

ASX ANNOUNCEMENT

Exopharm Shareholder Update

- HREC approval received for PLEXOVAL II safety study, first-in-human, off-the-shelf Plexaris™
- Canary Capital engaged
- Updated shareholder presentation and reminder for webinar 10:30am Wednesday 2 September at <https://exo.ph/Sept2020Webinar> (open to all)

21 August 2020, Melbourne, Australia: Exopharm Limited (ASX:EX1) is a clinical stage Australian company using exosomes (extracellular vesicles (EVs)) from cells to generate a new class of cell-free medicines. Exopharm is a leader in the manufacture and experimental clinical use of EV medicines.

PLEXOVAL II clinical study update

As announced on 19 August 2020, Exopharm has applied for approval from the Human Research Ethics Committee (HREC) to conduct an allogeneic (off-the-shelf) Plexaris safety trial in Melbourne. HREC approval has now been received. The study, "PXR002: A Prospective, Randomised, Double Blind, placebo controlled, single dose, single site Phase I study to assess the safety and biological activity of a human non-autologous platelet derived Extracellular Vesicle therapy vs placebo on wound healing rate following skin punch biopsy in healthy volunteer adults," is being managed by Emeritus Research (Emeritus). The final step before study start is Research Governance Office delegate approval by Emeritus. Further information will be provided once the trial is open for enrolment.

Canary Capital engaged

The Company is also pleased to advise that it has executed a mandate with Canary Capital Pty Ltd (Canary Capital), a boutique Sydney headquartered investment management and corporate advisory firm, to provide corporate advisory and investor marketing services to the company.

Mr Paul Hart from Canary Capital says "Canary Capital prides itself on creating value for its clients with long term strategic investments and will be profiling the company on its website." (<https://canarycapital.com.au>)

Under the terms of the mandate:

- The mandate will commence on September 1st, 2020 and continue for 12 months;
- Exopharm will pay Canary Capital a monthly fee of \$6,000 (exclusive of GST);
- The Company will issue Canary Capital 1,500,000 unlisted options with a \$0.60 exercise price and 1,500,000 options with an exercise price of \$0.90 with a five year expiry.

Updated shareholder presentation and reminder for science webinar

Attached is an update to the shareholder presentation. Shareholders and other interested people are reminded to join a Webinar update at 10:30am Wednesday 2 September at <https://exo.ph/Sept2020Webinar>. Dr Karen Holden, Head of Translation and Dr Patrick James, Head of Product Development, will provide a look into some of the scientific developments at Exopharm in the last three months. There will be a Q&A session with Ian Dixon (CEO) and Chris Baldwin (CCO) at the end of the Webinar.

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

Company and Media Enquiries:

Dr Ian Dixon, MBA
Founder and Managing Director
P: +61 (0)3 9111 0026 ian.dixon@exopharm.com

Rudi Michelson
Monsoon Communications
Tel: +61 (0)411 402 737
rudim@monsoon.com.au

Join our mailing list to receive updates:

<http://exo.ph/ExoMails>

www.exopharm.com

P: +61 (0)3 9111 0026

ABOUT EXOPHARM

Exopharm Limited (ASX:EX1) is a clinical-stage Australian regenerative medicine company developing therapeutic exosome products as regenerative medicines and precision medicines.

Exosomes are small particles naturally produced by cells, which deliver therapeutic 'cargoes' to other cells to reduce inflammation and promote regeneration. Exosomes are plentiful in our youth but decline with age. Recent research points to exosomes as a way to extend the number of healthy, functional years (extending health span).

Exosomes secreted by stem cells could be used instead of stem-cell therapy with equal or greater benefit – and without the problems of stem-cell therapies. They could be used to deliver targeted ‘novel’ drugs and have potential as diagnostics.

While trillions of exosomes are produced by stem cells, the real challenge is to ‘purify’ them as drug products. Exopharm owns a purification technology called Ligand-based Exosome Affinity Purification (LEAP). LEAP technology and associated know-how places Exopharm at the forefront of this emerging field worldwide. Exopharm is at clinical stage with pending and current trials for wound healing, dry aged-related macular degeneration and osteoporosis.

Exopharm was founded in 2013 by Dr Ian Dixon, co-founder of the ASX-listed stem-cell therapy developer Cynata Therapeutics. He was also a director of Cell Therapies, which produced adult stem cells for ASX-listed stem cell company Mesoblast. Exopharm listed on the ASX in December 2018.

