mesoblast

the regenerative medicine company

2018 Annual General Meeting
Dr Silviu Itescu, Chief Executive

November 30, 2018

Nasdaq: MESO ASX: MSB

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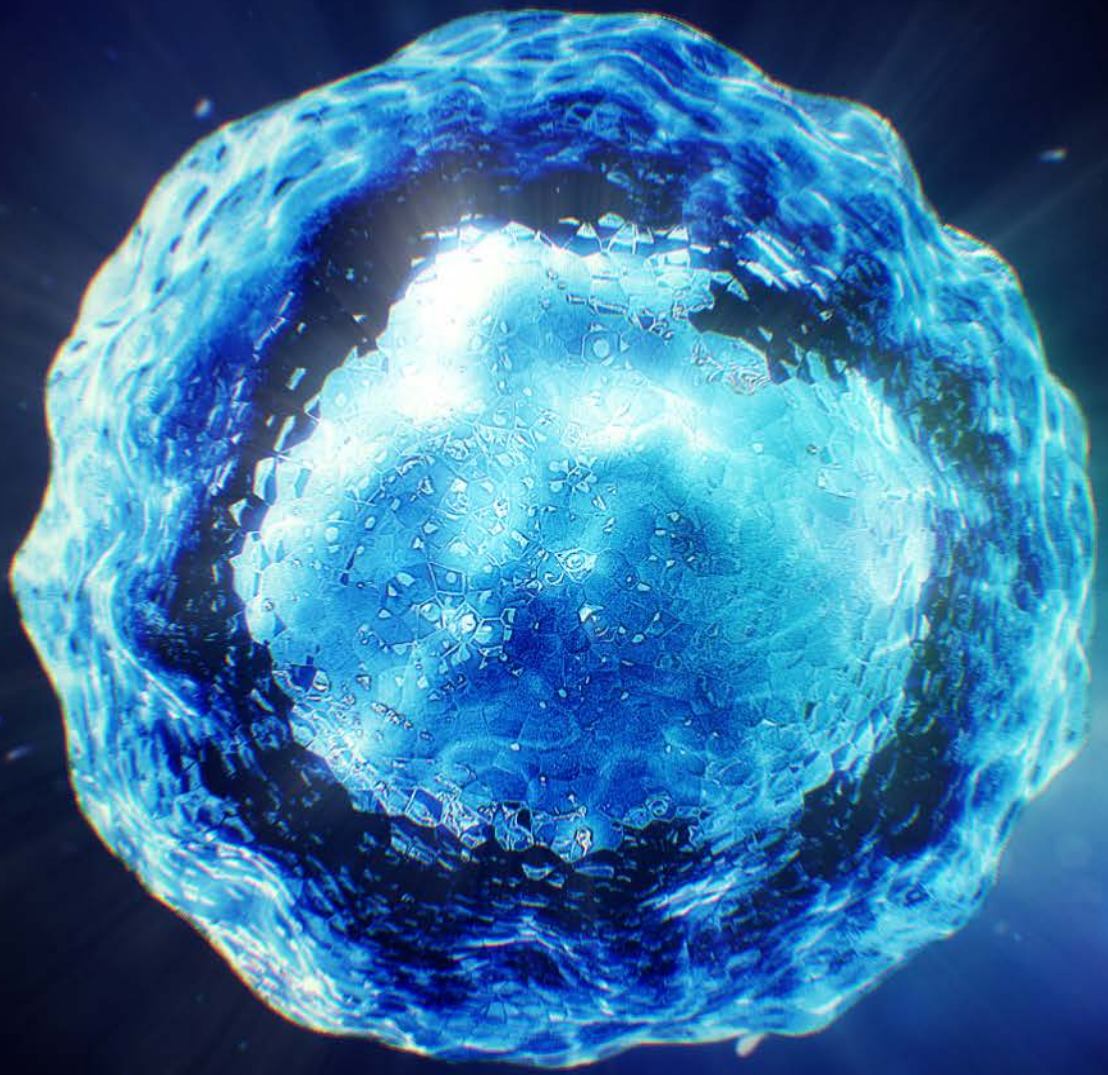
This presentation includes forward-looking statements that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. All statements other than statements of historical facts contained in this presentation are forward-looking statements. Words such as, but not limited to, "believe," "expect," "anticipate," "estimate," "intend," "plan," "targets," "likely," "will," "would," "could," and similar expressions or phrases identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and future events , recent changes in regulatory laws, and financial trends that we believe may affect our financial condition, results of operation, business strategy and financial needs. These statements may relate to, but are not limited to: expectations regarding the safety or efficacy of, or potential applications for, Mesoblast's adult stem cell technologies; expectations regarding the strength of Mesoblast's intellectual property, the timeline for Mesoblast's regulatory approval process, and the scalability and efficiency of manufacturing processes; expectations about Mesoblast's ability to grow its business and statements regarding its relationships with current and potential future business partners and future benefits of those relationships; statements concerning Mesoblast's share price or potential market capitalization; and statements concerning Mesoblast's capital requirements and ability to raise future capital, among others. Forward-looking statements should not be read as a guarantee of future performance or results, and actual results may differ from the results anticipated in these forward-looking statements, and the differences may be material and adverse. You should read this presentation together with our financial statements and the notes related thereto, as well as the risk factors, in our most recently filed reports with the SEC or on our website. Uncertainties and risks that may cause Mesoblast's actual results, performance or achievements to be materially different from those which may be expressed or implied by such statements, include, without limitation: risks inherent in the development and commercialization of potential products; uncertainty of clinical trial results or regulatory approvals or clearances; government regulation; the need for future capital; dependence upon collaborators; and protection of our intellectual property rights, among others. Accordingly, you should not place undue reliance on these forward-looking statements. We do not undertake any obligations to publicly update or revise any forward-looking statements, whether as a result of new information, future developments or otherwise.

