Anti-inflammatory peptide as a groundbreaking drug against inflammatory diseases

Novel peptide that modulates the interferon signaling pathway

Diseases driven by excessive or chronic inflammation affect nearly two-thirds of people worldwide during their lifetime, including auto-inflammatory conditions, neurodegenerative disorders, cancer, and viral infections. A key culprit is the cytokine interferon from the innate immune system, confirmed as disease-causing or promoting in conditions like Type I interferonopathies. Current therapies—broad-spectrum immunosuppressants, JAK/STAT inhibitors, and monoclonal antibodies—are often inadequate, non-specific, costly, and prone to side effects like secondary infections or metabolic disorders.

This invention introduces a newly discovered peptide (and its derivatives) that specifically modulates the interferon signaling pathway, suppressing interferon responses without affecting other pathways. Unlike broad immunosuppressants (e.g., corticosteroids) or expensive antibodies, this peptide offers targeted action, cost-effective production, and easy optimization as a next-generation biomolecule.

Innovation

Novel peptide against inflammatory dieseases

- High specificity: Blocks interferon-driven inflammation precisely, avoiding broad immune suppression.
- Safety Profile: Reduces risks of secondary infections, unlike current options.
- Cost-Effective: Peptides are cheaper to manufacture and scale than monoclonal antibodies.
- Versatile application

Application

Targets a massive global market for diseases in which inflammation plays a crucial role:

- **Autoimmune and autoinflammatory diseases** e.g. rheumatoid arthritis, psoriasis, Crohn's disease, and ulcerative colitis.
- **Neurodegenerative diseases** e.g. Alzheimer's disease, Parkinson's disease.
- **Metabolic diseases**, especially type 2 diabetes and insulin resistance.
- **Cardiovascular, Skin and Respiratory diseases, Cancer**

Development Status

- In vitro application; not yet clinically tested

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