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Molecular Biometrics Identifies Promising Biomarkers for Diagnosis of Parkinson's Disease

CHESTER, NJ and MONTREAL -- (MARKET WIRE) -- May 3, 2007 --Molecular Biometrics, LLC, a privately held metabolomics company, presented results of a pilot study to identify diagnostic biomarkers for idiopathic Parkinson's Disease (PD) at the American Academy of Neurology's 59th Annual Meeting in Boston, MA.

Hyman Schipper, M.D., Ph.D. presented a poster (P03.006) titled "Vibrational Spectroscopy on blood plasma for diagnosis of idiopathic Parkinson's Disease." This study was based on Molecular Biometrics' proprietary biospectroscopy-based metabolomics (BSM) platform developed by David Burns, Ph.D., Chief Scientific Officer at Molecular Biometrics. Drs. Schipper and Burns were Principal Investigators and architects of this study.

Oxidative metabolism (OM) has long been implicated as a major factor in the pathogenesis of idiopathic PD. In this pilot study, investigators utilized Molecular Biometrics' BSM platform to assess biomarkers of OM in the plasma of PD patients. The study concluded that both Raman spectroscopy (RS) and near infrared (NIR) spectroscopy (also known as vibrational spectroscopy or VS) could be used to reproducibly identify and quantify biomarkers of OM with a sensitivity and specificity of > 75%. Moreover, the biomarkers produced characteristic metabolomic profiles, or "fingerprints," that could distinguish patients with PD from normal elderly controls and from patients with other neurological disorders such as Alzheimer's disease.

James Posillico, Ph.D., President and Chief Executive Officer at Molecular Biometrics, commented, "Currently there are no proven biomarkers to aide in the diagnosis of PD. Doctors rely primarily on clinical symptoms, which can lead to misdiagnosis. Advanced neuroimaging analyses such as positron emission tomography (PET) are too complex and expensive to be used on a routine basis. We expect that metabolomic signatures like those identified in this pilot study will eventually provide clinicians with a rapid, cost-effective tool for diagnosing and monitoring patients with PD."

Dr. Posillico added, "Biospectroscopic tests may also be useful in clinical trials to determine if new drug candidates are having the desired effect of modifying disease progression."

About the study

The study involved 52 patients: 20 with probable PD (Hoehn & Yahr stages 1 - 3) and 32 normal age-matched control subjects. All subjects had no memory complaints and were considered cognitively normal (greater than 8/30 or on the Folstein Mini-mental State Examination, MMSE). Samples were analyzed using two forms of spectroscopic analysis: Raman spectroscopy (RS) and near infra-red spectroscopy (NIR). Both analyses produced unique metabolomic profiles based on changes in the distribution of functional groups such as -CH, -NH, ROH and C=C, which are indicators of OM. Spectral profiles were analyzed by proprietary bioinformatic methods to quantify the observed changes. The two spectroscopic methods demonstrated that PD samples had significant increases in scattering of the ROH and -NH bands and a decrease in the -CH band relative to controls.

Dr. Schipper commented, "As hypothesized, these data suggest that biomarkers of OM can be detected and quantified in the plasma of PD patients using minimally-invasive biospectroscopic analysis. Additional studies are planned to validate these findings and to further demonstrate the clinical utility of this method in the diagnosis of PD."

Molecular Biometrics is rapidly advancing the development of its metabolomics platform based on OM with the aim of commercializing a rapid, minimally-invasive and cost-effective test for screening patients for Parkinson's Disease and other neurological disorders.

About Parkinson's Disease

Parkinson Disease is a neurological disorder that occurs when certain neurons in the brain die or become impaired. When these neurons are impaired they fail to produce dopamine, a neurotransmitter that sends information to those parts of the brain controlling movement and coordination. Without dopamine, patients' muscles do not function normally resulting in the characteristic uncoordinated movement of PD patients. PD affects men and women equally and is not associated with any specific social, ethnic economic group or geographic area. It is estimated that in the U.S. alone there are 1.5 million patients, with 60,000 new cases diagnosed every year.

About Molecular Biometrics

Based in Chester, New Jersey with a research and development facility in Montreal, Quebec, Molecular Biometrics, LLC is a privately held metabolomics company developing highly specific and sensitive analytical methodologies for molecular diagnostic and monitoring applications in medicine, and for drug discovery and

development through pharmacodiagnostics based on its novel technology platform of metabolomics. For more information, please visit www.molecularbiometrics.com.

{Editor's Note: Study abstract available upon request}

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