Technology Opportunity, Ref. No. UZ-10/657

Novel compounds for treatment of severe inflammation and ischemia-reperfusion events

Novel injectable, water-soluble compounds have been identified which are particularly suitable for the treatment and/or protection of patients suffering from a severe inflammation or an ischemia-reperfusion event. In contrast to currently used volatile anaesthetics, no cost-intensive monitoring during the application is required.

Keywords Organ protection, non-anaesthetic, water soluble, anti-inflammatory, ischemia-reperfusion events, myocardial infarction, severe inflammatory reactions, sepsis, acute respiratory distress syndrome

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Background Inflammatory reactions and ischemia-reperfusion processes (such as sepsis or myocardial infarction) belong to the most frequently occurring disease states in critically ill patients. In daily clinical routine volatile anaesthetics are used to treat the inflammatory response to such injuries. The use of volatile anaesthetics is however limited to controlled environments such as operating rooms due to their anaesthetic side-effects.

Invention Water-soluble, non-anaesthetic compounds have been identified which are suitable to treat and/or protect patients in a medical condition involving hypoxic, anoxic and/or inflamed tissue by suppressing the inflammatory response of the damaged tissue, with improved anti-inflammatory effect compared to volatile anaesthetics. Due to the absence of anaesthetic side-effects, no cost-intensive monitoring during the application of the compounds is required.

Fields of Use

- Ischemia-reperfusion situations such as aortic aneurysm repair, multiple trauma, peripheral vascular disease, renal vascular disease, myocardial infarction, instable angina, stroke, impending stroke and transient ischemic attacks.
- Severe inflammatory syndromes such as sepsis, acute lung injuries, life-threatening asthma and acute respiratory distress syndromes.
- Organ protection during surgical interventions, catheter interventions (angioplasty, coronary artery bypass-surgery, cardiac catheterization, carotid endarterectomy, cerebral ateriography and organ transplantation).

Patent Status Patent filed

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