BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Dennis W. W. Shaw, M.D.	Staff Radiologist
eRA COMMONS USER NAME (credential, e.g., agency login) DENSHAW	

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

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	MM/YY	FIELD OF STUDY
University of Washington, Seattle, WA	BS	1979	Biology
University of Washington School of Medicine Seattle, WA	MD	1983	Medicine

A. Personal Statement

Dennis Shaw, MD is the Division Chief of Magnetic Resonance Imaging and Vascular/Interventional Imaging at Seattle Children's Hospital (SCH) and an investigator in the SCRI Center for Clinical and Translational Research. He is also Professor of Radiology at the University of Washington. Dr. Shaw's work involves application of MRI, MR spectroscopy and other advanced imaging techniques to diseases including metabolic, neuro-psychiatric, neuro-oncologic, and muscular conditions. Dr. Shaw has a long-standing collaborative relationship with personnel at the FHCRC and growing collaboration with Dr. Tawil. Dr. Shaw will help to facilitate imaging activities at Seattle Children's and biopsy/functional testing at the University of Washington as part of Project 2.

B. Positions and Honors

Professional Experience

2004-present Professor, Radiology, University of Washington School of Medicine, Seattle, WA
1999-2004 Associate Professor, Radiology, University of Washington School of Medicine, Seattle, WA
1992-1999 Assistant Professor, Radiology, University of Washington School of Medicine, Seattle, WA
1992 Fellow, Neuroradiology, University of Washington School of Medicine, Seattle, WA
1990-1992 Acting Instructor, Radiology, University of Washington School of Medicine, Seattle, WA
1990 Asa Seeds Award
1991 Fellow, Pediatric Radiology, University of Washington School of Medicine, Seattle, WA
1986 Resident, Radiology, University of Washington School of Medicine, Seattle, WA
1986 Post-doctorate, Cardiovascular Training, University of Washington School of Medicine, Seattle,
1985 Resident, Neurosurgery, University of Washington School of Medicine, Seattle, WA
1984 Intern, Surgery, University of Washington School of Medicine, Seattle, WA
1983 Medical Alumni Research Prize
1979 Cum Laude, University of Washington, Phi Beta Kappa

C. Selected Peer Reviewed Publications

1. Shaw DWW, Geyer JR, Berger MS, Lindsey KL: Asymptomatic recurrence detection with surveillance scanning in children with medulloblastoma. J Clin Oncol 1997; 15(5):1811-1813
2. Shaw DWW, Weinberger E, Astley SJ: Quantitative comparison of conventional spin-echo and fast spinecho during brain myelination. J Comput Assist Tomogr. 1997; 21: 867-871.
3. Sidhu MK, Shaw DWW, Daly CP, Waldhausen JH, Coldwell D: Post-traumatic hepatic pseudoaneurysms in children. Pediatr Radiol 1999; 29:46-52
4. Sparks BF, Friedman SD, Shaw DW, Aylward EH, Echelard D, Artru AA, Maravilla KR, Giedd HN, Munson J, Dawson G, Dager SR: Brain structural abnormalities in young children with autism spectrum disorder. Neurology 2002; 59:184-192
5. Friedman SD, Shaw DWW, Artru AA, Richards TL, Gardner J, Dawson G, Posse S, Dager SR. Regional brain chemical alterations in young children with autism spectrum disorder. Neurology 2003; 60:100-107

6. Anzai Y, Ishikawa M, Shaw DWW, Artru A, Yarnykh V, Maravilla K. The paramagnetic effect of supplemental oxygen on CSF hyperintensity on FLAIR MR images. AJNR 2004; 25:275-279
7. Parisi MA, Bennet CL, Eckert ML, Dobyns WB, Gleeson JG, Shaw DWW, McDonald R, Eddy A, Chance PF, Glass IA. The *NPHPI* gene deletion associated with juvenile nephronophthisis is present in a subset of individuals with Joubert syndrome. Am J Hum Genet 2004; 75:82-91
8. Friedman SD, Shaw DWW, Artru AA, Petropoulos H, Dawson G, Dager SR: Gray and white matter brain chemistry in young children with autism. Arch Gen Psychiatry 2006; 63: 786-794
9. Saneto RP, Friedman SD, Shaw DWW. Neuroimaging of mitochondrial disease. Mitochondrion 2008; 8:396-413
10. Vavilala MS, Richards TL, Roberts JS, Chiu H, Pihoker C, Bradford H, Deeter K, Marro KI, Shaw D. Change in blood-brain barrier permeability during pediatric diabetic ketoacidosis treatment. Pediatr Crit Care Med 2010:11;332-8
11. Shurtleff H, Warner M, Poliakov A, Bournival B, Shaw DW, Ishak G, Yang T, Karandikar M, Saneto RP, Browd, SR, Ojemann JG. Functional magnetic resonance imaging for presurgical evaluation of very young pediatric epilepsy patients. J Neurosurg Pediatrics 2010:5;500-50
12. Friedman SD, Shaw DW, Ishak G, Gropman AL, Saneto RP. The use of neuroimaging in the diagnosis of mitochondrial disease. Dev Disabil Res Rev 2010; 16:129-135
13. Kim JE, Lyoo IK, Estes AM, Renshaw PF, Shaw DW, Friedman SD, Kimg KJ, Yoon SJ, Hwang J, Dager SR. Laterobasal amygdalar enlargement in 6- to 7-year-old children with autism spectrum disorder. Arch Gen Psychiatry 2010;67:1187-1197 doi:10.1001/archgenpsychiatry.2010.148
14. Poliachik SL, Friedman SD, Carter GT, Parnell SE, Shaw DW. Skeletal muscle edema in muscular dystrophy: clinical and diagnostic implications. Phys Med Rehabil Clin N Am. 2012 Feb;23(1):107-22, xi. Epub 2011 Dec 15. Review. PubMed PMID: 22239878.
15. Friedman SD, Poliachik SL, Carter GT, Budech CB, Bird TD, Shaw DW. The magnetic resonance imaging spectrum of facioscapulohumeral muscular dystrophy. Muscle Nerve. 2012 Apr;45(4):500-6. doi: 10.1002/mus.22342. PubMed PMID: 22431082.