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.

INHERENT RISKS OF INVESTMENT IN BIOTECHNOLOGY COMPANIES

There are a number of inherent risks associated with the development of biopharmaceutical products to a marketable stage. The lengthy clinical trial process is designed to assess the safety and efficacy of a drug prior to commercialisation and a significant proportion of drugs fail one or both of these criteria. Other risks include uncertainty of patent protection and proprietary rights, whether patent applications and issued patents will offer adequate protection to enable product development, the obtaining of necessary drug regulatory authority approvals and difficulties caused by the rapid advancements in technology. Companies such as Exopharm are dependent on the success of their research and development projects and on the ability to attract funding to support these activities. Investment in research and development projects cannot be assessed on the same fundamentals as trading and manufacturing enterprises. Therefore, investment in companies specialising in drug development must be regarded as highly speculative. Exopharm strongly recommends that professional investment advice be sought prior to such investments.



The Future of Exosome Medicines

August 2020

Investor Presentation

IMPORTANT INFORMATION



Purpose of presentation: This presentation (including this document, any related video or oral presentation, any question and answer session and any written or oral material discussed or distributed in relation to this presentation) has been prepared by Exopharm Limited (ACN 163 765 991) (**Exopharm or Company**). This presentation is intended for sophisticated or professional investors (as those terms are defined in the *Corporations Act 2001* (Cth)), and their professional investment advisors and has been prepared for the sole purpose of providing general high-level information on Exopharm and its operations.

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Overview

- Exopharm is an Australian clinical stage biotechnology company with unique manufacturing IP for turning exosomes (or EVs) into medicines
- 26 staff based in Melbourne, Victoria
- Publicly-traded on the ASX (ASX:EX1) (listed Dec 2018)
- 95.47 million shares outstanding, market cap of ~ \$30 million

What Makes Us Unique

1. LEAP™ process for purifying EVs provides world-beating capability
2. One of three companies worldwide with a platform for engineering EVs

