ALS drug gets rare second review at high-stakes FDA meeting

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This 2018 photo provided by Amylyx shows the company's co-founders Joshua Cohen, left, and Justin Klee in Cambridge, Mass. on Sept. 2, 2022. A closely watched experimental drug for Lou Gehrig's disease is getting an unusual second look from U.S. regulators on Wednesday, Sept. 7, 2022, amid intense pressure to approve the treatment for patients with the fatal illness. Patients and their families have rallied behind the drug from Amylyx Pharma, launching an aggressive lobbying campaign and enlisting members of Congress to push the Food and Drug Administration to grant approval. Credit: Amylyx via AP, File

A closely watched experimental drug for Lou Gehrig's disease got an unusual second look from U.S. regulators on Wednesday, following intense pressure to approve the treatment for those with the fatal illness.

Patients and their families have rallied behind the drug from Amylyx Pharma, launching an aggressive lobbying campaign and enlisting members of Congress to push the Food and Drug Administration to grant approval.

The FDA has approved only two therapies for the disease, amyotrophic lateral sclerosis, which destroys nerve cells needed for basic functions like walking, talking and swallowing. The more effective of the two drugs extends life by several months.

In a rare move, the FDA convened a second meeting of neurology advisers who narrowly voted against the company's drug in March. The panel was reviewing new statistical analyses from Amylyx and planned to vote again on whether to recommend approval. The FDA is not required to follow's the group's guidance.

An internal review by FDA scientists posted ahead of the meeting struck a negative tone, concluding that the company's updated analysis was not "persuasive" and provided "no new data." On the other hand, the FDA's instructions to the panel stressed the need for regulatory flexibility when considering drugs for deadly diseases.

A final FDA decision is expected later this month.

Dr. Billy Dunn, FDA's neurology review director, opened the meeting by noting the "concerns and limitations" with Amylyx's data, while emphasizing the need for new treatment options.

"We are highly sensitive to the urgent need for the development of new treatments for ALS," Dunn said. "We have not made any final decisions on the approvability of this application."

Dunn also noted that a larger study being conducted by Amylyx could provide "more definitive results" on the drug by 2024.

In a highly unusual move, Dunn suggested the agency might be more willing to approve the drug if Amylyx would commit to withdrawing its medication if the 600-patient trial fails to show a benefit. He then called on the company's co-founders to publicly commit to that step, and Amylyx co-CEO Justin Klee said the company would voluntarily withdraw its drug in that scenario.

The ALS drug review is being closely watched as an indicator of FDA's flexibility in reviewing experimental medications for the terminally ill and its ability to withstand outside pressure.

"We're here because there's a lot of pressure," said Diana Zuckerman of the nonprofit National Center for Health Research, in an interview ahead of the meeting. "FDA is going the extra mile by saying you can have another meeting, but the company responded by giving them no new data."

Amylyx conducted one small, mid-stage trial of its drug that showed some benefit in slowing the disease, but it was plagued by missing data and other problems, according to FDA reviewers.

"The final result—for a single study—is borderline and not very statistically persuasive," FDA statistician Tristan Massie told panelists.

The Cambridge, Massachusetts, company says follow-up data gathered after the study showed the drug extended life. Patients who continued

taking the drug survived about 10 months longer than patients who never took the drug, according to a new company analysis.

But FDA scientists said that the new approach "suffers from the same interpretability challenges" as the original study.

On Wednesday, more than 20 ALS researchers, patients and family members told the advisers they supported approval. The agency has also received more than 1,200 written comments, largely from ALS advocates.

"I'm asking you to approve it because I know it works. It's extending my life and I want that for others," said Greg Canter, who was diagnosed with ALS in 2018 and participated in Amylyx's study. He credits the drug with improving his lung capacity and slowing his functional decline.

Amylyx's medication comes as a powder that combines two older drugs: one prescription medication for liver disorders and a dietary supplement used in traditional Chinese medicine.

Hanging over the review is FDA's controversial approval of the Alzheimer's drug Aduhelm last year, which was reviewed by the same agency scientists and outside advisers.

In that case, the FDA disregarded the overwhelmingly negative vote by its outside advisers, three of whom resigned over the decision. The agency's approval—which followed irregular meetings with drugmaker Biogen—is under investigation by Congress and federal inspectors.

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