mesoblast
the adult stem cell company

Executive Director's Presentation
Annual General Meeting
30 November 2009

Mesoblast Capital Overview

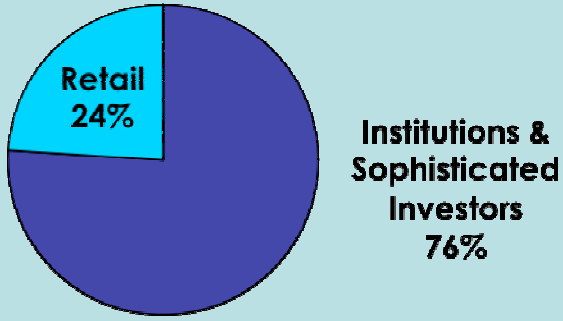
Fund Raisings	$m
IPO @ 50 cents	21.0
Equity Placements:	
Jul-06	17.4
Dec-07	13.4
Apr-09	10.8
Option funds	3.2
Total Funds Raised	$65.8

Use of capital:

- Mesoblast Preclinical and Clinical Programs
- Investment in Angioblast, 38.4%

Shares on Issue	138.3m
Current Share Price	$1.43
Current Market Cap (circa)	$200m

Mesoblast Ownership



MSB Financials

Cash Balance at 30 Sep 09*	**$15.8m**

Cash Burn (annual)	$m
G&A & Clinical Support	5.5
Capital Expenditure	0.1
Intellectual Property	0.2
Interest Revenue	(0.6)
Total Net Overheads, IP & Clinical Support	5.2
Clinical Development/R&D (external)**	3.0
Total Annual Spend	$8.2m

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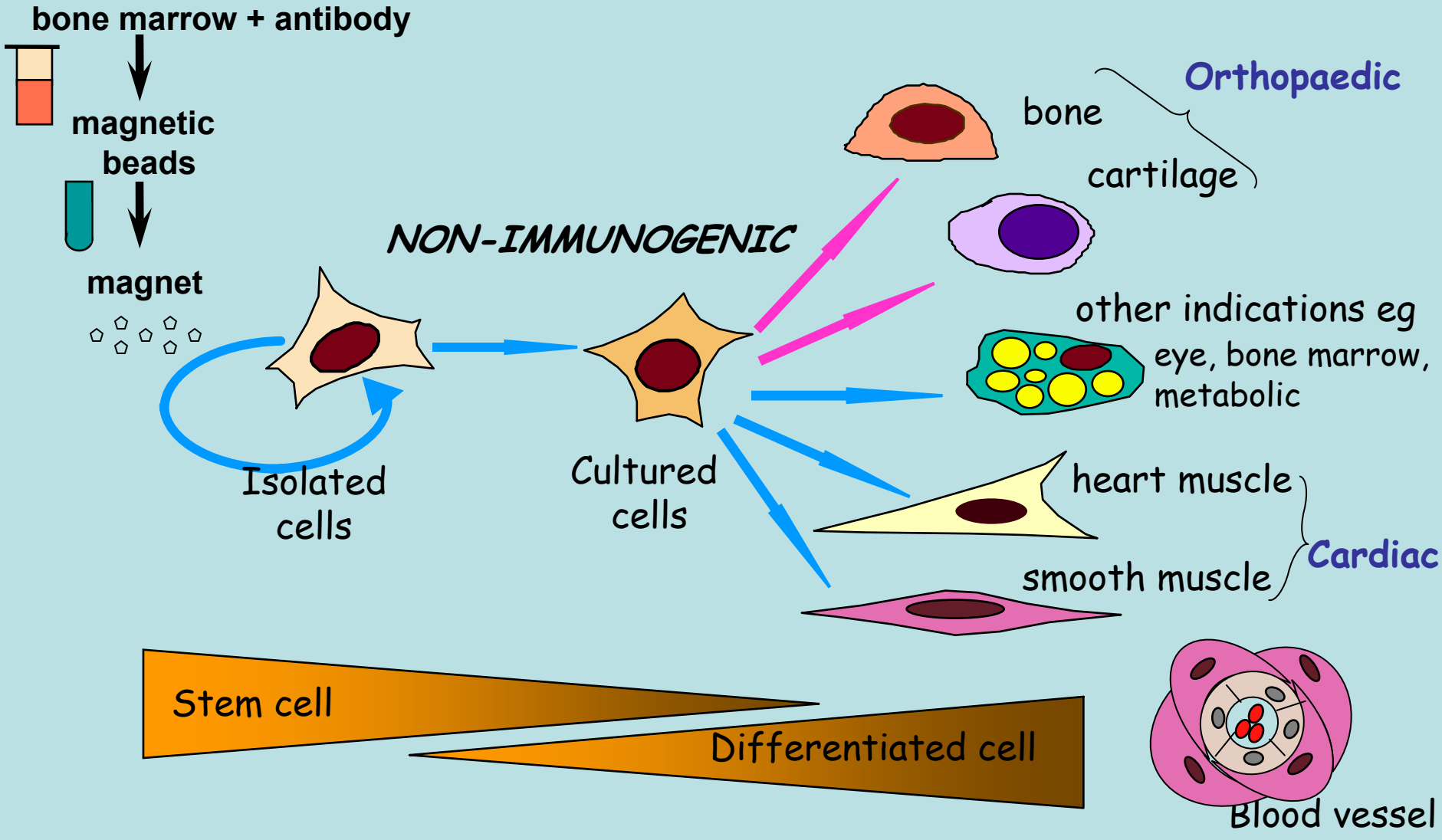
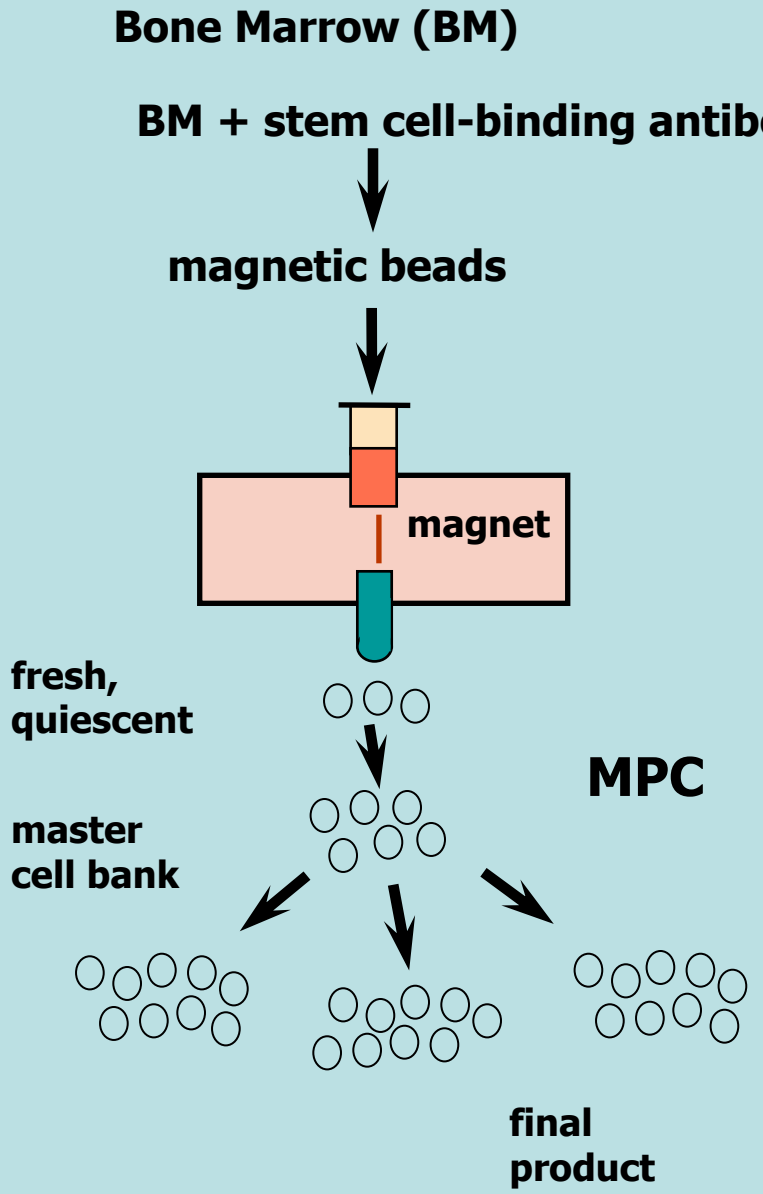
Our Cells are Highly Expandable and Non-Immunogenic; Potential for "Off-the-Shelf" Allogeneic Products



