

# Quarterly Activities Report

Period Ending 31 December 2020

**ASX Code:** ADO

**CEO**

Mr Derek Thomson

**Company Secretary**

Mr Duncan Cornish

**Principal and Registered Office**

Unit 4, 26 Brandl St, Eight Mile Plains, Qld 4113, Australia

**Telephone:** +61 7 3219 0085

**Internet**

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

**Email**

[contact@anteotech.com](mailto:contact@anteotech.com)

**ABN**

75 070 028 625

## Key Activities

Activities for the Quarter in the Life Sciences Division focused on the development of the COVID-19<sup>1</sup> Antigen Rapid Test (ART), including clinical studies and commercial arrangement for manufacturing. Focus for the Energy Division was on the development of cross-linker additives and a high silicon content anode system.

## Highlights for the Quarter Include:

- Validation of COVID-19 ART targeted sensitivity by Operon in Spain, study results demonstrate high sensitivity.
- Completion of all development processes required to declare design freeze for COVID-19 ART on time and on budget.
- Receipt of \$3.5 million from the exercise of listed options (ADOO) (expiry date of 6 December 2020) exercisable at \$0.02 each.
- Significant battery developments recording 21% higher capacity at cycle 100, for a 70% micro-silicon containing anode using AnteoTech's Cross Linker Additive.
- Increasing sales<sup>2</sup> of A\$563,000 for first half ending December 31 (up 550% on the corresponding period ending December 2019).

<sup>1</sup> The AnteoTech Antigen Rapid Test detects the SARS-CoV-2 active virus that causes the disease called COVID-19

<sup>2</sup> Unaudited sales revenue (per P&L)

## Letter to Shareholders

Dear Shareholders

On behalf of the Board, I am pleased to provide you with our Quarterly Activities Report. During the last quarter of 2020, we found ourselves busier than ever, with the Life Sciences team stepping through the process of validating and commercialising our COVID-19 ART, while our Energy team made significant progress on the Cross-Linker Additive and the development of Silicon Composite anodes.

The COVID-19 test development achieved a significant milestone this quarter, with the validation of our targeted sensitivity by Operon in Spain. This validation provided us with the assurance needed to continue developing the test and, in parallel, negotiate manufacturing arrangements and supply agreements in anticipation of successful regulatory approvals.

As I write this, we are completing laboratory validation studies, part of the overall regulatory process, with the Victorian Infectious Diseases Reference Laboratory (VIDRL) a unit of Doherty Institute, and are progressing with the documentation for regulatory approval.

At the same time, we are in the very final stages of manufacturing technology transfer to Operon in Spain. The first mass production version of our COVID-19 ART, a pre-requisite for finalising clinical trials and regulatory approvals, will be produced in Spain in just a few days' time.

Our saliva test development work continues as a highest priority focus. We continue to be encouraged by the results we are seeing, which is helping to refine our lysis buffer formulation. We are confident that saliva will be one of the sample types that can be utilised within our COVID-19 ART .

We continue to monitor the dynamics of COVID-19 antigen rapid testing in global markets. Whilst we remain a strong participant and proactive lobbyist for the use of new technologies in the fight against COVID-19 in Australia, authorities have not approved the use of COVID-19 antigen rapid test screening outside of clinical settings in situations such as festivals, sporting events, residential aged care facilities, airports and the broader travel industry. In addition, we observe that Australia is very likely to continue to have very low COVID-19 case numbers. Accordingly, we believe it prudent that our initial market focus should be on geographies with high patient volume and expressed need and approval for clinical solutions to help control the pandemic via rapid testing.

Leveraging our manufacturing presence through Operon in Spain and expanding industry relationships in Europe, our initial market entry will be focused on select European countries.

Our European market entry will be facilitated by acquiring CE mark, and we will achieve this utilising data from the current clinical trials at VIDRL. Representatives based in Europe have been appointed to work with us to finalise distribution arrangements during the coming months.

We will decide on the timing of entry into other markets based on an assessment aimed at maximisation of returns for the COVID-19 ART program.

