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HerbalScience Research Demonstrates that Optimized Turmeric Extract Inhibits Amyloid-Beta...

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HerbalScience Research Demonstrates that Optimized Turmeric Extract Inhibits Amyloid-Beta Accumulation, a Hallmark of Alzheimer's Disease - Results of Laboratory Study Detecting Previously Unidentified Bioactives in Standardized Turmeric Extract Will Be Published in Upcoming Issue of Current Alzheimer's Research -

NAPLES, Fla., Sept. 3 /PRNewswire/ -- Alzheimer's disease is the most common cause of dementia among the elderly and is projected to increase in prevalence over the next decades as the population ages -- creating an urgent need for treatments that will prevent or reverse the now-inexorable course of cognitive deterioration and memory loss. Because development of synthetic drugs is expensive and complex, many researchers are focusing on botanical extracts whose benefits have been documented by traditional medicine systems. In that vein, scientists with HerbalScience Group LLC, working with researchers from other organizations and medical institutions, conducted an in-depth study of optimized turmeric extracts, demonstrating that key bioactives in the botanical extracts inhibit aggregation and release of amyloid, a protein fragment considered a prime causal suspect in Alzheimer's disease.

An article detailing the study, titled "Optimized Turmeric Extracts Have Potent Anti-Amyloidogenic Effects," will be published in the December 2009 issue of Current Alzheimer's Research, a peer-reviewed scientific journal. The authors are affiliated with several research organizations and medical institutions, including HerbalScience Group LLC; the University of Miami Leonard M. Miller School of Medicine, Miami, Florida; the University of South Florida College of Medicine, Tampa, Florida; Veterans Administration Hospital, Research Service, Tampa, Florida; and Natura Therapeutics, Tampa, Florida.

"The optimized extracts outperformed curcumin, the best studied anti-Alzheimer extract from turmeric," said Randall S. Alberte, Ph.D., one of the authors of the study and Chief Scientific Officer of HerbalScience Group LLC, a Naples, Florida, and Singapore-based company dedicated to applying advanced science and technology to the production of botanical drugs and nutraceuticals.

For the research, three standardized turmeric extracts were prepared that were enriched in curcuminoids and turmerones, two major classes of compounds present in turmeric. Each of the three proprietary extracts had a different chemical profile and was standardized using advanced extraction technology developed by HerbalScience to create herbal extracts that are dose-reliable and efficacious. The activities of the extracts were compared to standard curcuminoids.

Inhibition of amyloid aggregation and secretion was studied in vitro among the different extracts and standards, and it was found that one of the extracts had the greatest activity in inhibiting the aggregation and secretion of amyloid. This extract, containing the highest levels of curcuminoids among all of the extracts, demonstrated activity that was significantly greater than curcumin alone, the most active of the four curcuminoid standards. This result indicates that an enriched turmeric extract could be just as or more effective than curcumin, the most commonly studied turmeric material for Alzheimer's disease.

The HerbalScience study also used advanced DART (Direct Analysis in Real Time) Time-of-Flight mass spectrometry technology to generate detailed chemical profiles of each extract in order to determine the key bioactive compounds. Only 5% of the compounds were known chemicals, with the remaining 95% being identified for the first time. With further chemical analysis and identification of key bioactives, highly standardized extracts such as these could offer a rich new source for potential drug discovery for Alzheimer's and other therapeutic targets.

The journal article detailing the study will appear in the December 2009 issue of Current Alzheimer's Research (Vol. 6, No. 6). Authors are R. Douglas Shytle, Paula C. Bickford, Kavon Rezai-zadeh, L Hou, Jin Zeng, Jun Tan, and Paul Sanberg, with University of South Florida College of Medicine affiliations including the Department of Neurosurgery Center for Excellence in Aging and Brain Repair, Department of Psychiatry and Behavioral Medicine Silver Child Development Center, and Neuroscience Program; Cyndy D. Sanberg of Natura Therapeutics, Inc., Tampa, Florida; Bill Roschek Jr. and Randall S. Alberte, of HerbalScience Group LLC, Naples, Florida; and Ryan C. Fink, Department of Biochemistry and Molecular Biology, The University of Miami Leonard M. Miller School of Medicine, Miami, Florida. Dr. Bickford is also affiliated with the Veterans Administration Hospital, Research Service, Tampa, Florida; and Drs. Shytle, Bickford, Tan, and Paul Sanberg are also affiliated with Natura Therapeutics.

HerbalScience is a privately-held life sciences company headquartered in Naples, Florida, with facilities in Singapore. HerbalScience is engaged in the discovery, development, manufacture, and marketing of proprietary botanical compounds for human health in the U.S. and international markets. The company has prominent alliances with prestigious university laboratories and prominent researchers in the U.S., as well as research institutions in China.

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Cathy Callegari for HerbalScience Group, +1-212-579-1370, cathy@callprinc.com

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