BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Jason T. Huse	Assistant Attending, Department of Pathology
eRA COMMONS USER NAME	Memorial Sloan-Kettering Cancer Center

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Princeton University	B.A.	1996	Chemistry
University of Pennsylvania School of Medicine	Ph.D.	2002	Neuroscience
University of Pennsylvania School of Medicine	M.D.	2003	

A. Positions and Honors

Positions and Employment

1996-2003 Combined Degree Student (MD/PhD), University of Pennsylvania School of Medicine, Philadelphia, PA
PhD mentor: Robert W. Doms
2003-2005 Resident in Pathology and Laboratory Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA
2005-2007 Fellow in Neuropathology, Hospital of the University of Pennsylvania, Philadelphia, PA
2006-2009 Research Fellow, Memorial Sloan-Kettering Cancer Center, New York, NY
Post-doctoral mentor: Eric C. Holland
2008-2009 Instructor, Department of Pathology, Memorial Sloan-Kettering Cancer Center
2009-pres Assistant Attending, Department of Pathology, Memorial Sloan-Kettering Cancer Center

Honors and Awards

1999-2001 Howard Hughes Medical Institute Predoctoral Fellow
2001 Robert M. Toll Medical Student Research Prize
2002 Louis B. Flexner Student Prize for Outstanding Dissertation
2002 Saul Wingrad Award for Outstanding Dissertation
2003 Jesse H. Frank Prize in Pathology
2006-2008 American Brain Tumor Association Fellow
2009 Revson/Winston Biomedical Research Fellowship
2009 Weil Award for the Best Paper in Experimental Neuropathogy Presented at the AANP Annual Meeting
2009-pres. Leon Levy Foundation Young Investigator, Memorial Sloan-Kettering Cancer Center
2011 AACR-Landon Innovator Award for Research in Personalized Cancer Medicine

B. Publications

Peer- Reviewed Articles

1. **Huse, J.T.**, Pijak, D.S., Leslie, G.J., Lee, V.M.-Y, Doms, R.W. "Maturation and Endosomal Targeting of ß-Site Amyloid Precursor Protein-cleaving Enzyme: The Alzheimer's Disease ß-Secretase". (2000) J Biol Chem 2000;275:33729-33737.

2. **Huse, J.T.**, Liu, K., Pijak, D.S., Carlin, D., Lee, V.M.-Y., Doms, R.W. "ß-Secretase Processing in the Trans-Golgi Network Preferentially Generates Truncated Amyloid Species That Accumulate in Alzheimer's Disease Brain". J Biol Chem 2002;277:16278-16284.

3. **Huse, J.T.**, Byant, D., Yang, Y., Pijak, D.S., D'Souza, I., Lah, J.J., Lee, V.M.-Y., Doms, R.W., Cook, D.G. "Endoproteolysis of ß-Secretase (BACE) Within its Catalytic Domain: A Potential Mechanism for Regulation". J Biol Chem 2003;278:17141-17149.

4. Schessl, J., Medne, L., Hu, Y., Brown, M.J., **Huse, J.T.**, Torigian, D.A., Jungbluth, H., Goebel, H.H., Bonnemann, C.G. "MRI in DNM2-related centronuclear myopathy: Evidence for highly selective muscle involvement". Neuromuscul Disord 2006;12:28-32.

5. Chen, H.I., Burnett, M.G., **Huse, J.T.**, Lusting, R.A., Bagley, L.J., Zager, E.L. "Recurrent delayed cerebral necrosis with aggressive characteristics after radiosurgical treatment of an arteriovenous malformation". J Neurosurg 2006;105:455-460

6. Cardillo, S., **Huse, J.T.**, Iqbal, N. "Diabetic muscle infarction of the forearm in a patient with longstanding type I diabetes". Endocr Pract 2006;12:188-192.

7. Elmariah, S.B., **Huse, J.**, LeRoux, P., Lustig, R.A. "Multicentric glioblastoma multiforme in a patient with BRCA1 invasive breast cancer". Breast J 2006;12:470-474.

8. **Huse, J.T.**, Pasha, T.L., Zhang, P.J. "D2-40 Functions as an effective chondroid marker distinguishing true chondroid tumors from chordoma". Acta Neuropathol 2006;113:87-94.

