Majid Khan, Ph.D.

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PROFESSIONAL EXPERIENCE

Fathhome / Trinion Labs — Chief Scientific Officer — Nov 2025 – Present
Dallas, TX · (Remote) · Previously R&D Member of Technical Staff (Aug 2022 – Oct 2025)

CONNEQT Health — Scientific Fellow & Customer Success Manager — Jun 2025 – Present
Naperville, IL · (Hybrid)

DHS/FEMA Nonprofit Security Grant Program (NSGP / NSGP-SS) — Chief Project Officer — Sep 2023 – Present
Salt Lake City, UT · (Remote) · Faith-based nonprofit community organizations

Apple — Technical Specialist; Technical Expert — 2018 – 2019; 2024 – 2025

University of Nevada, Reno & Utah — Affiliate Clinical & Translational Research Scientist — Jan 2024 – Present

ATEC Spine — Intraoperative Medical Device Liaison — 2024

University of Nevada, Reno School of Medicine — **Graduate Clinical Research Scientist** — 2019 – 2023

Truckee Meadows Community College — STEM & Human Anatomy & Physiology (Cadaver Lab) Tutor — 2015 – 2017

Saint Mary's Regional Medical Center — Biomedical Engineering Intern — 2014 – 2015

EDUCATION

Ph.D., Cellular and Molecular Biology, University of Nevada, Reno School of Medicine — 2019 – 2023
Dissertation: Advancing Clinical Practices and Patient Outcomes Through Computational Analyses in Medicine: A Focus on SARS-CoV-2 Epidemiology, COVID-19, and Long-COVID Neuropathogenesis. ScholarWolf | ResearchGate

B.S., Biochemistry & Molecular Biology, University of Nevada, Reno — 2016 – 2018
Thesis: ZIKV in Controlling Growth of Neuroblastoma Stem Cells: Use of ZIKV for Targeted Immunotherapy of Neuroblastoma.

A.S., Truckee Meadows Community College — 2013 – 2016
Reno, NV

HONORS & AWARDS

Professional

- Mountain West Clinical & Translational Research (MW-CTR) Pilot Grant — $150,000 (long-COVID neurological sequelae; fMRI changes and serum protein biomarkers). — 2024
- DHS/FEMA Nonprofit Security Grant Program (NSGP / NSGP-SS) — ~$1.45M cumulative competitive Federal funding awarded as named awardee for security hardening of community facilities. — 2023 – Present
- CDC/NIOSH SBIR Phase I, R43OH012283 (R&D Scientist, Member of Technical Staff) — $250k ozone pathogen-inactivation device (2022). — 2022 – Present

Graduate

- Ernest W. Mack, M.D. Scholarship — academic excellence. — 2023
- Dean's Benevolence Endowment Award — academic excellence. — 2023
- Wiener Biomedical Graduate Scholar — academic excellence. — 2023
- George H. Bourget Scholarship — academic excellence. — 2023
- The Doyle Foundation Scholarship — academic excellence. — 2023
- Crain Biomedical Research Scholarship — graduate academic excellence. — 2021
- Top 10 Featured Poster, CNS Annual Meeting — neurosurgery clinical research. — 2021
- Top 5 Candidate, AANS Young Student Neurosurgeon Committee — nominated by Dr. Karsy. — 2021
- Summer Research Stipend Award, UNR Med Office of Medical Research. — 2020

- Research Stipend Award, UNR Med Office of Medical Research. 2020
- Top 50 Selected Abstract, ACS Virtual Clinical Congress. 2020
- The Doyle Foundation Scholarship — academic excellence. 2020
- Robert H. Case Memorial Scholarship — academic excellence. 2019
- Dick Joseph Memorial Scholarship — academic excellence. 2019
- UNR Med Annual Student Research Day — 2nd place, best overall research poster. 2019
- NV INBRE Pilot Grant, NIH/NIGMS — $10,000 (ZIKV / neuroblastoma; GM103440). 2018

Undergraduate

- Dean's List. 2016 – 2018
- Rob Robertson Pre-Medical Scholarship — academic excellence. 2016 – 2018
- Sherman T. Renewable Scholarship — academic excellence. 2016 – 2018
- Asian American Pacific Islander Alumni Association Scholarship —service and leadership. 2018
- NV INBRE Pilot Grant, NIH/NIGMS. 2017
- Young Alumni Chapter Scholarship — academic excellence. 2017
- PathMaker Summer Research Program (U of U / HCI) — $5,000 (HIF-1α knockout - meningioma/glioma). 2017

RESEARCH EXPERIENCE

University of Nevada, Reno — Graduate Research Assistant — Dr. S. Verma 2019 – 2023

