A NEXT GENERATION, FIELD READY OXIDATIVE STRESS TEST

OxiDx Pty Ltd

*Comprehensive monitoring of **oxidative stress** levels, anytime, anywhere*

Spin-off Company from Proteomics International

OxiDx Pty Ltd was launched in August 2022 as a spin-out from Proteomics International and the University of Western Australia. OxiDx is a medical technology company and operates as an independent entity to maximise the commercialisation of the patented '2-tag' oxidative stress technology.

Oxidative Stress

Oxidative stress occurs when the body's antioxidant defences are overwhelmed by an excess of toxic oxidants, often referred to as free radicals. Oxidative stress is implicated in over 70 health conditions, with levels often reflective of a person's health condition[1].

The OxiDx Test

Backed by peer-reviewed publications, OxiDx uses next generation diagnostic technology to detect subtle changes in protein structures, 'decorations', that sit on the surface of a protein, known as post-translational modifications. These protein markers can be detected via a simple fingerprick blood sample. The OxiDx platform technology for systemic oxidative stress is targeted for use as an athletic monitoring tool in both human and equine (horse) industries.

85% of Thoroughbreds suffer at least one injury during their 2–3-year-old racing seasons[2]

Thoroughbred Racing

Injury risk management and competitive advantage from improved race-preparedness

Professional and Elite Amateur Sports

Performance, recovery and injury risk management

Muscle injuries account for up to 55% of all sports injuries and cost the Australian economy over $2B annually[3]

Optimise training and recovery routines to ensure athletes and thoroughbred horses are **ready to perform at their best in competition**

Further applications for the OxiDx technology

- **Precision medicine** – Direct-to-consumer monitoring tool for health and wellbeing.
- **Primary industry** – Monitor effects of changing conditions, handling and detect pathogen invasion.
- **Clinical trials and research** – Complementary diagnostic test for treatment efficacy and personalised dosing in multiple health conditions.

1 Doi: 10.1373/clinchem.2005.061408
2 Appraising the Welfare of Thoroughbred Racehorses in Training in Queensland, Australia: The Incidence, Risk Factors and Outcomes for Horses after Retirement from Racing
3 Muscle Injuries: A Brief Guide to Classification and Management

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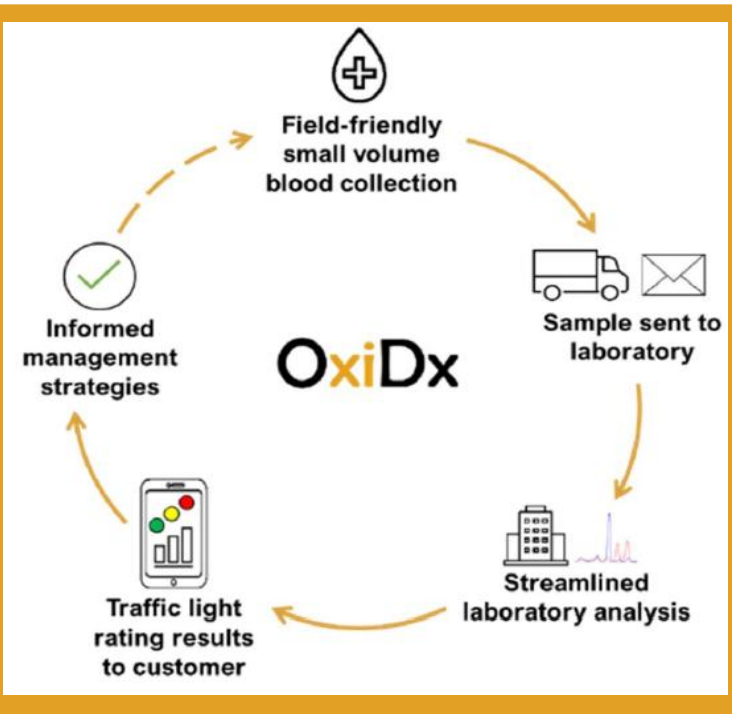
- ✓ **Highly sensitive patented technology**
- ✓ **Streamlined rapid laboratory analysis allows results to be returned to customers within 24 hr**
- ✓ **Fingerstick blood collection permits sampling by anyone, anytime, anywhere**
- ✓ **No cold-chain logistics or special mailing requirements**
- ✓ **Results feedback to inform management strategy – simple decision tool**
- ✓ **Cost-effective for sequential sampling and large cohort collection**



Clinical Evidence

Peer-reviewed evidence in elite athlete recovery[4]

- Groundbreaking results published demonstrated the OxiDx test can **identify and assess recovery from exercise-induced muscle damage in elite marathon runners**[4]
- Individual variability was significant, with some runners showing prolonged recovery times
- The individual variability **emphasised the importance of individualised recovery monitoring to prevent injury**.
- **OxiDx's diagnostic sensitivity** to recovery processes **surpasses traditional markers**[4,6] and **offers athletes and coaches a novel reliable tool for optimising recovery and enhancing performance**.

Peer-reviewed evidence in muscle damage tracking[5]

- Results showcased OxiDx's ability to monitor muscle repair post-exercise, aiding recovery management for athletes.

Study results pending in Thoroughbred horses investigating whether the OxiDx test can:

- Identify and monitor muscle damage after a race
- Predict the timeline of recovery from muscle damage after a race
- Predict performance prior to a race, based on the extent of muscle damage

Key Publications

Temporal changes in thiol-oxidized plasma albumin are associated with recovery from exercise-induced muscle damage after a marathon	[4]James C, Lloyd EM, Arthur PG. Temporal changes in thiol-oxidized plasma albumin are associated with recovery from exercise-induced muscle damage after a marathon. Physiol Rep. 2024. Link
Temporal tracking of cysteine 34 oxidation of plasma albumin as a biomarker of muscle damage following a bout of eccentric exercise	[5]James, C., Dugan, C.W., Boyd, C. et al. Temporal tracking of cysteine 34 oxidation of plasma albumin as a biomarker of muscle damage following a bout of eccentric exercise. Eur J Appl Physiol, 2024. Link
Oxidation of cysteine 34 of plasma albumin as a biomarker of oxidative stress	[6]Lim ZX, Duong MN, Boyatzis AE, Golden E, Vrielink A, Fournier PA, Arthur PG. Oxidation of cysteine 34 of plasma albumin as a biomarker of oxidative stress. Free Radic Res, 2020. Link