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+++ Newsticker Wissenschaft #5 +++ Patent Review +++


Protein tyrosine phosphatase 1B (PTP1B) inhibitors as potential anti-diabetes agents: patent review (2015-2018)

ABSTRACT

Introduction: Protein tyrosine phosphatase 1B (PTP1B) inhibition has been recommended as a crucial strategy to enhance insulin sensitivity in various cells and this fact is supported by human genetic data. PTP1B inhibitors improve the sensitivity of the insulin receptor and have the ability to cure insulin resistance-related diseases. In the latter years, targeting PTP1B inhibitors is being considered an attractive target to treat T2DM and therefore libraries of PTP1B inhibitors are being suggested as potent antidiabetic drugs.

Areas covered: This review provides an overview of published patents from January 2015 to December 2018. The review describes the effectiveness of potent PTP1B inhibitors as pharmaceutical agents to treat type 2 diabetes.

Expert opinion: Enormous developments have been made in PTP1B drug discovery which describes progress in natural products, synthetic heterocyclic scaffolds or heterocyclic hybrid compounds. Various protocols are being followed to boost the pharmacological effects of PTP1B inhibitors. Moreover these new advancements suggest that it is possible to get small-molecule PTP1B inhibitors with the required potency and selectivity. Furthermore, future endevours via an integrated strategy of using medicinal chemistry and structural biology will hopefully result in potent and selective PTP1B inhibitors as well as safer and more effective orally available drugs.

Protein-Tyrosin-Phosphatase-1B-(PTP1B)-Hemmer als potenzielle Antidiabetika: Patentprüfung (2015-2018).
Protein-Tyrosin-Phosphatase-1B (PTP1B)-Hemmer verbessern die Sensitivität des Insulinrezeptors und haben das Potenzial, insulinresistenzbedingte Krankheiten zu heilen. Deshalb wurden in den letzten Jahren Bibliotheken von PTP1B-Hemmern erstellt, die man als potente Antidiabetika zur Behandlung von Typ-2-Diabetes heranziehen kann.

Mit einem internationalen Forscherteam veröffentlichte Prof. Hidayat Hussain ein Patent-Review von potenten PTP1B-Hemmern, die als Arzneimittel zur Behandlung von Typ-2-Diabetes geeignet wären.

Originalpublikation:
Hidayat Hussain, Ivan R Green, Ghulam Abbas, Sergazy M Adekenov, Wahid Hussain and Iftikhar Ali. (2019) Protein tyrosine phosphatase 1B (PTP1B) inhibitors as potential anti-diabetes agents: patent review (2015-2018). *Expert Opinion on Therapeutic Patents*. DOI: 10.1080/13543776.2019.1655542