Our Mission

Mesoblast is committed to bring to market disruptive cellular medicines to treat serious and life-threatening illnesses



Premier Global Cellular Medicines Company

Disruptive Technology Platform[1]	Commercialization	Late Stage Pipeline
▪ Disruptive technology which targets the most severe disease states refractory to conventional therapies ▪ Well characterized multimodal mechanisms of action ▪ Underpinned by extensive, global IP estate	▪ First approved products commercialized by licensees in Japan[2] and Europe[3] ▪ Increasing revenues and milestone payments ▪ Industrial-scale manufacturing to meet commercial demand ▪ Building focused U.S. sales force for upcoming GVHD product launch	▪ 2 blockbuster product candidates in heart failure and back pain Phase 3 trials ▪ Upcoming FDA interactions under RMAT regarding Phase 2 LVAD trial results ▪ China cardiovascular partnership in place ▪ Global partnership discussions to leverage commercial capabilities

1. Mesenchymal precursor cells (MPCs) and their culture-expanded progeny mesenchymal stem cells (MSCs).
2. Licensee JCR Pharmaceuticals Co., Ltd. received the first full PMDA approval for an allogeneic cellular medicine in Japan and markets this product under its trademark, TEMCELL® Hs Inj.
3. Licensee Takeda received first central marketing authorization approval from the European Commission for an allogeneic stem cell therapy and markets this product under its trademark, Alofisel®.

Multiple Commercial Opportunities

MARKETED

PLATFORM	PRODUCT	THERAPEUTIC AREA		APPROVAL	COMMERCIAL RIGHTS
MSC (Bone Marrow)	TEMCELL® HS Inj[1]	Acute Graft Versus Host Disease	1st allogeneic regen med approved in Japan	✓	JCR Japan
MSC (Adipose)	Alofisel®[2]	Perianal Fistula	1st allogeneic regen med approved in Europe	✓	Takeda Global

IN DEVELOPMENT

	PLATFORM	PRODUCT CANDIDATE	THERAPEUTIC AREA	PRE-CLINICAL / PHASE 2 / PHASE 3	COMMERCIAL RIGHTS
TIER 1	MSC	Remestemcel-L	Acute Graft Versus Host Disease		mesoblast
TIER 1	MPC	Revascor	Advanced HF (Class II/III) End-Stage HF (Class III/IV)[3]		mesoblast TASLY China[4]
TIER 1	MPC	MPC-06-ID	Chronic Low Back Pain		mesoblast
TIER 1	MPC	MPC-300-IV	Rheumatoid Arthritis Diabetic Nephropathy		mesoblast
TIER 2	Includes remestemcel-L (Crohn's disease – biologic refractory), MPC-25-IC (Acute Cardiac Ischemia), MPC-25-Osteo (Spinal Fusion) and MPC-75-IA (Knee Osteoarthritis)				