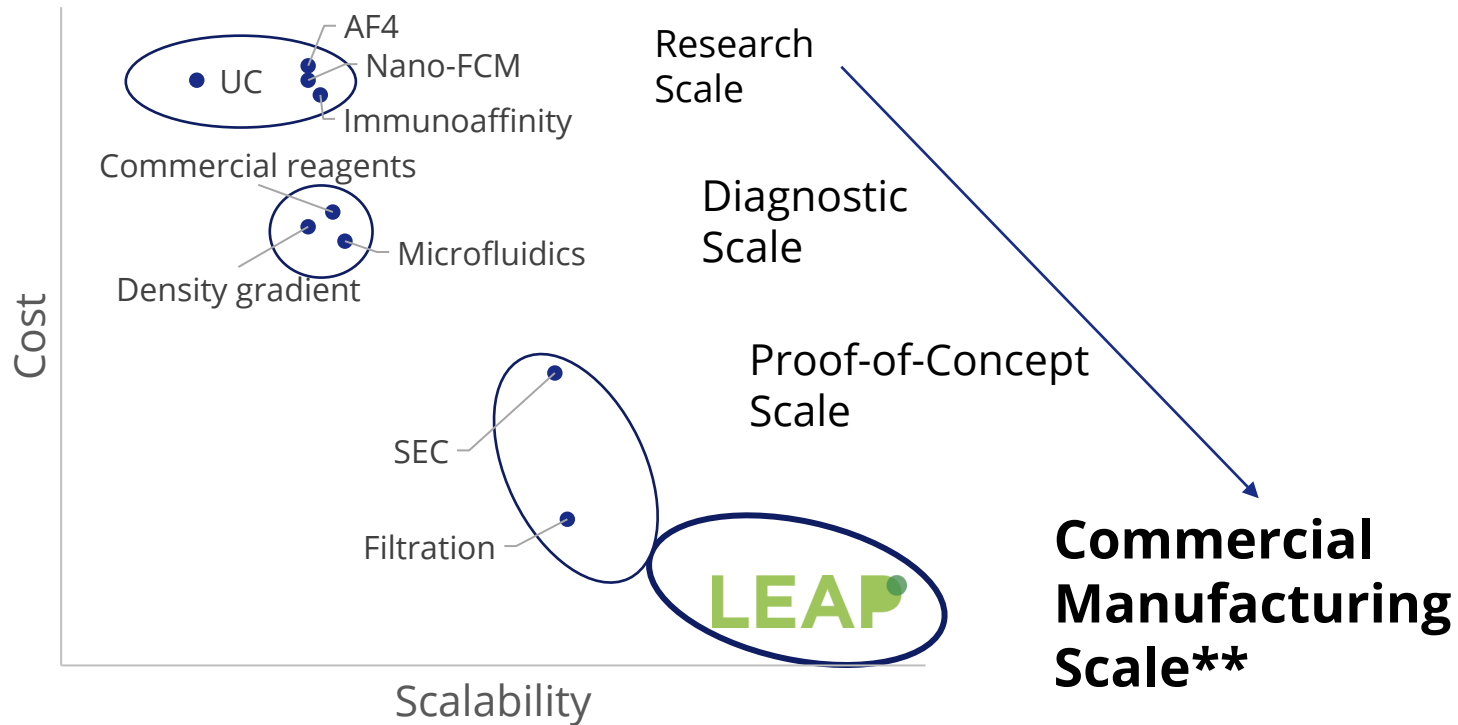
Where We are Going

- Monetising LEAP with partnership deals to fund development programs
- Using non-dilutive funding to advance Exopharm's Naïve EV clinical assets
- Creating EEV assets with pharmaceutical partners to derive near-term revenue

LEAP is the *Only* Commercial-scale EV Purification Technology



State of the Art, EV Purification as of June 2020*



Unlike all other alternatives, LEAP technology

- (i) is readily scaled up to over 1,000L scale,
- (ii) uses industry-standard equipment and processes
- (iii) uses low-cost, reusable consumables (from validated sterilization process)
- (iv) is a proprietary process that creates proprietary products

* Adapted from <https://doi.org/10.1016/j.tibtech.2020.05.012>
Technologies and Standardization in Research on Extracellular Vesicles

Srujan Gandham,^{1,4} Xianyi Su ,^{2,4} Jacqueline Wood ,^{2,4} Angela L. Nocera,¹ Sarath Chandra Alli,^{2,3} Lara Milane,¹ Alan Zimmerman ,² Mansoor Amiji,¹ and Alexander R. Ivanov ,^{2,*}

** LEAP assessment from Exopharm, based on industrial use to date; LEAP Patents processing through National phases at present

Exopharm IP Assets are Comprehensive and Provide Essential EV Capabilities



LEAP

Purification of EVs at Scale



- Developed internally – **exclusive** ownership and use
- Comprehensive application to EVs
- Family of resins and potential resins await development

LOAD

Addition of nucleic acids to EV Payloads



- Global, **exclusive** in-licensing agreement (2020)
- Comprehensive application to EVs
- Custom medicines loaded into EEVs

EVPS

Addition of proteins to EV Surfaces



- Global, **exclusive** in-licensing agreement (2020)
- Comprehensive application to EVs
- Custom addressing of EEVs to selected cells

Naïve EV Program: NEVs are the **Future of Regeneration**



2000 AD

Mesenchymal stem cells (MSCs) regenerate tissue, so grow them and transplant them into patients



“Off-the-shelf” stem cells

2020's

MSC EVs are what make MSCs work, and could deliver a truly off-the-shelf treatment