Industrial-Scale Manufacturing Process



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Competitive Advantages:

Precise identification,
ease of isolation and scale-up

- purer initial stem cell pool
- homogeneous population
- efficient large-scale expansion
- lower costs of cell culture process
- batch-to-batch consistency
- stringent release criteria
- greater potency of expanded product

Lead Orthopaedic Programs

1. **Spinal Fusion**
   - Lumbar fusion: Phase 2 trial (minimally-invasive) ongoing
   - Cervical fusion: Phase 2 trial ongoing

2. **Intervertebral disc repair/regeneration**
   - Phase 2 clinical trial to commence 2010

3. **Long bone fracture repair**
   - ✓ Phase 1b trial long bone non-union completed

4. **Knee Osteoarthritis**
   - Phase 2 trial post-knee trauma ongoing

Lead Non-Orthopaedic Programs, In Association With Angioblast Systems

5. **Congestive Heart Failure (CHF)**
   - Phase 2 trial ongoing

6. **Acute Myocardial Infarction (AMI)**
   - Phase 2 trial ongoing

7. **Bone Marrow Transplantation, Expansion of Umbilical Cord Blood**
   - Orphan Drug Designation
   - Phase 1/2 trial ongoing

8. **Age-Related Macular Degeneration (AMD) and Diabetic Retinopathy**
   - Phase 2 trial to commence early 2010

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Commercialisation and Revenue Generation Strategies

1. **Broad-based Partnering of Platform Technology**
   e.g. For Pharma Licensing

2. **Partnering Specific Applications**
   e.g. For Medtech Applications

3. **Taking Individual Applications to Market on Our Own**
   e.g. For Orphan Drug Applications

4. **Product Manufacturing and Supply Agreements**
   e.g. Transfer Price on Finished Product

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Commercial Strategies For MPC-Based Biologicals