We remain on track for initial market launch of our test by the end of the Q1 2021.

We were recently awarded an up to \$1.4 million grant from the QLD State Government, allowing us to solidify our market differentiation and set a course toward increasing revenues. The grant has also enabled us to accelerate elements of the program to address the challenges that have arisen during development. These challenges include:

- Low COVID-19 case numbers in Australia have made access to validated positive COVID-19 patients for the purposes of a prospective clinical trial more challenging. In response, we have pursued clinical trial activities in association with VIDRL using stored patient samples. These samples are stored in dilution using Viral Transfer Media (VTM), which can cause signal

interference with the test. The VTM cannot be removed in this clinical trial setting and is not present in the normal intended use of the test. i.e. direct patient sampling.

- Our saliva development work continues to encourage us, and we believe that a saliva use case for our COVID-19 ART and COVID-19/Influenza A/B multiplex test will set a market differentiating position that few will be able to emulate. However, in the world of stored samples for clinical trials, COVID-19 positive saliva samples are extremely rare, and this is now hampering our development for regulatory approval for a saliva use case for testing.
- There is a requirement for AnteoTech to conduct direct patient prospective clinical trials, often after emergency use approval is received, to satisfy regulatory requirements. These trials are a definitive assessment of the test's performance as the trials use in situ positive afflicted patient samples to test samples free of any VTM elements.

In the light of these challenges we have decided to accelerate our planned patient prospective clinical trials by six months and to initiate processes to begin these trials before initial market entry. We are currently finalising an agreement to conduct a prospective clinical trial in India, where the prevalence of SARS-CoV-2 positive patients is much greater than in Australia. This trial will be completed via our partner organisation Novatech and will include a full evaluation of the COVID-19 ART using VTM free nasal samples as well as saliva samples direct from patients.

The QLD Government grant has also enabled us to increase our capacity to produce test strips at our Eight Mile Plains headquarters, and this has enabled us to accelerate our validation studies, however, production of strips at Eight Mile Plains is not intended to increase to a marketable quantity in the short to medium term. The Australian based manufacture of test kits in marketable quantities will be contracted to businesses in South East Queensland.

Despite the intense focus on the Life Sciences Division developing the COVID ART, we have not overlooked the important development work being conducted by the Energy Team. While COVID-19 lockdowns have slightly delayed the results from some of our collaborators, we have continued with our internal development and over the past months have received encouraging results, showing a 9% higher starting capacity and an up to 21% higher capacity at cycle 100, for a 70% micro-silicon containing anode when using our Cross-Linker Additive AnteoX™. We expect that validation work by our collaborators, which is currently underway, will lead to commercial progression of these relationships in the near future.

2020 was a unique and remarkable year that challenged us personally and professionally. We welcome 2021 with much excitement for what we know will be a year of milestones for the Company. I thank our shareholders for their support throughout 2020 and look forward to keeping you updated on our progress this year.

**Derek Thomson**

Chief Executive Officer

## Life Sciences

### COVID-19 Antigen Rapid Test Development

The Life Science team's focus for the Quarter was the progression of development and commercialisation of the COVID-19 ART, completion of test design and advancement of commercial agreements.

#### Independent Validation Study

In October we announced the results of an independent validation study of the COVID-19 ART, conducted by the Spanish lateral flow developer and manufacturer Operon. The study used positive and negative samples, stored in Viral Transport Media (VTM), that were obtained in Spain. The samples were tested using RT-PCR methods prior to testing using AnteoTech's COVID-19 ART, enabling a direct head-to-head comparison. For further explanation of the study, please refer to the ASX Announcement dated 21 October 2020.

#### Design Freeze

A significant step in the COVID-19 ART development process was the declaration of a "design freeze" [ASX November 2020]. The design freeze marks the point at which all technical work and inputs to the test are completed. Together with the completion of the technical work, critical contracts for the procurement of antibodies and Europium particles were also finalised.

