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**Additional Information.** In connection with the proposed Business Combination, ALPA intends to file with the SEC a registration statement on Form S-4 containing a preliminary proxy statement/prospectus of ALPA, and after the registration statement is declared effective, ALPA will mail a definitive proxy statement/prospectus relating to the proposed Business Combination to its shareholders. This Presentation does not contain all the information that should be considered concerning the proposed Business Combination and is not intended to form the basis of any investment decision or any other decision in respect of the Business Combination. ALPA's shareholders and other interested persons are advised to read, when available, the preliminary proxy statement/prospectus and the amendments thereto and the definitive proxy statement/prospectus and other documents filed in connection with the proposed Business Combination, as these materials will contain important information about the Company, ALPA and the Business Combination. When available, the definitive proxy statement/prospectus and other relevant materials for the proposed Business Combination will be mailed to shareholders of ALPA as of a record date to be established for voting on the proposed Business Combination. Shareholders will also be able to obtain copies of the preliminary proxy statement/prospectus, the definitive proxy statement/prospectus and other documents filed with the SEC, without charge, once available, at the SEC's website at [www.sec.gov](http://www.sec.gov), or by directing a request to: ALPA Healthcare Acquisition Corp, 1177 Avenue of the Americas, 5th Floor New York, New York 10036.

**Participants in the Solicitation.** ALPA, the Company and their respective directors and executive officers may be deemed participants in the solicitation of proxies from ALPA's shareholders with respect to the proposed Business Combination. A list of the names of ALPA's directors and executive officers and a description of their interests in ALPA is contained in ALPA's final prospectus relating to its initial public offering, dated September 18, 2020, which was filed with the SEC and is available free of charge at the SEC's web site at [www.sec.gov](http://www.sec.gov), or by directing a request to ALPA Healthcare Acquisition Corp, 1177 Avenue of the Americas, 5th Floor New York, New York 10036. Additional information regarding the interests of the participants in the solicitation of proxies from ALPA's shareholders with respect to the proposed Business Combination will be contained in the proxy statement/prospectus for the proposed Business Combination when available.

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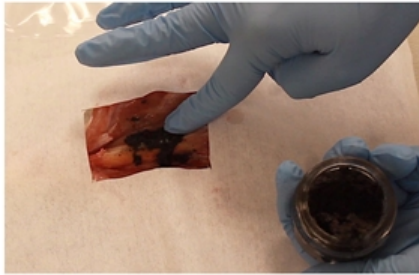
## INVESTMENT HIGHLIGHTS

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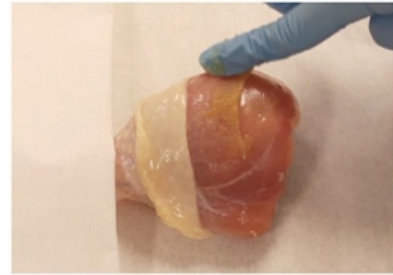


1. Platform product with multiple therapeutic applications
2. Clinical proof of concept from Phase II trial
3. Fast Track review granted by the US FDA
4. 21 issued patents provide protection until 2031
5. Deeply experienced team with shared experience at Johnson & Johnson
6. Attractive valuation relative to other Phase II biotech companies
7. Numerous valuation inflection points before market launch

## CARMELL'S TECHNOLOGY PLATFORM



*Bone Healing Accelerant (BHA)  
applied to bone*



*Tissue Healing Accelerant (THA)  
applied to soft tissue*



*Bone Healing Accelerant (BHA)  
ready to use out of container*

### Medical application:

- Local application at the site requiring regeneration
- Controlled degradation over weeks/months
- Assured quantum of platelets that release regenerative growth factors

### Potential Clinical impact, designed to:

- Accelerate the healing of bone
- Accelerate the healing of soft tissue
- Reduce infections

### Benefits to Care Provider:

- Ready to use
- No mixing
- No need for prep at clinical setting
- No need for training staff in extraction of PRP
- Potential to deliver all growth factors consistently