- Designed and executed the computational core of a SARS-CoV-2 research program: next-generation RNA-sequencing of patient samples for differential gene expression and viral/host pathway analysis, and study of herpesvirus (OC43) reactivation in infected cell lines.
- Conducted in-vivo cardiovascular physiology and stereotaxic microsurgery in murine models to study the role of arcuate (ARC-TH) neurons in blood-pressure regulation and hypertension development.
- Applied in-vitro molecular methods — RNAscope, Western blot, and immunofluorescence — across brain dissections and SH-SY5Y neuronal cultures.
- Performed metagenomic analysis to identify co-occurring respiratory pathogens; partnered with UNR chemical engineering on wastewater-based SARS-CoV-2 variant surveillance and sequencing across multiple community sites.
- First-authored the resulting multi-site surveillance study (One Health, 2023) and identification of a novel biomarker (Nature: Scientific Reports, 2026); the computational work formed the basis of the doctoral dissertation on COVID-19 and long-COVID neuropathogenesis.

University of Utah, Dept. of Neurosurgery — Co-Investigator — Drs. M. Karsy & R. L. Jensen 2019 – 2023

- Investigator in a high-output clinical-research group, contributing to numerous peer-reviewed publications and national conference abstracts across neurosurgery, skull-base oncology, and neuro-oncology.
- First- or co-first-authored national-database studies using ACS-NSQIP and the National Inpatient Sample with propensity-score matching and multivariate methods — pituitary-adenoma reporting quality (STROBE), hospital-volume effects in hydrocephalus, and the neurosurgical advanced-practice-provider workforce.
- Contributed to systematic reviews and big-data analyses spanning skull-base frailty and outcomes, esthesioneuroblastoma staging, sella/orbit pathology, and racial/ethnic disparities in surgical outcomes.
- Delivered statistical analyses, figures, and manuscripts; presented as first/presenting author at CNS, AANS, NASBS, and NCCN national meetings.

Sierra Eye Associates — Co-Investigator — Dr. A. Khanani 2020 – 2023

- Contributed to a large body of ophthalmic-pharmacology and retinal-therapeutics research, including first-author reviews of anti-VEGF / angiopoietin agents (faricimab) and extended drug-delivery systems for neovascular AMD and diabetic macular edema.
- Compiled and analyzed clinical-trial data (faricimab and port-delivery-system programs), reviewed protocols, and built tables and figures for manuscripts and industry-facing publications.
- Co-authored peer-reviewed articles and case reports (real-world dual VEGF-A / Ang-2 inhibition; Purtscher's-like retinopathy) and multiple continuing-education and trade publications.

UCLA, Dept. of Neurosurgery — Co-Investigator — Dr. Y. Muftuoglu 2020 – 2022

- Contributed to clinical case-report research — chart-data review, figure generation, and manuscript writing — with the UCLA neurosurgery group.

UNR Med, Dept. of Radiology — Co-Investigator — Dr. R. Rangaswamy 2020 – 2022

- Supported neuro-interventional radiology research, including a comparison of CT-ASPECTS versus standard-of-care postoperative imaging and case studies (middle-meningeal-artery embolization; bilateral internal-carotid-artery agenesis).
- Performed preliminary imaging-data analysis and helped design methods for future studies.

University of Nevada, Reno — Student Researcher — Dr. S. Verma 2017 – 2019

- Led an INBRE-funded undergraduate thesis investigating Zika virus as a targeted oncolytic immunotherapy against neuroblastoma stem cells, using BSL-2 viral/cell culture, Western blot, PCR, and FISH.
- Contributed to KSHV virology (ORF59–nucleolin interaction during lytic reactivation); presented at multiple state and national research symposia.

Huntsman Cancer Institute — Student Researcher — Dr. R. Jensen & Dr. D. Gillespie 2017 – 2018

- Selected for the PathMaker summer research program; engineered HIF-1α knockouts in meningioma and glioma cell lines via shRNA interference and the CRISPR-Cas9 system.
- Performed mouse tissue biopsy, cell/viral culture, Western blot, PCR, and RNA-seq; presented findings at national IDeA (NISBRE) and state research symposia.

