PURDUE INNOVATES | Office of Technology Commercialization

Peptide Inhibitors of MAPKAP Kinase II and Methods of Use

A novel category of peptides offers a highly effective, low-dose treatment for fibrotic diseases and smooth muscle spasm disorders by inhibiting key kinases, utilizing multiple methods for cellular entry.

Cell kinases are intracellular signaling molecules used to communicate information between different parts of a cell. Kinases are very prevalent in many cellular signaling pathways, so when something goes wrong with these molecules many diseases and other problems can arise.

Researchers at Purdue have discovered a category of peptides that can be used as intervention for fibrotic diseases such as pulmonary fibrosis, abdominal adhesion, intimal hyperplasia, and aid in scar-less wound healing. These peptides may even be useful for disorders involving smooth muscle spasms such as asthma, vascular bypass surgery, and systemic hypertension. These peptides work by inhibiting kinases that are frequently uncontrolled in the disease state. This treatment is advantageous over previous methods due to its efficacy at lower doses and the multiple ways the peptides can enter cells.

Advantages:

-Lower effective dose

-Higher biological activity

-Multiple methods of cell entry

TRL: 7

Intellectual Property:

EP-Patent, 2001-07-16, Spain | NATL-Patent, 2007-07-16, Singapore | NATL-Patent, 2007-07-16, Canada | NATL-Patent, 2007-07-16, European Patent | Utility Patent, 2007-07-16, Brazil | PCT-Patent, 2007-07-16, WO | NATL-Patent, 2007-07-16, Australia | DIV-Patent, 2007-07-16, Australia | DIV-

Technology ID
64887

Category
Pharmaceuticals/Drug Discovery & Development
Pharmaceuticals/Biopharmaceuti

Authors
Alyssa Panitch
Brandon Seal
Brian Ward

Further information
Clayton Houck
CJHouck@prf.org

View online

Patent, 2007-07-16, European Patent | DIV-Patent, 2007-07-16, Hong Kong | EP-Patent, 2007-07-16, Spain | EP-Patent, 2007-07-16, France | EP-Patent, 2007-07-16, Denmark | EP-Patent, 2007-07-16, Czech Republic | EP-Patent, 2007-07-16, Switzerland | EP-Patent, 2007-07-16, Austria | EP-Patent, 2007-07-16, Germany | EP-Patent, 2007-07-16, European Patent | EP-Patent, 2007-07-16, Belgium | EP-Patent, 2007-07-16, Italy | EP-Patent, 2007-07-16, Ireland | EP-Patent, 2007-07-16, United Kingdom | EP-Patent, 2007-07-16, Netherlands | Utility Patent,

Keywords: cell kinases, intracellular signaling, peptides, fibrotic diseases, pulmonary fibrosis, abdominal adhesion, intimal hyperplasia, scar-less wound healing, smooth muscle spasms, kinase inhibitors, protein kinase inhibitors, tyrosine kinase inhibitors