DEVELOPMENTAL BIOLOGY

An official journal of the Society for Developmental Biology

DESCRIPTION

*Developmental Biology* (DB) publishes original research on mechanisms of development, differentiation, and growth in animals and plants at the molecular, cellular, genetic and evolutionary levels. Areas of particular emphasis include transcriptional control mechanisms, embryonic patterning, cell-cell interactions, growth factors and signal transduction, and regulatory hierarchies in developing plants and animals.

Research Areas Include:

- Molecular genetics of development
- Control of gene expression
- Cell interactions and cell-matrix interactions
- Mechanisms of differentiation
- Growth factors and oncogenes
- Regulation of stem cell populations
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- Gametogenesis and fertilization

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AUDIENCE

Cell and Developmental biologists. Focuses on: mechanisms of development, differentiation, and growth in animals and plants.
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*To find out more, please visit the Preparation section below.*

**Introduction and article types**

**Scientific Guidelines for Authors submitting to Developmental Biology**

Developmental Biology’s goal is to publish high quality papers providing causal insight into the cellular and molecular mechanisms that govern developmental processes.

Studies which simply confirm an established functional role for a developmental component by presenting analysis in a new species lack sufficient novelty for consideration. Descriptive studies will only be considered if/when they represent a timely and novel insights or resources to the field.

The following article types are available for authors:

**Original Research Papers**

Developmental Biology seeks to publish only the very best papers that contribute new information to our understanding of developmental mechanisms. We require that manuscripts specifically address biological relevance and conform to the following guidelines:

Expression profiling and gene expression studies must contain supporting functional data. Studies solely based on analysis of expression by microarray, northern blots, PCR or in situ hybridization that are too descriptive or preliminary would not justify full review.

Developmental Biology is pleased to publish classical experimental embryology papers that provide unusual new insights.

Experiments using interfering DNA or proteins to address gene function are expected to be highly controlled. In particular, experiments with *Morpholino, RNAi, siRNA or dominant negative constructs* are expected to contain very precise controls to address the specificity of the effects observed.

Studies in which the expression, structure or function of a gene/protein is altered but leads to no phenotypic consequences are not appropriate. Furthermore, studies of mutants which simply show that a gene/protein is required for development will be discouraged unless attempts are made to address the mechanistic basis, causal roles or tissues and processes affected.

Experiments using *stem cells* must advance our understanding of biological functioning. Studies that simply grow/isolate stem cells from a tissue and show what markers they express are not appropriate.

Experiments using *cell culture* must show direct (in vivo) relevance in a developmental context.

**Resource Papers**

Resource papers are original research papers which provide important and timely information that will have an impact on the work of developmental biologists. Examples of such papers are studies describing novel spatial gene expression patterns and gene phylogeny, new model systems or containing a usable collection of data of particular value to the field. This would not include, for example, a description of the expression pattern of a gene in one species that has already been described in another species, or an expression pattern with no obvious link to a developmental process.
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**Short Communications**

Short communications are intended to provide quick publication of good impact results, thus portraying current advances in the field of Developmental Biology. This new format of paper in DB should contain approximately four figures and a single scientific conclusion. Although there is no specific word limit, typical short communications are in the range of 2,000-3,000 words.

**Review Articles**

Review articles are intended to reach a broad audience of readers from investigators in the field to new graduate students learning the material for the first time. We encourage submissions of review articles on established topics in the field but also on timely and provocative areas of research. Review Articles are by invitation; scientists who wish to contribute a review should send a pre-submission inquiry to one of the editors.

**Opinion papers (DB Perspectives)**

This article type is intended to raise new ideas and challenge current dogma. An abstract is still required but the format is flexible. Perspectives are subject to the same review process as original papers, but may receive expedited consideration.

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**Commentary**

DB accepts commentaries on newly published articles of particular relevance to the developmental biology field. Commentaries should provide an insightful perspective on a topic just published in a journal by discussing the context, existing problems and/or implications of a new finding. A commentary may also speculate on future directions of a certain topic and may include a personal opinion. Commentaries should be no longer than 2000 words and should not contain an abstract.

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Developmental Biology supports the presentation of all experimental data in its final published articles online and in print. For this reason word length and figure numbers are not restricted (except for Short Communications) and supplementary data are generally not supported.
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Drosophila: FlyBase -nomenclature guidelines

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Mouse: Mouse Genome Informatics (MGI) - Mouse nomenclature guidelines

Nematodes: WormBase - nomenclature guidelines

Rat: Rat Genome Database (RGD) - Rat nomenclature guidelines

Xenopus: Xenbase - Xenopus nomenclature guidelines

Yeast: Saccharomyces Genome Database (SGD) - nomenclature guidelines

Zebrafish: ZFIN - Zebrafish nomenclature guidelines

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