#### Manufacturing Agreements & Technology Transfer

The technical transfer to AnteoTech's manufacturing partner in Spain, Operon, [ASX November 2020] is on track, enabling the scaled manufacturing of the COVID-19 test. On successful completion, AnteoTech will facilitate the implementation of a manufacturing agreement with Operon.

AnteoTech has also signed an agreement with a Spanish company to commence manufacturing of the plastic cassettes that hold the test strips that are inserted into the reader. This company is conveniently located close to Operon's manufacturing plant, reducing supply chain processes for this high-volume element of the product.

#### Platform Development

In December, the provider of the lateral flow reader for the COVID-19 ART, Axxin, delivered the first generation "Alpha Reader", a version of the AX-2X-S platform configured specifically for AnteoTech's requirements. The reader's on-time delivery is an essential milestone in the overall test commercialisation program.

AnteoTech's reader platform will form the basis of AnteoTech's test development pipeline, that covers a series of COVID-19 related tests and further tests for the rapid point of care diagnostics market.

#### PoC Test in Development

COVID-19 ART



## Raw Material Business Update and Growth

The Raw Materials business continues to show significant growth compared to the same period last year. Sales revenue<sup>2</sup> for the quarter were \$235,800, compared to \$49,800 in the corresponding December 2019 quarter and for the first half were \$563,000 compared to \$102,000 (550% increase) in the corresponding period to end December 2019. AnteoBind particle activation bulk kits purchased by vaccine or antibody-drug development clients in Asia Pacific and US continues to be the main driver for this improved sales performance.

Our commercial discussions with Merck Estapor regarding the development of AnteoBind activated Estapor Europium particle products are ongoing. Meetings with Merck during the quarter have established some key areas for collaboration.

## Business Development - Adapting to COVID Times

Our Raw Materials and Assay Services business promotion was a key area of focus leading into the pandemic. In previous years, our business development activities focused on international conferences and face to face workshops, delivering training to suppliers and their customers on the uses of AnteoBind in lateral flow applications.

Despite international travel restrictions, AnteoTech has fortunately been able to continue workshops through a virtual setting. By shipping samples of our product to customers and distributors and asking them to mirror our equipment set up in their laboratories, our technicians have used Zoom to provide step-by-step demonstrations and instructions on how to apply AnteoBind in their assay development. While not the conventional way to conduct hands-on training, it was pleasing to observe that the workshops were successful in meeting their aim of training our customers and distributors, with positive feedback and a strong appreciation of the ongoing support.

## Queensland Government Grant Awarded

Post the quarter in review, on 21 January, we announced the award of an up to \$1.4 million grant towards the development and commercialisation of our COVID-19 Antigen Rapid Test (ART), under the Queensland Government's Essential Goods and Supply Chain Program (EGSCP).

Development of the product to this point has included presentations and assessment of the COVID-19 ART development by senior members of Queensland Health and Queensland Pathology. The grant term is two years, with drawdowns awarded upon achievement of commercialisation objectives including the development of working test prototypes, reader platform completion, TGA approval, manufacture of 1 million tests per annum in Queensland and associated employment of several additional staff.

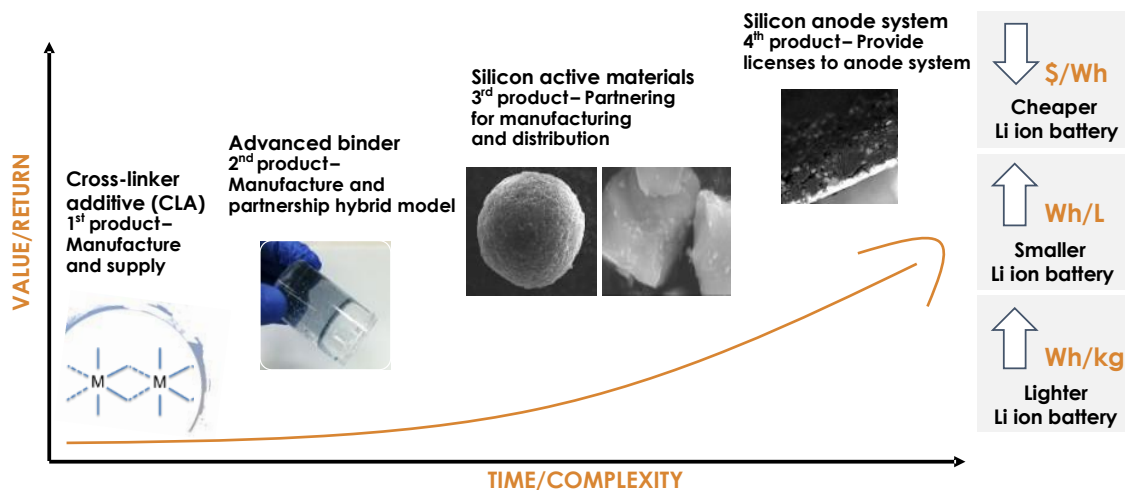
<sup>2</sup> Unaudited sales revenue (per P&L)

