

Mitotic Poisons in Cancer Therapy

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Cell proliferation is a fundamental feature of tumors, as cells undergo an ordered event collectively known as the cell cycle. Therefore, checkpoints in mitotic division has become target for anti-cancer therapeutics.

A comprehensive review of the literature covering studies on cell proliferation, the mechanism of cell cycle regulation, mitosis, cytokinesis, and anti-cancer drug development were extensively perused. Mitotic poisons, including taxanes, epothilones, colchicine, vinca alkaloids, berberine, laulimalide, and pseudolaric acid B, were identified.

Conclusions: microtubules, mitotic kinases, and kinesin motor protein could serve as targets for the development of mitotic poisons as pharmacotherapy effective against well-stratified malignancies.

Documents:

Khalil Mohamed AA, Essien-Baidoo S, Boye A. Natural product-inspired mitotic poisons in cancer pharmacotherapy. Academia Drug Development & Pharmacology. 2026; 2: 1-17. <https://doi.org/10.20935/AcadDrug8351>