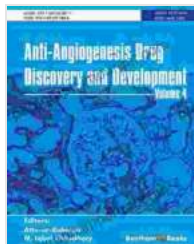


Anti-Angiogenesis Drug Discovery and Development: Unlocking Novel Therapies for Cancer and Beyond



Anti-Angiogenesis Drug Discovery and Development

Volume 4 by Jess K. Gilmour

★★★★☆ 4.6 out of 5

Language : English

File size : 3070 KB

Text-to-Speech : Enabled

Enhanced typesetting : Enabled

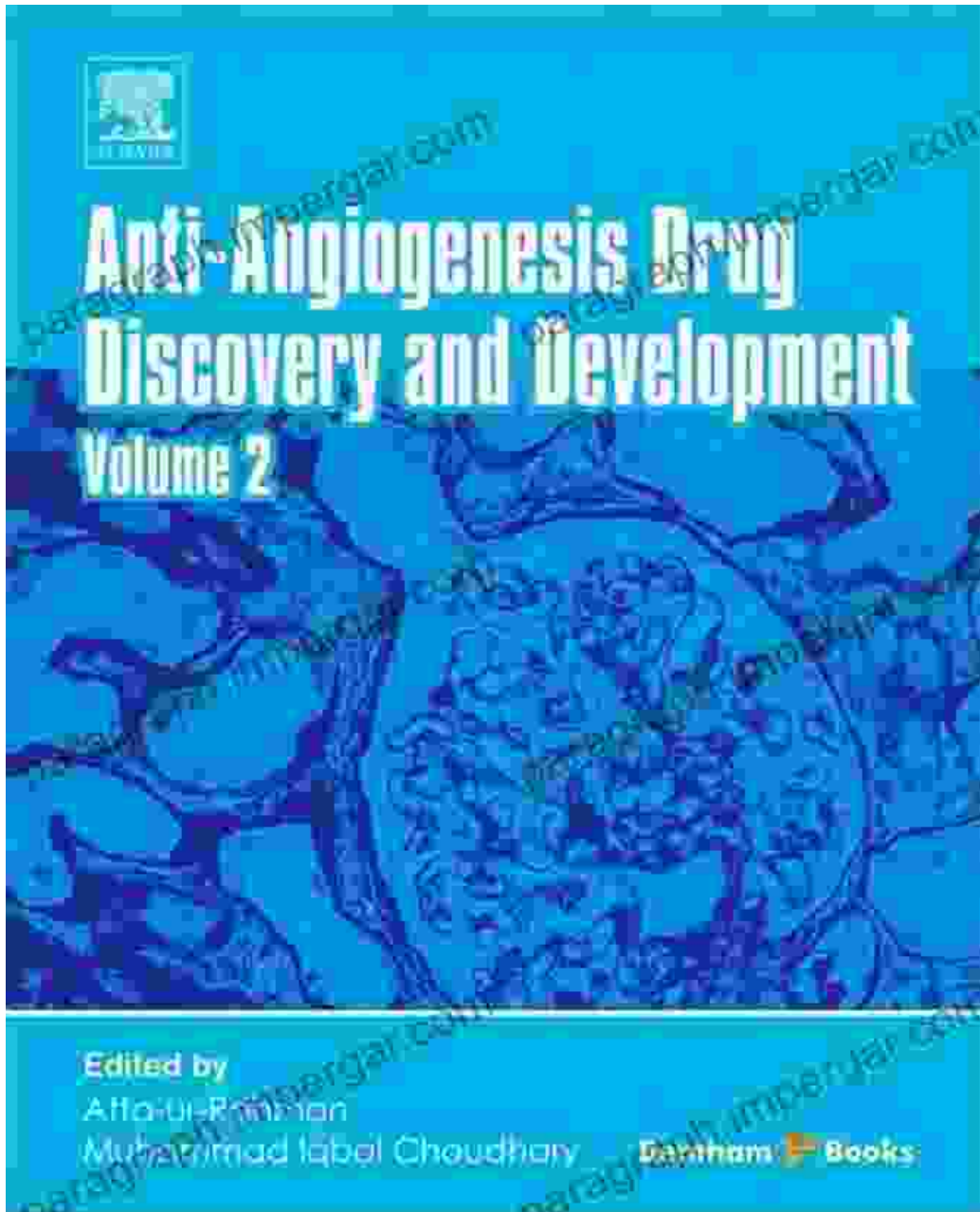
Print length : 312 pages

Screen Reader : Supported

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Angiogenesis, the formation of new blood vessels, plays a pivotal role in numerous physiological and pathological processes. In cancer, angiogenesis is essential for tumor growth, invasion, and metastasis. By targeting angiogenesis, researchers have developed novel therapeutic strategies that aim to inhibit or disrupt the formation of new blood vessels, thereby cutting off the tumor's lifeline and halting its progression.

Section 1: The Role of Angiogenesis in Cancer

This section explores the fundamental mechanisms of angiogenesis and its critical involvement in cancer development. Readers will gain an understanding of how tumors induce angiogenesis to meet their metabolic demands, promote invasion, and facilitate metastasis.

- Molecular mechanisms of angiogenesis
- Angiogenic factors and their signaling pathways
- Regulation of angiogenesis in cancer

Section 2: Targeting Angiogenesis for Cancer Therapy

This section delves into the various approaches to targeting angiogenesis for cancer treatment. Readers will learn about the different classes of anti-angiogenic drugs, their mechanisms of action, and their clinical applications.

- VEGF inhibitors: Bevacizumab, Aflibercept
- VEGFR tyrosine kinase inhibitors: Sunitinib, Sorafenib
- Angiopoietin inhibitors: Trebananib
- Integrin inhibitors: Cilengitide

Section 3: Emerging Anti-Angiogenic Therapies

This section highlights the latest advancements in anti-angiogenesis drug discovery. Readers will discover promising new targets, novel therapeutic modalities, and combination strategies that hold great potential for improving cancer therapy.