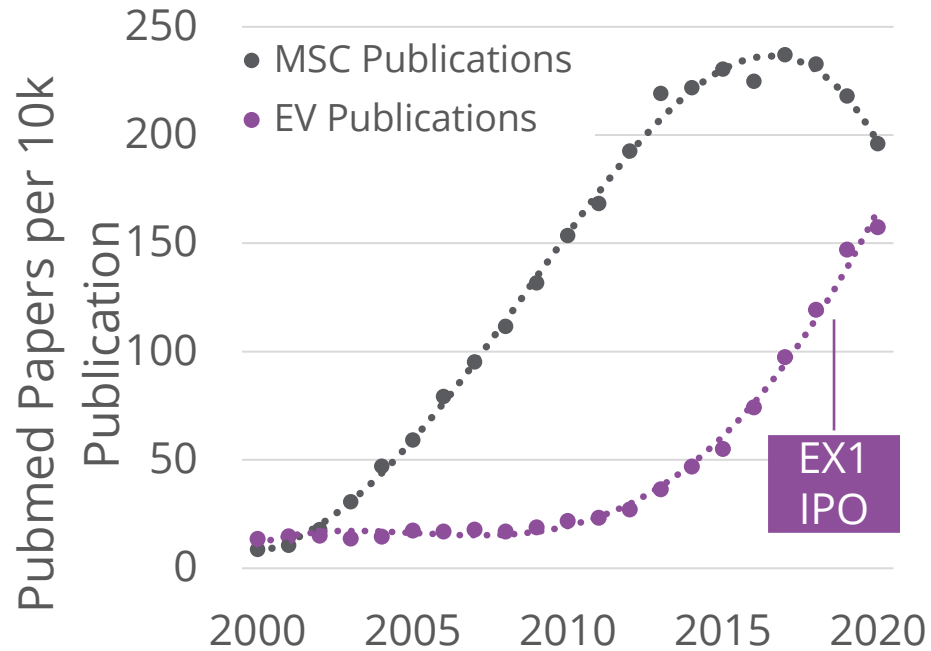


Potential EV Medicine

**Same active ingredient,
different commercial
outcome**

- Exopharm solved core manufacturing problem with LEAP
- Let adult stem cell clinical companies identify uses and resolve regulatory pathways
- Follow quickly with safer, more economical offering

Exopharm is the World Leader in NEVs



Naïve EVs (NEVs)

- Stem cell benefits, without the risks and costs
- Targeted to mobility and sensory indications (sight, osteoarthritis hearing, neural degeneration)

news feature

Exosome redux

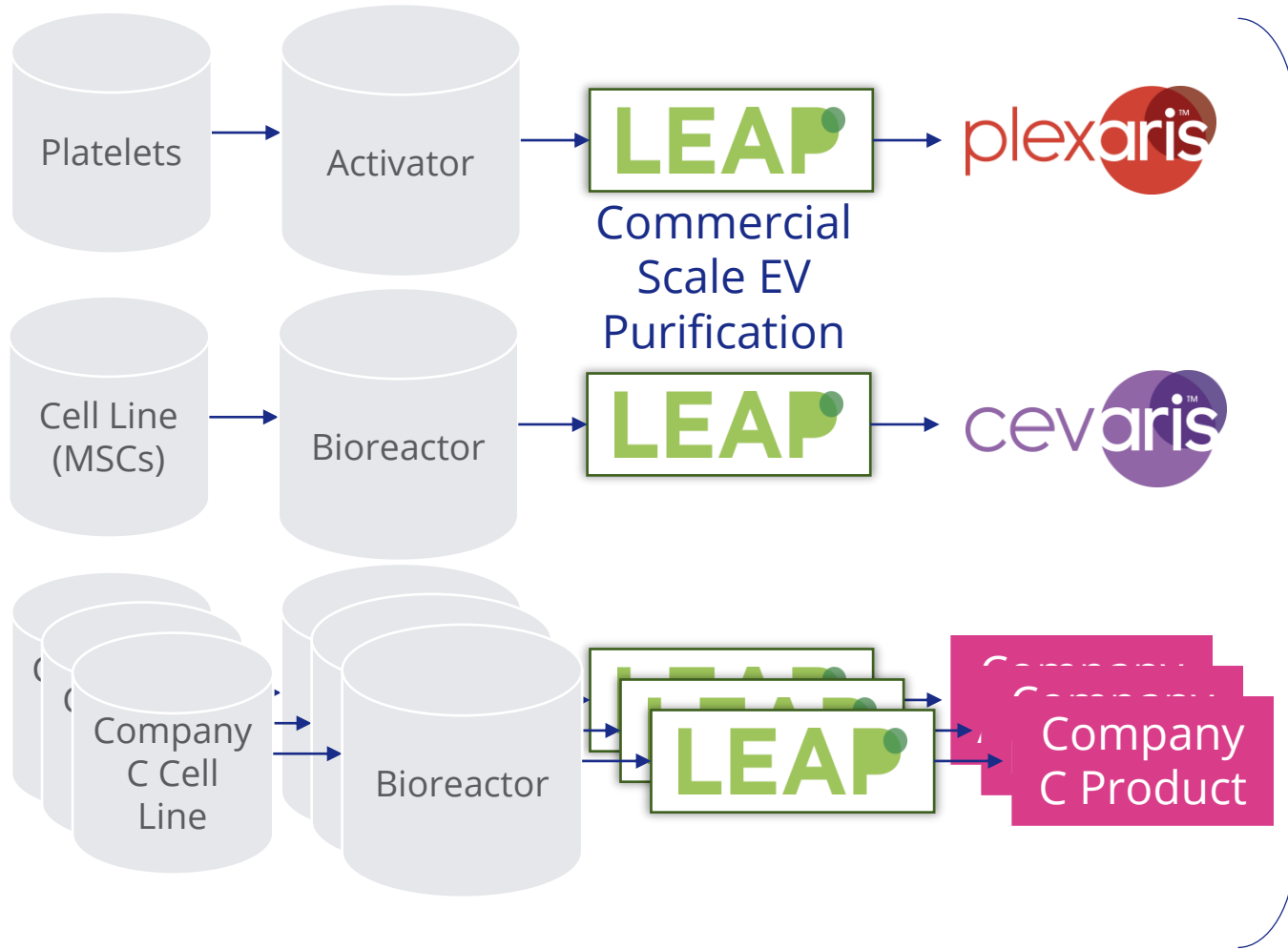
Adult stem cell companies are pivoting their businesses to commercialize exosomes as therapeutics.

