



## Measuring movement not so mysterious

People move in mysterious ways – physiotherapist Dr Andrew Ronchi says every person's pattern of movement is as distinctive as their fingerprint.

As the founder and CEO of Melbourne-based wearable sensor device company *dorsaVi*, Dr Ronchi has devised completely new technology to monitor muscle movement and activity, whether you are out on the field, at home, at work, or in a clinic, and provide lab quality data.

Dr Ronchi, a former AFL club physiotherapist, says his company's new wearable sensor technology is literally a game changer.

Seven AFL clubs – Hawthorn, Richmond, Western Bulldogs, Essendon, Brisbane Lions, Fremantle Dockers, and West Coast Eagles – now use *dorsaVi*'s ViPerform technology to measure, analyse and improve the efficiency of players' movement.

*dorsaVi*'s wearable sensors contain accelerometers, gyroscopes and a magnetometer, that are wirelessly linked to a computer allowing the subject's movement and muscle activity to be monitored in real time. The data is also recorded and can be later referenced for a more detailed analysis. The technology is truly revolutionary – the reason many elite sporting clubs and athletes are rapidly embracing it as part of their program.

The sensors are attached externally to major muscles, the limbs or back, to measure the individual's movement in 3D space, or the relative motions of separate regions of the body. Sensors placed separately in the thoracic and lumbar regions of the spine for example, can assess body core stability or when placed on the lower limbs can detect movement asymmetries between the two sides of the body.

*dorsaVi* has three versions of its proprietary technology for elite sport (ViPerform), Occupational Health and Safety (ViSafe) and clinical applications (ViMove).

"Sport is giving us visibility and credibility in the Australian and international markets," Dr Ronchi said.

*dorsaVi*'s OH&S services offer the first ever technology that enables employers to assess risk of injury for employees, reduce insurance-related costs, meet compliance, and test the effectiveness of proposed changes to workplace design, equipment or methods based on objective evidence.

"Clinical applications are our medium term vision with over 24,000 physiotherapists and 25,000 medical practitioners in Australia alone. There are many employers out there who could benefit from our technology and the OH&S market for ViSafe is potentially huge."

Dr Ronchi said sports medicine specialists at the Olympic Park Sports Medicine have taken up *dorsaVi*'s ViMove system.

"They're the experts that others look to when a new product emerges, and changes clinical practice – it's critical to have opinion leaders using our system.

"Dr Adam Castricum, the Hawthorn Football Club's doctor, and doctor for the Australian athletics team, is using our technology when he works with elite athletes.

"A medical practice on London's Harley Street that specialises in treating chronic pain, is using our system to help identify the causes of pain, and to devise treatments to correct the movement or posture problems responsible.

"English Premier League clubs Manchester United, Sunderland and West Brom are all using our technology, as well as Sao Paulo FC and several other elite South American football teams. We're also working with high profile basketball teams in New York."

Dr Ronchi worked as a physiotherapist for 20 years before undertaking a PhD project in computer and electronic engineering, to determine which type of sensor was best for measuring back movement.

"We can give people accurate information about how their back moves, and show them a view of their back in action on a computer screen. We can then teach them to move optimally to alleviate their back pain – and importantly we may be able to help them avoid surgery," he said.

"The clinical applications of our technology is the holy grail and the customer base already includes physiotherapists, pain specialists, sports physicians and surgeons. The technology goes beyond mere innovation; it is backed by scientific and clinical rigour. In a clinical trial undertaken at eight Australian sites, 112 patients were involved in a randomized controlled trial. The trial shows significant and sustained results at 52 weeks for both reduced pain and improved function."

ViMove is approved by the TGA in Australia, has FDA clearance in the US, and is also approved in New Zealand, UK and Europe, and Canada.

### **dorsaVi Ltd**

**MD:** Andrew Ronchi

**ASX Code:** DVL

**Market Cap:** ~\$49 million

**Description:** *dorsaVi* Ltd (*dorsaVi*) is a biotechnology company focused on developing motion analysis device technologies. The Company is focused on commercializing its wireless sensor movement monitoring system and products in the Elite Sports, Occupational Health and Safety (OH&S) and medical/physiotherapy markets.

**w:** [www.dorsavi.com/](http://www.dorsavi.com/)

**e:** [info@dorsavi.com](mailto:info@dorsavi.com)

**p:** 1800 367 728