



## **Mesoblast - A Global Leader in Cell Based Medicines**

34th Annual J.P. Morgan Healthcare  
Conference  
*January 2016*

---

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

*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 Quarterly Report on Form 6-K 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 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 Teva Pharmaceutical Industries Ltd, JCR Pharmaceuticals Co., Ltd, and Lonza 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.*

## Key Investment Highlights

- 1 Disruptive technology platform: proprietary, allogeneic, “off-the-shelf” adult stem cells with predictable therapeutic properties
- 2 Established late stage portfolio of distinct and advanced product candidates
- 3 Strategic partnerships delivering clinical, manufacturing and commercial capabilities, together with financial support
- 4 Scalable, cost-efficient manufacturing capabilities
- 5 Intellectual property leadership covering compositions, uses, and manufacturing processes
- 6 Experienced management team

## Focused Company With Strong Cash Reserves to Meet Key Corporate Objectives

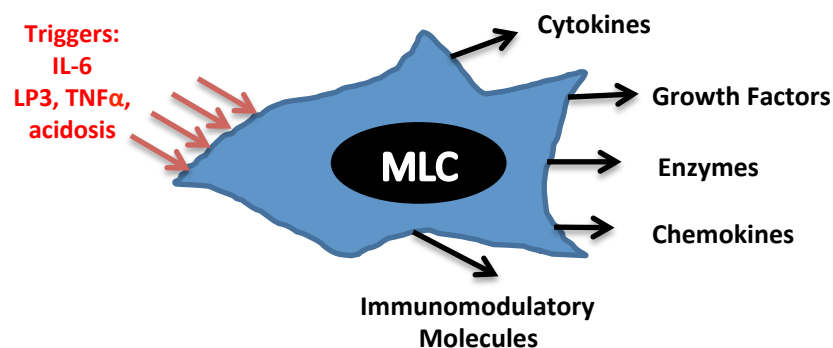
- Successfully completed US listing with access to world's largest sophisticated healthcare investor pool and analysts
- Financing raised USD \$63.5m (net proceeds) which significantly augmented existing cash reserves of USD \$77.8m at 30 September 2015
- Quarterly cash outflows expected to be reduced by approximately 20-25% in Q2-4 FY2016 in comparison to Q1 FY2016 (USD\$28.1m) and Q4 FY2015 (USD\$27.3m)
- Cash managed to extend runway and achieve Tier 1 value inflexion points
- Major focus is FDA filing for our first US Product approval in Acute Graft Versus Host Disease (aGVHD)
- FDA Approval may be accompanied by a Rare Pediatric Disease Designation / Priority Review Voucher
- We intend to conclude additional and appropriate strategic partnerships

## 1

# Disruptive Technology Platform

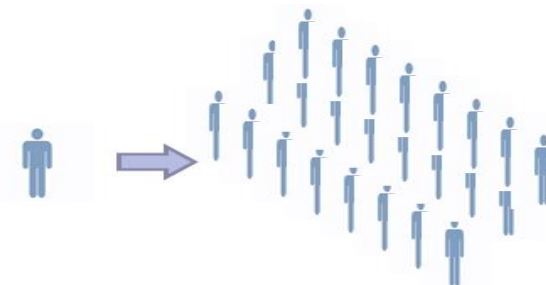
## Multiple, Diverse Mechanisms

- Mesenchymal Lineage Adult Stem Cells (MLCs), immunoselected precursors and progeny
- Located around blood vessels in all vascularized tissues
- Respond to signals associated with tissue damage
- Secrete diverse variety of biomolecules responsible for tissue repair and immunomodulation



## Allogeneic Scalable Use

- MLCs can be isolated from diverse tissue sources (bone marrow, adipose, dental pulp)
- MLCs from a single healthy donor can be expanded to thousands of doses in weeks
- Potential for commercial large-scale expansion via proprietary manufacturing processes
- Immunomodulatory properties makes MLCs relatively non-immunogenic
- Allows for commercially scalable, allogeneic, off-the-shelf products



## 2

## Product Candidates Target Diseases with High Unmet Needs

*Three Tier 1 Product Candidates in Phase 3 Programs*

PRODUCT CANDIDATES	PROGRAMS	PRECLINICAL	PHASE 2	PHASE 3	APPROVAL
<b>TIER 1</b>					
TEMCELL HS INJ.	Acute GVHD (Japan)				
MSC-100-IV	Acute steroid-refractory GVHD				
MPC-150-IM	Advanced chronic heart failure				
	End-stage chronic heart failure				
MPC-06-ID	Chronic low back pain				
MPC-300-IV	Rheumatoid arthritis (biologic refractory)				
	Diabetic nephropathy				
<b>TIER 2</b>					
MSC-100-IV	Crohn's disease (biologic refractory)				
MPC-25-IC	Acute cardiac ischemia				
MPC-25-Osteo	Spinal fusion				
MPC-CBE	Bone marrow transplant				

This chart is figurative and does not purport to show individual trial progress within a clinical program. For product registration purposes, Phase 3 programs may require more than one trial.

## 2

## Tier 1 Product Candidate Deliverables

Product Candidate	Programs	Anticipated Milestones	2016				2017			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
MSC-100-IV / Temcell® HS Inj.	Acute Graft Versus Host Disease	Temcell® HS Inj. Launch in Japan	■							
		US Pediatric Phase 3 Interim Analysis (IA) Top Line Results			■					
		Phase 3 program complete, Top Line Results				■				
		US Pediatric BLA Filing				■	■			
		US Pediatric Approval							■	■
MPC-150-IM	Class II and III Heart Failure	Phase 3 1st IA results		■						
		Phase 3 2nd IA (futility & efficacy analysis)								
	Class IV Heart Failure Requiring LVAD	Phase 2 trial results							■	
MPC-06-ID	Chronic Low Back Pain Due to Degenerative Disc Disease	Phase 3 enrollment complete Trial 1				■				
		Phase 3 First IA results Trial 1				■				
		Phase 3 Second IA results Trial 1								■
MPC-300-IV	Rheumatoid Arthritis (Biologic Refractory)	Top line data first cohort released	■							
		Full trial Results		■						

A

## MPC-150-IM: Chronic Heart Failure (CHF) – Market Opportunity

*MPC-150-IM is in development for patients with New York Heart Association Class II-IV CHF*

### Market opportunity

- 5.7m patients (2% of the population) diagnosed with CHF in the US<sup>1</sup>
- 870,000 new cases diagnosed in the US each year<sup>1</sup>
  - Growing by 2% per annum
- ~1.9m CHF NYHA Class II-IV patients with low ejection fraction (LVEF<40%) in the US alone<sup>2</sup>

### Gap in treatment options

- Class II / III CHF patients with low ejection fraction continue to be at high risk of repeated hospitalizations and mortality, despite standard of care pharmacological treatments<sup>3</sup>
- Class III / IV CHF patients only have heart transplant and mechanical support as treatment options

### Targeted physician population

- Specialists: Targeted physician audience & commercial footprint
  - Heart failure specialists
  - Interventional cardiologists
  - Cardiac surgeons

*MPC-150-IM is positioned to fill the significant treatment gap in patients with advanced CHF*

