

Pathology of the Developing Mouse

A Systematic Approach

Pathology of the Developing Mouse: A Systematic Approach is the first publication to provide comprehensive guidance regarding the identification, characterization, and interpretation of mouse developmental defects. Emphasizing the interpretation of abnormal phenotypes, it provides detailed protocols for appropriately processing mouse embryos, fetuses, neonates, juveniles, and placentas as well as recognizing and categorizing structural lesions.

Topics include:

- Baseline anatomic and physiologic traits of developing mice: embryos, fetuses, neonates, and juveniles
- Comprehensive developmental timelines for major organs and systems
- Principles of good experimental design and statistical analysis for mouse developmental pathology studies
- Procedures for anatomic pathology examinations to evaluate structural changes at the macroscopic, microscopic, and ultrastructural levels, using conventional autopsy-based or novel noninvasive imaging techniques
- Methods for clinical pathology testing to assess biochemical and cellular composition of tissues and fluids
- Options and protocols for *in situ* molecular pathology analysis for site-specific explorations of various mechanisms responsible for producing adverse findings during development
- Basic principles for interpreting anatomic pathology and clinical pathology changes in the animal and placenta

A complete reference on the design, analysis, and interpretation of abnormal findings in developing mice, the book is enhanced with abundant full-color illustrations, enabling readers to comprehend both normal development and the major categories of defects that may be seen in malformed embryos, fetuses, neonates, juveniles, and placentas. The numerous literature citations provide an excellent starting point for additional reading to begin building true expertise in the field. The comprehensive coverage of the topic will make this book a regularly referenced developmental pathology resource in basic and biomedical research laboratories around the world.



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