



ASX ANNOUNCEMENT

30 October 2020

## CardieX September 2020 Quarterly Update

### Highlights

- Commercial agreement announced with Andon for the co-development of remote patient home health monitoring devices.
- Commercial agreement announced with Mobvoi to launch a new line of smartwatches with heart and arterial health management features based around CardieX subsidiary ATCOR's patented SphygmoCor® technology.
- New patent granted in Europe for key "Brachial Cuff" blood pressure technology.
- New contract announced with Bayer AG for the AVANTI Heart Trial.
- Successfully completed \$2.5 million placement to new strategic investors.
- CardieX devices to be used in largest hypertension and COVID-19 study to date (CARTESIAN Study).
- Launch of ATCOR·X division focusing on wearable, connected fitness, and smartwatch partnerships.
- Additional New Bayer clinical trial executed 19 October, 2020.

On behalf of CardieX Limited (CardieX, the "Company"), I am pleased to provide an update on our activities during the September 2020 quarter.

### New commercial partnership agreements

During the quarter the Company achieved two significant commercial milestones with the signing of partnership agreements with Shenzhen Stock Exchange listed company, Andon ([002432.SZ](#)), one of China's largest manufacturers of home-use medical electronic devices, and with Mobvoi, one of China's most innovative AI, wearable and tech companies and a global leader in smartwatches.

### ***Agreement with Andon for next generation telehealth and remote patient home health monitoring devices***

In September, CardieX signed a three-year co-development and commercialization agreement (the "Agreement") with Andon which provides for the development and commercialization of new medical and consumer health devices for home-use based on ATCOR's patented and global standard SphygmoCor® technology for measuring central blood pressure and arterial stiffness.

The first device under the Agreement is to be named ATCOR "Pulse" (the Device) and will be targeted for commercial launch in the US, Europe, Australia and China in Q4 2021.



ATCOR “Pulse” will be the first new medical device for ATCOR since 2012 and represents a game changing medical technology collaboration for home-use vital signs monitoring. This unique device will be the world’s first cloud-connected home-use BP monitor to include ATCOR’s SphygmoCor® technology and Arty™, ATCOR’s new cardiovascular vital signs and telehealth platform (Arty™ being an anagram of “Heart” and “Artery”).

The Agreement with Andon in conjunction with the ATCOR “Pulse” device significantly expands the commercial market opportunity for CardieX into the home consumer health device market, which is estimated to be worth \$US2.5B annually (Source: Fortune Business Insight).

When paired with ATCOR’s Arty™ app, the Device will provide full remote patient monitoring of a patient’s vital signs at home. The remote patient monitoring market is estimated to reach \$US43B by 2027 (Source: 2020 Research & Markets Report).

At launch, the device and will also be fully telehealth-enabled with video, chat, messaging, customizable screens, and full vital signs sharing features between clinician and patient when paired with the Company’s Arty™ app. ATCOR Pulse will be the first blood pressure device ever to feature customizable screens and vital signs modules when integrated with the Company’s new Arty™ app.

ATCOR “Pulse” is part of an ecosystem of new devices and products in development by the Company in home health, digital health, clinician vital-signs monitors, wearables, and smart devices – all of which will connect in to the Company’s Arty™ digital health ecosystem, thereby creating a unique digital platform for monitoring consumer health and vital signs.

The “Pulse” will be only vital signs device that can deliver specialist-grade diagnostics in a home setting and will be the first of multiple planned devices to incorporate the Company’s patented SphygmoCor® technology.

***Agreement with Mobvoi to launch a new line of smartwatch incorporating features based around CardieX subsidiary ATCOR’s patented SphygmoCor® technology***

Towards the end of the quarter the Company announced that it had entered a new commercial partnership agreement (the Mobvoi Agreement) with consumer electronics and AI company Mobvoi which expanded on the existing Joint Development Agreement (JDA) initiated between the two companies in 2019.

Under the new commercial partnership agreement, CardieX and Mobvoi will jointly launch a new line of consumer smartwatches with a heart and arterial health management feature-set based around ATCOR’s proprietary and globally patented SphygmoCor® technology for measuring central arterial waveforms.

