The importance of integrated therapies on cancer: Silibinin, an old and new molecule

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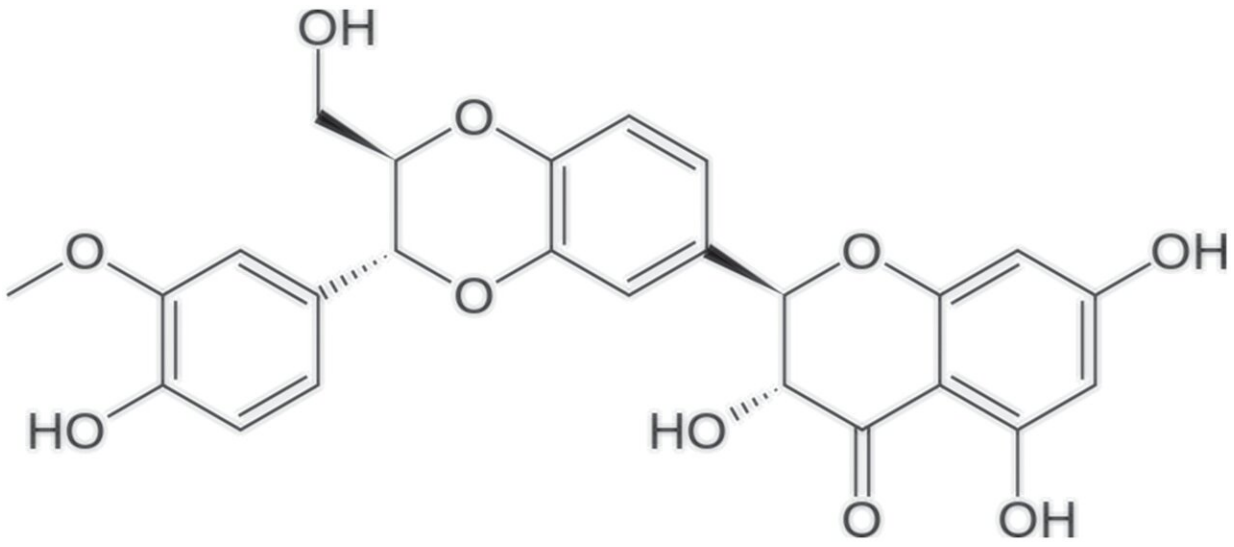

Molecular structure of silibinin. Credit: *Oncotarget* (2024). DOI: 10.18632/oncotarget.28587

A new review paper titled "The importance of integrated therapies on cancer: Silibinin, an old and new molecule" has been published in *Oncotarget*.

In this new review, researchers Elisa Roca, Giuseppe Colloca, Fiorella Lombardo, Andrea Bellieni, Alessandra Cucinella, Giorgio Madonia, Licia Martinelli, Maria Elisa Damiani, Ilaria Zampieri, and Antonio Santo from Perderzoli Hospital and Fondazione Policlinico Universitario "A. Gemelli" begin their abstract by noting that the efficacy of coadjuvant molecules, in the landscape of cancer treatments, remains a focus of attention for clinical research with the aim of reducing toxicity and achieving better outcomes.

The researchers state, "Most of the pathogenetic processes causing tumor development, neoplastic progression, aging, and increased toxicity involve inflammation."

Inflammatory mechanisms can progress through a variety of molecular patterns. As is well known, the aging process is determined by pathological pathways very similar and often parallel to those that cause cancer development. Among these complex mechanisms, inflammation is currently much studied and is often referred to in the geriatric field as "inflammaging." In this context, treatments active in the management of inflammatory mechanisms could play a role as adjuvants to standard therapies.

Among these emerging molecules, silibinin has demonstrated its anti-inflammatory properties in different neoplastic types, also in combination with chemotherapeutic agents. Moreover, this molecule could represent a breakthrough in the management of age-related processes. Thus, silibinin could be a valuable adjuvant to reduce drug-related toxicity and increase therapeutic potential.

"For this reason, the main aim of this review is to collect and analyze data presented in the literature on the use of Silibinin, to better understand the mechanisms of the functioning of this molecule and its possible therapeutic role," the researchers explain.

More information: Elisa Roca et al, The importance of integrated therapies on cancer: Silibinin, an old and new molecule, *Oncotarget* (2024). DOI: 10.18632/oncotarget.28587