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## BIOGRAPHICAL SKETCH

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NAME Pregizer, Steven Karl	POSITION TITLE Postdoctoral Research Fellow Trainee		
eRA COMMONS USER NAME (credential, e.g., agency login) pregizers			
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
The Master's College (Newhall, CA)	B.S.	05/02	Biological sciences
University of Southern California (Los Angeles)	Ph.D.	08/08	Molecular biology
Vanderbilt University (Nashville, TN)	Postdoctoral	n/a	Molecular biology

### A. Personal Statement

The goal of the proposed research is to ascertain the role of endogenous *Bmp2* expressed by chondrocytes. Specifically, we plan to remove *Bmp2* from hypertrophic and articular chondrocytes using Cre-Lox technology and to identify the consequences for development and maintenance of the skeletal tissues. As a postdoctoral researcher, I bear primary responsibility for carrying out the proposed work. I have been thoroughly trained as a molecular biologist, first as a graduate student in the lab of Dr. Baruch Frenkel at the University of Southern California and now as a postdoc in Dr. Mortlock's lab at Vanderbilt University. In both labs, my research projects focused on the molecular biology of the skeleton, with a particular emphasis on gene regulation in osteoblasts and chondrocytes. In Dr. Mortlock's lab, I made the discovery that *Bmp2* is expressed robustly in hypertrophic chondrocytes during postnatal development, as well as in adult articular chondrocytes. The current application builds logically on my previous work and takes advantage of skills I have acquired during my training. It also takes advantage of skills possessed by others with whom I have developed close professional relationships during my time at Vanderbilt. This includes Dr. Florent Elefteriou and Dr. Matt Stewart, who provide expertise in pathology of bone and cartilage, respectively. In summary, I have the motivation, expertise, and collaborative network necessary to carry out the proposed work successfully.

### B. Positions and Honors

#### Positions and Employment

1998-2002      Research Assistant, Department of Biological Sciences, The Master's College, Newhall, CA

#### Professional Memberships

2010-            Member, American Society for Bone and Mineral Research

#### Honors

1999            Freshman chemistry award, The Master's College, Newhall, CA

2002            B.S. awarded with highest honors, The Master's College, Newhall, CA

2002            Outstanding graduate in the biological sciences, The Master's College, Newhall, CA

### C. Selected Peer-reviewed Publications

1. Jariwala U, Prescott J, Jia L, Barski A, Pregizer S, Cogan JP, Arasheben A, Tilley WD, Scher HI, Gerald WL, Buchanan G, Coetzee GA, Frenkel B. Identification of novel androgen receptor target genes in prostate cancer. *Mol Cancer*. 2007 Jun 6;6:39. PMID: PMC1904239
2. Prescott J, Jariwala U, Jia L, Cogan JP, Barski A, Pregizer S, Shen HC, Arasheben A, Neilson JJ, Frenkel B, Coetzee GA. Androgen receptor-mediated repression of novel target genes. *Prostate*. 2007 Sep 15;67(13):1371-83.
3. Pregizer S, Barski A, Gersbach CA, García AJ, Frenkel B. Identification of novel Runx2 targets in osteoblasts: cell type-specific BMP-dependent regulation of *Tram2*. *J Cell Biochem*. 2007 Dec 15;102(6):1458-71.
4. Barski A, Pregizer S, Frenkel B. Identification of transcription factor target genes by ChIP Display. *Methods Mol Biol*. 2008;455:177-90.
5. Pregizer S, Baniwal SK, Yan X, Borok Z, Frenkel B. Progressive recruitment of Runx2 to genomic targets despite decreasing expression during osteoblast differentiation. *J Cell Biochem*. 2008 Sep 26;105(4):965-970. PMID: PMC2591066
6. Pregizer S, Mortlock DP. Control of Bmp Gene Expression by Long-Range Regulatory Elements. *Cytokine Growth Factor Rev*. 2009 Oct-Dec; 20(5-6):509-15. PMID: PMC2787762
7. Kruithof BP, Fritz DT, Liu Y, Garsetti DE, Frank DB, Pregizer SK, Gaussin V, Mortlock DP, Rogers, MB. An Autonomous BMP2 Regulatory Element in Mesenchymal Cells. *J Cell Biochem*. 2010 Feb; 112(2):666-74.
8. Mortlock DP, Pregizer S. Identifying Functional Annotation for Noncoding Genomic Sequences. *Curr Protoc Hum Genet*. 2012 Jan; Chapter 1: Unit 1.10.

### D. Research Support

#### Ongoing Research Support

F32 AR057649-03                  Pregizer (PI)                  08/12/2010 - 08/11/2013  
NIH/NIAMS

Identification of the Bmp2 Chondrocyte Enhancer

The goal of this project is to map sequences that mediate Bmp2 expression in mouse chondrocytes. This will be accomplished by generating and testing a series of BAC- and plasmid-based reporter constructs in transgenic assays. Additionally, these constructs will be used to validate a chondrocyte culture model that can be used to further dissect the mechanisms of Bmp2 regulation in this cell type.

Role: PI