

POSTDOC OPPORTUNITIES

The Alliance at Oregon is recruiting three (3) postdoctoral fellows for several recently funded collaborative projects within the [Guldborg](#) and [Willett](#) labs.

Compensation: \$54,835 - \$66,598 + benefits and relocation, +\$10,000 topping fellowship

Qualifications: Significant laboratory experience in regenerative medicine, biomechanics, biomarker assays, and/or preclinical models

For more information, view applications:

[Willett Lab](#) - [Guldborg Lab](#) - [Alliance at Oregon Open Pool](#)

Musculoskeletal Regenerative Rehabilitation

Goal: Restore function to damaged musculoskeletal tissues through development of novel evidence-based treatments that combine regenerative therapies and physical rehabilitation protocols.

Details: Coordinated 3D bioprinted patient-specific in vitro models, novel sensor-enabled preclinical models, instrumented rehabilitation systems, and predictive multivariate modeling techniques will be used to optimize functional recovery from injuries to bone, muscle, tendon/ligament, and cartilage.

Immunoengineering Strategies for Musculoskeletal Trauma

Goal: Investigate (i) how the development of systemic immune dysregulation and immunosuppression relates to functional bone regeneration and (ii) how systemic immunomodulation impacts the immune system and regenerative outcomes following severe musculoskeletal trauma.

Details: This project combines established pre-clinical composite trauma models, systemic cellular and cytokine biomarkers of immune dysregulation, advanced machine learning algorithms, and nanoparticle-mediated immunomodulatory strategies to enhance functional regeneration following severe musculoskeletal injuries.

Post-Traumatic Osteoarthritis

Goal: The goals of this research are to develop early interventions for joint trauma that accelerate healing and reduce or even prevent downstream post-traumatic osteoarthritis. We are developing joint-specific, patient-specific in vitro model systems as well as in vivo preclinical injury models and using these to perform high throughput therapeutic testing.

Details: Includes identifying early biomarkers and cell signaling pathways that predict osteoarthritis to formulate candidate therapies and delivery vehicles that specifically target affected joint tissues. Will also explore combination treatments that would synergize exercise, intra-articular injectables, and modulated movement biomechanics to reduce pain, pathologic locomotion, and degenerative structural joint conditions.