NATURE BIOTECHNOLOGY | VOL 37 | DECEMBER 2019 | 1395-1400 | www.nature.com/naturebiotechnology

December 2019

- 14 Exosome companies reviewed globally
- 5 Companies planning Clinical Trials with exosome medicines
- 1  FIRST and ONLY reported human dosing (Jan 2020)

Naïve EV Factory



Mobility

plexaris
cevaris

Company C Product

Sensory

cevaris

Company A Product

Respiratory (ARDS)

Company B Franchise

Cardiovascular

Company C Product

Company A Product

Disease Areas

Naïve EVs: Strategy and Progress



Strategy: When adult stem cell companies score wins, follow with more economical, safer offering

Progress:

Plexaris™ (EVs from platelets)

- Demonstrated manufacturing process for delivering safe EV treatments
- Demonstrating allogeneic safety

Cevaris™ (EVs from MSCs)

- Demonstrated efficacy in non-clinical work on sensory and mobility indications
- Preparing for Phase I study in humans

Milestones:



Autologous Phase I



Allogeneic Phase I



Allogeneic Phase I



= Achieved in CY 2020




= Targeted for CY 2020

Potential markets >>\$10 billion/yr

Exosome redux

Adult stem cell companies are pivoting their businesses to commercialize exosomes as therapeutics.

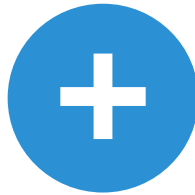
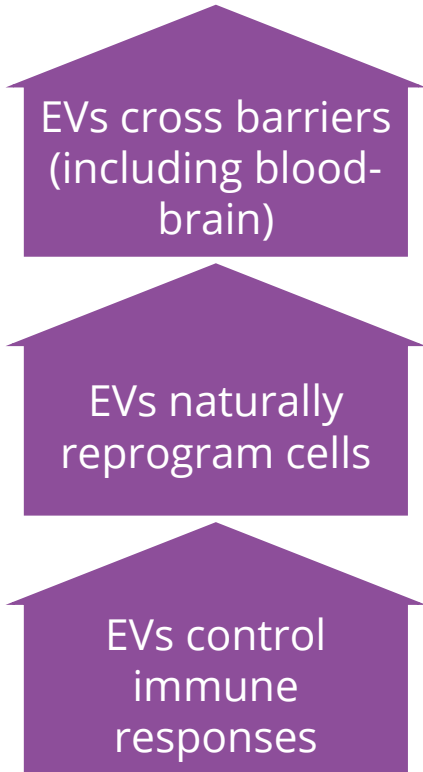
NATURE BIOTECHNOLOGY | VOL 37 | DECEMBER 2019 | 1395-1400 | www.nature.com/naturebiotechnology

Companies Reviewed	Planning Clinical Trials:	Clinical Trials Running:
<p>Aegle Therapeutics Alxerion Biotech Anjarium Biosciences Aruna Biomedical Capricor Therapeutics Codiak Biosciences Evox Therapeutics ExoCoBio Exopharm Ltd NeurExo Sciences PureTech Health ReNeuron Tavec Pharma Versatope Therapeutics</p>	<p>Aegle Therapeutics Codiak Biosciences Capricor Therapeutics Evox Therapeutics Exopharm Ltd</p>	<p> first dosing Jan 2020</p>

