

Special Issue on  
**Diabetes and Alzheimer's Disease: From Intertwined  
Mechanisms to Novel Therapeutic Strategies**

# CALL FOR PAPERS

Type 2 diabetes mellitus (T2DM) and Alzheimer's disease (AD) are main chronic diseases, whose prevalence rise with age and affects consequently old age populations. Patients affected by T2DM have a higher incidence of cognitive decline and an increased risk of developing AD. Growing evidence supports the concept that AD may be considered as a metabolic disease mediated by impairment in brain insulin responsiveness, glucose utilization, and energy metabolism. Chronic hyperglycaemia, altered insulin action, glucose fluctuations, inflammation, oxidative stress, and advanced glycosylated products (AGEs) certainly play a role. In this context, researchers proposed the term "type 3 diabetes" for AD because of the shared molecular and cellular features between T2DM and insulin resistance associated with cognitive impairment. However, their relationship and underlying mechanisms as well as the determinants of the accelerated cognitive decline in T2DM are still unclear.

Elucidating the intertwined mechanisms among such diseases is important to address the question whether cognitive decline may be prevented by an adequate metabolic control or even treated with drugs already available for T2DM treatment. We invite investigators to submit original research and review articles highlighting the recent advances in this field, including epidemiological, basic, and clinical researches and perspectives.

Potential topics include but are not limited to the following:

- ▶ Cognitive declines in type 2 diabetes mellitus and AD: are they similar?
- ▶ Type 2 diabetes and brain insulin resistance
- ▶ Glucose, insulin, and amyloid- $\beta$
- ▶ Amylin, amyloid, and AD
- ▶ Hyperglycaemia, hypoglycaemia, and cognitive impairment
- ▶ Oxidative stress, mitochondria, and brain aging
- ▶ Metabolism, obesity, aging, and AD
- ▶ Cardiovascular and lifestyle risk factors for diabetes and AD
- ▶ Common peripheral biomarkers in diabetes and AD
- ▶ Role of adiponectin and adiponectin receptors in aging, diabetes, and AD
- ▶ Drug management and therapeutics
- ▶ Effectiveness of insulin and incretin based therapies

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

**Lead Guest Editor**

Virginia Boccardi, University of  
Perugia, Perugia, Italy  
[virginia.boccardi@unipg.it](mailto:virginia.boccardi@unipg.it)

**Guest Editors**

Ilaria Canobbio, University of Pavia,  
Pavia, Italy  
[ilaria.canobbio@unipv.it](mailto:ilaria.canobbio@unipv.it)

Ramesh Kandimalla, Texas Tech  
University Health Sciences Center,  
Lubbock, USA  
[ramesh.kandimalla@ttuhsc.edu](mailto:ramesh.kandimalla@ttuhsc.edu)

Soledad Ballesteros, Universidad  
Nacional de Educación a Distancia,  
Madrid, Spain  
[mballesteros@psi.uned.es](mailto:mballesteros@psi.uned.es)

**Manuscript Due**

Friday, 10 March 2017

**First Round of Reviews**

Friday, 2 June 2017

**Publication Date**

Friday, 28 July 2017