PUBLICATIONS

Peer-Reviewed Articles

- Earl ER, Tenhoeve S, **Khan M**, Carter AS, Gill A, Alt JA, Jensen RL, Karsy M. Impact of Rurality on Access to Care in Adult Patients with Sinonasal Squamous Cell Carcinoma. Biomedicine Hub. 2026. doi:10.1159/000552782
- Brown J, Rennert RC, Earl ER, **Khan M**, Bauer SZ, Cutler CB, Nadel JL, Budohoski KP, Couldwell WT. Minimally Invasive Far Lateral Approach to the Ventrolateral Skull Base: A Single-Center Experience. Oper Neurosurg (Hagerstown). 2026. doi:10.1227/ons.0000000000001967
- Li L, **Khan M**, Haak L, Verma SC, Pagilla K. High Prevalence of Tomato Brown Rugose Fruit Virus in Domestic Wastewater as a Potential Viral Indicator for Treatment Systems. Sci Rep. 2026;16(1):4698. doi:10.1038/s41598-025-34782-x
- Adhikari K, Zhou E, **Khan M**, Goswami S, Khazaieli A, Simmons BA, Awasthi D, Verma SC. Inactivation of BSL-2 and BSL-3 Human Pathogens Using FATHHOME's Trinion Disinfector: A Rapid and Eco-Friendly Ozone-Based Dry Disinfection Approach. Biosafety and Health. 2025;7(4):245-256. doi:10.1016/j.bsheal.2025.07.006
- Cole KL, Tenhoeve SA, **Khan M**, Findlay MC, Cortez J, Grandhi R, Menacho ST. Barriers to Care: Examining the Unique Obstacles of Indigenous American Patients With Acute Neurosurgical Injuries. Neurosurgery. 2025. doi:10.1227/neu.0000000000003162
- **Khan M**, Akinyemi OE, Masud M, Thomas MJ, Martin N, Khanani AM. Targeting the Complement System in Geographic Atrophy: Mechanisms and Therapeutics. Expert Rev Ophthalmol. 2024. doi:10.1080/17469899.2023.2286607
- Penha FM, Masud M, Khanani ZA, Thomas M, Fong RD, Smith K, Chand A, **Khan M**, Gahn G, Melo GB, Khanani AM. Review of Real-World Evidence of Dual Inhibition of VEGF-A and ANG-2 with Faricimab in nAMD and DME. Int J Retina Vitreous. 2024;10(1):5. doi:10.1186/s40942-024-00525-9 PMID:38233896
- Findlay MC, Bounajem MT, Kim RB, Henson JC, Azab MA, Cutler CB, **Khan M**, et al. Subtemporal Approach for the Treatment of Ruptured and Unruptured Distal Basilar Artery Aneurysms: Is There a Contemporary Use? Oper Neurosurg (Hagerstown). 2024. doi:10.1227/ons.0000000000001185 PMID:38690880
- Bauer S, Findlay M, **Khan M**, Alexander H, Lucke-Wold B, Hamrick F, Hunsaker J, Karsy M. Anterior Skull Base Outcomes and Complications: A Propensity Score–Matched Evaluation of Age and Frailty as Measured by mFI-5 from the ACS-NSQIP Database. Indian J Neurosurg. 2024;13(01):035-043. doi:10.1055/s-0043-1770908
- Carter A, Findlay MC, Earl ER, **Khan M**, Bauer S, Farsi K, Lucke-Wold B, Karsy M. In Reply to the Letter to the Editor Regarding "Systematic Review of Research, Mentorship, and Career Resources for Medical Students Pursuing Neurosurgical Training." World Neurosurg. 2024;182:236. doi:10.1016/j.wneu.2023.11.097 PMID:38390891
- Carter A, Findlay MC, Earl ER, **Khan M**, Bauer S, Farsi K, Lucke-Wold B, Karsy M. In Reply to the Letter to the Editor Regarding "Systematic Review of Research, Mentorship, and Career Resources for Medical Students Pursuing Neurosurgical Training." World Neurosurg. 2023. doi:10.1016/j.wneu.2023.09.043

