Next-generation anti-inflammatory small-molecule leads

Inflammatory diseases often require long-term treatment, but current standards such as NSAIDs and corticosteroids are limited by relevant safety and tolerability concerns. Zymonic acid and ZOMPD are novel small-molecule anti-inflammatory compounds designed to inhibit inflammatory processes more specifically. Their small-molecule nature may enable flexible dosing through relatively rapid clearance and limited long-term persistence in the body. Initial data indicate suppression of inflammatory responses in immune cells, supporting their development as promising candidates for safer therapeutic intervention.

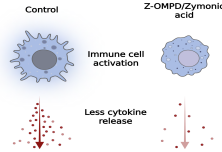


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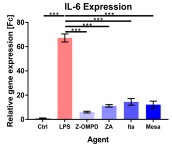
Zymonic acid and ZOMPD suppress key inflammatory signals

The technology comprises two new anti-inflammatory compounds that modulate inflammatory pathways and reduce pro-inflammatory gene expression. In cellular inflammation models, these substances suppress cytokine upregulation in immune cells, supporting their potential as pharmacological leads for inflammatory disease treatment.

01 Novel chemical leads targeting inflammatory signaling pathways
02 Published evidence of non-cytotoxicity for both compounds
03 Favorable high-dose safety profile shown in rodents and large animals as contrast agents
04 Broad development potential across multiple inflammatory indications



Z-OMPD and zymonic acid reduce immune-cell activation and cytokine release.



Relative IL-6 gene expression in LPS-stimulated immune cells treated with Z-OMPD, zymonic acid and reference agents.

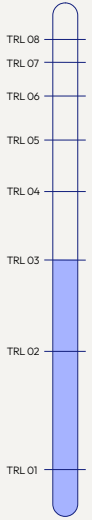
REFERENCES:
Grashei et al. 2023, Nat. Comm.
Grashei et al. 2026, Adv. Science

CHALLENGE

Chronic inflammatory disorders are commonly managed with NSAIDs or corticosteroids, but long-term use is often associated with gastrointestinal, renal, cardiovascular, and immunological risks. This limits sustained treatment and can reduce patient adherence. There is a clear need for new anti-inflammatory agents with effective activity and an improved tolerability profile.

INNOVATION

The invention introduces the novel compounds zymonic acid and ZOMPD as anti-inflammatory leads for the treatment of inflammatory diseases. They are designed to act directly on inflammatory mechanisms rather than relying on broadly acting standard approaches. Early data indicate suppression of key cytokines which promote inflammatory reactions. The compounds may offer a basis for safer stand-alone or combination therapies and can be developed in multiple dosage forms, including oral formulations.



01 Basic principles observed · **02** Technology concept formulated · **03** Experimental proof of concept · **04** Technology validated in lab · **05** Technology validated in relevant environment · **06** Technology demonstrated in relevant environment · **07** System prototype demonstrated in operational environment · **08** System complete and qualified

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Bayerische Patentallianz GmbH
Dr. Nicola Hoesch
nhoesch@baypat.de
+49 (0)89 5480177-29
Prinzregentenstr. 52
80538 München