D. Research Support

Ongoing Research Support

Past Research Support

1P50HD55782-01 – NIH NICHD (Dawson)
UW Autism Centers of Excellence 08/06/2007 - 07/31/2012
Project IV - Structural and Chemical Brain Imaging of Autism (Dager)
Project IV of the UW ACE will pursue the three broad objectives: (1) Identification of early biomarkers for autism, including the trajectory of head circumference growth, brain structure and tissue-based patterns of neurochemical alterations that can increase our ability to identify infants who will eventually develop autism or autism-related symptoms; (2) Longitudinal characterization of brain development in adolescents with autism previously studied since age 3; and (3) identification of risk and protective brain biomarkers related to longer term outcome in adolescents with autism, including development of seizure disorder and behavioral decline.
Role: Co-Investigator

R01 MH077772-01 – NIH NICHD (Piven)
UW Autism Centers of Excellence-Network (IBIS) 09/20/2008 - 06/30/2012
UW Site - A Longitudinal MRI Study of Infants at Risk for Autism (Dager)
In this application we propose to employ new MR methods to conduct a longitudinal MRI/DTI study of 6 m old infant sibs of autistic individuals, with follow-up at 12 and 24 m of age. This study will provide important, new information about the trajectory of early post-natal brain overgrowth (regions, tissues, structures and fiber tracts), as measured on MRI and DTI, and its potential relationship to clinical features. It has the potential to provide insights into developmental brain and behavioral phenotypes, and neurobiological mechanisms, that will inform other levels of analysis during what appears to be a critical period of development in the pathogenesis of autism.
Role: Co-Investigator

5R01HD065283-02 – NIH (Dager)
A Longitudinal 3D MRSI Study in Infants at High Risk for Autism 09/01/2009 – 08/31/2011
The aim of this proposal is to expand the scope of a funded NIH project "A longitudinal MRI Study of Infants at Risk for Autism," (RO1 HD055741- IBIS network) through adding 3-D Proton Echo Planar Spectroscopic Imaging (3D PEPSI) to allow measurements of brain chemistry in 6 month-old siblings of children diagnosed with autism (high risk) and age-matched infants without a family history of autism (low risk). This project will add complementary brain chemical information to assess mechanisms underlying hypothesized abnormalities of brain growth (regions, tissues, structures and fiber tracts) measured by MRI/ DTI and relationships to clinical features. These results will provide important insights into brain development, behavioral phenotypes and the underlying neurobiology of autism.
Role: Co-Investigator

National Childhood Cancer Foundation
Children's Oncology Group Chairs Grant 03/01/2009 – 02/21/2012
COG is the largest childhood cancer research network in the country. Support is used for development and conduction of pediatric cancer clinical trials as well as follow up and late effects evaluation.
Role: Co-Investigator

Simons VIP Grant (E. Aylward)
University of Washington 04/01/2011 – 07/31/2012
Simons Variation in Individuals Project: research initiative aimed to better understand the effects of 16p11 deletions and duplications. Families with variations in 16p11.2 are being recruited. The study involves extensive clinical evaluation and advanced brain imaging that includes structural (DTI) and functional measures (fMRI). Brain functional evaluation employing MEG (magnetoencephalography) will also be conducted.
Role: Co-Investigator

5R21 HD049832 NIH (Vavilala)
Cerebral Edema Diabetic Ketacidosis (DKA study) 10/1/2008 – 06/30/2009
The major goals of this project are to study the acute physiologic changes in the brain associated with DKA including alterations in permeability and perfusion
Role: Co-Investigator