- Findlay MC, Drexler R, **Khan M**, Cole KL, Karbe A, Rotermund R, et al., Karsy M. A Multicenter, Propensity Score–Matched Assessment of Endoscopic Versus Microscopic Approaches in the Management of Pituitary Adenomas. Neurosurgery. 2023;93:794-801. doi:10.1227/neu.0000000000002497
- Findlay MC, Bauer SZ, **Khan M**, Kim RB, Park S, Hepzibha A, Karsy M. Are There Racial and Ethnic Health Disparities Among Outcomes After Anterior Cranial Fossa Surgery? A Propensity Score–Matched ACS-NSQIP Study. Neurosurgery. 2023. doi:10.1227/neu.0000000000002397
- Carter A, Findlay MC, Earl ER, **Khan M**, Bauer S, Farsi K, Lucke-Wold B, Karsy M. Systematic Review of Research, Mentorship, and Career Resources for Medical Students Pursuing Neurosurgical Training. World Neurosurg. 2023;179:28-36. doi:10.1016/j.wneu.2023.07.133
- Cutler CC, Azab MA, Lucke-Wold B, **Khan M**, Henson JC, Gill AS, Alt JA, Karsy M. Systematic Review of Treatment Options and Therapeutic Responses for Lesions of the Sella and Orbit: Evidence-Based Recommendations. World Neurosurg. 2023;173:136-145.e130. doi:10.1016/j.wneu.2022.12.108
- Henson JC, Cutler CC, Cole KL, Lucke-Wold B, **Khan M**, Alt JA, Karsy M. Immunohistochemical Profiling and Staging in Esthesioneuroblastoma: A Single-Center Cohort Study and Systematic Review. World Neurosurg. 2023;170:e652-e665. doi:10.1016/j.wneu.2022.11.094
- **Khan M**, Hanna C, Findlay M, Lucke-Wold B, Karsy M, Jensen RL. Modeling Meningiomas: Optimizing Treatment Approach. Neurosurg Clin N Am. 2023;34(3):479-492. doi:10.1016/j.nec.2023.02.014
- Rawanduzy C, Earl E, Brooks J, **Khan M**, Dadario NB, Sughrue M, Karsy M. Connectomic Networks and Their Impact on Clinical Outcomes in Glioma Treatment: A Review. Indian J Neurosurg. 2023;12:116-131. doi:10.1055/s-0043-1771214
- Hosseini-Siyanaki MR, Segherlou ZH, Liu S, Azab MA, **Khan M**, Lucke-Wold B. Recurrent Meningioma: When to Intervene. BOHR Int J Neurol Neurosci. 2023;2(1):3-11. doi:10.54646/bijnn.008
- Findlay MC, **Khan M**, Kundu M, Johansen CM, Lucke-Wold B. Innovative Discoveries in Neurosurgical Treatment of Neurodegenerative Diseases: A Narrative Review. Curr Alzheimer Res. 2023;20(6):394-402. doi:10.2174/1567205020666230911125646
- **Khan M**, Li L, Haak L, Payen SH, Carine M, Adhikari K, Uppal T, Hartley PD, Vasquez-Gross H, Petereit J, Verma SC, Pagilla K. Significance of Wastewater Surveillance in Detecting the Prevalence of SARS-CoV-2 Variants and Other Respiratory Viruses in the Community—A Multi-Site Evaluation. One Health. 2023;16:100536. doi:10.1016/j.onehlt.2023.100536
- **Khan M**, Yost S, Yu S, Cutler C, Henson JC, Azab MA, Colby S, Karsy M. Evaluating Pituitary Adenomas Using National Research Databases: Systematic Review of the Quality of Reporting Based on the STROBE Scale. Neurosurg Rev. 2022;45(6):3801-3815. doi:10.1007/s10143-022-01888-z
- **Khan M**, Joyce E, Horn J, Scoville J, Ravindra V, Menacho S. Postoperative Bowel Complications After Non-Shunt-Related Neurosurgical Procedures: Case Series and Review of the Literature. Neurosurg Rev. 2022;45(1):275-283. doi:10.1007/s10143-021-01609-y PMID:34297261
- Hosseini-Siyanaki MR, Lucke-Wold B, **Khan M**. Exploration of Treatments for Subarachnoid Hemorrhage. J Biomedical Research. 2022;3(1):48-55. doi:10.46439/biomedres.3.026 full text (ResearchGate)
- Cutler CB, King P, **Khan M**, Olowofela B, Lucke-Wold B. Innovation in Neurosurgery: Lessons Learned, Obstacles, and Potential Funding Sources. Neurons and Neurological Disorders. 2022;1(2). doi:10.58489/2836-8851/003
- Aziz A, **Khan M**, Baumal CR, Khanani AM. Faricimab: An Emerging Therapy for the Treatment of Neovascular Age-Related Macular Degeneration. Touch Ophthalmology. 2021;15(1):23-25. doi:10.17925/OPHT.2021.15.1.23
- Hunsaker JC, **Khan M**, Gamblin A, Karsy M, Couldwell WT. Use of a Surgical Stepdown Protocol for Cost Reduction After Transsphenoidal Pituitary Adenoma Resection: A Case Series. World Neurosurg. 2021;152:e476-e483. doi:10.1016/j.wneu.2021.05.126 PMID:34098141
- Hunsaker JC, **Khan M**, Harper J, Makarenko S, Evans J, Couldwell WT, Karsy M. Prediction of Readmission and Complication in Pituitary Adenoma Resection via the NSQIP Database. Cureus. 2021;13(5):e14809. doi:10.7759/cureus.14809 PMID:34123604
- **Khan M**, Farnsworth B, Pope B, Sherrod B, Karsy M. Impact of Hospital Volume on Outcome After Surgical Treatment for Hydrocephalus: A U.S. Population Study from the National Inpatient Sample. Cureus. 2021;13(2):e13617. doi:10.7759/cureus.13617 PMID:33816016