1. Broad-Based Partnering Of Platform Technology e.g. For Pharma Indications

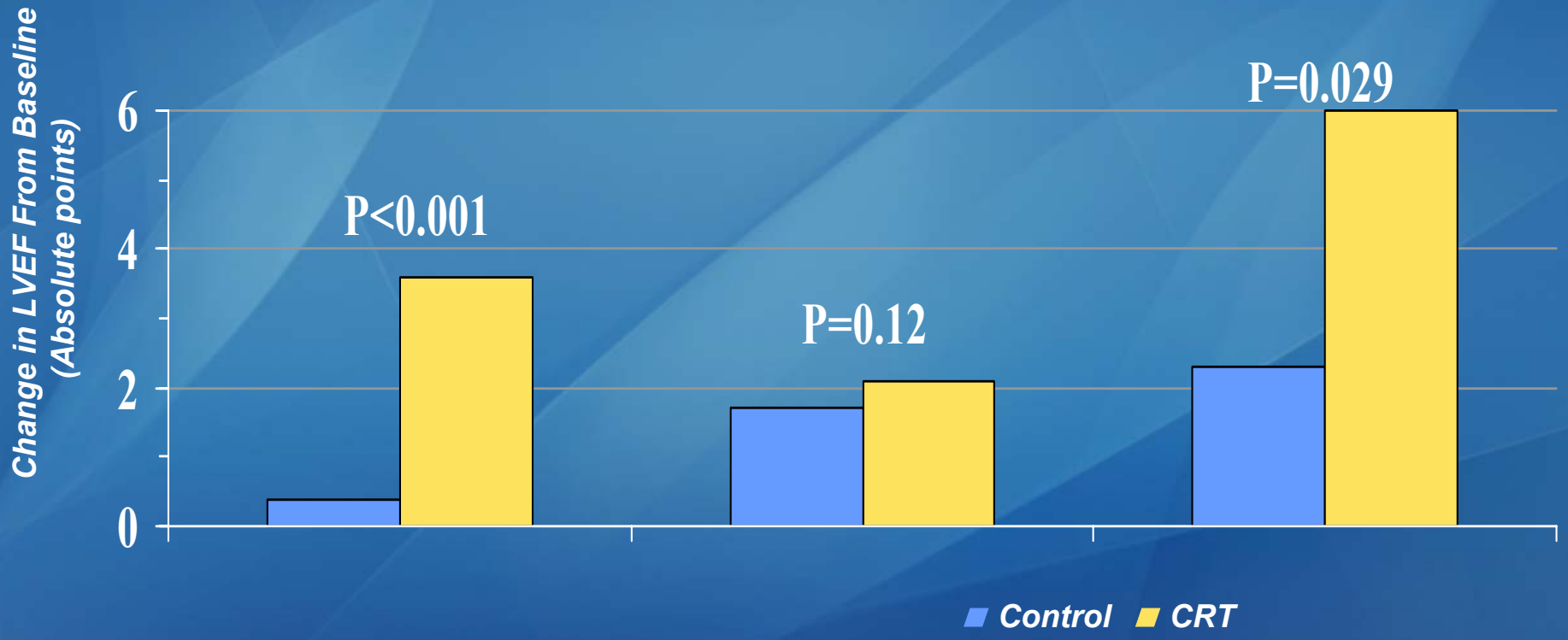
- partner(s) for lead programs
- partner(s) for non-core/second generation programs
- extensive resources applied to programs
- enable simultaneous development of multiple core and new applications
- de-risk funding requirements for more costly Phase 3 programs
- de-risk need for sales and marketing force

Congestive Heart Failure

- *in United States alone, existing 5.5M plus 0.55M new-onset/year*
- *Class II-IV patients with EF < 35%*
  (a) have highest mortality at 6 and 12 months
  (b) account for 40% of all CHF patients
- *product effective in this group will generate premium pricing*
- *predicted 45% annual growth rate, peak penetration year 8*

Cardiac Resynchronization Therapy (CRT): A Good Model For Product Success In CHF Patients With EF < 35%.

At 6 Months, CRT Increases EF In Patients With Conduction Defects (15% Of Total CHF Pool)… 4 point difference from controls impacts on mortality!



Data sources: *MIRACLE: Circulation 2003;107:1985-1990*
MIRACLE ICD:JAMA 2003;289:2685-2694
Contak CD: J Am Coll Cardiol 2003;2003;42:1454-1459

