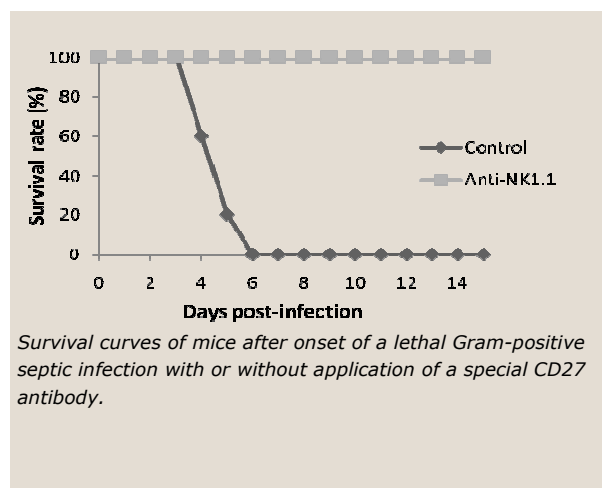


New therapeutic approach for sepsis and infections: In vivo modulation of Natural Killer cells via CD27

Reference Number: TO 02-00250

Challenge

Bacterial infections are usually treated with antibiotics, nevertheless, several bacterial infections cannot be treated accordingly, as, for example, sepsis. Septicaemia has become a leading cause of death for patients admitted to Intensive Care Unit in the USA and Europe (mortality rate 30% to 70%). In this context, especially the role of Gram-positive bacteria in septic infections has been neglected to date. Different options currently exist to combat sepsis, but there is still lack of a reliable therapy. The same is true for the treatment of viral infections as the conventional therapies are associated with severe adverse effects resulting in an urgent need for new effective therapeutic approaches.



Technology

The present technology relates to the modulation of NK cells *in vivo* or *in vitro* through the use of activating or inhibiting ligands of CD27, such as antibodies, for a regulation of the immune response associated with various diseases, like viral or bacterial infections and sepsis. Through the application of anti-CD27 antibodies the onset of a lethal bacterial sepsis was cured in a mouse model by preventing the activation of NK cells via CD27. In a different setting the host resistance against Influenza virus was improved. The invention furthermore relates to screening assays for ligands of the surface marker CD27.

Commercial Opportunity

In-licensing or cooperation for further development in the different fields of application covering sepsis/infection.

Developmental Status

Mouse model data demonstrate proof of concept for sepsis treatment and improved resistance against Influenza virus infection with a CD27 antibody.

Patent Situation

Priority filed in 2008 (EP08002867.3), international application pending (WO09100942).

Berlin
Braunschweig
Hamburg
Hanover
Munich
Neuherberg

Ascenion GmbH
Herzogstraße 64
D-80803 Munich
T +49 (0) 89 31 88 14 - 0
F +49 (0) 89 31 88 14 - 20
info@ascenion.de
www.ascenion.de