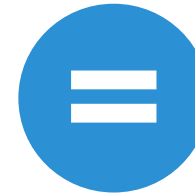
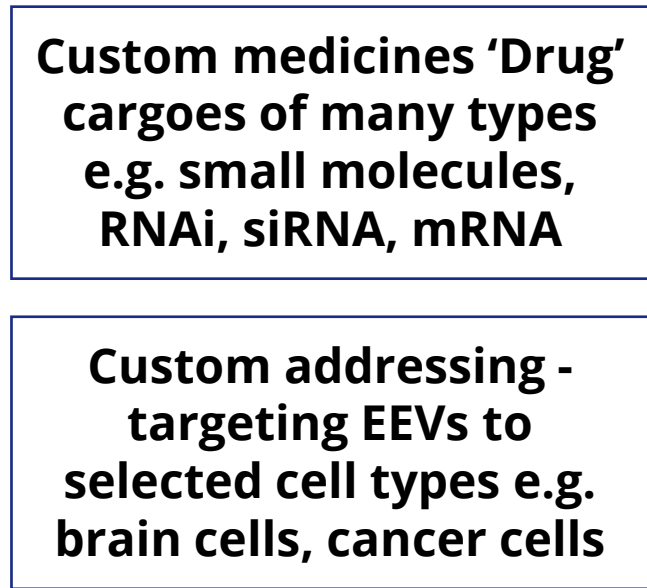
Engineered EV Program: EEVs are the **Future of Precision Medicine**



Natural characteristics of Naïve EVs

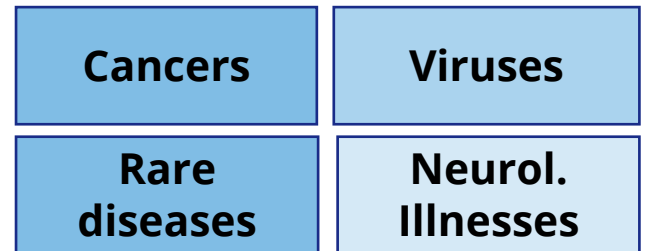


Engineered EVs (EEVs)



Potential markets for 'untreatable' diseases

>>\$100 billion/year



EEV Opportunities

- Solve the major problem of drug delivery for pharma partners
- Multiple EEV products and variations
- Multiple applications
- Multiple deals

Pharma Companies Investing Heavily in EEV Deals with Exopharm's Peers



Only three companies globally have announced proprietary platforms for EEV Development:

EV Company	IP Status	Pharma Partner	Date	Area	Upfront	Milestones
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Jun 2020	CNS	> \$50 mln	\$1.7 billion
		<input checked="" type="checkbox"/>	Mar 2020	Rare diseases	\$63 mln	\$1.3 billion
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Jan 2019	Cancer	\$77 mln	\$1.8 billion
		<input checked="" type="checkbox"/>	Jun 2020	CNS	> \$100 mln	Not disclosed
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Discussions underway			

As of Jun 2020

 Revital Aricha Head, R&D Brainstorm Cell Therapeutics	 Chris Baldwin Chief Commercial Officer Exopharm Ltd.	 Heather Branscome Lead Biologist & PhD Candidate American Type Culture Collection & George Mason University
 Xandra Breakefield Professor, Neurology & Geneticist, Neurology & Radiology Harvard Medical School & Massachusetts General Hospital	 Koen Breyne Post-Doctoral Researcher Massachusetts General Hospital, Harvard Medical School	 Richard Brudnick Chief Business Officer & Head of Strategy Codiak Biosciences
 Joana Correia Executive Director & Chief Scientific Officer Exogenus Therapeutics SA	 Joel de Beer Managing Director Anjarium Biosciences AG	 Chulhee Choi Chief Executive Officer ILIAS Biologics Inc.
 Bernd Giebel Group Leader, Institute for Transfusion Medicine University Hospital Essen	 Shelley Hartman Chief Executive Officer Aegle Therapeutics	 Fatah Kashanchi Professor & Director George Mason University
 Per Lundin Co-Founder & Chief Operating Officer Evox Therapeutics	 Linda Marbán Chief Executive Officer Capricor Therapeutics, Inc.	 Alex Mok Co-Founder & Chief Executive Officer Mantra Bio
 Guillaume van Niel Research Director Université de Paris, Institute of Psychiatry & Neuroscience of Paris (IPNP), INSERM	 Eva Rohde Head, Department of Transfusion Medicine & Director GMP Unit University Hospital & Paracelsus Medical University, Salzburg	 Pranav Sharma Staff Scientist & Founder & Chief Scientific Officer Scripps Research & Xosomix
 Shaun Stapleton Vice President, Regulatory Affairs & Pharmacovigilance ReNeuron	 Steven Stice Co-Founder & Chief Scientific Officer & Professor Aruna Bio	 Aijun Wang Associate Professor, Department of Surgery & Biomedical Engineering

