



TiGro-Biologics. Ltd

Autologous Tissue Growth Technology

Our business

- Patented Tissue Growth Technology
- Market Size \$ 4.64 b and growing
- TiGroBiologics value at 5 years = \$ 30 m
- Breakeven 1 year

Our Offer

- \$ 400 k for 40% of TGB
- ROI = \$ 11.6 m (30 X)
- Excluding potential of BIG-BIO BUYOUT (big hit)

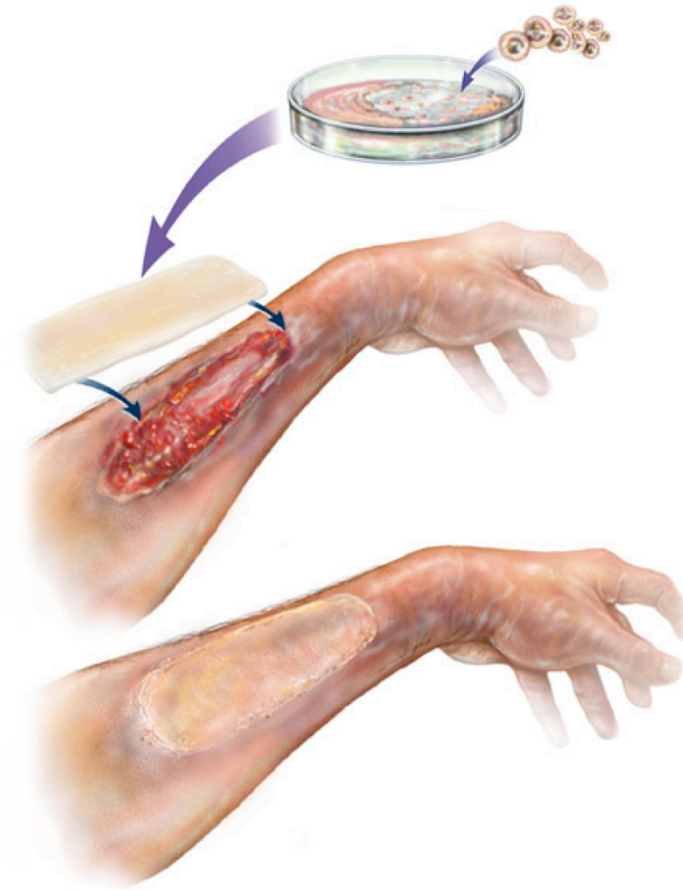


The application