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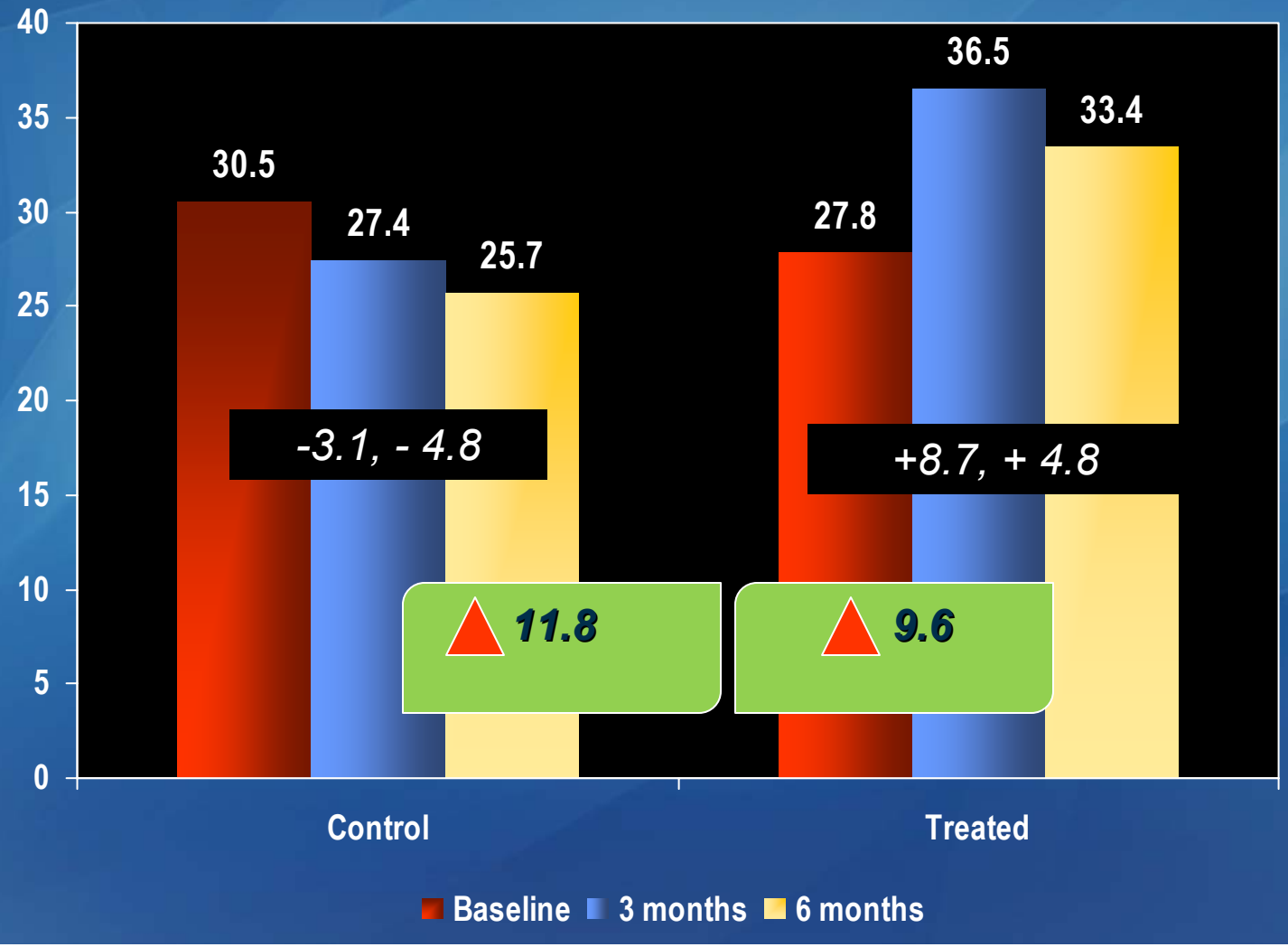
Phase 2a Trial Of Allogeneic MPC In CHF Patients EF<40%

- 60 patient multi-center, randomized, controlled trial
- class II-IV CHF, EF < 40%, high 6- and 12-month mortality
- three cohorts of 20 patients, each cohort testing progressively increasing allogeneic MPC dose
- cells injected by JNJ NOGA Myostar catheter
- 40 patients first two doses completed, no adverse events
- evaluating cardiac functional recovery at 3, 6 and 12 months

MPC Treatment Results In Sustained 10-Point Increase In EF Relative To Controls… ?Impact On Mortality



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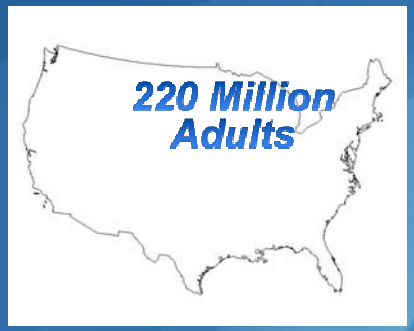
Commercial Strategies For MPC-Based Biologicals

2. Partnering Specific Applications, e.g. For Spine Indications

- partner(s) when technology/clinical risk reduced
- may drive more favorable distribution deal as Phase 3 costs lower than Pharma indications
- share the risk, share the reward
- de-risk need for sales/marketing force

