# Bone Therapeutics announces conclusions from interim analysis of Phase III PREOB study in hip osteonecrosis

## Independent DSMB recommends Phase III trial be discontinued for futility

## Development programmes to be focused fully on ALLOB platform and JTA-004 in line with broader commercial strategy

**Gosselies, Belgium, 6 November 2018, 8pm CET – BONE THERAPEUTICS** (Euronext Brussels and Paris: BOTHE), the bone cell therapy company addressing high unmet medical needs in orthopaedics and bone diseases, today announces the conclusions of the Data and Safety Monitoring Board (DSMB) for the interim analysis of the Phase III osteonecrosis (ON) study of PREOB in 44 patients with a 12-month follow-up.

The DSMB evaluated the results of a formal pre-planned interim efficacy analysis in order to assess the efficacy of the injection in the femoral head of 20 million autologous PREOB cells combined with core decompression *vs.* the injection of placebo combined with core decompression, with the intent to stop the study early if there is overwhelming evidence of treatment benefit or futility. The DSMB reported that PREOB was well-tolerated by patients. However, the interim results suggest that it is unlikely that the primary objective will be achieved at the final analysis. The DSMB therefore recommended the discontinuation of the trial. Based on this recommendation, and while the data is being reviewed, the Company is taking steps to notify investigators that enrolment of patients in the trial is being stopped.

While osteonecrosis of the hip remains a serious condition, the treatments offered to early-stage patients have evolved favourably in the last few years, particularly with novel core decompression techniques offering better patient outcomes. The discontinuation of the Phase III hip osteonecrosis study does not affect the clinical development of the allogeneic platform, ALLOB, in other promising indications, with different physiopathology, larger patient populations and faster clinical trial recruitment than in osteonecrosis of the hip.

Bone Therapeutics will focus its cell therapy development activities and resources on its off-the-shelf, allogeneic platform, ALLOB. Allogeneic (ALLOB) cells are differentiated cells derived from *ex vivo* cultured bone marrow cells of healthy donors, which have demonstrated stronger osteogenic properties than PREOB cells. 100 million allogeneic cells or more can be administered with a single local injection, five times more than what was possible with PREOB. As announced recently, the ALLOB platform has further advantages over PREOB including dosing, logistics and scalability, offering substantial advantages in reaching large patient populations in a cost-effective manner. The Company believes it is therefore more economically viable than the autologous product. The Company recently announced the optimisation of the allogeneic manufacturing process which will be implemented in all future clinical development programmes involving the ALLOB platform.

The Company will focus its efforts for the next years on more relevant and valuable markets for cell-based therapies with its ALLOB platform, with its two lead programmes:

- **Delayed union fractures** – Bone Therapeutics announced in September positive final results in the Phase I/IIA delayed-union study in 21 patients, supporting the future clinical development of the delayed union indication.

- **Spinal fusion** – Bone Therapeutics completed patient recruitment in the Phase IIA spinal fusion study in February. Efficacy and safety data for the full set of 32 patients are expected mid-2019, post a follow-up period of 12 months.

In addition, in October Bone Therapeutics announced promising results from the first efficacy study of its

patented, non-cellular viscosupplement JTA-004**,** in patients with moderate symptomatic knee osteoarthritis, supporting future clinical development of the product. The Company believes the favorable safety and efficacy profile of JTA-004 observed in this first efficacy study supports the move to registration studies and will begin dialogue with the regulatory authorities to determine next steps.

**Thomas Lienard, Chief Executive Officer of Bone Therapeutics, commented:** "*The interim results for PREOB were a disappointment to the Company. However, Bone Therapeutics has shifted its focus towards the allogeneic platform, ALLOB, which we believe offers a more compelling and commercially-viable solution to address unmet needs in orthopaedics and bone disease. The discontinuation of the PREOB study will allow us to fully focus on this more promising platform and accelerate its development. Our lead programmes in delayed union fractures and spinal fusion have continued to deliver encouraging results. We will also continue to focus resources on JTA-004 in patients with knee osteoarthritis, following the favourable efficacy and safety profile announced last month".*

**Phase III hip osteonecrosis trial with PREOB**

The Phase III study was a randomised, double-blind, placebo-controlled pivotal trial that should have enrolled 118 patients to evaluate the safety and efficacy of 20 million PREOB cells in early-stage osteonecrosis of the femoral head over a 24-month period. For the interim analysis, a total of 44 patients were either treated with PREOB combined with core decompression or placebo combined with core decompression, and followed up for a period of 12 months. The primary endpoint of the trial was the percentage of responders, *i.e.* patients showing a clinically relevant pain relief and no progression to fracture stage.

## *About Bone Therapeutics*

*Bone Therapeutics is a leading cell therapy company addressing high unmet needs in orthopaedics and bone diseases. Based in Gosselies, Belgium, the Company has a broad, diversified portfolio of bone cell therapy products in clinical development across a number of disease areas targeting markets with large unmet medical needs and limited innovation.*

*Bone Therapeutics' technology is based on a unique, proprietary approach to bone regeneration, which turns undifferentiated stem cells into bone-forming cells. These cells can be administered via a minimally invasive procedure, avoiding the need for invasive surgery.*

*The Company's primary clinical focus is ALLOB, an allogeneic "off-the-shelf" cell therapy platform derived from stem cells of healthy donors, which is in Phase II studies for the treatment of delayed-union fractures and spinal fusion. In addition, the Company also has JTA-004, a viscosupplement in development for the treatment of knee osteoarthritis.*

*Bone Therapeutics' cell therapy products are manufactured to the highest GMP standards and are protected by a rich IP estate covering nine patent families. Further information is available at: www.bonetherapeutics.com.*

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