

## **CAMBRIA BIOSCIENCES' CHEMICAL GENETICS PLATFORM IS FEATURED IN NATURE ARTICLE DESCRIBING A NEW PHARMACEUTICAL MODE OF ACTION**

**- Research collaboration identifies novel nematode nicotinic receptor -**

**WOBURN, MA – March 13, 2008** - Cambria Biosciences, a privately held biopharmaceutical company, today announced that it has co-authored an article with partner Novartis Animal Health Inc. which was published in the March 13 edition of *Nature*. The study describes Novartis' discovery of a new anthelmintic compound effective against parasitic nematode strains resistant to currently available treatments. Its unique mode of action was elucidated by Cambria's chemical genetics platform, which identified a nematode-specific protein whose biological function had not been previously studied. This successful work also led to a development milestone payment from Novartis to Cambria as part of an existing collaboration between the two companies.

"Cambria's powerful chemical genetics approach, using the model roundworm *Caenorhabditis elegans* (*C. elegans*), quickly revealed that this compound, which was previously found by Novartis to have a mode of action distinct from other anthelmintics, likely activates a novel nicotinic acetylcholine receptor signaling pathway," said Bethany Westlund, Ph.D., Senior Scientist at Cambria and an author on the study.

"I am pleased that Cambria's unique mode of action technology helped Novartis advance its product pipeline," said Chaoxian Geng, Ph.D., Program Director at Cambria. "Our platform and experienced scientists comprise the premier commercial providers of chemical genomics. We use physiologically relevant whole organisms in combination with genetics, bioinformatics and genomics to characterize product candidates, thus helping our corporate partners advance their pipelines and position them in the market. Cambria has a proven track record with this approach through its work with many global drug developers, including Novartis."

This new compound belongs to a chemical class called amino-acetonitrile derivatives (AADs), which possess potent anthelmintic activity. Cambria scientists explored the mode of action through large scale genetic analysis of AAD-resistant *C. elegans* mutants. Subsequent DNA sequencing of particular chromosomal regions from those mutants identified mutations in ACR-23, a member of a distinct subset within the large family of nematode nicotinic receptors. This research therefore suggests that the ACR-23 protein may be a target of AADs, and further suggests that the AADs function as agonists of ACR-23. AAD sensitivity is the first biological function ever described for this nicotinic receptor.

"Anthelmintic resistance in production livestock continues to spread, so the discovery of a compound with a novel mode of action is urgently needed," said Dr. Peter Wells, Head of Global Research & Development for Novartis Animal Health Inc. "Although it has been 25 years since the introduction of a new anthelmintic drug class for livestock, our discovery gives hope that new and effective anti-worm drugs may be possible. Characterizing a compound's mode of action is a crucial part of the development process and is key to appropriately positioning its use in the animal health community, so we are pleased that Cambria's platform has helped advance these efforts."

The *Nature* article is titled, "Amino-Acetonitrile Derivatives: A new class of anthelmintics effective against drug-resistant nematodes." It was authored by Ronald Kaminsky of the Novartis Centre de Recherche Santé Animale and collaborating scientists from Cambria, Novartis, the University of Bern, Switzerland, and the Laboratoire Central Vétérinaire, Bingerville, Côte d'Ivoire.

**About Cambria Biosciences**

Cambria Biosciences is an innovative biotechnology company building a product pipeline for neurological conditions such as Lou Gehrig's disease and epilepsy. Cambria also employs its chemical genetics platform to aid animal health and agricultural companies in advancing their pipelines, differentiating their products and reducing the risks of field resistance through a precise understanding of their candidate products' mode of action. Further information is available at [www.cambriabio.com](http://www.cambriabio.com).

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