



## MEDIA RELEASE

### **Kynetyka supported by Victoria's Medical Device Partnering Program to develop DVTECT™ technology**

**10 November 2020; Melbourne Australia**

Kynetyka Technologies Pty Ltd ("Kynetyka"), a privately held Melbourne-based medical device company led by Craig Newton and Xenia Sango, is delighted to announce that it has secured the support of Victoria's Medical Device Partnering Program (MDPP) to further the development and clinical testing of Kynetyka's DVTECT™ technology for deep vein thrombosis (DVT) detection.

The support package includes the technical refinement of the DVTECT™ hardware and software by research engineers at one of MDPP's key partner organisations, Swinburne University, followed by a proof-of-concept clinical study in patients with DVT.

Kynetyka's Director Xenia Sango said "We are delighted to receive this support from MDPP and to be working with Swinburne University. Their product design and engineering capability is world-class. Swinburne's expertise will assist Kynetyka in our quest to develop a unique medical device that will enable the rapid and early screening of DVTs, potentially helping to save lives lost to pulmonary embolism."

The proprietary DVTECT™ device is designed to detect abnormalities of the calf muscle as a predictor of DVT. The technology underpinning DVTECT™ is based on an analysis of oscillometric waveforms generated in the calf muscle. DVTECT™ comprises an accelerometer attached to the calf, with the waveforms sent to a linked device for analysis by proprietary software.

Dr David Sly, Senior Lecturer in Clinical Technologies and Neuroscience at Swinburne University, noted: "The Swinburne team is excited to be working with Kynetyka and the MDPP on the novel DVTECT™ technology. Along with Dr. Adin Tan and Stuart Favilla from Swinburne's Centre for Design Innovation, our aim is to optimise the data capture system, including selection and integration of appropriate sensors, and to update the data analysis software. The outcome will be a fully-functional user-friendly prototype ready for proof-of-concept testing in the clinic."

Professor Sally McArthur, Victorian Regional Director for Medical Device Partnering Program added: "The DVTECT™ project is a great example of Victoria's MDPP in action. Supported by LaunchVic, the MDPP assists energetic start-ups like Kynetyka to get their medical device along the path to market. Each project kicks off with a MDPP-facilitated workshop involving key stakeholders. At the DVTECT™ Workshop, doctors who diagnose and manage the treatment of DVT reinforced the need for a device for screening of DVTs in patients. MDPP looks forward to helping Kynetyka to meet that need."

The MDPP DVTECT™ development project is expected to run until mid-2021.

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**Kynetyka Technologies Pty Ltd**

Kynetyka Technologies Pty Ltd (Kynetyka) is an Australian medical device company, incorporated in September 2017 and headquartered in Melbourne. The company is focused on developing their proprietary and unique DVTECT™ technology through to commercialisation. The DVTECT™ technology enables screening for deep vein thrombosis in at-risk patients.

Kynetyka's executive team has collectively over 80 years' experience in the medical/pharmaceutical and technology development sectors both domestically and internationally; their detailed product development knowledge is enabling expeditious development of the device to market. Their experience in engineering, and quality and regulatory compliance ensures the device will be studied appropriately in the clinic and developed to meet national and international regulatory standards. Previous organisations that they have worked with include CSL Limited and CSL Behring (Australia, Switzerland, USA), CSIRO, Serono (UK), Invion Limited, Epworth HealthCare and La Trobe University.

**Deep Vein Thrombosis (DVT)**

DVT is a significant complication in all surgical and medical wards, as well as in other aspects of community life. It can lead to pulmonary embolism (clots in the lungs) and possible death. There are also dangers of continuing morbidity in the legs and the lungs from the presence of venous thromboembolism. At the present time, there is no recognised clinical assessment that has an accuracy greater than 60%; many patients with DVT have no overt clinical findings. Where there are suspicious findings, the specific investigations for confirmation usually involve Doppler ultrasound, which is expensive and requires significant capital equipment and expertise.

**DVTECT™ technology**

When a patient has a DVT in the calf, there is a demonstrable change in the calf muscles in response to a percussive stimulus applied to the tissues; the normal mobility of the calf is reduced.

Kynetyka has developed the DVTECT™ device to provide a non-invasive, cost-effective, portable, point-of-care assessment. DVTECT™ works by placing a sensor on the calf and applying a percussive

stimulus to the muscle. The resulting muscle oscillation is then recorded and transmitted to the DVTECT™ device where the waveform of the oscillation is analysed by the DVTECT™ software to indicate the presence a DVT.

DVTECT™ is a unique medical device for bedside screening, easy for clinicians with minimal inconvenience to the patient. DVTECT™ offers the potential to detect DVT, prevent pulmonary embolisms and the associated risk of death, and save on unnecessary ultrasounds. Only ~25% of patients referred for radiology ultrasound are found to have a DVT. In Australia ultrasounds performed for suspected DVT rose from 427,000 in 2013/14 to 500,000 in 2017/18<sup>1</sup>,

As a screening device, the initial target market is hospitals – post-surgery recovery wards, Intensive Care Units and Emergency Departments. It could also be used in primary care on symptomatic patients or those with thromboembolism risk factors.

### **The Medical Device Partnering Program (MDPP)**

The Medical Device Partnering Program (MDPP) is an ideas incubator that fosters collaborations between researchers, industry, end-users and government and develops medical technologies with global market potential.

MDPP has operated for over 10 years in the Australian medical device sector; MDPP Victoria, supported by LaunchVic, was launched in 2019. The MDPP program supports start-ups and existing companies by connecting them with the research and development community across hospitals, universities and industry partners.

Operationally, the MDPP team provides commercial assessment with insights into the specific market opportunity for devices and works collaboratively to develop and test device prototypes. MDPP's multidisciplinary approach allows clients to leverage the best expertise, perspectives and networks. Projects that go through the MDPP Ideas Incubator have a strong commercial focus and are in response to industry-driven problems.

MDPP's aim is to build on the current research and manufacturing capability across the nation and advance Australia's position as a global leader in the growing medical devices market.

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<sup>1</sup> MBS Taskforce: Fourth report from the Diagnostic Imaging Clinical Committee – Pulmonary Embolism and Deep Vein Thrombosis 2017 and Requested Medicare items (55244, 55221, 55246, 55222) processed from July 2016 to June 2018