Postdoctoral Fellow Position in Regenerative Biology
University of California San Francisco, San Francisco, USA

We are seeking highly motivated candidates with interests in regenerative biology to join Dr. Huang's laboratory at UCSF (website: http://www.cvri.ucsf.edu/~huang/lab/Research.html). The laboratory uses the heart as a model system to investigate organ development, regeneration and repair in adult zebrafish, neonatal and adult mice, with an emphasis on the pathways that regulate resident stem cell activation and mature cell dedifferentiation/proliferation, and with innovative and integrated approaches in single cell analysis, advanced imaging microscopy and genome manipulation technology.

Research Directions

1. Developing novel intravital imaging in live animals and tissue clearing techniques for high-resolution visualization of cellular behavior, activity and interaction during heart development, regeneration and injury repair.
2. Performing functional screens to induce adult mouse and human cardiomyocyte regeneration using both candidate gene and directed evolution approaches integrated with CRISPR/Cas9 genome manipulation technology.
3. Taking pharmacological and genetic approaches to uncover the unifying principle governing the decline of regenerative potentials in adult mammalian organs and appendages including the heart, digit/limb, skin, brain, and spinal cord.
4. Leveraging the power of phylogenetic screen to identify novel mammalian animal models with extraordinary tissue regenerative capacity.
5. Investigating human genetic mutations and underlying molecular mechanisms in rare heart diseases that may result in preservation of cardiac regenerative potential.
6. Exploring the molecular basis of extreme biology in invertebrate and vertebrate species including water bears, naked mole-rats and ground squirrels.

We invite candidates with a highly productive training record, strong research motivation, and extensive experience in any of but not limited to the following areas: (1) developmental and regenerative biology, (2) heart physiology and cardiomyocyte biology, (3) cell division, signaling, and bioinformatics data analysis. Successful candidate will work in a highly interdisciplinary research program that interfaces developmental and stem cell biology, regenerative medicine, and cardiovascular diseases.

To apply, interested candidates should submit a single PDF file including 1) a cover letter with a brief statement of research experience, interest, and career plan, 2) curriculum vitae, and 3) a list of three references to Dr. Huang (Guo.Huang@ucsf.edu).

Selected publications

1. Hirose, K., Payumo, A., et al. & **Huang, G. N**. (2019) Evidence for hormonal control of heart regenerative capacity during the acquisition of endothermy. ***Science*** 364(6426): 184-188.
2. Payumo, A. & **Huang, G. N.** (2020) Lamin B2, guardian of cardiomyocyte nuclear division. ***Dev Cell*** 53:5-6
3. **Huang, G. N.**, et al. & Olson, E. N. (2012) C/EBP transcription factors mediate epicardial activation during heart development and injury. ***Science*** 338 (6114): 1599-1603.
4. **Huang, G. N.**, et al. and Worley, P. F. (2008) NFAT binding and regulation of T cell activation by the cytoplasmic scaffolding Homer proteins. ***Science.*** 319 (5862): 476-81.

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