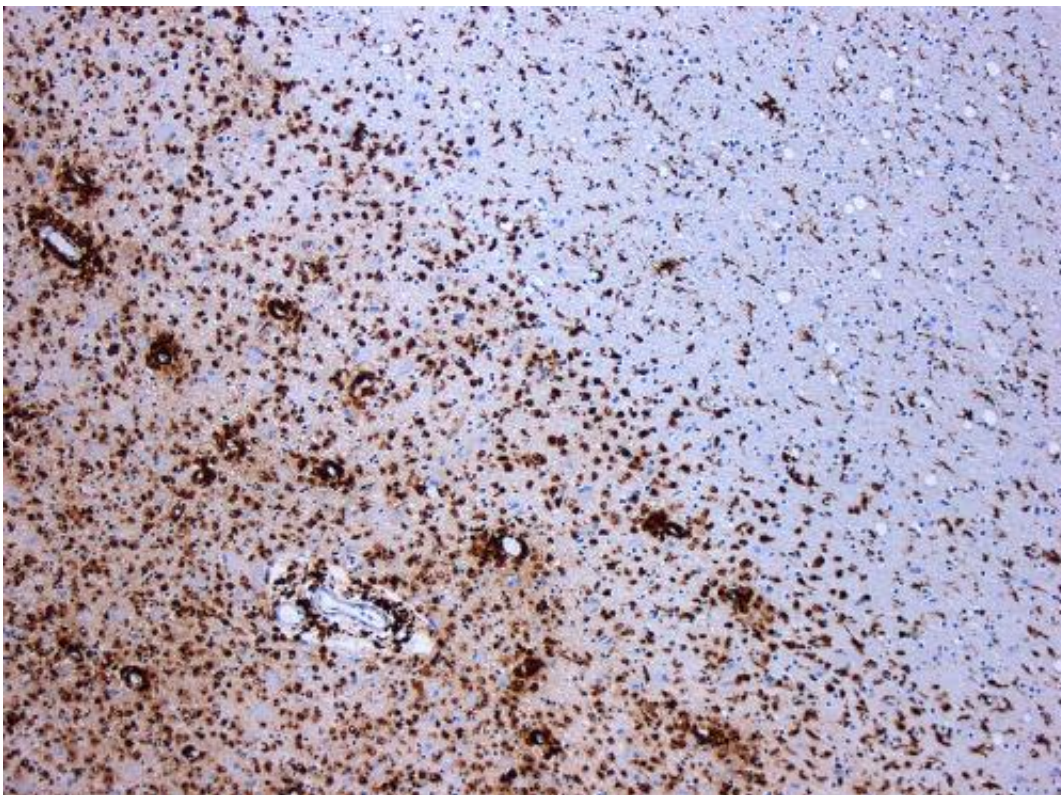


# Clinical trials of anti-LINGO-1 drug to treat eye damage from MS appears to show mixed results

January 9 2015, by Bob Yirka

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Demyelination by MS. The CD68 colored tissue shows several macrophages in the area of the lesion. Original scale 1:100. Credit: [CC BY-SA 3.0](#) Marvin 101/Wikipedia

(Medical Xpress)—Biogen Idec Inc has released preliminary results of a

phase II clinical trial (called RENEW) meant to test the effectiveness of using an anti-LINGO-1 drug called BIIB033, to treat eye damage that occurs in patients with multiple sclerosis—and the results appear to be mixed. While some improvement in the recovery of optic nerve latency were seen, there did not appear to be any recovery in secondary outcomes, which are necessary for a patient to recover lost vision abilities.

MS causes problems for patients because it causes a loss of the [myelin sheath](#) that covers nerves—which causes problems with sending [electrical signals](#) to or through the impacted areas. The disease also causes inflammation in the eyes (acute optic neuritis) which can lead to vision problems. This new trial by Biogen was meant to discern if BIIB033, which is also undergoing trials for treating MS in general, could help restore lost vision. The company reported that the clinical trial involved 82 patients and that there was an average of 34 percent improvement (compared to those given a placebo) in the recovery of [optic nerve](#) latency, which is a measure of the time it takes electrical signals to travel from the retina to the visual cortex. Unfortunately, they also found that the drug did not increase retinal thickness and thus visual function. Indications are that the drug was well tolerated and that three people experienced "severe adverse effects."

BIIB033 works by blocking production of the protein LINGO-1 which plays a role in monitoring myelin, prior research has found that when levels of the protein are lowered in MS patients, damage to the sheath is reduced. Biogen is hoping to add the new drug to its list of those it already sells to combat symptoms associated with MS.

Despite the mixed results, Biogen remained optimistic, noting that thus far, BIIB033 is the only drug to show any improvement in optic nerve repair in MS patients. They noted also that the study has offered evidence of remyelination, a first for any drug trial. Investors were not as

cheery, the price for shares in the company fell 2.4 percent after first rising slightly following the announcement. The final results of the clinical trial are not expected until sometime next year.

**More information:** — [www.biogenidec.com/Files/Files/O-1-FINAL-7Mar13.pdf](http://www.biogenidec.com/Files/Files/O-1-FINAL-7Mar13.pdf)

— [www.msdiscovery.org/research-r... pipeline/230-biib033](http://www.msdiscovery.org/research-r...pipeline/230-biib033)

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