

Developmental Biology in Greece

Guest Editor

Nikolas Zagris

*Division of Genetics and Cell and Developmental Biology, Department of Biology, University of Patras, Patras, Greece.
zagris@upatras.gr -  <https://orcid.org/0000-0001-7125-3185>*

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Preface

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The roots of developmental biology extend down into a distant past in the speculations of philosophers and the studies of naturalists from Aristotle to great naturalists of the Age of Enlightenment. Aristotle argued that embryonic development is both the greatest of all biological mysteries and the key to a deeper understanding of organisms. These propositions remain equally true today, and we are now in the midst of a most exciting stage of cell and developmental biology. The gripping history of developmental biology is one of lightning-fast progress. Once considered descriptive, developmental biology, with the advent of molecular biology and the introduction of powerful molecular techniques, has been continuously evolving, keeping pace with current developments and shifts, and has become a field of codes and regulatory circuits. This field provides an understanding of the properties of individual cells, tissue organization, organs, their homeostasis and aging, repair and regeneration, and, ultimately, death.

Developmental biology is interdisciplinary, and has spawned the fields of stem cell biology and cellular reprogramming; stem cell culture systems are exploited to recapitulate morphogenesis and differentiation, with the creation of gastruloids, spheroids, or organoids setting the stage for tissue engineering and regenerative medicine in the treatment of developmental disorders and disease.

This special issue of *The International Journal of Developmental Biology* brings together factual articles by some of the best-known Greek scientists in the field.

This issue highlights, through insightful scholarly reviews and original research articles, mechanisms that control development; it embraces emerging disciplines and experimental model systems as well as the development and application of emerging therapeutic strategies attesting to the fast-moving world of developmental biology. Sincere thanks to all the contributing authors for the time they have devoted to this special issue.

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Nikolas Žagris
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