1. Mesoblast receives royalty income from its licensee JCR Pharmaceuticals Co Ltd on sales of JCR's TEMCELL® Hs. Inj. product in Japan
2. Mesoblast will receive royalty income from its licensee Takeda Pharmaceuticals on Takeda's worldwide sales of its product Alofisel® in the local treatment of perianal fistulae
3. Study funded by the United States National Institutes of Health (NIH) and the Canadian Health Research Institute; conducted by the NIH-funded Cardiothoracic Surgical Trials Network
4. Tasly's rights are limited to China; Tasly also has rights to develop MPC-25-IC for AMI

This chart is figurative and does not purport to show individual trial progress within a clinical program

Partnerships and License Agreements

- JCR has rights to use our MSC technology to treat acute GVHD in Japan
- Its product, TEMCELL® HS Inj., was the first fully approved allogeneic cellular medicine in Japan
- Royalties and milestones received in last twelve months exceed US$5 million
- License expanded in Oct 2018 to cover use in treatment of epidermolysis bullosa – a highly debilitating and sometimes lethal skin disease

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- Patent license agreement entered in Dec 2017 with Takeda (formerly TiGenix NV) providing exclusive access to certain IP for local treatment of perianal fistulae
- Mesoblast is eligible to receive €20 million in milestone payments plus royalties upon commercial sales of Alofisel® worldwide

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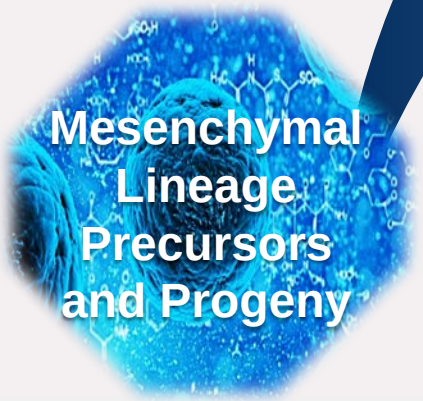
- Exclusive cardiovascular rights in China
- Mesoblast received US$40 million on closing, eligible to receive additional milestones and royalties
- Tasly expects to meet with China's regulatory authority in early 2019 to discuss a pathway for approval of Mesoblast heart failure cell therapy in China

Global IP Estate Provides Substantial Competitive Advantage

- ~800 Patents and patent applications (69 Patent families) across all major jurisdictions
- Covers composition of matter, manufacturing, and therapeutic applications of mesenchymal lineage cells
- Enables licensing to third parties for different indications, when in alignment with our corporate strategy, e.g.TiGenix (subsequently acquired by Takeda)
- Provides strong global protection against competitors seeking to develop products in areas of core commercial focus



Markets
U.S., Europe, China, and Japan

Sources
Allogeneic, Autologous, (Bone Marrow, Adipose, Dental Pulp, Placenta), Pluripotent (iPS)

Diseases
All Tier 1 & Tier 2 Indications, and multiple additional conditions

Commercial-Scale Manufacturing Capability

- Immune privileged nature of mesenchymal lineage cells enables allogeneic “off the shelf” product candidates
- Culture expansion scalable to produce anticipated commercial quantities
- Management know-how in regulatory activities necessary for product approval and commercial launch

Lonza contract manufacturing facility in Singapore

We believe remestemcel-L will be the first commercially produced allogeneic mesenchymal lineage cell product registered for sale in the U.S.

Commercial Organizational Transition

Board of Directors – Structured Succession Plan to Bring Complementary Skills:

- Proven FDA product approval capabilities
- Commercial launch expertise
- Reimbursement and health system expertise
- Extensive global transactional record

Management – Expand Know-How to Support Commercial Launch Plans:

- Commercial leadership with proven track record to roll out launch team
- Operational leadership to drive product life cycle management, commercial manufacturing and regulatory interactions

