

Postdoctoral or staff scientist positions in the fields of musculoskeletal disease and cancer immunotherapy.

GENERAL SUMMARY

Two postdoctoral or staff scientist positions are available immediately in the Department of Pathology & Laboratory Medicine at the University of Rochester Medical Center. The candidate will do basic and translational research in either musculoskeletal disease or cancer immunotherapy, funded by multiple NIH R01 and DoD research projects.

The position in bone research will investigate the mechanism by which interactions among T cells, macrophage and osteoblasts cause osteoporosis and immunosenescence during aging through TRAF3-NF-kappaB signaling using sophisticated genetical mouse models, cell fate mapping coupled with single-cell transcriptomics, three-dimensional imaging and histomorphometry analysis. He/she will also evaluate if our recently patented bone-targeted hydroxychloroquine prevents TRAF3 lysosomal degradation to treat osteoporosis by blocking the interactions between macrophage and T cells.

The candidate in cancer immunotherapy will use humanized mice coupled with patient-derived xenograft model to evaluate the efficacy of our novel adoptive macrophage delivering a single tumoricidal factor to targeted treat solid cancer while avoiding the systemic side-effects like cytokine release syndrome. He/she will also investigate the effects of microbiota-derived LPS signaling and multi-drug resistance on the fate and therapeutic response of metastatic cancer to the engineered macrophage.

EDUCATION AND EXPERIENCE REQUIRED

The applicants must have a PhD, MD or MD/PhD degree, be highly motivated with a strong motivation to work independently with good writing and oral communication skills. Prior experience in small animal handling/surgery, flow cytometry, cell culture, immunostaining /confocal microscopy is preferred. Experience in analysis of single cell and bulk RNA-seq, gene cloning, bone marrow transplantation, bone histomorphometry would be a plus.

APPLICATION REQUIREMENTS

To apply for these positions, please email a cover letter and C.V. to:

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