

### **Breast Cancer Apoptosis and the Therapeutic Role of Luteolin**

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### **Abstract**

Breast cancer represents one of the three most common gynecological cancers, with each subtype having distinct risk profile and treatment strategies. Optimal therapy for each case depends not only on tumor subtype and cancer stage, but also on patient preferences. Thus, the final therapeutic choice seems complicated to be reached. In addition, frequent relapses and the aesthetic effects have led to the search for more effective and less invasive methods. Surgical interventions have become less complex and new hormonal and chemotherapeutic drugs are established, that promise great results, either combined to surgical treatment or used exclusively. Luteolin is a representative of natural flavonoid that has proven to modulate various signaling pathways involved in cancer development. Recent data demonstrate that luteolin induces apoptotic cell death via antioxidant activity, acting as an anticancer agent against various types of human malignancies including breast cancer. The aim of this review is to summarize latest data considering the therapeutic role of luteolin in breast cancer.

**Key words:** breast cancer, luteolin, flavonoid, apoptosis, carcinogenesis, therapy