Disc Degeneration *Number One* Cause of Chronic Back Pain



100 million
Experience Low Back Pain

12.5 million
Experience Chronic Low Back Pain

Neurological &
Imaging Studies

80%

20%

Discogenic Nerve
Blocks & Discography

Discogenic
4 million

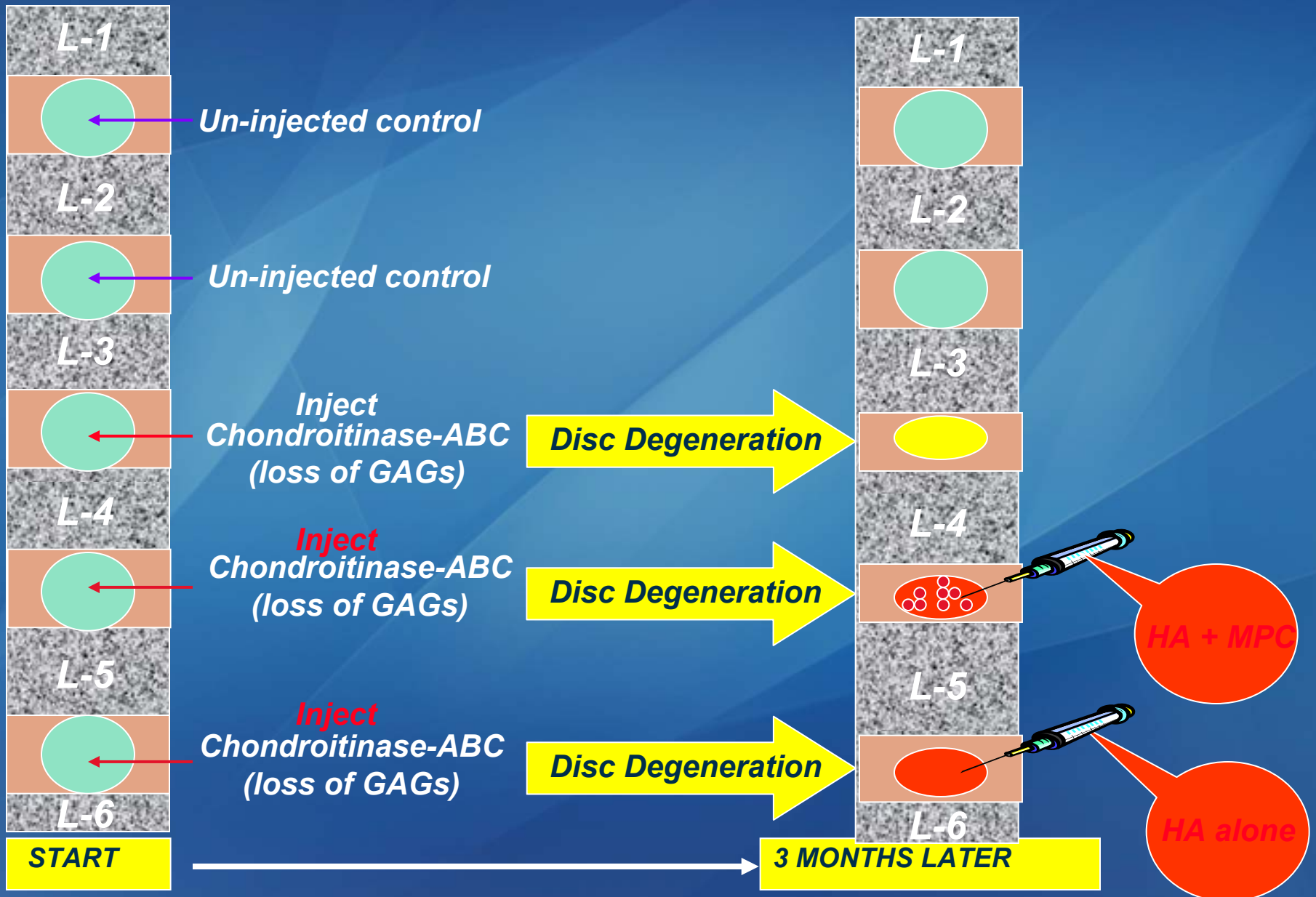
Facet Joint
3 million

