



## Oxidative Stress and its Complications in Diabetic Neuropathy

Shruti Thakur, Rachana \*

*Jaypee Institute of Information Technology A-10, Sector-62, Noida-201307, Uttar Pradesh, India*

Address for Correspondence: Rachana; [rachana.dr@iitbombay.org](mailto:rachana.dr@iitbombay.org)

**ABSTRACT:** Diabetic neuropathy is one of the major complications posed during and after diabetes. It has gained great attention world wide as, it is incurable and clinical success of the drugs available is very slow. Researchers have identified some major pathways which lead to micro-vascular complications in diabetes. Interlinks among these pathways for the progression of neuropathy can enlighten us to develop therapeutics for its treatment. ROS are one of the main causes of concern as they are reported to be important factors for diabetic neuropathy. Generation of ROS through mitochondria in hyperglycemic conditions has been considered as a major contributor to oxidative stress. This increase in oxidative stress, results in the over-activation of pathways like advanced glycation end products formation, protein kinase C, NF- $\kappa$ B activation and increased polyol flux etc.. These pathways further lead to increased cellular oxidative damage to organelles and biomolecules, causing dysregulation of cellular functions. It also leads to the production of a number of other factors which again increase the malfunction of the neurovascular system. Here, we aim towards the proper understanding of their interlinks with other pathways, which can bring forth new drug target sites and can result in the discovery of potentially new and better therapeutics. © 2014 iGlobal Research and Publishing Foundation. All rights reserved.

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