Press release
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Silenseed has received FDA approval to begin a Phase II clinical trial in patients with pancreatic cancer; the company is raising $10 million in new financing

The biopharmaceutical company **Silenseed** Ltd. announces that it has received approval from the U.S. Food and Drug Administration to open a Phase II clinical trial of **siG12D-LODER** for the treatment of patients with pancreatic cancer. The 80 patients enrolled in the trial will be divided into two equal groups to test the treatment's effects on their survival and the progress of disease. Pancreatic cancer is an incurable illness, whose incidence is growing and which is expected, according to forecasts, to become the second most frequent cause of cancer deaths, after lung cancer.

In addition, the company is expected to carry out a smaller-scale Phase IIa trial that will include a combination of siG12D-LODER with an immune-oncology drug. Several immune-oncology drugs are now in the market – for example, Keytruda, Opdivo, Yervoy, CTL019 (the first CAR-T drug, which was approved recently for the treatment of leukemia) and others. So far, in several clinical trials, immunotherapy treatments have not been shown to be effective in treating patients with pancreatic cancer.

The approval to initiate the clinical trial came after the FDA examined the individual results of each of the 15 patients enrolled in the company's Phase I trial. The results showed that Silenseed's treatment had a high safety profile as well as exhibiting initial signs of efficacy, in that none of the participating patients showed tumor progression. Additionally, the tumor shrank and in some cases, even shrank significantly. The results of the trial were published in the journal *Oncotarget* in September 2015.

The FDA also recognized the company's production infrastructure as compatible with the GMP (Good Manufacturing Practice) guidelines for the purposes of the current trial and approved the treatment protocol, which will include a special adaptor that was developed by the company so that existing standard endoscopic equipment could be used for direct penetration of the tumor.

The Phase II trial is planned to be held in about 10 medical centers, including Memorial Sloan Kettering in New York, the Cleveland Clinic in Cleveland, Ohio and MD Anderson in Houston, and preparations are currently underway to enroll the first patients.

The company, which has raised $3.5 million in the past year and a total of $10 million to date, is now raising an additional $10 million, most of which will be used to finance the implementation of the Phase II trial.

The platform developed by the company and its mode of treatment are the first in the world to successfully silence the oncogene KRAS in human, and is based on the company targeted RNAi (RNA interference) delivery technology. KRAS is the most common oncogene in the realm of oncology, appearing in about 30% of patients with lung cancer, 40% of those with intestinal cancer and more than 90% of those with pancreatic cancer.

The treatment is administered once every three months, the amount of time it takes for the tiny capsule to slowly release the drug directly into the solid tumor. Inactivation of the tumor is based on a genetic phenomenon called RNAi, whose discoverers were awarded the Nobel Prize in Medicine in 2006. RNAi causes the silencing of specific genes by suppressing the production of certain proteins. In this way, once the drug-delivery is solved, it is possible to halt various diseases through the use of targeted treatment with a low level of toxicity (as opposed to chemotherapy) and few side effects.

RNAi is considered a promising field for developing the treatments of the future, but so far it has encountered many obstacles due to problems with giving and delivering the drug. Silenseed, as noted, presents an effective solution to these problems for the purpose of local treatment of the tumor. The company holds seven approved patents and is accumulating knowledge for the treatment of non-pancreatic cancers as well.

Silenseed was co-founded in 2008 by Dr. Amotz Shemi, who formerly served as Senior Vice President Technologies at Medinol Ltd and as a CEO of Color-Chip, and is today CEO at Silenseed, and Prof. Eithan Galun, Director of the Goldyne Savad Gene Therapy Institute at Hadassah Medical Center in Jerusalem.

The company has an unusually high percentage of top-tier Israeli scientists among its investors, including Prof. Michael Sela and Prof. Ruth Arnon, the developers of Copaxone; Prof. Shmuel Cabilly, who developed methods for recombinant antibody production for Genentech; Dr. Ettie Pirak, a co-inventor of the drug Erbitux for the treatment of cancer-related illnesses. Other prominent investors include David Bonderman, the founding partner of TPG Capital, which also invests in Kite Pharma; Ilan Shiloah, Chairman at The Time Investment Company; Dr. Shmuel Cabilly; and Belsize Asset Management. Dr. Amotz Shemi, founding partner and CEO at Silenseed, says: “We are proud of the FDA approval and the opportunity we’ve been given to open the Phase II clinical trial, in which we hope to continue proving the efficacy of our unique treatment for silencing the gene that drives the disease. We believe that carrying out the immuno-oncological trial concurrently is likely to lead to an additional treatment breakthrough which, in turn, will lead to a partnership agreement with one of the pharma giants”.

“Our platform holds tremendous potential for various types of cancer and the product that is progressing through our development pipeline addresses an unmet market of patients with pancreatic cancer, which today is incurable, and provides an effective solution.”