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# PLATFORM TECHNOLOGY USED IN PHASE II TRIAL

## Mechanism of Action via Cytokines, Chemokines and Adhesive Proteins

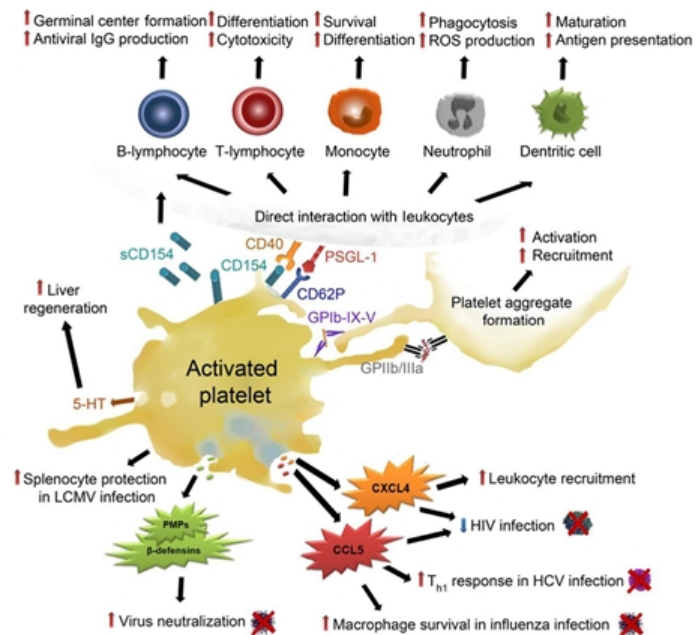


### Biological Pathways for Regenerative Healing

Platelet-derived Growth Factor	<ul style="list-style-type: none"> <li>• Angiogenesis</li> <li>• Mitogenesis</li> <li>• Macrophage Activation</li> </ul>
VEGF	<ul style="list-style-type: none"> <li>• Angiogenesis</li> <li>• Vasculogenesis</li> </ul>
TGF-β	<ul style="list-style-type: none"> <li>• Long-term Healing</li> <li>• Bone Regeneration</li> <li>• Regulation of Inflammatory Processes</li> </ul>
EGF	<ul style="list-style-type: none"> <li>• Cell Growth</li> <li>• Cell Proliferation</li> <li>• Cell Differentiation</li> </ul>
CTGF	<ul style="list-style-type: none"> <li>• Promotes Angiogenesis</li> <li>• Cartilage Regeneration</li> <li>• Fibrosis and Platelet Adhesion</li> </ul>
ILGF-1 ILGF-2	<ul style="list-style-type: none"> <li>• Chemotactic for Fibroblasts</li> <li>• Stimulates Protein Synthesis</li> <li>• Enhances Bone Formation</li> </ul>

Source: Current Evidence on Using Platelet Rich Plasma as a Therapeutic Modality for Veterinary Orthopedic Conditions, March 2021, World's Veterinary Journal 11(1):73-78

### Biological Pathways for Potential Anti-infective Impact

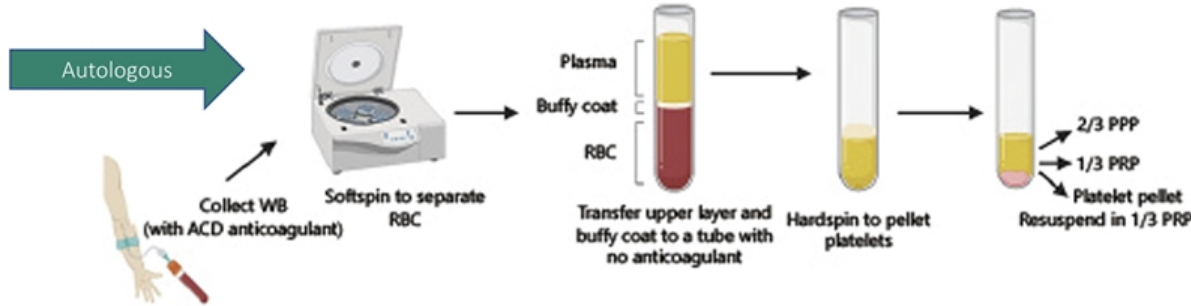


Source: Platelets and Infection – An Emerging Role of Platelets in Viral Infection, December 2014, Frontiers in Immunology 5(Suppl 1):649

# ALLOGENEIC VS AUTOLOGOUS PRP



Extracting Platelets is a Complex, Multi-step Process Resulting in **Variable Outcomes** Driven by **Donor Biology** and **Process Control**

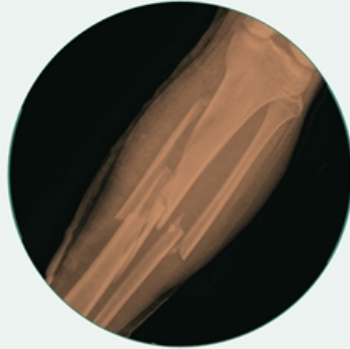


	Autologous PRP: Individualized Treatment	Allogeneic PRP: Universal Treatment
What is it?	Platelets (via PRP) drawn from individual patient for their own specific use	Platelets obtained from a blood bank (via Fresh Frozen Plasma) that can be used for any patient
How is collected?	<ul style="list-style-type: none"> <li>Nurse draws blood from patient in the clinic</li> <li>It is processed while the patient waits</li> <li>The collected PRP is then used for therapy</li> </ul>	<ul style="list-style-type: none"> <li>No need for capital equipment to process PRP</li> <li>No training required for processing/handling PRP</li> <li>Ready to use product, off-the-shelf</li> </ul>
Form & Bio-Availability	<ul style="list-style-type: none"> <li>Liquid</li> <li>24 hours</li> </ul>	<ul style="list-style-type: none"> <li>Multiple: putty, paste, screw, plate, sheet, ribbon</li> <li>Controlled degradation up to 3 months</li> </ul>
Platelet quality	Variable, depends on: (i) patient may have low platelet count (ii) low process control	Low variability since: <ul style="list-style-type: none"> <li>Platelets are pooled from healthy volunteers</li> <li>High process control manufacturing process</li> <li>Assured platelet count</li> </ul>
Regulatory Oversight	Healthcare providers using PRP off-label	Carmell's Phase 2 candidate has received FDA Fast Track Review status for open tibia fractures with IM rodding