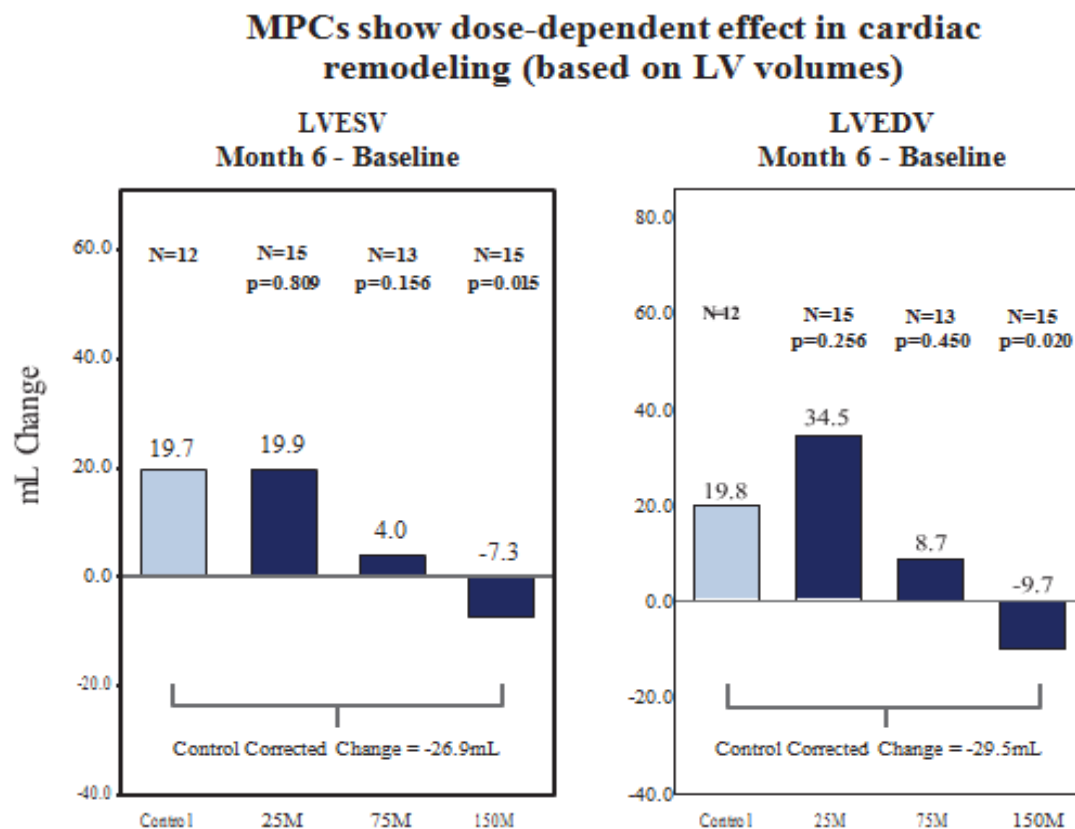
1. AHA statistical Update – Heart disease and stroke statistics-2015 update Circulation 2015

2. Gurwitz JH, Magid DJ, Smith DH, et al. Contemporary Prevalence and Correlates of Incident Heart Failure with Preserved Ejection Fraction. *The American journal of medicine*. 2013;126(5):393-400.

3. European Heart Journal (2012) 33, 1750–1757 Figure 3



## A MPC-150-IM: Phase 2 Trial Results in CHF Identify Optimal Therapeutic Dose



- Phase 2, randomised placebo controlled trial in 60 patients with Class II / III CHF and LVEF<40%
  - Placebo vs. 25, 75, 150 M MPCs injected by endomyocardial catheter
- At 6 months: Dose-dependent effect seen on left ventricular remodeling, with the 150 M cell dose (MPC-150-IM) showing greatest effect vs. controls

## A MPC-150-IM: Phase 2 Trial Results in CHF Identify Optimal Target Patients, Advanced Heart Failure (Baseline LVESV>100ml)<sup>1</sup>

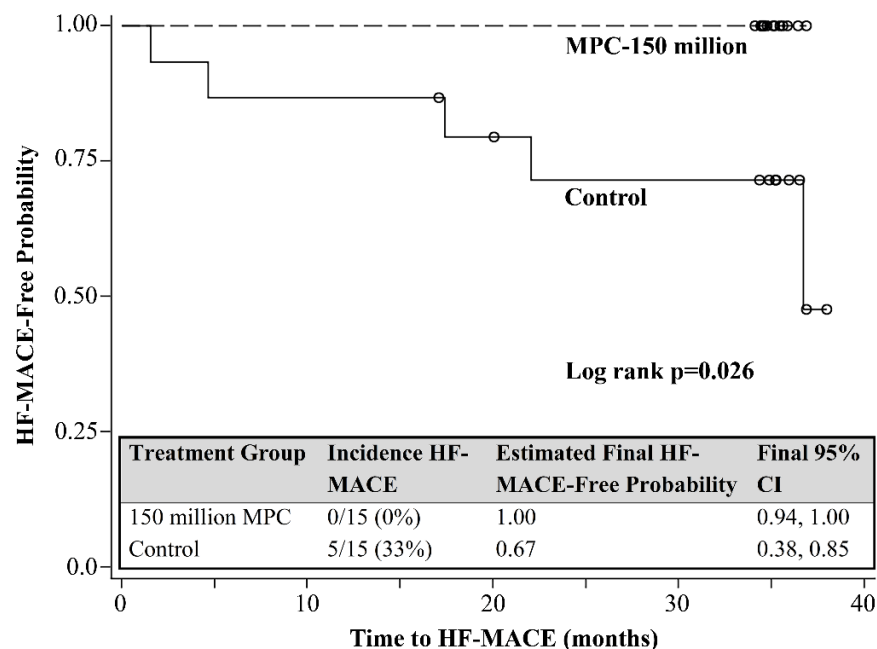
	Change (Entire Cohort) Month 6 minus Baseline			Change (LVESV > 100 mL) Month 6 minus Baseline			
	Control (n=15)	150 M MPC (n=15)	Δ, Control Corrected	Control (n=7)	150 M MPC (n=11)	Δ, Control Corrected	P-values
LVESV (ml)	+20	-7	-27	+46	-8	-54	<0.02
LVEDV (ml)	+20	-10	-30	+41	-10	-51	<0.03
LVEF (%)	-2.3	+0.6	+2.9	-6.4	+1.7	+8.1	<0.05

Placebo corrected benefit of single 150M cell dose on cardiac volumes and ejection fraction at 6 months was greatest in patients with more advanced heart failure as defined by baseline LVESV>100ml at baseline

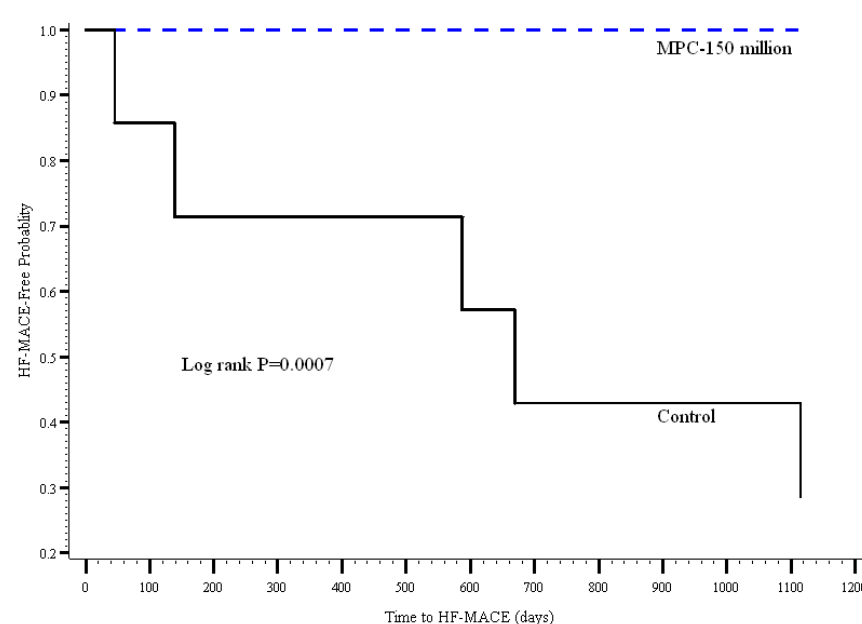
A

## MPC-150-IM: Single Dose Prevents HF-MACE Over 3 Years

HF-MACE Kaplan-Meier Curve over 36 months following treatment in all patients



HF-MACE Kaplan-Meier Curve over 36 months following treatment in patients with LVESV>100ml



- Over 36 months, patients receiving 150M MPC had significantly greater probability of remaining free of a first HF-MACE\* vs. controls (0% vs. 33%,  $p = 0.026$  by log-rank)
- All HF-MACE events occurred in controls with baseline LVESV>100ml, where the treatment effect size was even greater (0% vs. 71%,  $p = 0.0007$  by log rank)
- Controls with baseline LVESV>100ml had 11 total/recurrent events over 36 months vs. 0 in matched patients receiving 150 M MPCs ( $p=0.0007$ )

Circ Res. 2015; 117:576-584. Perin E et al. A Phase II Dose-Escalation Study of Allogeneic Mesenchymal Precursor Cells in Patients With Ischemic or Non-Ischemic Heart Failure.