Tissue regeneration

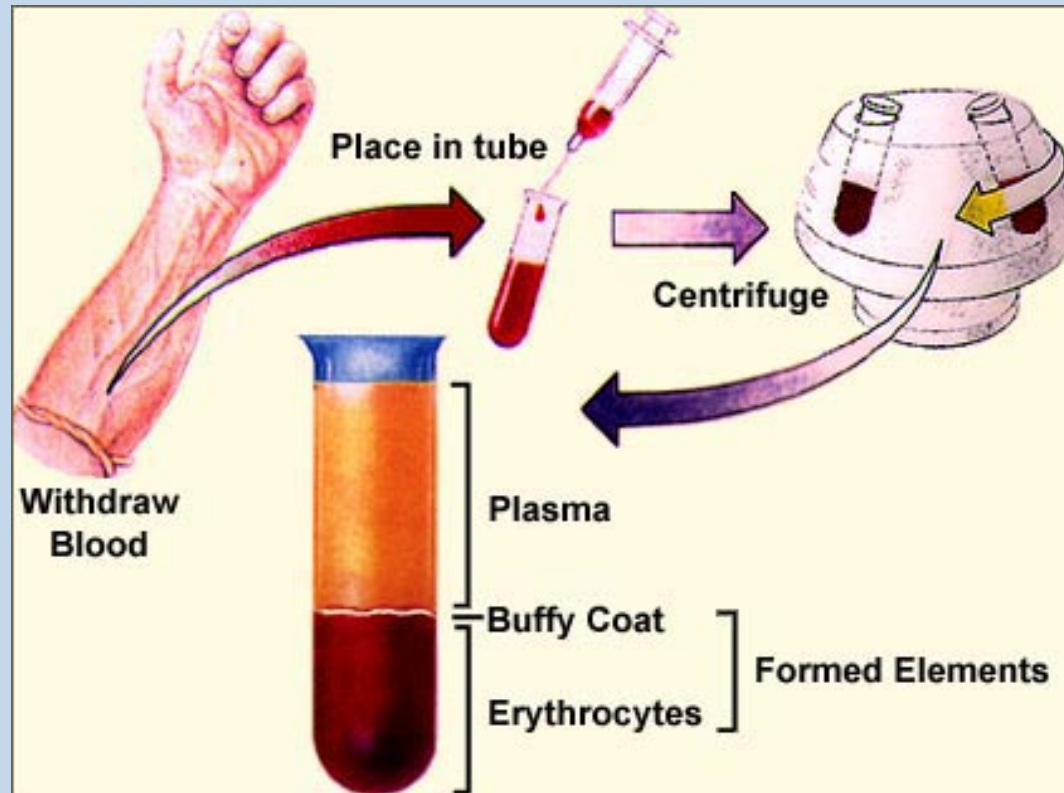


Tendon repair



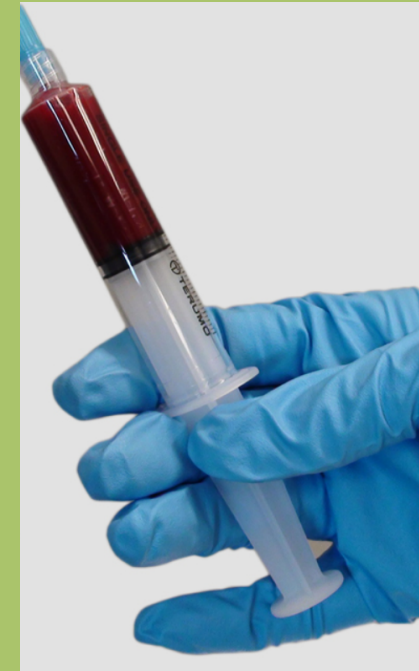
Wound healing

Current Technologies

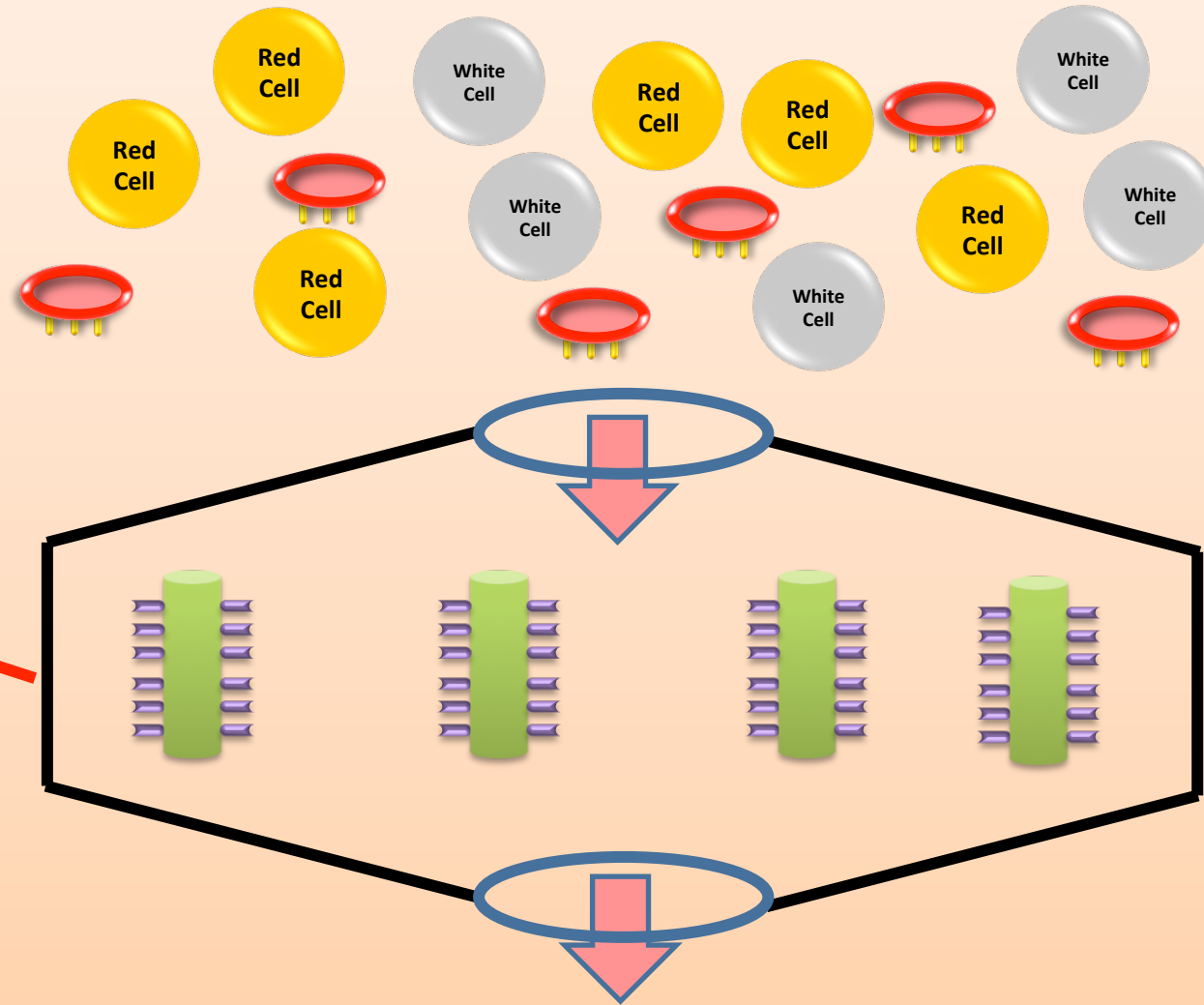


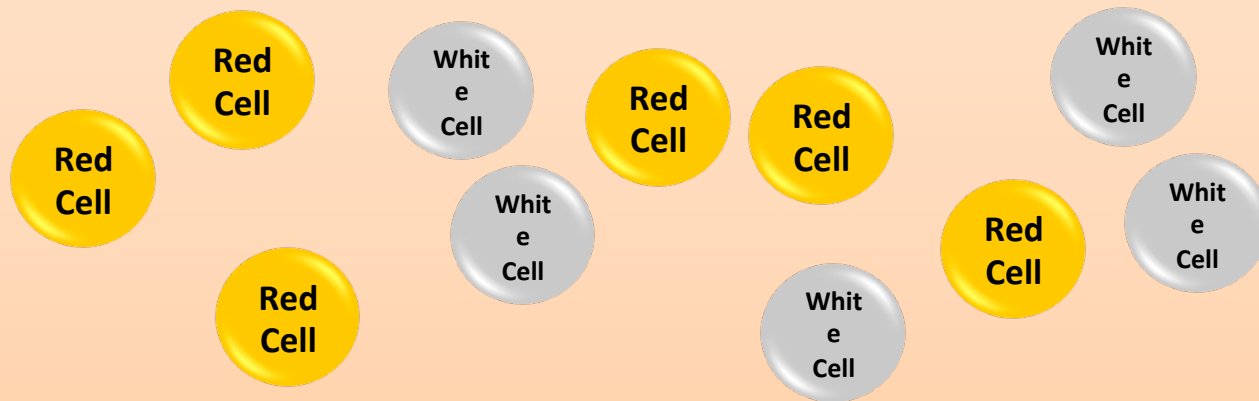
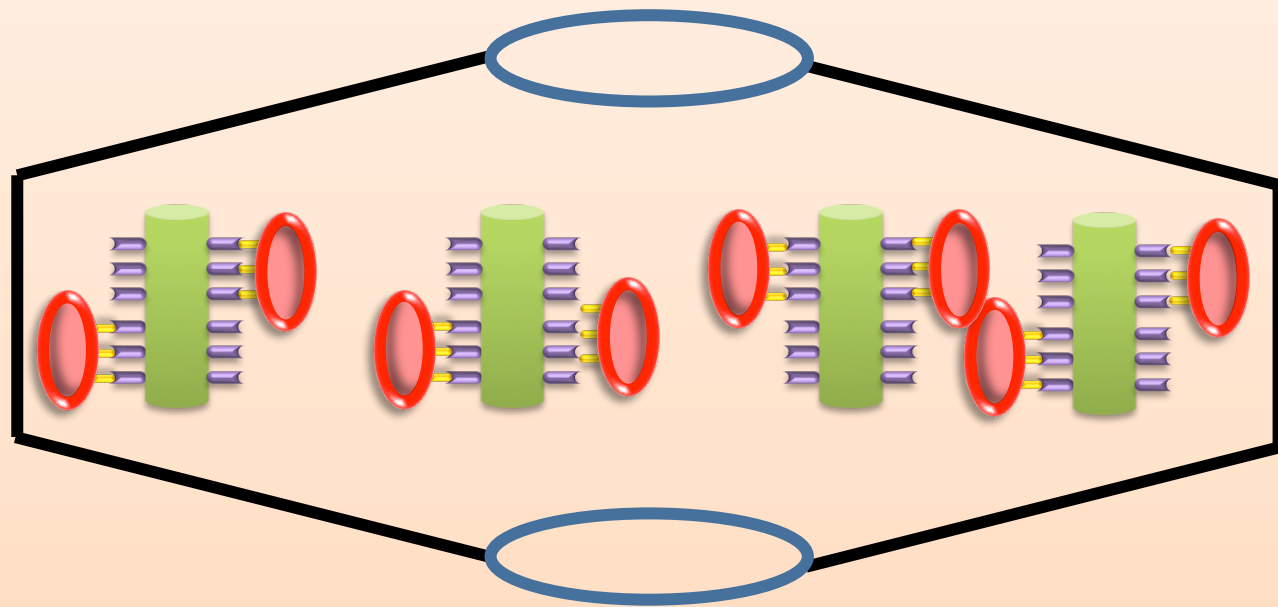
Our Technology

- Does not use centrifuge;
- Low cost (1/3 to 1/2);
- Shorter time operation (1/2);
- Easy to use.

