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Vice President Plastic & Reconstructive Surgery

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- Founded in 1987
- 501(c)3 Non Profit Tissue Bank
- Founded by Surgeons
  - High quality, safe source of allografts
  - Not-for-profit foundation
  - Advance the science of tissue transplantation
- Governed and Guided by Surgeons Today







#### ALLOGRAFT TISSUE RECIPIENTS



Turia Pitt Burn Survivor Skin for Burn Recipient

We save and heal lives by honoring the donated gift, serving patients and advancing science



Sue Pilon Breast Cancer Survivor ADM Tissue Recipient



Dylan Vitucci Osteosarcoma Patient Osteoarticular Graft Recipient



#### MTF BIOLOGICS: FAST FACTS

- More than 8.5 Million allografts distributed
- Nearly 6 Million lives saved and healed
- More than 130,000 tissue donors processed
- Zero viral disease transmission in our 30 year history
- More than 100 peer-reviewed publications
- 63 issued and 19 pending US patents
- More than \$55 Million in research funding

## Every minute of every day, an MTF Biologics allograft is used to save or heal a life

#### PLASTIC & RECONSTRUCTIVE SURGERY





**mtf**biologics







lip@grafter



Meso BioMatrix® Acellular Peritoneum Matrix





### A NATURAL SOLUTION

- Injectable allograft adipose matrix
  - Off-the shelf fat transfer
  - A soft tissue filler that **becomes** soft tissue (FAT)
- Source/Material

tbiologics

- Human allograft adipose
- Adipose extra-cellular matrix (ECM)
- Naturally-occurring matrix proteins





#### ANIMAL STUDIES: ADIPOSE & BLOOD VESSEL FORMATION

#### Significant blood vessel formation observed at 12 weeks.



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Kokai et al., Plast Reconstr Surg. Feb 2019

# DORSAL WRIST STUDY – SAFETY IN HUMAN

- Two sites, 15 patients
- Single Injection in dorsal wrist (2.5-5.5cc)
- Primary Objective: To assess Renuva safety, subcutaneous fat changes over 16weeks
- Outcome: Shown safe in first in human study
- Kokai *et al., Plastic & Reconstructive Surgery Journal,* February 2019
  - Bench Data
  - Animal Data
  - First in Human Data







Kokai et al., Plast Reconstr Surg. Feb 2019

# *IN-VIVO* ASSESSMENT IN ABDOMINOPLASTY PATIENTS

- Peter Rubin, MD (UPMC)
- 10 patients (5 at 12 weeks, 5 at 24 weeks)
- 6 injection sites per patient (20cc each)



- **Primary Objective**: To evaluate the remodeling of Renuva injected into subcutaneous tissues
- Secondary Objectives: Assessment of rate of complications



# PROGRESSIVE ADIPOGENESIS (PERILIPIN A STAINING)



- Demonstrated safety
- Capsule fairly prominent
- Host infiltration
- Adipogenesis outer perimeter



- Demonstrated safety
- Capsule thinner, much less prominent
- Host infiltration
- Adipogenesis throughout



# PILOT TEMPLE STUDY, RETENTION

- 10 Patients, 4 Sites
- Primary Objective: Evaluate retention of Renuva over 24 weeks
- Secondary Objectives: Evaluate complication profile, remodeling via biopsy at 8 Weeks, patient satisfaction





# TEMPLE STUDY RESULTS - SUMMARY

#### • Renuva is safe and well-tolerated

- Low complications; zero at/after 4 weeks
- Achieve aesthetic correction; not over-correction
- Adipogenesis observed via biopsy
- Volume retention up to 6 months
- Study to be submitted to ASJ by end of Q2



#### FULLNESS - NORMALIZED TO BASELINE



# RENUVA PILOT FACE VOLUME RESTORATION STUDY

- A Multi-Phase, Prospective, Multi-Center, Single Blind, Clinical Pilot Study to Evaluate the Safety and Efficacy of Allograft Adipose Matrix (AAM) to Correct Age-Related Volume Deficit in the Face
  - Three sites
  - 24 patients total
    - 6 month follow-up (blinded); long term follow-up (2 years)
    - 4-point MMVSA, 5-point GAIS
    - 3D facial photography (Canfield, Vectra m3)



Subject 2-004 Immediate post



- Temple, Mid-Face and Pannus studies
- Planning phase for future series of clinical evaluation in variety of procedures
- Demonstrated
  - Renuva is safe and well-tolerated
  - Renuva stimulates adipogenesis
  - Renuva maintains volume correction up to 6 months
    - Longer term studies ongoing and planned



# THE FUTURE

- THIS IS JUST THE BEGINNING!
- Allograft adipose platform technology
- Recipient is making his/her own fat
- Aesthetic and reconstructive applications