11 \* HF-MACE is defined as a composite of cardiac related death or resuscitated cardiac death or non-fatal decompensated heart failure events

A

## MPC-150-IM: Phase 3 Trial Recruiting Well and Targets Advanced Heart Failure where Medical Need is Greatest

- Patients with large baseline LVESV and advanced heart failure are at highest risk of HF-MACE
- For these patients existing therapies are inadequate and economic burden is greatest
- To confirm that MPC-150-IM reduces HF-MACE in patients with advanced heart failure, the ongoing Phase 3 trial is designed to enrich for patients with high risk of HF-MACE through the requirement of a prior hospitalization in the last nine months or high levels of NT-proBNP
- Trial is recruiting well across North America and is expanding into Europe
- A first interim analysis will be performed during Q1 2016 (results available Q2 2016) focused on safety and efficacy based on secondary surrogate volume measurements

A

## MPC-150-IM: Reduced Size of Phase 3 Program Following FDA Discussions

Following the preliminary responses from FDA in Dec 2015, the ongoing phase 3 program is planned to be optimized as follows:

- The current Phase 3 trial size will be reduced from 1,165 to approximately 600 subjects
- The revised primary endpoint will be a comparison of recurrent HF-MACE between MPC treated patients and controls
- The proposal to use of recurrent HF-MACE as a primary endpoint is based on having successfully achieved this endpoint in the Phase 2 trial
- A second confirmatory study, will be conducted in parallel in an identical patient population of up to 600 patients using the same primary endpoint

*In Q2 2016, Teva and Mesoblast will provide updated timelines for program completion*

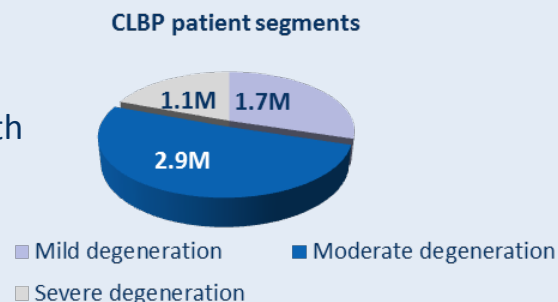
B

## MPC-06-ID: Chronic Low Back Pain due to Degenerative Disc Disease – Market Opportunity

***MPC-06-ID is in development for the treatment of chronic low back pain (CLBP) lasting >6 months as a result of moderate degenerative intervertebral disc disease***

### Market opportunity

- Over 5.7m patients in the US suffer from CLBP due to degenerative disc disease (DDD)
- MPC-06-ID is being developed to target 4.0m patients with Moderate and Severe CLBP due to DDD



### Gap in treatment options

- For patients who fail conservative treatment (rest, analgesia, opioids, and epidural steroids), treatment options are limited to highly invasive therapies such as spinal fusion or artificial disc replacement
- Surgeons report ~40% of patients ultimately fail back surgery

### Targeted physician population

- Specialists: Targeted physician audience & commercial footprint
  - Pain management specialists and anesthesiologists
  - Orthopedic / spine surgeons

***MPC-06-ID is positioned to fill the significant treatment gap in patients with moderate to severe CLBP after conservative treatment options have failed***

1. LEK & NCI opinion leader interviews, and secondary analysis  
2. Shapiro CM Phys Med Rehabil Clin N Am 2014

- 100 patients with >6 months of CLBP due to DDD and unresponsive to conservative therapies (including opioids and epidural steroids) were evaluated in a randomized, placebo controlled Phase 2 trial
- Visual Analog Scale (VAS) scored from 0-100, evaluated at 1,3,6,12 and 24 months
  - Minimally clinical important difference (MCID) in VAS is defined as >30% improvement<sup>1</sup>
  - Guidance from key opinion leaders and payers requires > 50% in pain reduction at a distinct time point
- Oswestry Disability Index (ODI) is a standardized measure of function and was evaluated at 1,3,6,12 and 24 months
  - Minimally clinical important difference (MCID) in ODI is defined as >30% or 10 point improvement<sup>1</sup>
  - 15 point improvement has been used as the MCID for surgical devices to support FDA and EU marketing authorization

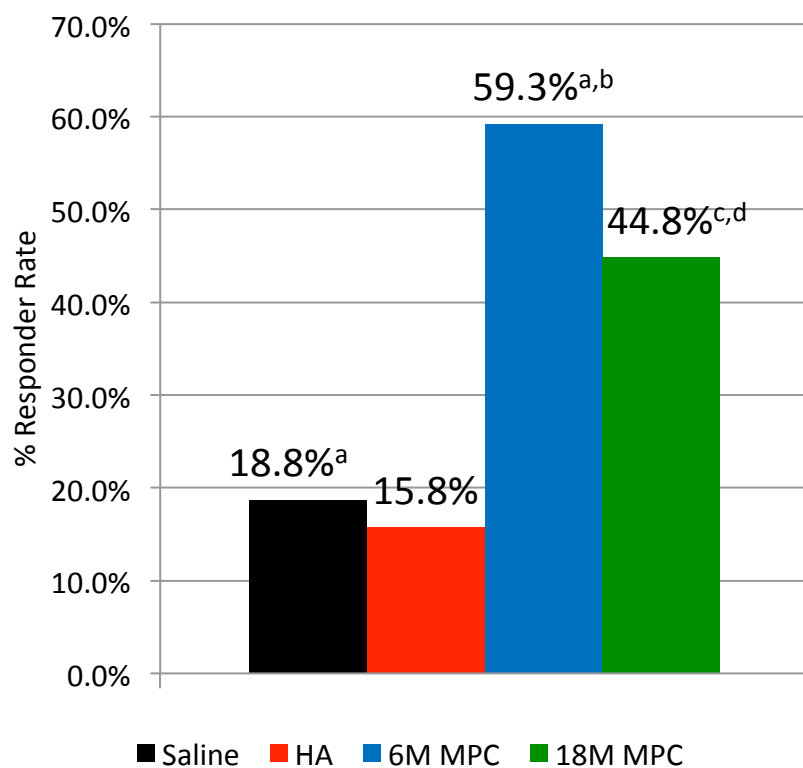
1. Ostelo RWJ, Deyo RA, Stratford P, et al. Interpreting change scores for pain and functional status in low back pain. Spine 2008; 33(1):90-94.