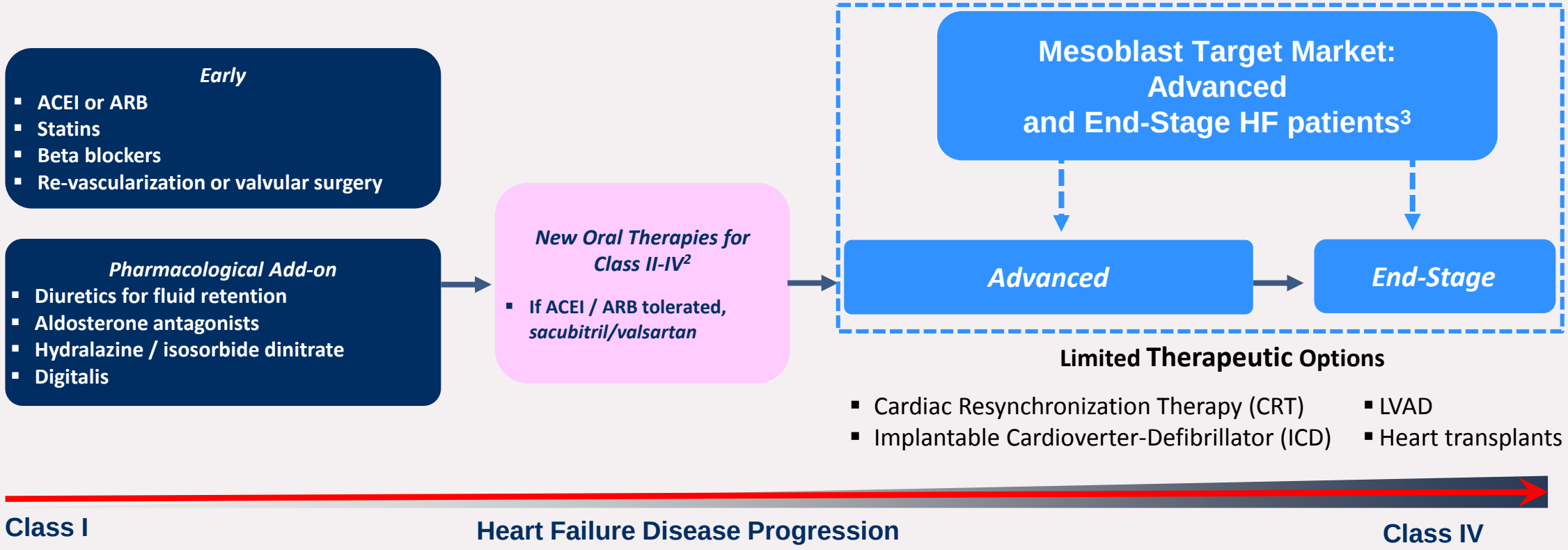
Remestemcel-L: Graft Versus Host Disease Pathway to Market

- TEMCELL® HS Inj. sales experience in Japan informs commercial strategy for the U.S.
- Phase 3 successfully completed
- Fast Track designation provides eligibility for FDA priority review
- Commercialization strategy in place for product launch
- Building out efficient, targeted sales force
- $700m US/EU addressable market, no competing approved products