9. Whitmore, R.G., Krejza, J., Kapoor, G.S., **Huse, J.T.**, Woo, J., Bloom, S., Wolf, R.L., Judy, K., Rosenfeld, M., Biegel, J.A., Melhem, E.R., O'Rourke, D.M. "Prediction of oligodendroglial tumor subtype and grade using magnetic resonance perfusion-weighted imaging." J Neurosurg 2007;107:600-609.

10. Gasparetto, E.L., Pawlak, M.A., Patel, S.H., **Huse, J.T.**, Woo, J.H., Krejza, J., Rosenfeld, M.R., O'Rourke, D.M., Lustig, R., Melhem, E.R., Wolf, R.L. "Posttreatment recurrence of malignant brain neoplasm: accuracy of relative cerebral blood volume fraction in discriminating low from high malignant histologic volume fraction". Radiology 2009; 250, 887-896.

11. Perry, A., Miller, C. R., Gujrati, M., Scheithauer, B.W., Jost, S.C., Raghavan, R., Qian, J., Cochran, E.J., **Huse, J.T.**, Holland, E.C., Burger, P.C., Rosenblum, M.K. "Malignant Gliomas with Neuroblastic (PNET-like) Components (GBM-PNET): A Clinicopathologic and Genetic Study of 52 Cases". Brain Pathol 2009; 19: 81-90.

12. Bleau, A.-M., Hambardzumyan, D., Ozawa, T., Fomchenko, E.I., **Huse, J.T.**, Brennan, C.W., Holland, E.C. "PTEN/PI3K/Akt pathway regulates the side population phenotype and ABCG2 activity in glioma tumor stem-like cells". Cell Stem Cell 2009; 4: 226-235

13. **Huse, J.T.**, Brennan, C., Hambardzumyan, D., Wee, B., Pena, J., Rouhanifard, S.H., Sohn-Lee, C., le Sage, C., Agami, R., Tuschl, T., and Holland, E.C. "The PTEN-regulating microRNA miR-26a is amplified in high-grade glioma and facilitates gliomagenesis *in vivo*". Genes & Development 2009; 23, 1327-1337.

14. Becher O.J., Hambardzumyan D., Walker T.R., Helmy K., Nazarian J., Albrecht S., Hiner R.L., Gall S., **Huse J.T.**, Jabado N., MacDonald T.J., Holland E.C. "Preclinical evaluation of radiation and perifosine in a genetically and histologically accurate model of brainstem glioma.". Cancer Res 2010; 70, 2548-2557.

15. Ney, D.E., **Huse, J.T.**, Dunkel, I.J., Steinherz, P.G., Haque, S., Khakoo, Y. "Intraventricular Meningioma After Cranial Irradiation for Childhood Leukemia". J of Child Neurol 2010; 25, 1292-1295.

16. Ozawa, T., Brennan, C.W., Wang, L., Squatrito, M., Sasayama, T., Nakada, M., **Huse, J.T.**, Pedraza, A., Utsuki, S., Yasui, Y., Tandon, A., Fomchenko, E.I., Oko, H., Levine, R.L., Fujii, K., Ladanyi, M., Holland, E.C. "PDGFRA gene rearrangements are frequent genetic events in PDGFRA-amplified glioblastomas." Genes & Development 2010; 24, 2205-2218.

17. Squatrito, M. Brennan, C.W., Helmy, K., **Huse, J.T.**, Petrini, J.H., Holland, E.C. "Loss of ATM/Chk2/p53 pathway components accelerates tumor development and contributes to radiation resistance in gliomas". Cancer Cell 2010; 18, 619-629.

18. Fomchenko, E.I., Dougherty, J.D., Helmy, K.Y., Katz, A.M., Pietras, A., Brennan, C.W., **Huse, J.T**., Milosevic, A., Holland, E.C. "Recruited cells can become transformed and overtake PDGF-induced murine gliomas in vivo during tumor progression". PLoS One 2011; 6, e20605.

19. Palaskas, N., Larson, S.M., Schultz, N., Komisopoulou, E., Wong, J., Rohle, D., Campos, C., Yannuzzi, N. Osbourne, J.R., Linkov, I., Kastenhuber, E.R., Taschereau, R., Plaiser, S.B., Tran, C., Heguy, A., Wu, H., Sander, C., Phelps, M.E., Brennan, C.W., Port, E., **Huse J.T.**, Graeber, T.G., Mellinghoff, I.K. "18F-fluorodeoxy-glucose positron emission tomography marks MYC-overexpressing human basal-like breast cancers". Cancer Res 2011; 71, 5164-5174.

