Positive Phase 2 Study Results of Trofinetide in Pediatric Rett Syndrome Published in Neurology, the Medical Journal of the American Academy of Neurology

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-- Statistically Significant Improvement Indicates Trofinetide's Potential for Treating Rett Syndrome

-- Trofinetide for Rett Syndrome has Fast Track Status and Orphan Drug Designation in the U.S. and Orphan Drug Designation in Europe

SAN DIEGO & CINCINNATI & MELBOURNE, Australia--(BUSINESS WIRE)--Mar. 27, 2019-- ACADIA Pharmaceuticals Inc. (NASDAQ: ACAD), Neuren Pharmaceuticals Limited (ASX: NEU), and Rettsyndrome.org (RSO) announced today that the positive results from a Phase 2 study conducted by Neuren, which evaluated the safety and efficacy of trofinetide in females with Rett syndrome (RTT), have been published in *Neurology®*, the medical journal of the American Academy of Neurology.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20190327005774/en/

The study, "Double-Blind, Randomized, Placebo-Controlled Study of Trofinetide in Pediatric Rett Syndrome" has been published online and will appear in the April 16, 2019 issue of *Neurology*. The study evaluated 82 females with Rett syndrome aged 5 to 15 years and found at the highest dose (200 mg/kg twice daily or BID) trofinetide achieved statistically significant improvement compared with placebo on three of five syndrome-specific efficacy measures: the Rett Syndrome Behaviour Questionnaire (RSBQ), a caregiver assessment (p=0.042), the Clinical Global Impression Scale-Improvement (CGI-I), a clinician assessment of the improvement of Rett syndrome (p=0.029), and the RTT-Clinician Domain Specific Concerns-Visual Analog Scale (RTT-DSC), a clinician assessment (p=0.025). Results of the study also showed trofinetide was well-tolerated at all dose levels (50 mg/kg BID, 100 mg/kg BID, and 200 mg/kg BID).

"Disease burden is severe for Rett patients and their families, and the impact of the disorder is life-long," said Daniel Glaze, M.D., study author, Baylor College of Medicine, Department of Pediatrics and Neurology and Director at the Blue Bird Circle Rett Center, Texas Children's Hospital. "The data reported in this study show that females treated with trofinetide experienced lessened neurobehavioral impairments including social communication deficits, anxiety-like behavior, and mood dysregulation. These are very promising data for the Rett community that is currently without any U.S. FDA-approved treatment option."

In 2018, ACADIA entered into an exclusive North American license agreement with Neuren for the development and commercialization of trofinetide for Rett syndrome and other indications.

"Rett syndrome is a condition that leads to severe neurological impairments and is not only debilitating for the person with the disease, but also very hard on the families and caregivers of the children, mostly females, who are often unable to speak, walk, eat, and even breathe normally," said Steve Kaminsky, Ph.D., Chief Science Officer of RSO. "These results are very encouraging because they provide strong evidence that trofinetide may be a potential treatment for Rett syndrome."

ACADIA plans to initiate a 12-week Phase 3 double-blind, randomized, placebo-controlled study evaluating trofinetide in the second half of 2019 following completion of additional manufacturing scale-up activities. This study will evaluate efficacy and safety of trofinetide and placebo in approximately 180 females ages 5 to 20 years with Rett syndrome. Half of the study participants will receive trofinetide and half will receive placebo. The study will use the RSBQ and the CGI-I syndrome specific efficacy measures as co-primary efficacy endpoints. The Phase 3 study will be followed by a nine month open label extension study in which all participants, including those on placebo in the Phase 3 study, will be eligible to receive trofinetide. In the open label extension study, all participants will be followed to evaluate long term tolerability and safety of trofinetide.

"Neuren has successfully led the clinical development of trofinetide to date, which allows us to further evaluate trofinetide as a potentially important treatment option for Rett syndrome," said Serge Stankovic, M.D., M.S.P.H., ACADIA's President. "In addition to achieving successful outcomes from early-stage clinical research with trofinetide for Rett syndrome, Neuren has fostered strong and enduring relationships with the Rett community. We will build on these efforts as we continue to study trofinetide for this unmet medical need."

Phase 2 Study Design

In the Phase 2 study, 82 females were enrolled and randomized to receive liquid trofinetide or placebo orally or via gastrostomy tube for six weeks: 24 subjects to placebo BID, 15 subjects to 50 mg/kg of trofinetide BID, 16 subjects to 100 mg/kg of trofinetide BID, and 27 subjects to 200 mg/kg of trofinetide BID. Safety and tolerability assessments included adverse events (AEs), clinical laboratory tests, physical examinations, and concomitant medications.

The five core efficacy endpoints included three clinician-completed measures and two caregiver-completed measures.

