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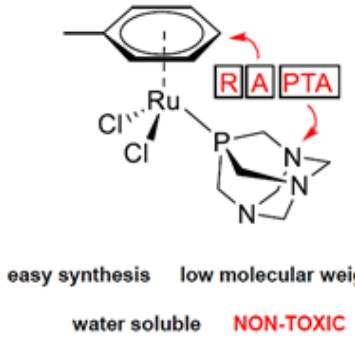
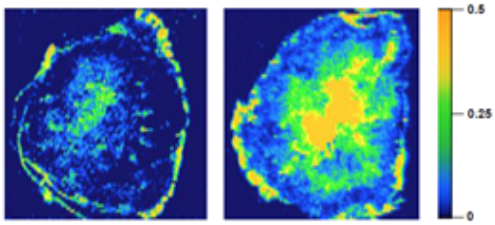
Licensing Opportunity

TTO – Technology Transfer Office

RAPTA: compounds that modulate the tumour microenvironment via an epigenetic mode of action





Chemical structure of RAPTA-T and images of tumor cross-sections showing the platinum distribution in the tumor without (left) and with (right) RAPTA-T pretreatment. The tumors were treated with cisplatin and the platinum levels in the tumor pretreated with RAPTA-T are considerably higher and lead to a significant inhibition of tumor growth (mesothelioma – a chemoresistant tumor).

Ref. Nr

6.1380

Keywords

Cancer, Tumor microenvironment, Epigenetics, Combination therapies

Intellectual Property

WO2015/136061A3 (US,EP) & US9018199B2

Publications

Nature Communications volume 8, 14860 (2017)
Scientific Reports volume 7, 43005 (2017)

Date

18/05/2018

Description

RAPTA compounds exhibit unique pharmacological properties and low general toxicities. Unlike anti-angiogenic drugs, at clinically relevant doses RAPTA normalizes tumor blood vessels without significantly inducing anti-angiogenic activity and vessel pruning, thereby offering a similar benefit as antiangiogenic compounds, but without the translational difficulties. In vivo RAPTA pre-treatment followed by cytotoxic agents lead to a significantly improved treatment outcome in chemoresistant tumors mediated through higher drug uptake into the formerly chemo-resistant tumor.

The technology is a first-in class ruthenium based compound (RAPTA) with low toxicity and effective at inhibiting both primary tumor growth and the spreading and growth of solid metastatic tumors.

RAPTA synergizes with a number of cancer drugs to overcome chemoresistant cancers.

Mode of action points to alterations at the histone level together with extracellular effects.

Aim

To progress the therapeutic use of RAPTA alone or in combination to a first clinical trial. Investigate the synergistic effects of RAPTA with immunotherapy treatments and by antibody drug conjugation (ADC).

Advantages

Low toxicity and higher efficiency than other compounds in phase I/II for treating solid tumors.

Combination therapy with RAPTA can overcome therapeutic resistance to different classes of anticancer agents.

Status

Pre-clinical (Rodents, CAM and cell cultures).

Offering

Licensing or collaboration (pre-clinical and clinical, including combination therapies and ADC approaches).