Current Projects:

DIFFIR
Geriatric DIstal Femur: FIxation versus Replacement:A Randomized Controlled Trial of Acute Open Reduction Internal Fixation (ORIF) versus Distal Femur Replacement (DFR)
This study is designed to determine if acute DFR compared to ORIF results in improvements in knee pain and function in geriatric patients with distal femur fractures, as measured by the Oxford Knee Score (OKS)(52) up to 12 months with extended follow –up at 24 months.

SEXTANT
Evaluation of a New Strategy for Protocolized Antibiotic Care for Severe Open Fractures.
The proposed study is a multi-center, prospective randomized controlled trial comparing current standard of care treatment to the SEXTANT treatment protocol in patients with Type III open fractures of the tibia and IIIB fractures of the ankle and hindfoot.

ULTRAPRESS
Development of a Novel Method for Non-invasive Diagnosis of Compartment Syndrome.
To monitor a patient with suspected compartment syndrome, a clinician currently inserts a needle into the area of suspected compartment syndrome while an attached pressure-monitor records the pressure. An intra-compartment pressure of 30 mm Hg would signal compartment syndrome. Once a patient is suspected of compartment syndrome, ultrasound images of the affected and unaffected limb will be acquired for 30 seconds in each compartment. A processing algorithm will be applied to the ultrasound images. The investigators hypothesize that changes in muscle compartment pressure correlate to subtle changes in the ultrasound image.

ADAPT
Does a Digital Mental Health Intervention Affect Symptoms of Depression, Anxiety and Post-Traumatic Stress Disorder After Musculoskeletal Trauma? (ADAPT) A pilot and feasibility study.
The primary objective is determining feasibility via study recruitment rate, retention rate and engagement, and providing preliminary clinical data for a definitive multicenter clinical trial.

PAAIN 2
Personalized Pain Profiling in Hip and Knee Osteoarthritis Patients.
We seek to better understand the patient's response to pain medications after orthopaedic surgeries. Specifically, we want to know if the response to pain medication can be predicted based on known pharmacodynamic and pharmacokinetic models of pain medications being administered. To answer this question, we need to collect a large data set of recorded and time-stamped pain medications and pain assessment scores (VAS) as well as physiologic data collected from the wearable device (Oura ring) and patient charts (vital signs, medical history, height, weight, sex, sleep patterns, social history, etc.) Data analysis will be performed at UCSFs.

INVEST
IncreasiNg diVErSiTy study: A study for the improvement of racial and ethnic minority participation in low back pain research.
INVEST is an observational study of U.S. Black, Latino, Asian, Pacific Islander, or Native American adult men and women with chronic low back pain. The goal of the INVEST Study is to increase diversity in chronic low back pain (cLBP) research studies by developing strategies, methods, materials, and processes to increase enrollment and retention of underrepresented racial and ethnic minorities (Black, Latino, Asian, Pacific Islander, or Native American populations).

RESTORE-PME
CurvaFix® IntramedullaRy System for FixaTion Of Pelvic and AcetabulaR FracturEs
A Post Market Evaluation
The primary object of this study is to evaluate the use and performance of the IM Implant in a post-marketing setting.

The primary objective of this study is to evaluate the use and performance of the IM Implant.
The IM Implant has been cleared for commercial use in the United States by the U.S. Food and Drug Administration
(U.S. FDA) under 510(k) number K180050.

WEIGHT BEARING
Effect of Early Weight Bearing on Rehabilitation Outcomes in Patients with Traumatic Ankle and Tibial Plateau Fractures.
The purpose of this multi-center randomized controlled trial (RCT) is to compare outcomes following early versus delayed weight bearing among individuals with a traumatic ankle fracture. Simultaneously, a pilot RCT will be conducted in patients 18 years and older and surgically treated with a unicondylar plateau fracture without joint impaction. This study will enroll patients 18 years and older surgically treated for an ankle fracture or fracture dislocation (without syndesmosis) at participating civilian trauma centers and military treatment facilities.