

# Angiotensin II Type 2 Receptor Agonists for Use in Treatment of Cachexia

Ref. No.: CH630

## Background

Cachexia, also called wasting syndrome, is frequently associated with severe primary disease e.g. cancer, AIDS, chronic liver-, renal- or heart failure, chronic infections and others. Symptoms are loss of body mass that cannot be reversed nutritionally, muscle atrophy, fatigue, weakness and/or loss of appetite. About more than 90% of terminal cancer patients suffer from cancer cachexia and cachexia is the cause of death in more than 20% of the cancer patients. It has been reported that the Renin-Angiotensin-System (RAS) is involved in the development of Cachexia. Current approaches targeting the RAS system have been focused on the inhibition of angiotensin-converting enzyme inhibitors and angiotensin II type 1 receptor antagonists. However current treatment strategies are sub-optimal, limited in effectiveness and potential side effects.

## Technology

The invention offers the use of selective angiotensin II type 2 receptor (AT2) agonists, in particular the small molecule Compound 21, for the treatment of cachexia. Alternatively the AT2 agonist can be combined with an angiotensin converting enzyme (ACE) inhibitor or an angiotensin II type 1 receptor antagonist. *In vivo* data with the AH-130 Yoshida hepatoma cancer cachexia rat model show that the treatment with low-dosed Compound 21 (0,2 mg/kg/d) not only significantly prolongs survival of rats but also significantly improves food intake and spontaneous activity compared to placebo treatment. Further on also the loss of body and muscle mass can be decreased.

## Benefits

- ✓ Compound 21 improves survival, food intake, body weight and locomotor activity in cancer cachexia rat model

## Application

Treatment of cachexia / cancer cachexia

## Commercial Opportunity

Searching for a licensing or developing partner

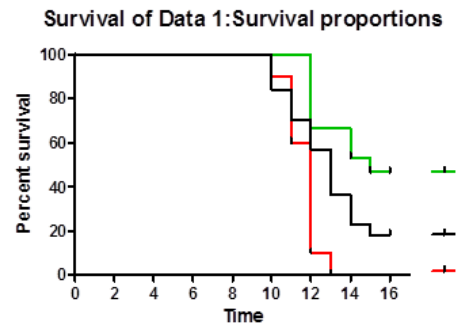


Fig. 1: Survival data of rats with hepatoma cachexia treated with either placebo (black) or compound 21 (green: 0,2 mg/kg/d; red: 1 mg/kg/d)

## Key words

cachexia, cancer cachexia, angiotensin 2 receptor agonist, AT2, compound 21, small molecule

## Developmental Status

*in vivo* (hepatoma cachexia rat model)

## IP Status

EP patent application (07/2013)  
PCT patent application (07/2014)  
publication [here](#)

Regionalization: EP and US (07/2014)

## Patent Owner

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