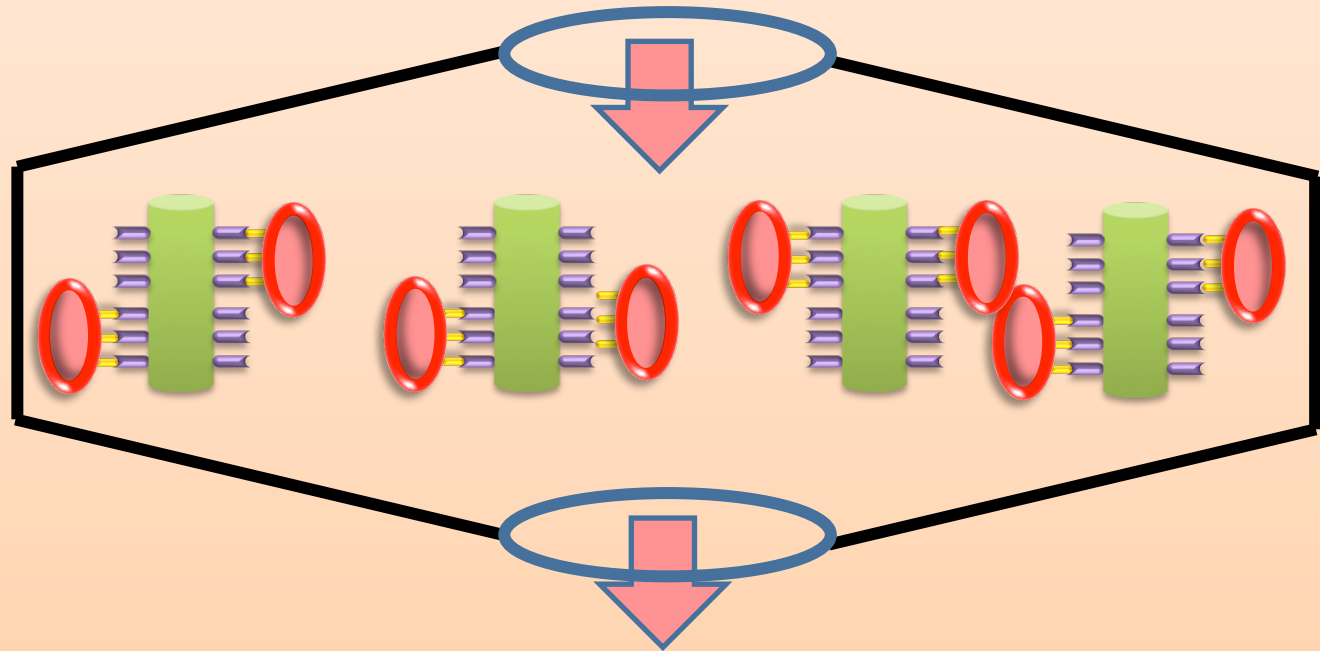


Big competitive Advantage!!!



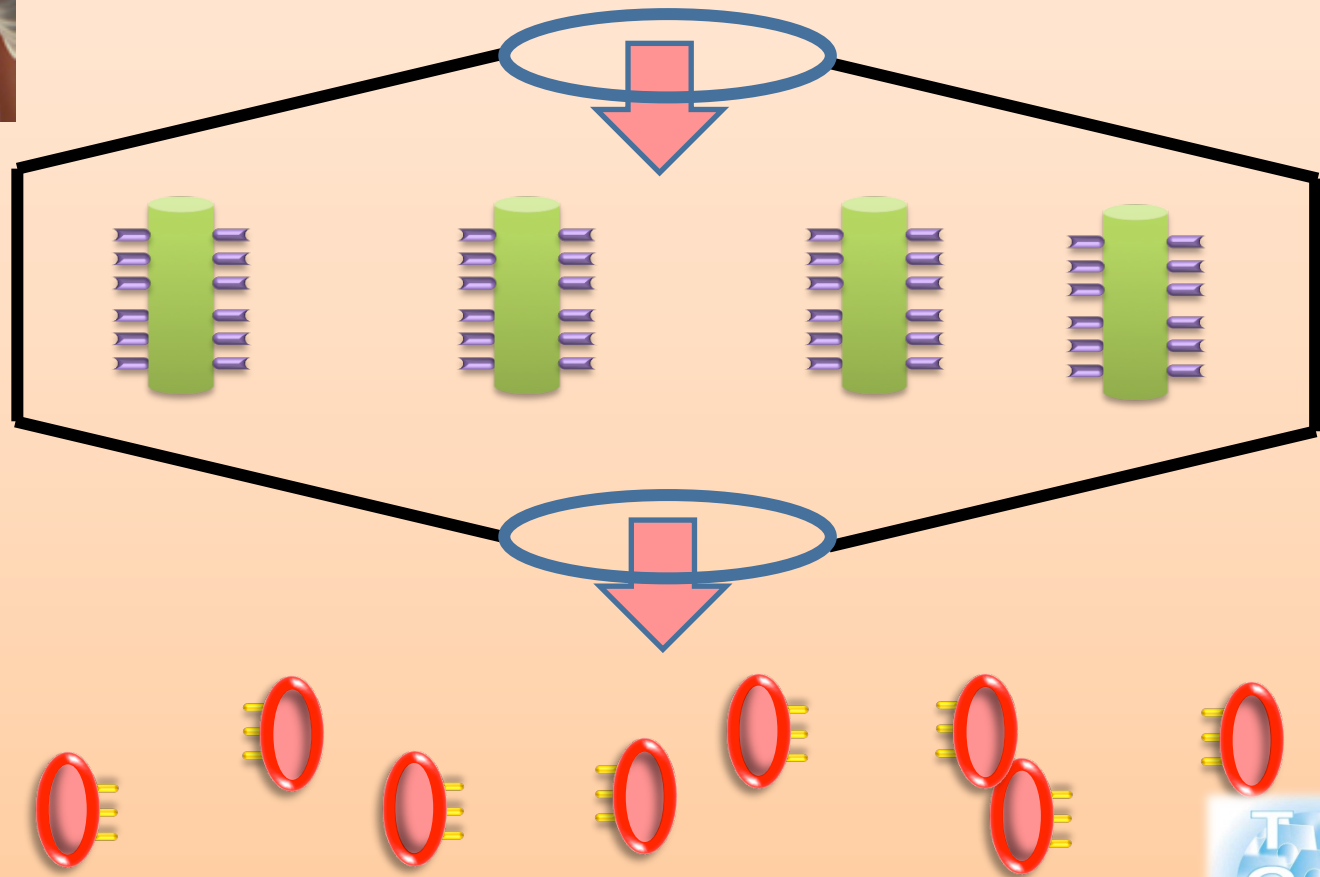


Platelet uncoupling TGB PATENTED solution





PRP ready to be used





TiGro-Biologics Kit

Contents:

- One 1ml Syringe
- Two 10ml Syringes
- Two 30ml Syringes
- Two 60ml Syringes
- One 18 Gauge 1.5" Needle
- One 30ml Bottle of ACD-A
- One Non-Latex Tourniquet 1x18inch
- One 18 Gauge InFusion Cannula with Clamp
- Two 2x2 Gauze Sterile
- One Adhesive Tape 54inch
- Seven Syringe Tips-Sterile



Single Kit Contents:



