Aposense Ltd. אפוסנס בע"מ

5-7 Odem St, POB 7119 Petach-Tikva 49170, Israel
Phone: +972.3.924.72.11 Fax.: +972.3.921.57.14
http://www.aposense.com info@aposense.com

[***FREE TRANSLATION TO ENGLISH***]

Aposense Ltd.

(the "**Company**")

March 24, 2016

To
The Israel Securities Authority
www.isa.gov.il

To
The Tel Aviv Stock Exchange Ltd.
www.tase.co.il

Dear Sir/Madam,

Re: **Immediate Report**

Pursuant to the quarterly report of the Company for the 3rd quarter of 2015,[1] the Company operates in the field of genetic therapy, and develops the Apo-Si system - an innovative system for transmission of macro molecular drugs[2] through biological barriers (the "**System**"). The System is based on a first of its kind exploitation[3] of a powerful electric field recently discovered, which is located in the depths of all biological membranes. The essence of the technology is the molecular nano-motors developed by the Company, designed to exploit the energy of the said electric field and to use it for moving inside the biological membranes in order to transmit macro molecular drugs related to them, through the cell membranes and into their target sites within the cell. The feasibility study of the System consists of five phases: (1) designing of the molecular motors designated for the transmission of drugs through the cell membranes; (2) manufacturing of a prototype of the molecular motor; (3) manufacturing of molecular motors' complexes with genetic material segments; (4.a) inspection of the performance of the complexes in transmitting the segments of the genetic material into the cell cultures cells; (4.b) inspection of the complexes' ability to silence genes expression in cell cultures; (5) inspection of the performance of the complexes in animal model systems, which includes, *inter alia*, evaluation of dispersion of complexes following their injection intravenously, assessing the Complexes' ability to silence genes expression and to halt the production of protein in such form.

The Company hereby respectfully notifies that it has successfully performed the aforementioned phase 4.b. The molecular motors system successfully transmitted genetic sequences with many negative charges, into cultured cells, and such sequences succeeded on halting the expression of a reporter gene, thus restraining the production of target protein. These results were demonstrated in a repeatable manner and with a

[1] Article 2 of Section A (update of Company's businesses) in the quarterly report of the Company for the 3rd quarter of 2015, dated November 29, 2015 [Reference no. 2015-01-169653], included herein by reference.
[2] Large molecule drugs, with a high molecular weight, which are valuable as a drug i.e. sequences of genetic material such as siRNA and proteins. Many fields in medicine have recently shown great interest in such drugs.
[3] To the Company's best knowledge.

5-7 Odem St, POB 7119 Petach-Tikva 49170, Israel
Phone: +972.3.924.72.11 Fax.: +972.3.921.57.14
http://www.aposense.com info@aposense.com

statistical significance comparing to the audit group in several types of cells. The results were presented to the Scientific Advisory Board which accompanies the project, which determined that based on such results, the Company achieved its target for said phase 4.b, and may now move on to the last phase no. 5 of the feasibility study – inspection of the performance of the complexes in animal model systems.

Forward-looking statements – the information and assessments of the Company as aforementioned, concerning the continuance of the development of the technology, achieving milestones determined with respect to the continuance of the development, continuance of additional pre-clinical and/or clinical trials, including dates for the commencement and dates for the completion of the pre-clinical and clinical trials, including forecasts, deadlines, estimations and/or Company's plans with respect to such estimations, are considered as "forward-looking statements", as defined in the Israeli Securities Law 5728-1968. Such statements involve significant uncertainty, which is based, *inter alia*, on third parties and many factors which the Company does not necessarily has control over, and therefore, it is possible that such assessments and/or expected costs for the continuance of the aforementioned and/or the dates and relevant deadlines will not be fulfilled and/or will not be fully fulfilled and/or will be fulfilled in a significantly different matter as assessed or anticipated in the first place. Other factors that may lead to significant changes in the Company's assessments as aforementioned may be the lengthening of additional pre-clinical trials in the technology based developments and/or requirements for repeating trials already conducted and/or lengthening of existing trials beyond expected - among others - for proving their efficiency or their failure, failure to receive successful results within the framework of the pre-clinical and/or clinical trials, developments in treatments for the diseases the Company's products are designed to handle, competitive products, the Company's ability to raise resources and finance sources for conducting pre-clinical and clinical trials, develop formulations and/or appropriate molecules at the determined schedule, the Company's ability to bring its products to the market on time, the ability of the Company to engage with significant business partners, the availability and compliance of patients to participate in future clinical trials, further requirements – unique and/or strict on behalf of institutions and medical centers in which the trials are conducted and/or will be conducted, the acceptance of the Company's developments by the medical community etc. and other risk factors applicable to the Company and its operations, as specified in Article 26 of Section A (Description of Company's businesses) of the Company's periodic report for 2014. It should be further emphasized, that there is no certainty that the pre-clinical and clinical trials in the products developed on the basis of the technology will succeed, and the failure of such trials might obligate the Company to update its research and development plans, budgets and

5-7 Odem St, POB 7119 Petach-Tikva 49170, Israel
Phone: +972.3.924.72.11 Fax.: +972.3.921.57.14
http://www.aposense.com info@aposense.com

schedules, and that the Company is exposed to additional risk factors as specified in Article 26 of Section A (Description of Company's businesses) of the Company's periodic report for 2014, which may significantly affect the Company's assessments, jointly and severally.

About Aposense:

Aposense Ltd. has a unique platform which engages in the development of products designed to identify and link biological membranes, as a basis for drug development in a variety of fields, including in the field of gene therapy.

Respectfully,

Aposense Ltd.

Signed on behalf of the Company:
Prof. Ilan Ziv, Chief Executive Officer and Chief Science Officer
Yuval Gottenstein, Chief Financial Officer