Sacroilliac
Joint
1.5 million

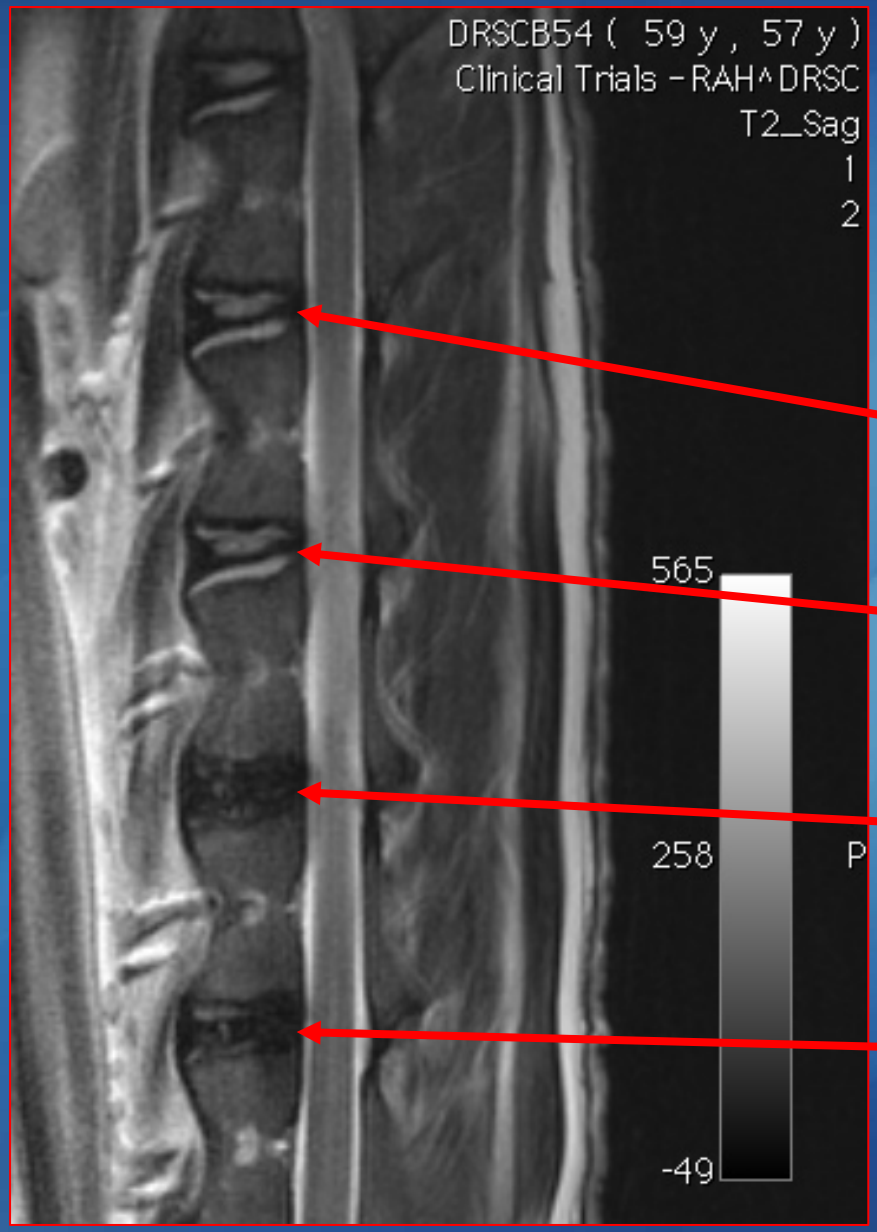
Other
1.5 million

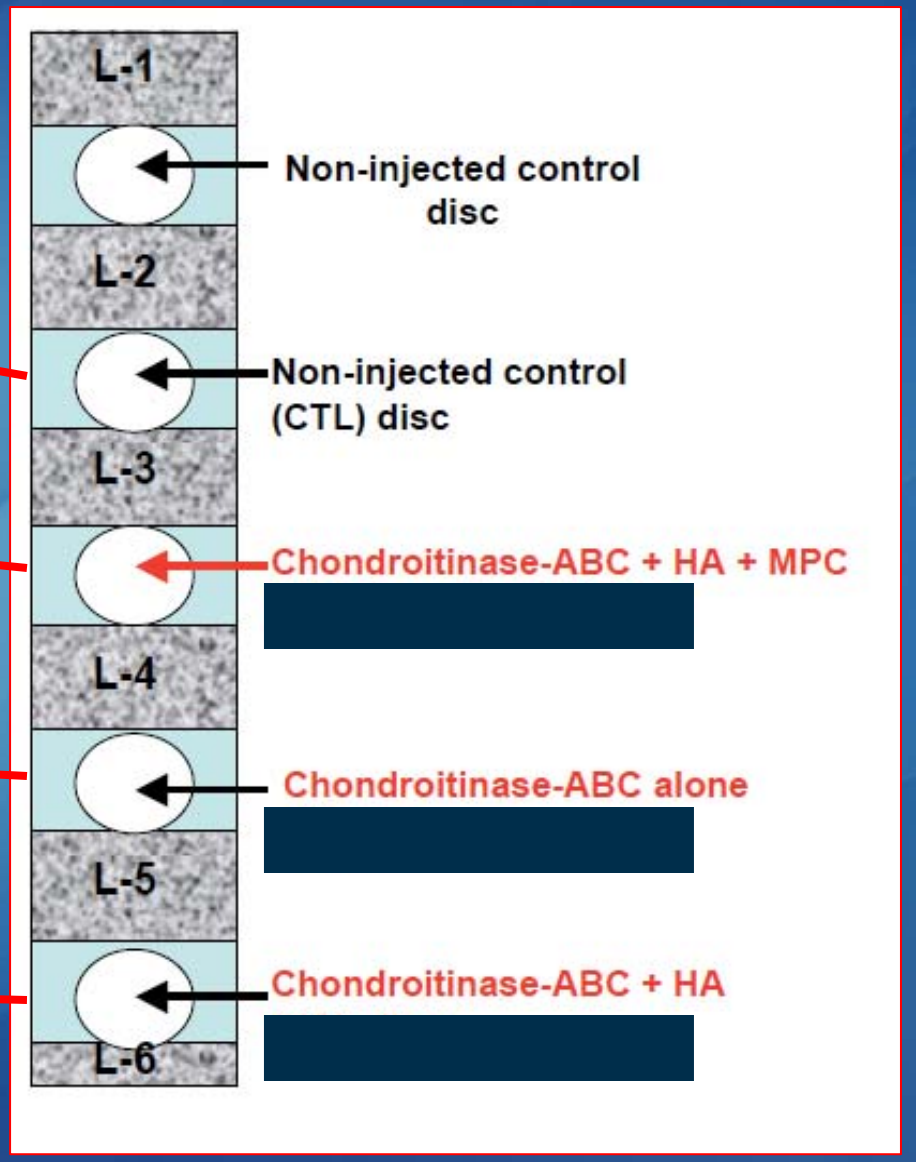
Disc Herniation,
Spondylolisthesis, DDD,
Stenosis, VCF, Tumor
2.5 million

Sheep model to evaluate the re-constitution of degenerate discs by injections of MPC + hyaluronan (HA)