B

MPCs Groups Have a Greater Proportion of Patients Through 24 Months with at Least 50% Pain Reduction Than Controls

6 & 12Months

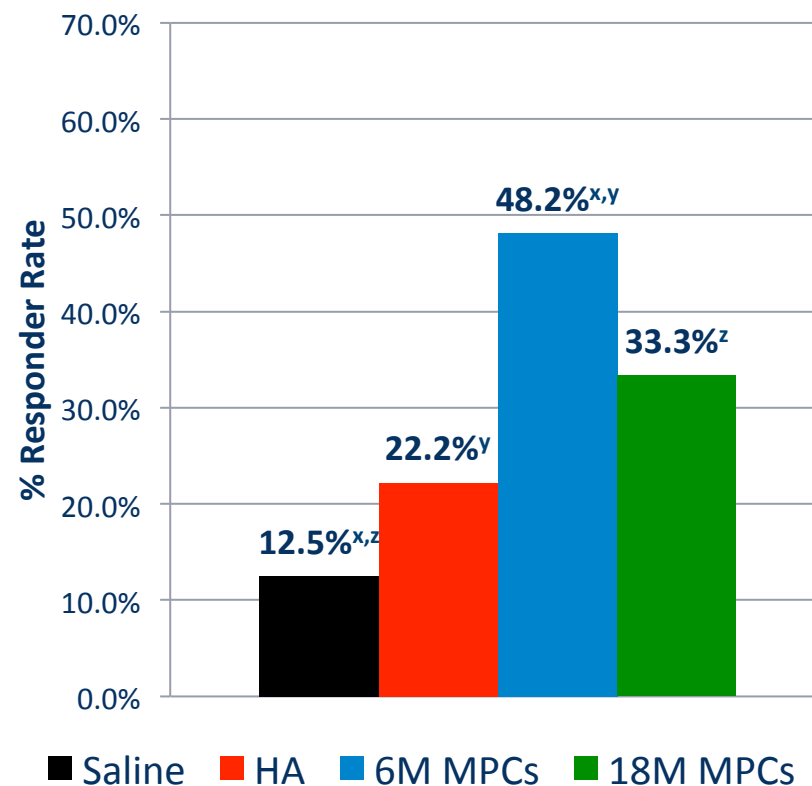
50% Reduction in VAS LBP with No Intervention



- a.  $p=0.013$  6M MPC vs. saline
- b.  $P=0.006$  6M MPC vs. HA
- c.  $P=0.110$  18M MPC vs. saline
- d.  $P=0.060$  18M MPC vs. HA

12 & 24 Months

50% Reduction in VAS LBP with No Intervention



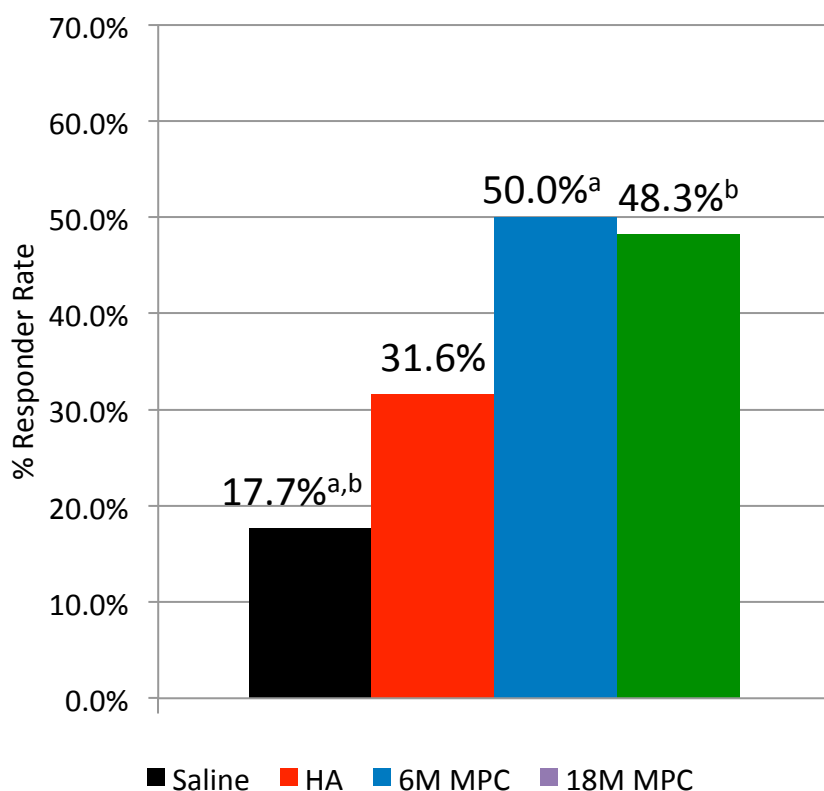
- x.  $p=0.023$  6M MPC vs. saline
- y.  $p=0.118$  6M MPC vs. HA
- z.  $p=0.166$  18M MPC vs. saline



B

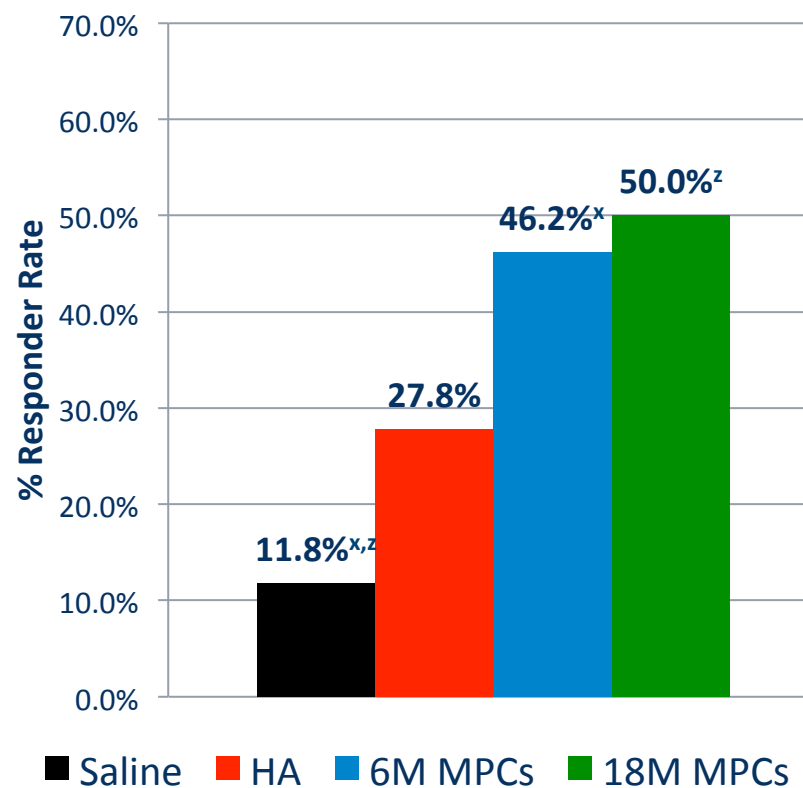
MPCs Groups Have a Greater Proportion of Patients Through 24 Months with at Least 15 Point Improvement in Function (ODI) With No Intervention Compared to Controls

