

## In Memoriam Lori Altshuler

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The neuroscience community lost a gifted researcher when Lori Altshuler, MD, 58, of Manhattan Beach, CA, died peacefully at home after a long illness on 5 November 2015. Born 23 August 1957, in Englewood, NJ, Lori received her BA and MD degrees from Cornell University, and after her psychiatry residency at UCLA, completed a biological psychiatry fellowship at the National Institute of Mental Health. Lori joined the UCLA faculty in 1989, was appointed chief of the bipolar disorders clinic at Brentwood, VA, in 1991, and in 1995 established the UCLA Mood Disorders Research Program. In 2004, Lori was honored with the Julia S. Gouw Endowed Chair in Mood Disorders at UCLA.

It was during her residency, working with Arne Scheibel, MD, and Jeffrey Cummings, MD, that her interests in neuroanatomic and cognitive abnormalities in the major psychoses emerged. In fact, throughout her entire career she was never one to miss a research opportunity. In 1986–1987, she spent the last portion of a year-long honeymoon at the Shanghai Psychiatric Institute comparing Chinese and Western (DSM-III) systems of diagnosis and classification of psychiatric disorders.

Lori had an unparalleled intellectual curiosity, analytical mind, as well as a warm and engaging personality. She formed friendly collegial relationships with equally driven academics in three distinct fields: (1) using neuroimaging to assess underlying causes of mood disorders; (2) conducting clinical trials to assess treatments for bipolar disorder; (3) investigating mood disorders in women during pregnancy, postpartum, and postmenopause. She advanced our

understanding of mood dysregulation with innovative research and mentorship in each of these areas.

Robert Post, MD, recalled her early career during his eulogy at her 5 February 2016 memorial: 'Lori worked as a Clinical Associate with our group at the NIMH in Bethesda for 2 years in the late 1980s. Instead of the usual clinical track that all the other research fellows followed, she took a year just to study brain anatomy at St Elizabeth's Hospital so she could be an expert on exactly where neural structures were located and how they were connected. This paved the way to her seminal findings in live patients at UCLA using brain imaging. She was the first to suggest that the key emotional center of the brain—the amygdala—increased in size as a function of the number of manic episodes a patient experienced.'

Expanding upon her accomplishments in neuroimaging, Ahmad Hariri, PhD, wrote: 'Of particular note, Lori and colleagues at UCLA conducted seminal studies revealing state-dependent and state-independent dysfunction of cortico-limbic circuit nodes in bipolar disorder. Across these studies, Lori and colleagues demonstrated that the activity of the amygdala, which plays a critical role in responding to threat and assessing danger, follows a state-dependent course—increased in manic, decreased in depressed, and unchanged in euthymic states. In contrast, they demonstrated that activity of the prefrontal cortex, which plays a critical role in integrating and regulating amygdala activity, exhibits a state-independent or trait-like course—decreased across all three states. These studies also identified abnormal state-dependent changes in the functional connectivity between the amygdala and prefrontal cortex. Collectively, the work of Lori and her colleagues provided a unique perspective on the underlying neurobiology of bipolar disorder wherein the prefrontal cortex may not be adequately capable of regulating amygdala activity contributing to the cycling of mood states.'

While performing her neuroimaging studies, Lori was also contributing data to a number of collaborative clinical trials for bipolar depression. Her research on treatment for bipolar depression has demonstrated that patients who achieve a positive acute antidepressant response to 10 weeks of antidepressant treatment adjunctive to a mood stabilizer will probably maintain response with the same continued treatment with the risk of manic episode no higher than the reported rate for patients on mood stabilizer monotherapy. These findings contradicted the accepted notion that patients with bipolar depression should discontinue antidepressants as soon as the episode remits.

Lori's tremendous curiosity compelled her to pursue an additional research interest. She collaborated on two consecutive studies exploring depression during pregnancy and postpartum, finding that non-depressed pregnant women (who have previously had at least one episode of unipolar depression) who discontinued antidepressant medication relapsed significantly more frequently (68%) over the course of their pregnancy compared with women who

continued their medication (26%). This study dispelled the myth that pregnancy was protective against depression and, more importantly, provided an evidence-based foundation for women and their physicians to weigh the risks and benefits of continuing *vs* discontinuing antidepressant medications during pregnancy.

During her career she received many honors and awards, and especially prized those for mentoring. Her love for teaching and mentoring began during her first year on faculty, at the end of which she received a departmental teaching award. Despite a busy schedule, Lori devoted much of her time to mentorship, finding various ways to squeeze in another hour here or there. Mark Frye, MD, during his eulogy at her 5 February 2016 memorial described her innovative mentoring: 'Frequently, Lori would bicycle up the beach bike path from her home in Manhattan Beach. In the early winter mornings, I would wait along the path to see her headlight appear through the fog, followed by her helmeted head. Then we would begin our mentoring session as we cycled along the path and then on the city streets to UCLA. I have always remembered this image and these conversations as they have shaped how I ask clinically relevant research questions and mentor the next generation of clinical researchers. Lori modeled highly collaborative clinical research partnerships and by doing has transformed the practice of mood disorders.'

Lori felt lucky to be born into a warm and supportive family, and valued family ties above all else. After starting her own family, she refused professional engagements that involved travel while the boys were very young. She often

took them on work trips (only if the trip would be fun!), but more often they traveled for pleasure.

In the words of Dr Post: 'Because of her work, we all understand depression and bipolar disorder better and know how to better treat patients. However, it is her beautiful and radiant presence that is indelible in our memories of her. She was a treasure. We can only thank the powers that be that we had the opportunity to work with her and to have her as a friend.'

Lori is survived by her sons Eric and Daniel, parents, Gloria Altshuler (the late Leonard Elberger) and Dr Kenneth (Ruth) Altshuler; husband Greg Monfette and step-daughter Jaime Monfette; siblings Dr Steven (Terry) Altshuler and Dara (Robert Kaplan) Altshuler; and numerous adoring nieces, nephews, cousins, and countless friends and colleagues.

The Lori Altshuler, MD Memorial Fund will honor Lori by providing an annual award to an outstanding UCLA psychiatry resident. Donations can be given online at [www.cftexas.org/lori-altshuler](http://www.cftexas.org/lori-altshuler) or a check made payable to the fund can be sent to: Communities Foundation of Texas; Attention: Carolyn Newham; 5500 Caruth Haven Lane, Dallas, TX 75225, USA.

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