Under the Mobvoi Agreement, Mobvoi will be responsible for developing the hardware and firmware for the new smartwatch, while CardieX will integrate a proprietary Mobvoi specific algorithm feature set based on the Company’s Arty™ health analytics platform into the smartwatch. As a result, the new smartwatch will be the first in the world to feature the Company’s Heart Stress™, Arterial Age™, Exercise Capacity™ (eCAP™) and Arty™ Score with active community and AI-powered health coaching services. These unique features are made possible through the use of CardieX subsidiary ATCOR’s new patent pending PPG based sensor technology.



Mobvoi is based in Beijing and is recognized as one of China's fastest growing and most innovative artificial Intelligence (AI), wearable, and consumer technology companies. Mobvoi is a global leader in smartwatches and consumer AI and currently has strategic partnerships in place with both Google and the Volkswagen Group.

#### **Key new blood pressure patent granted in Europe.**

During the quarter the Company was granted a new patent by the European Patent Office (EPO) in relation to the intellectual property (IP) for the Company's proprietary SphygmoCor® technology used in cuff-based blood pressure devices.

The granting of EPO Patent Number EP2566387 further protects the Company's IP in relation to the measurement of a whole central blood pressure waveform with cardiovascular features using a brachial cuff. Patent EP2566387 specifically covers non-invasively estimating the heart's pressure and pressure waveform with features related to cardiac function and arterial properties using a conventional BP cuff inflated to low pressure. The patent provides a non-invasive, simple, and operator-independent tool to clinically diagnose the cardiovascular system and estimate the risk of having heart disease which otherwise would require an invasive procedure.

Significantly, examining officers from the EPO specifically referenced the substantial differences in respect of any other existing patents when granting the new patent to ATCOR, demonstrating the unique nature of the technology.

The granting of the European patent follows similar patents already granted to the Company in the United States and Japan, with the new European patent in force until 2034.

#### **New contract announced with Bayer AG.**

In August, CardieX announced that global pharmaceutical company Bayer AG and CardieX subsidiary ATCOR, entered into a new Amended Agreement for both the lease of ATCOR devices and the provision of expanded data management services for Bayer's "AVANTI" trial.

Bayer (OTCMKTS: BAYZF: \$USD17b) originally contracted ATCOR to provide clinical trial lab and data management services and devices for the AVANTI trial through to October, 2020 with a contract value of \$USD1.26M. The total value of this contract and ongoing trial has now been increased an additional \$USD420K to \$USD1.68M under the new Amended Agreement.

In addition, the term of the contract has been extended through to June, 2021 with the additional AVANTI Amended Agreement revenue to be accrued by the Company in the current FY 2021.

The AVANTI trial is one of two (2) significant ongoing trials that ATCOR currently has under contract with Bayer – the other being the CONCORD trial.

This increase in contract value with Bayer is consistent with prior announcements by CardieX that the Company was expecting further amendments in respect of additional existing trials as well as new trial contracts in the immediate future – together adding significant new incremental revenue to the Company for FY 2021.



## Launch of ATCOR·X

During the quarter the Company launched ATCOR·X ([www.atcorx.com](http://www.atcorx.com)) to accelerate development and drive adoption of the Company's SphygmoCor® technology – the global gold-standard for non-invasive measurement of central blood pressure waveforms and arterial stiffness – and to improve the health of millions of people suffering from hypertension.