6 & 12 Months  
15pt Improvement in ODI with No Intervention



a.  $p=0.052$  6M MPC vs. saline  
b.  $p=0.058$  18M MPC vs. saline

12 & 24 Months  
15pt Improvement in ODI with No Intervention

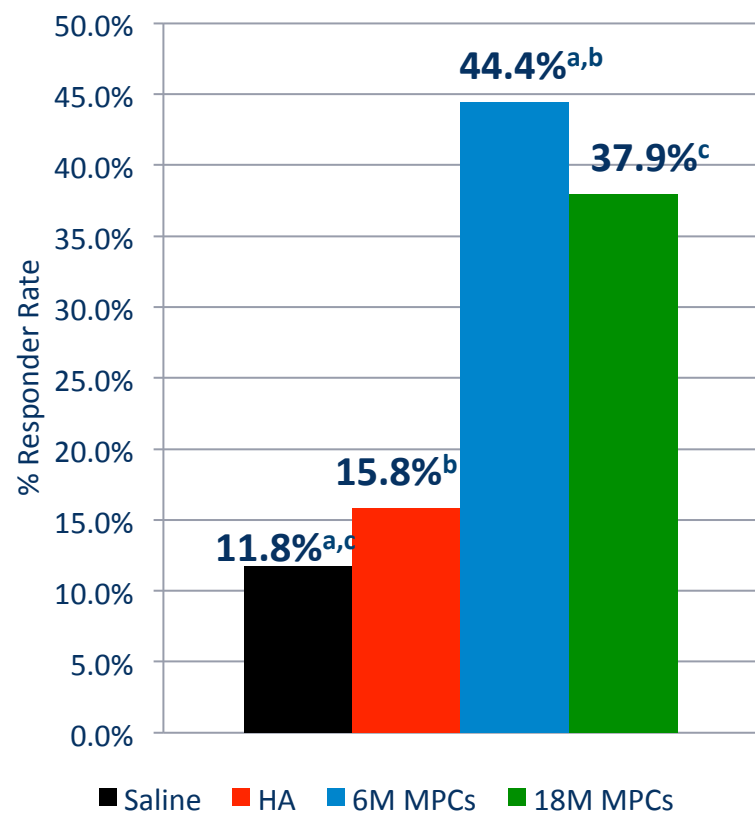


x.  $p=0.023$  6M MPC vs. saline  
z.  $p=0.012$  18M MPC vs. saline

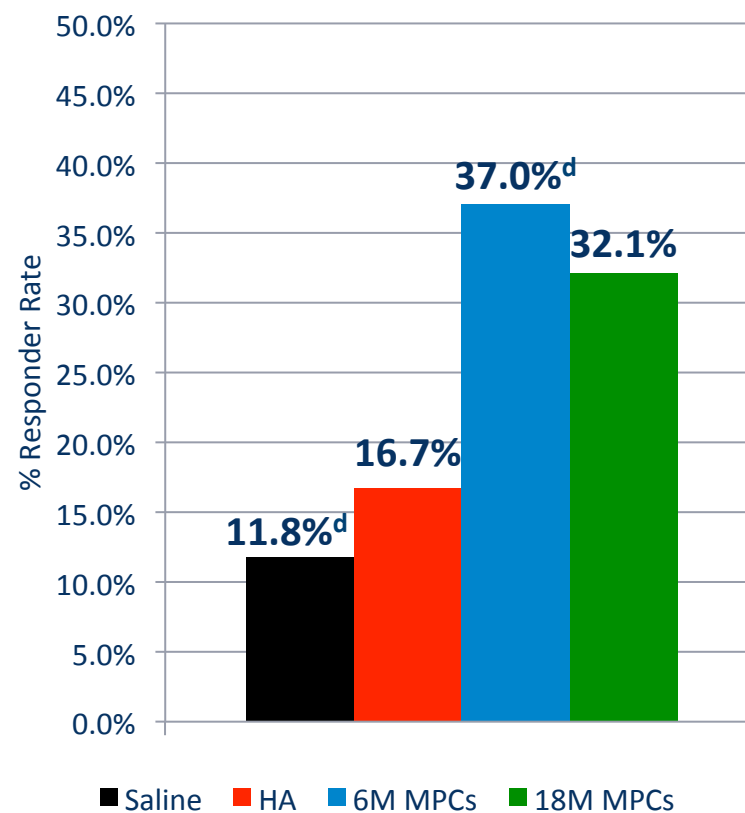
B

## MPC-06-ID: Composite Endpoint for Both Pain and Function Over 24 Months – Phase 2 Data

% Patients with treatment success  
at 6 & 12 months



% Patients with treatment success  
at 12 & 24 months



### Treatment Success Composite Endpoint

50% VAS back pain reduction AND 15 point ODI improvement AND no intervention at the treated level

- a.  $p=0.044$  6M MPC vs. saline
- b.  $p=0.058$  6M MPC vs. HA
- c.  $p=0.090$  18M MPC vs. saline

- d.  $p=0.090$  6M MPC vs. saline

B

## MPC-06-ID: Phase 3 Pathway to Potential Approval in Patients with CLBP due to Moderate Degenerative Intervertebral Disc Disease

- **Phase 3 trial is enrolling well**
  - The study will enroll ~330 patients
  - Primary efficacy endpoint is a composite of  $\geq 50\%$  pain improvement (VAS) and  $\geq 15$  point functional improvement (ODI) over 12 and 24 months
- **The Phase 3 endpoint is consistent with the approach for approval of spinal device technologies**
- **An interim analysis for efficacy will be performed during Q4 2016**



## MSC-100-IV / TEMCELL® HS Inj. : Acute Graft vs Host Disease – Market Opportunity

***MSC-100-IV / TEMCELL® HS Inj. is targeting pediatric and adult patients with acute Graft Versus Host Disease (aGVHD) following allogeneic Bone Marrow Transplant (BMT).***

### Market opportunity

- ~30,000 allogeneic BMTs performed globally each year, 25% pediatric<sup>1,2</sup>
- ~3,700 allogeneic BMTs performed in Japan each year<sup>3</sup>
- ~50% of all patients develop aGVHD (Grades II-IV)<sup>4</sup>

### No approved treatment options

- Mortality can reach 85% in patients with liver & gut complications
- No currently approved therapies for steroid refractory patients
- Off-label options have mixed efficacy with high toxicity
- Significant need for a new treatment with a favorable risk / benefit profile

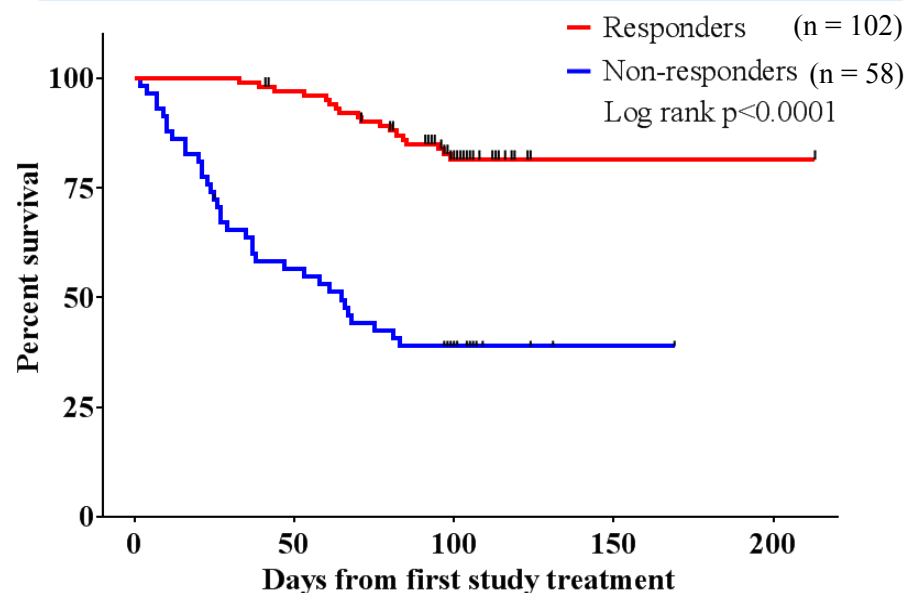
### Targeted physician population

- Highly targeted physician audience & commercial footprint for pediatric launch in US
- ~ 75 centers in the US conduct pediatric allogeneic BMTs
- ~ 50% of all US pediatric transplants concentrated in 15 centers & key metropolitan areas

1. Gratwohl A et al Quantitative and qualitative differences in use and trends of hematopoietic stem cell transplantation: a Global Observational Study. Haematologica. 2013 Aug; 98(8):1282-90.
2. CIBMTR, Decision resources GVHD Epi Nov 2012.
3. APBMT Annual Report Dec 2012; Assumes a growth rate of approximately 3% per year
4. Decision resources Niche Markets and Rare diseases: GVHD Nov 2012

## C MSC-100-IV: Phase 3 Trial in Children with Steroid Refractory Acute Graft vs Host Disease (SR-aGVHD)

### MSC-100-IV in Children with SR-aGVHD who failed multiple other modalities



Survival of Pediatric Patients Treated with MSC-100-IV  
28-Day Responders vs Non-responders

### MSC-100-IV as first line therapy in children with SR-aGVHD

Response at Day 28	Randomized Placebo Controlled Trial		Open-label Expanded Access Program
	Placebo	MSC-100-IV	MSC-100-IV
Responder	3/14 (21.4%)	9/14 (64.3%)	25/32 (78.1%)
Non-responder	11/14 (78.6%)	5/14 (35.7%)	7/32 (21.9%)
	p-value = 0.0014		

Compared with placebo control patients, MSC-100-IV produced markedly superior overall response at day 28, a clinically meaningful endpoint ( $p=0.0014$ ).

