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New Insight into Subphases of DNA Replication in Mammalian Cells

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Message from the Guest Editor

Around sixty years ago, it was not known whether replicative DNA synthesis of the leading strand of the DNA duplex in mammalian (particularly in human) cells is a continuous process or is interrupted, and if it is, how many times in the S phase. The generally accepted view of discontinuous synthesis of the lagging strand forming Okazaki fragments should not be confused with that of the leading strand synthesis. Over the past 40 years, it turned out that it has still not been clarified how many subphases of the leading strand synthesis of replication are.

In this Special Issue, we welcome scientists who have contributed to the field with their commendable publication(s) worth to discuss how many (if any) subphases are in the replication, and authors are asked to describe the method(s) that allowed them to come to their conclusions.

Methods of interest: flow cytometry; bromdeoxyuridine labeling; BrdU–Giemsa technique; electron-microscopic autography; X-ray irradiation; and counterflow centrifugal elutriation.













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