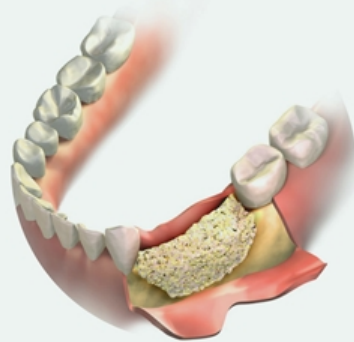
# CARMELL IS FOCUSED ON MULTIPLE THERAPEUTIC AREAS



## BONE APPLICATIONS



Orthopedic



Dental

REGENERATIVE HEALING  
WITH  
PLATELET-RICH PLASMA  
(PRP)

## TISSUE APPLICATIONS



Surgical/Wound Healing



Hair Loss/Skin Rejuvenation

## R&D PIPELINE WITH MULTIPLE SHOTS ON GOAL



R&D Candidates	Indications	preclinical	Phase 1	Phase 2	Anticipated Milestones
Bone Healing Accelerant (BHA)	Tibia Fracture Healing (FDA Fast Track granted)				First Patient In HEAL II Q3 2023
	Foot/Ankle Fusion				Phase 2 study: First Patient in Q3 2023
	Spinal Fusion				Complete preclinical large animal study, interbody cage, Q2 2023
	Dental Bone Graft Substitute				Complete preclinical large animal study, Q3 2023
	Bone Void Filler (EU CE Mark)				Submit for CE Mark Q4 2023
Tissue Healing Accelerant (THA)	Androgenetic Alopecia (hair loss/baldness)				Complete preclinical large animal study, Q2 2023
	Cosmetic skin serum				
	Surgical/Chronic Wound Healing				Complete preclinical large animal study, Q3 2023

- BHA designated as combination product (Plasma-based Bioactive Material & βTCP) regulated as a biologic in the US and is designated as a Class III Medical Device in the EU.
- THA is a similar formulation to BHA minus the βTCP and is regulated as a biologic in the US.
- HEAL II is powered to demonstrate superiority vs. standard of care and could potentially serve as one of the two pivotal clinical studies needed for BLA approval in the US.
- Note: Gradient arrow designates "to be confirmed with regulatory body interaction". Anticipated Milestones are best estimates by Carmell Management based on current data and are subject to change depending on regulatory guidance, operational factors and clinical progress.

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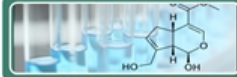
## RIGOROUS MANUFACTURING PROCESS & IN-HOUSE EXPERTISE



Process – maintain donated Platelet enRiched Plasma whole and process for safety without destroying proteins



Plasticize – create multiple forms; putty, paste, sheet, screw, ribbon



Crosslinking – novel, safe crosslinker that allows for sustained release of regenerative factors throughout the healing process



Bioactivity – each lot tested against eleven release tests that guarantee lot-to-lot consistency, including 3 potency assays: bioassay, PDGF & TGF $\beta$



Off-the-shelf – ready to use no mix, no prep, no patient blood draw



- Multiple full-scale batches successfully produced (stability 9 month to-date, 24 month expected)
- Eleven release tests developed and validated to support lot-to-lot consistency
- ISO 13485 Certified
- Estimated ~90% Gross Profit Margin

## INTELLECTUAL PROPERTY & MARKETING EXCLUSIVITY



1

Proprietary Products  
and Processes:  
*21 Issued Patents*

2

12-year BLA  
Marketing  
Exclusivity  
*(42 USC 262:  
Regulation of  
biological products)*

3

Practical  
Barriers-to-Entry  
*Company know-how  
and trade secrets  
related to processing  
plasma and  
maintaining  
bioactivity*

## DEEPLY EXPERIENCED MANAGEMENT TEAM

*Extensive Experience at Johnson & Johnson*



**Randy Hubbell**  
President & CEO

- Former Chief Commercial Officer at Cardiva Medical (acquired by Haemonetics)
- Worldwide Vice President J&J Biosurgery
- Worldwide Vice President Global Strategic Marketing, Pain Therapeutics and Cardiology, J&J
- Executive Director Stent Marketing Cordis, J&J
- Previously at Boston Scientific and IBM
- MBA from Loyola University
- B.A. Engineering from Tulane University



**Jim Hart**  
Chief Medical Officer

- Former Chief Medical Officer of Johnson & Johnson Global Surgery
- Cardiovascular surgeon for 20 years
- Significant contributions to minimally invasive cardiac surgery
- MD from Pennsylvania State University College of Medicine
- Fellowship in cardiothoracic surgery at the Pennsylvania State University MS Hershey Medical Center
- B.A. from Carnegie Mellon University



**Seby Borriello**  
Chief Business Officer

- Former Chief Commercial Officer SK Life Science
- Former VP of Market Development, Cempra
- Former Head of Commercial, Mentor (J&J Aesthetic Business)
- Vice President Account Management at Johnson & Johnson Heath Care Systems Inc.
- M.S. in Organizational Dynamics from the University of Pennsylvania
- B.A. in Public Administration from St. John's University



**Donna Godward**  
Chief Quality Officer

- Former Chief Quality Officer of Medical Devices and Diagnostics at Johnson & Johnson
- Worldwide Vice President of Regulatory, Quality & Compliance at Cordis, J&J
- Co-chair of J&J Executive Quality Leadership Development Program
- Executive Director, Regulatory, Quality & Compliance for Ortho-Clinical Diagnostics, J&J
- Previously at Merck and BMS
- M.B.A from Washington University
- B.A. in Biological Sciences from Indiana University



