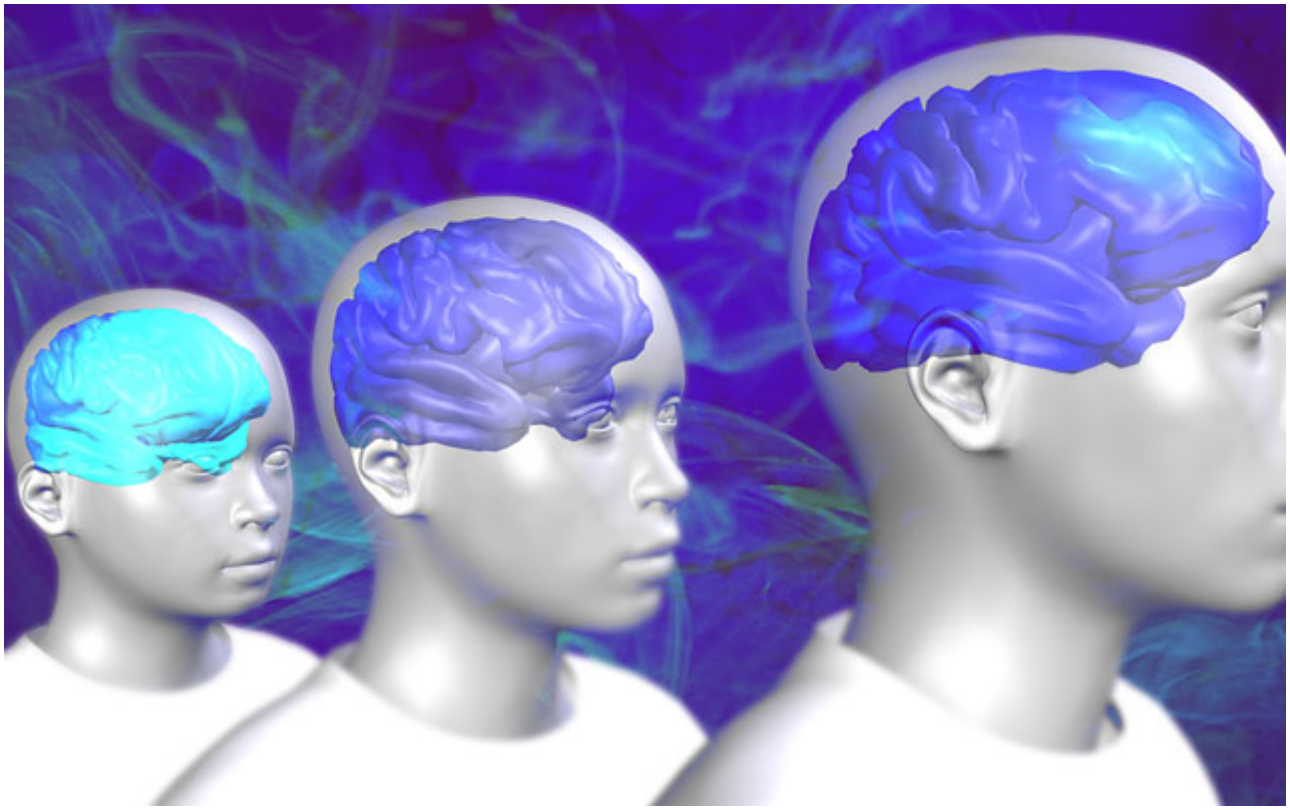
"Fifty years ago, we were among the groundbreakers in the idea that the brain had to be put back into psychiatry," said Grant. "As we and others have embraced this paradigmatic shift, we have come to understand that alterations in mood, behavior and cognition are not simply the product of something being 'wrong' structurally with the brain. Behavioral disturbances can reflect altered patterns of communication between distributed neural networks. Connectivity among circuits may be overly strong, too weak or asynchronous.

"We now view the brain as a constantly adapting system. Nature and nurture are not separate universes, but in constant interplay. We come into the world with certain endowments, and these exert some limits on what we think and do, but the brain is a system that constantly learns, creates behaviors and those behaviors and learning continue to reprogram it, including at a genetic level."

Some departmental highlights, over the years, then and now.

Alcoholism and Other Addictions

Marc Schuckit, MD, and colleagues have conducted ground-breaking longitudinal studies on the genetics and characteristics relating to vulnerability to alcohol abuse. They have discovered that, contrary to intuition, children of alcoholics are more resistant to the negative physiological and psychiatric effects of alcohol consumption, and thus able to tolerate larger doses than others. These findings have led to a better understanding of the genetic contributions to alcoholism and early identification of those at risk.