20. **Huse, J.T.**, Nafa, K., Shulka, N., Kastenhuber, E.R., Lavi, E., Hedvat, C.V., Ladanyi, M., Rosenblum, M.K. "High frequency of IDH-1 mutation links glioneuronal tumors with neuropil-like islands to diffuse astrocytomas". Acta Neuropathol 2011; 122, 367-369.

21. Litkowski, P., Khakoo, Y., Gilheeney, S.W., Souweidane, M., **Huse, J.T.**, Haque, S., Young, R.J. "Hemangioma of the cavernous sinus in a child". Neurology 2011; 77, 1647-1648.

22. Pulvirenti, T., Van Der Heijden. M., Droms, L.A., **Huse, J.T.**, Tabar, V., Hall, A. "Dishevelled 2 signaling promotes self-renewal and tumorigenicity in human gliomas". Cancer Res 2011; 71, 7280-7290.

23. Morris, L.G.T., Taylor, B.S., Bivona, T.G., Gong, Y., Eng, S., Brennan, C.W., Kaufman, A., Kastenhuber, E.R., Banuchi, V.E., Singh, B., Heguy, A., Viale, A., Mellinghoff, I.K., **Huse, J.T.**, Ganly, I., Chan, T.A. "Genomic dissection of the EGFR/PI3K pathway reveals frequent deletion of the EGFR phosphatase PTPRS in head and neck cancers". Proc Natl Acad Sci USA 2011; 108, 19024-19029

24. Turcan, S., Rohle, D., Goenka, A., Walsh, L.A., Fang, F., Yilmaz, E., Campos, C., Fabius, A.W.M., Lu, C., Ward, P.S., Thompson, C.B., Kaufman, A., Guryanova, O., Levine, R., Heguy, A., Viale, A., Morris, L.G.T., **Huse, J.T.**, Mellinghoff, I.K., Chan, T.A. "IDH1 mutation is sufficient to establish the glioma hypermethylator phenotype". Nature 2012. In press.

25. Gorovets, D., Kannan, K., Kastenhuber, E.R., Islamdoust, N., Campos, C., Pentsova, E., Jhanwar, S.C., Heguy, A., Mellinghoff, I.K., Chan, T.A., **Huse, J.T.** "IDH mutation and Neuroglial Developmental Features Define Clinically Distinct Subclasses of Lower-Grade Diffuse Astrocytic Glioma". Clin Cancer Res 2011. Submitted.

26. Silber, J., Jacobsen, A., Ozawa, T., Harinath, G., Pedraza, A., Holland, E.C., Sander, C., **Huse, J.T.** "miR-34a repression in proneural malignant gliomas upregulates expression of its target PDGFRA and promotes tumorigenesis". PLoS ONE. In press.

27. Hatzoglou, V., Patel, G.V., Morris, M.J., Curtis, B.S., Zhang, Z., Shi, W., **Huse, J.T.**, Rosenblum, M.K., Holodny, A.I., Young, R.J. "Brain Metastasis from Prostate Cancer". Amer J Neuro-Rad 2012. Submitted.

Reviews and Book Chapters

1. **Huse, J.T.** and Doms R.W. "Closing in on the Amyloid Cascade: Recent Insights into the Cell Biology of Alzheimer's Disease". Mol Neurobiol 2000;22:81-98.

2. **Huse, J.T.** and Doms R.W. "Neurotoxic Traffic: Uncovering the Mechanics of Amyloid Production in Alzheimer's Disease". Traffic 2001;2:75-81.

3. **Huse, J.T.** "Book Review: Neuropathology (Series title: Foundations in Diagnostic Pathology), Editor: Richard Prayson". Human Pathol 2006;37:244-245.

4. **Huse, J.T.** and Holland, E.C. "Genetically Engineered Mouse Models of Brain Cancer and the Promise of Preclinical Testing". Brain Pathology 2009; 19, 132-143.

5. Bleau, A.-M., **Huse, J.T.,** Holland, E.C. "The Glioblastoma Resistance Network". Cell Cycle 2009; 8, 2936-2944.

6. **Huse, J.T.** and Holland, E.C. "Yin and yang: cancer-implicated miRNAs that have it both ways". Cell Cycle 2009; 8, 3611-3612.

7. **Huse, J.T.** and Holland, E.C. "Targeting Brain Cancer: Advances in the Molecular Pathology of Malignant Glioma and Medulloblastoma". Nature Rev Cancer 2010; 10, 319-331.

