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PEPTIDES FOR THE PREVENTION AND TREATMENT OF INFLAMMATION

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Commercialization opportunities

- Granting of the licenece
- Transfer of ownership
- Joint further research or commercialization

IP Status

The invention was submitted for patenting according to Polish (P.428089) procedures.

Implementation progress

TRL 4
Technology validated under laboratory conditions

The human body is constantly exposed to pathogenic microorganisms, therefore in the course of evolution, it has developed a number of effective mechanisms in order to prevent and combat infections. In many cases, however, the body is not able to overcome infection and inflammation (especially systemic), which can cause septic shock or other serious complications. Currently, the market seek for effective prevention and treatment methods, because sepsis is a huge clinical problem - especially in hospitals, intensive care units (750 thousand of new cases of severe sepsis are diagnosed per year in the USA), where it is the second most common cause of death. The vast majority of infections are caused by bacteria.

At the Faculty of Chemistry of the University of Gdańsk the research on design and synthesis of biologically active peptides has been conducted for many years. The invention are peptides for the prevention use and treatment of inflammation - caused by bacterial infections, as well as systemic inflammation - such as sepsis, accompanied by the growth of cytokines and reactive forms of nitrogen. The use affects both - humans and animals.

The effectiveness of anti-inflammatory properties of the compounds, especially in the case of inflammation caused by Gram-negative bacteria infection, was confirmed by in vitro tests and in a mouse model. The presented compounds may find their applications in anti-inflammatory drugs or as a novel therapeutic agent for sepsis.

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