

Novel radiosensitizer enhancing the efficacy of cancer radiotherapy

About the invention

The subject of the offer is a derivative of 2'-deoxyadenosine in the form of 8-(4-trifluorothio)benzylamino-2'-deoxyadenosine (dA-benzylNHSCF₃), a method for its preparation and its use as a radiosensitiser in cancer therapy.

The solution is based on the use of a modified nucleoside which, after incorporation into the DNA of cancer cells, increases the sensitivity of genomic DNA to damage induced by ionising radiation. The mechanism of action leads to increased DNA breaks and reduced survival of cancer cells, particularly under conditions of reduced oxygenation.

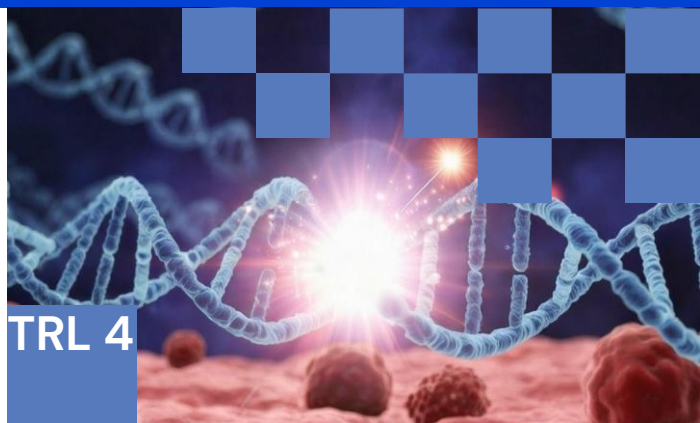
The developed derivative has proven radiosensitising properties and can be used as an adjunct to radiotherapy, especially in the treatment of solid tumours, contributing to increased treatment efficacy and selectivity.

IP protection

The invention is protected by a patent application filed with the Polish Patent Office under number: **P.450925**.

Technology readiness level

TRL 4 - Technology validated in laboratory conditions



TRL 4

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Applications

- Radiosensitization in cancer radiotherapy,
- Treatment of radioresistant solid tumors,
- Support of ionizing radiation-based oncological therapies.

Possible cooperation

- Licensing of the compound and synthesis technology,
- Joint R&D and further preclinical validation,
- Development and clinical implementation of the radiosensitizer.