8. **Huse, J.T.**, Phillips, H., and Brennan, C.W. "Molecular Subclassification of Diffuse Gliomas: Seeing Order in the Chaos". Glia 2011; 58, 1190-1199

D. Research Support

Ongoing Research Support

Brain Tumor Center Research Grant 7/1/2011-6/30/2012
"Characterizing the pathophysiological significance of transcriptional subclass in WHO grade II and III diffuse astrocytoma"
The project aims to determine the functional and clinical importance of transcriptional signatures WHO grade II and III astrocytomas, particularly with regard to prognosis and potential cell(s) of origin.
Role: Principal Investigator
Amount: $100,000

AACR-Landon Innovator Award for Research in Personalized Cancer Medicine 7/1/2011-6/30/2013
"Personalizing PI3K/AKT Pathway Inhibitor Therapy in Malignant Glioma"
The project aims to optimize methods for the stratification of malignant glioma patients by PI3K/ AKT pathway activation status and support clinical trials for pathway inhibitors.
Role: Principal Investigator
Amount: $100,000

Geoffrey Beene Center Research Grant 8/1/2010-7/30/2012
"A Comprehensive Genomic and Epigenomic Analysis of the Impact of First-Line Therapy in the Molecular Evolution of Malignant Glioma"
The project aims to comprehensively identify genomic and epigenomic abnormalities resulting from cytotoxic anti-cancer therapy in malignant glioma.
Role: Principal Investigator
Amount: $400,000

Geoffrey Beene Center Research Grant 8/1/2010-7/30/2012
"Identification of aberrant signal transduction pathways in Primary CNS Lymphoma
This project is directed toward the identification of signaling pathway abnormalities in primary CNS lymphoma. Multilevel genomic and transcriptomal mechanistic analysis will also be performed.
Role: Co-Principal Investigator
Amount: $400,000

<u>Completed Research Support</u>
Society for MSKCC Research Grant 7/1/2009-6/30/2011
"A Functional Analysis of microRNAs in Gliomagenesis"
The project is directed towards the functional characterization of specific miRNAs that enhanced gliomagenesis through the regulation of tumor suppressor expression.
Role: Principal Investigator
Amount: $200,000

Geoffrey Beene Center Shared Resource Award 8/1/2010-7/30-2011
"High-Throughput Immunohistochemistry"
Funds the purchase of a high-capacity autostainer for immunohistochemistry to serve as a shared institutional resource
Role: Principal Investigator
Amount: $232,000

Brain Tumor Center Research Grant 7/1/2009-6/30/2010
"Biomarker Development for molecular subclassification of malignant glioma"
The project is directed toward the identification and clinical implementation of mRNA, miRNA and protein biomarkers to facilitate the classification of malignant gliomas into molecularly defined treatment groups for targeted therapies.
Role: Principal Investigator
Amount: $100,000

Geoffrey Beene Center Research Grant 8/1/2009-7/30/2011
"Pulsatile kinase inhibitor therapy for malignant glioma: proof of concept clinical trial"
This project aims to determine whether high-dose pulsatile erlotinib therapy will be efficacious specifically against

malignant gliomas harboring the EGFR vIII deletion mutation.
Role: Co-Principal Investigator
Amount: $400,000

Brain Tumor Center Research Grant 7/1/2009-6/30/2010
"Molecular Characterization and Stratification of Human Medulloblastomas"
The project was directed towards the development of methods for the molecular profiling and classification of medulloblastomas from formalin-fixed paraffin-embedded tissue.
Role: Co-Principal Investigator
Amount: $100,000

Revson/Winston Fellowship in Biomedical Research 7/1/2009-9/1/2009
"A Functional Analysis of microRNAs in Gliomagenesis"
The project was directed towards the functional characterization of specific miRNAs that enhanced gliomagenesis through the regulation of tumor suppressor expression.
Role: Research Fellow primarily responsible for the design, execution, and interpretation of investigations.

David Tetenbaum Hope/American Brain Tumor Association Fellow 7/1/2006-6/30/2008
"A Study of the Role of microRNAs in Brain Tumor Pathogenesis"
The project was directed towards elucidating the functional relevance of brain tumor-implicated microRNAs in relevant in vivo model systems.
Role: Research Fellow primarily responsible for the design, execution, and interpretation of investigations.

Howard Hughes Medical Institute Pre-doctoral Fellowship 7/1/1999-12/31/2001