PCT Patent

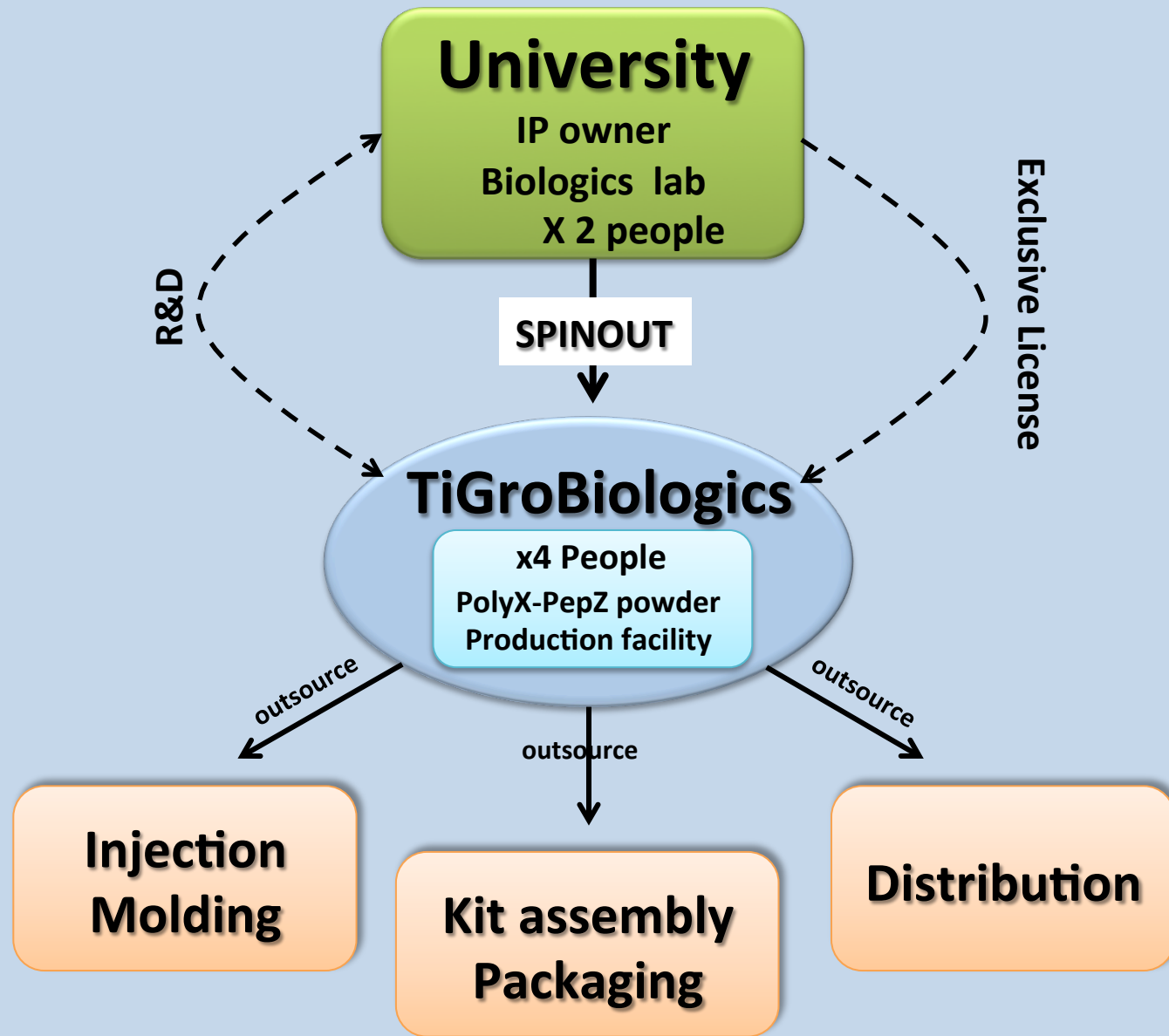
**A peptide enhanced polymer and
extraction solution for platelet rich
plasma harvesting and delivery**

Filing date – April 2011.

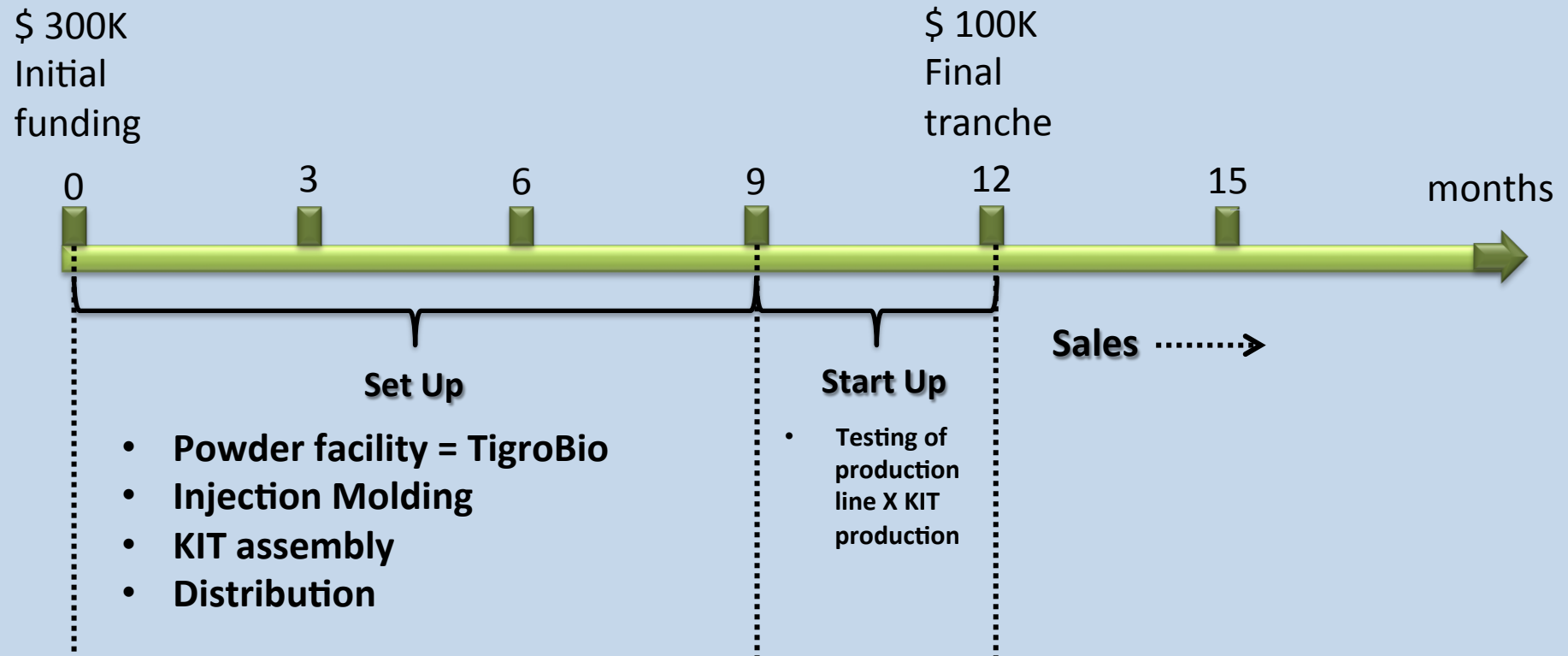
**Exclusive licence concluded between
TGB and University**



