

# Joshua Bear

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## Current Position and Career Goals

### **ASSISTANT PROFESSOR OF PEDIATRICS AND NEUROLOGY, UNIVERSITY OF COLORADO DENVER AND CHILDREN'S HOSPITAL COLORADO | 2017-PRESENT**

Clinical pediatric neurologist and epilepsy specialist on an academic research track with NIH NSADA-K12 grant support.

As an early career clinician-scientist, my focus is on building a sustainable and productive research program while developing my skills as an attending physician in an academic position. Ultimately I hope to establish myself as an investigator of the interplays between sleep and epilepsy using a combination of functional neuroimaging and neurophysiology data. In order to advance this goal, I am presently conducting research on the functional network effects of electrical status epilepticus of sleep with the goal of having adequate preliminary results and publications to apply for a K23 award in two years.

## Education

### **FELLOW, PEDIATRIC EPILEPSY, UNIVERSITY OF COLORADO DENVER AND CHILDREN'S HOSPITAL COLORADO | 2016-2017**

I completed a one-year pediatric epilepsy fellowship at the Children's Hospital Colorado.

### **RESIDENT PHYSICIAN, UNIVERSITY OF CALIFORNIA SAN FRANCISCO, DEPARTMENT OF NEUROLOGY | 2013-2016**

Successfully completed the five-year child neurology residency program and board-eligible in pediatrics and child neurology.

### **RESIDENT PHYSICIAN, UNIVERSITY OF CALIFORNIA SAN FRANCISCO DEPARTMENT OF PEDIATRICS | 2011-2013**

Completed two years of pediatrics medical training as part of the five-year child neurology residency program.

### **CASE WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE, CLEVELAND, OHIO | M.D., 2011**

Graduated from the four-year university program and was inducted into the local Alpha Omega Alpha chapter indicating a position within the top 15% of the graduating class although there was no formal class ranking.

### **OHIO UNIVERSITY CENTER FOR INTERNATIONAL STUDIES, ATHENS, OHIO | M.A. INT'L DEVELOPMENT STUDIES, 2007**

Area of focus was international health with specialized studies examining healthcare inequalities, obstacles to access, and technological solutions to delivering healthcare to rural areas.

### **OHIO UNIVERSITY SCHOOL OF VISUAL COMMUNICATIONS, ATHENS, OHIO | B.S. VISUAL COMMUNICATIONS, 2003**

Area of specialization was interactive multimedia, focusing on the user experience as well as database management and backend development.

## Work Experience

### **MEDICAL CONSULTANT, NEURO LEAP CORPORATION | JAN-DEC 2013**

Provided medical consulting services to a Mountain View-based technology start-up developing new tools for the assessment of and therapy for children with disabilities.

### **GRADUATE ASSISTANT, OHIO UNIVERSITY CENTER FOR INTERNATIONAL STUDIES, ATHENS, OHIO | 2006-2007**

Hired to a graduate assistantship position in the Center for International Studies with primary responsibilities related to departmental communications, event organizing, and marketing.

**ENGLISH LANGUAGE INSTRUCTOR, OHIO-SAITAMA ENGLISH TEACHING PROGRAM, TODA-SHI, SAITAMA, JAPAN | 2003–2005**  
Taught English at six different junior high schools throughout Toda City, Japan, with responsibilities including course planning, lectures, organizing activities, and assessment.

## Grants

### NIH/NINDS LOAN REPAYMENT PROGRAM | 2018–2020

Recipient of a two-year, \$70,000, competitive award from the NINDS for loan repayment for my research studying the intrinsic cortical networks in children with electrical status epilepticus of sleep.

### 1K12NS089417-01 NIH NSADA-K12 INSTITUTIONAL TRAINING GRANT | 2017–2020

Awarded the third NSADA scholarship position at the University of Colorado Denver for a project using combined functional MRI and magnetoencephalography to examine the intrinsic neural networks in children with electrical status epilepticus of sleep.

### T35 RUTH L. KIRSCHSTEIN NATIONAL RESEARCH SERVICE AWARD | 2008

Awarded for a radiographic study of blood flow patterns in hepatic tumors during medical school.