Academic (11)

Repurposed Stem Cell Companies (4)

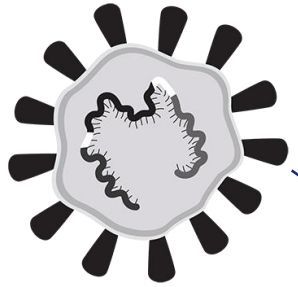
EV Companies (6)

	EEV Tropism	EEV Protein Loading	EEV RNA Loading	Scalable Manufacture	2020 Funding
Codiak (US)	✓	✓	✓		>\$100 mln in deals
Evox (UK)	✓	✓	✓		>\$100 mln in deals
Mantra (US)	✓				~\$30 mln Series A
ILIAS (Korea)		✓	✓		
Aegle (US)				?	~\$7 mln
Exopharm	✓	✓	✓	✓	

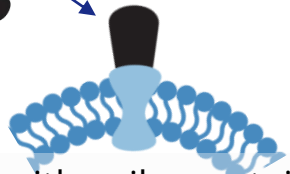
Exopharm Ltd is the only one:

- With IP in all EV technologies
- To have dosed a human subject
- That is publicly traded

EEV Design Example: CoV Specific Anti-viral “Fortrexo CoV”

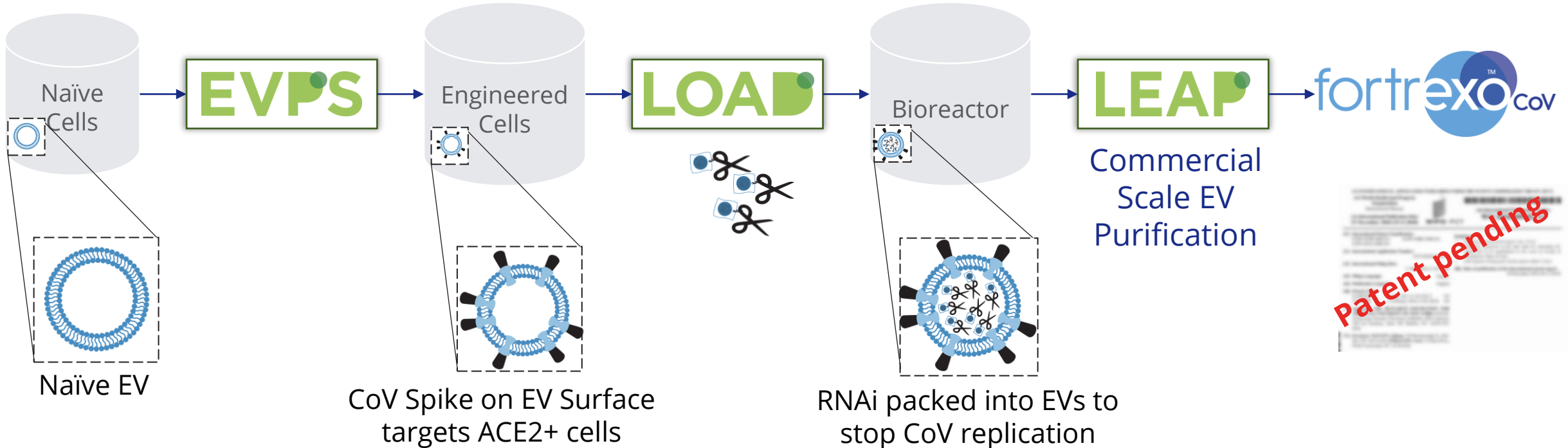


The SARS-CoV-2 virus has spike proteins on the outside and a nucleic acid payload on the inside. The spike protein targets cells with ACE2 receptor on the outside and delivers the particle into the ACE2+ cell. The payload enables viral particle replication inside an infected cell