Business Model



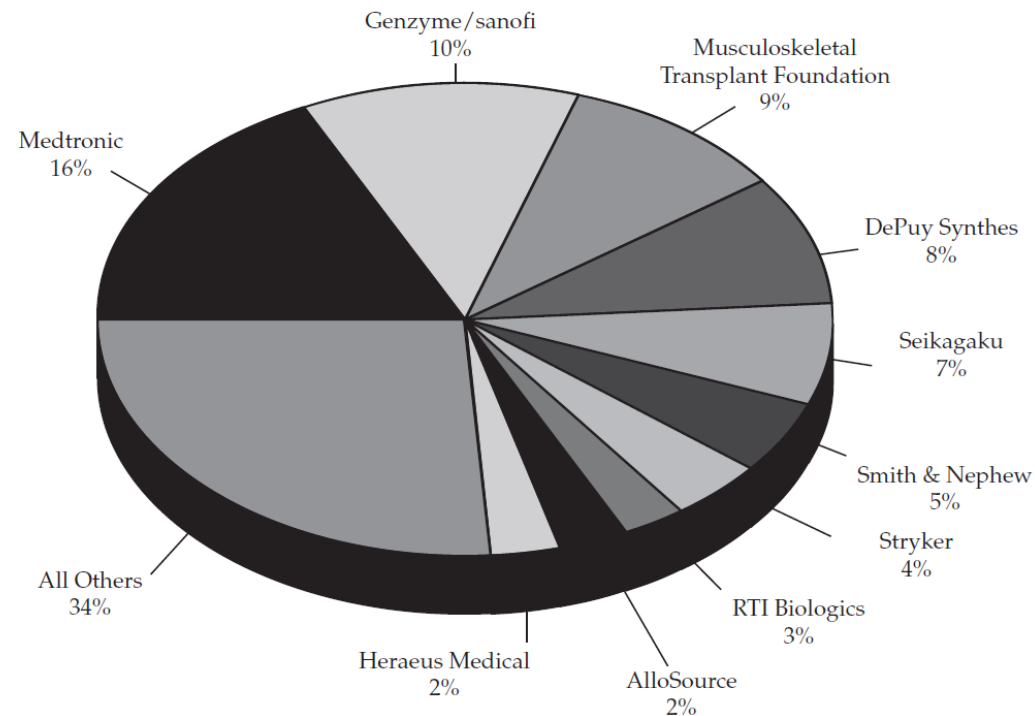
Timeline & Milestones



The Market

2012: revenues generated by sales of orthobiologics reached \$4.64 b (2,9% from 2011)

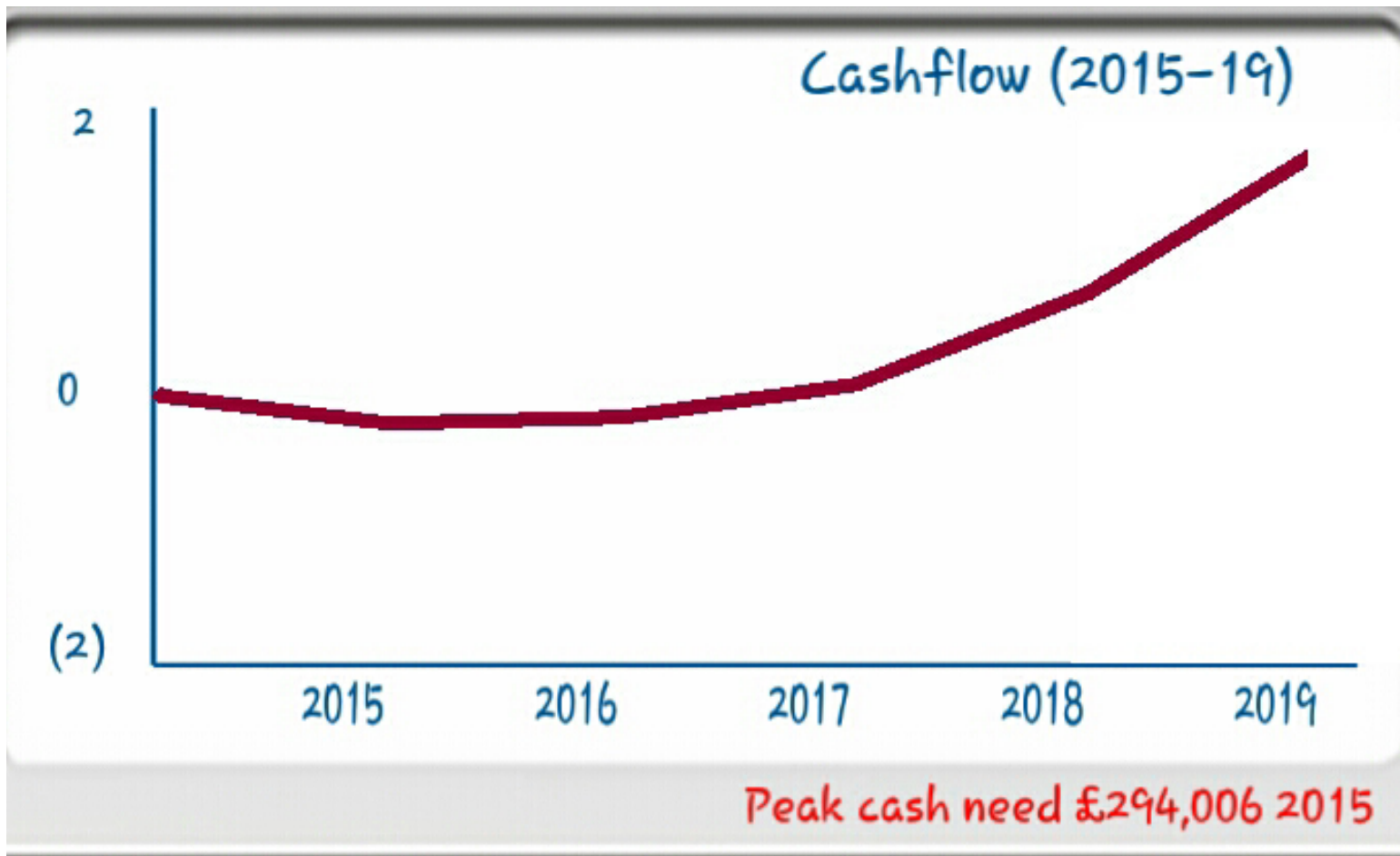
The Players



Current Price for PRP injection

- U.S. ~ \$ 500 /injection
- Europ ~ \$ 250 /injection
- India ~ \$ 100 /injection

Our price for the first year: \$ 50 + 7% royalty to the university



- EBIDTA after 5 years ~ \$ 1.6 m
- P/E ratio for Biotech ~ 50
 - Discount → 20
 - So the value of company ~ \$30 m



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Thank You

www.tigrobiologics.com

APPENDIX

University Team:

- 6 researchers involved;
- Analytical analysis proving similarity with other players.

SPIN-OFF:

3 researchers left University and create

TiGroBiologics (TGB)

Market:

TGT commercialize KIT;

Put it in market

BIG HIT

PCT applications (USA; EU; JAP; CH; IN; BR; etc) in national phase-university owned

University TiGroBiologic agreements:

- 1) Exclusive license;
- 2) 7% of royalties from net sales to Uni;
- 3) Agreement to assign patent in event of large company buy out.

