For Release

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Beta-O2's ßAir Bio-artificial Adrenal Device Shows Potential to Treat Adrenocortical Insufficiency and Other Stress-related Disorders.

Pre-clinical study data published in PNAS

Rosh Haayin, Israel, February 19, 2015 --- Beta-O2 announced today the results of a series of pre-clinical studies demonstrating that the company's ßAir Bio-artificial Adrenal device could offer a treatment for adrenocortical insufficiency and other stress-related disorders. The results are published in the current issue of the Proceedings of the National Academy of Sciences of the United States of America (PNAS). PNAS is one of the world's most-cited and comprehensive multidisciplinary scientific journals, publishing more than 3,800 research papers annually. The article, titled "**Transplantation of bovine adrenocortical encapsulated in alginate"** can be viewed here.

The studies cited in the article were led by Professor Stefan Bornstein and Dr. Mariya Balyura at University Hospital Carl Gustav Carus Dresden.

Professor Bornstein said, "The Bio-artificial Adrenal supersedes an immunosuppression completely. The donor cells will be protected against immune system responses of the patient. The system lets hormones pass the half-permeable walls into the body of the receiver. Our vision is that people in the future may even receive adrenal cells from another species, as, for example, from the pig. The device creates the biotechnical conditions for it."

Professor Bornstein continued, "I am convinced that Beta-O2's ßAir Bio-artificial Adrenal device will revolutionize the therapy of adrenocortical insufficiency. Many more patients could benefit from transplantation because the recipients wouldn't need any immunosuppressive drugs, at all."

ßAir is an implantable device that provides immune protection and optimal living conditions for cells implanted within it. It has thus far proven successful in providing a viable environment for islets of Langerhans or beta cells, to thrive and naturally produce insulin on demand, a necessary function missing in people with type 1 diabetes. The product for type 1 diabetes is called the 'ßAir Bio-artificial Pancreas'. Three patients are currently implanted with the ßAir Bio-artificial Pancreas as part of an ongoing clinical study in Sweden.

"The news today indicates that the same immune protection system being used to treat type 1 diabetes patients in the clinical trial in Sweden, also appears to work well for other types of functional cells, such as adrenal cells. We found that when placed in the ßAir, the life span of the adrenal cells significantly increased. The capacity of the adrenal cells for stable, long-term basal hormone release significantly improved as well, as did their response to various stimulating hormones. Additionally, as described in the PNAS article, we learned that ßAir has xeno transplantation or cross species capabilities. For example, using the ßAir, pig adrenal cells can be transplanted into a living being other than a pig and still remain healthy and function properly," said Dr. Dan J. Gelvan, chairman of the board of Beta-O2.

Dr. Gelvan continued, "What all this means is that transplantation of a 'ßAir Bio-artificial Adrenal' with cells from another species could prove to be a treatment option for patients with adrenocortical insufficiency and other stress-related disorders. This is important because current treatment options for adrenal insufficiency are limited and have unpleasant side effects. The study findings reported in the PNAS article are also significant as they offer a sneak preview of the huge potential of ßAIR. If it can provide a viable environment for many different types of cells, then ultimately it may be prove to afford an effective treatment, if not a cure, for a long list of illnesses."

About Beta-O2 Technologies Ltd.

Beta-O2 Technologies Ltd. is a biomedical company developing a proprietary implantable bioreactor, the ßAir. The company's flagship product is called the ßAir Bio-artificial Pancreas. It is in development as a treatment and potential cure for type 1 diabetes (T1D). ßAir was first designed to address the main problems of the otherwise successful procedures in which islets of Langerhans (i.e. pancreatic endocrine cells) are transplanted in diabetic patients, such as the need for life-long immunosuppressive pharmacological treatment and limited functionality of the transplanted islets over time due to an insufficient oxygen supply. The company's second pipeline product is the ßAir Bio-artificial Adrenal for the treatment of adrenocortical insufficiency and other stress-related disorders. This product is currently at the pre-clinical stage of development. Beta-O2 investors include Aurum Ventures, Sherpa Innoventures, SCP Vitalife Partners, Pitango Venture Capital and Saints Capital. For more information, please visit www.beta-o2.com .