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Opinion

ET-Traps: A Potential Therapeutic for Diabetes Related Complications

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Summery

Endothelin-1 (ET-1) is a vasoactive peptide that is synthesized and secreted by a diverse range of cells. It is considered critical for life. However, in a diseased state, excess ET-1 is released which induces pathology like sustained vasoconstriction, inflammation, ER stress and structural damage to tissues and organs. As such ET-1 is implicated in a host of different diseases, like diabetes, pregnancy disorders (pre-eclampsia), cardiovascular diseases, chronic kidney disease, neurodegenerative disorders and different cancers [1, 2]. To this end, we at ET-traps have developed a novel therapeutic tool to bind and sequester the increased levels of ET-1 found in these different diseases.

The study by Jain *et al.* (2019) demonstrated for the first time that ET-traps potently and significantly ameliorates different markers of diabetes disease pathology [3, 4]. Specifically, subcutaneous administration of ET-traps reduced ET-1 levels, fibrosis (ECM deposition) and other heart and kidney markers back to non-disease levels without toxicity. Since ET-traps merely sequester the excess levels of ET-1 and do not block the normal physiological functions of the endothelin system, it does not have the side effects that are seen with therapeutics that target endothelin receptors and inhibit the critical functions of the endothelin system.

This study shows that administrating ET-traps potently and significantly lowers markers of diabetes disease pathology.

Diabetes accounts for 11.5% of total global health expenditures, at USD 760 billion (IDF). 80% of these costs are for treating complications like heart and kidney disease. Diabetes and kidney disease due to diabetes cause an estimated 2 million deaths in a year (WHO). Most of these fatalities are due to complications in the heart and kidney.

ET-traps could help prevent a large number of these fatalities and reduce the healthcare spend globally by helping to slow disease progression and reduce complications in the different organs that are brought about by elevated ET-1 levels. I believe that ET-traps can be administered subcutaneously by individuals themselves using a self-injecting device. This of course has to be tested in an advanced pre-clinical study, which would require further funding. For further enquiries please visit www.et-traps.co.uk

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References

1. Davenport, A.P., et al (2016). Endothelin. Pharmacol Rev. 68(2): p. 357-418.
2. Barton, M. and M. Yanagisawa, Endothelin: 30 Years From Discovery to Therapy. Hypertension, 74(6): p. 1232-1265.
3. Jain, A., et al (2018). Endothelin-1 traps potently reduce pathologic markers back to basal levels in an in vitro model of diabetes. J Diabetes Metab Disord,. 17(2): p. 189-195.
4. Jain, A., et al (2019). In vivo studies demonstrate that endothelin-1 traps are a potential therapy for type I diabetes. Journal of Diabetes and Metabolic Disorders. p. 133-143.