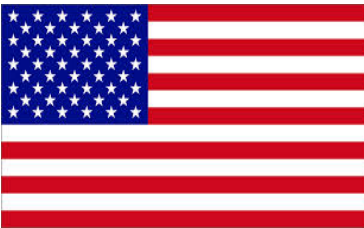
- Evidence that MSC-100-IV is effective when used as first line therapy in children with SR-aGVHD
- FDA agreement on 60 patient open label Phase 3 trial for accelerated US approval pathway
- Enrollment criteria: MSC-100-IV offered as first line therapy in children with SR-aGVHD

## MSC-100-IV / TEMCELL® HS Inj. : Product Launch Plans in aGVHD



### Japan (TEMCELL® HS Inj.): 2016 Expected Revenues

- Our licensee JCR Pharmaceuticals Co. to launch TEMCELL® HS Inj. in Japan for adult and pediatric aGVHD in Q1 2016
- Japan's National Health Insurance (NHI) set reimbursement for TEMCELL® HS Inj. at ¥868,680 (US\$7,200) for 72 million cells
- A four-week, multi-dose treatment course of TEMCELL for an average adult is expected to be reimbursed at ¥13,898,880 (US\$115,000), or at ¥20,848,320 (US\$172,000) if symptoms persist and additional dosing is required
- Mesoblast is entitled to receive royalties and other payments at pre-defined thresholds of cumulative net sales



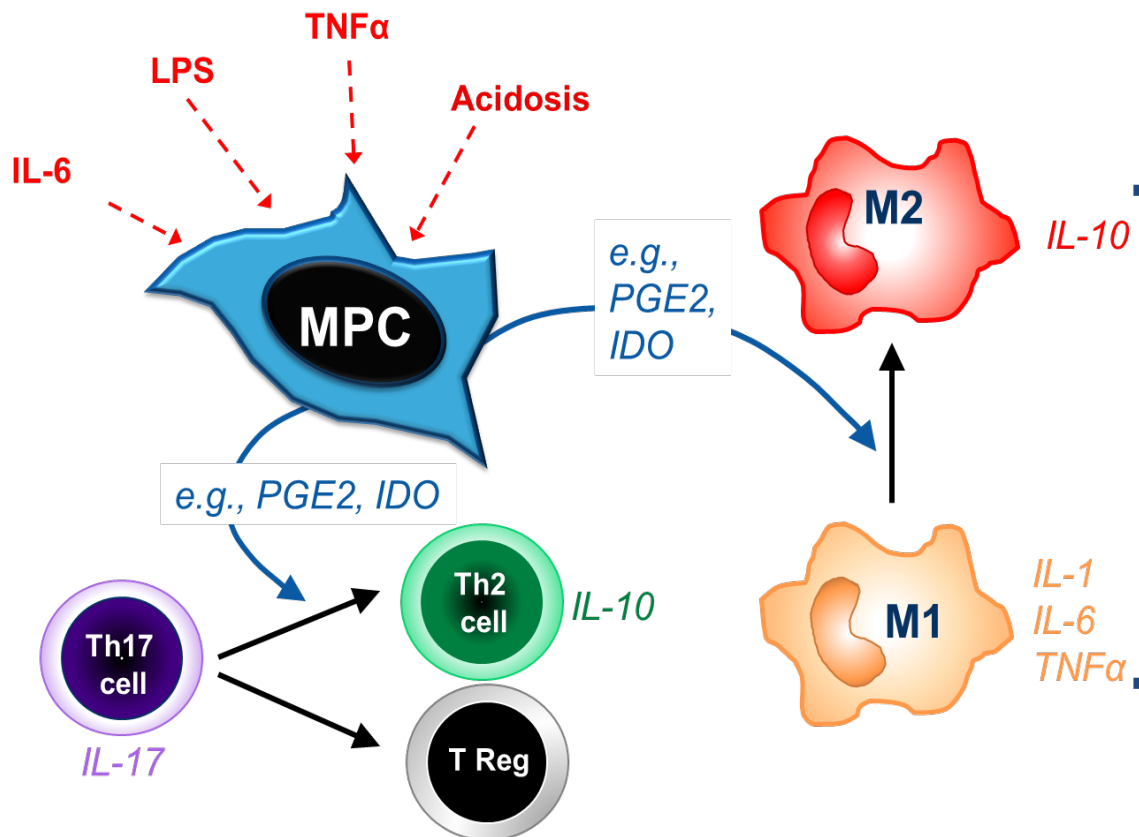
### United States (MSC-100-IV): 2017 Potential FDA Approval

- Open-label Phase 3 study in 60 children actively recruiting in the US
- Interim analysis results in Q3 2016
- Recruitment complete and top-line results Q4 2016
- Complete readiness for commercial manufacturing Q4 2016
- Potential FDA filing by end 2016 based on interim analysis, Q1 2017 based on full dataset
- Potential for FDA Rare Pediatric Disease Designation / Priority Review Voucher

***TEMCELL® HS Inj. is the first allogeneic stem cell product approved in Japan  
MSC-100-IV has the potential to be the first allogeneic stem cell product approved in US***

## D Anti-Inflammatory Portfolio - a Major Emerging Opportunity

*Inflammation induces production of immuno-modulatory factors by MLCs, which regulate multiple immune pathways concurrently*



- MLCs have receptors that respond to pro-inflammatory signals, resulting in release of anti inflammatory mediators
- Mesoblast is developing MLC product candidates to target immune mediated diseases where multiple pathways are associated with treatment resistant disease:
  - Biologic refractory rheumatoid arthritis
  - Diabetic kidney disease
  - Biologic refractory Crohn's disease
- MLCs have to date demonstrated a safe profile in terms of infectious or neoplastic complications; this may position them well relative to certain other biologic therapies

- **Biologic-refractory rheumatoid arthritis, 48 patients – *Ongoing***
  - Randomized, placebo controlled, dose-escalating study
  - First dose / cohort 1 is fully enrolled
  - Topline data expected Q1 2016
  - Clinical objective is sustained remission
- **Type 2 Diabetes with inadequately controlled glucose, 61 patients – *Published in Diabetes Care in July 2015***
  - Randomized, placebo controlled dose-escalating study completed with no safety findings
  - Positive dose-dependent effects seen on reducing HbA1c levels over 3 months
  - The highest dose (2 million MPC / kg) demonstrated a significant reduction in HbA1c levels at 8 weeks post treatment relative to controls ( $p < 0.05$ )
- **Diabetic kidney disease, 30 patients – *Results Presented at Late Breaking Session At American Diabetes Association June 2015.***
  - Randomized, placebo controlled, dose-escalating study
  - Demonstrated preservation or improvement in renal function for at least 24 weeks
  - Planning next stages of clinical development



D

## MPC-300-IV: Biologic Refractory Rheumatoid Arthritis (RA) – Market Opportunity

*Ongoing randomized, controlled Phase 2 Trial in 48 patients with biologic refractory rheumatoid arthritis, comparing two doses of MPC-300-IV against placebo*

### Market opportunity

- 1.7m patients with RA in the US<sup>1</sup>
- Incidence increases with age – 8.7 per 100,000 for ages 18-34 vs. 89 per 100,000 for ages 65-74<sup>2</sup>
- Responsible for 250,000 hospitalizations and 9m physician visits per year in the US
- Aging population and early diagnosis and treatment will drive expanding RA prevalence
- Diagnosis of RA is associated with at least a 2X greater risk of death from CV disease
- Targeting active RA patients who have failed a previous biologic therapy