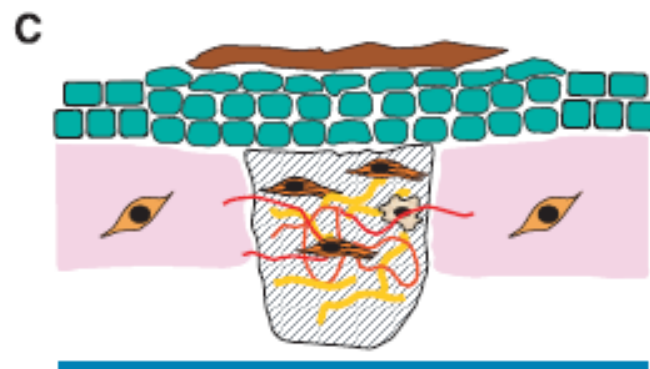
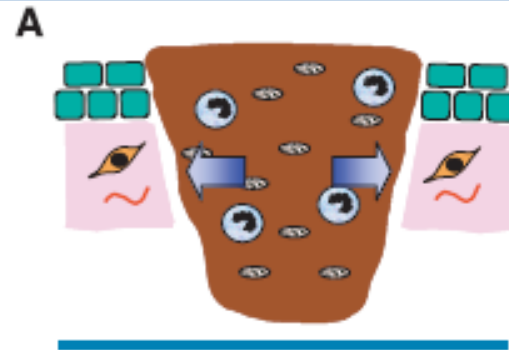
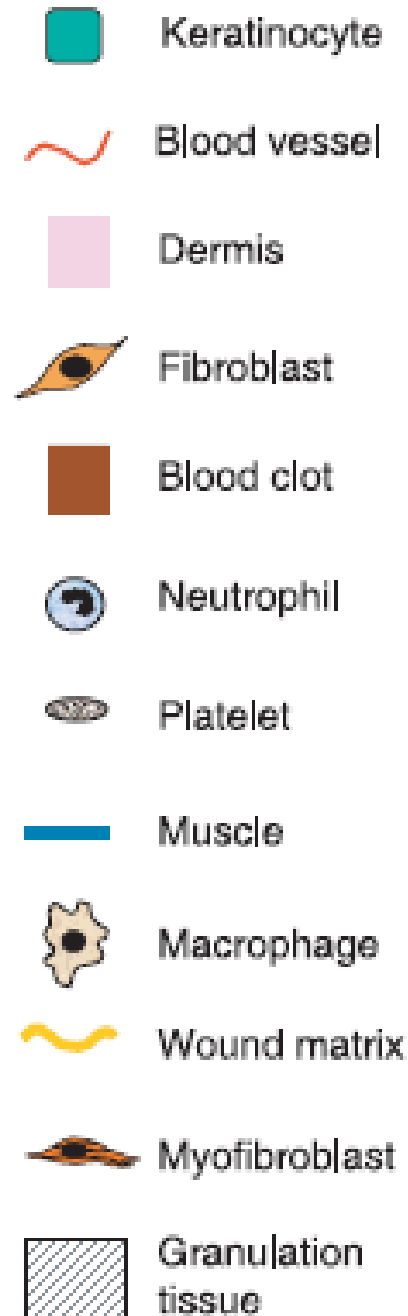
Prove of concept:

- 1) Opinion Makers to use and evaluate product;
- 2) Results compared with common devices.
- 3) University support activity.

TGB Kit Production:

- 1) PolyX produced by TGB;
- 2) Plastic Injection of device by specialized company with clean room clearance;
- 3) Packaging outsourced

Be purchased by a large BIO company



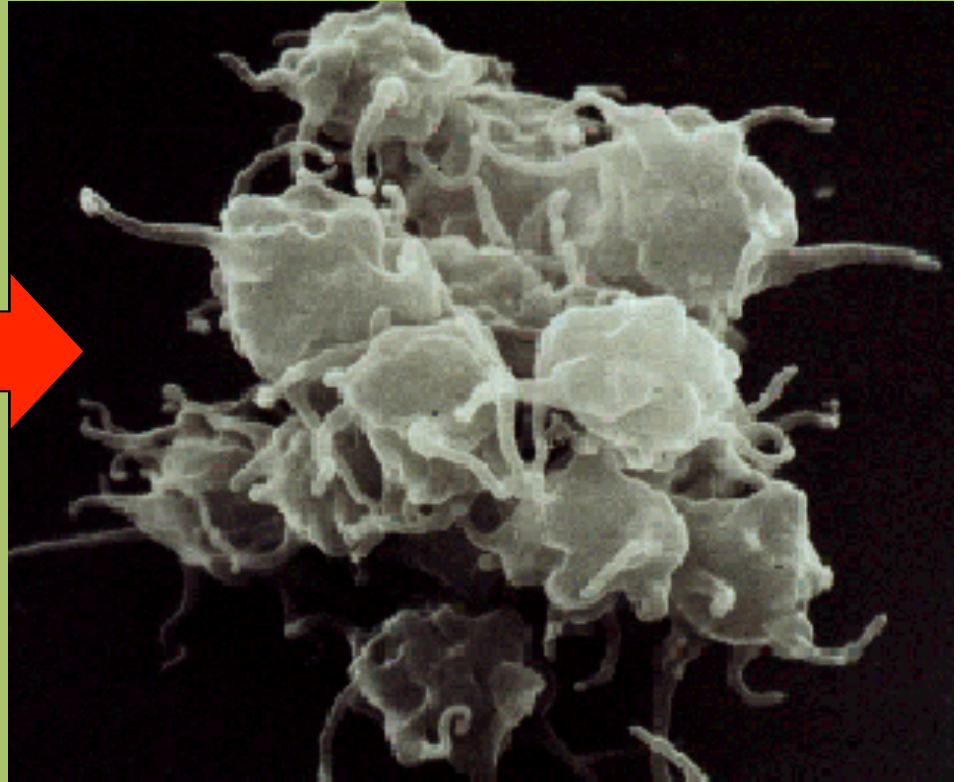
**A) Action platelet
Formation of fibrin clot
Recruitment of
inflammatory cells**

**B) reepithelization
Angiogenesis and
granulation tissue**

C) Final healing

Regulation of Wound Healing
by Growth Factors and Cytokines

SABINE WERNER and RICHARD GROSE
Physiol Rev 83:835-870, 2003. doi:10.1152/physrev.00031.2002



Blood composition



45% Solid Part:

- White Blood Cells
- Red Blood Cells
- Platelets

55% Liquid Part

- water
- Inorganic and organic molecules
- proteins

Material Handling Area



Clean Room with machine feeding
(raw-material, energy, air-
compressed and water) by the
subsoil



Raw Material Central Feeding

Machine and Mould Set-up



Maintenance Area

Rolling bridge and furnishings separated from the production area and handling.



Injection Area



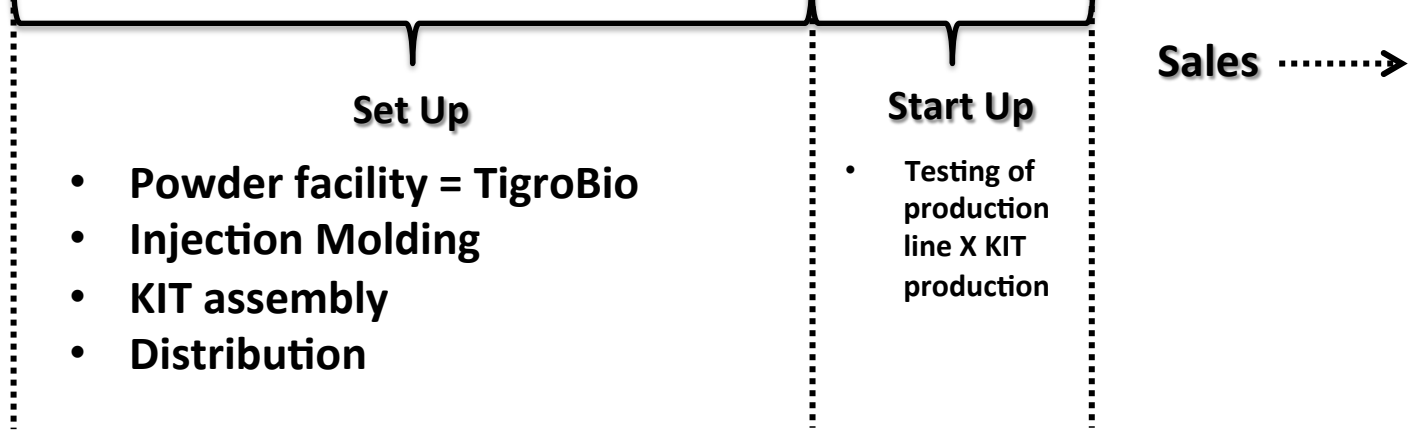
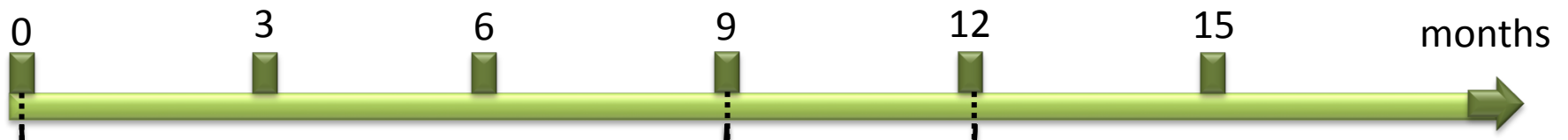
100% Electric Machines - reduced emission of particles