FDA Biologic License Application filing planned Q1 2019

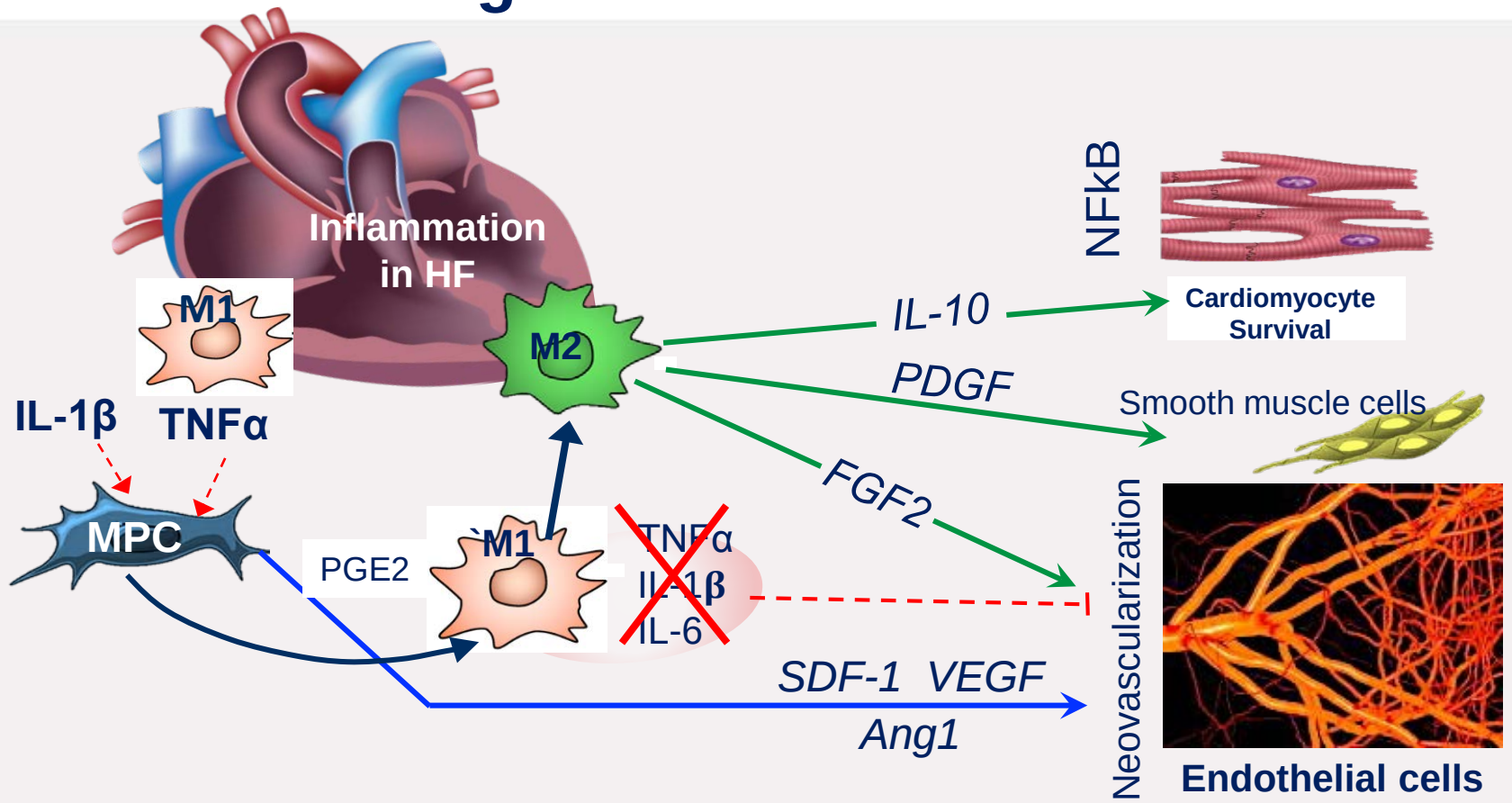
Revascor: Targeting Patients with Advanced Heart Failure Refractory to Standard of Care

Common Treatment Pathway in Progressive Heart Failure[1]



1. Source: Simon-Kucher & Partners 2017. Primary research 2017; Payers n=35, KOLs n=15, Cath lab managers n=4.
2. Corlanor® (ivabradine) approved by FDA (April 2015). ENTRESTO® (sacubitril/valsartan) approved by FDA (July 2015).
3. GlobalData-PharmaPoint Heart Failure (2016); McMurray et al., 2012;Yancy et al., 2013, 2016 ACC/AHAHFSA Focused Update on New Pharmacological Therapy for Heart Failure: An Update of the 2013 ACCF/AHA Guideline for the Management of Heart Failure.

Blood Vessel (Endothelial) Dysfunction in the Heart and Major Organs is at the Core of Progressive Heart Failure