- **Khan M***, Harper J*, Hunsaker JC, Kraus KL, Adogwa O, Mukherjee D, Kang A, Swartz K, Origitano TC, Guan J, Karsy M. Evaluating the Role of Advanced Practice Providers in Neurosurgery. Neurosurgery. 2021;88(3):E285-E287. (*co-first author) doi:10.1093/neuros/nyaa502 PMID:33370811
- Gahn GM, Khanani AM, **Khan M**, Aziz A, Siddiqui F, London NJ, Mukkamala LK, Morse LS. Purtscher's-Like Retinopathy Associated with Acute Pancreatitis. Am J Ophthalmol Case Rep. 2020;20:100892. doi:10.1016/j.ajoc.2020.100892 PMID:32913924
- **Khan M**, Aziz A, Shafi N, Abbas T, Khanani AM. Targeting Angiopoietin in Retinal Vascular Diseases: A Literature Review and Summary of Clinical Trials Involving Faricimab. Cells. 2020;9(8):1869. doi:10.3390/cells9081869 PMID:32785136

Conference Abstracts

- Cole KL, Tenhoeve S, Findlay M, **Khan M**, Cortez J, Grandhi R, Menacho ST. Measuring Success in Distance Traveled: Indigenous American Patients with Acute Neurosurgical Injuries. Neurosurgery. 2025;71(Suppl 1):136. doi:10.1227/neu.0000000000003360_1022
- Henson JC, Cutler CC, Cole KL, Lucke-Wold B, **Khan M**, Alt JA, Karsy M. Immunohistochemical Profiling and Staging in Esthesioneuroblastoma. J Neurol Surg B Skull Base. 2023;84(S01). doi:10.1055/s-0043-1762019
- Findlay MC, Bauer SZ, **Khan M**, Kim RB, Park S, Hepzibha A, Karsy M. Racial and Ethnic Health Disparities Among Tumor Cases of the Anterior Cranial Fossa: A Propensity Score–Matched ACS-NSQIP Study. J Neurol Surg B Skull Base. 2023;84(S01). doi:10.1055/s-0043-1762269
- Dioso ER, Rennert RC, **Khan M**, Bauer SZ, Cutler CB, Karsy M, Couldwell WT. Far Lateral Approach to the Ventrolateral Skull Base: Case Series. J Neurol Surg B Skull Base. 2023;84(S01). doi:10.1055/s-0043-1762339
- Dioso ER, Carter AS, **Khan M**, Karsy M. The Impact of Rurality on Treatment and Outcomes Among Adult Patients with Sinonasal Malignancies in Utah. J Neurol Surg B Skull Base. 2023;84(S01). doi:10.1055/s-0043-1762047
- Cutler CB, Azab MA, Lucke-Wold B, **Khan M**, Henson C, Gill A, Alt JA, Karsy M. Evidence-Based Recommendations on Inflammatory Pathologies of the Sella and Orbit: A Systematic Review. J Neurol Surg B Skull Base. 2023;84(S01). doi:10.1055/s-0043-1762127
- Bauer S, Findlay M, **Khan M**, Alexander H, Lucke-Wold B, Hamrick F, Hunsaker J, Karsy M. Anterior Skull Base Outcomes: An mFI-5–Based Evaluation of Age and Frailty from the ACS-NSQIP Database. J Neurol Surg B Skull Base. 2023;84(S01). doi:10.1055/s-0043-1762117
- **Khan M**, Mohammed A, Hunsaker JC, Kim R, Makarenko S, Evans J, Couldwell WT, Karsy M. Skull Base Complications and 30-Day Readmission: An Evaluation of the Elderly from the NSQIP Database. J Neurol Surg B Skull Base. 2021;82(S02). doi:10.1055/s-0041-1725305
- Hunsaker JC, **Khan M**, Harper J, Makarenko S, Evans J, Couldwell WT, Karsy M. Prediction of Readmission and Complication in Pituitary Adenoma Resection via the NSQIP Database. J Neurol Surg B Skull Base. 2021;82(S02). doi:10.1055/s-0041-1725303
- Hunsaker JC, **Khan M**, Harper J, Makarenko S, Evans J, Couldwell WT, Karsy M. Prediction of Readmission and Complication in Pituitary Adenoma Resection via the NSQIP Database. J Natl Compr Canc Netw. 2021;19(3.5):HSR21-052. doi:10.6004/jnccn.2020.7731
- Hunsaker JC, **Khan M**, Gamblin A, Karsy M, Couldwell WT. Use of a Surgical Stepdown Protocol for Cost Reduction After Transsphenoidal Pituitary Adenoma Resection. J Natl Compr Canc Netw. 2021;19(3.5):QIM21-085. doi:10.6004/jnccn.2020.7711

Dissertation

- **Khan M**. Advancing Clinical Practices and Patient Outcomes Through Computational Analyses in Medicine: A Focus on SARS-CoV-2 Epidemiology, COVID-19, and Long-COVID Neuropathogenesis. Doctoral dissertation, University of Nevada, Reno. 2023. ScholarWolf | ResearchGate

