October 27, 2020

DPW Holdings' Announces that the Journal of Alzheimer's Disease Highlights Milestone Research (AL002) Licensed by Alzamend Neuro® from the University of South Florida

New Immunomodulatory Therapeutic Vaccine Developed by USF's Dr. Chuanhai Cao That Targets Oligomeric Amyloid-β Could be Step Towards Halting Alzheimer's Disease Progression

NEWPORT BEACH, Calif., Oct. 27, 2020 (GLOBE NEWSWIRE) -- DPW Holdings, Inc. (NYSE American: DPW) a diversified holding company ("**DPW**," or the "**Company**") announced that the Journal of Alzheimer's Disease, an internationally renowned scientific periodical, published a study written principally by Dr. Chuanhai Cao, the inventor of Alzamend Neuro Inc.'s AL002. DPW has an investment in Alzamend Neuro ("**Alzamend**") through its subsidiary, Digital Power Lending, LLC. In 2012, the University of South Florida ("**USF**") was granted a patent related to this technology (USPTO #8,188,046), and the patent has been exclusively licensed to Alzamend, a Tampa-based biotechnology company dedicated to finding a means of prevention, treatment and cure for Alzheimer's disease. Alzamend's goal is to move the technology out of preclinical testing and into human clinical trials during the first quarter of 2021 with the assistance of TAMM Net, Inc. ("**TAMM Net**") a contract research organization located in Marietta, Georgia.

Alzheimer's disease affects more than 5.8 million Americans at an estimated cost of over $305 billion in 2020, according to the Alzheimer's Association. Currently, Amyloid-β buildup in the brain is believed to be the cause of Alzheimer's by many researchers. There have been many attempts to prevent or reverse the progression of the disease by targeting Amyloid-β, including the first vaccine clinical trial as AN-1792 in 2002 by Elan, which targeted Amyloid-β proteins. Unfortunately, the AN-1792 vaccine was suspended by the FDA due to adverse effects. The long-term follow-up result to the vaccine responders demonstrated a benefit from the vaccine, indicating that vaccine against Alzheimer's disease with Aβ is promising if the treatment can overcome the adverse effects.

The study, published in the Journal of Alzheimer's Disease on October 15, 2020, shows that this novel vaccine using immune cells known as dendritic cells loaded with a modified Aβ, known as E22W42, could be a significant step in halting Alzheimer's. Testing of this new vaccine was conducted on mice genetically engineered to develop high levels of Aβ and behavioral/cognitive abnormalities that mimic human Alzheimer's disease, also known as transgenic[1] mice. Testing has shown that all responders to the vaccine had slowed memory decline. Researchers compared two sets of mice; one set that was administered the vaccine and one set that was not, in a cognitive test called a "Radial Arm Water Maze". This maze is

composed of a large central area with six paths or “arms,” with a hidden escape platform found at the end of one of the arms. Mice were given a pass/fail depending on their ability to find the path with the hidden exit through a total of 15 trials. The results showed that the vaccinated mice showed fewer errors in working memory than the control transgenic mice, which showed a decrease in working memory like that seen in Alzheimer’s patients.

On top of better performances in the water maze, the vaccinated mice were tested to have a higher level of Amyloid-β antibodies. Since antibodies function as the body’s targeting system for foreign/unwanted materials, the antibodies will be responsible for breaking down the protein buildup, thus preventing neural degeneration.

Previous vaccine attempts have failed in the clinical trial steps due to unwanted immune system side effects. Inflammation is a primary symptom of Alzheimer’s disease, so any possible treatment that causes neural inflammation as a side effect is essentially “pouring gas on a fire.” This is where the E22W42 vaccine shows one of its most important qualities. As described in the study, there was no significant difference in the quantity of immune elements that cause inflammation in the plasma of the vaccinated mice vs. the control mice. The researchers conclude that the E22W42 vaccine has little potential for over priming or otherwise inducing an adverse inflammatory reaction by the immune system. The predicted reason for the lack of inflammation is due to the vaccine being developed as a dendritic cell vaccine, acting as a natural adjuvant, as it uses dendritic cells to generate the antibodies. This is important as dendritic cells can induce a moderate amount of antibody response, thus helping to minimize adverse effects.

“This therapeutic vaccine uses the body’s own immune cells to target the toxic Aβ molecules that accumulate harmfully in the brain. And, importantly, it provides strong immunomodulatory effects without inducing an unwanted, vaccine-associated autoimmune reaction in the aging mice. We are confident that this mutant-peptide sensitized dendritic cell vaccine can overcome all major adverse events of vaccines against Alzheimer’s disease and will bring great hope to Alzheimer’s disease patients once the vaccine is available to the public,” said Dr. Cao.

“Our Company is committed to supporting the full product development life-cycle of treatment and cures for Alzheimer’s disease,” said Stephan Jackman, CEO of Alzamend Neuro®. “We believe that strong support of research is the foundation for true innovation, and we are excited to be working with Dr. Cao, the University of South Florida and TAMM Net to further develop E22W42 (also known as CAO22W or AL002) to alleviate the burden created by Alzheimer’s disease, the nation’s 6th leading cause of death and ‘most feared disease.’”

