Bones and Cartilage. Edition No. 2

Description:

Bones and Cartilage provides the most in-depth review and synthesis assembled on the topic, across all vertebrates. It examines the function, development and evolution of bone and cartilage as tissues, organs and skeletal systems. It describes how bone and cartilage develop in embryos and are maintained in adults, how bone is repaired when we break a leg, or regenerates when a newt grows a new limb, or a lizard a new tail.

The second edition of Bones and Cartilage includes the most recent knowledge of molecular, cellular, developmental and evolutionary processes, which are integrated to outline a unified discipline of developmental and evolutionary skeletal biology. Additionally, coverage includes how the molecular and cellular aspects of bones and cartilage differ in different skeletal systems and across species, along with the latest studies and hypotheses of relationships between skeletal cells and the most recent information on coupling between osteocytes and osteoclasts. All chapters have been revised and updated to include the latest research.

- Offers complete coverage of every aspect of bone and cartilage, with updated references and extensive illustrations
- Integrates development and evolution of the skeleton, as well a synthesis of differentiation, growth and patterning
- Treats all levels from molecular to clinical, embryos to evolution, and covers all vertebrates as well as invertebrate cartilages
- Includes new chapters on evolutionary skeletal biology that highlight normal variation and variability, and variation outside the norm (neomorphs, atavisms)
- Updates hypotheses on the origination of cartilage using new phylogenetic, cellular and genetic data
- Covers stem cells in embryos and adults, including mesenchymal stem cells and their use in genetic engineering of cartilage, and the concept of the stem cell niche

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