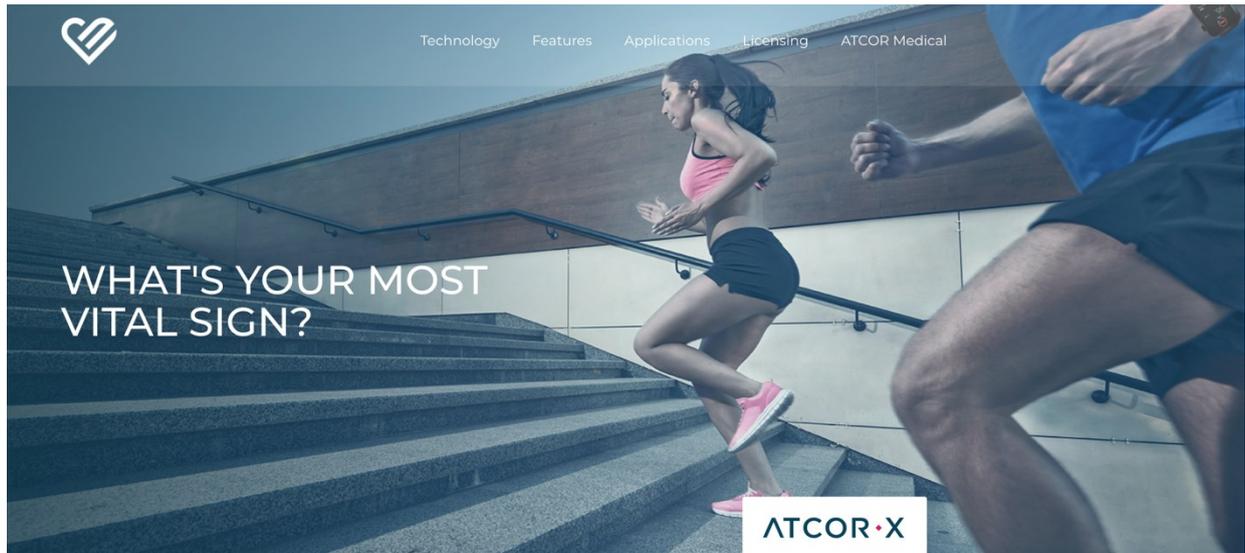
Under the ATCOR·X brand, CardieX will license its Arty™ wearable and connected device platform to smartwatch, consumer electronics, connected fitness, and wearable companies for incorporation into their devices. Arty™ consists of a unique feature set of enhanced biometric heart and arterial health measurements that can be tailored for risk assessment and to manage cardiovascular and renal disease, dementia and Alzheimer's disease, arterial stiffness and vascular aging, diabetes, maternal health, and other chronic disease. These initially include:

- Heart Stress™ (HS) – Measures the level of stress on the heart due to the hardening of arteries, which can be a sign of cardiovascular risk.
- Exercise Capacity™ (eCap) – Measures the heart's ability to provide oxygenated blood to cells based on the body's performance demands. Unlike VO2 max, eCap indicates potential exercise endurance based on cardiovascular health.
- Heart Rate (HR+™) – Provides accurate, medical-grade, beat-to-beat heart rate (HR) measurement equivalent to standard ECG-based methods with greater accuracy than HR measurements common in other wearables.
- Arterial Age™ – Compares an individual's heart health with healthy people their age to indicate the biological age of their heart compared to chronological age.
- Arterial Stiffness Factor™ (ASF) – Measures the flexibility of an individual's arterial and vascular system to indicate risk for cardiovascular events tied to arterial stiffness, such as heart attack, stroke, and dementia.
- Irregular Heartbeat – Helps an individual identify if they are experiencing an abnormal heartbeat without the use of an ECG, which may be a sign of atrial fibrillation.
- HRV+™ – Heart Rate Variability Plus provides beat-to-beat HR measurement of a user's autonomic nervous system (ANS), parasympathetic (rest and relax) and sympathetic (fight or flight) nervous systems to indicate biological stress.
- Vitals Risk™ – Identifies the risk of heart, brain, and other organ damage from cardiovascular disease based on the user's own data.
- BP Variability (BPV+™) – Shows the variability of brachial blood pressure, representing how stable one's blood pressure is over time.
- Heart Performance Index™ (HPX) – Measures how efficiently an individual's heart works to meet the body's demand for oxygen and blood flow indicating how healthy an individual is. Research has shown exercise and a healthy lifestyle can help improve your HPX score and improve your day to day performance.
- Arty™ Score – Combines Heart Stress, Exercise capacity (eCAP), Heart Rate (HR+), and Arterial Age to quantify an individual's unique heart and arterial health risk profile.

# CardieX

The above measures can be combined into comprehensive cardiovascular dashboards and also can be used to develop personalized fitness, diet and lifestyle coaching services to help individuals improve their health through nutrition and exercise.

ATCOR·X builds on the Company's commercial partnerships and integrations with both Mobvoi, and Andon.



[www.atcorx.com](http://www.atcorx.com)

## **Sensor and wearable technology strategy.**

ATCOR·X is a key part of the Company's wearable technology and sensor strategy. Globally, the wearable health technology sector is on track to reach USD\$37B by 2025 (Source: Industry Stats Report) and the Company is aggressively looking to position itself in multiple market segments related to this sector including:

- Smartwatches;
- Wearable devices (consumer fitness and health and medical wearables);
- Connected fitness; and
- Consumer electronics integration.