## Energy

The Quarter has seen further expansion and refinement of the business strategy for the Energy Division. The three key areas of focus in the strategy are:

- To become a materials supplier facilitating the enhancement of the anode (negative electrode) in lithium ion batteries, via the increased use of silicon, by leveraging AnteoTech's IP
- Commercialization focus on developing cross-linker additives (AnteoX™), the enhancement of silicon active materials and the development of a high silicon content anode system combining synergies between various AnteoTech products and technologies
- Attracting international collaborations with a view to gaining external verification and feedback to support the internal development of products (cross-linker additive, silicon active material and anode systems) leading to early adoption of AnteoTech IP.

### Commercialisation roadmap targeting >1000mAh/g at anode coating level



### Cross-linker additive (CLA) testing

The CLA product development continues to accelerate and is on track to deliver an immediate market opportunity, subject to the feedback and outcome of testing performed by our collaboration partners.

As reported in the last quarterly report, a 2<sup>nd</sup> generation of cross-linker additive (CLA) was made available for testing by existing partners. This 2<sup>nd</sup> generation CLA demonstrates significantly delayed reactivity leading to more homogeneous cross-linking and heat-activation properties, while retaining the capability to form very strong network structures. The improved properties also mean that a much higher quantity can now be incorporated into the slurry and anode fabrication process without adversely affecting processability.

Over the last quarter, CLA samples were shipped to three collaborators all of which are actively evaluating, or are about to commence their evaluation, pairing AnteoTech's CLA with their high silicon content anode benchmarks. Due to COVID-19 restrictions and lockdowns in some of our collaborator's countries evaluation work has taken longer than anticipated. All partners are expected to complete their evaluation by the end of February 2021 and the outcome of the evaluation will be communicated in due course.