## Research and Publications

### PUBLISHED ARTICLES

Joshi CN, Chapman KE, **Bear JJ**, Wilson SB, Walleigh DJ, Scheuer ML. Semiautomated Spike Detection Software Persyst 13 Is Noninferior to Human Readers When Calculating the Spike-Wave Index in Electrical Status Epilepticus in Sleep.

**Bear JJ**, Gelfand AA, Goadsby PJ, Bass N. Occipital headaches and neuroimaging in children. *Neurology*. 2017 Jun 30. doi: 10.1212/WNL.0000000000004186. *A retrospective chart review that was selected by the editor for Neurology's In Focus section and featured on the cover.*

**Bear JJ** & Kirsch H. Concordance between interictal MEG and stereo-EEG predicts seizure freedom after epilepsy surgery (Commentary). *Brain*. 2016 Nov 1. doi: 10.1093/brain/aww248

**Bear JJ** & Wu YW. Maternal Infections During Pregnancy and Cerebral Palsy in the Child. *Pediatr Neurol*. 2016 Apr; 57:74–9. doi: 10.1016/j.pediatrneurol.2015.12.018.

Fredericks C, Kvam K, **Bear JJ**, Crabtree G, Josephson S. A case of progressive multifocal leukoencephalopathy in a lupus patient treated with belimumab. *Lupus*. 2014 Feb 14.

**Bear JJ** & Michota FA. Nausea, vomiting, and panic attacks in a 50-year-old woman. *Cleve Clin J Med* 78, 233–239 (2011).

Wu H, Exner AA, Shi H., **Bear JJ**, & Haaga JR. Dynamic evolutionary changes in blood flow measured by MDCT in a hepatic VX2 tumor implant over an extended 28-day growth period: time-density curve analysis. *Acad Radiol* 16, 1483–1492 (2009).

### BOOKS AND CHAPTERS

**Bear, J.** X-linked adrenoleukodystrophy, In: *Pediatric Demyelinating Diseases of the Central Nervous System and Their Mimics*, T Lotze and E Waubant, eds., Springer (2017).

### POSTER PRESENTATIONS

Joshi, C., Chapman, K., **Bear, J.**, Patel, S., Walleigh, D., Wilson, S., Scheuer, M. "Comparison between Human experts and Persyst 13 when calculating spike wave index in Encephalopathy with Electrical Status Epilepticus in Sleep (ESES)," accepted for presentation at the 2017 Annual Meeting of the American Epilepsy Society.

Ruzhnikov, Maura RZ., **Bear, J.**, Smith, M., Knutzen, D. "A patient-centered study of the diagnosis and clinical characteristics of Joubert syndrome," accepted for presentation at the 2017 Western Society for Pediatric Research Annual Meeting and recipient of the 2017 WSPR Abbott Nutrition David W. Smith Pediatric Trainee Research Award.

**Bear, J.**, Sullivan, J., Kirsch, H., Nagarajan, S. "Advanced source localization of focal beta-band activity detected on magnetoencephalography for epileptogenic zone identification," accepted for presentation at the 2016 Annual Meeting of the American Epilepsy Society on December 3, 2016, Houston, TX.

**Bear, J.**, Gelfand AA, Goadsby PJ, and Bass N. "Occipital Headaches and Neuroimaging in Children," presented at the American Academy of Neurology 2014 Annual Meeting on April 30, 2014, Philadelphia, PA.

**Bear, J.**, Wu, H., Haaga, JR, "The role of angiogenesis in tumor maturation: oxygen delivery or waste elimination?" presented at the 2008 Lepow Medical Student Research Day, January 9, 2009, Cleveland, OH.

Cunningham, J., Balkin, A., **Bear, J.**, et al., "An assessment of drinking water contamination and container- breeding mosquito habitats, six rural Ecuadorian communities," presented at the 56th Annual Meeting of the American Society of Tropical Medicine and Hygiene, November 4 – 8, 2007, Philadelphia, PA.

**Bear, J.** and Tickamyer, A., "The role of geography and inequality on mortality rates in Ecuador," presented and 2nd-place award recipient at the 6th Annual Ohio University Student Research and Creative Activity Fair, May 3, 2007, Athens, OH.

Romoser, W., Snyder, G., Lascano, M., Sempertegui, C., Balkin, E., Beam, T., **Bear, J.**, et al., "A participatory design for introducing university students to health problems in the developing world," presented at the 55th Annual Meeting of the American Society of Tropical Medicine and Hygiene, November 12 – 16, 2006, Atlanta, GA.