The Mobvoi Agreement was the first of many commercial and licensing deals CardieX is pursuing as it looks to incorporate its patented-pending PPG sensor technology into the landscape of consumer and medical devices.

Currently the Company has a direct partnership with Mobvoi, one of China's largest smartwatch companies, for the integration of the ATCOR·X platform into a new range of devices with commercial terms covering both subscription and royalty revenues.

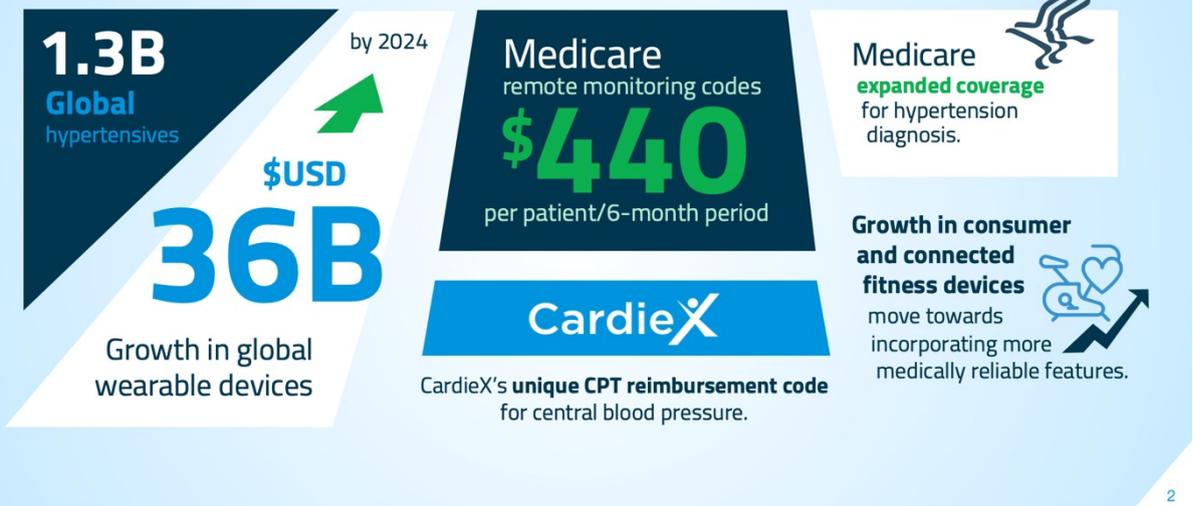
# CardieX

Separately, CardieX also has an investment in, and a development agreement with, Blumio Inc - one of the leaders in innovative sensor technology for 24-hour ambulatory patient monitoring. The commercial opportunity with CardieX's partnership with Blumio was recently accelerated with the signing of a development agreement between Blumio and Infineon – one of the largest global semiconductor companies. CardieX has already been able to port its cardiovascular algorithms into the Blumio sensor opening up a significant market and revenue opportunity for CardieX in the near future.

Multiple additional discussions are also ongoing.



## SIGNIFICANT GLOBAL OPPORTUNITY IN WEARABLE HEALTH DATA DRIVEN BY



# CardieX

## A COMPLETE WEARABLE HEALTH MONITORING SOLUTION

POWERED BY  
**ATCOR**

We are uniquely positioned

- World-first patented wearable PPG sensor technology.
- World-first medically reliable health feature set.
- Multiple diagnostic & health applications (hypertension, stroke, Alzheimers, kidney & renal disease, consumer health & fitness).
- Global leader in advanced cardiovascular diagnostics.

\* No other company can offer our level of physiological health data across the wearable and connected device ecosystem.