1. The RSBQ, a rating scale in which the subject's caregiver rates the frequency of symptoms.
2. The CGI-I, in which the clinician rates how much the subject's overall illness has improved or worsened, relative to baseline.
3. The RTT-DSC, in which the clinician assesses - on a visual analog scale - the severity of concerns identified for each subject on an individual basis.
4. The Motor Behavioral Assessment, a rating scale in which the clinician rates the subject's current level of function.
5. The Caregiver Top 3 Concerns, in which the subject's caregiver assesses - on a visual analog scale - the severity of

concerns identified for each subject on an individual basis.

About Trofinetide

Trofinetide is a novel synthetic analog of the amino-terminal tripeptide of IGF-1 designed to treat the core symptoms of Rett syndrome by reducing neuroinflammation and supporting synaptic function. In the central nervous system, IGF-1 is produced by both of the major types of brain cells – neurons and glia. IGF-1 in the brain is critical for both normal development and for response to injury and disease. Trofinetide has been granted Fast Track Status and Orphan Drug Designation in the U.S. and Orphan Drug Designation in Europe for both Rett syndrome and Fragile X syndrome.

About Rett Syndrome

Rett syndrome is a debilitating neurological disorder that occurs primarily in females following apparently normal development for the first six months of life. Rett syndrome has been most often misdiagnosed as autism, cerebral palsy, or non-specific developmental delay. Rett syndrome is caused by mutations on the X chromosome on a gene called MeCP2. There are more than 200 different mutations found on the MeCP2 gene that interfere with its ability to generate a normal gene product. Rett syndrome occurs worldwide in approximately one of every 10,000 to 15,000 female births causing problems in brain function that are responsible for cognitive, sensory, emotional, motor and autonomic function. Typically, between six to 18 months of age, patients experience a period of rapid decline with loss of purposeful hand use and spoken communication and inability to independently conduct activities of daily living. Symptoms also include seizures, disorganized breathing patterns, an abnormal side-to-side curvature of the spine (scoliosis), and sleep disturbances. Currently, there are no approved medicines for the treatment of Rett syndrome.

About ACADIA Pharmaceuticals

ACADIA is a biopharmaceutical company focused on the development and commercialization of innovative medicines to address unmet medical needs in central nervous system disorders. ACADIA has developed and is commercializing the first and only medicine approved for the treatment of hallucinations and delusions associated with Parkinson's disease psychosis. In addition, ACADIA has ongoing clinical development efforts in additional areas with significant unmet need, including dementia-related psychosis, schizophrenia inadequate response, schizophrenia-negative symptoms, major depressive disorder, and Rett syndrome. This press release and further information about ACADIA can be found at: www.acadia-pharm.com.

About Neuren Pharmaceuticals

Neuren Pharmaceuticals Limited (Neuren) is a biopharmaceutical company developing new therapies for brain injury, neurodevelopmental and neurodegenerative disorders. Neuren has completed Phase 2 development of trofinetide for Rett syndrome and has completed a Phase 2 clinical trial of trofinetide in Fragile X syndrome. In addition, Neuren is advancing the pre-clinical development of its second drug candidate NNZ-2591. Further information about Neuren can be found at: www.neurenpharma.com.

About Rettsyndrome.org

Rettsyndrome.org (RSO) is one of the leading private funders of Rett syndrome research, investing over $46 million to date. The mission of the organization is to accelerate full spectrum research to cure Rett syndrome and empower families with information, knowledge and connectivity. Rettsyndrome.org recently earned Charity Navigator's prestigious 4-star rating for its strong financial health and commitment to accountability and transparency. Further information about Rettsyndrome.org can be found at: www.rettsyndrome.org.

Forward-Looking Statements

Statements in this press release that are not strictly historical in nature are forward-looking statements. These statements include but are not limited to statements regarding the timing of the commencement of the Phase 3 clinical trial evaluating trofinetide; the likelihood of success of such clinical trial; the prospects for FDA approval of trofinetide for Rett syndrome and other indications; and the success of any efforts to commercialize trofinetide in North America. These statements are only predictions based on current information and expectations and involve a number of risks and uncertainties. Actual events or results may differ materially from those projected in any of such statements due to various factors, including the risks and uncertainties inherent in drug discovery, development, approval and commercialization. For a discussion of these and other factors, please refer to ACADIA's annual report on Form 10-K for the year ended December 31, 2018 as well as ACADIA's subsequent filings with the Securities and Exchange Commission. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. This caution is made under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All forward-looking statements are qualified in their entirety by this cautionary statement and ACADIA undertakes no obligation to revise or update this press release to reflect events or circumstances after the date hereof, except as required by law.

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Source: ACADIA Pharmaceuticals Inc.

ACADIA Pharmaceuticals Inc.
Investor Contact:
Mark Johnson, CFA
(858) 261-2771
ir@acadia-pharm.com

Media Contact:
Maurissa Messier
(858) 768-6068
media@acadia-pharm.com

Neuren Pharmaceuticals
Contact:

Jon Pilcher, Chief Financial Officer
+61 438 422 271
jpilcher@neurenpharma.com