“Modified cell therapies, especially dendritic cells, may provide a safer and more patient-specific active immunization. Ex-vivo modification of dendritic cells as a modality of treatment has been previously used in oncological therapeutics,” said Art Spalding, CEO of TAMM Net. “It has been shown to be relatively safe and is able to engage the immune system to attack the target tissues with success. Its use in Alzheimer’s therapeutics is relatively recent. We are excited to conduct a first-in-human phase 1 study of E22W42 in 2021.”

For more information on DPW and its subsidiaries, the Company recommends that stockholders, investors and any other interested parties read the Company’s public filings and press releases available under the Investor Relations section at

www.DPWHoldings.com or available at www.sec.gov.

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[1] The term “transgenic mice” refers to mice that have had DNA from another source put into their DNA. The foreign DNA is put into the nucleus of a fertilized mouse egg. This enables science to transform mice into those that mimic having certain attributes i.e. having dementia or Alzheimer’s disease.

About DPW Holdings, Inc.
DPW Holdings, Inc. is a diversified holding company pursuing growth by acquiring undervalued businesses and disruptive technologies with a global impact. Through its wholly and majority-owned subsidiaries and strategic investments, the Company provides mission-critical products that support a diverse range of industries, including defense/aerospace, industrial, telecommunications, medical, and textiles. In addition, the Company extends credit to select entrepreneurial businesses through a licensed lending subsidiary. DPW’s headquarters are located at 201 Shipyard Way, Suite E, Newport Beach, CA 92663; www.DPWHoldings.com.

About Alzamend Neuro
Alzamend Neuro®, Inc., (“Alzamend®)” (www.Alzamend.com) is a Delaware corporation with its corporate headquarters in Tampa, Florida with nexus in California. The mission of Alzamend® is to help the Alzheimer’s community by supporting the full product development life cycle of treatment and cures for Alzheimer’s Disease (“AD”) driven by the belief that strong support of research is the foundation for true innovation. Alzamend® is currently working to transition two therapeutics targeting Alzheimer’s disease (“AD”) from the preclinical stage at the University of South Florida into the clinical stage and towards full commercialization. Alzamend® has licensed both a patented mutant-peptide immunotherapeutic (AL002/ E22W42) for use as a treatment or vaccine and a lithium based ionic cocrystal therapy (AL001) that may greatly reduce or eliminate the symptoms of agitation and other endpoints for mild to moderate stage patients diagnosed with AD. There are no profound treatments today for Alzheimer’s disease. With AL001 and AL002, the Company believes that we can change that.

About TAMM Net, Inc.
TAMM Net is a fully integrated contract research organization providing biomedical companies with expertise in: obtaining reimbursement, researching government funding resources, providing solutions to regulatory issues and applications, and supplying distribution to closed systems. Everyone on the TAMM Net team has over 20 years of experience in their fields with documented success.

About USF Health
USF Health (www.health.usf.edu) is dedicated to creating a model of health care based on understanding the full spectrum of health. It includes the University of South Florida’s Colleges of Medicine, Nursing, and Public Health; the Schools of Biomedical Sciences as well as Physical Therapy & Rehabilitation Sciences; and the USF Physicians Group. With more than $360 million in research grants and contracts last year, USF is one of the nation’s top 63 public research universities and one of 39 community-engaged, four-year public universities designated by the Carnegie Foundation for the Advancement of Teaching.

About the Journal of Alzheimer’s Disease

The Journal of Alzheimer's Disease (http://www.j-alz.com) is an international multidisciplinary journal to facilitate progress in understanding the etiology, pathogenesis, epidemiology, genetics, behavior, treatment and psychology of Alzheimer's disease. The journal publishes research reports, reviews, short communications, book reviews, and letters-to-the-editor. Groundbreaking research that has appeared in the journal includes novel therapeutic targets, mechanisms of disease and clinical trial outcomes. The Journal of Alzheimer's Disease has an Impact Factor of 5.101 according to Thomson Reuters' 2008 Journal Citation Reports. The Journal is published by IOS Press (http://www.iospress.nl).

Forward-Looking Statements

This press release contains “forward looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements generally include statements that are predictive in nature and depend upon or refer to future events or conditions, and include words such as “believes,” “plans,” “anticipates,” “projects,” “estimates,” “expects,” “intends,” “strategy,” “future,” “opportunity,” “may,” “will,” “should,” “could,” “potential,” or similar expressions. Statements that are not historical facts are forward-looking statements. Forward-looking statements are based on current beliefs and assumptions that are subject to risks and uncertainties. Forward-looking statements speak only as of the date they are made, and the Company undertakes no obligation to update any of them publicly in light of new information or future events. Actual results could differ materially from those contained in any forward-looking statement as a result of various factors. More information, including potential risk factors, that could affect the Company’s business and financial results are included in the Company’s filings with the U.S. Securities and Exchange Commission, including, but not limited to, the Company’s Forms 10-K, 10-Q and 8-K. All filings are available at www.sec.gov and on the Company’s website atwww.DPWHoldings.com.

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