

1 Human Cancer Viruses

Principles of Transformation and Pathogenesis

Editors: J. Nicholas, Baltimore, Md.; K.-T. Jeang, Bethesda, Md.; T.-C. Wu, Baltimore, Md.
XII + 244 p., 35 fig., 9 in color, 9 tab., hard cover, 2008. ISBN 978-3-8055-8576-7

2 Cell Migration: Signalling and Mechanisms

Editors: F. Entschladen; K.S. Zanker, Witten

VIII + 176 p., 20 fig., 2 tab., hard cover, 2010. ISBN 978-3-8055-9321-2

Cell migration is a highly complex process which involves several compartments of the cell, including surface receptors, signalling elements and the cytoskeleton. It plays an essential role in embryogenesis, wound healing and inflammatory responses, and a dysregulation of cell movement can cause pathological states such as developmental defects, chronic inflammation, cancer invasion and metastasis.

Covering extracellular regulatory signals and intracellular signal transduction pathways as well as the molecular mechanisms of migration in stem cells, leukocytes and tumor cells in the adult human organism, this book summarizes the current state of knowledge about cell migration. In the first part, the major aspects of different migratory cells in health and disease are covered, with special emphasis on T lymphocytes. The second part provides a comprehensive overview of the principal molecular mechanisms of migration such as adhesion receptors, cytoskeletal rearrangements and locomotor force generation, which, together, can be referred to as a cell's 'migrosome'.

With contributions by eminent international scientists from different disciplines this book will serve as a valuable resource not only for researchers in cell biology, immunology and oncology, but also for clinicians who wish to learn more about the role of migratory processes in health and disease.

Cover illustration: Time series of a migrating ES-2 ovarian carcinoma cell. The cell was stained by a myosin VI-GFP fusion protein and moves within a three-dimensional collagen matrix, which is not visualized. From Bastian et al.: Cancer Lett 2009;274:218-224, with permission.

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