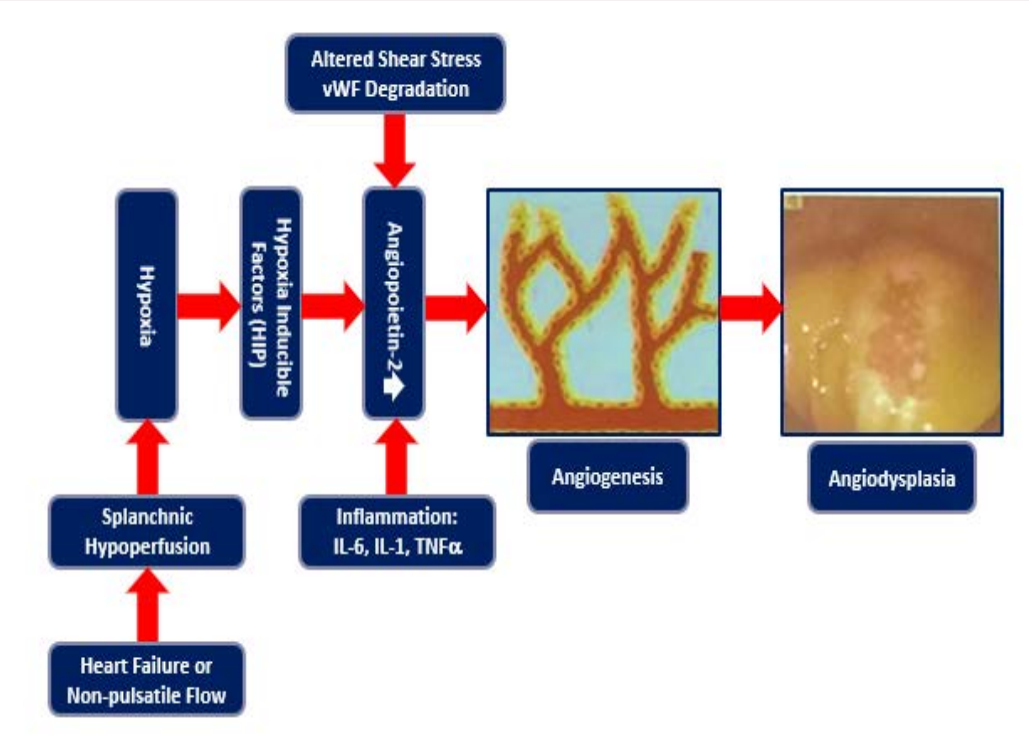


Mesoblast MPCs have been shown to reverse inflammation-related endothelial dysfunction[1]

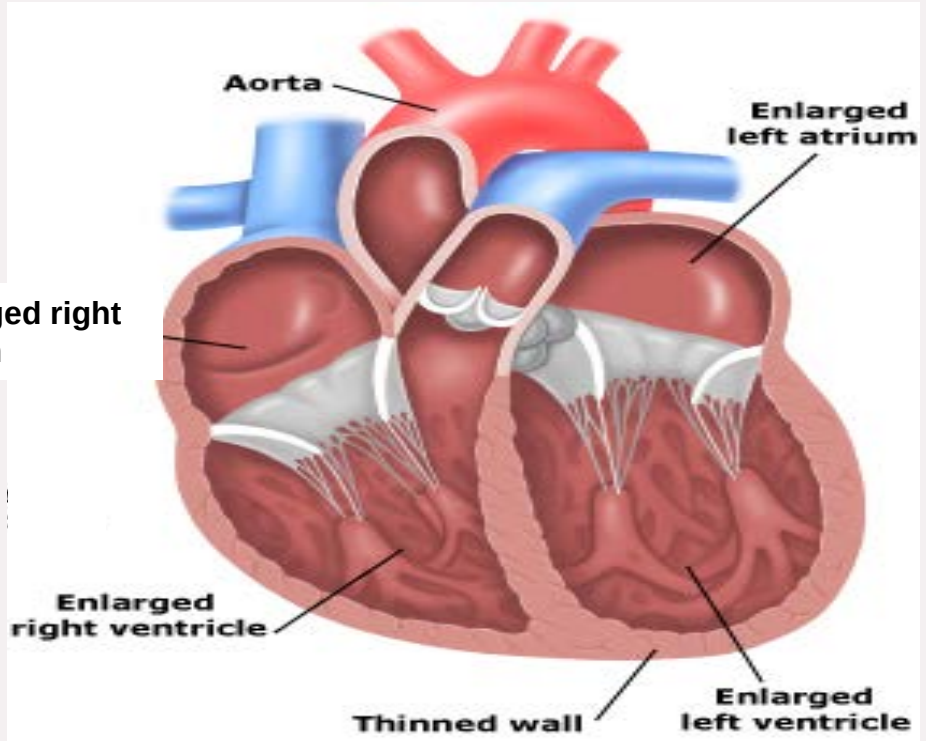
1 Dooley et al. Effect of MPCs on the systemic inflammatory response and endothelial dysfunction in an ovine model of collagen-induced arthritis. PLOS One, May 7, 2015.

GI Bleeding in LVAD Patients due to Inflammation-Related Endothelial Dysfunction

GI Blood Vessels are Abnormal in LVAD Patients



Right Ventricular Failure and Increased Pressure in GI Blood Vessels



Mesoblast MPCs significantly reduced GI bleeding in two randomized controlled clinical trials in LVAD patients

Source: 1. Grosman-Rimon L, Jacobs I, Tumiati LC, et al. Longitudinal assessment of inflammation in recipients of continuous-flow left ventricular assist devices. Can. J. Cardiol. 2015;31:348–356. 2. Grosman-Rimon L, Billia F, Fuks A, et al. New therapy, new challenges: The effects of long-term continuous flow left ventricular assist device on inflammation. Int J Cardiol 2016;215:424-430. 3. Itescu S, Schuster M, Burke E, et al. Immunobiologic consequences of assist devices. Cardiol Clin 2003;21:119–133. 4. Klovaite J, Gustafsson F, Mortensen SA, et al. Severely impaired von Willebrand factor-dependent platelet aggregation in patients with a continuous-flow left ventricular assist device (HeartMate II). J Am Coll Cardiol 2009;53:2162–2167. 5. Joyce D, Crow S, Li Z, et al. Pilot investigation of a novel testing strategy for bleeding in ventricular assist device recipients. J Heart Lung Transplant 2012;31:750–756.

