



ONCOLOGY

Copper complexes as novel anticancer agents

Applicant	Università degli Studi Padova
Inventors	Valentina Gandin, Cristina Marzano, Marina Porchia, Francesco Tisato
Priority	15/06/2021
Protection	IT 102021000015635 PCT/EP2022/066390

TRL scale



What it is needed for?

Although **platinum-based drugs**, such as cisplatin, have achieved great success in cancer treatment and are presently enclosed in the majority of clinical protocols for the management of **solid malignancies**, their use **are associated with** significant drawbacks such as **severe toxic effects on normal tissues and early appearance of drug resistance phenomena**, calling for innovative metal-based drugs endowed with a better pharmacological profile.

We have developed a set of novel coper(I)-based compounds with anti-cancer properties. The choice of copper instead of platinum has several advantages, such as increased accumulation in cancer cells and reduced toxicity due to existence of natural biological pathways that regulate copper levels and detoxify the metal where necessary.

Our proprietary copper complexes show outstanding *in vitro* antitumor activity against a wide panel of human cancer cell lines, including platinum resistant and multidrug resistant cancer cells. *In vivo*, compounds induce a remarkable reduction of tumor growth while manifesting a minimal animal toxicity.

Advantages

- Selectivity against cancer cells;
- Favorable safety profile;
- Overcomes drug resistance to cisplatin and oxaliplatin.

Applications

A drug for the treatment of a plethora of cancers;
A research tool to study the pathogenesis of cancer.

What we are looking for

Technology is available for licensing and/or co-development