

Obituary

In Memoriam: J. Christian Gillin

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J. Christian Gillin, MD, a renowned sleep specialist and Professor of Psychiatry at the University of California, San Diego (UCSD) and the Veterans Affairs San Diego Healthcare System, died of esophageal cancer on Saturday, September 13, 2003. He was 65 years old.

Dr Gillin was internationally known and widely honored for his seminal research on sleep and mood disorders. In 2001 he was the recipient of a Lifetime Achievement Award from the American Academy of Sleep Medicine in recognition of his contributions to the advancement of sleep medicine. He was also given the Distinguished Scientist Award of the Sleep Research Society, which noted that ‘in addition to the immense scientific contributions Dr Gillin has made to the field of sleep and sleep disorders, one of his greatest accomplishments is in the number of students he has trained. Many investigators in this next generation of sleep researchers can trace their scientific roots back to Dr Gillin.’

“Chris Gillin was a fine, unique, gifted man who will be mourned and missed by his family, many friends throughout the world, by his department at UCSD and the scientific community,” said Lewis Judd, MD, Chair of the UCSD Department of Psychiatry. “Personally I will miss Chris greatly as a long time friend and superb colleague. He was one of a kind.”

Colleagues recall Dr Gillin’s fundamental dignity, humanity, and positive approach to life coupled with an unquenchable scientific curiosity. He was an admired role model and inspired deep affection among those who knew him and worked with him. In psychiatry, sleep and chronobiology circles throughout the world, he enjoyed respect and admiration, as he personified the very best in human nature in addition to being one of the most influential leaders in psychiatry and sleep.

Dr Gillin’s love of family, friends and the outdoors intensified after he was diagnosed with advanced cancer 3 years ago. An avid runner, he had completed the Bay to Breakers Race in San Francisco just a few weeks before his diagnosis. A week after he learned he had cancer, he went paragliding for the first time. He remained active during his battle with the disease even lecturing to medical students on the subject of death and dying, to share his personal experiences and insights.

Born in Columbus, Ohio, Dr Gillin credited his anthropologist father for sparking his interest in mental illness at an early age. He once described an encounter with a catatonic patient during a visit to a mental hospital with his father when he was 18, commenting that the patient made a lasting impression on him. After an undergraduate career at Harvard University where he graduated magna cum laude, he earned his MD at Case Western Reserve School of Medicine and completed his psychiatric training at Stanford University Medical Center. Dr Gillin’s scientific contributions to psychiatric-related research are included in over 500 scientific publications and one book.

Early on, Dr Gillin became interested in two hypotheses of psychosis and hallucinations of schizophrenia. These two interests drove much of his research program during his first

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years of research at the Intramural Research Program of the National Institute of Mental Health (NIMH), where he was assigned to the sleep laboratory and began his sleep research, the area of study that would become his legacy. He worked at the National Institute of Mental Health from 1971 to 1982, when he joined the UCSD faculty.

Working with others, he eventually concluded there was very little evidence to strongly support the transmethylation hypothesis of schizophrenia, which resulted in well-cited papers and reviews. Furthermore, tryptophan and 5-HTP, biosynthetic precursors of serotonin, failed to improve symptomatology of schizophrenic patients. However, he did replicate earlier work of Drs Vincent Zarcone and William Dement, which showed that actively ill schizophrenic patients generally fail to generate a REM sleep rebound following manual REM sleep deprivation.

In collaboration with endocrinologists at the NIH he published the first papers on growth hormone secretion in patients with acromegaly and age-related loss of nocturnal growth hormone. In the context of hyperactivity of the HPA in depression, he also published the first papers on the effects of glucocorticoids and ACTH on sleep in normal controls.

Dr Gillin's group was the first to replicate Dr David Kupfer's finding of short REM latency (the elapsed time between the onset of sleep and the first REM period) in major depression compared to normal controls. In his study, however, he also included patients with primary insomnia, since he was concerned about issues of diagnostic sensitivity and specificity. Based on a discriminate function analysis using several objective sleep measures, he correctly separated normal controls, depressed patients, and primary, non-depressed insomniacs with about 75% accuracy, including a second group of depressed patients. Insomniacs did not have short REM latency in that study, which is consistent with many other studies, suggesting some diagnostic specificity and sensitivity between depression and primary insomniacs.