PRESENTATIONS

- **Khan M**, et al. From Exploratory Adjunct to Primary Endpoint: A Scoping Review of SphygmoCor-Derived Central Hemodynamics in Pharmacological Trials. NAA Annual Meeting - UPenn, 2026 (presenting author)
- **Khan M**, et al. Evaluating Pituitary Adenomas Using National Research Databases: STROBE Systematic Review. CNS Annual Meeting, 2023. (presenting author)

- Findlay MC, Bounajem MT, Kim RB, Henson JC, Azab MA, Cutler CB, **Khan M**, et al. Microsurgical Treatment of Ruptured and Unruptured Distal Basilar Artery Aneurysms via the Subtemporal Approach: A 20-Year Case Series. CNS Annual Meeting, 2023.
- Bauer S, Findlay M, **Khan M**, et al. Anterior Skull Base Outcomes and Complications: mFI-5 Age vs. Frailty (ACS-NSQIP). NASBS, 2023.
- Budohoski KP, et al. (incl. **Khan M**). Factors Associated with Hearing Outcomes After a Middle Fossa Approach in 131 Consecutive Patients with Vestibular Schwannomas. NASBS, 2023.
- Dioso ER, Carter AS, **Khan M**, Karsy M. The Impact of Rurality on Treatment and Outcomes Among Adult Patients with Sinonasal Malignancies in Utah. NASBS, 2023.
- Dioso ER, Rennert RC, **Khan M**, et al. Far Lateral Approach to the Ventrolateral Skull Base: Case Series. NASBS, 2023.
- Findlay MC, Bauer S, **Khan M**, Karsy M. Racial and Ethnic Health Disparities Among Tumor Cases of the Anterior Cranial Fossa (ACS-NSQIP). NASBS, 2023.
- Cutler C, Azab MA, Lucke-Wold B, **Khan M**, et al. Evidence-Based Recommendations on the Workup and Treatment of Inflammatory Pathologies of the Sella and Orbit: A Systematic Review. NASBS, 2023.
- Henson JC, Cutler C, Cole K, Lucke-Wold B, **Khan M**, Karsy M. Immunohistochemical Profiling and Staging in Esthesioneuroblastoma. NASBS, 2023.
- **Khan M**, Li L, Harger S, Haak L, Uppal T, et al. Investigation of SARS-CoV-2 Prevalence and Variants Through Wastewater Surveillance. City of Sparks Council Meeting (oral), 2022.
- Bauer S, Findlay MC, **Khan M**, Karsy M. Anterior Skull Base Outcomes: An mFI-5 Based Evaluation of Age vs. Frailty (ACS-NSQIP). CNS Annual Meeting, 2022.
- Henson JC, Cutler CC, Cole KL, Lucke-Wold B, **Khan M**, Alt JA, Karsy M. Immunohistochemical Profiling and Prognostic Outcomes in Esthesioneuroblastoma: A Single-Center Series and Systematic Review. CNS Annual Meeting, 2022.
- Henson JC, Cutler CC, Cole KL, Lucke-Wold B, **Khan M**, Alt JA, Karsy M. Prognostic Utility of Staging and Grading Systems in Esthesioneuroblastoma: A Systematic Review. CNS Annual Meeting, 2022.
- Findlay MC, Bauer S, **Khan M**, Karsy M. Racial Disparities in Surgical Outcomes Following Anterior Skull Base Tumor Resection (ACS-NSQIP). CNS Annual Meeting, 2022.
- **Khan M**, Masud M, Khan H, Khanani AM. Ophthalmic Artery Occlusion Post-SARS-CoV-2 Infection in a Healthy Male. Retinal Physician (oral), 2022.
- Khan H, Ewing T, Aziz A, Masud M, Sulahria H, **Khan M**, et al. Real-World Efficacy and Safety of the Ranibizumab Port-Delivery System in Neovascular AMD: The SUMMIT Study. World Ophthalmology Conference (oral), 2022.
- Khan H, Ewing T, Masud M, Sulahria H, **Khan M**, et al. Real-World Efficacy and Safety of the Ranibizumab Port-Delivery System in Neovascular AMD: The SUMMIT Study. American Society of Retina Specialists Annual Meeting, New York, NY, 2022.
- **Khan M**, Yost S, Yu S, Cutler C, Henson JC, Azab MA, Colby S, Evans JJ, Couldwell WT, Karsy M. Evaluating Pituitary Adenomas Using Administrative Databases: STROBE Systematic Review. Early Career Neuroscience Virtual Research Symposium (MSNTC/BSG), 2022. (presenting author)
- Hunsaker JC, **Khan M**, Gamblin A, Karsy M, Couldwell WT. Use of a Surgical Stepdown Protocol for Cost Reduction After Transsphenoidal Pituitary Adenoma Resection. CNS Annual Meeting (oral), 2021.
- **Khan M**, Mohammed A, Hunsaker JC, Kim R, Makarenko S, Evans J, Couldwell WT, Karsy M. Skull Base Complications and 30-Day Readmission: An Evaluation of the Elderly (NSQIP). CNS Annual Meeting, 2021. (presenting author)
- **Khan M**, Farnsworth B, Pope B, Sherrod B, Karsy M. Impact of Hospital Volume on Outcome After Surgical Treatment for Hydrocephalus (National Inpatient Sample). CNS Annual Meeting, 2021. (presenting author)
- **Khan M***, Harper J*, Hunsaker JC, Kraus KL, et al., Karsy M. Evaluating the Role of Advanced Practice Providers in Neurosurgery. CNS Annual Meeting (oral), 2021. (presenting author)
- **Khan M**, Joyce E, Horn J, Scoville J, Ravindra V, Menacho S. Postoperative Bowel Complications After Non-Shunt-Related Neurosurgical Procedures: Case Series and Literature Review. CNS Annual Meeting, 2021. (presenting author)