Revascor: End-stage LVAD Heart Failure Program Pathway to Market

- In end-stage heart failure patients with LVADs, inflammation-related endothelial dysfunction results in severe GI bleeding and recurrent hospitalizations
- Treatment of end-stage heart failure patients with our MPCs in two NIH funded studies showed a reduction in GI bleeding and related hospitalizations
- FDA guidance has indicated that GI bleeding associated with LVADs is a clinically meaningful outcome
- Mesoblast has received RMAT designation for use of Revascor as an adjunct to LVAD implantation, enabling eligibility for FDA priority review and accelerated approval
- > $500m (US only) addressable market

Plan to meet with FDA in H1 2019 to discuss potential approval pathway

Blockbuster Product Opportunities

Revascor: Advanced Heart Failure

- New therapies needed to reduce hospitalizations and mortality
- Phase 3 trial in advanced heart failure has enrolled >90% of patients
- Majority of patients in this Phase 3 trial have ischemic heart failure
  - Revascor significantly improved LVAD wean tolerance and reduced hospitalizations from GI bleeding in ischemic heart failure patients in NIH-funded Phase 2 trial

MPC-06-ID: Back Pain

- Limited treatment options for patients who fail conservative therapy include opioids and surgery
  - 50% of opioid prescriptions are for chronic low back pain
  - Opioid crisis is associated with a high rate of overdose and accidental death
  - Urgent need for novel therapies to avoid opioid use
- Phase 3 study completed enrollment ~400 patients in March 2018

Global Partnerships to Commercialize Blockbuster Assets

- Advanced discussions with multiple potential partners for global commercialization of cell therapies for:
  - advanced heart failure
  - chronic low back pain due to disc degeneration
- Partners will bring:
  - access to high growth markets
  - clinical, regulatory and manufacturing expertise
  - established extensive commercial footprint

Global pharma partnering discussions fueled by positive late-stage trial results, regulatory interactions and regional licenses

Significant Increase in Revenue

Revenue for the quarter ending September 30, 2018 (US$m)

For the quarter ending	September 30, 2018	September 30, 2017	$ Change	% Change
Milestone revenue	10.5	0.5	10.0	NM
Commercialization revenue	1.0	0.6	0.4	66%
Interest revenue	0.2	0.1	0.1	93%
Total revenue	**11.6**	**1.2**	**10.5**	**NM**

First quarter FY2019 revenue increased by US$10.5 million vs 2018 revenue due to:

- Commercialization revenue from royalty income on sales of TEMCELL®[1] HS. Inj. increased 66% for the quarter and 116%[2] for the 12 months ended September 30, 2018 compared to the 12 months ended September 30, 2017
- US$10 million of milestone revenue in relation to establishing a strategic cardiovascular partnership with Tasly in China

1. TEMCELL® HS Inj. is a registered trademark of JCR Pharmaceuticals Co. Ltd.
2. Growth reported in constant currency which eliminates the effects of fluctuations in foreign exchange rates between different reporting periods.

Cash Position Strengthened through Strategic Transactions

Balance sheet cash (US$m)

	September 30, 2018	June 30, 2018	$Change
Reported cash on hand	55.1	37.8	17.3
NovaQuest financing agreement	-	39.0	(39.0)
Tasly strategic partnership	40.0	40.0	-
Pro forma cash on hand	**95.1**	**116.8**	**(21.7)**

- Pro forma cash on hand at September 30 includes US$40 million received in October 2018 on closing of the strategic cardiovascular partnership with Tasly previously announced in July 2018
- An additional US$50 million may be available under existing arrangements with Hercules Capital and NovaQuest, subject to achievement of certain milestones

Corporate Milestones

Remestemcel-L for Acute Graft Versus Host Disease

- Successfully met all efficacy and safety endpoints through six months ✓
- FDA meetings and BLA filing (Q4 CY18 – Q1 CY19)

Revascor for Advanced and End-Stage Heart Failure

- Meet with FDA to discuss the recent LVAD phase 2b study results for the clinically meaningful GI bleeding data (1H CY19)
- Phase 3 events-driven trial in advanced heart failure enrollment completion (Q4 CY18 – Q1 CY19)

MPC-06-ID for Chronic Low Back Pain

- Phase 3 trial completed enrollment (Q1 CY18) ✓

Completed non-dilutive transactions for commercialization of MSC-100-IV (remestemcel-L) ✓

Establish regional strategic and commercial licensing arrangements (China, Japan, Europe) ✓

Establish global commercial partnerships; in advanced discussions on blockbuster products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Questions?

