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Oxford BioDynamics Plc
("OBD" or the "Company" and, together with its subsidiaries, the "Group")

Study published in peer reviewed journal identifies *EpiSwitch*[™] biomarker for the diagnosis of Amyotrophic Lateral Sclerosis (ALS)

- *There is currently no definitive, clinically validated measure to diagnose ALS*
- *Diagnosis of ALS could take on average one year following onset of symptoms*
- *Epigenetic biomarkers represent a promising approach for definitive disease diagnosis, with the potential to improve patient outcomes*
- *This represents a collaboration between Oxford BioDynamics, the University of Oxford, and Neurology Clinical Research Institute, Massachusetts General Hospital, Harvard Medical School*

Oxford BioDynamics Plc (AIM: OBD), a biotechnology company focused on the discovery and development of epigenetic biomarkers based on regulatory genome architecture, for use within the pharmaceutical and biotechnology industry, is pleased to note the publication of a paper in the peer reviewed journal *EBioMedicine* entitled: "Initial Identification of a Blood-Based Chromosome Conformation Signature for Aiding in the Diagnosis of Amyotrophic Lateral Sclerosis".¹ *EBioMedicine* is the open access arm of the Lancet and Cell Publishing Groups, dedicated to the subject of translational medicine.

In the study, OBD's *EpiSwitch*[™] platform was used to compare the genomic architecture of healthy and Amyotrophic Lateral Sclerosis (ALS) patient samples to discover an epigenetic biomarker, called a chromosomal conformation signature (CCS), with diagnostic potential in ALS. The study successfully yielded a distinct CCS biomarker that was diagnostic for ALS, demonstrating a highly promising, potential new approach to the diagnosis of this disease.

ALS, also known as Lou Gehrig's disease, is a progressive, neurodegenerative disorder characterised by muscle weakness and eventual paralysis. There is currently no definitive, clinically validated measure to identify ALS. Doctors perform a series of exclusion tests which often leads to a significant delay in diagnosis, averaging one year from the onset of symptoms. ALS is a rapidly progressing disease therefore this delay can have a significant clinical and lifestyle impact on patients. This delay may also limit the recruitment of patients with early phase disease into clinical trials.

The study represents a collaboration between Oxford BioDynamics, Nuffield Department of Clinical Neurosciences, University of Oxford, and the Neurology Clinical Research Institute, Department of Neurology, Massachusetts General Hospital, Harvard Medical School.

Dr Alexandre Akoulitchev, Chief Scientific Officer of Oxford BioDynamics, and corresponding author commented:

"There is currently no definitive method for the differential diagnosis of ALS, which has proven to be extremely challenging given the very heterogeneous profiles, variable prognosis, and several potential sub-types of the disease. We are pleased that through our collaboration with leading world experts and institutions, we have successfully developed blood-based epigenetic biomarkers that provide new insights into disease mechanisms and have the potential to be used as a rapid and effective diagnostic test for this disease. We believe it will make an important contribution both to patient care and to therapeutic development."



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Merit E. Cudkowicz, MD, Chief of Neurology, Massachusetts General Hospital, Julieanne Dorn Professor of Neurology Harvard Medical School, and co-author commented:

“To develop effective treatments for ALS, it is critical to both develop tools to diagnose ALS earlier and understand the underlying biology. We are very excited to partner with colleagues at Oxford BioDynamics and in the UK to accelerate diagnosis and treatment.”

-ENDS-

1 *EBioMedicine* (2018) <https://doi.org/10.1016/j.ebiom.2018.06.015>

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Notes for Editors

About Oxford BioDynamics Plc

Oxford BioDynamics Plc (AIM: OBD) ("Oxford BioDynamics") is a biotechnology company focused on the discovery and development of epigenetic biomarkers for use within the pharmaceutical and biotechnology industry.

The Company's award-winning, proprietary technology platform, *EpiSwitch*[™], aims to accelerate the drug discovery and development process, improve the success rate of therapeutic product development and take advantage of the increasing importance of personalised medicine.

In particular, *EpiSwitch*[™] can reduce time to market, failure rates and the costs at every stage of drug discovery. Additionally, the technology provides significant insights into disease mechanisms for drug discovery and product re-positioning programmes, and enables the personalisation of therapeutics for patients in the context of challenging pricing environments where improved clinical outcomes are critical.

Oxford BioDynamics is headquartered in the UK, and listed on the London Stock Exchange's AIM under the ticker "OBD". For more information please visit www.oxfordbiodynamics.com.