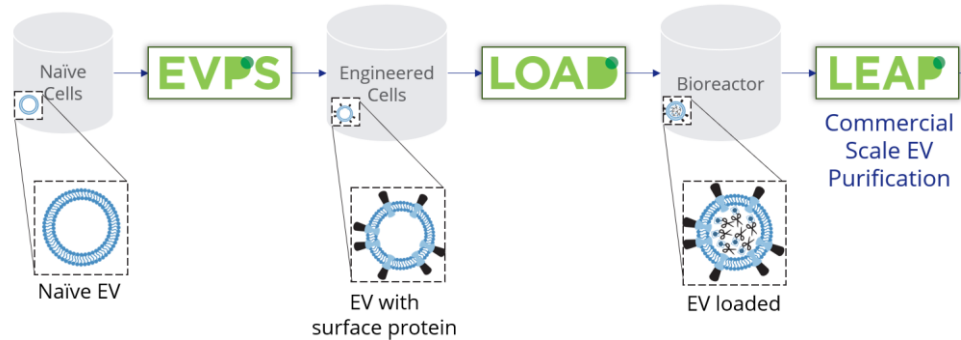
EV with spike protein attached using EVPS

Exopharm has designed an EEV to reduce viral replication in ACE2+ cells by delivering RNAi that inhibit viral particle replication in an infected cell



Patent pending

Precision Medicine Factory



Cancers

Pharma A
Pharma A
Pharma A
Pharma A

Viruses

Pharma D Pharma A

Rare diseases

Pharma B
Pharma E

Neurological diseases

Pharma B

- B.1
- B.2
- B.3

Pharma C

Potential markets for 'untreatable' diseases >>\$100 billion/year

Engineered EVs: Strategy and Progress



Strategy: Provide partners with evidence of Exopharm's EEV platform and enter into development programs

Progress:

Plexodox™ (EEVs from platelets)


- Demonstrated ability to enhance generic cancer drug through EV loading
- Demonstrating proof of concept with CNS application

Fortrexo™ (EVs from MSCs)

- Designed program for addressing COVID-19
- Design program for CNS application

Potential markets >>\$100 billion

Milestones: EEVs

- Assembly of IP
- Demonstrate Proof of Concept**
- First Partnering Deal 

= Achieved in CY 2020

= Targeted for CY 2020

Exopharm has Clear Paths to Revenue: Milestones Toward Revenue



		Jan - Jun 2020	Jul - Dec 2020	Jan - Jun 2021	Jul - Dec 2021
	EEV IP Added <input checked="" type="checkbox"/>	Additional IP <input checked="" type="checkbox"/>	Bioprocessing Licensing Revenue <input checked="" type="checkbox"/>		
		Economic results <input checked="" type="checkbox"/>			
Naïve EVs 	PLEXOVAL I <input checked="" type="checkbox"/>	PLEXOVAL II <input checked="" type="checkbox"/>			
			Non-clinical results <input checked="" type="checkbox"/>	Pre-IND <input checked="" type="checkbox"/>	Phase I US <input checked="" type="checkbox"/>
					Phase IIA Plan <input checked="" type="checkbox"/>
Engineered EVs 	Anti-CoV patent lodged <input checked="" type="checkbox"/>	POC results <input checked="" type="checkbox"/>			
		CNS design <input checked="" type="checkbox"/>	POC results <input checked="" type="checkbox"/>		
			EEV Partnership <input checked="" type="checkbox"/>		

= Key Value Driver

Our Team is Built to Succeed



Exopharm: What We are Going to Do



EV medicines
will transform
healthcare

Exopharm's
leads world in
the clinical
development of
Naïve EVs

Engineered EV
program offers
high-value,
near term
pathway to
revenue

Exopharm's
team has the
experience and
capability to
capture its
opportunities

Exopharm Ltd.
Refreshing Medicine, Today

Thank you

Dr Chris Baldwin

Chief Commercial Officer
chris.baldwin@exopharm.com
+61 450 290 280

www.exopharm.com