



Chiara Anselmi

Postdoctoral Scholar, Stem Cell Biology and Regenerative Medicine

Bio

BIO

My expertise is in the areas of regeneration, evolution, the nervous system and cell biology. I use a marine colonial tunicate, *Botryllus schlosseri*, characterized by having robust regenerative capabilities and an assayable and frequent (weekly) CNS (Central nervous system) tissue regeneration and loss throughout adult life. I believe that comparative studies on a simple chordate can help us elucidate the principal mechanisms that are the foundation of regeneration and aging.

I use a multidisciplinary methodology that integrates advanced single cell RNAseq, imaging, multi-parameter flow cytometric isolation of cellular populations and transplantation assays to elucidate the cellular and genetic changes associated with neuronal degeneration process in young and old colonies.

STANFORD ADVISORS

- Ayelet Voskoboynik, Postdoctoral Research Mentor
- Irving Weissman, Postdoctoral Faculty Sponsor

Research & Scholarship

LAB AFFILIATIONS

- Irving Weissman (9/1/2019)

Publications

PUBLICATIONS

- **Morphological Study and 3D Reconstruction of the Larva of the Ascidian *Halocynthia roretzi*** *JOURNAL OF MARINE SCIENCE AND ENGINEERING*
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- **Yamanaka Factors in the Budding Tunicate *Botryllus schlosseri* Show a Shared Spatio-Temporal Expression Pattern in Chordates.** *Frontiers in cell and developmental biology*
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- **Sexual and asexual development: two distinct programs producing the same tunicate.** *Cell reports*
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- **Stem Cells and Innate Immunity in Aquatic Invertebrates: Bridging Two Seemingly Disparate Disciplines for New Discoveries in Biology.** *Frontiers in immunology*
Ballarin, L., Karahan, A., Salvetti, A., Rossi, L., Manni, L., Rinkevich, B., Rosner, A., Voskoboynik, A., Rosental, B., Canesi, L., Anselmi, C., Pinsino, A., Tohumcu, et al

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- **Sixty years of experimental studies on the blastogenesis of the colonial tunicate *Botryllus schlosseri*** *DEVELOPMENTAL BIOLOGY*
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- **A Notch-regulated proliferative stem cell zone in the developing spinal cord is an ancestral vertebrate trait** *DEVELOPMENT*
Lara-Ramirez, R., Perez-Gonzalez, C., Anselmi, C., Patthey, C., Shimeld, S. M.
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- **Differentiation and Induced Sensorial Alteration of the Coronal Organ in the Asexual Life of a Tunicate**
Manni, L., Anselmi, C., Burighel, P., Martini, M., Gasparini, F.
OXFORD UNIV PRESS INC.2018: 317–28
- **High-precision morphology: bifocal 4D-microscopy enables the comparison of detailed cell lineages of two chordate species separated for more than 525 million years** *BMC BIOLOGY*
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2015; 13: 113