

Press Release

Theralase Achieves 98% Destruction of Bladder Cancer

Toronto, Ontario – July 22, 2015, Theralase Technologies Inc. (“Theralase” or the “Company”) (TLT:TSXV) (TLTFF:OTC), a leading biotechnology manufacturer focused on commercializing medical technologies to eliminate pain and destroy cancer, announced today that it has achieved near complete destruction (~98%) of bladder cancer in an animal model.

The Company previously announced on December 9th and 23rd, 2014, respectively, of its success in destroying bladder cancer cells both in a Petri dish and in a preliminary orthotopic rat model in research performed at the University of Toledo.

Theralase, in order to optimize the model, relocated it to Princess Margaret Cancer Center, University Health Network (“UHN”) under the direction of Dr. Lothar Lilge, Senior Scientist, UHN and Dr. Arkady Mandel, Chief Scientific Officer (“CSO”) of the Company. Optimization of both the formulation and purity of the lead drug, TLD-1433, by Sigma Aldridge Fine Chemicals (“SAFC”) and the wavelength of laser light used to activate the drug by Theralase resulted in achieving the highest cell kill to date.

Bladder cancer is the 5th most prevalent cancer in the world (4th in men, 8th in women) resulting in 430,000 new cases worldwide and an estimated 91,000 deaths annually. There has been no new treatment developed for this disease in the last 16 years. The cost to treat a patient with this disease ranges from \$USD 100,000 to 200,000. The disease has an 80% recurrence rate. 70% of new bladder cancer cases are early stage disease affecting the inner lining of the bladder (urothelium) and are known as Non-Muscle Invasive Bladder Cancer (“NMIBC”). According to the latest clinical research, 25% of these patients will have a recurrence of the disease within 6 months and a total of 50% recur within 2 years. The standard of care currently is to surgically resect the bladder tumour followed by installation of a bacteria, known as Bacillus-Calmette Guérin (“BCG”) into the bladder for high risk patients. The next course of action for these patients, where the standard of care was not effective, is to either repeat the same treatment (surgery and BCG therapy) or to surgically remove the bladder in its entirety with any associated lymph nodes and nearby organs.

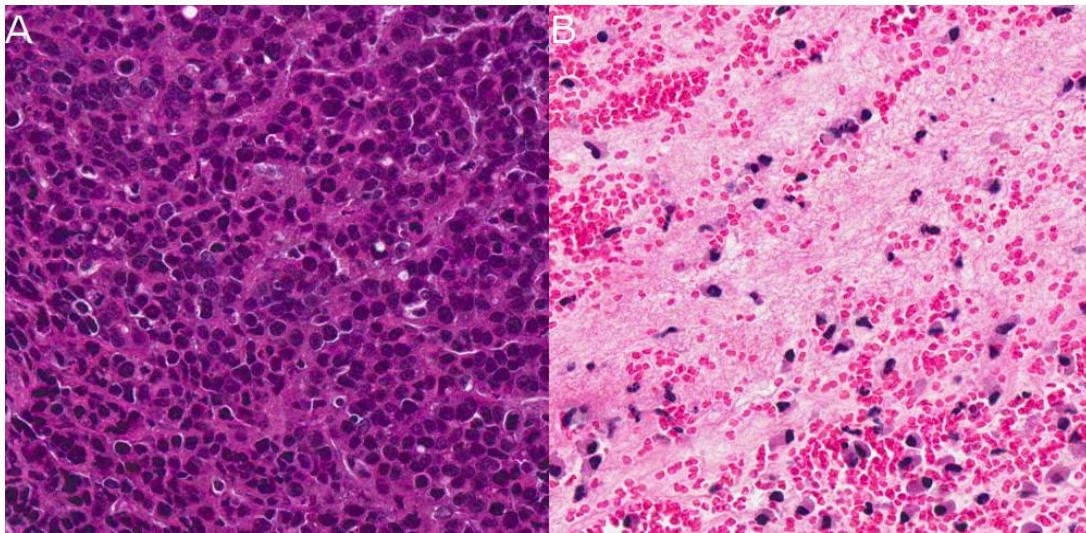
Theralase is developing an alternative therapy, known as Photo Dynamic Therapy (“PDT”), applicable for the 50% of patients or those who have relapsed within 2 years of treatment. In this form of treatment, Theralase’s lead water-soluble PDT drug, TLD-1433, is instilled into the bladder via a plastic tube known as a catheter, allowed to be absorbed into the bladder cancer cells for approximately one hour and then subsequently laser light activated over a period of 30 minutes. The entire procedure could be performed in a surgical suite in less than 3 hours. Theralase is researching the destruction of the entire bladder tumour with only one treatment; however, subsequent treatments could be performed in the future if there ever was a recurrence. The worldwide market for bladder cancer treatment is estimated to be worth more than \$20 billion dollars annually, with half of this population having a need for an alternative to their standard of care within 2 years.

