

10 April 2013

FLEXISEQ®: Rheumatology publishes clinical evidence supporting a novel, drug-free osteoarthritis treatment.

1300 patient clinical trial provides evidence that Pro Bono Bio's innovative osteoarthritis treatment, FLEXISEQ, is as effective as an oral, prescription drug while having a distinctly favourable safety profile.

London, England 10 April 2013 –Key phase III trial data supporting Pro Bono Bio's ("PBB") drug-free osteoarthritis treatment FLEXISEQ, have been published today in Rheumatology, the official journal of the British Society for Rheumatology. The event is the latest high profile publication and achievement for the product after winning a German pharmacy award for innovation in January 2013.

The publication reports that FLEXISEQ (TDT 064)¹, then a control arm in the reported trial, was equivalent to the oral NSAID celecoxib (the active comparator arm) and was better tolerated by patients. The findings offer hope to osteoarthritis patients, particularly those who are at risk from the common gastrointestinal and cardiovascular side effects associated with NSAIDs, such as celecoxib and diclofenac.

Professor Conaghan, lead author of the international study said: *"Most people with osteoarthritis live with chronic pain that interferes with their daily activities. Many can't take or can't tolerate current oral analgesics because of side effects. There is therefore a huge unmet need for effective and safe analgesics for osteoarthritis. The new study is interesting because it suggests that a novel topical therapy, that doesn't include a topical anti-inflammatory drug, may help osteoarthritis pain (and mobility)".*

Interestingly, this 12 week clinical trial was originally deemed a failure when the investigational product IDEA-033 (Ketoprofen-in-vehicle), despite showing good efficacy, failed to show a statistically significant benefit compared with the topical control, then known as TDT 064. This has not proved a long term set-back however as TDT 064, seen to have its own novel therapeutic effect and having proved that it matched both oral celecoxib and the investigational drug, was brought to market as FLEXISEQ.

At the end of the 12 week trial period, the 238 patients who applied TDT 064 (FLEXISEQ) twice a day experienced a 39.8% mean reduction in pain on the WOMAC2 scale and the treatment effect was statistically superior to oral placebo and equivalent to oral celecoxib. The 234 patients taking oral celecoxib experienced a mean reduction of 40.4% (also superior to oral placebo). Similar reductions were reported for joint function and stiffness. As would be expected for a non-systemic treatment, TDT 064 was well tolerated with the majority of adverse events being mild to moderate local skin irritations. The majority of adverse events from the celecoxib arm were gastric disorders, as would be expected from an oral NSAID.

Professor Bolten, a co-author of the study, highlighted the relevance of its findings for the population of cardiovascular patients also suffering from osteoarthritis and at risk from NSAID related side effects: *"For topical TDT 064 (FLEXISEQ®), the study showed the same pain and stiffness reducing qualities as oral celecoxib. As TDT 064 does not contain any NSAID (or other pharmaceutical ingredient), side effects are very rare and it does not interact with other drugs. Therefore the many elderly osteoarthritis patients with cardiovascular problems, in which NSAIDs are contraindicated, can be treated at low risk."*

Awarded 'Innovation of 2013' in Germany by the Federal Association of German Pharmacists, FLEXISEQ is engineered to treat osteoarthritis via a cutting edge, physical mode of action. The product employs Sequeosome Technology[®] rather than an active pharmaceutical ingredient to address an underlying cause of the symptoms of osteoarthritis, relieving pain with comparable efficacy to celecoxib, as shown in the *Rheumatology* publication.

Michael Earl, a director of Pro Bono Bio said: "Sufferers of osteoarthritis are not presented with a lot of different options when it comes to treatments and it is, sadly, inevitable that a subset of these patients will develop unpleasant and potentially dangerous side effects due to their treatment. FLEXISEQ offers some hope to this "at risk" population as a topical, drug-free intervention with clinically meaningful efficacy, as reported in *Rheumatology*. We are delighted that this part of FLEXISEQ's clinical data has been brought to a wider forum".

FLEXISEQ is already available in the German and Malaysian markets (from pharmacies and clinics) and is a CE marked, class IIa medical device. PBB intends to make the product available to new markets later this year, continuing its run of success.

-ENDS-

For further information please contact:

John Mayo
Pro Bono Bio
+44 20 7291 5456
karen.frost@pbbio.com

Michael Earl
Pro Bono Bio
+44 20 7291 5446
lucy.parker@pbbio.com

About Sequeosome Technology:

Sequeosome Technology utilises nanostructures called Sequeosome[™] vesicles that cross the skin barrier after the gel's topical application and migrate through various tissues to reach the target joint. Once inside the joint, Sequeosome vesicles accumulate on the damaged cartilage forming a lubricating layer. This targeted, physical mode of action crucially means there are no drug-to-drug interactions with FLEXISEQ as it is not itself a drug and, as a result, it can be used by patients who may be taking a variety of medications for other diseases, without increasing their drug burden. FLEXISEQ is also a welcome option for patients considered 'at risk' from the common side effects associated with NSAIDs for example, those with such conditions as high blood pressure and/or gastric disorders.

About Pro Bono Bio:

PBB has ambitious growth targets that will allow it to support a unique humanitarian mission. In 2012 it supported elderly pilgrims on the Hajj to Mecca, alleviating the joint pain caused by long periods of walking and kneeling.

Pro Bono Bio is an innovative pharmaceutical and nano medical device company launched in 2011. Pro Bono Bio launched FLEXISEQ in Europe in the first half of 2012 and plans to launch two further new products for the treatment of inflammatory skin disorders in early

2013. These new products, ROSSOSEQ[®] and EXOSEQ[™], are based on Sequeosome Technology, the same technology that powers FLEXISEQ