Neurocrine Biosciences Announces Top-Line Results from Phase II INTERACT Study Evaluating Luvadaxistat (NBI-1065844) for the Treatment of Negative Symptoms and Cognitive Impairment Associated with Schizophrenia (CIAS)

March 2, 2021

- Negative Outcome on Primary Endpoint Measured by the Change from Baseline on the Positive and Negative Syndrome Scale/Negative Symptom Factor Score (PANSS NSFS)

- Positive Outcome on Cognitive Assessment Secondary Endpoints Support Potential Further Clinical Development of Luvadaxistat

- No New Safety Signals Compared to Previous Trials of Luvadaxistat

SAN DIEGO, March 2, 2021 /PRNewswire/ -- Neurocrine Biosciences (Nasdaq: NBIX) today announced that investigational drug luvadaxistat (NBI-1065844/TAK-831) did not meet its primary endpoint in the Phase II INTERACT study in adults with negative symptoms of schizophrenia, as measured by the change from baseline on the PANSS NSFS at Day 84. Luvadaxistat met secondary endpoints of cognitive assessment, which merit further clinical evaluation. The adverse event profiles for luvadaxistat were consistent with previous trials. Takeda Pharmaceutical Company Limited ("Takeda") granted an exclusive license to Neurocrine Biosciences for seven pipeline programs, including luvadaxistat, in June 2020. The results from the Phase II INTERACT study are being evaluated to determine next steps for development activities.

"The Phase II INTERACT study was a well-designed and executed clinical study that resulted in a negative outcome for luvadaxistat on the primary endpoint assessing the change from baseline in negative symptoms of schizophrenia. We are, however, encouraged that secondary endpoints assessing cognitive performance within the trial were met and that treatment emergent adverse events reported were consistent with previous luvadaxistat studies," said Eiry W. Roberts, M.D., Chief Medical Officer of Neurocrine Biosciences. "The totality of the top-line data from this study therefore support further clinical evaluation of luvadaxistat. We plan to work with our partner Takeda as we move forward."

About the INTERACT Study

INTERACT is a Phase II, twelve-week, multi-center, randomized, double-blind, placebo-controlled, parallel-group study that evaluated the efficacy, safety, tolerability and pharmacokinetics of three dosing levels of investigational drug luvadaxistat (NBI-1065844/TAK-831) as an adjunctive treatment of adult patients with negative symptoms of schizophrenia. Study enrollment began in January 2018 and included a total of 256 randomized patients.

About Luvadaxistat (NBI-1065844/TAK-831)

Luvadaxistat is a potential first-in-class, investigational, oral, selective inhibitor with a high binding affinity to d-amino acid oxidase (DAAO). It targets glutamate, an abundant neurotransmitter in the brain. In schizophrenia, N-methyl D-aspartate (NMDA) receptor hypofunction on PV^{+} gamma-aminobutyric acid (GABA) interneurons results in disinhibition of cortical or hippocampal glutamate neurons projecting to the pyramidal neurons. The cortical disturbances account for the negative/cognitive symptoms of schizophrenia, while the downstream subcortical dopamine release manifests as the positive symptoms of the disorder.

About Schizophrenia

Schizophrenia is a serious and complex syndrome with heterogeneous symptoms that impacts more than 20 million people worldwide. This chronic and disabling disorder is thought to result from a complex interplay of genetic and environmental risk factors. Schizophrenia is characterized by positive symptoms (e.g. hallucinations, delusions and disorganized thinking), negative symptoms [e.g., blunted affect, alogia (reduction in quantity of words spoken), avolition (reduced goal-directed activity due to decreased motivation), asociality, and anhedonia (reduced experience of pleasure)] and cognitive deficits. Annual associated costs for schizophrenia are estimated to be more than $150 billion in the United States.

Current schizophrenia medications include antipsychotics, which work primarily through antagonism of the dopamine D2 receptor. These approaches do not impact the negative symptoms of schizophrenia or cognitive impairment associated with schizophrenia (CIAS), suggesting that dysfunction of the dopamine system might not fully explain the negative and cognitive symptoms associated with schizophrenia. Animal, brain imaging, genetic, and postmortem brain studies have advanced our understanding of the underlying neurobiology of schizophrenia, with converging lines of evidence from these studies implicating NMDA receptor hypofunction in the pathophysiology of schizophrenia.

About Neurocrine-Takeda Collaboration

On June 16, 2020, Neurocrine and Takeda announced a strategic collaboration to develop and commercialize compounds in Takeda's early-to-mid-stage psychiatry pipeline. Specifically, Takeda granted an exclusive license to Neurocrine Biosciences for seven pipeline programs, including three clinical stage assets for schizophrenia, treatment-resistant depression and anhedonia.

About Neurocrine Biosciences

Neurocrine Biosciences is a neuroscience-focused, biopharmaceutical company dedicated to discovering, developing and delivering life-changing

treatments for people with serious, challenging and under-addressed neurological, endocrine and psychiatric disorders. The company's diverse portfolio includes FDA-approved treatments for tardive dyskinesia, Parkinson's disease, endometriosis*, uterine fibroids* and clinical programs in multiple therapeutic areas. For nearly three decades, Neurocrine Biosciences has specialized in targeting and interrupting disease-causing mechanisms involving the interconnected pathways of the nervous and endocrine systems. For more information, visit neurocrine.com, and follow the company on LinkedIn. *(*in collaboration with AbbVie)*

Neurocrine Biosciences Forward-Looking Statements

In addition to historical facts, this press release contains forward-looking statements that involve a number of risks and uncertainties. These statements include, but are not limited to, statements related to: the benefits to be derived from our collaboration with Takeda, the future development of luvadaxistat, and the timing of the commencement or completion of our clinical, regulatory, and other development activities. Among the factors that could cause actual results to differ materially from those indicated in the forward-looking statements are: our future financial and operating performance; the impact of the COVID-19 pandemic and efforts to mitigate its spread on our business; risks and uncertainties associated with the scale and duration of the COVID-19 pandemic and resulting global, national, and local disruptions; risks related to the development of luvadaxistat; risks associated with our dependence on third parties for development and manufacturing activities related to luvadaxistat, and our ability to manage these third parties; risks that the FDA or other regulatory authorities may make adverse decisions regarding our product candidates; risks that clinical development activities may not be completed on time or at all, or may be delayed for regulatory, manufacturing, COVID-19 or other reasons, may not be successful or replicate previous clinical trial results, may fail to demonstrate that our product candidates are safe and effective, or may not be predictive of real-world results or of results in subsequent clinical trials; risks that the potential benefits of our collaboration with Takeda may never be realized; risks that luvadaxistat may be precluded from commercialization by the proprietary or regulatory rights of third parties, or have unintended side effects, adverse reactions or incidents of misuse; and other risks described in our periodic reports filed with the SEC, including without limitation our annual report on Form 10-K for the year ended December 31, 2020. Neurocrine disclaims any obligation to update the statements contained in this press release after the date hereof.

SOURCE Neurocrine Biosciences, Inc.

Neurocrine Biosciences, Inc., Media: Linda Seaton, +1-858-617-7292, media@neurocrine.com; or Investors: Todd Tushla, +1-858-617-7143, ir@neurocrine.com