

评《有丝分裂机制研究》

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【摘要】：有丝分裂是一个细胞过程，在这个过程中，已经复制的染色体被分离成两个相同的，以准备成功的细胞分裂。19 世纪末有丝分裂的发现是由于光学显微镜在过去几十年里取得的重大进步而成为可能的。从那时起，随着技术的进步，对有丝分裂现象的描述和我们对其分子机制的理解都得到了促进。以下是一个描述了许多这些进展的开放获取章节的简要描述，最近作为关于有丝分裂机制的十章书的第一部分出版了。这本开放获取的在线书籍提供了有丝分裂的每一个主要组成部分和事件的评论，如着丝点（将每一个姐妹染色单体连接到纺锤体纤维的染色体特化），纺锤体形成，染色体聚集到中期板，在纺锤体形成中评估质量的检查点，后期染色体分离的两个片段，有丝分裂错误的后果。任何对复杂细胞过程的机制感兴趣的人都应该会发现这些解释既有趣又有用。

【关键词】：《有丝分裂机制研究》；评论

Commentary on“Research on Mitotic Mechanisms”

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Abstract: Mitosis is the cellular process in which the already duplicated chromosomes are segregated into two identical in preparation for successful cell division. The discovery of mitosis in the late 19th century was made possible by the significant improvements in light microscopes achieved over many preceding decades. Since then, both the descriptions of mitotic phenomena and our understanding of the molecular mechanisms that underlie them has been facilitated at every step by technological advances. The following is a brief account of an open-access chapter that describes many of these advances, recently published as the first part of a ten-chapter book on mitotic mechanism. This open-access, on-line book provides reviews of each of the principal components and events of mitosis, such as kinetochores (the chromosomal specializations that attach each of the sister chromatids to spindle fibers), spindle formation, chromosome congression to the metaphase plate, the checkpoints that assess quality in spindle formation, the two segments of anaphase chromosome segregation, and the consequences of mitotic errors. Anyone interested in the mechanisms that underly complex cellular processes should find these accounts both interesting and useful.

Keywords: “Research on Mitotic Mechanisms”; Commentary

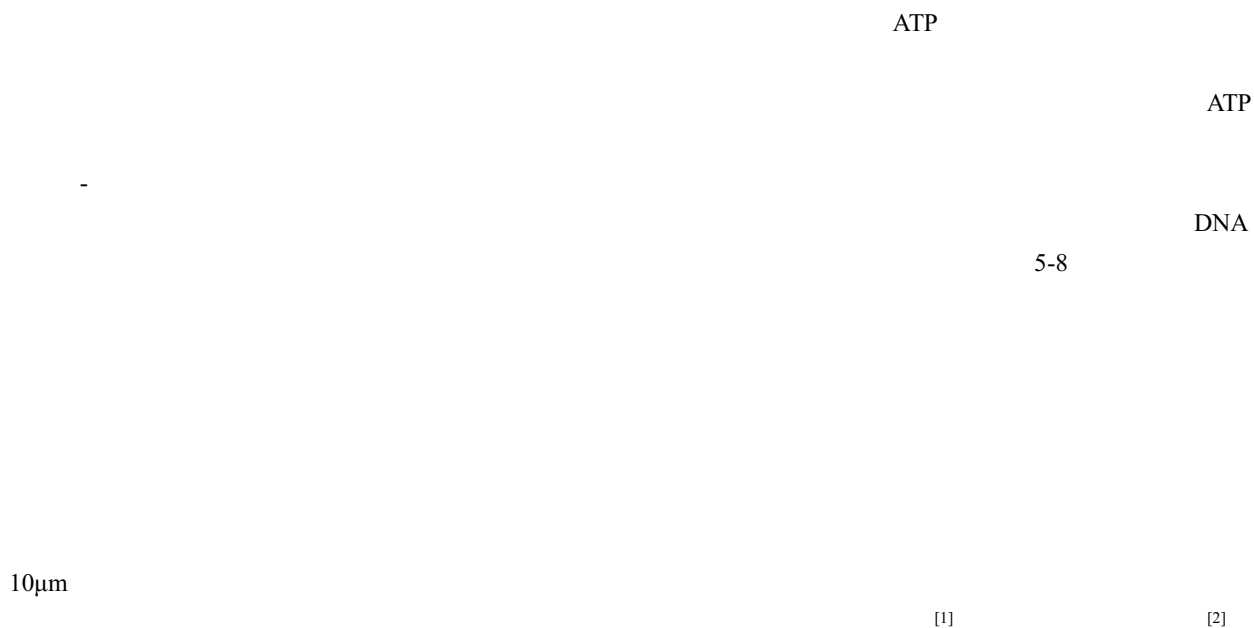
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