

# ET-Traps: A Potential Therapeutic for Diabetes Related Complications

Arjun Jain <sup>1,2,3,4</sup>

<sup>1</sup> ET-traps Limited, Cambridge, UK

<sup>2</sup> Accelerate Cambridge, Judge Business School, University of Cambridge, UK

<sup>3</sup> Department of Physiology, Development and Neuroscience, University of Cambridge, UK

<sup>4</sup> Imperial College, London, UK

\*Correspondence Author: Arjun Jain, ET-traps Limited, Cambridge, UK

Received Date: May 31, 2024| Accepted Date: June 11, 2024| Published Date: June 20, 2024

**Citation:** Arjun Jain (2024), ET-Traps: A Potential Therapeutic for Diabetes Related Complications, *International Journal of Clinical Case Reports*, 3(3); DOI:10.31579/2834-8389/021

**Copyright:** © 2024, Arjun Jain. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Summary

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 administering 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](http://www.et-traps.co.uk)

## Acknowledgements

Kudos to Ashok, Kirti and Leela Jain for making the big move. As I always say, it maybe a small step for man but a giant leap for the Jain family.

## 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.

**Ready to submit your research? Choose ClinicSearch and benefit from:**

- fast, convenient online submission
- rigorous peer review by experienced research in your field
- rapid publication on acceptance
- authors retain copyrights
- unique DOI for all articles
- immediate, unrestricted online access

**At ClinicSearch, research is always in progress.**

Learn more <https://clinicsearchonline.org/journals/international-journal-of-clinical-research-and-reports>



© The Author(s) 2023. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.