



Researcher Ronald Davis prepares a treatment for his son, Whitney Dafoe, who has chronic fatigue syndrome and can no longer walk or speak.

says. So he is furiously testing the electrical device, as well as screening blood samples for proteins and genetic signatures that might reveal a biomarker for the disease. Not having clear criteria for a diagnosis has made clinical trials particularly challenging.

In 2015, David Tuller, a journalist turned ME/CFS advocate, published a critique of the PACE studies¹¹. Weeks later, six researchers signed an open letter to the editor of *The Lancet*, which published the initial PACE results, requesting a reanalysis of the data (see go.nature.com/2z9inlg). Last March, scientists and advocates did the same in a letter to *Psychological Medicine* — the journal that published the 2013 PACE results — requesting a retraction (see go.nature.com/2brb5yx). A leading criticism was that the investigators had changed how they measured recovery during the course of the trial, making that outcome simpler to achieve. The PACE investigators have denied this charge and others on their website, writing that changes were made before they analysed the data, and wouldn't have affected the results.

Patients and advocates disagree, and although the paper has not been retracted, the CDC subsequently abandoned the trial's recommendations. In September last year, the NHS announced that it would also revise its recommendations. In a corresponding report¹², a panel concluded that recent biological models based on measurable physiological abnormalities require greater consideration.

Despite the setbacks and the long delays, many argue that science is operating as it should — being self-critical and open to revision. In five years' time, researchers should be able to pinpoint specific aberrations in the immune, metabolic, endocrine or nervous systems of people with ME/CFS, and perhaps find genetic predispositions to

the condition. These indicators might yield diagnostic tests — and, further down the road, treatments.

Allen did not enrol in Montoya's study with the expectation of a cure around the corner. She says she'll be happy if — at the very least — a younger generation can avoid the complete bewilderment she felt when her body suddenly failed her. "I know how long science takes," says Allen. "I am going to try and do whatever I can do to make it move forward as fast as possible." ■

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