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ARMGO Pharma, Inc. announces data which supports its Rycal program as a novel approach for the treatment of stress-induced cognitive disorders

TARRYTOWN, N.Y., Aug. 30, 2012 -- ARMGO Pharma, Inc., a biopharmaceutical company developing innovative small molecule drugs known as "Rycals™," which act on the ryanodine receptor calcium-release channel (RyR), announced that a study published today in the prestigious scientific journal *Cell* reveals the underlying role of calcium leak through the RyR as an important contributor to stress-induced cognitive dysfunction. In the published study titled "Role of Leaky Neuronal Ryanodine Receptors in Stress-Induced Cognitive Dysfunction," mice were given an orally available, brain-penetrant Rycal, known as S107, prior to and during a chronic stress protocol. The results of behavioral tests demonstrated that stressed mice have cognitive dysfunction manifested as impaired learning and memory, increased anxiety and reduced spontaneous exploratory activity as compared to untreated control mice. Mice treated with S107 showed significant improvement in all tested measures, including learning and memory, essentially becoming indistinguishable from normal unstressed mice. In addition, direct electrophysiological assessment of the hippocampus showed that stressed mice had impaired neuronal signaling measured by reduced long-term potentiation (LTP), which was significantly improved after treatment with S107. This promising and innovative research was conducted in the laboratory of ARMGO Pharma's founding scientist, Dr. Andrew Marks, Chair and Professor of Physiology and Cellular Biophysics at Columbia University College of Physicians and Surgeons.

The data generated by Dr. Marks demonstrate that orally available and brain-penetrant Rycals drugs may have therapeutic utility for the treatment of stress-induced cognitive dysfunction and a potentially broad variety of learning and memory disorders. There is a well-established link between impaired learning and mental stress, and long-term chronic stress is a major contributor to the development of neuropsychiatric, cardiovascular and autoimmune diseases, as well as to cancer. However, there is currently no effective therapy for common disorders characterized by stress-induced cognitive dysfunction, including post-traumatic stress disorder (PTSD).

"These findings are an important demonstration of the role of dysfunctional RyRs in stress-induced disorders of the central nervous system," said Michael A. Blonar, Ph. D., Chief Scientific Officer of ARMGO Pharma. "The data also suggest the potentially broad utility of Rycal compounds for the treatment of learning and memory impairment in a variety of human pathologies."

In addition to demonstrating the role of the RyR2 isoform in a preclinical model of stress-induced cognitive dysfunction, the data support accumulating evidence that neuronal RyRs are intimately involved in learning and memory and that restoration of normal intracellular calcium homeostasis is important to neuronal cell survival and normal function. The central role of the RyR in neuronal pathology, as well as the downstream consequences of sustained RyR mediated calcium leak and elevated neuronal calcium concentrations, suggest a potentially significant role for RyR-directed therapies in diseases of the central nervous system.

"The lack of novel therapies to address cognitive disorders is a tremendous unmet medical need worldwide," said Sapan Shah, Ph. D., President and Chief Executive Officer of ARMGO Pharma. "Studies from Dr. Marks' laboratory have previously demonstrated compelling evidence for the potential benefit of ARMGO's Rycal program for the treatment of important cardiovascular and musculoskeletal diseases. These new results demonstrate that we may also be able to treat important conditions including PTSD and perhaps other related learning and memory disorders. We are encouraged that these remarkable findings further validate and support ARMGO's efforts to discover and develop novel medicines for the treatment of serious unmet medical needs."

About Rycals™: In chronic debilitating diseases such as heart failure and muscular dystrophy, as well as in other neurodegenerative disorders, activation of stress pathways causes the stabilizing protein

calstabin™ to dissociate from the RyR, resulting in leaky intracellular calcium channels. When calcium is continuously leaked into the cytoplasm — rather than released in natural, highly regulated processes — contraction of heart and skeletal muscle is weakened and neurologic function is impaired. Small molecule Rycal compounds enhance the binding of calstabin to leaky RyRs that are present inside virtually all cell types, repairing the leak and restoring normal function in muscle and brain tissues. By stabilizing the RyR, it may be possible to restore the strength of muscle contraction or neuronal function in chronic diseases. For both physicians and patients, Rycal compounds represent a potential novel treatment of chronic, debilitating disorders.

About ARMGO Pharma, Inc.: ARMGO Pharma, Inc., is a privately held biopharmaceutical company dedicated to applying original, targeted science to the discovery and development of novel small-molecule therapeutics to treat debilitating cardiac, musculoskeletal, and neurological disorders. The company's proprietary drugs, known as Rycals, are a new class of oral agents that act on a novel therapeutic target, the ryanodine receptor calcium-release channel (RyR) located on the sarcoplasmic/endoplasmic reticulum of the cell. ARMGO Pharma has been awarded an exclusive, worldwide license from Columbia University for its RyR technology. ARMGO Pharma's lead Rycal program is in Phase 2 clinical studies for the treatment of heart failure and arrhythmias. A second Rycal candidate is at the pre-clinical stage of development for the treatment of muscle disorders including Duchenne Muscular Dystrophy.

For more information, please visit www.armgo.com

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