

Abstract Formatting Guidelines

Abstracts should be submitted using the document upload feature in the registration or abstract submission form. *Abstracts will not be accepted via email.*

Abstract Length

- The abstract description should be no more than 150 words and should be block-text formatted. (*Note: 150 word count does not include author and institution information*)

Abstract Page Format

- 1 page maximum
- 1" page margins
- .doc or .docx formats only. *PDF abstracts will not be accepted.*

Abstract Text Format

- 12 pt. Arial or Times New Roman
- Block-text
- Single-spaced
- Minimal in-line citations only, if necessary
 - Ex. *While its role within external sensory organ development has been documented (Johnson 2007) relatively few genes have been identified as D-Pax2 targets.*

Abstract Title

- The Title should appear at the top of the abstract, centered, no abbreviations.
- Species should be italicized; do not use abbreviations in the title.
- Capitalize only the first letter and proper nouns.

Abstract Authors

- Center authors and titles.
- List all authors by last name and punctuated first initials (i.e. Cohen, J.D.)
- Multiple authors separated by a comma. (i.e. Bodnar, A.¹, Parsons, R.¹, Coffman, J.²)
- Underline the presenting author's name.
- List author affiliation by department, institution, city, and state (abbreviated capitals).
 - *If more than one institution is listed, please number them using superscript numbers.*
- List the corresponding author's email address, *italics*, below author list.
- Provide one space between the email address and the beginning of the abstract text.

See sample below.

For help, contact the Office of Education at 207-288-9880 or education@mdibl.org.

**Tissue homeostasis, regeneration and negligible senescence:
Insight from sea urchins**

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Sea urchins represent an interesting alternative model for aging research because they exhibit indeterminate growth, high regenerative potential and a wide range of life spans with some species living more than 100 years. Gene expression studies indicate that cellular pathways involved in energy metabolism, protein homeostasis and tissue regeneration are maintained with age. Quantitative analyses of cell proliferation and apoptosis indicates a low level of tissue renewal, and regenerative capacity, assessed by measuring the re-growth of amputated tube feet and spines, is maintained with age. Localized expression of the stem cell marker Vasa in somatic tissues suggests that multi-potent cells are present throughout adult sea urchins and may contribute to normal homeostasis in addition to regeneration. Long-term maintenance of mechanisms that sustain tissue homeostasis and regenerative capacity are essential for indeterminate growth and negligible senescence and understanding these mechanisms may reveal effective strategies to prevent the degenerative decline with age.