Journal of Diabetes Research

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Special Issue on

Recent Insight in Islet Amyloid Polypeptide Morphology, Structure, Membrane Interaction, and Toxicity in Type 2 Diabetes

CALL FOR PAPERS

The formation of protein amyloid deposits is associated with major human diseases including Alzheimer's disease, Parkinson's disease, the spongiform encephalopathy, and type 2 diabetes mellitus. Type 2 diabetes mellitus is characterized metabolically by defects in both insulin secretion and insulin action, resulting in hyperglycemia, and is characterized histopathologically by the presence of fibrillar amyloid deposits in the pancreatic islets of Langerhans (islet amyloid). The presence of these amyloid deposits has been linked to death of the insulin-producing islet β-cells.

Islet amyloid polypeptide (IAPP), a 37-amino-acid peptide, is the major constituent of the amyloid deposits found in type 2 diabetic patients. Despite considerable progress, there are important outstanding issues in the field of islet amyloid.

Advances in biophysical methods will aid our understanding of the process of IAPP amyloid formation. We invite authors to submit original research and review articles that seek to define the molecular and cellular mechanism of amyloid formation. We are interested in articles that explore new aspects of peptide structure and dynamics, peptide-membrane interactions, new methodology to provide insight into the misfolding pathways, and so forth.

Potential topics include, but are not limited to:

- Elucidation of the molecular mechanisms of IAPP
- Identification of the toxic IAPP species
- Potential drug development, small-molecule inhibitors
- New structural information and kinetic studies on IAPP
- Method development to characterize the structure and oligomerization of amyloid proteins

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/jdr/isle/.

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