### Gap in treatment options

- One third of RA patients do not respond or cannot tolerate current biologic therapies
  - Sustained remission defined by ACR 70 only occurs in 5-15% of patients on biologics<sup>3</sup>
  - Biologics are associated with increased incidence of opportunistic infections and malignancies
- Biologics only target single cytokine pathways even though RA involves multiple signals / pathways
- Need for disease-modifying therapies with greater safety and efficacy (e.g., remission / ACR 70)

### Targeted physician population

- Rheumatologists

1. GlobalData®: EPiCast Models / PharmaeTrack  
2. GlobalData®: Rheumatoid Arthritis Therapeutic – Pipeline Oct 2011  
3. Alivernini, S et. al. Arthritis Research & Therapy 2009, 11:R163

## D

## MPC-300-IV: Diabetic Nephropathy (DN) – Market Opportunity

## Market opportunity

- ~7.1 million patients with Diabetic Nephropathy in the US<sup>1</sup>
- ~1.96 million patients with Chronic Kidney Disease (CKD) Stage 3b-4 (GFR 20-45 ml/min / 1.73 m<sup>2</sup>) Diabetic Nephropathy<sup>3,4</sup>
- ~200,000 incident cases per year with CKD Stage 3b-4 Diabetic Nephropathy<sup>2</sup>

## Gap in treatment options

- Despite standard of care, patients with Stage 3b-4 continue to progress to End-Stage Renal Disease (ESRD)
- The only treatment option for ESRD is renal replacement (dialysis or transplant)
  - 40% of patients are dead within 2 years of initiating dialysis<sup>5</sup>
- Cost of renal replacement therapy is \$100,000 per year (dialysis) - \$250,000 (transplant)<sup>3</sup>

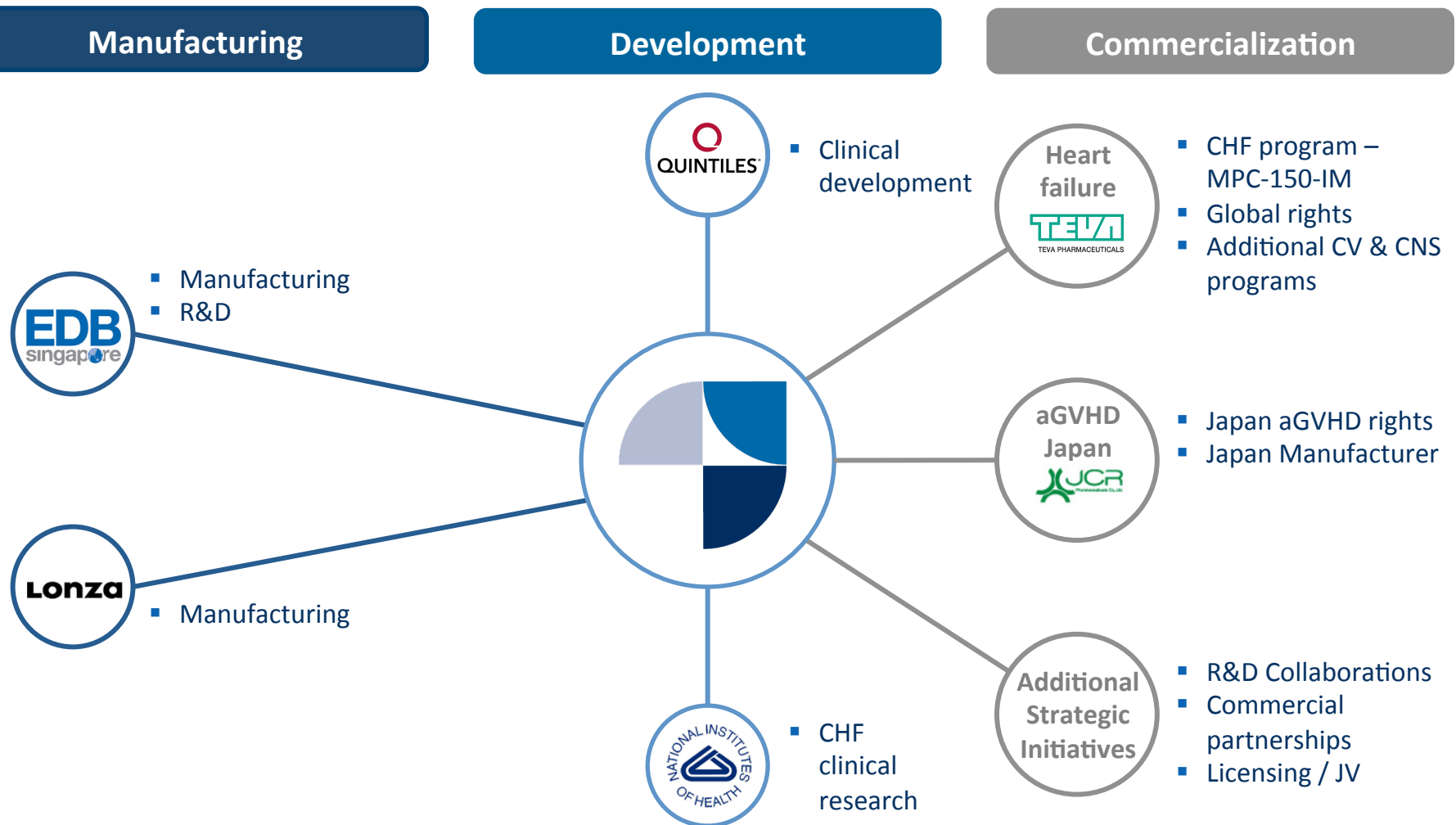
## Targeted physician population

- ~7,000 nephrologists, who generally manage patients with CKD in the US<sup>6</sup>
- ~4,500 endocrinologists / diabetologists, who are also critical, in the US<sup>6</sup>

***Significant and urgent need for true disease modifying therapies, with the goal of halting or reversing renal damage in patients with chronic kidney disease***

1. EpiCast Model Diabetic Nephropathy – Epidemiology Forecast to 2022 PharmaeTrack 2. Global Data PharmETTrack; Solicited Analysis 3. US Renal Data System Annual Data Report 2012,2013,2014, 4. Levey A and Coresh J. Lancet 2012; 379:165-180, 5. Robinson BM et al. Kidney Int 2014 6. 2012 AAMC Physician Specialty Data book

### 3 Strategic Collaborations with Industry Leaders



## 4

## Scalable Manufacturing Capabilities: Partnership with Lonza



### Manufacturing objectives

- Distinct manufacturing processes for each product
- Commercial scale processes with batch-to-batch consistency and reproducible release criteria
- Substantial advances made in development of consistent high yield manufacturing processes to improve efficiency and yields in large commercial-grade bioreactors

## Composition of matter (COM) and manufacturing process

**141 patents or patent applications**  
**Valid through 2024-2035\***

- MPCs– 58 patents or patent applications related to MPC composition of matter or methods of isolation, expansion and manufacture of MPC's – start to expire 2020\* and extend to 2029\*
- MSCs – 51 granted patents or patent applications related to MSC composition of matter and manufacture of MSC's –start to expire 2018\* and extend to 2035\*
- DPSCs – 32 patents or patent applications – start to expire 2021\* and extend to 2024\*

In the last 12 months we have had 34 new patents granted including 9 in the US, 6 in Japan, 5 in China and 14 in other jurisdictions

## Specific therapeutic applications

**382 patents or patent applications**  
**Valid through 2035\***

- Immunologic / inflammatory disorders – 100 patents or patent applications – start to expire 2019\* and extend to 2035\*
- Cardiovascular disorders – 69 patents or patent applications – start to expire 2018\* and extend to 2024\*
- Orthopedic disorders – 65 patents or patent applications – start to expire 2017\* and extend to 2032\*
- Oncology / hematology – 96 patents or patent applications – start to expire 2019\* and extend to 2030\*
- Other therapeutic applications – 52 patents or patent applications – start to expire 2027\* and extend to 2032\*

