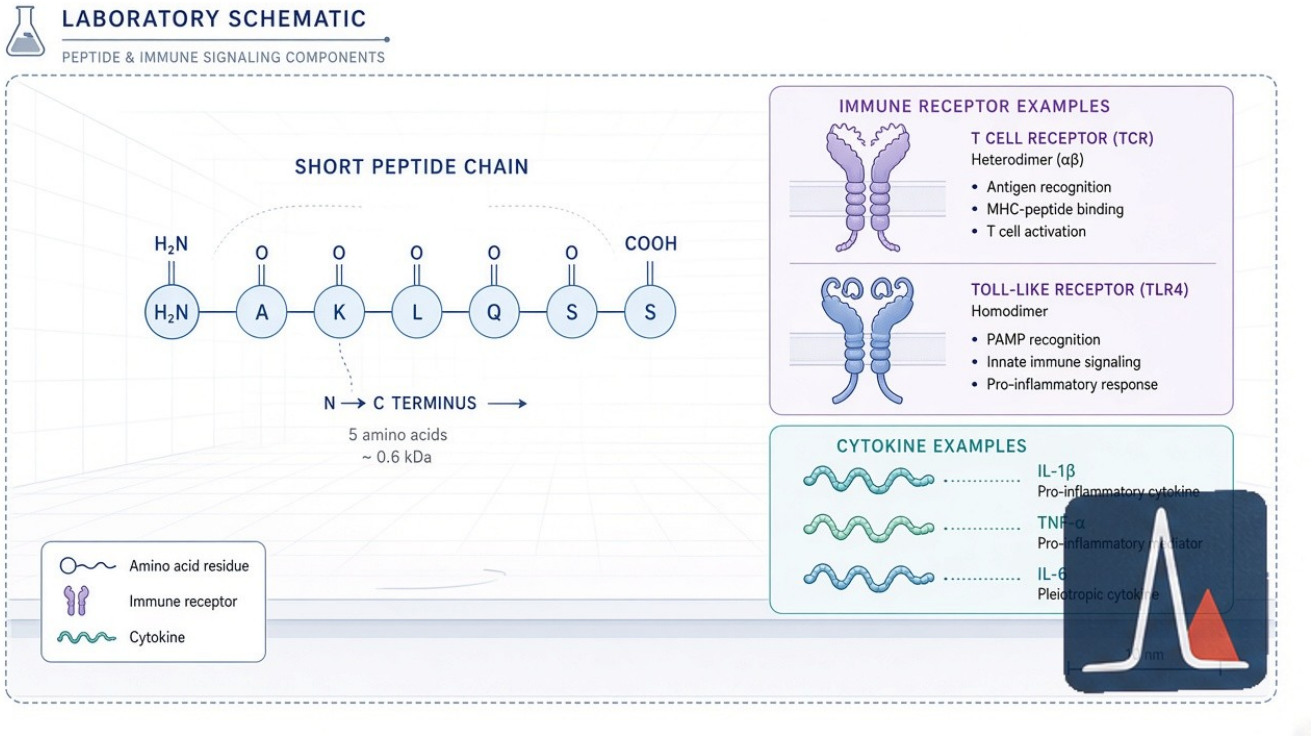
Published reports on thymosin alpha-1

21 October 2026

In vitro, clinical, and review reports on thymosin alpha-1, each with study type and a stated limitation. Observations only; no health claims.



This briefing records what published papers reported on thymosin alpha-1. It does not interpret those reports as effects in people or animals outside the cited settings.

In vitro. A 2026 cell-culture study reported that thymosin α1 alone was associated with a moderate increase in CD8+ T-cell proliferation and activation. With CD3/CD28 stimulation, the report described a further rise in the proliferation index and in CD69, CD25, and HLA-DR expression, and higher secretion of IL-2, IFN-γ, TNF-α, and IL-10. After repeated CD3/CD28 stimulation, the same report described lower PD-1, TIM-3, and LAG-3. Limitation: culture model only; the abstract states that in vivo validation is still needed.

Clinical. An open-label randomized trial (2026) enrolled 73 patients with HBV-related acute-on-chronic liver failure (35 versus 38). The report described higher 90-day transplant-free survival in the thymosin α1 arm than in the comparator arm, lower Treg and CD226low/− Treg frequencies at weeks 4–8, and a moderated late-stage inflammatory response. Limitation: open-label design, one disease setting, and a modest sample; marker and outcome associations are not evidence of a general effect.

Review. A 2025 narrative review summarized literature linking thymosin alpha-1 with T-cell differentiation, thymic output, dendritic-cell and macrophage activity, vaccine response in older adults, and immunosenescence, and stated that long-term efficacy and safety in geriatrics remain to be established. Limitation: not new primary data; preclinical and clinical sources are mixed, and no single outcome is established.

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Sources

- Thymosin α1 Augments CD8⁺ T-Cell Activation and Reverses Exhaustion In Vitro (2026). DOI: 10.31557/APJCP.2026.27.6.2089. https://pubmed.ncbi.nlm.nih.gov/42345155/ - Thymosin α1 improves the outcomes of patients with hepatitis B virus-related acute-on-chronic liver failure by restoring immune balance (2026). DOI: 10.1080/08923973.2026.2641686. https://pubmed.ncbi.nlm.nih.gov/41887933/ - Aging and Thymosin Alpha-1 (2025). DOI: 10.3390/ijms262311470. https://pubmed.ncbi.nlm.nih.gov/41373628/

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