biology

Uyrazole derivative of usnic acid, method of preparation and application in cancer therapy, particularly cervical cancer

About the solution

The invention concerns a new pyrazole derivative of usnic acid obtained by chemical synthesis using methylhydrazine.

The compound exhibits strong antiproliferative and antimetastatic activity against cancer cells from various tissues, particularly cervical, breast, and pancreatic cancers, while showing low toxicity toward normal cells.

It also induces cytoplasmic vacuolization and cancer cell death, likely through the activation of endoplasmic reticulum (ER) stress.

The derivative has potential applications in cancer therapy and as an in vitro research tool for studying cell death mechanisms and ER stress responses.

IP Protection

The invention is protected by the Polish Patent Office under the following number: **Pat.246172**

Technology readiness level

TRL 4 - Technology validated in laboratory conditions.

Research Team

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Applications

- Research on new anticancer drugs.,
- Therapy for cervical, breast, and pancreatic cancers,
- Induction of ER stress in cell biology studies.

Cooperation opportunities

- Collaboration on preclinical and toxicological studies,
- Licensing of the technology or joint development of therapeutic formulations,
- Partnership in compound commercialization and product development.

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