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

**OBD presents latest ALS biomarker data at the 6<sup>th</sup> World CNS Summit (Targeting Neurodegenerative Diseases)**

*Non-invasive biomarkers identified for the diagnosis and prognosis of neurodegenerative and psychiatric disorders*

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, has presented its latest *EpiSwitch*<sup>™</sup> biomarker data in a plenary talk entitled: "Multi-Center Biomarker Development for Diagnosis and Prognosis of Amyotrophic Lateral Sclerosis", at the 6<sup>th</sup> World CNS Summit in Boston, MA, 20-22 February 2018.

Amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease, is a type of motor neuron disease. A new diagnosis of ALS is made once every 90 minutes. ALS attacks certain cells in the brain and spinal cord needed to control our muscles. Early signs of ALS include: muscle cramps and muscle twitching; weakness in hands, legs, feet or ankles; and difficulty speaking or swallowing.

ALS is a progressive neurodegenerative disorder with no single diagnostic test. During the early symptomatic stage, if the diagnosis is not clear, doctors perform a series of exclusion tests including electromyography and nerve conduction, magnetic resonance imaging (MRI), genetic tests, muscle biopsy, spinal tap, blood and urine tests to aid diagnosis.

Most patients with ALS only survive 2-5 years after their first early symptoms and diagnosis. 1 in 10 ALS patients will survive at least 10 years.<sup>1</sup> Currently there are limited treatments for ALS, as such a variable rate of disease makes prognosis difficult and therapies challenging to develop.

OBD has demonstrated on the MIQE-compliant qPCR format of *EpiSwitch*<sup>™</sup> that there are prognostic biomarkers that capture rates of development and stages of ALS. These results define actionable stratifications for individual patients on the basis of high resolution detection of chromosome conformations and regulatory genome 3D architecture. Additional applications and examples of chromosome conformation stratifications were also presented and discussed for the extended range of indications of neurodegeneration, psychiatric disorders and related autoimmune and inflammatory conditions, including multiple sclerosis, lupus, treatment resistant depression, autism and post-traumatic stress disorder.

**Dr Alexandre Akoulitchev, Chief Scientific Officer of Oxford BioDynamics, commented:**

"We believe that delivering non-invasive prognostic biomarkers for ALS and building the insights into sub-typing of ALS is highly important. We aim to provide practical solutions that could benefit each and every individual patient that undergoes prognostic evaluation as early as possible and then receives one of the few available treatments. Our studies follow up on very successful early collaborations and support from the Northeast ALS Consortium (NEALS), Massachusetts General Hospital, Nuffield Department of Clinical Neurosciences, the University of Oxford and Innovate UK.

We are witnessing a growing body of evidence for the applications of chromosome conformation signatures in stratifications of neurodegenerative and psychiatric conditions. Earlier reports and the latest published validations of *EpiSwitch*<sup>™</sup> stratifications from diagnostic, prognostic and biomarkers



# OXFORD BIODYNAMICS

for response to treatment, gives OBD a unique opportunity to make a highly valuable contribution to improved patient care, clinical decisions and evidence of efficacy in drug treatments.”

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1. *Clin Epidemiol.* 2015 Feb 12;7:181-93. doi: 10.2147/CLEP.S37505

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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*<sup>™</sup>, 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*<sup>™</sup> 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](http://www.oxfordbiodynamics.com).