**Janet Vargo**  
VP, Clinical Sciences

- Former Head of Mentor's Clinical Program (a Johnson & Johnson Company)
- Executive Director, Clinical Trial Design for Scientific and Clinical Affairs in the Office of the Chief Medical Officer, J&J
- Ph.D. in Experimental Psychology (Behavior Neuroscience) from Miami University
- M.S. in Applied Biopsychology from the University of New Orleans
- B.S. in Psychology, PSU

## MEDICAL & SCIENTIFIC ADVISORY BOARD



### Aesthetics Medical Advisors



Dr. Grant Stevens is the founder and medical director of Marina Plastic Surgery and the Marina Med Spa in Marina Del Rey, California.



Dr. Amelia Hausauer is the Director of Dermatology and Minimally Invasive Aesthetics for Aesthetx, a hybrid plastic surgery and dermatology practice located in the heart of Silicon Valley.



Dr. Suneel Chilukuri is Director of Cosmetic Surgery, Refresh Dermatology.



Dr. Chris Hubbell is Board Certified Skin Expert, founder and medical director of Hubbell Dermatology & Aesthetics.

### Orthopedic Medical Advisors



Dr. Samir Mehta is Chief, Division of Orthopedic Trauma and Assistant Professor of Orthopedic Surgery at the Hospital of the University of Pennsylvania.

### Dental Implant Advisors



James L. Rutkowski D.M.D., PhD. is a Pharmacist, Dentist, and has a PhD. in Pharmacology. Dr. Rutkowski's PhD dissertation was on the use of autogenous platelet concentrates for the development of de novo bone for use in dental implant procedures.

### Scientific Advisors



Dr. Steve Badylak is Research Professor in the Department of Surgery and Director of Tissue Engineering at the McGowan Institute for Regenerative Medicine at the University of Pittsburgh.



Dr. Israel Nur has over four decades of research and development (R&D) in biological experience, with a strong focus in plasma and serum derived product industry, in both the public and private sectors.



## BONE APPLICATIONS

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## CARMELL VERSUS STANDARD OF CARE: ORTHOPEDICS



Product	Standard of Care	Current products used	Carmell™ benefits
Long bone fracture	Metal fixation	No adjunctive product used to accelerate healing in long bone fractures	Human data vs. SOC to support design of Phase 2 study
Spine fusion DBM enhancer or DBM replacement	Demineralized bone matrix (DBM)	DBM has limitations on how well bone grows (i.e., volume and density) and it also has difficult supply chain due to only one human cadaver donor per patient	Potential to enhance and extend DBM, use less or no DBM and grow bone faster, stronger and with greater density.
Dental Bone Graft Substitute	Demineralized bone matrix (DBM)	Allograft bone graft substitute/synthetic bone graft substitute to fill socket or defects to promote bone growth over four to nine months	BHA has shown in preclinical models to regrow bone faster and higher quality (i.e., density, vascularity, etc.) and a Phase 2 study was conducted to support a larger RTC designed to demonstrate accelerated healing.

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## CARMELL VS MARKETED ALTERNATIVES (TIBIA FRACTURES)



	Carmell® Bone Healing Accelerant	Medtronic INFUSE® Bone Graft	Platelet Rich Plasma (PRP)	Bioventus EXOGEN® Bone Healing System
Composition/ Configuration	Pooled allogeneic plasma proteins (crosslinked) with $\beta$ -TCP/glycerol carrier	Recombinant BMP-2 on collagen sponge	Autologous blood protein solution	Non-invasive ultrasound device
Indications for Use	Open tibia fracture healing	Open tibia fracture healing	N/A	Closed tibia fracture healing
Regulatory Pathway	BLA	PMA	No regulatory review	PMA
How Supplied	Off-the-shelf	Off-the-shelf	OR preparation	Patient administered
How Administered	Direct placement over fracture line	Sponge wrapped around fracture line	Direct placement over fracture line	Externally applied over fracture site
Mechanism of Action	Hard and soft tissue healing adjuvant	Bone healing/osteinduction	Unsubstantiated	Ultrasound stimulation
Protein Content	Multiple proteins - broad activity spectrum	Single protein	Multiple proteins	N/A
Protein Concentration	Uniform	Uniform	Variable	N/A
Protein Dosing	Physiological	Supraphysiological	Physiological	N/A
Potency	Assured	Assured	Not tested	Unknown
Protein Release Kinetics	Extended	Rapid	Rapid	N/A
Clinical Data	Phase II RCT	Multiple large-scale RCTs (safety and efficacy concerns surround each)	No RCTs in this indication	Multiple RCTs (concluding no healing benefit)
Clinical Complications/ Limitations	No study product related adverse events throughout the year long study	Ectopic bone formation Swelling/edema formation Osteolysis/rapid bone resorption Antibody formation	None observed	Skin irritation Patient compliance
Product Costs	\$	\$\$\$\$\$	\$\$	\$\$\$\$

