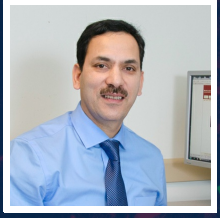
Treating Brain Tumors



Khalid Shah

Director, Stem Cell Therapeutics and Imaging Program Director, Molecular Neurotherapy and Imaging Lab Associate Professor

CURRENT RESEARCH

Novel therapeutics for treating brain tumors rather than slowing their imminent harm

About 30,000 new patients are diagnosed each year with malignant tumor lesions in the brain, and most of these lesions remain untreated due to the complexity of the brain thereby effecting the quality of life for patients. Dr. Khalid Shah, of Massachusetts General Hospital and Harvard Medical School, focuses on the advancement of novel promising therapies for primary tumors in the brain as well as highly metastatic forms of tumors from the breast, lung, and melanomas that find their way to the brain. One major reason for the failure of numerous drugs to treat the tumors in the brain is the blood-brain-barrier that protects the entry of certain substances into the brain. Dr. Shah's strategy to overcome this hurdle is to use stem cells that locally deliver certain substances into the brain or introduce the therapeutics via alternate routes that bypass the blood-brain-barrier. The development of these therapeutic interventions is essential for improving the overall survival of patients dealing with these deadly conditions.

Dr. Shah's team capitalizes on their unique expertise in interdisciplinary research spanning stem cell and tumor cell biology, genetic engineering, and molecular imaging as well as their proven abilities to synthesize new insights from disparate fields, to lead interdisciplinary teams into new territory. In addition, while Dr. Shah's research is deeply fundamental, there is always a translational aspect connected to it. As the leading cause of cancer-related deaths in children; second leading cause of cancer-related deaths in males ages 20-39; and the fifth leading cause of cancer-related deaths in females ages 20-39, the therapeutic options Dr. Shah and his team are developing will provide innovative...

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AFFILIATION

Harvard University (Medical School)

EDUCATION

- M.S., in Genetic Engineering, 1997 , WUR, Netherlands
- Ph.D., in Genetic Engineering, 2001 , WUR, Netherlands
- Postdoc, in Neurology, 2001-2005 , Harvard Medical School

AWARDS

- Young Investigator Award, 2007
- Research Scholar Award, 2007
- Science Initiative Award, 2010
- Young Mentor Award, 2012
- Distinguished Research Award, 2014

RESEARCH AREAS

Life Science, Neurological / Cognitive, Oncology / Cancer, Stem Cell

FUNDING REQUEST

Your contributions will support the continued research of Dr. Khalid Shah, of MGH, as he develops mechanism based novel therapies for brain tumors with a bench to bedside translational potential. Donations will fund the necessary $250K/year required for personnel, stem cell engineering, imaging, and animal models. Additionally, Dr. Shah is in the process of taking his preclinical findings into early stages clinical trials, which will require an estimated $10M per therapeutic stem cell phase.