

2023 OARSI Travel Scholar Program Report

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As a 2023 OARSI Travel Scholar, I had the incredible opportunity to spend six months at Boston University School of Medicine under the guidance of Professor Tuhina Neogi. I vividly remember the excitement of receiving the scholarship, and although there was a slight delay, I began my journey in September 2023. My time in Boston was truly rewarding—everyone I met was welcoming, supportive, and passionate about their work.

During my stay, I made significant progress on two research projects, both of which are now nearly complete and being prepared for submission to the American College of Rheumatology 2024 Convergence and the OARSI 2025 Conference. A particularly memorable experience was attending the ACCELERATOR meeting of the Boston Musculoskeletal Clinical Research Collaboratory, where I connected with many talented professionals.

The projects I worked on focused on the role of antidepressants in osteoarthritis (OA) management, specifically examining how different classes of antidepressants relate to pain outcomes, such as pain severity, pain sensitization, and the need for joint replacement surgery. These medications include:

- Analgesic antidepressants (AADs), like tricyclic antidepressants (TCAs, e.g., amitriptyline), serotonin-norepinephrine reuptake inhibitors (SNRIs, e.g., duloxetine), and gabapentinoids (GBPs, e.g., gabapentin), which are commonly used for pain management.
- Selective serotonin reuptake inhibitors (SSRIs), like fluoxetine, which are primarily prescribed for depression but may also influence pain outcomes.

Our findings suggest that while SSRIs are mainly used to treat depression, they may also benefit knee OA symptoms. In contrast, analgesic antidepressants such as amitriptyline, duloxetine, and gabapentin, though effective for pain relief, were associated with a higher risk of patients eventually needing total joint arthroplasty compared to SSRI users. This highlights the importance of personalized treatment approaches in OA management.

This experience has been invaluable for my growth as an early-career investigator. The OARSI Travel Scholarship provided me with an outstanding opportunity to broaden my research knowledge, immerse myself in a new scientific environment, and build lasting professional relationships and friendships.