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# PHASE II CLINICAL TRIAL (HEAL I) SUMMARY: TIBIA FRACTURES



## Study Design

- Double arm (20 treatment/10 control)
- Prospective, randomized, multi-center

## Patient Population

- Open tibia fractures
- Highly co-morbid population (e.g., 70% smokers)
- 70% most severe injuries\* with significant soft tissue compromise



\* Gustilo Open Fracture Grade Classification:

- IIIA High Energy
  - Severe, crushing soft tissue injury or
  - High degree of contamination or
  - Moderate-severe bone comminution
- IIIB High Energy
  - Severe loss of soft tissue coverage
  - Typically requiring a soft tissue flap for wound coverage
  - +/- High degree of contamination
  - +/- Moderate-severe bone comminution

## Study Results

Test Parameters	Carmell: 14 patients	Control: 7 patients
Mean # of cortices w/ $\geq 75\%$ bridging*	2.64	1.33
Composite* (x-Ray & clinical)	36%	0%
1+ infections at 12 months	25%	100%
Healing at 30 days	36%	0%

\* On a standard set of anterior/posterior and lateral tibia x-rays, there are four easily visible cortices. With a fracture, these bone cortices are disrupted and a resulting fracture line free of bone is visible on the X-ray. Bridging refers to the callous traversing the fracture line and is visible for each cortex.

\* % of Pts. mRUST  $\geq 13$  + Full Weight Bearing + Lack of Tenderness mRUST (Radiology Union Scale for Tibia Fractures 4-16), over 90% of surgeons believe 13 or greater to represent healing

## PHASE II STUDY (HEAL II): FDA Agreed Upon Primary Endpoints



Target	Open Tibia Fractures with IM Rodding
Study Rationale	SOC + application of Bone Healing Accelerant vs. SOC alone
Key Results and Design Elements	<p>Primary endpoints: Same composite endpoint as HEAL I (180-day x-ray + clinical)</p> <ul style="list-style-type: none"> <li>• One-year follow-up</li> <li>• Enrollment anticipated for 18 months</li> </ul> <p>Secondary endpoints</p> <ul style="list-style-type: none"> <li>• Infection reduction</li> <li>• Soft tissue healing</li> <li>• Patient-reported outcomes</li> </ul> <p>Adaptive design, target of 220 pts at 20-point treatment effect (HEAL I had 36-point effect)</p> <p>Pivotal upgrades from HEAL I</p> <ul style="list-style-type: none"> <li>• 100% increase in upper limit of volume of study material (9g vs 4.5g)</li> <li>• Frozen product with 2x higher growth factor count</li> </ul>

## FOOT & ANKLE FUSION PROGRAM



### Clinical Need:

Deterioration of cartilage between the bones in the foot and ankle due to age, injury or disease

### Standard of Care:

- Fusion surgery – remove the cartilage and fuse the two ends of the bone together utilizing hardware such as pins, screws and/or plates.
- Depending on severity, patient co-morbidities and the distance between the bones, the “gap” may need to be filled with a “bone void filler” that can be autologous bone (from a separate anatomical site of the patient such as their hip), a low technology solution such as demineralized bone or the use of a biologic (Augment® by Stryker).

### Status of Carmell Program: FDA has agreed to

- F/A Fusion similar in healing process as tibia fracture
- Carmell to submit a “New Protocol Amendment Under Existing IND”
- Study Design Synopsis for Phase II study utilizing BHA
  - 60 patients (2:1 randomization)
  - 6-month primary endpoint composite endpoint (clinical endpoint plus CT scan)
  - Enrollment estimated to be 6 months

### Reasons To Believe:

- BHA Carmell has conducted multiple preclinical studies that support our belief that BHA has the potential to heal wounds and accelerate bone healing of high quality, as measured by density, vascularity, and the presence of woven bone.
- Augment® (Stryker) has shown some effectiveness on fusion rates but delivers only one growth factor (rPDGF) plus  $\beta$ TCP – whereas, BHA has a multitude of growth factors plus  $\beta$ TCP

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# PHASE II CLINICAL TRIAL SUMMARY: FOOT & ANKLE FUSION



Bone Healing Accelerant (BHA) versus Autologous Bone Grafting (ABG) for Hindfoot or Ankle Arthrodesis

## Study Design (FDA feedback on synopsis Nov 2022)

- Full protocol under development
- Prospective, randomized, multi-center
- Double arm, approx. 60 pts, 2:1 randomization
- ~10 sites

## Patient Population (to be finalized)

- Ankle and/or foot fusion procedures
- 18 to 65 years
- Few limits on diabetes (<Hbg A1c level  $\geq$  8%), obesity (<40 kg/m<sup>2</sup>) and smokers allowed.