## Complementary technologies and additional candidates

**138 patents or patent applications**  
**Valid through 2024-2032\***

- Cell-based complementary technologies – 63 patents or patent applications - start to expire 2017\* and extend to 2030\*
- SDF-1 – 27 patents or patent applications –start to expire 2027\* and extend to 2032\*
- Factors and agents for cardiovascular and other fibrotic indications – 48 patents or patent applications –start to expire 2021\* and extend to 2023\*



## Experienced Management Team



### Silviu Itescu – MBBS, FRACP CEO and Managing Director

- Mesoblast Founder, physician scientist in the fields of stem cell biology, autoimmune diseases, organ transplantation, and heart failure.
- Previously: Faculty member Columbia University, USA; University of Melbourne and Monash University in Australia
- 2013 Key Innovator Award from the Vatican's Pontifical Council for Culture for leadership in translational science and clinical medicine in relation to adult stem cell therapy.
- 2011 BioSpectrum Asia Person of the Year



### Paul Hodgkinson – MA (Hons), FCA Chief Financial Officer

- 16+ years' international pharmaceutical experience in finance, strategic planning, business development and licensing, manufacturing and supply chain, and procurement.
- Previously: CFO, Novartis Australia and New Zealand; CFO, AstraZeneca Australia .



### Dr Donna Skerrett – MD, MS Chief Medical Officer

- 20+ years of combined experience in transfusion medicine, cellular therapy, and transplantation.
- Previously: Director of Transfusion Medicine and Cellular Therapy, Weill Cornell Medical Center; Associate Director of Transfusion Medicine, Director of Stem Cell Facilities, Columbia University New York-Presbyterian Hospital.



### Sue MacLeman – BPharm, MMktg, MLaw, FACPP, FAICD Head Commercial

- 20+ years as pharmaceutical executive with roles in corporate, medical, marketing, business development, and sales management
- Previously: Schering-Plough Corporation , Amgen Inc. and Bristol-Myers Squibb.



### Dr Paul Simmons – PhD Head Research & New Product Development

- 30+ years of experience in stem cell research, especially research in basic hematopoiesis and in precursor cells for the stromal system of the bone marrow.
- Previously : President, International Society of Stem Cell Research (ISSCR); C. Harold and Lorine G. Wallace Distinguished University Chair at the University of Texas Health Institute; Inaugural Professor and Director, Centre for Stem Cell Research, Brown Foundation Institute of Molecular Medicine.



### Dr John McMannis – PhD Head Manufacturing

- 27+ years in clinical cellular therapy trials in both academic and commercial environments.
- Previously: Professor of Medicine, Director of the Cell Therapy Laboratory and Technical Director of the Cord Blood Bank, University of Texas MD Anderson Cancer Center; Immunotherapy Division, Baxter; COBE (now Terumo) BCT



### Darin Weber – PhD Head Regulatory Affairs & Quality

- 18 + years cellular and tissue-based regenerative medicine products
- Member, United States Pharmacopeia Expert Committee, ISSCR and ARM
- Previously: Chief, Cellular Therapy Branch, FDA Office of Cellular, Tissue and Gene Therapies



### Peter Howard – BSc, LLB (Hons) Corporate Executive and General Counsel

- 25+ years' experience in corporate structuring, public listings, private financings, strategic, licensing, intellectual property and mergers and acquisition activities.
- Previously: Partner at Middletons (now, K&L Gates)



### Michael Schuster – MS, MBA Head Investor Relations

- Has been a founding executive of Mesoblast Ltd for last 10 years
- EVP, Global Therapeutic Programs; Director of Business Development; VP Operations

## Experienced Board of Directors



### **Brian Jamieson, FCA** Non-Executive Chairman

Former Chief Executive of a major Australian Law Firm Minter Ellison, Chief Executive Officer at KPMG Australia, KPMG Board Member in Australia and a member of the USA Management Committee. Brian has over 30 years of experience providing advice and audit services to a diverse range of public and large private companies. He is currently Chairman of a number of lifesciences and other publicly listed companies.



### **William M. Burns, BA** Non-Executive Director

Bill has spent his entire career to date in two companies, the Beecham Group and F. Hoffmann-La Roche Ltd. He was Chief Executive Officer of Roche Pharmaceuticals, when he joined the Board of F. Hoffmann-La Roche until he retired in 2014. His responsibilities spanned from research to commercialization, has also served on the Board of Directors of Genentech, and as a Director of Chugai Pharmaceutical Co.



### **Donal O'Dwyer, BE, MBA** Non-Executive Director

Donal has over 25 years of experience as a senior executive in the global cardiovascular and medical devices industries, including with Baxter, Edwards Lifesciences, and Johnson and Johnson. He was Worldwide President of Cordis Cardiology, the cardiology division of Johnson & Johnson's Cordis Corporation.



### **Michael Spooner, Bcom, ACA, MAICD** Non-Executive Director

Michael is a well-known and respected business leader and consults for a number of companies based in Australia and the United States. Most recently, he was a non-executive Director of Hawaii Biotech Inc. and was appointed Chairman of BiVACOR, a total artificial heart company. He was also a non-executive Director of Peplin Inc. until the company was sold for over \$300 million. Previously, Michael was the Chairman of Mesoblast Limited from its initial listing in 2004 until 2007 and Managing Director & CEO of Ventracor Limited where he led the transformation of a small Australia-listed life sciences company into the second highest performing stock on the S&P/ASX 200 Index.



### **Silviu Itescu - MBBS, FRACP** CEO and Managing Director

Silviu has served on Mesoblast's Board of Directors since the Company's founding in 2004. Previously he established an international reputation as a physician scientist in the fields of stem cell biology, autoimmune diseases, organ transplantation, and heart failure, and has been on the faculties of Columbia, Melbourne and Monash Universities. In 2011, Silviu was named BioSpectrum Asia Person of the Year. In 2013, he received the inaugural Key Innovator Award from the Vatican's Pontifical Council for Culture for his leadership in translational science and clinical medicine in relation to adult stem cell therapy. Silviu has consulted for international pharmaceutical companies, has been an adviser to biotechnology and health care investor groups, and a director on a number of public lifesciences companies.



### **Eric A. Rose, MD** Non-Executive Director

Eric is a world leader in cardiovascular medicine. He is currently Chairman and CEO of SIGA Technologies and Executive Vice President, Life Sciences, at MacAndrews & Forbes, Inc., the holding company of Ronald O. Perelman. Eric has served as the Edmond A. Guggenheim Professor and Chairman of the Department of Health Evidence and Policy at the Mount Sinai School of Medicine. He led the Columbia Presbyterian heart transplantation program, during which time it became the most active program in the United States and pioneered heart transplantation in children, performing the first successful pediatric heart transplant in 1984. Eric has authored more than 300 scientific publications.



### **Ben-Zion Weiner, BSc, MSc, PhD** Non-Executive Director

Ben-Zion was head of global research and development at Teva Pharmaceutical Industries Ltd for over three decades, including as Chief R&D Officer and a member of the Teva Executive Committee. Ben-Zion has been responsible for the development of hundreds of generic products for the United States, European and other markets, he has twice been the recipient of the Rothschild prize for innovation.

## Key Investment Highlights

- 1 Disruptive technology platform: proprietary, allogeneic, “off-the-shelf” adult stem cells with predictable therapeutic properties
- 2 Established late stage portfolio of distinct and advanced product candidates
- 3 Strategic partnerships delivering clinical, manufacturing and commercial capabilities, together with financial support
- 4 Scalable, cost-efficient manufacturing capabilities
- 5 Intellectual property leadership covering compositions, uses, and manufacturing processes
- 6 Experienced management team