PRESS RELEASE Tuesday February 18, 2014

New drug candidate from Vivolux starves cancer cells – clinical study due to begin shortly

Vivolux AB, a drug discovery company specialized in cancer treatment, announced today that data that forms the basis for one of the company's promising projects has been published in the journal *Nature Communications*. Researchers at Vivolux have discovered a novel cancer drug target. The drug candidate kills sleeping cell populations in regions of solid tumors that are less oxygenized – areas that cannot be reached by conventional cancer therapeutics.

In solid tumors, there are areas with poor vascular supply where cancer cells divide more slowly due to a lack of oxygen and nutrients. The cancer cells enter a sleeping state. When other tumor tissue is killed, the sleeping cells start growing, which means that solid tumors can be very difficult to treat with traditional radiotherapy and chemotherapy. The published study shows that the Vivolux drug candidate kills sleeping cancer cells by interrupting the power supply in the cells' power plants – the mitochondria.

Vivolux, in collaboration with the Mayo Cancer Center, will commence a clinical trial of the new drug candidate as soon as the FDA has granted clearance.

Hans Rosén, CEO and founder, states: "The article in Nature Communications is a sign of quality and a milestone for the researchers. We hope that the FDA will soon clear our application so that we can start the clinical work. The study will be conducted at Mayo's three sites in the USA. There is a considerable medical need for new cancer drugs and the development that is taking place within Vivolux is very much leading edge, as demonstrated by the interest from Harvard Medical School, Mayo and other institutions, where we will commence clinical studies with our proprietary drug candidates during 2014.

Stig Linder, Professor of Experimental Oncology at the Karolinska Institute and the person who has led the development work, says: "We have been working with a small molecule called VLX600. In various in vitro and in vivo models it has killed colon cancer cells found deep inside the tumor and which are otherwise difficult to access. These cells have a limited ability to compensate for a lack of mitochondrial function with increased glucose uptake."

Vivolux AB was founded in 2006, based on substances developed in-house as well as collaboration with a research group in Uppsala, which has developed an advanced system for preclinical analysis of cancer drugs based on tests using fresh human cancer cells. Collaboration was later established with Stig Linder's research group at the Karolinska Institute. This collaboration has resulted in access to a further unique method for evaluating the effects of cancer drugs. In contrast to the standard method,

which is used by leading pharmaceutical companies, three-dimensional aggregates of human cancer cells are used as models of solid tumors. This facilitates identification of drug candidates that can reach and kill all cells deep in the tumor tissue. With the aid of these unique methods, several drug candidates have been identified and optimized.

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