Similarities b/w Tibia and F/A Fusion		
BHA Mechanism of Action	Tibial Fracture	Foot/Ankle Arthrodesis
Bleeding bone environment	Yes	Yes
Cellular Healing Cascade	Yes	Yes
Intrinsic to stability of bone	No	No
Stabilized using hardware	Yes	Yes
Fill voids & gaps between bones	Yes	Yes

## Proposed Study Design

Objective	To evaluate the preliminary safety and efficacy of BHA compared to ABG in the treatment of patients undergoing hindfoot or ankle arthrodesis and who require supplementary grafting.
Duration	12 months
Primary Success	To evaluate the ability of BHA to create a successful fusion in patients undergoing hindfoot or ankle arthrodesis and who require supplementary grafting at 24 weeks.
Primary Endpoint	Percentage of patients deemed fused receiving BHA or control that meet the criteria for fusion at 24 weeks.
Key Secondary Endpoint	<ol style="list-style-type: none"> <li>1. Pain (vs. baseline &amp; improvement of &gt; 20mm on 100mm scale)</li> <li>2. Improvement in PRO scores to include: Foot and Ankle Ability Measure- Activities of Daily Living Subscale</li> <li>3. Proportion of primary surgical site incisions healed at 24 days</li> </ol>
Key Safety Endpoint	Incidence of any surgical site infection up to 24 weeks and up to 52 weeks

## US/EU REGULATORY PATHWAY



### US (BLA/CBER) – Combination Product

- Current Status: FDA clearance of HEAL II trial
- CMC plan agreement with FDA
- Clinical protocol approved

### EU Class III Medical Device

- Current Status: Clinical Trial Applications underway
- MDR application for CE mark in development
- ISO 13485 audit successfully completed



## SOFT TISSUE APPLICATIONS

## CARMELL VERSUS STANDARD OF CARE: SOFT TISSUE



Need	Standard of Care (SOC)	Current products used	Potential Carmell™ benefits
Androgenetic Alopecia	Topical Minoxidil	Autologous Platelet Rich Plasma is growing in usage with some encouraging, but mixed results due to significant variability in the final product	THA expected to be more consistent in terms of biomaterials, is available off-the-shelf and has presence at the clinical site for an extended period of time
Facial Rejuvenation	Facial Fillers (Hyaluronic Acid – HA)	HA based products that are injected as an artificial facial filler to reduce wrinkles or, emerging SOC, PRP/micro-needling a natural face filler by stimulating collagen growth	Natural facial filler by utilizing combination therapy of micro-needling plus THA, off-the-shelf, ready-to-use with consistent bioactivity.
Wound Care	Low technology products or very expensive allograft technologies	SOC is to treat with low technology wound care products that protect the wound environment and control moisture or expensive allografts (amnio, placenta, etc).	Carmell technology to potentially enhance current solution on both ends of the cost structure by providing regenerative factors to the healing site
Burn graft healing	Staple or sutures	No adjunctive produce used to improve graft take or reduce infections	Potential to promote angiogenesis, greater % of graft take and may reduce infections.

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## HAIR GROWTH OBSERVED IN ANDROGENETIC ALOPECIA PLACEBO CONTROLLED TRIAL

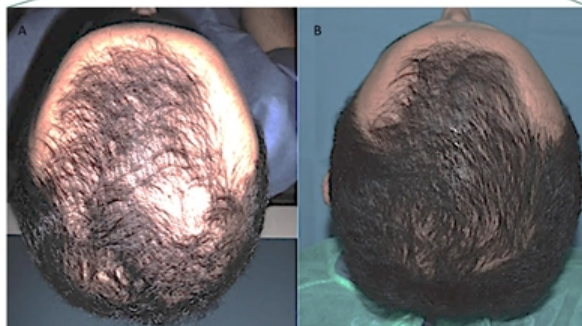


The Effect of Platelet-Rich Plasma in Hair Regrowth: A Randomized Placebo-Controlled Trial. *Stem Cells Transl Med.* 2015 Nov; 4(11): 1317–1323. Dr. Pietro Gentile

20 patients:

- 10 received placebo
- 10 received autologous PRP once a month for 3 months

Change after 14 weeks of last dose:	Placebo	PRP Treated
Hair count	-3.5%	37.5%
Hair density (no/cm <sup>2</sup> )	2.3%	28.5%
Terminal hair density (no/cm <sup>2</sup> )	-3.6%	26.9%



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## TISSUE HEALING OBSERVED IN MOUSE RADIATION BURN MODEL

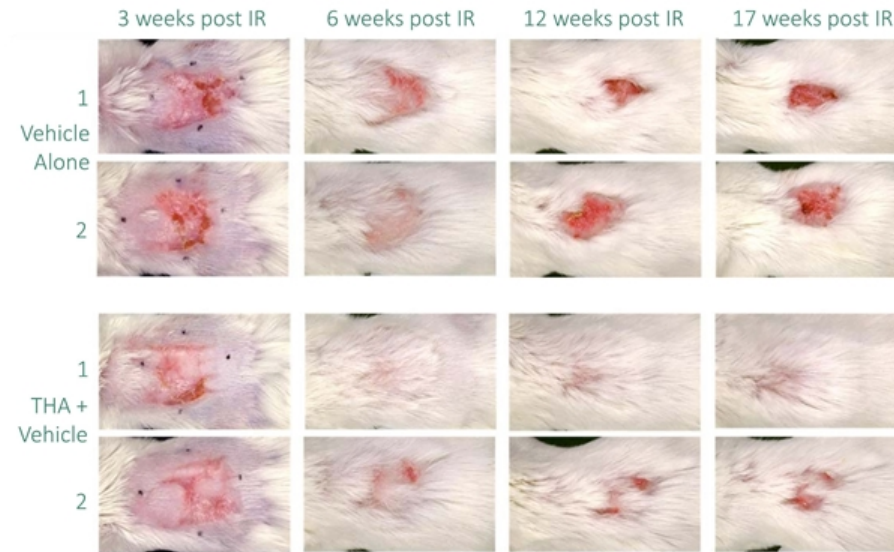
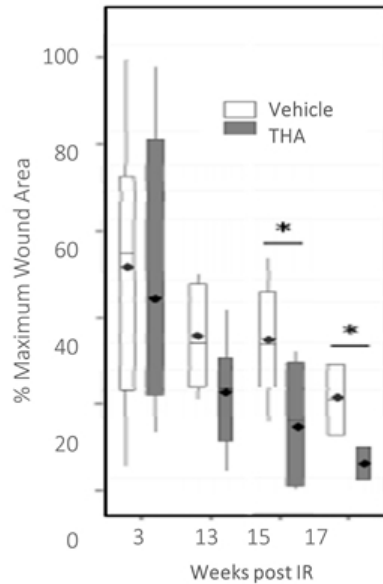


