

GAGE DEKOEYER CRUMP
Curriculum Vitae

CURRENT POSITION Assistant Professor

CURRENT ADDRESS Center for Stem Cell and Regenerative Medicine
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EDUCATION

Postdoc, Developmental Biology, **University of Oregon**, Eugene, OR 2001-2006.

Ph.D., Cell Biology, **University of California, San Francisco**, San Francisco, CA, 2000.

Sc.B., Biochemistry and Molecular Biology, **Brown University**, Providence, RI, 1994.

B.A., Hispanic Literature

POSITIONS AND RESEARCH EXPERIENCE

Assistant Professor, CSCRM/CNB, USC KSOM, 2006-present. Research Focus: Epithelial-Mesenchymal Interactions in Facial Skeletal Development.

Postdoctoral Research, Laboratory of Charles Kimmel, Institute of Neuroscience, University of Oregon, 2001-2006. Postdoctoral research project: Tissue Interactions That Shape the Zebrafish Jaw.

Doctoral Research, Laboratory of Cori Bargmann, Department of Anatomy, University of California, San Francisco, 1994-2000. Doctoral Research Project: Genetics of Synapse Formation in *C. elegans*.

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

2005-present. Ad hoc reviewer for Development, Developmental Biology, Developmental Dynamics, Mechanisms of Development, and Gene

2007-present. Society for Developmental Biology

HONORS

O'Donnell Postdoctoral Fellow of **Life Sciences Research Foundation**, 2002-2005.

Chancellor's Award Fellowship, University of California, San Francisco, 1999-2000.

Howard Hughes Medical Institute, Predoctoral Fellowship in Biological Sciences, 1994-1999.

PUBLICATIONS

Patel, M.R., Lehrman E.K., Poon, V.Y., **Crump, J.G.**, Zhen M., Bargmann, C.I., and Shen, K. (2006). Hierarchical Assembly of Presynaptic Components in Defined *C. Elegans* Synapses. **Nature Neuroscience** 12, 1488-1498.

Crump, J.G., Swartz, M.E., Eberhart, J.K., and Kimmel, C.B. (2006). Moz-dependent Hox Expression Controls Segment-Specific Fate Maps of Skeletal Precursors In The Face. **Development** 133, 2661-2669.

Eberhart, J.K., Swartz, M.E., **Crump, J.G.**, and Kimmel, C.B. (2006) Early Hedgehog Signaling from Neural to Oral Epithelia Organizes Anterior Craniofacial Development. **Development** 133, 1069-1077.

Yan, Y.L., Willoughby, J., Liu, D., **Crump, J.G.**, Wilson, C., Miller, C.T., Singer, A., Kimmel, C.B., Westerfield, M., and Postlethwait, J.H. (2005). A Pair of Sox: Distinct and Overlapping Functions of Zebrafish *sox9* Co-orthologs in Craniofacial and Pectoral Fin Development. **Development** 132, 1069-1083.

Kishi, M., Pan, Y.A., **Crump, J.G.**, and Sanes J.R. (2005). Mammalian SAD Kinases Are Required for Neuronal Polarization. **Science** 307, 929-932.

Crump, J.G., Swartz, M.E., and Kimmel, C.B. (2004). An Integrin-Dependent Role of Pouch Endoderm in Hyoid Cartilage Development. **PLoS Biology** 2, e244.

- Featured Highlight in **Nature Reviews Genetics** 5, 643 (September 2004).
- Featured Article in **Register Guard** newspaper, Eugene, OR, USA (August 3, 2004).

Crump, J.G., Maves, L., Lawson, N.D., Weinstein, B.M., and Kimmel, C.B. (2004). An Essential Role for Fgfs in Endodermal Pouch Formation Influences Later Craniofacial Skeletal Patterning. **Development** 131, 5703-5716.

Kimmel, C.B., Ullmann, B., Walker, M., Miller, C.T., and **J.G. Crump** (2003). Endothelin 1-mediated Regulation of Pharyngeal Bone Development in Zebrafish. **Development** 130, 1339-1351.

Dwyer, N.D., Adler, C.E., **Crump, J.G.**, L'Etoile, N.D., and C.I. Bargmann (2001). Polarized Dendritic Transport and the AP-1 mu1 Clathrin Adaptor UNC-101 Localize Odorant Receptors to Olfactory Cilia. **Neuron** 31, 277-287.

Crump, J.G., Zhen, M., Jin, Y., and C.I. Bargmann (2001). The SAD-1 Kinase Regulates Presynaptic Vesicle Clustering and Axon Termination. **Neuron** 29, 115-129.

Roayaie, K.*, **Crump, J.G.***, Sagasti, A., and C.I. Bargmann (1998). The Gα Protein ODR-3 Mediates Olfactory and Nociceptive Function and Controls Cilium Morphogenesis in *C. elegans* Olfactory Neurons. **Neuron** 20, 55-67. (*these authors contributed similarly to this work)

Chou, J.H., Troemel, E.R., Sengupta, P., Colbert, H.A., Tong, L., Tobin, D.M., Koayaie, K., **Crump, J.G.**, Dwyer, N.D., and C.I. Bargmann (1996). Olfactory Recognition and Discrimination in *Caenorhabditis elegans*. **Cold Spring Harbor Symposia on Quantitative Biology**, Volume LXI, 157-164.

RESEARCH SUPPORT

1 R01DE018405-01 (PI:Crump) NIH/NIDCR 9/01/07-8/31/12

Epithelial-mesenchymal interactions in facial patterning

The goals of this grant are to understand the roles of regional specification (Aim 1) and tissue interactions (Aims 2/3) in patterning the facial skeleton.

Total Direct Costs: \$1,250,000

Wright Foundation (PI:Crump) 07/0107-6/30/09

Molecular Genetics of Cartilage and Joint Development in the Zebrafish Head

The goals of this grant are to use developmental genetics to understand how head skeletal precursors are generated from the cranial neural crest.

Total Direct Costs: \$100,000

INVITED PRESENTATIONS

Crump, J.G. (2007). The Molecular and Cellular Basis of Skeletal Shape in the Dorsal Face. Oral Presentation, Strategic Conference of Zebrafish Investigators, Asilomar, CA.

Crump, J.G., Swartz, M.E., and Kimmel, C.B. (2005). Hox Genes Specify the Jaw-Support Skeleton by Promoting the Response of Crest Cells to Pouch Endoderm. Platform presentation, 4th European Zebrafish Genetics and Development Meeting, Dresden, Germany.

Crump, J.G. and Kimmel, C.B. (2003). Shaping the second pharyngeal arch: selective cell intercalations and the *polypterus* mutation. Platform presentation, 3rd European Meeting on Zebrafish and Medaka Development and Genetics, Paris, France.

Crump, J.G., Jones, M. and Kimmel, C.B. (2002). The Cellular Basis of Pharyngeal Cartilage Development. Platform presentation, 5th International Conference on Zebrafish Development and Genetics, Madison, WI.

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