Snyder, G., Balkin, E., Lascano, M., Romoser, W., Beam, T., **Bear, J.**, et al., "Knowledge, attitudes and practices relative to aspects of health in three rural Ecuadorian communities: a preliminary assessment using a grounded theory approach," presented at the 55th Annual Meeting of the American Society of Tropical Medicine and Hygiene, November 12 – 16, 2006, Atlanta, GA.

## Presentations

### International

"Maternal Infections During Pregnancy and Cerebral Palsy in the Child," presented at the 2014 Pediatric Academic Societies Annual Meeting on May 3, 2014, Vancouver, Canada.

### Local Academic Presentations, University of Colorado Denver

"Big Head, Little Head, Funny Shaped Head," presented to the University of Colorado Neurology residency program on Nov 11, 2017.

"Introduction to Magnetoencephalography," presented to the Children's Hospital Colorado epilepsy fellowship program on Jun 6, 2017.

### Local Academic Presentations, University of California San Francisco

"An Incidental Finding: X-linked Adrenoleukodystrophy and the ALD/AMN Complex," presented to the UCSF Department of Neurology on Feb 2, 2016.

"Neurosonography and MRI in the Neonate," presented to the UCSF Division of Neonatology on Jan 4, 2016.

"Approach to the Hypotonic Infant," presented to the SF General Hospital Department of Pediatrics on Oct 27, 2015.

"An Introduction to Seizures," presented to the UCSF Department of Pediatrics on Jul 7, 2015.

"The Pituitary," presented to the SF General Hospital Department of Pediatrics on Aug 15, 2014.

"Sexuality and physical disability," presented to the UCSF Division of Adolescent and Young Adult Medicine on Jan 27, 2012.

“Neuropsychiatric lupus: Review of findings on imaging,” presented to the UCSF Division of Pediatric Rheumatology on Aug 22, 2012.

“A fever with a source (or two): Reviewing the association between atelectasis and fever,” presented to the UCSF Department of Pediatrics on Jan 27, 2013.

“Having trouble keeping up: Management of Duchenne’s muscular dystrophy for the primary care pediatrician,” presented to the Kaiser San Francisco Department of Pediatrics on Aug 8, 2012.

“Move your feet: Case presentation and review of conversion paralysis,” presented to the UCSF Department of Pediatrics on May 21, 2013.

“A smart start: A primer to the embryology and malformations of the human brain,” presented to the UCSF Division of Genetics on Feb 2, 2012.

## Committees and Academic Service

Clinical magnetoencephalography development team at CU Denver and Children’s Hospital Colorado | 2017–present

UCSF Graduate Medical Education, Resident Representative for Neurology | 2014–2016

UCSF APeX (EMR) Fellows and Residents Advisory Group, Resident Representative for Neurology | 2013–2015

UCSF Graduate Medical Education, Resident Representative for Pediatrics | 2011–2013

Pediatric Residency Subcommittee on Evaluations and Feedback, Chair | 2012–2013

UCSF Benioff Children’s Hospital Interdisciplinary Committee on Family-Centered Rounds, Resident Rep | 2012–2013

UCSF Department of Pediatrics Residency Admissions Committee, Member | 2011–2013

## Service and Volunteer Work

### JOHN HAY HIGH SCHOOL AND JOAN C. EDWARDS CHARITABLE FOUNDATION | 2009 – 2011

During 2009 and early 2010, I assisted with tutoring students at John Hay High School, a public city school in Cleveland. Then in March, 2010, I accepted the directorship of the Health Profession Pipeline Project, working directly under the executive director of the Joan C. Edwards Foundation to build the partnership and further develop a medical school-based curriculum for underprivileged Cleveland high school students.

## Awards and Recognition

American Epilepsy Society 2016 Fellows Program | 2016

M. Richard Koenigsberger Scholarship Award, Child Neurology Society | 2014

House Officer Research Award, Pediatric Academic Societies | 2014

Alpha Omega Alpha Honor Medical Society Inductee | 2011

Case Western Reserve University School of Medicine Dean’s Award | 2011

The Sam Packer, MD, Memorial Award | 2011