- **Khan M**, Joyce E, Horn J, Scoville J, Ravindra V, Menacho S. Postoperative Bowel Complications After Non-Shunt-Related Neurosurgical Procedures. AANS Annual Scientific Meeting, 2021. (presenting author)
- **Khan M***, Harper J*, Hunsaker JC, et al., Karsy M. Evaluating the Role of Advanced Practice Providers in Neurosurgery. AANS Annual Scientific Meeting, 2021. (presenting author)
- Hunsaker JC, **Khan M**, Harper J, Makarenko S, Evans J, Couldwell WT, Karsy M. Prediction of Readmission and Complication in Pituitary Adenoma Resection (NSQIP). NCCN Annual Conference, 2021.
- Hunsaker JC, **Khan M**, Gamblin A, Karsy M, Couldwell WT. Use of a Surgical Stepdown Protocol for Cost Reduction After Transsphenoidal Pituitary Adenoma Resection. NCCN Annual Conference, 2021.
- Shinagawa A, **Khan M**, Babu J, Rangaswamy R. Intraprocedural Stroke During Middle Meningeal Artery Embolization. West Coast Vascular and Interventional Symposium, 2021.
- **Khan M***, Harper J*, Hunsaker JC, et al., Karsy M. Evaluating the Role of Advanced Practice Providers in Neurosurgery. Weill Cornell Medicine MSNS Research Symposium, 2021. (presenting author)
- Hunsaker JC, **Khan M**, Gamblin A, Karsy M, Couldwell WT. Use of a Surgical Stepdown Protocol for Cost Reduction. Brown University AANS/SIGN 3rd Annual Student Neuro Conference, 2021.
- Hunsaker JC, **Khan M**, Harper J, Makarenko S, Evans J, Couldwell WT, Karsy M. Prediction of Readmission and Complication in Pituitary Adenoma Resection (NSQIP). Brown University AANS/SIGN Conference, 2021.
- **Khan M**, Mohammed A, Hunsaker JC, et al., Karsy M. Skull Base Complications and 30-Day Readmission (NSQIP). ACS Clinical Congress, 2020. (presenting author)
- Matern T, Shinagawa A, **Khan M**, Rangaswamy R. Bilateral Agenesis of the Internal Carotid Arteries. Western Medical Research Conference, Carmel, CA, 2020.
- **Khan M**, Ruesch M, Jensen RL, Gillespie D. Knockout of HIF-1α in Meningioma and Glioma Cell Lines via shRNA Interference and CRISPR-Cas9. NV Statewide ACS Meeting, Las Vegas, NV (oral), 2019. (presenting author)
- **Khan M**, Khaiboullina SF, Verma SC. ZIKV in Controlling Growth of Neuroblastoma Stem Cells. NV Statewide ACS Meeting, Las Vegas, NV (oral), 2019. (presenting author)
- **Khan M**, Ruesch M, Jensen RL, Gillespie D. Knockout of HIF-1α in Meningioma and Glioma Cell Lines via shRNA and CRISPR-Cas9. 115th Annual Meeting, NSMA, Reno, NV, 2019. (presenting author)
- **Khan M**, Khaiboullina SF, Verma SC. ZIKV in Controlling Growth of Neuroblastoma Stem Cells. 4th Annual NV INBRE Statewide Meeting, Reno, NV (oral), 2019. (presenting author)
- Siddiqui F, **Khan M**, Dingman K, Uppal T, Verma SC. KSHV-Encoded ORF59 Protein Interacts with Host Nucleolin During KSHV Lytic Reactivation. UNR BMB Undergraduate Spring Research Symposium, 2019.
- **Khan M**, Khaiboullina SF, Verma SC. ZIKV in Controlling Growth of Neuroblastoma Stem Cells. UNR Student Research Day, Reno, NV, 2019. (presenting author)
- **Khan M**, Khaiboullina SF, Verma SC. ZIKV in Controlling Growth of Neuroblastoma Stem Cells. 115th Annual Meeting, NSMA, Reno, NV, 2019. (presenting author)
- **Khan M**, Ruesch M, Jensen RL, Gillespie D. Knockout of HIF-1α in Meningioma and Glioma Cell Lines via shRNA and CRISPR-Cas9. NISBRE NIH/NIGMS 7th Biannual National IDeA Symposium, Washington, D.C., 2018. (presenting author)
- **Khan M**, Ruesch M, Jensen RL, Gillespie D. Knockout of HIF-1α in Meningioma and Glioma Cell Lines. 3rd Annual NV INBRE Statewide Meeting, Reno, NV (oral), 2018. (presenting author)
- Mohammed A, **Khan M**, Jensen RL, Gillespie D. Knockout of HIF-1α in Meningioma and Glioma Cell Lines via Lentivirus and CRISPR-Cas9. University of Utah Undergraduate Summer Research Symposium, Salt Lake City, UT, 2018.
- **Khan M**, Khaiboullina SF, Verma SC. ZIKV in Controlling Growth of Neuroblastoma Stem Cells. UNR BMB Undergraduate Winter Research Symposium, Reno, NV, 2018. (presenting author)
- **Khan M**, Khaiboullina SF, Verma SC. ZIKV in Controlling Growth of Neuroblastoma Stem Cells. NISBRE NIH/NIGMS 7th Biannual National IDeA Symposium, Washington, D.C., 2018. (presenting author)