Adolescent Brain

Susan Tapert, PhD, and colleagues are leading an unprecedented longitudinal, multi-site study to probe the mysteries of the adolescent brain, following more than 10,000 children over 10 years as they transition from ages 9 and 10 through their teen years. The national study will use a variety of technologies to measure cognitive, intellectual, social, physical and emotional health and change, and perhaps identify predictors of subsequent substance abuse and other mental health problems.

Depression

One of the focuses of the department's investigations into mechanisms and treatment of depression and related mood disorders has been to explore the associations and potential disturbance of our biological clocks. Studies led by the late J. Christian Gillin, MD; Daniel Kripke, MD; John Kelsoe, MD; David Janowsky, MD; Barbara Parry, MD, and others have linked changes in basic cellular rhythmicity to circadian disturbances — and the possibilities of identifying those people who might benefit from specific pharmacologic and non-pharmacologic interventions, such as bright light treatment.

Schizophrenia

The work of David Braff, MD; Mark Geyer, PhD; Neal Swerdlow, MD, PhD; Greg Light, PhD, and others has identified fundamental information processing deficits in people with schizophrenia and those vulnerable for the disorder. Through a combination of research on animal models, and persons with varying psychotic features, they have shown that defects in filtering complex information is one of the bases for behavioral disturbances. This has led to development of novel

pharmacologic and non-pharmacologic treatments, including "machine-brain" interface paradigms to modify attentional processing deficits.

HIV, Brain and Behavior

Investigators led by Grant and others were among the first to identify that substantial cognitive and behavioral difficulties can occur at many stages of HIV disease, and that these were related to cellular injury in the brain. The neurocognitive features of HIV were established, and identified as one of the sources of risk behavior and reduced quality of life. This has permitted further research on developing biomarkers for brain involvement in HIV, and modifying antiviral and neuroprotective treatments to eliminate neurobehavioral complications.

Eating Disorders

The work of Walter Kaye, MD, and colleagues epitomizes the "bench to bedside" approach within the department. Kaye and colleagues discovered that disturbances in the rewarding effects of food were fundamental in anorexia nervosa and identified some of the brain circuitries dysregulated in this condition. These findings have been translated into new therapies.

Healthy Aging

Dilip Jeste, MD, and colleagues have launched innovative studies into the importance of wisdom in older people, and how this wisdom can lead to a healthier and more satisfying aging process. At the same time, they have partnered with industry to improve technologies for monitoring and feedback of behaviors in the home that may be signals of frailty, helping others to intervene earlier in health-related difficulties associated with getting older.

Anxiety and PTSD

Murray Stein, MD, and colleagues have identified some of the basic neurobiological mechanisms that underlie several anxiety disorders and have pioneered new treatments, including for social anxiety. Others, such as Dewleen Baker, MD, have examined how the brain changes due to post-traumatic stress disorder and the psychobiological markers of combat stress and deployment stress, with the idea of trying to understand better the components of resilience.

Medicinal Cannabis

In 2000, UC San Diego School of Medicine established the Center for Medicinal Cannabis Research (CMCR), among the first in the nation. CMCR has been at the forefront of sorting out what conditions cannabinoids may be helpful in treating and relevant public health implications, such as testing drivers suspected of being under the influence.

Veterans

In partnership with the Veterans Affairs San Diego Healthcare System, whose physicians and psychologists are faculty members, the department has been involved in research on the biopsychosocial bases, and improved treatment, of major mental health issues confronting veterans, such as post-traumatic stress disorder, schizophrenia, mood disorders and suicide risk.

