

NEWS | FUTURE OUTLOOK

AiM Medical Robotics Secures \$2 Million NCI Award to Advance MRI-Guided Brain Cancer Surgery

AiM Medical Robotics will use NCI funding to advance its MRI-compatible robotic platform for precise brain tumor ablation, real-time thermometry and minimally invasive neurosurgery.

By **Ankit Kankar** | September 13, 2026



Image Courtesy: Public Domain

AiM Medical Robotics, a leading developer of advanced robotic systems for MRI-guided neurosurgery, announced that it has been selected to receive **\$2 million Phase II Small Business Innovation Research (SBIR) award from the National Cancer Institute (NCI)**, part of the National Institutes of Health (NIH), to advance the use of its robotic platform for MRI-guided ablative treatment of brain cancer. The SBIR program, often referred to as "America's Seed Fund," is a highly competitive federal program that supports scientific excellence and technological innovation through the investment of federal research funds in critical American priorities.

The award, entitled **"Intraoperative MRI-Guided Neurosurgery Robot for Enhancing Ablative Treatment of Brain Cancer,"** will support further development and clinical evaluation of AiM's technology for precise robotic intervention within the MRI environment. This effort will support enhanced tumor ablation planning and treatment delivery with real-time MRI-based thermometry

that is tightly coupled to robot control in order to optimize eradication of tumors while minimizing collateral damage. The project is led by AiM founder Gregory Fischer, PhD, who is the Principal Investigator and is in partnership with the National Center for Image-Guided Therapy (NCIGT) at Brigham and Women's Hospital (BWH) and Co-investigators Nobuhiko Hata, PhD and G. Rees Cosgrove, MD.

"Brain tumors remain a major clinical challenge, and MRI-guided laser interstitial thermal therapy (LITT) is limited by the accuracy of probe placement, intraoperative visualization, and procedural complexity. The outcomes of this research could significantly improve the precision, safety, and efficiency of minimally invasive thermal ablation of intracranial tumors." said Dr. Hata, "The National Center for Image Guided Therapy and its AMIGO operating rooms provide the unique translational environment needed to evaluate these advances directly within real MRI-guided neurosurgical workflows."

AiM is developing a neurosurgical robotic platform designed to enable procedures to be performed under direct MRI guidance. Unlike conventional approaches that may require patients to be moved between imaging and treatment environments, AiM's technology is being developed to allow robotic intervention within the MRI suite, providing the potential for physicians to use high-quality imaging during the procedure to plan, guide and assess treatment.

This NCI-funded program will investigate application of the technology to ablative treatment of brain cancer, extending AiM's platform beyond functional neurosurgery and demonstrating its potential applicability across a broader range of intracranial procedures.

"We are incredibly honored to receive this validation and support from the NCI. Receiving this award is significant well beyond the funding; it validates the clinical and business need through a highly rigorous peer review process and it enables us to demonstrate this technology in brain cancer therapy." said Dr. Fischer, "Our vision has always extended well beyond any single procedure. We are building a platform intended to enable physicians to precisely, reliably, and safely reach targets within the brain and perform interventions while benefiting from the extraordinary imaging capabilities of intraoperative MRI. Brain cancer is an area where accuracy matters enormously, and this NCI-supported program provides an opportunity to demonstrate how our technology might ultimately contribute to more precise, image-guided treatment."

The award supports a first-in-human feasibility study in the Advanced Multimodality Image-Guided Operating (AMIGO) suite at BWH and covers a project period extending from September 2026 through August 2028. The award provides for an anticipated \$2,017,320 in federal funding over two years, with \$1,008,660 funded for Year 1 and the balance subject to availability of funds and satisfactory project progress.

Julie Pilitsis, MD, PhD, MBA co-Founder of AiM Medical Robotics and Chair of the Department of Neurosurgery at University of Arizona College of Medicine - Tucson, said: "Successful treatment of intracranial disease depends upon knowing precisely where you are, reaching the intended target safely and confirming what has been accomplished. MRI provides remarkable anatomical information, but historically the engineering challenge has been bringing sophisticated robotic intervention into that environment. Combining these capabilities has the potential to create an entirely new way of approaching precision neurosurgery."

The award comes as AiM continues to advance its MRI-compatible robotic platform through clinical development. The company believes the same fundamental ability to precisely navigate and intervene within the brain under MRI guidance could ultimately support multiple applications, potentially including functional neurosurgery, biopsy, ablation and targeted delivery of therapeutics.

For brain tumors in particular, the ability to combine precise robotic positioning with intraoperative MRI could offer an important advantage. Brain anatomy can change during procedures, while the relationship between a planned trajectory and the actual treatment target can be critical to therapeutic success. Further, with tumor ablation, real time monitoring of thermal dose during delivery, and adapting as needed, is essential to ensuring complete tumor ablation with minimized damage to surrounding sensitive tissue. Performing intervention and imaging within the same environment creates the potential to verify targeting and treatment without relying exclusively upon preoperative imaging.

Dr. Fischer further said: "For many years our engineering objective has been to overcome one of the fundamental limitations in image-guided intervention: the difficulty of combining highly precise robotics with the MRI environment. This NCI award builds upon prior NIH-supported development led by AiM co-founders Drs. Pilitsis and Fischer, and allows us to apply that work to one of the most challenging problems in neurosurgery. It is an important validation of the technology, the clinical need, and the business case and, provides our team the resources through substantial non-dilutive capital to continue translating it toward clinical use."

Read online: <https://worldbusinesswatch.com/news/11/109/aim-medical-robotics-secures-2-million-nci-award-to-advance-mri-guided-brain-cancer-surgery.html>

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