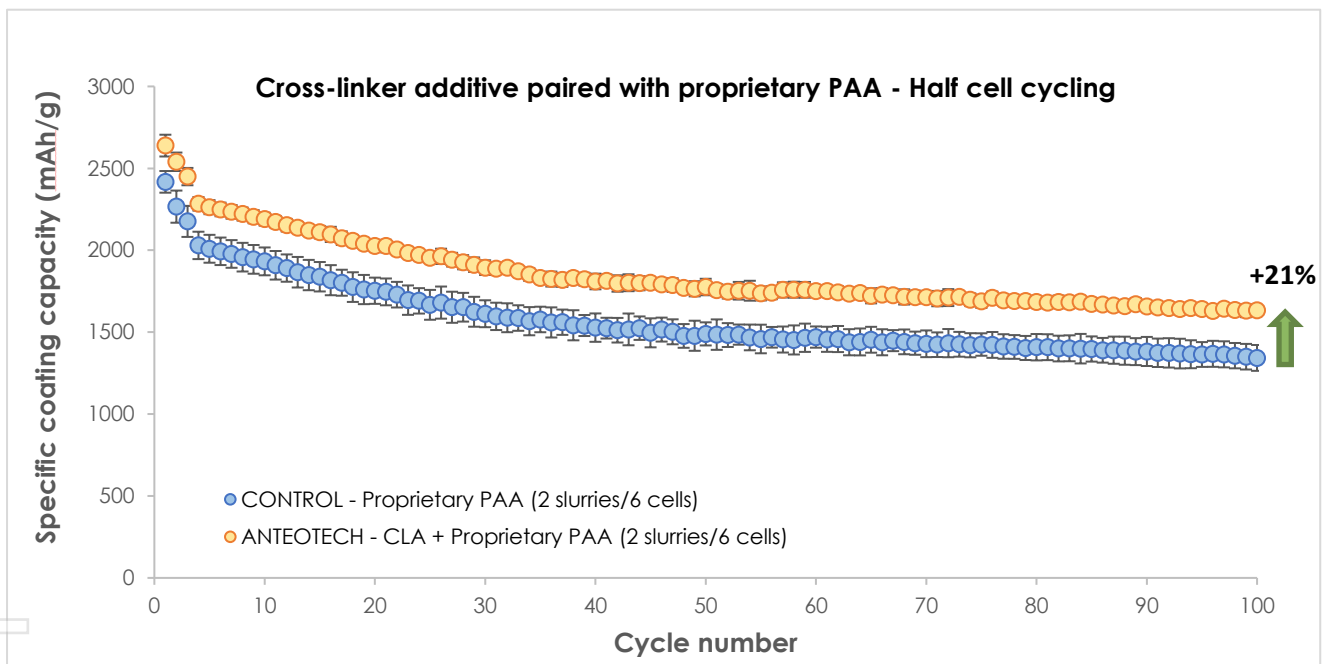
### Collaborator 5 – CLA testing with proprietary anode system

- Evaluation of AnteoTech's CLA compound is still underway with Collaborator 5 agreeing to expand and deepen the evaluation program by also taking up the 2<sup>nd</sup> generation CLA.
- The initial set of results are delayed due to severe restrictions caused by the COVID-19 pandemic in this geography.

### Collaborator 8 – CLA testing with proprietary binder and high silicon content anode system

- Internal test results, pairing Collaborator 8's proprietary binder system with AnteoTech's CLA, were communicated and were received with great enthusiasm and interest.
- Internal testing showed an up to 9% higher starting capacity and an up to 21% higher capacity at cycle 100, for a 70% micro-silicon containing anode when AnteoTech's CLA is used.
- As a result, Collaborator 8 committed to testing AnteoTech's 2<sup>nd</sup> generation CLA and a sample was shipped to the partners facility in late 2020.

### Binder paired with CLA demonstrates up to 21% higher capacity over 100 charge/discharge cycles



### Collaborator 9 - CLA testing with high silicon content anode system

- Collaborator 9 has committed to evaluate AnteoTech's CLA paired with their high silicon content benchmark anode system.
- A 2<sup>nd</sup> generation CLA and a sample were shipped to the partners facility in late 2020 with test results expected to be available by late February.

### Ongoing internal development

AnteoTech's CLA compounds can be paired with several chemically different active materials and binders which demonstrates versatility and applicability across a broad footprint of the anode binder and active material market.

The Energy team is continuously focused on expanding AnteoTech's testing regimes to create data sets that highlight the performance of CLAs with various silicon active materials and binder types to increase traction with current and potential future collaborators.

### Silicon composite development (2<sup>nd</sup> generation)

Following successful completion of the work packages in relation to AnteoTech's 1<sup>st</sup> generation composite, technical development is now focused on improvements required in relation to long-term cycling stability for the 2<sup>nd</sup> generation composite.

Critical to achieving this objective was the establishment of internal full cell testing capabilities, where silicon composite containing anodes are paired with a commercial metal oxide cathode (NCM variants) to replicate the commercial industrial use of this anode active material. Internal full cell testing capabilities were established and refined over the last quarter, now forming part of the routine testing procedures in AnteoTech's development work.

Aspects of the composite material are continuously being enhanced and the program is on track to deliver a 2<sup>nd</sup> generation composite with improved cycling attributes to Collaborators by FY21Q4.