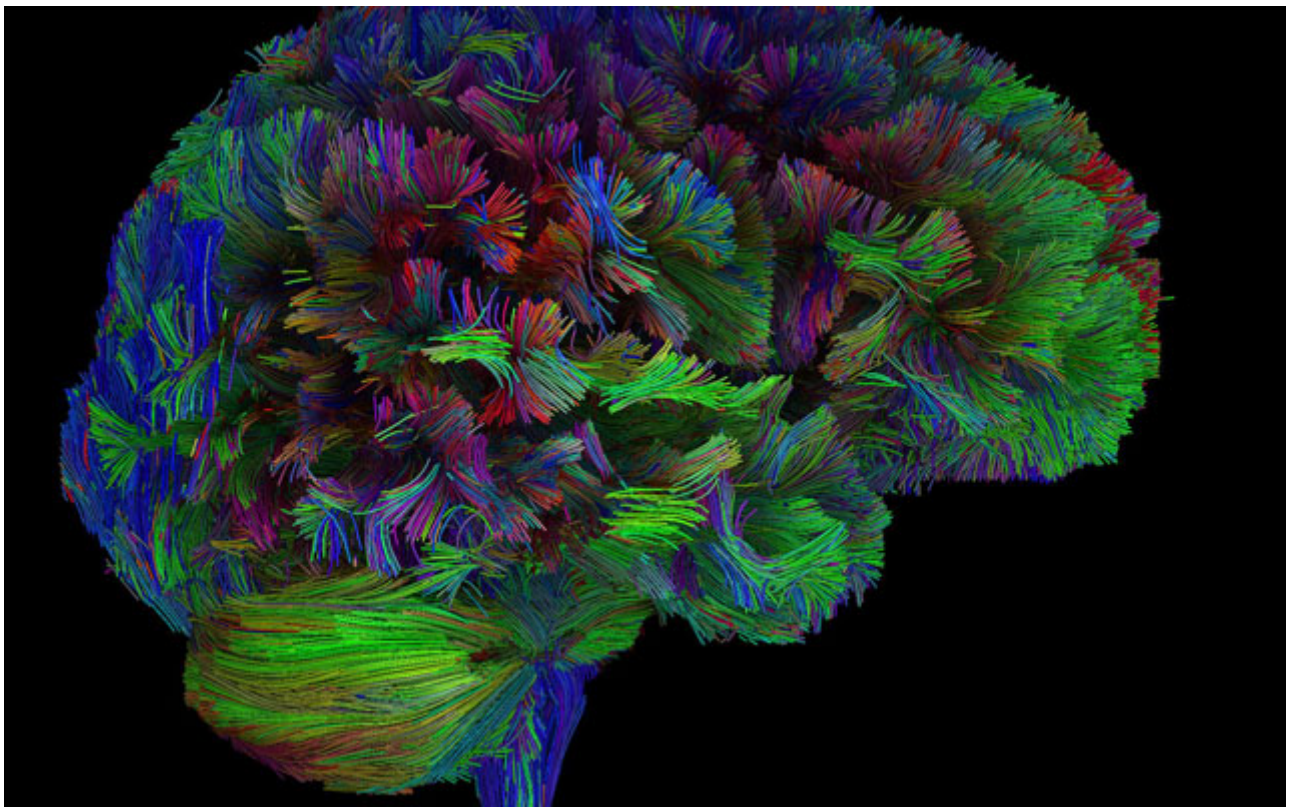
Real World

Of course, health science research is only valuable if it can be applied to better understanding and treating the human condition, said Grant. "Mental health interventions need to work in the real world."

Greg Aarons, PhD, professor and director of the Child and Adolescent Services Research Center, with colleagues such as Lauren Brookman-Frazee, PhD, have been evaluating how interventions can be made practical in community settings, leading to a more precise understanding of what works and what does not.

The department has been a leader in the development of evidence-based clinical programs, such as the Eating Disorders Center and the Senior Behavioral Health program. The latter has established a new standard of evaluation and treatment of aging disorders, especially related to Alzheimer's disease and other dementias, and well-designed inpatient and outpatient programs.

One in four college students is at increased risk for mental health problems, largely due to stress. The department, in partnership with UC San Diego Health and the university, has created a College Mental Health clinic to identify and help at-risk students. It's unique within the UC system.



And, of course, the department's educational mission includes training and preparing mental health professionals for the future. The earliest programs focused on training psychiatrists, emphasizing evidence-based practices. In the 1980s, efforts expanded to train psychologists in the scientist-practitioner model, partnering with San Diego State University. Over the years, this top-ranked doctoral program has grown to encompass 25 distinct multidisciplinary specialties, including clinical and research training in addictions, child psychiatry, geriatric psychiatry, HIV/AIDS, eating disorders, neuropsychology, and biological psychiatry.

Grant said the future of psychiatry — or at least the vision at UC San Diego — likely involves developing new technologies to alter ingrained patterns of neural communications —

strengthening where needed, weakening elsewhere.

"We are developing strategies to understand how communications within and between cells are altered in psychopathological states. We propose to use techniques developed with our engineers first to monitor these communication patterns between circuits in real time, to identify targets of intervention and then evaluate the effects of interventions.

"These interventions need not be limited to drugs or electromagnetic brain stimulation. Indeed, one of the exciting challenges will be to determine and monitor how verbal and nonverbal communications can be optimized to modify the brain's responses in predictable ways. I expect this great department to contribute to improved mental health outcomes in the decades to come."

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- → Psychiatry and Behavioral Health
