

## **New Method for the Synthesis of Different Pyrroloquinazolinoquinolin Alkaloids**

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**Abstract :** Luotonins and its derivatives (Isoluotonins) are alkaloids from the aerial parts of *Peganum nigellastrum* Bunge that display three major skeleton types. Luotonins A, B, and E are pyrroloquinazolinoquinoline alkaloids. A few methods were known for the synthesis of Isoluotonin. All luotonins have shown promising cytotoxicities towards selected human cancer cell lines, especially against leukemia P-388 cells. Luotonin A is the most active one, with its activity stemming from topoisomerase I-dependent DNA-cleavage. Such intriguing biological activities and unique structures have led not only to the development of synthetic methods for the efficient synthesis of these compounds, but also to interest in structural modifications for improving the biological properties. Recent progress in the study of luotonins is covered.

**Keywords :** luotonin A, isoluotonin, pyrroloquinolines, alkaloids

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