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ONCOLOGY

SerpinB3 inhibitor for tumor treatment

Applicant	Università degli Studi Padova
Inventors	Patrizia Pontisso, Alessandra Biasiolo, Andrea Martini, Santina Quarta, Mariagrazia Ruvoletto, Cristian Turato, Gianmarco Villano
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TRL scale



What's needed for?

The compound 1-piperidin propionic acid, inhibitor of SerpinB3 production, is proposed as a novel adjuvant drug in the treatment of different types of solid tumors resistant to chemotherapy.

In the prior art this compound is used at a cosmetic level for topical anti-aging treatments, while it has never been proposed as a systemic formulation for the treatment of chemoresistant tumors that overexpress SerpinB3.

Several data have shown the involvement of the molecule SerpinB3 in the carcinogenesis process as it determines resistance to apoptosis, induces cell proliferation and greater cell invasiveness. Furthermore, it leads to impaired immune surveillance and reduced chemosensitivity.

Recent studies have documented that SerpinB3 is expressed in primary liver tumors with poor prognosis, in more advanced stage of colon and pancreatic tumors, in tumors of the lung, esophagus, breast and ovary with poor response to chemotherapy. 1-piperidin propionic acid is able to efficiently inhibit SerpinB3 synthesis and this effect is achieved at very low concentrations of the compound.

Advantages

- Readily available on the market
- Well tolerated in the experimental model
- Not easily degradable
- Low cost

Applications

Use of the compound in the oncological field as an adjuvant in the treatment of chemoresistant tumors overexpressing SerpinB3.