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- MD Student with Scholarly Concentration in Molecular Basis of Medicine / Surgery, expected graduation Spring 2026
- Masters Student in Medicine, admitted Summer 2023

Publications

PUBLICATIONS

- **Serotonin modulates nucleus accumbens circuits to suppress aggression in mice.** *Nature communications*
Zhang, Z., Touponse, G. C., Alderman, P. J., Yassine, T., Pomrenze, M. B., Harris, T. W., Shank, A. N., Malenka, R. C., Eshel, N.
2026
- **Cholinergic modulation of dopamine release drives effortful behaviour.** *Nature*
Touponse, G. C., Pomrenze, M. B., Yassine, T., Denomme, N., Wang, M., Mehta, V., Zhang, Z., Malenka, R. C., Eshel, N.
2026
- **DISTINCT ENCODING OF REWARD AND AVERSION BY D1 CELL SUBTYPES IN THE NUCLEUS ACCUMBENS**
Pomrenze, M., Denomme, N., Baek, J., Wang, M., Touponse, G., Tucciarone, J., Eshel, N., Malenka, R.
SPRINGERATURE.2026
- **Serotonin modulates nucleus accumbens circuits to suppress aggression.** *bioRxiv : the preprint server for biology*
Zhang, Z., Touponse, G. C., Alderman, P. J., Yassine, T., Pomrenze, M. B., Harris, T. W., Shank, A. N., Malenka, R. C., Eshel, N.
2025
- **Seizure outcomes of laser interstitial thermal therapy (LITT) for drug-resistant extratemporal epilepsy.** *Epileptic disorders : international epilepsy journal with videotape*
Touponse, G. C., Wang, A. R., Buch, V. P., Purger, D. A., Halpern, C. H., Henderson, J. M., Falco-Walter, J., Le, S.
2025
- **Pregnancy-Related Spinal Biomechanics: A Review of Low Back Pain and Degenerative Spine Disease.** *Bioengineering (Basel, Switzerland)*
Yoseph, E. T., Taiwo, R., Kiapour, A., Touponse, G., Massaad, E., Theologitis, M., Wu, J. Y., Williamson, T., Zygourakis, C. C.
2025; 12 (8)
- **5-HT2C receptors in the nucleus accumbens constrain the rewarding effects of MDMA.** *Molecular psychiatry*
Pomrenze, M. B., Vaillancourt, S., Salgado, J. S., Raymond, K. B., Llorach, P., Sacai, H., Rijsketic, D. R., Hietamies, T. M., Touponse, G. C., Cardozo Pinto, D. F., Rastegar, Z., Casey, A. B., Eshel, et al
2025
- **Cost of Orthopaedic Trauma Surgery is Weakly Associated with Industry Payments to Surgeons.** *Journal of orthopaedic trauma*
Wadhwa, H., Touponse, G., Li, G., Bishop, J. A., Zygourakis, C. C.
2025
- **CT pan-scanning versus targeted imaging among older adults after ground level falls.** *Trauma surgery & acute care open*
Touponse, G., Choi, J., Calderon, C., Luna, S. E., Tennakoon, L., Ko, A.
2025; 10 (1): e001534
- **Opponent control of reinforcement by striatal dopamine and serotonin.** *Nature*
Cardozo Pinto, D. F., Pomrenze, M. B., Guo, M. Y., Touponse, G. C., Chen, A. P., Bentzley, B. S., Eshel, N., Malenka, R. C.
2024
- **Brain metastases from esophageal cancer: A retrospective review from a single institution.** *World neurosurgery*
Touponse, G. C., Li, G., Tai, J. W., Rodrigues, A. J., Granucci, M., Burnside, G., Bhambhani, H. P., Han, S. S., Ji, H. P., Gephart, M. H.

2024

- **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
- **Socioeconomic disparities in lumbar fusion rates were exacerbated during the COVID-19 pandemic.** *North American Spine Society journal*
Wu, J. Y., Tang, M., Touponse, G., Theologitis, M., Williamson, T., Zygourakis, C. C.
2024; 18: 100321
- **Demographic and Socioeconomic Trends in Cervical Fusion Utilization from 2004 through 2021 and the COVID-19 Pandemic.** *World neurosurgery*
Wu, J. Y., Touponse, G. C., Theologitis, M., Ahmad, H. S., Zygourakis, C. C.
2023
- **Striatal dopamine integrates cost, benefit, and motivation.** *Neuron*
Eshel, N., Touponse, G. C., Wang, A. R., Osterman, A. K., Shank, A. N., Groome, A. M., Taniguchi, L., Cardozo Pinto, D. F., Tucciarone, J., Bentzley, B. S., Malenka, R. C.
2023
- **Socioeconomic Influence on Cervical Fusion Outcomes.** *Clinical spine surgery*
Touponse, G., Theologitis, M., Beach, I., Rangwalla, T., Li, G., Zygourakis, 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
- **Socioeconomic Effects on Lumbar Fusion Outcomes.** *Neurosurgery*
Touponse, G., Li, G., Rangwalla, T., Beach, I., Zygourakis, C.
2023
- **Evidence-based surgery for laparoscopic cholecystectomy.** *Surgery open science*
Fisher, A. T., Bessoff, K. E., Khan, R. I., Touponse, G. C., Yu, M. M., Patil, A. A., Choi, J., Stave, C. D., Forrester, J. D.
2022; 10: 116-134
- **Scoping review of traumatic hemothorax: Evidence and knowledge gaps, from diagnosis to chest tube removal.** *Surgery*
Choi, J., Villarreal, J., Andersen, W., Min, J. G., Touponse, G., Wong, C., Spain, D. A., Forrester, J. D.
2021
- **Practical Computer Vision Application to Compute Total Body Surface Area Burn: Reappraising a Fundamental Burn Injury Formula in the Modern Era.** *JAMA surgery*
Choi, J., Patil, A., Vendrow, E., Touponse, G., Aboukhatir, L., Forrester, J. D., Spain, D. A.
2021