

Ionis Pharmaceuticals to hold technology webcast

December 2, 2019

Webcast scheduled for Friday, December 13th at 11:00 a.m. Eastern Time

CARLSBAD, Calif., Dec. 2, 2019 /PRNewswire/ -- Ionis Pharmaceuticals, Inc. (NASDAQ: IONS) announced today that it will host a live webcast on Friday, December 13th at 11:00 a.m. Eastern Time to take a deep dive into antisense technology, Ionis' proprietary RNA-targeted drug discovery platform. The approximately two-hour webcast will include presentations from Ionis' key architects and pioneers of RNA-targeted therapeutics Stanley T. Crooke, MD, PhD, chief executive officer and chairman; Brett P. Monia, PhD, chief operating officer; C. Frank Bennett, PhD, senior vice president, research and neurology, and Eric Swayze, PhD, vice president, chemistry. The agenda for the webcast will be as follows:

| Topic | Presenter |
|---|-----------|
| Introduction | Stan |
| Optimization of Antisense | Eric |
| Enhancing Productive Delivery <i>in vivo</i> (LICA) | Frank |
| New Routes of Local Delivery | Frank |
| Commercially Attractive Oral Delivery | Brett |
| Bridging the Gap Between the Gene and the Patient | Brett |
| New Advances in Core Antisense Research | Stan |
| Conclusions | Stan |
| Q&A | All |

Interested parties may access the webcast [here](#). A webcast replay will be available for a limited time at the same address.

About Ionis Pharmaceuticals

As the leader in RNA-targeted drug discovery and development, Ionis has created an efficient, broadly applicable, drug discovery platform called antisense technology that can treat diseases where no other therapeutic approaches have proven effective. Our drug discovery platform has served as a springboard for actionable promise and realized hope for patients with unmet needs. We created the first and only approved treatment for children and adults with spinal muscular atrophy as well as the world's first RNA-targeted therapeutic approved for the treatment of polyneuropathy in adults with hereditary transthyretin amyloidosis. Our sights are set on all the patients we have yet to reach with a pipeline of more than 40 novel medicines designed to treat a broad range of diseases including cardiovascular diseases, neurological diseases, infectious diseases, pulmonary diseases and cancer.

To learn more about Ionis visit www.ionispharma.com and follow us on twitter @ionispharma.

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