



*Market Sector:  
Cancer chemotherapy*

## Flavonoid adjuvant chemotherapy

*Novel adjuvant therapeutic for soft tissue sarcomas enhances chemotherapeutic effect of doxorubicin*

### Summary of invention

**A non-toxic flavonoid has been identified that enhances the anti-tumor efficacy of doxorubicin (DOX), a well know chemotherapeutic drug. In a preliminary clinical study , objective responses were observed in many more patients than expected.**

### Applications

The use of a combination of doxorubicin and flavonoid compound enhances the anti-tumor activity of doxorubicin in soft-tissue sarcomas. This fact holds enormous potential in future anti-tumor therapy, because cytostatic concentrations and associated cardiotoxic risk of doxorubicin can either be maintained while augmenting anti-tumor effect, or can be lowered while maintaining the same anti-tumor effect.

### Commercial partner

- Available for licensing
- Specific area of activity of the partner: Oncology

#### KEYWORDS

Doxorubicine; flavonoid; soft tissue sarcoma; chemotherapy; potentiation; adjuvant

#### KEY BENEFITS

Flavonoid acts synergistically in combination with doxorubicin

Higher objective tumor response observed in humans, specifically with soft tissue sarcomas

No toxicity of flavonoid observed in humans in phase I clinical trial

#### PATENT / IP STATUS

Patent application filed.

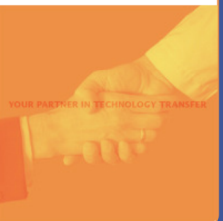
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## Background

Chemotherapy is part of conventional cancer treatments, and is a widely used method to treat several forms of cancer. It aims at eliminating rapidly dividing cells. However, also certain healthy cells divide rapidly, such as blood cells and the cells lining the mouth and the gut, which therefore are also prone to be damaged by chemotherapy. The damage of healthy cells may result in severe side effects. For example, the administration of DOX to patients is limited by a cumulative dose-dependent cardiotoxicity, which after years can lead to severe morbidity and also mortality.

Clearly, DOX-based cancer therapy would benefit tremendously from decreasing or avoiding toxic side-effects of the chemotherapeutic agent.

The present invention relates to a flavonoid that may synergistically increase the efficacy of this chemotherapeutic drug DOX. The use of this flavonoid as an adjuvant to DOX therapy could thus potentially enable lowering of cytostatic concentrations and associated cardiotoxic risk while maintaining anti-tumor activity.

Flavonoids are naturally occurring compounds that are present in numerous different fruits, vegetables and beverages, such as tomato, orange, tea and wine. Besides their relevance in plants, they are pharmacologically important as they comprise iron-chelating and radical-scavenging properties, which may contribute to the antioxidant activity of flavonoids. Fully synthetic and semi-synthetic compounds have recently become available. The current invention relates to a semi-synthetic flavonoid.

## Remarks

This opportunity is being developed jointly by the University Maastricht through their licensing body BiomedBooster BV and by VU University medical centre in Amsterdam.

Additional information is offered upon execution of a Confidentiality Agreement.

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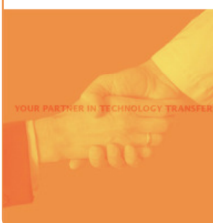
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