



OXO Translational Science GmbH • Vor dem Schlosstor 9 • 39164 Stadt Wanzleben-Börde

Tel.: (039209) 6939-0
Fax: (039209) 6939-29
Email: info@oxots.de

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Press release

Kuala Lumpur, Heidelberg, Magdeburg/Wanzleben, Bangkok

OXO Translational Science GmbH (OXO TS) Germany, a pharmaceutical company engaged in drug development for treatment of inflammatory diseases and diabetic vascular complications, reports the publication of a new patent in the European Patent Bulletin entitled “Use of chlorite to treat red blood cell diseases and indications mediated thereby”. The patent application has been filed in on 22nd August 2016 (EP16763581.2). An official communication under rule 71(3) EPC on the granting of the patent was sent on 27th September 2022.

Red Blood Cell (RBC) dysfunctions are the reason for many currently incurable or unstoppable diseases, e.g. Sickle Cell Anemia. Dysfunctional RBCs are also responsible for the damage of the endothelial cell wall of blood vessels (particularly in the microcapillaries) of individuals diagnosed with Diabetes Type 1 and Type 2. In these patients, RBC dysfunction is characterized by high levels of Hemoglobin A1c (HbA1c). The latter reflects glycation of hemoglobin with RBCs, which leads to metabolic, functional and structural disturbances of the cells. Highly glycated dysfunctional RBCs in Diabetic patients as well as hemolytic products from these cells lead to endothelial damage and vascular inflammation.

In October 2022 the Journal of Diabetes and Treatment published an article entitled “Redoxactive Clearance of Highly Glycated Red Blood Cells: A New Frontier in the treatment of Diabetic Vasculopathies”. This open-access article reports the results from a scientific clinical collaboration project between 1) the National University of Malaysia (Kuala Lumpur, Prof. Yazid Bajuri), 2) the University of Heidelberg, Department for Internal Medicine (Sonderforschungsbereich SFB1118: ‘Reactive Metabolites as cause of diabetic complications’, Prof. Peter Nawroth), and 3) the OXO TS Research Group, (Wanzleben, Germany and Bangkok, Thailand)

In this controlled clinical trial, a number needed to treat (NNT) of only 20 patients (mean HbA1c > 10%) was sufficient to convincingly proof WF10, propriety drug of OXO TS, as a completely new therapeutic concept for reduction of elevated HbA1c levels and restoration of endothelial integrity. In the treatment group, receiving standard of care glucose lowering drugs AND the i.v. drug WF10, > 83% of patients achieved HbA1c values characteristic for NON-diabetic patient within 4 – 6 weeks, whereas in the control group, receiving ONLY standard of care medication, only 25% of the patients achieved those values.

Dr. Joerg Flemmig, Chief Scientific Officer at OXO TS and co-author of the paper, stated: *“We are grateful to be able to provide a safe and meaningful drug for treatment of diabetic vascular complication. In our recent clinical studies, we were able to show that not high blood sugar levels per se but glycation-derived dysfunctional RBCs are responsible for diabetic vascular complications.”*

WF10, the flagship drug of OXO TS, is approved in Thailand and the launch in ASEAN is lined up. Based on the European patent approval, the company is looking for partners to co-finance the pivotal Phase III study for EMA Approval.