

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Plosa, Erin Jean		POSITION TITLE Clinical Fellow	
eRA COMMONS USER NAME (credential, e.g., agency login)			
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
Vanderbilt University, Nashville, TN	BA	05/99	Mathematics
Wake Forest University School of Medicine Winston-Salem, NC	MD	05/05	Medicine
Vanderbilt Children’s Hospital, Pediatric Residency Training Program Nashville, TN		07/05-06/08	Pediatrics
Vanderbilt Children’s Hospital, Fellowship in Neonatal-Perinatal Medicine		07/08-06/11	Neonatology

**A. Personal Statement**

The goal of the proposed research is to test the hypothesis that NF-κB directly inhibits fibroblast growth factor-10 transcription at the promoter/enhancer level. FGF-10 is a mesenchymal growth factor critical for normal lung development. Support from the Marshall Klaus Research Award will facilitate my goal of contributing to our understanding of the mechanism underlying how inflammation alters normal fetal lung development. Bronchopulmonary dysplasia, one of the most common complications of prematurity, contributes significantly to the short- and long-term morbidities associated with preterm birth. Clarifying the relationship between inflammation and arrested or altered saccular stage lung development may lead to innovative therapies for our young patients. I intend to pursue a career in academic medicine and envision my fellowship as a time to solidify my interest in becoming a basic science researcher. I am committed to learning new laboratory approaches and to gaining a more thorough understanding of the cellular and molecular biology of mammalian development. The principles of experimental design learned will be a necessary foundation for the development of my academic career. Throughout my medical training, I have always envisioned myself as a physician with in-depth knowledge in a particular field. I am intrigued by how molecular signaling events can impact lung development in preterm infants. Basic science research provides the opportunity for pursuit of detailed knowledge and understanding as well as the joy of discovery. Additionally, I anticipate that I will further my appreciation for the complexity of human development and the scholarly rigor required from both basic and clinical researchers to move our field forward.

**B. Positions and Honors**

*Positions and Employment*

2005 - 2008 Residency, Pediatrics, Vanderbilt Children’s Hospital

2008 - 2011 Fellowship, Neonatal-Perinatal Medicine, Vanderbilt Children's Hospital

*Other Experiences/Professional Memberships/Honors*

2002 Medical Student Research Training Program in Diabetes, Endocrinology, and Metabolism  
2009 Marshall Klaus Perinatal Research Award  
2009 Ikaria Advancing Newborn Medicine Fellowship Award

**C. Contributions to Science**

1. Undergraduate Research

During my undergraduate time, I had limited exposure to basic laboratory techniques and methodology while working in a research laboratory at Vanderbilt University, investigating the effects of soluble forms of the EphA receptor on tumor angiogenesis.

*Journal Articles*

1. Brantley DM, Cheng N, **Thompson EJ**, Lin Q, Brekken RA, Thorpe PE, Muraoke RS, Cerretti DP, Pozzi A, Jackson D, Lin C, Chen J. Soluble Eph A receptors inhibit tumor angiogenesis and progression in vivo. *Oncogene* 2002; 21: 7011-26.

2. Medical School Research

During medical school, I conducted research through the Scholars Program. Within the Division of Pediatric Infectious Disease, I administered surveys to parents of children regarding immunization practices.

*Journal Articles*

Shinall MC, **Plosa EJ**, Poehling KA. Validity of parental report of influenza vaccination in children 6 to 59 months of age. *Pediatrics* 2007; 120: e783-787.

3. Residency Research

In residency, I completed a review article on congenital cytomegalovirus, given my budding interest in neonatology.

*Journal Articles*

**Plosa EJ**, Esbenschade J, Fuller P, Weitkamp JH. Cytomegalovirus infection. *Pediatrics in Review* 2012; 33(4): 156-63.

4. Fellowship Research

During fellowship, I joined the laboratory of Drs. Lance prince and Timothy Blackwell to study lung development in health and disease.

*Journal Articles*

1. Benjamin JT, Carver BJ, **Plosa EJ**, Yamamoto Y, Miller JD, Liu JH, van der Meer R, Blackwell TS, and Prince LS. NF- $\kappa$ B activation limits airway branching through inhibition of Sp1-mediated fibroblast growth factor-10 expression. *J Immunol* 2010; 185(8): 4896-903.

2. **Plosa EJ**, Gooding KA, Zent R, and Prince LS. Non-muscle myosin II regulation of lung epithelial morphology. *Developmental Dynamics* 2012; 241(11): 1770-1781.

**D. Additional Information: Research Support and/or Scholastic Performance**

Program Director/Principal Investigator (Last, First, Middle): Plosa, Erin J.

1T32HD060554-01 (Gitlin)

7/1/2009 - 6/30/2011

“Inflammatory Signaling Inhibits Sp1-mediated FGF-10 Expression”

Mentor: Prince

Trainee: Plosa

Advancing Newborn Medicine Fellowship Grant

12/1/2009 - 11/30/2010

“Regulation of FGF-10 Expression by Inflammatory Signals”

Mentor: Prince

Trainee: Plosa