Improved Calcitonin-based Therapeutics (Ramot)

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Technology

The aggregation site on human calcitonin has been identified, paving the way for development of specific inhibitors of calcitonin amyloid fibril formation. Such inhibitors will enable development of improved calcitonin therapeutics as well as greatly facilitate in vitro calcitonin manipulations.

The Need

The therapeutic use of human calcitonin is severely limited by its tendency to associate and form fibrils. Salmon calcitonin, which is used in the clinic, causes immunogenic reactions in some treated patients owing to low sequence homology compared to the human form. There is thus a clear need for a calcitonin based therapeutic which is non-immunogenic and does not associate to form fibrils.

Potential Applications

Calcitonin therapy for:

- Osteoporosis therapy
- Paget's disease
- In vitro calcitonin solubilizer

Stage of development

Short peptide inhibitors of human calcitonin aggregation have been synthesized characterized and tested in vitro.

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