Dr. Lothar Lilge, UHN stated, “In the latest preclinical study, animals with bladder cancer tumours were treated via PDT. All orthotopic grown tumours in the bladders of these animals showed a strong response to PDT with large areas of hemorrhage, necrosis (destruction) and inflammation present throughout the entire depth of the tumour, leading to a near complete (~98%) destruction of the tumour. Blood vessels of the submucosa and muscle layers (underlying structures) and healthy

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urothelium (bladder wall lining) did not show damage associated with the treatment. One of the major causes of failure of a previous Photo Dynamic Compound, Photofrin[®] to destroy bladder cancer was irreparable damage to the muscle layer of the bladder, post PDT treatment, rendering the bladder non-functional. The Theralase technology presents none of these issues in all experiments completed to date. I look forward in assisting Theralase in commencing clinical studies with their PDT technology later this year."

Dr. Arkady Mandel, CSO stated, "In the images below, you can observe an untreated bladder cancer tumour from our orthotopic rat model on the left. In the image, you will note that tumour nuclei are well defined and closely packed. In the image on the right, two days after PDT treatment; however, you will note widespread hemorrhage, inflammation and destruction of the bladder tumour. The dark spots in the destroyed tumour are immune system cells responding to the widespread tumour cell death and inflammation that may also exhibit cytotoxicity towards tumour cells. Theralase in conjunction with our partners SAFC and UHN is continuing to fine tune our PDT technology with the goal of commencing a Health Canada Phase Ib clinical study for NMIBC in 4Q2015."



Dr. Michael Jewett, a senior uro-oncologist at UHN and clinical principal investigator for the proposed clinical studies stated, "The results obtained from this orthotopic rat model are extremely strong. Greater than 98% destruction of the bladder tumours with no impact to healthy urothelium or the underlying structure of the bladder, including the submucosa and muscle layers, is exactly what the doctor ordered. It will be a pleasure to lead the clinical studies at UHN to prove the safety, tolerability and efficacy of this technology on human patients later this year. If this is able to work in humans, the PDT technology is a game changer for anyone inflicted with this deadly disease."

Roger Dumoulin-White, President and CEO, Theralase stated, "We continue to make significant strides forward in the pursuit of commercialization of this technology in the destruction of NMIBC and in the not too distant future other equally devastating forms of cancer. We join all of our employees, directors, consultants, supporters, partners and shareholders in celebrating this latest success of hard work, tenacity and commitment to succeed, in what will prove to be one of many more successes to come, in the not too distant future."

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About Theralase Technologies Inc.

Theralase Technologies Inc. (“**Theralase**®”) (TSXV: TLT) (TLTFF: OTC) in its Therapeutic Laser Technology Division designs, manufactures and markets patented super-pulsed laser technology indicated for the: elimination of pain, reduction of inflammation and dramatic acceleration of tissue healing for numerous nerve, muscle and joint conditions. Theralase’s Photo Dynamic Therapy Division researches and develops specially designed molecules called Photo Dynamic Compounds, which are able to localize to cancer cells and then when laser light activated, effectively destroy them.

Additional information is available at www.theralase.com and www.sedar.com .

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