Autopsy Tissue Needs
Laboratory of Charles Eberhart, M.D., Ph.D., and Eli Bar, Ph.D.
Johns Hopkins Hospital

Research Interests

Our laboratory is focused on understanding how tumors of the brain and eye form and grow. Our studies frequently use normal development to guide this investigation of the neoplastic process, as rapid growth and cellular migration are common to both processes. We have implicated Hedgehog, Notch, and other developmentally significant signaling cascades in the initiation and ongoing growth of malignant brain tumors such as medulloblastoma and glioblastoma. We are also engaged in preclinical testing of pharmacological agents that target these pathways in brain and eye tumors. Another related area of interest is the relationship between stem cells and cancer. The possibility that transformed stem cells represent the origins of brain and eye tumors, as well as the hypothesis that "cancer stem cells" are required for long-term tumor self-renewal and growth, are active areas of investigation.

Selected Publications

Bar, Eli E., Aneeka Chaudhry, Mohamed H. Farah, and Charles G. Eberhart. "Hedgehog Signaling Promotes Medulloblastoma Survival via Bcl2." *American Journal of Pathology* 170 (2007): 347-55.

Bar, Eli E., Aneeka Chaudhry, Alex Lin, Xing Fan, Karisa Schreck, William Matsui, Angelo L. Vescovi, Sara Piccirillo, Francesco Dimeco, Alessandro Olivi, and Charles G. Eberhart. "Cyclopamine-Mediated Hedgehog Pathway Inhibition Depletes Stem-Like Cancer Cells in Glioblastoma." *Stem Cells* 25 (2007): 2524-33.

Bar, Eli E., Alex Lin, Tarik Tihan, Peter C. Burger, and Charles G. Eberhart. "Frequent Gains at Chromosome 7q34 Involving BRAF in Pilocytic Astrocytoma. *Journal of Neuropathology & Experimental Neurology* 67 no. 9 (September 2008): 878-87.

Fan, Xing, and Charles G. Eberhart. "Medulloblastoma Stem Cells." *Journal of Clinical Oncology* 26 no. 17 (June 10, 2008): 2821-27.

Fan, Xing, Leila Khaki, Thant S. Zhu, Mary E. Soules, Caroline E. Talsma, Naheed Gul, Cheryl Koh, Jiangyang Zhang, Yue-Ming Li, Jarek Maciaczyk, Guido Nikkhah, Francesco DiMeco, Sara Piccirillo, Angelo L. Vescovi, and Charles G. Eberhart. "NOTCH Pathway Blockade Depletes CD133-Positive Glioblastoma Cells and Inhibits Growth of Tumor Neurospheres and Xenografts." Stem Cells 28 no. 1 (November 10, 2009): 5-16.

Autopsy Tissue Needed

We are seeking fresh (if it can be provided within a few hours) or frozen tissue for the following diagnoses: diffuse intrinsic pontine glioma, glioblastoma, and medulloblastoma.

Contact Information

Eric Raabe, M.D., Ph.D.
Pediatric Neuro-oncology Fellow
Phone: 410-614-5055
Email: eraabe2@jhmi.edu