University of Gdańsk
Technology Transfer Office

chemistry

Uracil derivative with radiosensitizing properties

About technology

Radiotherapy is one of the **most common therapeutic methods** employed for human cancer treatment. This method uses **ionizing radiation**, which mainly acts indirectly via the radiolysis products of water damaging cellular DNA. Commonly used radiotherapy causes many side effects. Two classes of radiosensitizing agents are distinguished: hypoxic cell sensitizers, which rely on hypoxia occurring only in cancer cells, and pyrimidine analogues that could be incorporated into DNA due to their structural similarity to native nucleosides.

The **method** allowing to **increase the effectiveness of radiotherapy** is the use of the respective derivatives of nucleic bases **radiosensitizers**, operating in a low oxygen environment, that are incorporated into cellular DNA during its biosynthesis.

Implementation progress

TRL 4 –Technology validated in laboratory conditions

Research Team

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IP Protection

The invention is the subject of patent protection:

- Pat.234558, UPRP
- EP3351535, EPO

Cooperation opportunities

- Licensing agreement
- Transfer of ownership
- Spin off

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