Non-Confidential Description

Novel Somatostatins Available for Diagnostic and Therapeutic Applications

Technology Case: RFT-51

Invention Summary

Somatostatins are ubiquitous polypeptides known to affect basic biological processes such as growth, development, metabolism and cell differentiation in vertebrates.

This invention, developed at North Dakota State University, provides isolated novel somatostatin polypeptides and nucleic acids, methods of making and using these polypeptides and nucleic acids, and methods of modifying mammalian somatostatin polypeptides and nucleic acids.

It also covers methods of modifying mammalian somatostatin polypeptides and nucleic acids for clinical diagnostic and therapeutic uses.

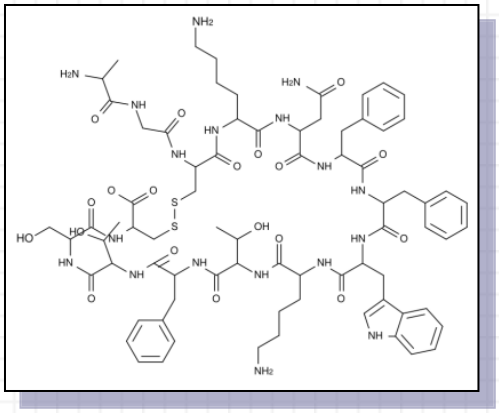

Fig. Structure of a typical somatostatin peptide

Benefits

- Treatment of diabetes, growth disorders, and some neurological disorders.
- Provides methods of modifying mammalian somatostatin polypeptides and nucleic acids.
- New therapy possibilities with somatostatin agonists and antagonists.
- Treatment of tumors, modification of certain metabolic activities.
- Potential for somatostatin analog therapeutics.

Invention Premise

- Novel somatostatin polypeptides derived from *Oncorhynchus mykiss*.
- Polynucleotides encoding novel somatostatin polypeptides
- Methods for identifying bioactive modified somatostatin polypeptides.

Developmental Stage

This technology has completed the initial laboratory work. Further R&D and commercialization requirements include scale-up manufacturing and formulation as well as preclinical and clinical research to demonstrate potential safety and efficacy.

Patents

This technology is patented (U.S. Patent No. 6,818,739), and available for exclusive licensing/partnering opportunities.

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Dr. Mark Sheridan is a James A. Meier Professor in the Department of Biological Sciences at North Dakota State University. He previously served as the Director of the Regulatory Biosciences Cluster at NDSU (1991-2000) and the Director of the North Dakota Experimental Program to Stimulate Competitive Research (2000-2003). He was born in Fullerton, California and grew up and attended schools in Southern California, graduating from Dos Pueblos Senior High School in Goleta, California. He earned his bachelor's and master's degrees from Humboldt State University, Arcata, California, and his doctorate in zoology from the University of California--Berkeley. Dr. Sheridan's research on hormone biology has been supported by NSF, NIH, and USDA. He has published over 86 refereed journal articles as well as one book and numerous book chapters. He has given scores of presentations at scientific meetings and has been a visiting professor at several universities around the world, including Brazil, Hong Kong, Japan, and Sweden. He currently serves as an editor for two scientific journals, General and Comparative Endocrinology and Comparative Biochemistry and Physiology. He has received several awards for his teaching and research and was a Fellow of both the Japan Society for the Promotion of Science and the Brazil International Scholar Program. Dr. Sheridan is active in professional organizations, university governance, and mentoring undergraduate and graduate students, post-doctorals, and faculty regarding their research education, proposal writing, grant project management, and research careers. Dr. Sheridan lives in Fargo, North Dakota.

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