



Oxford BioDynamics plc
("Oxford BioDynamics" or the "Company")

**Oxford BioDynamics' EpiSwitch® CRC Blood Test Accurately
Detects both Cancer and Polyps**

- *Results of multi-institutional clinical study published in peer reviewed journal 'Cancers' confirms efficacy of Oxford BioDynamics' EpiSwitch® blood-based Colorectal No-Stool Test (NST)*
- *High accuracy of detection reported at 81% for early cancer stages and 82% for non-cancerous polyps*
- *Discussions are underway with potential partners to bring this potentially evolutionary test to clinical practice*

Oxford, UK - 5 February 2025 - Oxford BioDynamics, Plc (AIM: OBD, the Company), a biotechnology company developing precision medicine tests based on the EpiSwitch® 3D genomics platform, announces the publication of compelling results involving OBD's technology in a multi-centre study using blood to detect colorectal cancer (CRC), including early stage, and non-cancerous polyps with high accuracy¹.

The peer-reviewed work, published in the high-impact journal 'Cancers', was a collaboration between OBD, Norwich Medical School (University of East Anglia), University Hospitals NHS Trust, Hospital Sultana Bahiyah, Island Hospital Penang, Hospital Pulau Pinang, Hospital Sultanah Aminah, and Mount Miriam Cancer Hospital (Malaysia) under the direction of leading UK and Malaysian colorectal cancer experts.

Using blood samples collected from 325 patients, the whole genome DNA screening for 3D EpiSwitch biomarkers in blood has identified and validated two eight-marker signatures (EpiSwitch® NST) that allow diagnosis of CRC and precancerous polyps, respectively. Independent validation cohort testing demonstrated an exceptionally high accuracy of detection - 81% for early cancer stages and 82% for non-cancerous polyps. Linking the top diagnostic biomarkers to nearby genes, OBD used the EpiSwitch KnowledgeBase platform to map pathways that help understand the processes contributing to the pathology of polyp and CRC progression.

Principle clinical lead Prof. Dmitry Pchejetski, Ph.D., Professorial Research Fellow and Head of the Tumour Microenvironment and Chemotherapy group at Norwich Medical School, said:

"I am excited by these findings. This test has the potential ability to detect early cancers and precancerous polyps with greater accuracy."

Dr Alexandre Akoulitchev, OBD's Chief Scientific Officer added:

"Reliable and non-invasive detection of early stages of colorectal cancer, as well as the polyps, has been the focus of strenuous efforts by a number of big biomarker companies deploying common biomarker modalities. To date the results in terms of sensitivity of detection for polyps and positive predictive value for cancer have been disappointing. Our own approach and these reported results demonstrate the consistent accuracy of EpiSwitch technology for the most challenging patient stratifications and will allow us to progress our ongoing commercial discussions with third parties."

The peer-reviewed manuscript, titled "A New Blood-Based Epigenetic Diagnostic Biomarker Test (EpiSwitch® NST) with High Sensitivity and Positive Predictive Value for Colorectal Cancer and Precancerous Polyps" is available online in Cancers¹ (www.mdpi.com/2072-6694/17/3/521).

Colorectal cancer

Globally, CRC is the third most common cancer type, accounting for 10% of all cancer cases. There were 1.9 million new cases and 930,000 deaths from the disease in 2020. More than 80% of CRC arises from adenomatous polyps and outgrowths. Around 75-95% of CRC cases occur in people with little or no genetic risk. Screening modalities such as colonoscopy, faecal immunochemical tests (FIT), FIT-DNA and cell-free DNA from CRC tumours in blood are current primary screening tests for early detection and prevention. Unfortunately, the non-invasive methods lack sensitivity to polyps and early CRC.

OBD's EpiSwitch pipeline development has delivered a blood-based Colorectal No-Stool Test (NST) which shows significant potential as an accurate and rapid cancer screening diagnostic for early stages of cancer (sensitivity 84% and specificity 79%) and non-cancerous polyps (sensitivity 79% and specificity 83%). This accurate, rapid, minimally invasive, and cost-effective NST test was built using OBD's EpiSwitch® 3D genomics platform and methodology. For each patient, NST captures a personal, systemic fingerprint of specific regulatory network changes associated with early stages of colorectal cancer and/or non-cancerous polyps.

References

¹ "A New Blood-Based Epigenetic Diagnostic Biomarker Test (EpiSwitch® NST) with High Sensitivity and Positive Predictive Value for Colorectal Cancer and Precancerous Polyps" Ewan Hunter¹, Heba Alshaker², Cicely Weston¹, Mutaz Issa¹, Shekinah Bautista¹, Abel Gebregzabhar¹, Anya Virdi¹, Ann Dring¹, Ryan Powell¹, Jayne Green¹, Roshan Lal³, Vamsi Velchuru³, Kamal Aryal³, Muhammad Radzi Bin Abu Hassan⁴, Goh Tiong Meng⁵, Janisha Suriakant Patel⁶, Shameera Pharveen Mohamed Gani⁶, Chun Ren Lim⁶, Thomas Guieu⁷, Alexandre Akoulitchev and Dmitri Pchejetski *Cancers* **2025**, 17, 521. (<https://www.mdpi.com/2072-6694/17/3/521>)

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Notes for Editors

About Oxford BioDynamics Plc

Oxford BioDynamics Plc (AIM: OBD) is an international biotechnology company, advancing personalized healthcare by developing and commercializing precision clinical diagnostic tests for life-changing diseases.

Currently OBD has two commercially available products: the [EpiSwitch® PSE](#) (EpiSwitch Prostate Screening test) and [EpiSwitch® CiRT](#) (Checkpoint Inhibitor Response Test) blood tests. PSE boosts the predictive accuracy of a PSA test from 55% to 94% when testing the presence or absence of prostate cancer. CiRT is a highly accurate (85%) predictive response test to immuno-oncology checkpoint inhibitor treatments.

The tests are based on OBD's proprietary 3D genomic biomarker platform, EpiSwitch® which enables screening, evaluation, validation and monitoring of biomarkers to diagnose patients or determine how individuals might respond to a disease or treatment.

OBD's clinical smart tests have the potential to be used across a broader range of indications, and new tests are being developed in the areas of oncology, neurology, inflammation, hepatology and animal health.

The Group's headquarters and UK laboratories are in Oxford, UK. Its US operations and clinical laboratory are in Maryland, USA, along with a reference laboratory in Penang, Malaysia.

OBD is listed on the London Stock Exchange's AIM (LSE: OBD). For more information, please visit the Company's website, www.oxfordbiodynamics.com, X (@OxBioDynamics) or [LinkedIn](#).

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