DESCRIPTION

Differentiation is a multidisciplinary journal dealing with topics relating to cell differentiation, development, cellular structure and function, and cancer. Differentiation of eukaryotes at the molecular level and the use of transgenic and targeted mutagenesis approaches to problems of differentiation are of particular interest to the journal.

The journal will publish full-length articles containing original work in any of these areas. We will also publish reviews and commentaries on topics of current interest.

The principal subject areas the journal covers are:

- embryonic patterning and organogenesis
- human development and congenital malformation
- mechanisms of cell lineage commitment
- tissue homeostasis and oncogenic transformation
- establishment of cellular polarity
- stem cell differentiation
- cell reprogramming mechanisms
- stability of the differentiated state
- cell and tissue interactions in vivo and in vitro
- signal transduction pathways in development and differentiation
- carcinogenesis and cancer
- mechanisms involved in cell growth and division especially relating to cancer
- differentiation in regeneration and ageing
- therapeutic applications of differentiation processes

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**INTRODUCTION**

*Differentiation* is a multidisciplinary journal that broadly covers the fields of cell differentiation and developmental biology. The journal provides insight into mechanisms of animal and plant development and cancer biology, covering all aspects from molecular and cellular to tissue and organismal level. Focusing in the functional mechanisms of development, cell differentiation, plasticity and dedifferentiation, *Differentiation* prioritizes experimental studies. High quality manuscripts of a descriptive nature and those describing novel techniques are also encouraged. The Journal also publishes review articles of current interest.

**Types of paper**

*Differentiation* will consider original manuscripts in any area of cell biology, developmental biology and cancer biology, including:

- Cell differentiation, functional specialization
- Dedifferentiation, transdifferentiation, plasticity
- Embryonic patterning, organogenesis
- Carcinogenesis, cancer
- Cell proliferation, especially relating to cancer
- Cell and tissue interactions, epigenetic regulation
- Signal transduction in development and differentiation
- Transgenic and targeted mutagenesis models of differentiation
- Plant cell differentiation
- Stem cell biology
- Evolutionary aspects of cell differentiation

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