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*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:

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Introduction and article types
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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.

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

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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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