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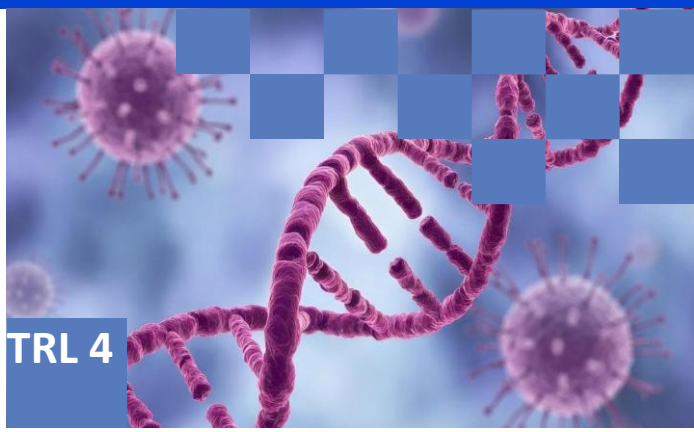
chemistry

Novel deoxyadenosine derivative as a radiosensitizer for cancer radiotherapy



About the invention

The invention relates to a novel 2 deoxyadenosine derivative in the form of 8 benzylo(4 trifluoromethoxy)2 deoxyadenosine and to a method of its synthesis. The compound exhibits DNA radiosensitizing properties and can be used to enhance the effectiveness of cancer radiotherapy.

Its mechanism of action is based on increasing DNA susceptibility to ionizing radiation induced damage, leading to enhanced genomic instability and cancer cell death. Radiosensitizing activity has been confirmed at the cellular level, indicating strong potential for the treatment of solid tumors, particularly radioresistant cancers.

IP protection

The invention is protected by a patent application in the Polish Patent Office under the number: **P.448242**

Technology readiness level

TRL 4 - Technology validated in laboratory conditions

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Applications

- Enhancement of radiotherapy for solid tumors,
- Sensitization of cancer cells to ionizing radiation,
- Reduction of therapeutic radiation doses while maintaining efficacy.

Possible cooperation

- Licensing of the compound and synthesis technology,
- Collaboration in preclinical and clinical development,
- Joint development of next generation nucleoside based radiosensitizers.

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