### Broader development

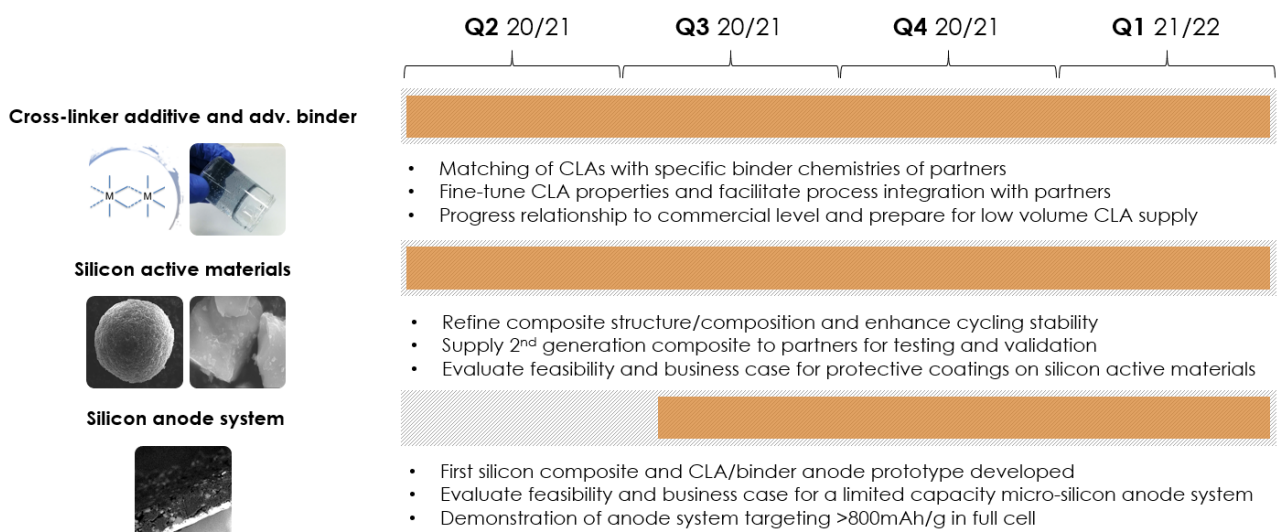
As indicated in the Investor Webinar presentation held on the 2<sup>nd</sup> of November, AnteoTech is evaluating the most suitable pathways for creating a high silicon content anode system, combining silicon active materials with an advanced binder system.

As part of this effort, AnteoTech is considering the viability of pairing micro-silicon as an active material with AnteoTech applied surface coatings in a limited capacity full cell testing set-up.

In developing further silicon active materials, it is vital that AnteoTech's strategy aligns with market trends for low cost, stable, high performing anodes. Additional technical developments are therefore regularly evaluated against the trends to ensure these align.

Updates on progress and results will be released to the market as they become available over the next quarter.