Arty™

- Blood Pressure
  - Central Blood Pressure
  - Arterial Stiffness (ASF™)
  - Heart Stress Score
  - Exercise Capacity (eCap™)
  - Heart Rate Plus (HR+™)
  - Blood Pressure Variability (BPV™)
  - Cardiac Efficiency (HPX™)
  - Heart Rate Variability (HRV+™)
  - Central Pulse Pressure
- Arty™ Score**

3

## DRIVING MULTIPLE NEW REVENUE STREAMS AND PARTNERSHIPS

How We Grow Revenue



4

### Additional Bayer clinical trial contracted.

On 19 October, the Company's ATCOR subsidiary executed a new clinical trial contract with Bayer AG for a new trial using the SunTech/ATCOR-enabled 24-hour blood pressure monitoring device (Oscar 2) totally approximately \$USD110K.

This new trial adds to the multitude of existing clinical trials already being supported by the Company including two additional trials with Bayer AG (AVANTI and CONCORD), as well as the PANACEA Trial with AstraZeneca.



## Corporate

In July, the Company announced it had successfully completed a \$2.5 million placement to new strategic, sophisticated investors at \$0.03 per share with a 1 for 5 free attaching listed option (CDXO). At 30 September, the Company had a cash balance of \$4.4 million and remains well funded to achieve its current milestones related to wearable technologies and new medical device developments.

### **Strong Start to the 2021 Fiscal Year and Commencement of ASX Quarterly Reporting:**

#### Strong Quarterly and Overall Fiscal 2020 Performance

The Company is pleased to report total receipts for September 2020 of \$1.2m for the first quarter of the fiscal year. This strong start to the financial year is further bolstered by a further Bayer contract and the Company's growing pharmaceutical study revenues.

The Company's net operating outflows of \$1.17m were higher than the prior quarter largely due to some one-off expenditures around the Company's current investigative study, product development costs associated with various initiatives announced during the quarter, minor costs in conducting the July share placement, and payments of creditors that were on hand at 30 June 2020.

During and subsequent to the end of quarter the Company has continued its focus on controlled cost reductions and refocusing of expenditures.

The net result of this is that the Company has continued to expand on all of its current initiatives, increased its pharmaceutical revenue footprint, whilst maintaining a strong cash position.

#### Continued Strengthening of Cash Position and Balance Sheet

**Material improvements** to the Company's cash position during the quarter, **totalling in excess of \$3.7m**, due to the following events announced during July:

- Receipt of \$715k (US\$500k) from inHealth following a reorganisation of the Company's convertible note investment;
- Announcement of a \$2.5m placement to new strategic investors completed;
- Confirmation of planned EGM to approve previously announced \$500k additional investment by C2 Ventures Pty Ltd (related party to Chairman Mr Niall Cairns and CEO Mr Craig Cooper) which was also received before the quarter end in advance of the planned shareholders meeting which will shortly be announced and despatched to members.

Overall the start to the 2021 fiscal year has shown the Company's proven direction and delivery on the previously announced new product development projects to expand and renew the Company's product offering.

Payments to related parties and their associates in the quarter were all related to remuneration for services under existing services agreements, with no non-remuneration payments made in the quarter to those parties.



## Outlook

The Company delivered strong progress in revenue growth from the base business during the September quarter. Importantly, key milestones were achieved with the signing of two new commercial partnership agreements which will provide the foundation for further growth as we progress through calendar 2021. The Company is well placed to capitalize on multiple new market and development opportunities that are being pursued and I look forward to updating shareholders accordingly as we progress.

A handwritten signature in black ink, appearing to read "Craig Cooper".

**Craig Cooper**  
**CEO & Managing Director**

For more information please contact:

### Investor Relations

Rod Hinchcliffe

[rod.hinchcliffe@mcpartners.com.au](mailto:rod.hinchcliffe@mcpartners.com.au)

### Media Relations

Melissa Hamilton

[melissa.hamilton@mcpartners.com](mailto:melissa.hamilton@mcpartners.com)

### About CardieX

CardieX is a global health technology company that focuses on hypertension, cardiovascular disease, and other vascular health disorders. The company's [ATCOR](#) division is the world leader in medical devices for measuring arterial stiffness and central blood pressure waveforms based on its unique FDA-cleared and patented SphygmoCor® technology. Under the ATCOR-X brand, the company also develops and licenses its Arty™ platform consisting of physiological and health analytics for wearable devices. The company's digital platform, ArtyNet™, is a connected SaaS ecosystem providing physicians with a complete telehealth solution for remotely managing patients' health (2021 launch). CardieX is listed on the Australian Stock Exchange (ASX:CDX).