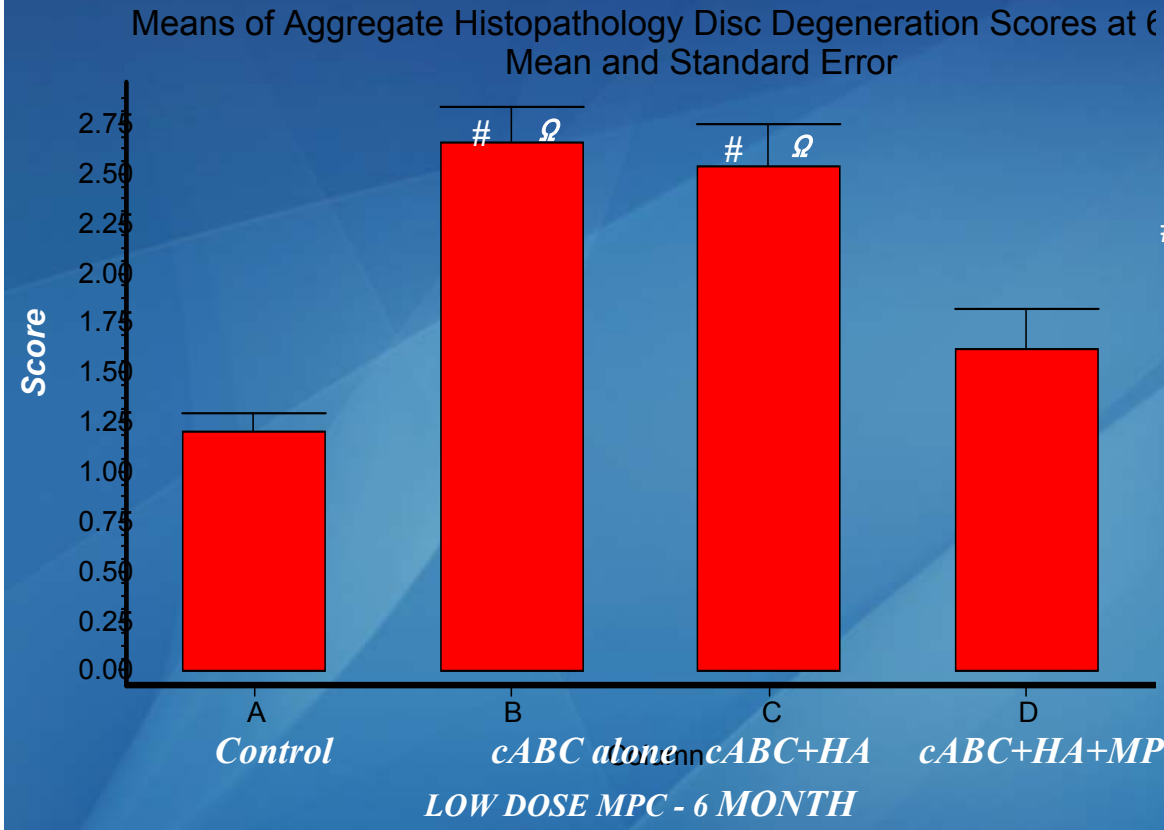


MRI of an ovine spine 6 months after injecting 0.5 million MPC showing similar H_2O signal (white) to normal control ovine disc. Note: L4L5 & L5L6 low H_2O signal



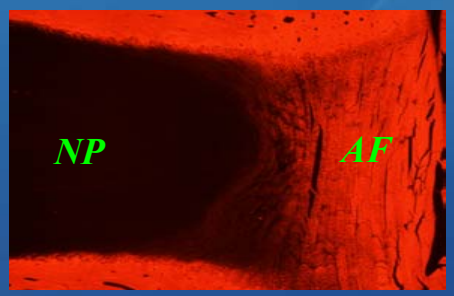


Aggregate Histopathology Disc Degeneration Scores Show MPC Return Disc Pathology To Normal



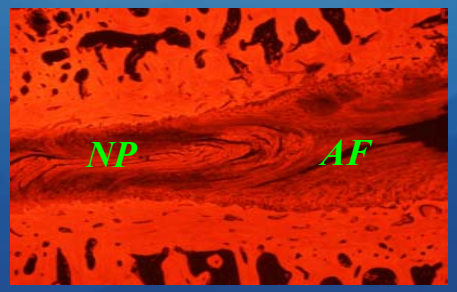
 # = significantly different from control p < 0.001;

Ω = from MPC p< 0.01



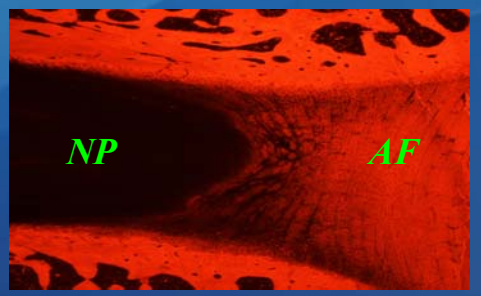
Normal Control Disc

(AF histopath score = 1).



Degenerate Disc

(AF histopath score = 4).



