Technology Offer

Angiotensin II (Ang1-7) Peptide for the Treatment of Acute Respiratory Distress Syndrome

Ref. No.: CH387/2008

Background

Acute respiratory distress syndrome (ARDS) is a severe, life threatening inflammatory disease of the lung associated with diffuse alveolo-capillary injury and increased lung permeability. ARDS, most commonly caused by sepsis, pneumonia, trauma and/or aspiration has an incidence of 20-50/100.000 person years, and a lethality of 30-35%.

Despite a multitude of clinical trials are in investigation to explore drug candidates such as glucocorticoids, recombinant angiotensin converting enzyme 2, depelestat and surfactants, so far no pharmacological drug could improve the clinical outcome of ARDS. There is a strong medical need for new drug candidates which improve clinical outcome and qualtity of life of survivors by intervention in the patho-physiological process.

Technology

The biologic active hepta-peptide Ang(1-7) which is a cleavage product of angiotensin 2, mediated by the angiotensin-converting enzyme 2 (ACE2), has been shown to be a promising drug candidate for acute respiratory distress syndrome. In rats, in which acute lung injury (ALI) can be induced by oleic acid- (OA) infusion, the administration of Ang(1-7) leads to an abrogation of OA-induced increase in lung wet-to-dry weight ratio. Furthermore, the OA-mediated increase of recruiting inflammatory cells within the rats´ lungs, measured by Myeloperoxidase (MPO) activity, could be significantly prevented if Ang(1-7) is administered (infusion). The OA-induced increase in pulmonary vascular resistance can also be abrogated by Ang(1-7).

Benefits

- ✓ High protective effects of Ang(1-7) on lung damages in ALI rat model
- ✓ Biologic peptide

Application

Second medical use of peptidic Ang(1-7) for ARDS / ALI

Commercial Opportunity

In-licensing or searching for strategic partner or financial investor

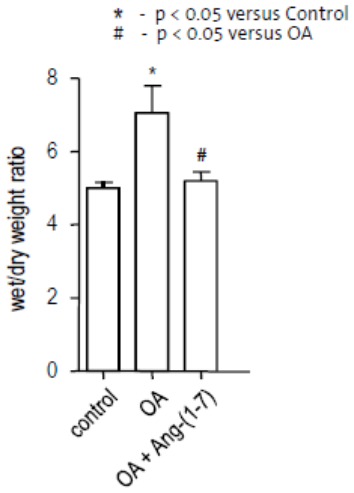

Fig. 1: OA-induced lung wet/dry weight ratio increase can be prevented by Ang(1-7)

Key words

acute lung injury, ALI, acute respiratory distress syndrome, ARDS, Angiotensin-(1-7), Ang(1-7), peptide, Ang(1-7) receptor agonist

Developmental Status

In vivo (ALI rat model)

IP Status

EP patent granted and validated in DE, FR, GB, IT, ES, NL, CH, SE, TR (06/2012) public. here

CA patent granted (08/2014)

CN patent granted (03/2014)

Pending patent applications (09/2009) in US, JP, BR, KR

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