- Targeting endothelial cell metabolism
- Immune-mediated anti-angiogenic therapies
- Angiogenesis inhibitors in combination with other therapies

Section 4: Preclinical and Clinical Development of Anti-Angiogenic Drugs

This section provides a comprehensive overview of the preclinical and clinical development process for anti-angiogenic drugs. Readers will learn about the essential steps involved in evaluating drug efficacy, safety, and toxicity, as well as the challenges and considerations in bringing new drugs to market.

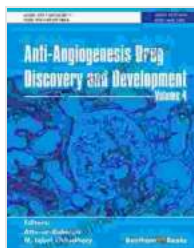
- Preclinical animal models and experimental designs
- Phase I, II, and III clinical trials
- Regulatory approval and post-marketing surveillance

Section 5: Future Directions in Anti-Angiogenesis Drug Discovery and Development

This section explores the exciting future of anti-angiogenesis drug discovery and development. Readers will gain insights into the cutting-edge research areas, promising new targets, and emerging technologies that are shaping the next generation of anti-cancer therapies.

- Artificial intelligence and machine learning in angiogenesis research
- Translational research and patient-centric approaches
- Personalized medicine and precision oncology

Anti-Angiogenesis Drug Discovery and Development is a comprehensive and up-to-date resource that provides readers with an in-depth understanding of this rapidly evolving field. From the molecular mechanisms of angiogenesis to the latest therapeutic advancements, this book offers valuable insights for researchers, clinicians, and anyone interested in the development of innovative cancer therapies.



Anti-Angiogenesis Drug Discovery and Development

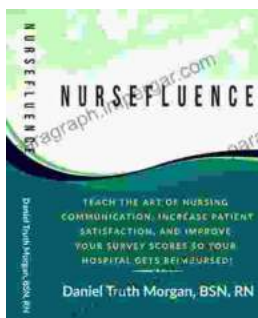
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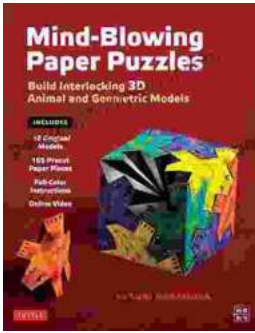
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