Capnia Awarded NIH Grant to Develop Sickle Cell Anemia Screening in Developing Countries

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Phase 1 SBIR Grant Supported by Scientific Data Recently Published in Journal Pediatric Blood & Cancer

REDWOOD CITY, Calif., April 6, 2015 (GLOBE NEWSWIRE) -- Capnia, Inc. (Nasdaq:CAPN), focused on the development of novel products based on its proprietary technologies for precision metering of gas flow, today announced it has been awarded a Small Business Innovation Research (SBIR) Phase I grant totaling approximately $220,000 by the National Heart, Lung, and Blood Institute (NHLBI), a division of the National Institutes of Health (NIH). This six month, Phase 1 grant will be used to help fund the development of a modified CoSense® device that is suitable for field use in developing countries with high prevalence of Sickle Cell Disease (SCD), also known as Sickle Cell Anemia (SCA).

This grant is supported by a recently published, peer-reviewed study, titled "Point-of-Care End-Tidal Carbon Monoxide Reflects Severity of Hemolysis in Sickle Cell Anemia," (Pediatr Blood Cancer. 2015 May;62(5):912-4. doi: 10.1002/pbc.25447. Epub 2015 Feb 14). Results from the published study demonstrate that CoSense accurately distinguishes children with SCA from age-matched healthy controls by measuring ETCO with a simple, rapid, non-invasive breath test. These data suggest that ETCO may be a valuable tool for ongoing non-invasive monitoring of the severity of hemolysis in SCA and that ETCO has potential for use as a point-of-care screening test for SCA. This Phase 1 project seeks to initiate development of a point-of-care CoSense device that accurately and consistently measures ETCO under the more extreme temperature conditions encountered in developing countries, where 90% of the SCD births occur.

"In certain developing territories such as Sub-Saharan Africa and India, 50-90% of babies born with SCD do not survive to adulthood," said Anish Bhatnagar, M.D., Chief Executive Officer of Capnia. "Studies have shown that when SCD is diagnosed in the newborn period, early mortality is preventable through prophylactic antibiotics, vaccinations, and health education. Universal newborn screening for SCD has been implemented in the United States with significantly improved morbidity and mortality outcomes, but comparable programs are expensive and difficult to implement in developing countries. While CoSense can be used in health care related environments in these countries, it would be desirable to extend its ability to be used in more remote settings. We are pleased that the NHLBI has recognized the potential of our technology and will be supporting the effort with this grant."

Research and development work supported by this Phase 1 grant will be conducted in collaboration with The University of California San Francisco Benioff Children's Hospital Oakland. Ashutosh Lal, M.D., Director, Thalassemia Program, was the principal investigator for the published SCA study and will collaborate with Capnia for this grant. "Our data showed that CoSense can clearly distinguish between SCA and controls using a breath test that is simple and rapid," said Dr. Lal. "Our collaboration with Capnia on this Phase I grant will allow us to work on an urgently needed non-invasive point of care solution for lack of screening alternatives for SCA in resource poor countries."

About Sickle Cell Disease/Sickle Cell Anemia

Sickle Cell Disease (SCD), also known as Sickle Cell Anemia (SCA), is the most common lethal inherited disorder with over 300,000 babies born with SCD each year. The vast majority of these infants are born in Sub-Saharan Africa and India. Hemolysis associated with SCD affects the blood and various organs in the body, causing episodes of pain and other symptoms. Complications caused by SCD can be mitigated with early diagnosis and specialized treatment. The United States has adopted a universal newborn screening for SCD; however, countries with the greatest prevalence of SCD births have insufficient resources for such public health programs.

About Capnia

Capnia, Inc. develops and commercializes novel products based on its proprietary technologies for precision metering of gas flow. Capnia's lead product CoSense is based on the Sensalyze™ Technology Platform. It is a portable, non-invasive device that rapidly and accurately measures carbon monoxide (CO) in exhaled breath. CoSense has 510(k) clearance for sale in the U.S. and has received CE Mark certification for sale in the European Union. CoSense is used for the monitoring of CO from internal sources (such as hemolysis, a dangerous condition in which red blood cells degrade rapidly), as well as external sources (such as CO poisoning and smoke inhalation). The initial target market is newborns with jaundice that are at risk for hemolysis, comprising approximately three million births in the U.S. and European Union. Capnia's proprietary therapeutic technology uses nasal, non-inhaled CO_2 and is being evaluated to treat the symptoms of allergies, as well as the trigeminally mediated pain conditions such as cluster headache, trigeminal neuralgia and migraine.

Forward-Looking Statements

This press release contains forward-looking statements that are subject to many risks and uncertainties. Forward-looking statements include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things, our ongoing and planned product development and clinical trials and that measuring ETCO may be an effective way to identify pathological hemolytic conditions.

We may use terms such as "believes," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should," "approximately" or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained herein, we caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in this presentation. As a result of these factors, we cannot assure you that the forward-looking statements in this presentation will prove to be accurate. Additional factors that could materially affect actual results can be found in Capnia's Form 10-K filed with the Securities and Exchange Commission on March 13, 2015, including under the caption titled "Risk Factors." Capnia expressly disclaims any intent or obligation to update these forward looking statements, except as required by law.

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