## 2020/2021 Energy Development Program





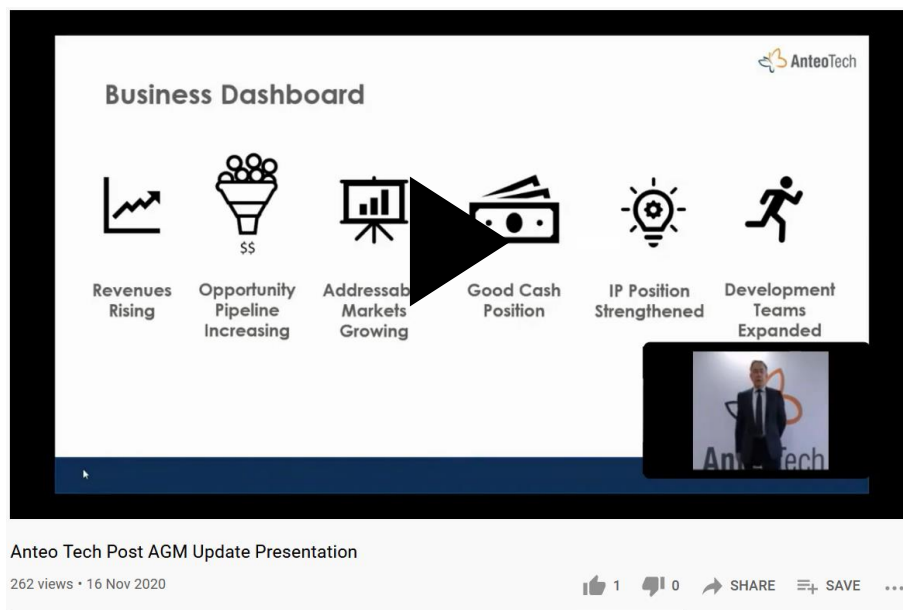
## Investor Relations

### Results of Annual General Meeting

The Annual General Meeting of AnteoTech Ltd was held on 12 November 2020. All resolutions put to the meeting were passed successfully. Details of the voting can be found in the Investors/ASX Announcements section of the website.

### Post AGM Company Update Webinar

A copy of the Post AGM Webinar with CEO Derek Thomson can be viewed through the Investor Centre Page of the company website. <https://www.anteotech.com/investors/>



## Corporate

### Options Exercised

\$3.5 million was received during the quarter from the exercise of the outstanding balance of the (195.2 million) listed \$0.02 options (ADOO) that were set to expire on 6 December 2020.

### R&D Tax Incentive Refund Received

In November 2020 AnteoTech received a cash refund of \$1,195,634 under the Federal Government's Research & Development Tax Incentive Scheme. The tax refund relates to costs of research and development conducted by the Company during the 2020 financial year, covering work undertaken on quantitative assay development (Point of Care Testing) and improved stability and performance for next generation high energy Lithium-ion batteries.

### Cash

The Company continued to monitor expenditure carefully during the period under review, ahead of the clinical trials and associated expenditure planned for the remainder of the financial year.

AnteoTech had \$6.4 million cash on hand at 31 December 2020 and remains well funded to support its near term commercial and clinical milestones.

**ASX Listing Rule 4.7C disclosure**

During the quarter the Company's operating cash outflows totalled \$1,220,000, including direct R&D activities (\$279,000), staff costs comprised mainly of technical/research staff totalling \$697,000, corporate and administration costs of \$130,000 and \$114,000 of other operating costs. A further \$77,000 was spent during the quarter on fixed assets and intellectual property that support AnteoTech's operations.

The cash outflows were offset by cash receipts from sales of \$245,000, the receipt of \$1.2 million from the R&D Tax Rebate (referred to above, noting that this is received as a one-off annual payment) and the receipt of option exercises during the quarter of \$3,559,000 (less underwriting fees and associated costs of \$169,000).

\$58,000 was paid during the quarter to Related Parties, as reported in Item 6.1 of the ASX Appendix 4C (Quarterly Cash Flow Report). This comprises the directors' fees.

For further information, please check our website ([www.anteotech](http://www.anteotech)) or contact Mr Derek Thomson on + 61 7 3219 0085. Media and investor inquiries may also be directed to Friederike Graser, on +61 7 3219 0085.

This announcement has been approved by the Board.

**For more information, please contact:**

Friederike Graser, Communications Manager, AnteoTech Ltd: +61 (0) 7 3219 0085

Ben Jarvis, Six Degrees Investor Relations: +61 (0) 413 150 448

**ABOUT ANTEO GROUP – AnteoTech Ltd (ASX:ADO)**

AnteoTech is a surface chemistry company with Intellectual Property ("IP") in its core technology product groups AnteoCoat™, AnteoBind™ and AnteoRelease™. The Company's purpose is to create shareholder value by identifying and solving important global industry problems by providing unique value-add solutions for its customers. Customers operate in the life sciences, diagnostics, energy and medical devices markets.

Follow AnteoTech on Twitter: <https://twitter.com/AnteoTech> or visit [www.anteotech.com](http://www.anteotech.com)

