ASX Announcement

Melbourne, Australia and Ajdovščina, Slovenia, 17 November 2022

SARTORIUS BIA SEPARATIONS (BIA) and EXOPHARM LTD (ASX:EX1) testing the synergy of Exopharm's patented LEAP technology together with BIA's unique CIM (Convective Interaction Media) monolith chromatography for improved large-scale exosome production and commercialisation

Highlights:

- BIA sees intense commercial interest in exosomes as a new drug-delivery chassis from its network
- A LEAP CIM combination has the potential to upscale exosome production
- Potential technology synergy being tested under a joint research collaboration
- Purification product incorporating the integrated technology could potentially be sold via the Sartorius BIA Separations international sales and support network to biomanufacturing customers

Sartorius BIA Separations is part of the international life science group ***Sartorius***, a leader in bioprocessing with 15,000 employees, over US$3 billion in 2021 sales and over 60 manufacturing and sales sites worldwide. BIA provides specialised bioprocessing purification columns to leaders in the worldwide biomanufacturing industry supporting the pharmaceutical and biotechnology sector.

Exopharm is a leader in advancing Genetic Medicines and other exosome-based medicines using exosomes or extracellular vesicles (EVs) as a chassis for non-viral drug-delivery. Exopharm has a suite of exosome-related technologies including its patented LEAP exosome purification technology.

Together BIA and Exopharm recognise the demand for a large-scale high-efficiency purification technology to enable purified exosomes to solve the drug-delivery problems facing the use of mRNA as therapeutic products.

The monolithic columns are potentially an ideal carrier for Exopharm's LEAP ligands that gently 'pull out' exosomes from the input material. CIM monoliths enable high throughput, high capacity, outstanding resolution and would offer high stability along with controlled exposure of the bioprocess material to the LEAP ligands – potentially a synergistic & powerful combination for exosome purification.

Discussions between BIA and Exopharm have arrived at a Material Transfer Agreement and associated collaborative program. Over the next few months BIA and Exopharm will test the

addition of LEAP ligand chemistry to the existing BIA CIM monolithic columns. The expectation is that the addition of LEAP ligands to the CIM will improve specificity and purity of the purified exosome product over BIA CIM ion exchange columns. BIA will also test different immobilisation densities of the LEAP ligands to seek an optimal density for high throughput industrial use.

Dr Ales Strancar, co-founder and managing director of BIA for 24 years, said 'BIA sees the potential in exosomes and understands that purification of exosomes has held back their adoption as a non-viral drug-delivery technology. CIM can potentially be improved if we add Exopharm's exosome-specific ligands on the CIM. This work with Exopharm has the potential to be a game-changer in the emerging exosome field.'

Dr Ian Dixon, founder and CEO of Exopharm, said 'BIA's CIM columns are ideally suited as the carrier of the LEAP ligands as they are already used in the industry for large-scale and efficient bioprocessing. The combination of LEAP ligands together with CIM monolithic columns will be tested over the next few months. After that we can potentially explore how to commercialise this advance.'

Exopharm's LEAP technology is subject to US Patent 11,202,805 B2 and its utility for purifying exosomes has already been demonstrated when the LEAP ligand chemistry is immobilised on other substrates (resins) in affinity chromatography columns.

Genetic Medicines such as mRNA require a drug-delivery chassis, and exosomes are an emerging ideal non-viral chassis for additive gene therapy, CRISPR gene editing etc. RNA can be loaded into exosomes to make therapeutic products that could one-day address many medical problems. Exosomes have advantages over nanoparticle delivery technologies – being non-toxic, 'immune-silent' and efficient at delivering RNA cargoes into cells. '*Immune and cytotoxic responses to LNP-encapsulated mRNA have been a major concern in early clinical studies*'[1]. Exosomes can also be engineered for specific delivery and repeated dosing.

BIA and Exopharm expect to have the results from this testing program early in CY '23, after which plans could potentially be made for commercialisation.

For further information:

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By the Managing Director - this announcement has been authorised for release by the Managing Director.

[1] Rohner et al 2022 https://doi.org/10.1038/s41587-022-01491-z

COMPANY AND MEDIA ENQUIRIES:

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ABOUT EXOPHARM

Exopharm (ASX:EX1) is a leader in advancing Genetic Medicines and other exosome-based medicines using exosomes or extracellular vesicles (EVs) as a chassis for improved and non-viral drug-delivery.
Exopharm (ASX:EX1) is pursuing a product pipeline-driven platform strategy. Exosomes can be loaded with a variety of active pharmaceutical ingredients (APIs) and can be targeted to selected cell-types and tissue types, improving the safety-profile of the APIs and providing better treatments. Exosomes can be used to deliver small molecule drugs, mRNA, DNA and other types of APIs.
Exosomes are an alternative means of drug-delivery inside the body, alongside technologies such as lipid nanoparticles (LNP), cell-penetrating peptides, viral vectors and liposomes.
Exopharm's exosome technologies solve important needs for the success of exosome medicines – **LEAP** manufacturing technology, **LOAD** API loading technologies and **EVPS** tropism technologies.
Exosome-based medicines could improve the treatment of many chronic or inherited medical conditions.
Exopharm is making its proprietary technologies available to pharmaceutical and biotechnology companies that want to harness exosome-delivery for their own products.
In addition, Exopharm is using its technology platform to enable its own product development programs - each aimed at delivering a transformative medicine for an unmet medical need.

FORWARD LOOKING STATEMENTS

This announcement contains forward-looking statements which incorporate an element of uncertainty or risk, such as 'intends', 'may', 'could', 'believes', 'estimates', 'targets', 'aims', 'plans' or 'expects'. These statements are based on an evaluation of current corporate estimates, economic and operating conditions, as well as assumptions regarding future events. These events are, as at the date of this announcement, expected to take place, but there cannot be any guarantee that such events will occur as anticipated or at all given that many of the events are outside of Exopharm's control or subject to the success of the Development Program. Furthermore, the Company is subject to several risks as disclosed in the Prospectus dated 6 November 2018.