### Study Purpose

- Investigate efficacy of THA using a mouse radiation burn model
- Study conducted in Laboratory of Dr. Naduparambil Jacob, Ph.D. at Ohio State University

### Design

- Mouse skin was irradiated with a single dose of 35Gy
- Wound treated topically once daily for 5 weeks and followed 17 weeks (n=22)
  - Aquaphor vehicle alone
  - THA + vehicle



Miller, E., et.al., (2019). "Plasma-based biomaterials for the treatment of cutaneous radiation injury." *Wound Repair and Regeneration* 27(2): 139-149.

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# ANTI-INFECTIVE EFFECT OBSERVED IN RAT PACEMAKER MODEL



## Study Purpose

- Demonstrate the ability of THA with and without antibiotics to reduce infection in rabbit pacemaker model

## Design

- Pacemakers and THA paste with and without rifampicin/minocycline hydrochloride were implanted into a subcutaneous pocket on either side of rabbit spine for 1 week (n=5, 7, 17, depending on group); Pockets were infected with MRSA

## Results

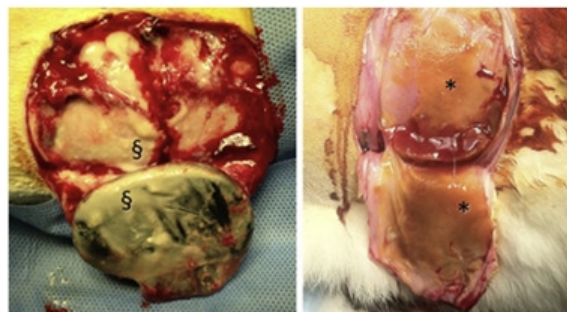
- No pockets with THA alone were purulent (0/5) whereas the positive control were 100% purulent (17/17)
- Pockets with THA and antibiotics were both purulence free (0/7) and culture negative (0/7)

## Conclusion

- THA has potential to decrease implant site infection

Schwartzman, D., et.al., (2015). "An off-the-shelf plasma-based material to prevent pacemaker pocket infection." Biomaterials 60: 1-8.

+ Control (MRSA)      THA + Antibiotics (MRSA)

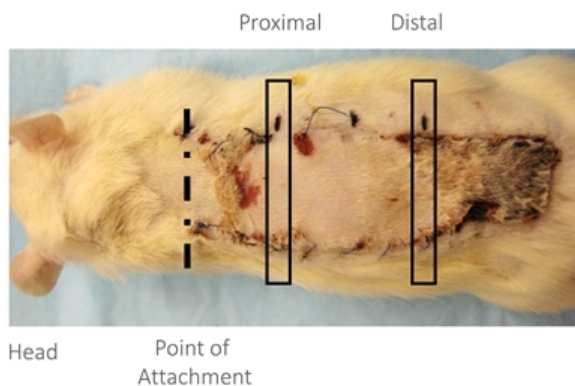


§ Purulence in control pocket  
\* No purulence in pacemaker pocket with THA + antibiotics

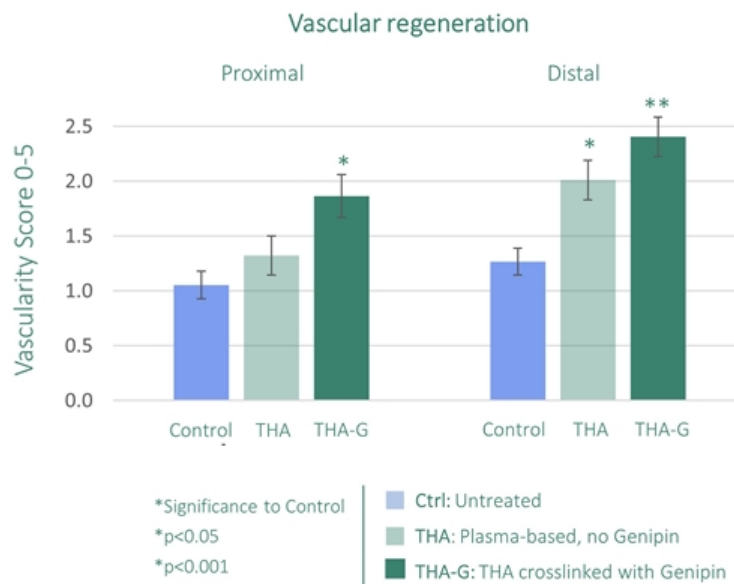
	-ve Control	+ve Control (MRSA)	THA only (MRSA)	THA + Antibiotics (MRSA)
Purulence	0/5	17/17	0/5 #	0/7 #
Culture Positive	0/5	17/17	3/5 *	0/7 #

