Evaluate Vantage

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pSivida and Alimera ones to watch following eye drug success

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Success in two phase III trials for a novel eye implant that holds the potential to be the first FDA approved drug therapy for diabetic macular oedema (DME), a leading cause of blindness, sent shares in pSivida soaring yesterday.

The product, called Iluvien, is a tiny cylindrical tube which is injected into the eye where it slowly releases the steroid fluocinolone acetonide for up to three years, significantly improving vision, according to the new data. Partner Alimera Sciences plans to seek approval in the US in the second quarter of next year and if a priority review is granted as expected and all goes well, a marketing license could be granted before 2010 is out. However, with one cut of the data failing to meet statistical significance, both firms are likely to be experiencing some nerves before the final FDA decision is known.

Gaining three lines

Iluvien was trialled in two studies, called Fame, which recruited a total of 956 patients with DME. The condition is a common complication of diabetic retinopathy and is caused by fluid build-up in the central vision portion of the retina. Retinal blood vessels in a diabetic's eyes deteriorate and leak, causing retinal swelling and loss of vision. Currently, the only FDA approved method for treating DME involves laser photocoagulation therapy, which can leave irreversible blind spots.

Patients were given either high or low dose Iluvien or underwent a sham procedure. The primary endpoint was the percentage of patients whose vision improved by 15 or more letters on an eye chart, equivalent to gaining three lines, over two years.

An analysis of the intent to treat population, a conservative statistical method that includes all patients who entered the study regardless of whether they completed it, concluded that both high and low dose Iluvien significantly improved vision over placebo.

However, another cut of the data, called 'modified all randomised and treated' which excludes patients who dropped out or violated protocols, found that one of the trials missed the primary endpoint. Considering that the Fame study protocol states that the primary assessment of efficacy will be based on this statistical method, chosen because it is considered to be the most flattering on the product, this finding could well raise eyebrows.

Strong package

Still, on a conference call yesterday pSivida's chief executive Dr Paul Ashton was unperturbed by this finding. He pointed out that when the pooled data from both trials was analysed using this method, the primary endpoint was met. Additionally, other statistical methods utilised by the company, which the FDA are likely to take into consideration, have been positive, so overall he believes the package will be strong enough.

Alimera has decided to file the low dose Iluvien for approval. The higher dose implant was associated with more side effects, most notably raised pressure in the eye, although this was mostly easily controlled with eye drops. However with a small proportion of patients requiring surgery as a result, a risk management strategy is likely to be required.

pSivida already has two products based on its miniaturised drug delivery techniques on the market, which bodes well for Iluvien. Retisert has been on the US market since 2005; the company claims it is the world's first approved intravitreal drug implant for the treatment of chronic non-infectious posterior uveitis, a sight-threatening inflammatory disease affecting the posterior segment of the eye. The implant, which releases the same active ingredient as Iluvien, is marketed by Bausch & Lomb. Another smaller product, Vitrasert, is also sold by Bausch & Lomb, to treat AIDS-related cytomegalovirus retinitis.

Alimera is a private ophthalmology group, without the clout of pSivida's current partner but certainly with pedigree; the company is run and staffed by several founding members of CIBA Vision Opthalmics, the start-up pharmaceutical arm of CIBA Vision, now Novartis Opthalmics.

Keep an eye on

The companies believe Iluvien has significant commercial potential, which considering the unmet need does not appear to be an unreasonable assumption. With the ophthalmology space receiving growing attention recently, as seen with Sanofi-Aventis's purchase of Fovea Pharmaceuticals and Novartis' move on Alcon.

Investors are clearly hopeful; pSivida's shares jumped 42% yesterday to $5, close to two-and-a-half year highs.

Should Iluvien reach the market, Alimera and pSivida will certainly be two companies to keep an eye on.