# Runners benefit from new spin-out

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A runner put through their paces with a Run3D assessment

Run3D Ltd, a new Oxford University spin-out company, provides a pioneering service to help runners avoid a common form of injury.

The firm offers Europe's first computerised three-dimensional assessment for preventing the types of overuse injuries that affect 50% of runners. Run3D's service uses 3D motion analysis checked against the world's largest biomechanical database to identify any abnormal patterns in a runner's gait. These abnormal patterns are often the root cause of an injury which once corrected can prevent any recurrence.

At the heart of the Run3D service is a multiple infrared camera system linked to a sophisticated data acquisition system, which has been developed by Professor Reed Ferber at the Running Injury Clinic, University of Calgary. A full assessment takes two hours and is backed by expert advice from a team headed by Dr Jessica Leitch, CEO of Run3D. Dr Leitch began working on the service after completing her doctoral studies in running injury biomechanics at Oxford University's Department of Engineering.

'An accurate analysis of a runner's biomechanics is fundamental to understanding the root-cause of a musculoskeletal overuse injury and to delivering a long-term solution to optimal running,' said Dr Leitch.

'Conventional video based systems are subjective and not sensitive enough to detect the subtle abnormalities that can lead to injury. Run3D measures a runner's joint angles in the three planes of human motion. The results are then compared to a biomechanical database in order to identify any abnormal patterns in the runner's gait to improve performance and prevent injury.

'Run3D's unique and rigorous approach provides an objective and scientific service, which delivers an effective and evidence-based programme that is tailored very specifically to that individual.'

Coming out of a joint research initiative at the Oxford Gait Laboratory at the Nuffield Orthopaedic Centre and the University's Engineering Department, the company will be based at the historic Roger Bannister Running Track in Oxford. Run3D offers a range of services that include the only mobile service of the kind, going out to running tracks and playing fields to assess athletes across the country. The cost of the full analysis will be £295, with discounted rates available for sports teams and running clubs.

Isis Innovation, the technology transfer office of the University of Oxford, managed the spin-out. Andrea Alunni, Seed Investment Manager at Isis said: 'Isis was happy to see this company through the incorporation process, providing support on all levels and access to investment.'

The spin-out comes from an initial investment from a new fund managed by Oxford Technology Management Ltd. The Oxford Technology Combined Seed Enterprise Investment and Enterprise Investment Scheme Fund targets start-up technology companies near Oxford.

Lucius Cary, founder of Oxford Technology Management said: 'We are delighted to be investing in Run3D Ltd, a spin-out from Oxford

University. There are now 2m people who run regularly in the UK, and statistically, 1m of these will develop running-related injuries in the course of the next 12 months. Jessica Leitch, who as well as having a DPhil in the biomechanics of running, is also an international runner, having represented Wales, and is the perfect person to provide a service to runners which, by analysing their gait in never-before-achieved 3D detail, will be able to help them to run better and to avoid injury.'

Partnering Run3D in this new venture is the Running Injury Clinic, at the University of Calgary, where the gait analysis system was developed. Other stakeholders include the Oxford University Hospitals NHS trust, following the incubation of the Run3D service at the Nuffield Orthopedic Centre, and Technikos LLP, a venture fund with a long term commercial partnership with the University of Oxford's Institute of Bio-medical engineering. Run3D is the third University of Oxford bio-engineering spin-out this year.

Provided by Oxford University

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