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ORTHOPAEDIC SURGERY



Trauma Division Orthopaedic Research Retreat

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Orthopaedic Surgery

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- Major Extremity Trauma
- Research Consortium
- *Improving outcomes through collaborative research*



- BIOBURDEN- assessing bacterial load in open tibia fractures- *Currently Enrolling*
- OUTLET- Outcome after severe distal tibia/ hindfoot fractures- *Currently Enrolling*
- POvIV- Randomized study comparing PO vs IV abx in acute infections after orif- *Currently Enrolling (Identify Patients if seen in clinic)*
- OXYGEN- effect of high vs low O2 conc periop for orif fxs- (Awaiting IRB approval)

- TAOS- Comparing BKA techniques- Burgess vs Ertl (In preparation for IRB approval)
- STREAM- PROMIS based IPAD study to evaluate for depression in OUTLET patients

We Need your Help

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- Identify patients
 - Especially in hand clinic/foot and ankle clinic
- Encourage participation
- Vasantha Reddi-research coordinator
- Veronica Lester-Ballard-clinical research coord





Selected Other Trauma Division Clinical Trials

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- Local antibiotics to prevent wound infection
 - IRB Review
- Administration of abx in the field for open fxs
 - Drafting protocols
- Tibia Fracture database



- The Problem
 - Severe musculoskeletal injuries often associated with loss of muscle
 - Surrounding muscle can hypertrophy but does not fully compensate
 - If complete loss of muscle unit- limited options to recover function

- Is there a way to replace lost muscle with scaffold to allow regeneration of new/functional muscle?
- **KeraNetics** is an advanced biomaterials company focused on creating keratin-based products for therapeutic and regenerative medical applications.(from their website)
- - Developed Keratin Gel scaffold which can serve as void filler and potentially as carrier for molecules to assist with muscle growth

- Basic Science work ongoing
- Animal study planned
- Needed clinical trial plan to assess safety
- Short time frame due to grant deadlines

- Limited clinical data
- Big issue in Wounded Warriors
- Utilized data from UVA studies on muscle to form materials/methods
- Plan for 5 patient trial
- 25-30 cc VML in anterior tibialis after injury

- Collaboration with BME dept
 - research MRI
 - Zebrascope (evaluate muscle fibrils)
 - Functional testing