Technology Offer

Moguntinones – a novel class of kinase inhibitors for cancer therapy

Description

Moguntinones, a class of small molecule compounds comprise 3-(indolyl)- or 3-(azaindolyl)-4-arylmaleimide derivatives with tumor and vascular targeting properties. The present invention relates to the use of Moguntinones for treatment of colorectal or gastric adenocarcinoma.

Tumor growth and metastasis are highly associated with the overexpression of protein kinases. Therefore protein kinases are an interesting class of target molecules for improved therapeutic attempts. These proteins are known to regulate the majority of cellular pathways including such relevant for control cell growth, movement and death - all processes relevant for cancer growth and progression.

A physiological process focused on in development of anti-cancer agents is apoptosis, a controlled form of cell death eliminating damaged, aberrant, infected, old or superfluous cells. In particular often mucosa tissue such as gastrointestinal mucosa is characterized by a rapid epithelial cell turnover in which homeostasis is maintained predominantly by apoptosis.

One essential prerequisite for growth and metastasis of cancers which form tumors is angiogenesis, a process involving the formation of new blood vessels from pre-existing capillary endothelial cells. Tumor cells may enhance angiogenesis by overexpression of proangiogenic factors, e.g. VEGF or interleukins. In general, this is especially pronounced with tumors having a high microvessel density as well as a particular aggressive behavior and high tendency to metastasize. Therefore, inhibitors of angiogenesis are researched as anti-tumor agents.

Application

It has been found that certain Moguntinone derivatives selectively inhibit certain protein kinases and are not only effective angiogenic inhibitors but also directly affect colon and stomach cancer cells by promoting or inducing apoptosis and/or decreasing the cell viability, and are thus useful for treatment of gastric and colorectal adenocarcinomas.

Stage of Development

Ongoing preclinical studies with the aim to accomplish the preconditions to enter into clinical phase I studies.

Patent Situation

The Moguntinones are protected in several patent families, containing pending as well as granted patent applications.

Rights available

Exclusive or non-exclusive licensing or option agreements. The compounds shall be provided to partners in order to carry out clinical trials concerning colorectal or gastric adenocarcinoma.

Additional Information

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