Assembly Area



\$ 200K
Initial
funding

\$ 200K
Final
tranche



Set Up

- Powder facility = TigroBio
- Injection Molding
- KIT assembly
- Distribution

Start Up

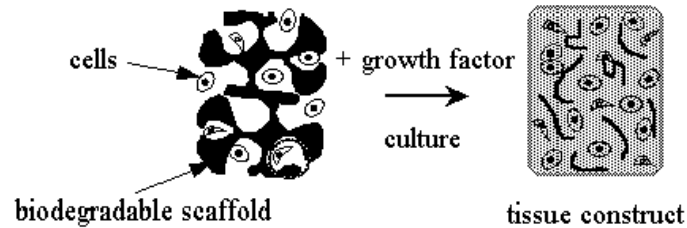
- Testing of production line X KIT production

Sales→

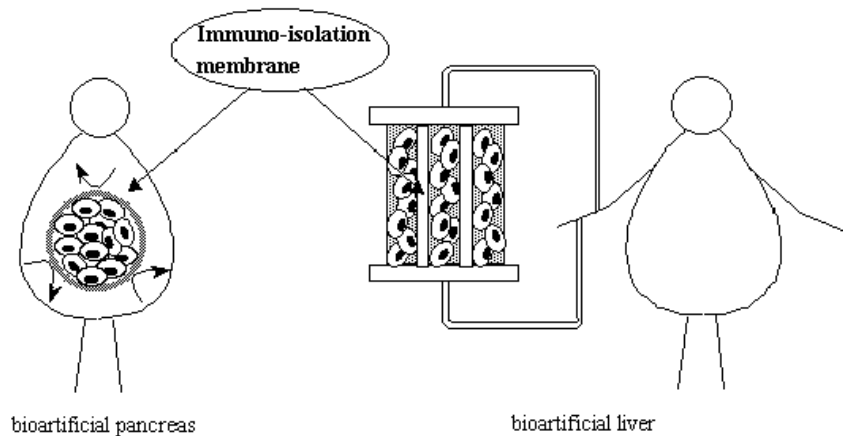
Tissue Regeneration

in vitro tissue engineering

1. Tissue construction

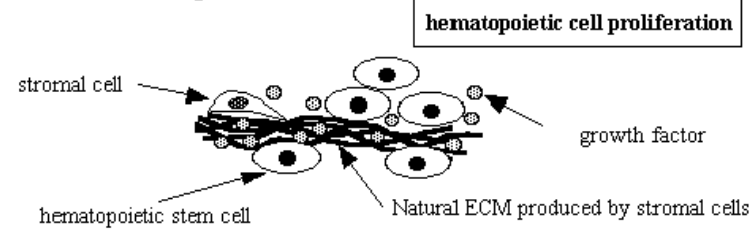


2. Organ substitution (bioartificial organs)

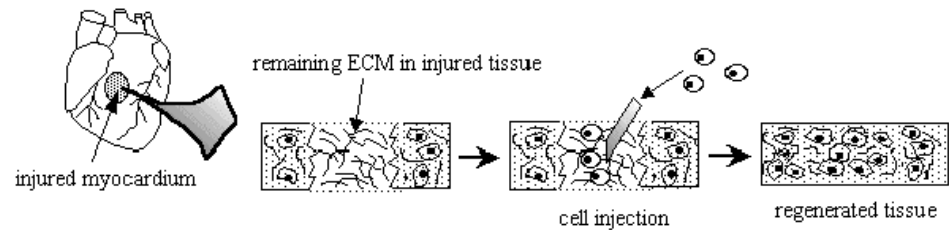


in vivo tissue engineering

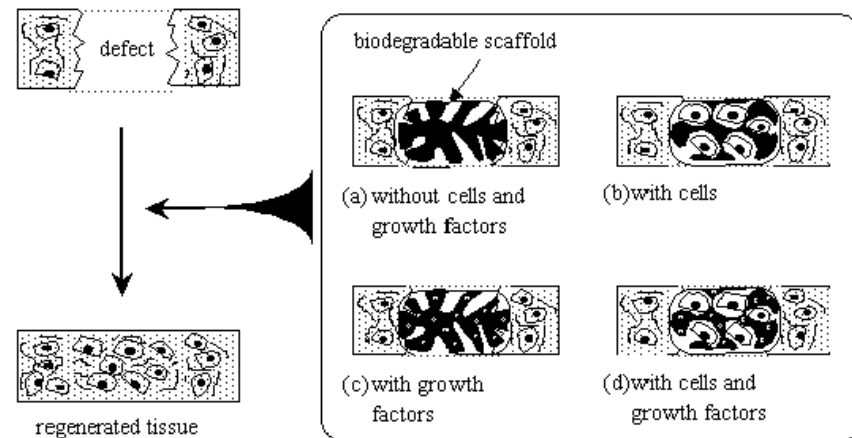
1. Blood cell transplantation



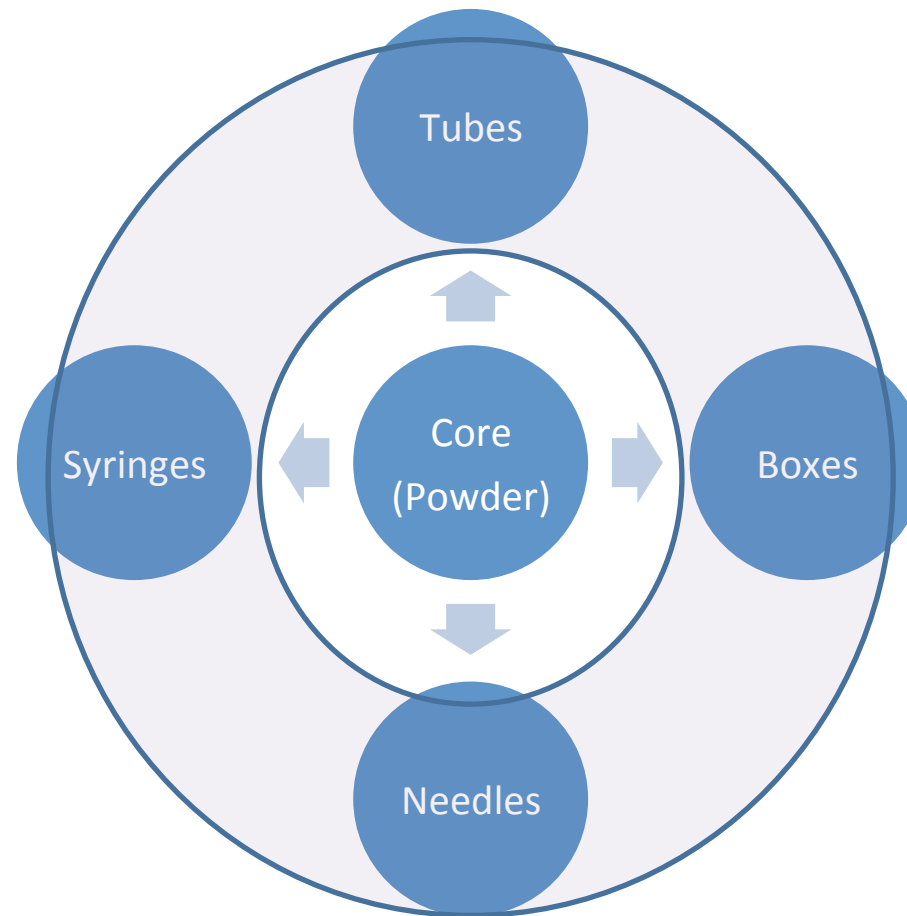
2. Cell transplantation into injured tissue



