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The Functional Neurology Series Continues

Can cognitive decline be reversed? Most people—scientists and physicians included—would say this is not possible once the process of neurological degeneration has begun. However, research into this question is underway, and this month Dr. Bland will speak with Dr. Dale Bredesen, whose work is taking the field of functional neurology into revolutionary new areas. We may very well be at the dawn of a new era—an era of treatable Alzheimer's disease.

Clinician/Researcher of the Month

Dale Bredesen, MD
Augustus Rose Professor of Neurology
Director, Mary S. Easton Center for Alzheimer's Disease Research at UCLA
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In late 2014, Dr. Dale Bredesen's name began popping up all over the Internet. The reason? In September, Dr. Bredesen had published the results of a small clinical trial he had conducted in patients with early-stage Alzheimer's disease. The article—published in the journal *Aging*—was titled "Reversal of Cognitive Decline: A Novel Therapeutic Program," and news of the trial was reported on not only in the medical press, but was also picked up by mainstream media outlets, such as CNN. Can the symptoms of Alzheimer's disease be reversed? Dr. Bredesen says yes, and this is the topic Dr. Bland and Dr. Bredesen discuss in this very exciting issue of *Functional Medicine Update*.

Dr. Dale Bredesen was educated at the California Institute of Technology, Duke University, and the University of California at San Francisco. Early in his career, he was an NIH Fellow in the laboratory of Dr. Stanley Prusiner, who was awarded the Nobel Prize for his discovery of prions. In 1998, Dr. Bredesen became the founding president and CEO of the Buck Institute for Research on Aging, the only independent institute devoted to research on aging and age-associated diseases in the United States. Recently, Dr. Bredesen has moved his research efforts to UCLA.

Dr. Bland and Dr. Bredesen begin their discussion with some background on brain biochemistry and the pathogenesis of Alzheimer's disease. Dr. Bredesen states that his decades of complex research actually originated from one simple question: What is it that drives neurons to die? He goes on to explain some of the discoveries that have taken place that now answer this question in part. In addition, Dr. Bredesen has developed a number of metaphors over the course of his career that provide non-scientists with visualizations that help illustrate and clarify some very complex concepts ("this beautiful network, this synaptic symphony," as Dr. Bredesen describes the brain).

They discuss Dr. Bredesen's study on the reversal of cognitive decline in detail. Because it was a small cohort of patients, Dr. Bredesen is able to elaborate on some of the individual experiences of the patients involved and their responses to the improvements in their symptoms. Dr. Bredesen plans to expand his work with more patients and further documentation of the results.

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