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Commercial Launch Plans

Eric Strati Pharm.D., MBA

November 30, 2018

Nasdaq: MESO ASX: MSB

Mesoblast is Committed to Patient Access and Maximizing Value for all Key Stakeholders

Mesoblast Culture	• Highly driven and passionate organization focused on improving the lives of those suffering from life threatening diseases
Experienced Commercial Team	• High commercial acumen underpinned by strong scientific foundation and knowledge of reimbursement dynamics within health systems / transplant centers
Targeted Commercial Objectives	• Optimize patient access while realizing the full value of Mesoblast products • Provide effective product education and distribution support

Mesoblast Planned Commercial Launch Activities for Lead Products

Targeted for > $1bn Market Combined[1,2,3]

- Build targeted highly effective field team
- Pre-launch engagement with payers and complete hospital account profiling
- Finalize distribution pathway and price for remestemcel-L

- Right size expansion of field team to support targeted US LVAD launch preparation
- Ongoing payer and health system engagement

- Leverage EU distributor for aGVHD launch

[1] Sources for GVHD Market Assessment: CIBMTR Current Uses and Outcomes of Hematopoietic Cell Transplantation 2017 Summary., Passweg JR, Baldomero, H (2016) Hematopoietic Stem Cell Transplantation in Europe 2014., Data on file, [2] Sources for LVAD Market Assessment: Agency for Healthcare Research and Quality – Healthcare Cost and Utilization Project- https://www.ahrq.gov/data/hcup/index.html – ICD-9 37.6., Data on file, [3] Subject to FDA discussions under existing RMAT designation

Remestemcel-L: US Launch Strategy to Maximize Patient Access with Limited Investment

Pre-Launch Activities

- Engage with key payers pre-launch to solidify market access and pricing strategy; support with appropriate health care economic information
- Pricing and Reimbursement driven by cost savings from reduction in length of hospital stay and improved survival[1,2,3]

Launch Activities

- Target top 15 centers which represent ~50% of patient volume[4]
- Support access through patient centric program

[1], 2016 claims analysis with Anthem/HealthCore – Data on File, [2] Data on file, [3] Mesoblast remestemcel-L study 001 trial results
[4] GVHD Market Assessment: CIBMTR Current Uses and Outcomes of Hematopoietic Cell Transplantation 2017 Summary

Results from Providers/Payers Qualitative US Market Research[1]

(n=20)

Median Response

Reaction to Tested Target Profile[2]

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Most Significant Value Drivers for Remestemcel-L

- Day 100 Survival rate
- Day 28 overall response rate
- No increase in infections
- Largest clinical data set (n ~300)
- Ability to administer the drug outpatient

Max Rating Product Attributes

"Remestemcel-L is Expected to Become Standard of Care"

- Multiple Respondents[1]

[1] ZS Associates June 2018 Qualitative Market Research: MCO Medical Directors n=5, Transplant Center Directors n= 5, Hospital Pharmacy Directors n=5, AMC-based Hem/Oncs / KOLs n=3
[2] Tested Target Profile reflective of Mesoblast phase III study 001 results

Revascor: Adjunct Therapy to LVAD Indication Commercial Strategy will Leverage Commercial Infrastructure

Pre-Launch Activities

- Engage with key payers pre-launch to develop and solidify market access and pricing strategy
- Pricing and Reimbursement driven by cost savings from reduced GI-bleed hospitalizations and associated co-morbidities
- Apply for New Technology Add-on Payment (NTAP) program under which Centers for Medicare and Medicaid Services provides additional payments for qualified new technologies provided in the inpatient setting.

Launch Activities

- Primarily target top 40 centers at launch representing ~75% of patient volume[1]
  - ~20% overlap with Tier 1 target transplant centers for aGVHD[2]

[1] Medicare provider inpatient charge data-FY2016 - https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Inpatient2016.html
[2] https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/newtech.html


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