

## Karen Elizabeth Malacon

- MD Student, expected graduation Spring 2025
- Ph.D. Student in Neurosciences, admitted Autumn 2022
- MSTP Student

### Publications

---

#### PUBLICATIONS

- **Provider's exposure to diversity contributes to socioeconomic disparities in lumbar and cervical fusion outcomes.** *World neurosurgery: X*  
Touponse, G., Malacon, K., Li, G., Yoseph, E., Han, S., Zygourakis, C.  
2024; 23: 100382
- **Gender Differences in Electronic Health Record Usage Among Surgeons.** *JAMA network open*  
Malacon, K., Touponse, G., Yoseph, E., Li, G., Wei, P. J., Kicielinski, K., Massie, L., Williamson, T., Han, S., Zygourakis, C.  
2024; 7 (7): e2421717
- **Myelin plasticity in the ventral tegmental area is required for opioid reward.** *Nature*  
Yalçın, B., Pomrenze, M. B., Malacon, K., Drexler, R., Rogers, A. E., Shamardani, K., Chau, I. J., Taylor, K. R., Ni, L., Contreras-Esquivel, D., Malenka, R. C., Monje, M.  
2024
- **Nf1 mutation disrupts activity-dependent oligodendroglial plasticity and motor learning in mice.** *Nature neuroscience*  
Pan, Y., Hysinger, J. D., Yalçın, B., Lennon, J. J., Byun, Y. G., Raghavan, P., Schindler, N. F., Anastasaki, C., Chatterjee, J., Ni, L., Xu, H., Malacon, K., Jahan, et al  
2024
- **Barriers to neurosurgery for medical students: a national study focused on the intersectionality of gender and race.** *Journal of neurosurgery*  
Pugazenthi, S., Malacon, K., Kim, N. C., Stuebe, C. M., Yoh, N., Bhanja, D., Walker, E., Bauman, M. M., Becker, K., Johnson, G. W., Caston, R. M., Lee, H., Strahle, et al  
2024: 1-12
- **Costs and Outcomes of Total Joint Arthroplasty in Medicare Beneficiaries Are Not Meaningfully Associated with Industry Payments.** *The Journal of bone and joint surgery. American volume*  
Wadhwa, H., Leung, C., Sklar, M., Malacon, K., Rangwalla, T., Williamson, T., Castillo, T. N., Amanatullah, D. F., Zygourakis, C. C.  
2023
- **Trends in Management of Osteoporosis Following Primary Vertebral Compression Fracture.** *Journal of the Endocrine Society*  
Malacon, K., Beach, I., Touponse, G., Rangwalla, T., Lee, J., Zygourakis, C.  
2023; 7 (7): bvad085
- **Microbial modulation via cross-fostering prevents the effects of pervasive environmental stressors on microglia and social behavior, but not the dopamine system.** *Molecular psychiatry*  
Smith, C. J., Rendina, D. N., Kingsbury, M. A., Malacon, K. E., Nguyen, D. M., Tran, J. J., Devlin, B. A., Raju, R. M., Clark, M. J., Burgett, L., Zhang, J. H., Cetinbas, M., Sadreyev, et al  
2023
- **Trends, Payments, and Costs Associated with BMP Use in Medicare Beneficiaries Undergoing Spinal Fusion.** *The spine journal : official journal of the North American Spine Society*  
Wadhwa, H., Wu, J. Y., Malacon, K., Ames, C., Ratliff, J., Zygourakis, C.  
2023

- **First reported use of machine vision image guided system for unstable thoracolumbar fusion: Technical case report** *INTERDISCIPLINARY NEUROSURGERY-ADVANCED TECHNIQUES AND CASE MANAGEMENT*  
Malacon, K., Fatemi, P., Zygourakis, C. C.  
2022; 30
- **Operative Versus Nonoperative Management of Unstable Spine Fractures in the Elderly: Outcomes and Mortality.** *Spine*  
Malacon, K., Rangwalla, T., Wadhwa, H., Zygourakis, C.  
2022
- **Prenatal opioid exposure inhibits microglial sculpting of the dopamine system selectively in adolescent male offspring.** *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology*  
Smith, C. J., Lintz, T., Clark, M. J., Malacon, K. E., Abiad, A., Constantino, N. J., Kim, V. J., Jo, Y. C., Alonso-Caraballo, Y., Bilbo, S. D., Chartoff, E. H.  
2022; 47 (10): 1755-1763
- **Prenatal environmental stressors impair postnatal microglia function and adult behavior in males.** *Cell reports*  
Block, C. L., Eroglu, O., Mague, S. D., Smith, C. J., Ceasrine, A. M., Sriworarat, C., Blount, C., Beben, K. A., Malacon, K. E., Ndubuizu, N., Talbot, A., Gallagher, N. M., Chan Jo, et al  
2022; 40 (5): 111161
- **Mild respiratory COVID can cause multi-lineage neural cell and myelin dysregulation.** *Cell*  
Fernández-Castañeda, A., Lu, P., Geraghty, A. C., Song, E., Lee, M. H., Wood, J., O'Dea, M. R., Dutton, S., Shamardani, K., Nwangwu, K., Mancusi, R., Yalçın, B., Taylor, et al  
2022
- **First reported use of real-time intraoperative computed tomography angiography image registration using the Machine-vision Image Guided Surgery system: illustrative case.** *Journal of neurosurgery. Case lessons*  
Wadhwa, H., Malacon, K., Medress, Z. A., Leung, C., Sklar, M., Zygourakis, C. C.  
2021; 1 (18): CASE2125
- **Internal state configures olfactory behavior and early sensory processing in Drosophila larvae** *SCIENCE ADVANCES*  
Vogt, K., Zimmerman, D. M., Schlichting, M., Hernandez-Nunez, L., Qin, S., Malacon, K., Rosbash, M., Pehlevan, C., Cardona, A., Samuel, A. T.  
2021; 7 (1)
- **First reported use of real-time intraoperative computed tomography angiography image registration using the Machine-vision Image Guided Surgery system: illustrative case** *Journal of Neurosurgery: Case Lessons*  
Wadhwa, H., Malacon, K., Medress, Z. A., Leung, C., Sklar, M., Zygourakis, C. C.  
2021
- **Sex differences in microglia as a risk factor for Alzheimer's disease** *Sex and Gender Differences in Alzheimer's disease*  
Delage, C., Rendina, D. N., Malacon, K. E., Tremblay, M., Bilbo, S. D.  
Elsevier Inc..2021; 1: 79-104
- **Neonatal immune challenge induces female-specific changes in social behavior and somatostatin cell number** *BRAIN BEHAVIOR AND IMMUNITY*  
Smith, C. J., Kingsbury, M. A., Dziabis, J. E., Hanamsagar, R., Malacon, K. E., Tran, J. N., Norris, H. A., Gulino, M., Bordt, E. A., Bilbo, S. D.  
2020; 90: 332-45