CLINICAL EXPERIENCE

University of Utah, Dept. of Neurosurgery — Neurosurgery Clinical Rotation 2017 – 2023

- Hands-on neurosurgery exposure assisting residents (patient preparation, intra-operative and post-operative care); 500+ hours across rounds, the OR, the Neuro Critical Care Unit, and clinic at multiple sites.
- Undertook clinical research with residents and attendings across neurosurgery, neuro-oncology, and ophthalmology, contributing to peer-reviewed publications and national conference presentations (several as first author).

UNR Med, Student Outreach Clinic — Student Provider 2019 – 2023

- Delivered primary care to uninsured patients — assessments, plans, and documentation; 550+ hours over four years.

Reno, NV — Preceptorship in Internal Medicine — Dr. Lorenzen 2020

- Obtained histories and performed physical exams; discussed cases with the attending.

BS-MD Program — Rural Clinical Rotation — Elko, NV 2018

- Family medicine, psychiatry, pediatrics, and internal medicine; 120 hours of patient encounters in rural settings.

UNR Med, Student Outreach Clinic — Student Social Worker — Project Upstream 2016 – 2018

- Conducted social-determinants-of-health surveys and connected new patients with social-work resources.

TEACHING EXPERIENCE

Mentorship — High-School, Undergraduate & Graduate Student Mentor 2019 – Present

- Formal mentor to 31 students; the mentorship is longitudinal rather than episodic, following individual mentees across successive stages of their training.

UNR Med — Peer Supplemental Instructor 2019 – 2021

- Led peer review sessions in the Anatomy Lab (neuroanatomy, MSK, radiology).

Truckee Meadows Community College — STEM & Human Anatomy & Physiology (Cadaver Lab) Tutor 2015 – 2017

- 2000+ hours of group and one-on-one tutoring, including students with disabilities.

EXTRACURRICULAR & SERVICE

Salt Lake City, UT & Reno, NV — Volunteer Teacher, Sunday School (K–12) & Interfaith Liaison 2018 – 2020

CERTIFICATIONS

- Biomedical Research Investigators & Key Personnel — CITI Program. 2026
- Supervised Machine Learning: Regression and Classification — Stanford University / DeepLearning.AI. 2025
- AI Series: Introduction to Healthcare — Stanford University School of Medicine. 2025
- Good Clinical Practice (GCP), Clinical Trials with Investigational Medical Devices — CITI Program. 2025
- AHEC Scholar — National AHEC Organization. 2024

PROFESSIONAL MEMBERSHIPS

American Physician Scientists Association (APSA) · Brain and Spine Group (BSG) · Student National Medical Association (SNMA) · Nevada State Medical Association (NSMA) · Washoe County Medical Society (WCMS) · Asian American Pacific Islander Alumni Association (AAPAA) · Geographical Management of Cancer Health Disparities (GMaP), Region 6.