In 1992, Dr Gillin and his NIMH funded research fellow Ruth Benca, MD, PhD, wrote the first major meta-analysis of sleep and psychiatric disorders which firmly established that short REM latency and other sleep disturbances were not diagnostically specific in major depressive disorder. Their meta-analysis changed the landscape regarding diagnostic specificity of sleep measures in depression.

In addition to the comparisons between patients with major depression and normal controls, Dr Gillin publications were among the few papers on polygraphic sleep in bipolar depression and in longitudinal studies of sleep in bipolar patients undergoing the 'switch process' between depression and mania. Using nursing observations of sleep in hospitalized bipolar depression, he noted that a reduction in duration of sleep predicted a switch from depression to mania, that switches at night were associated with higher ratings of mania than those during the day and evening, and that 48-h cyclers almost always switched at night.

Nevertheless, Dr Gillin remained convinced that objective and subjective sleep abnormalities, as with

the neuroendocrine, genetic, and brain imaging measures, have important implications for the pathophysiological and clinical aspects of mood disorders, even if they are not diagnostically specific. One important area was the pathophysiology of sleep disturbance in mood disorder: sleep as 'a neurobiological window into depression.' To explore that area, he developed a research program on basic neuroscience and chronobiology to test specific hypotheses linking sleep and depression.

When Dr Gillin moved to UCSD in 1982, he established an animal sleep laboratory. He and his postdoctoral student, Peter Shiromani, PhD, were among the first to identify cholinergic pathways originating in the pedunculo-pontine tegmentum and the lateral dorsal tegmentum to be critical for the induction and maintenance of REM sleep.

The antidepressant effects of sleep deprivation in depressed patients always struck him as a neglected area in research biological psychiatry. It was the only method known in which depression could be reversed within hours. He believed that sleep deprivation was an excellent experimental model for the study of antidepressant treatments and could lead to new, rapidly acting treatments based upon new models of brain function. His laboratory at UCSD was dedicated to these theories. In addition, in collaboration with many others, Dr Gillin studied chronobiology and bright light treatment for depression, immunological relationships to sleep, depression and alcoholism, and sleep abnormalities associated with depression, recovery, and abstinence in patients with alcoholism.

Dr Gillin was past-president of the Sleep Research Society, the Society for Light Treatment and Biological Rhythms and the West Coast College of Biological Psychiatry and was on the board of the American Academy of Sleep Medicine. He was a fellow of the American College of Neuropsychopharmacology, and of the American Psychiatric Association. At the time of his death, he was also the Co-Director of the Laboratory of Sleep and Chronobiology, which he helped establish as part of the UCSD General Clinical Research Center.

In addition, Dr Gillin was Director of the UCSD Mental Health Clinical Research Center, and Adjunct Professor, Department of Psychology, San Diego State University. He was also the former Director of the Fellowship Program in Psychobiology and Psychopharmacology of the UCSD Department of Psychiatry.

Dr Gillin was on the editorial board of *Sleep Medicine* from the initial launching of the journal and made significant contributions towards the growth of the journal. He was also on the editorial board of nine other journals, and for 7 years was Editor-in-Chief of *Neuropsychopharmacology*, the official publication of the American College of Neuropsychopharmacology. He served his country as US Naval Reserve Captain.

Shortly after his diagnosis of esophageal cancer, the UCSD Department of Psychiatry organized a Festschrift to recognize the enormous impact that Dr Gillin had on

the fields of sleep, mood disorders and circadian rhythms. He was honored with a scientific symposium attended by almost 200 scientists. The event highlighted friendships, scholarship, and leadership which had bonded Dr Gillin to colleagues around the nation and the world. The papers presented at the Festschrift were also edited and organized in a scientific monograph published in a special issue of the journal *Neuropsychopharmacology*.

During his illness, Dr Gillin and his family continued to travel, explore, and spend quality time together. He lived his 3 years with cancer in an admirable way and truly made each day count fully while continuing his scientific endeavors, mentoring and publishing. Dr Gillin is survived

by his wife, Frances Davis Gillin, PhD, Professor of Pathology at UCSD, and their two sons, John Lorin Gillin and his wife Crystal Zhang Gillin of the Bay Area, and Peter Daniel Gillin of Costa Mesa.

The family requests that for those wishing to make donations in memory of Dr Gillin, they be made to the SRS Gillin Jr. Faculty Award which can be sent to: Judy Milton, Sleep Research Society, One Westbrook Corporate Center, Westchester, IL 60154, with a note stating the purpose of the donation.

Chris Gillin was a man of courage, dignity and grace, and he will be sorely missed by his friends and colleagues around the world.