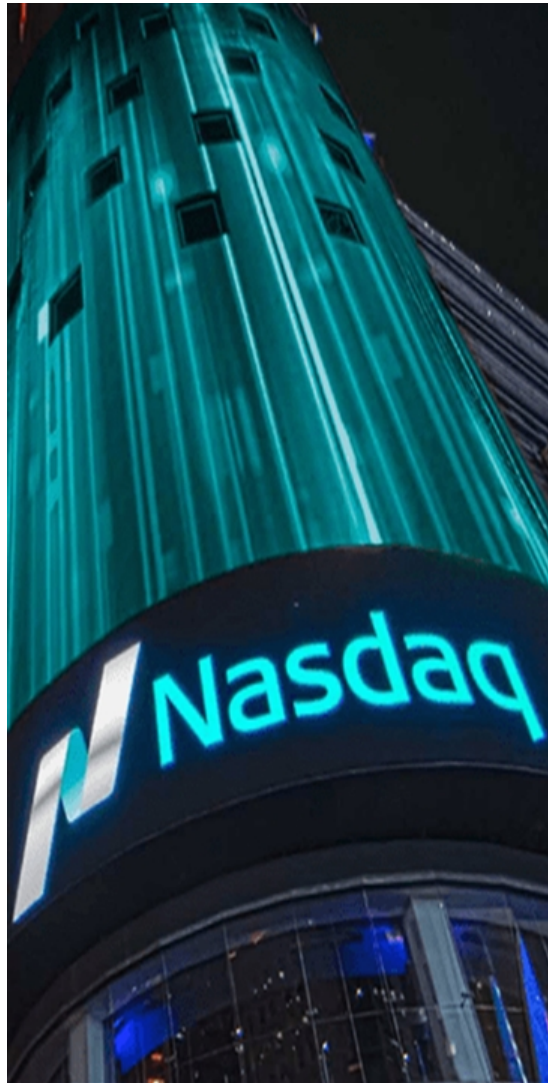
\* denotes statistically different (p<0.05) from + Control (MRSA)  
# denotes statistically different (p<0.001) from + Control (MRSA)

# INCREASED VASCULARIZATION OBSERVED IN RAT SKIN FLAP MODEL



Study conducted by Stephen Badylak, D.V.M., Ph.D., M.D. at Univ. of Pittsburgh





## TRANSACTION OVERVIEW

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## TRANSACTION SUMMARY



Transaction Structure	<ul style="list-style-type: none"><li>• Carmell pre-money valuation of \$150M</li><li>• ALPA founder linking 50% of Class B Founder Shares to achievement of \$11.50 price target for at least 20 days out of any 30 days over next 5 years</li></ul>
Capitalization & Use of Proceeds	<ul style="list-style-type: none"><li>• Market capitalization of ~\$328M</li><li>• Proceeds used to advance R&amp;D pipeline and repay debt</li></ul>
Transaction Timeline	<ul style="list-style-type: none"><li>• Definitive Business Combination announced in January, 2023</li><li>• Transaction expected to close in mid-2023</li></ul>
Post-Closing	<ul style="list-style-type: none"><li>• Post-closing, the Company will be renamed Carmell Therapeutics</li><li>• Randy Hubbell will serve as CEO. Remaining Executive Management team will continue in their roles.</li><li>• Rajiv Shukla will serve as Chairman.</li></ul>

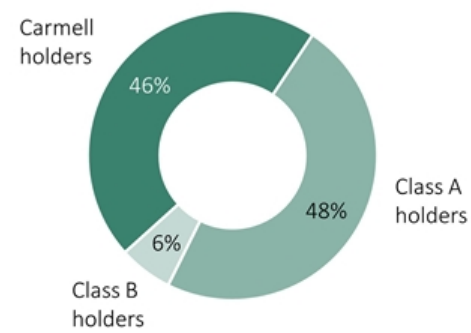
## TRANSACTION TERMS



Sources <sup>1</sup> , \$M	
Carmell Equity Rollover	\$150
ALPA Trust	\$154
<b>Total Sources</b>	<b>\$304</b>

Uses <sup>1</sup> , \$M	
Carmell Equity Rollover	\$150
Cash to Balance Sheet	\$144
Transaction Expenses	\$10
<b>Total Sources</b>	<b>\$304</b>

Enterprise Value <sup>1</sup> , \$M	
Shares	32.839
Share price	\$10
<b>Equity Value</b>	<b>\$328.39</b>
Net Cash <sup>2</sup>	\$140
<b>Enterprise Value</b>	<b>\$188.39</b>



1. Pro forma analysis assumes \$10.00 price and no redemptions from Trust. 50% of Class B Founder Shares linked to achievement of \$11.50 price target.
2. Assuming \$4M of debt at closing.