HYD LLC for Cancer Research and Drug Develoment

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HYD LLC was established in 1993 for the development and worlwide marketing of drugs and consumer products, that utilize the proprietary procedure, deuterium depletion. Since then, the company has been pioneering in research and drug development related to deuterium depletion, and was worldwide the first to investigate the biological role and physiological importance of naturally occurring deuterium. The company's mission is to develop and register novel pharmaceutical and consumer products primarily for the treatment and prevention of tumorous diseases, and to open up new ways of application of the method in further ranges of indication. Dr. Gábor Somlyai, Hungarian sub-molecular biologist, had begun investigations in 1990 regarding naturally occurring deuterium (D; heavy hydrogen (H)) as the cause of cancer. In the early nineties, Gábor Somlyai, PhD, recognized that the shortage of this heavy isotope in deuterium-depleted water (DDW) sensitized tumors to withdraw from repeated cell cycles and decreased their proliferation. Depletion of deuterium also induces changes in metabolism and gene expression, which are claimed to affect cancer outcomes using targeted therapies. Results clearly show that the D/H ratio in cellular water pools and the transfer of their deuterium content to different structural and functional molecules via reductive synthesis are essential for maintaining normal cellular functions, DNA and protein integrity. The proprietary procedure established by HYD LLC, has broad potentials to enhance the effectiveness of current oncotherapies, as well as to innovate new ones.

In 2012, Primus Capital closed a USD 1,5 Million investment in HYD Pharma Inc.. HYD LLC and its parent company, HYD Pharma Inc, completed the first facility in the world able to produce deuterium-depleted water (DDW) according to GMP rules. In 2015, Trigon Biotechnology Inc., strategic partner of HYD Pharma received new GMP compliance certificates for the deuterium-depleted water (DDW) producing facility, DDW as Active Pharmaceutical Ingredient was registered at the European Medicine Agency (EMA) and the protocol in the EudraCT system.

In 2016, HYD Pharma Inc. has been granted ethical approval by the State Institute for Drug Control (SIDC) in Slovakia for Phase 2 as one-of-the-first clinical trials to prove the anticancer effect of deuterium-depleted water (DDW) in chronic lymphocytic leukemia (CLL). HYD Pharma will apply for ethics approval for additional 5 clinical study sites in 2 other countries by the end of 2016.