

## Special Issue on Novel Pharmacotherapy for Type 2 Diabetes Treatments

# CALL FOR PAPERS

Type 2 diabetes (T2D) is a debilitating chronic disease which affects 120 million people worldwide and whose impact is not solely only on the patient, but also on caregivers, community, country's health system, and worldwide strategies for appropriate medical attention and accessibility. Several factors have been implicated in the onset, progression, and target-organ complications associated with this disease, and they should not be simply classified as modifiable and unmodifiable because their impact go beyond the onset of the disease; they influence the success of any treatment and long term prognosis.

Current T2D management is based on lifestyle management associated with escalating add-on guidelines, starting with metformin and progressively adding α-glucosidase inhibitors, sulfonylureas, thiazolidinediones, DDP-4 inhibitors, SGLT2 inhibitors, GLP-1 receptor antagonists, and insulin. The main goal is to achieve glycemic control, lowering organ damage and preventing diabetes-associated disabilities. However, the importance of controlling more than just glucose levels has been a growing concern in the past 2 decades, raising the importance of a skeletal muscle, epicardial and visceral fat, gut microbiota, and neurocognition involvement. Advances in diabetes pharmacology research have uncovered new facets in these drugs, including neuroprotection, anticancer properties, immunomodulation, and beta cell regeneration.

Albeit the numerous drugs available, glycemic control is still challenging in some specific groups and situations: low income households, pregnancy, the elderly, patients experiencing war conflict situations such as living near country borders and being refugees, and those with a certain genetic makeup. The need for a patient-specific treatment not only requires taking into account the numerous sociodemographic factors, but also has to include pharmacogenetic variables which will influence the success of the therapy and, inevitably, the continuity of it. Moreover, one of the goals in chronic diseases therapy is to lower the number of pills or injections a day, guaranteeing attachment to protocol, increasing patient compliance, and lessening the burden on caregivers.

Reformulation of old drugs is currently underway, fundamentally in development of oral presentations for insulin and DDP-4 inhibitors and longer (weekly) acting presentations for incretin mimetics. Neuroendocrine modulators like amylin analogues have opened the door for neurological control of satiety centers and distal islet control. The resurgence of PPAR coagonists like aleglitazar promises to improve glycemia and lipid levels while reducing cardiovascular morbidity and mortality in these patients. The newest diabetes therapies are meant to push current boundaries and try to restore a critical pancreatic mass capable of regaining insulin cyclic secretion, immunomodulation of local pancreatic inflammation factors, and, finally, the cutting edge of molecular biology including the silencing methods for SGLT2 and injectable plasmid encoding ZFP.

We are looking for researchers interested in diabetology, molecular biology, endocrinology, pharmacology and drug development, molecular genetics, and pharmacogenetics in order to lead the development of the topics which will be an invaluable resource for clinicians, medical care providers, clinical researchers, and medical students.

Potential topics include but are not limited to the following:

- ▶ New long and short acting insulin
- ▶ Novel administration routes for insulin delivery
- ▶ New mechanisms of actions of metformin and its derivatives
- ▶ Metabolic phenotypes and dysglycemia: pharmacological management of metabolically obese normal weight and metabolically healthy obese subjects
- ▶ Pharmacotherapy versus surgical treatment in obese and type 2 diabetes patients
- ▶ Targeting skeletal muscle in type 2 diabetes pharmacotherapy
- ▶ Impact of the new antiobesity drugs on glucose metabolism and type 2 diabetes
- ▶ Beta cell implants and pancreatic rhythmicity modulation in glucose intolerance and type 2 diabetes management
- ▶ New drugs for diabetic microangiopathy prevention
- ▶ Fat and sugar substitutes in metabolic control pharmacotherapy
- ▶ The role of ethnicity in pharmacotherapy selection in type 2 diabetes management
- ▶ Neurological modulators in satiety control
- ▶ Immunological targets in pharmacotherapy for type 2 diabetes mellitus

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jdr/nptdt/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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