Degenerate Disc + MPC

(AF histopath score = 1)

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Commercial Strategies For MPC-Based Biologicals

3. Taking Individual Applications to Market On Own e.g. for Orphan Drug Indications

- relatively inexpensive Phase 3 trials
- can build small sales/marketing team for niche indications
- easy access to key hospital centres of excellence, e.g bone marrow transplant sites
- fastest route to market
- special reimbursement opportunities
- greatest shareholder return

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Bone Marrow Transplantation

- *139,000 new cases hematologic cancers each year in US alone*
- *17,500 BMTs in USA in 2008*
- *39,000 BMTs in EU in 2008*
- *Allogeneic BMT could increase BMT market by > three-fold if an effective alternative to adult bone marrow existed, without risk of graft-versus-host disease (GVHD)*
- *Umbilical Cord Blood lower risk of GVHD, but less effective than adult bone marrow because insufficient cell numbers*

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MPC-Expanded Cord Blood For Bone Marrow Transplantation

- *Our proprietary MPC induce 40-fold expansion of Hematopoietic Stem Cells (HSC) in co-culture*
- *Orphan Drug designation received for increasing HSC in cancer patients needing allogeneic BMT*
- *NIH-funded FDA-cleared trial in up to 30 patients transplanted with MPC-expanded cord blood HSC*
- *Pilot trial to show earlier bone marrow engraftment, reduce in-hospital stay, reduce GVHD*
- *Plan for Phase 3 trial to obtain early FDA approval*

Clinical Trial Results

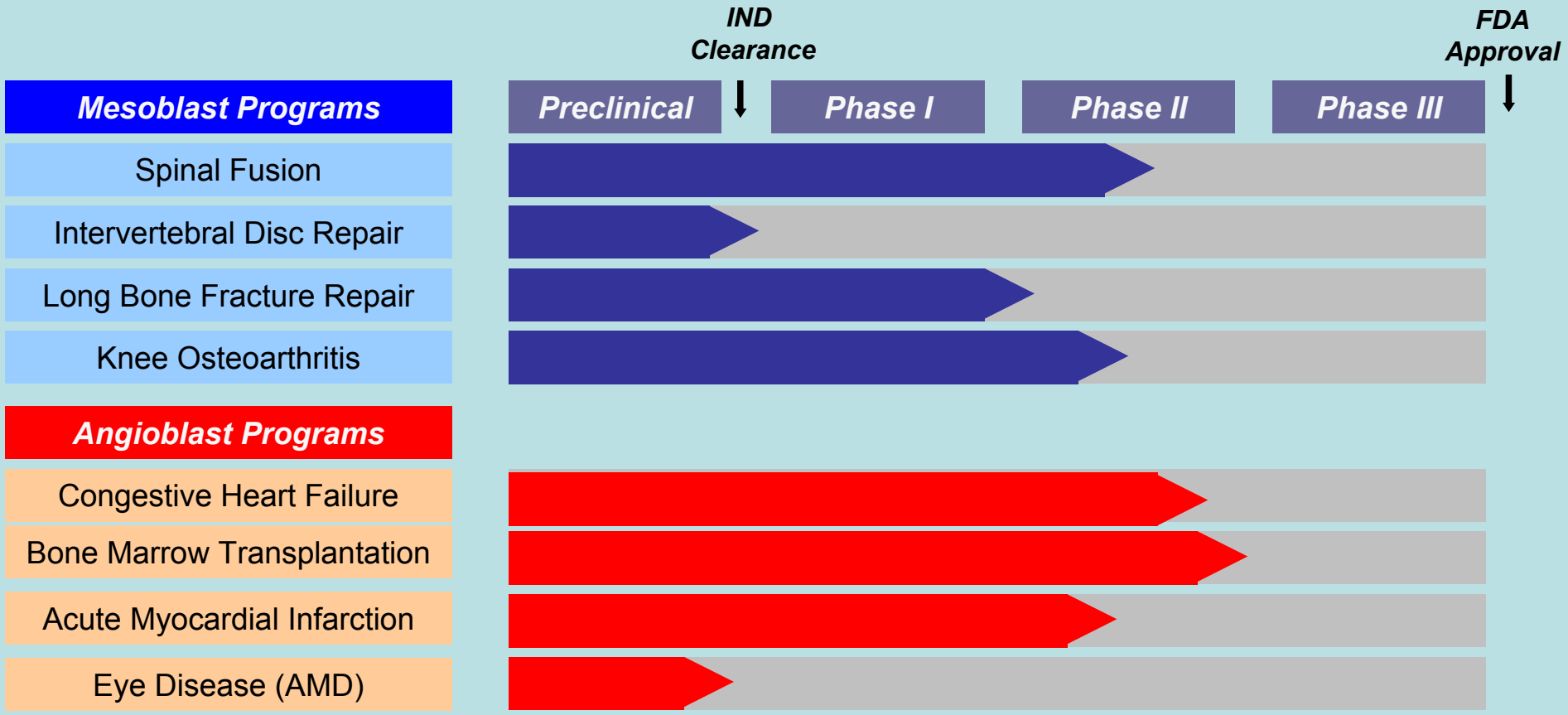
- *18 patients transplanted to date, mean age 40 yrs*
- *median time to neutrophil engraftment 16.5 days (historic controls approx. 30 days)*
- *median time to platelet engraftment 38.5 days (historic controls >90 days)*
- *one patient has Grade III GVHD (historic controls 40% Grade III/IV GVHD)*

Conclusions:

MPC-expanded cord blood comparable to allogeneic adult marrow for bone marrow reconstitution, with significantly reduced risk of GVHD

Results support accelerated Phase 3 program

Timelines For Lead Programs



Australian Regulatory Approval May Mean Earlier Revenues

Approval Process Underway

- **Manufacturing process contracted with TGA-approved manufacturer**
- **Documents for product manufacturing license submitted to TGA**
- **Decision expected within months**

Commercial Advantages

- **Early revenues via Special Access Scheme**
- **Accelerated entry into fracture and other markets with high-end pricing points**
- **Registration template for Asian and other jurisdictions**
- **Early clinical data for US registration**