3. Tissue regeneration for large defect



Keep and produce only powder as a core of innovation, outsource all other stuff.



So the cost for the final price will be reduced to about only 9\$

Fixed and Variable Costs

- Staff Salaries (4 persons)
 - 1 for finance 1.5 K\$/m
 - 2 for production 2x2k\$/m
 - 1 for cleaning 1k\$/m
- Director Salaries 4k\$/m (I will change it to 3)
- Capex
 - Technical and Officials equipment 200K \$
 - Rent space for lab + Electric, etc 12K\$ / y

Staff Salaries	Feb	78,000	83,000	86,000	90,000	95,000
Gen Overheads	Feb	12,000	12,500	13,000	13,500	14,000
Directors Rem	Mar	50,000	52,000	54,000	57,000	60,000
Capex		200,000				

Sales Assumptions

- Net price ~ \$ 9
- Sales price ~ \$ 50 + 7% royalty of university
 - So the gross margin will be 82%
 - Note: consider ~10% growing yearly with fixed gross margin for inflation, tax, etc.

	Start	2015/16	2016/17	2017/18	2018/19	2019/20
Sales Volume	Jul	5,000	10,000	12,000	20,000	30,000
Sales Price		50	53	58	65	70

CashFlow

Amounts in £'000s	2015/16	2016/17	2017/18	2018/19	2019/20
EBITDA	47	268	398	885	1,532
Capex	(200)	-	-	-	-
TAX	-	(2)	(42)	(108)	(171)
Debtors Inc/Dec	(2)	11	3	11	14
Creditors Inc/Dec	27	(5)	6	20	27
Movement in Cash	(128)	273	365	808	1,401
Receipts	288	635	831	1,546	2,501
Expense Payments	(288)	(136)	(163)	(279)	(446)
Net VAT	11	(73)	(105)	(186)	(309)
Salary Payments	(139)	(151)	(157)	(165)	(174)
Corporation TAX	-	(2)	(42)	(108)	(171)
Movement in Cash	(128)	273	365	808	1,401

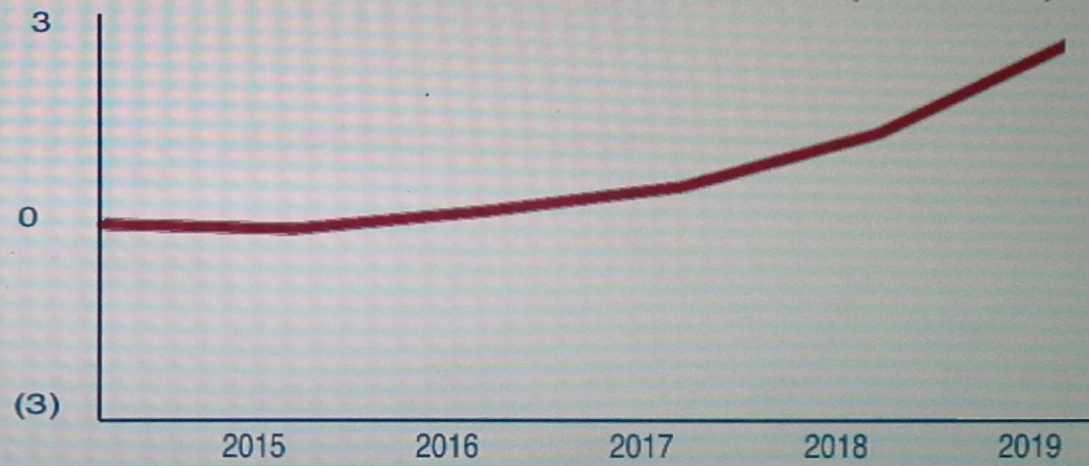
Powered by

FDSolutions

1y

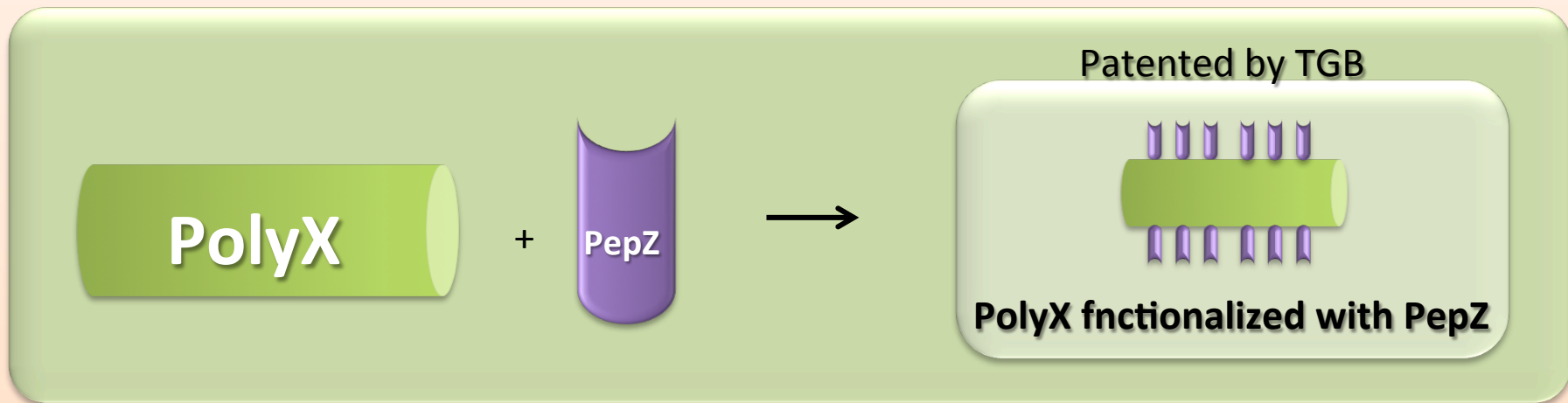
5y

Cashflow (2015-19)



Peak cash need £127,827 2015

Blood Volume	PRP Volume	Platelet Concentration	Spin speed	time Centrifugation	coagulants
30 a 60 mL	7 a 10 mL	from 2 up to 8 times	From 3000 to 4000 RPM	from 9 to 45 min	CaCl ₂ , autologous or bovine thrombin



PolyX is cleared by FDA;

PepZ is a peptide that only recognize protein in platelet surface

INNOVATIONS IN TISSUE REGENERATION MARKET

u.s.	Ex-U.S.	Total	% Changes vs. 2011	\$ Changes vs. 2011
\$2.97	\$1.66	\$4,64	+2.9%	\$.13