

Stanford



Paul Bump

Ph.D. Student in Biology, admitted Summer 2016

Bio

BIO

Paul Bump is an explorer of the small and squishy. His research in strange, enigmatic, marine invertebrates hopes to unlock secrets around basic biological processes and provide novel perspectives to advance fundamental cell biology research. He currently studies how an organism can build two wildly different bodies during its life while having access to the same genetic information. While puzzling, the process of indirect development, with distinct larval and adult body plans, is the most common developmental strategy in many animals. His research involves studying the metamorphosis of *Schizocardium californicum*, an indirect developing hemichordate worm, which transforms from a small swimming planktonic balloon into a burrowing, muscular worm in a 24-48 hour time period.

STANFORD ADVISORS

- Christopher Lowe, Doctoral Dissertation Advisor (AC)

LINKS

- Paul's Website: paulbump.info

Publications

PUBLICATIONS

- **Establishing typical values for hemocyte mortality in individual mussels (*Mytilus californianus*) using fluorescence-activated cell sorting**
Moyen, N., Bump, P., Somero, G., Denny, M.
WILEY.2020
- **Establishing typical values for hemocyte mortality in individual California mussels, *Mytilus californianus*.** *Fish & shellfish immunology*
Moyen, N. E., Bump, P. A., Somero, G. N., Denny, M. W.
2020
- **Programmed cell removal by calreticulin in tissue homeostasis and cancer.** *Nature communications*
Feng, M., Marjon, K. D., Zhu, F., Weissman-Tsukamoto, R., Levett, A., Sullivan, K., Kao, K. S., Markovic, M., Bump, P. A., Jackson, H. M., Choi, T. S., Chen, J., Banuelos, et al
2018; 9 (1): 3194
- **Genome-wide analysis of facial skeletal regionalization in zebrafish.** *Development (Cambridge, England)*
Askary, A., Xu, P., Barske, L., Bay, M., Bump, P., Balczerski, B., Bonaguidi, M. A., Crump, J. G.
2017
- **Competition between Jagged-Notch and Endothelin1 Signaling Selectively Restricts Cartilage Formation in the Zebrafish Upper Face** *PLOS GENETICS*
Barske, L., Askary, A., Zuniga, E., Balczerski, B., Bump, P., Nichols, J. T., Crump, J. G.
2016; 12 (4)