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# Tanezumab’s return shows pharma has held its nerve

Jonathan Gardner

Removal of a partial clinical hold on Pfizer and Lilly’s tanezumab is the strongest sign yet of hope for the once-troubled anti-nerve growth factor (NGF) drug class.

When the partners begin a new round of trials to treat pain-related disorders, they should be neck and neck with Johnson & Johnson’s fulranumab in phase III. Regeneron Pharmaceuticals, meanwhile, says fasinumab will re-enter clinical development this year. It might be too soon to begin pencilling in blockbuster forecasts for this class once again, but the new interest in clinical studies shows that developers believe that it is not too late to make something of NGF antibodies.

**Holds barred**

Pfizer says it will be starting a new phase III programme for tanezumab after the FDA’s decision to lift a two-year partial hold on the monoclonal antibody. The New York-based group said it had been able to persuade regulators to do so after presenting data last month characterising its effects on the sympathetic nervous system; adverse effects in animals had been the explanation for the hold.

These agents are aimed at treating pain – NGF is a mediator of inflammatory response, and by blocking the protein via antibody binding investigators hope to regulate pain through a non-narcotic pathway. Pfizer’s previous phase III programme had focused on arthritis in the knee and hip, although cancer-related pain has also been targeted.

Development had been halted first by concerns over osteonecrosis, which was resolved three years ago (*Therapeutic focus – Return of anti-NGF class gets FDA panel's backing, March 13, 2012*).

Continuing concerns over the safety of this class, as demonstrated by the partial hold on tanezumab, have frozen most development. It was perhaps only when Pfizer signed a co-commercialisation pact with Lilly that signs emerged that the anti-NGF class had a future (*Lilly deal hints at renewed interest in once promising pain class, November 7, 2013*).

**Path forward**

Pfizer says it will be due a $200m payment from Lilly as a result of the preparation for the phase III programme; the deal includes up to $350m in development milestones and $1.23bn in sales-based compensation. The size of the payments suggests that pharma still sees significant promise in this space.

Indeed, that is borne out by J&J’s declaration at its fourth-quarter earnings call that it is persisting with fulranumab, and Regeneron doing similarly with fasinumab. J&J has filed four phase III studies in hip and knee arthritis with clinicaltrials.gov since November.

None of those has begun recruiting; the goal enrolment across all four is 2,250, and readout is expected in late 2016.

Regeneron has been more circumspect, stating simply that fasinumab will re-enter the clinic in 2015. As for other agents in this class, AstraZeneca said today that it had “no activity to report” on MEDI-578, and AbbVie did not respond to a question on ABT-110 (PG110).

With much uncertainty over whether this class can shake its difficulties, forecasts remain modest. Credit Suisse is largely alone in predicting sales in this class – $200m for tanezumab and $100m for fulranumab by 2023. With more visibility, more analysts may begin making guesses, which would result in a rising consensus.

While Pfizer pressing ahead shows that big pharma has not given up on anti-NGFs, it is too soon to call it a renaissance. The sector has been waiting a while to see whether this class has any promise whatsoever, and it could be another two years or more before it knows whether it is throwing good money after bad.

| Trial | ID |
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| Fulranumab monotherapy in osteoarthritis of the hip or knee, 450 patients (PAI3003) | NCT02289716 |
| Fulranumab monotherapy in osteoarthritis of the hip or knee, 900 patients (PAI3007) | NCT02301234 |
| Fulranumab monotherapy in osteoarthritis of the hip or knee, 450 patients (PAI3001) | NCT02336685 |
| Fulranumab monotherapy in osteoarthritis of the hip or knee, 450 patients (PAI3002) | NCT02336698 |

*To contact the writer of this story email Jonathan Gardner in London at jonathang@epvantage.com or follow @JonEPVantage on Twitter*