**November 17th 2017**

**Editor in Chief: Dr. Ignacio Gonzalez Martinez**

**Guest Editor: Dr. Katarzyna Wrobel**

**Journal of the Mexican Chemical Society**

Dear Editors:

Our research group is pleased to submit the attached manuscript entitled: “ *Application Of Liquid Chromatography With Fluorimetric Detection For The Determination Of Urinary Pentosidine In Type 2 Diabetes Mellitus Patients: Effect Of Telmisartan Administration On Podocyturia And Relationship With Metabolic Control*.” by Carlos Kornhauser, Gloria Barbosa-Sabanero, Noemí Gutierrez-Romero, Myrna Sabanero, Elva L. Perez-Luque, Armando Goméz Ojeda, for your consideration of its possible publication in For consideration for publication in the special number “Modern analytical chemistry in interdisciplinary research” in the Journal of the Mexican Chemical Society.

This work reports beneficial effect of short-term Telmisartan administration in diabetes mellitus 2 (DM2) patients in terms of decreasing loss of podocytes, lower concentrations of pentosidine in urine and lower levels of cholesterol and LDL cholesterol in serum. Noteworthy, podocytes excretion in urine is considered a more sensitive and earlier marker estimating severity of glomerular damage as compared to proteinuria. On the other part, pentosidine is a well characterized advanced glycation end product (AGE) and its elevated concentration in urine has been associated with the progression of diabetic nephropathy (DN). It should be stressed that we have not found any earlier study evaluating changes of these two parameters in relation to the pharmacological treatment with angiotensin receptor blockers (ARBs). We performed our study on thirty DM2 patients with normal blood pressure, without systemic or urinary infections, or other chronic degenerative diseases, presenting deficient metabolic control and without history of ARBs treatment. The ARB used in this study was Telmisartan, a drug with demonstrated anti-hypertensive activity, renoprotective function and capable of improving insulin sensitivity in diabetic patients. Based on the obtained results, we propose that Telmisartan might tackle the formation of AGEs thus protecting podocytes from glyco-oxidative damage. Our results are relevant within the context of the actual discussion on the role that advanced glycation end products (AGEs) play in diabetic nephropathy. In particular, it is still not clear if the accelerated formation of AGEs plays a causative role in DN or the impairment of renal functions favors AGEs accumulation. Our results seem to support a hypothesis that AGEs are involved in pathogenesis of glomerular damage in DN.

The role of analytical chemistry in this work is capital, despite the lack of a commercial standard (matter resolved by the in-lab synthesis and purification of a suitable standard), not only develops a potential new procedure to assess renal function independently of proteinuria (the most widely used diagnostic tool), but provides valuable information about the deleterious effect of AGE in diabetic nephropathy.

Finally, this work provides new data suggesting potential utility of Telmisartan in prevention or in slowing down the progression of DN. One limitation of the preset work is a small group of participating subjects, however the reliable analytical procedure utilized for pentosidine measurement produced clear and encouraging results. To get solid evidence on the preventive potential of Temisartan, future study will be focused on the evaluation of its effect on podocyturia, AGEs levels and metabolic control using suitably large group of early DM2 patients.

This manuscript has not been published elsewhere and is not under consideration by any other journal. All authors have approved the submission of the manuscript to this journal. There are no conflicts of interest. Informed consent was provided, and appropriate ethical standards were followed.

As suggested reviewers our proposition is:

Dr. Armando Alcazar Magaña from Oregon State University. USA.

Dr. Manuel Portero Otin from Department of Experimental Medicine at Universitat de Lleida. Spain.

Dr. John Cijiang He Division Chief of Nephrology at Mount Sinai Hospital and the past President of the New York Society of Nephrology.

On behalf of our research group I want to thank you for receiving our manuscript, I appreciate your time and look forward to your response.

Kind Regards.

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