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# Discovery of Cerecor Drug Candidate CERC-611 (LY3130481) Published in Nature Medicine

## TARP $\gamma$ -8 selectivity may lead to enhanced antiseizure therapy

BALTIMORE, MD -- (Marketwired) -- 11/07/16 -- Cerecor, Inc. (NASDAQ: CERC), a biopharmaceutical company developing innovative drugs that have the potential to make a difference in the lives of patients with neurological and psychiatric disorders, today announced the publication of the rational discovery of CERC-611 (LY3130481) that targets specific neural circuitries for the treatment of epilepsy.

The paper [\*'Forebrain-selective AMPA-receptor antagonism guided by TARP  \$\gamma\$ -8 as a novel antiepileptic mechanism'\*](#) was conducted by researchers at Eli Lilly and Company and published in the November online issue of *Nature Medicine*.

CERC-611 is a potent and selective transmembrane AMPA receptor regulatory proteins ("TARP")  $\gamma$ -8-dependent  $\alpha$ -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid ("AMPA") receptor antagonist. TARPs are a fairly recently discovered family of proteins that have been found to associate with and modulate the activity of AMPA receptors.

AMPA receptor antagonists are known antiseizure agents, and their ability to down-modulate excitatory neurotransmission is key to their antiepileptic therapeutic potential. A non-selective AMPA antagonist approach is associated with undesired side effects like dizziness, ataxia and falling. CERC-611 was designed to specifically target forebrain TARP  $\gamma$ -8-dependent AMPA receptors involved in seizure generation.

"CERC-611 selectively blocks AMPA receptors associated with TARP  $\gamma$ -8, which are restricted to forebrain circuits involved in focal seizure generation," said Dr. Michael Rogawski, Professor of Neurology and Pharmacology, University of California, Davis School of Medicine. "Targeting these receptors may lead to improved antiseizure efficacy, safety and tolerability, and make a significant impact on treatment outcomes. No prior epilepsy treatment targets a subset of brain receptors involved in seizure generation in a regionally-selective fashion."

"We believe CERC-611 has the potential to provide a true advancement in epilepsy therapy," said Uli Hacksell Ph.D., Cerecor's CEO, President and Chairman. "We anticipate filing an investigational new drug application with the United States Food and Drug Administration and thereafter commence Phase 1 development of CERC-611 in 2017."

***About CERC-611***

CERC-611 is a potent and selective TARP  $\gamma$ -8-dependent AMPA receptor antagonist, which we plan to develop as an adjunctive therapy for the treatment of partial-onset seizures with or without secondarily generalized seizures in patients with epilepsy. TARP  $\gamma$ -8 is an auxiliary subunit of AMPA receptors that is expressed at high density in the hippocampus, a region of importance in partial epilepsies. The subunit is absent from most other parts of the brain, including the cerebellum, a brain region involved in motor function that may be responsible for the ataxia and falling associated with broad-spectrum AMPA receptor antagonists. CERC-611 has been observed to have positive preclinical activity in multiple models of epilepsy, neuropathic pain, and depression.

### ***About Cerecor***

Cerecor is a clinical-stage biopharmaceutical company developing innovative drug candidates to make a difference in the lives of patients with neurological and psychiatric disorders. In addition to CERC-611, Cerecor is currently pursuing the development of two clinical Phase 2-stage product candidates: CERC-301, an oral, NR2B specific N-methyl-D-aspartate receptor antagonist that is currently in a Phase 2 clinical trial as an oral, rapidly acting adjunctive treatment for patients with severe major depressive disorder, and CERC-501, a potent and selective kappa opioid receptor antagonist that is currently in a Phase 2 clinical trial for smoking withdrawal.

For more information about the Company and its products, please visit [www.cerecor.com](http://www.cerecor.com) or contact Mariam E. Morris, Chief Financial Officer, at (443) 304-8002.

### ***Forward-Looking Statements***

This press release may include forward-looking statements made pursuant to the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not historical facts. Such forward-looking statements are subject to significant risks and uncertainties that are subject to change based on various factors (many of which are beyond Cerecor's control), which could cause actual results to differ from the forward-looking statements. Such statements may include, without limitation, statements with respect to Cerecor's plans, objectives, projections, expectations and intentions and other statements identified by words such as "projects," "may," "will," "could," "would," "should," "continue," "seeks," "aims," "predicts," "believes," "expects," "anticipates," "estimates," "intends," "plans," "potential" or similar expressions (including their use in the negative), or by discussions of future matters such as the development of product candidates or products, potential benefits of product candidates, the expected timing of data from clinical trials, technology enhancements and other statements that are not historical. These statements are based upon the current beliefs and expectations of Cerecor's management but are subject to significant risks and uncertainties, including those detailed in Cerecor's filings with the Securities and Exchange Commission. Actual results may differ from those set forth in the forward-looking statements. Except as required by applicable law, Cerecor expressly disclaims any obligations or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in Cerecor's expectations with respect thereto or any change in events, conditions or circumstances on which any statement is based.

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