

**11<sup>th</sup> January, 2017**

Dear members of the SMA Europe Board,

In response to a request from SMA Europe, Biogen is providing the following update on an important New Collaboration between Biogen and Ionis to Identify Novel Therapies for the Treatment of Spinal Muscular Atrophy .

On December 19<sup>th</sup> 2017, Biogen and Ionis Pharmaceuticals, Inc. announced that they have entered into a new collaboration agreement to identify new antisense oligonucleotide drug candidates for the treatment of spinal muscular atrophy (SMA). Biogen will have the option to license therapies arising out of this collaboration and will be responsible for their development and commercialization.

“We are pleased to extend our collaboration with our valued colleagues at Ionis, which we believe complements our ongoing efforts to enhance and build a portfolio of treatments for SMA,” stated Michel Vounatsos, chief executive officer at Biogen. “Consistent with our commitment to individuals with SMA and their families, our aim is to increase therapeutic options available for this devastating neuromuscular disease.”

“Biogen has been a great collaborator, and we share in their focus to continue to work to bring new, innovative therapies to treat SMA. We owe it to the individuals and families challenged by SMA to discover additional therapies,” said Stanley T. Crooke, M.D., Ph.D., chief executive officer and chairman of Ionis. “Our antisense technology uniquely positions us to work with Biogen towards delivering new therapies and expanding our experience in SMA.”

Under the new collaboration agreement, Ionis will receive a \$25 million upfront payment and will earn development and regulatory milestone payments from Biogen if new drugs advance towards marketing approval. Upon commercialization, Biogen will pay Ionis performance milestones and tiered royalties on net sales.

We remain committed to transparent and timely communications and will continue to be available to provide requested updates.

Yours sincerely,  
Caroline Daly