Theralase Anti-Cancer Drugs Independently Reviewed

Toronto, Ontario – October 31, 2017, Theralase Technologies Inc. (“Theralase®” or the “Company”) (TSXV: TLT) (OTCQX: TLTFF), a leading biotech company focused on the commercialization of medical lasers to eliminate pain and the development of Photo Dynamic Compounds (“PDCs”) to destroy cancer, announced today that a recent peer-reviewed paper entitled, “Novel Osmium-based Coordination Complexes as Photosensitizers for Panchromatic Photodynamic Therapy”, presenting research on Theralase licensed Osmium PDCs, has been independently reviewed by Dr. Edith C. Glazer in her recent paper entitled, “Panchromatic Osmium Complexes for Photodynamic Therapy: Solutions to Existing Problems and New Questions”.

Edith C. Glazer, Ph.D., Associate Professor, Department of Biological Chemistry, University of Kentucky, Lexington, Kentucky provided an independent review of “Novel Osmium-based Coordination Complexes as Photosensitizers for Panchromatic Photodynamic Therapy” where she states that, “The validation of Osmium coordination complexes as photosensitizers for PDT, with very promising in vivo results, demonstrate radical improvements in survival following irradiation with visible (635 nm) or Near InfraRed (“NIR”) (808 nm) light. An unusual feature in the study is that the different complexes exhibit disparate photophysical and photobiological characteristics, despite sharing common structural motifs. These findings raise hopes for the development of novel photosensitizers that overcome the limitations of current commercially available systems for PDT, but also raise questions regarding the most efficacious biological Mechanisms Of Action (“MOA”) for this treatment modality.”

Dr. Glazer’s abstract and complete article is available at:


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https://doi.org/10.1111/php.12767

The original article describes how, “Cancer remains a major global malaise requiring the advent of new, efficient and low-cost treatments. PDT, which combines a photosensitizer and photons to produce cytotoxic reactive oxygen species, has been established as an effective cancer treatment, but has yet to become mainstream. One of the main limitations has been the paucity of photosensitizers that are effective over a wide range of wavelengths, can exert their cytotoxic effects in hypoxia (low oxygen), are easily synthesized and produce few if any side effects. To address these shortfalls, three new Osmium-based photosensitizers (TLD-1822, TLD-1824 and TLD-1829) were synthesized and their photophysical and photobiological attributes determined. These photosensitizers are panchromatic (i.e.: black absorbers), activatable from 200 to 900 nm and have strong resistance to photobleaching (ability to be light activated for longer periods of time without losing efficacy). In vitro studies show PDT efficacy with both red and NIR light in normoxic (normal oxygen) and hypoxic conditions, which translated to good in vivo efficacy of TLD-1829 in a subcutaneous mouse colon cancer model.

Sherri McFarland, Ph.D., Professor, Department of Chemistry and Biochemistry, University of North Carolina at Greensboro, the original inventor of the Osmium based PDCs, stated that, “I am delighted that our work with Osmium-based PDCs is being recognized by leaders in the field of light-responsive
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metalldrugs. Dr. Glazer wrote a very supportive highlight of our work in the specialized journal Photochemistry and Photobiology (2017, 93, 1326-1328), where she iterated the promise of these new PDCs as PDT agents and commended us on our efficacy-based, multidisciplinary collaborative approach to drug discovery. She notes that ‘one of the greatest implications of our work is that it serves as an example of the remarkable progress that can be made when academic and industrial groups tackle an underexplored area’. I look forward to continuing a productive collaboration with medical biophysicist Dr. Lothar Lilge and the entire Theralase team.”

Arkady Mandel, MD, Ph.D., D.Sc., Chief Scientific Officer of Theralase stated that, “The latest research and subsequent independent review of the Theralase licensed Osmium PDCs demonstrate the growing interest in this field of cancer research and the attention that Theralase’s research is starting to generate in the international research community. I look forward to continuing our research in this field with Dr. McFarland and Dr. Lilge, and the expansion of our clinical applications using these cutting-edge PDCs.”

Roger Dumoulin-White, President and CEO of Theralase stated that, “Theralase is committed to expanding our Phase Ib clinical research program to include new oncological targets, using both our Ruthenium (TLD-1433) and Osmium ((TLD-1822, TLD-1824 and TLD-1829) based PDCs. We look forward to presenting this research to the international scientific and medical communities.”

About Theralase Technologies Inc.
Theralase Technologies Inc. (“Theralase®” or the “Company”) (TSX: TLT) (OTCQX: TLTFF) in its Therapeutic Laser Technology (“TLT”) Division designs, manufactures, markets and distributes patented super-pulsed laser technology indicated for the treatment of chronic knee pain, and in off-label use, 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 (“PDT”) Division researches and develops specially designed molecules called Photo Dynamic Compounds (“PDCs”), which have demonstrated an ability 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.

This news release contains “forward-looking statements” which reflect the current expectations of management of the Corporation’s future growth, results of operations, performance and business prospects and opportunities. Such statements include, but are not limited to, statements regarding the proposed use of proceeds. Wherever possible, words such as “may”, “would”, “could”, “should”, “will”, “anticipate”, “believe”, “plan”, “expect”, “intend”, “estimate”, “potential for” and similar expressions have been used to identify these forward-looking statements. These statements reflect management’s current beliefs with respect to future events and are based on information currently available to management. Forward-looking statements involve significant risks, uncertainties and assumptions. Many factors could cause the Corporation’s actual results, performance or achievements to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements; including, without limitation, those listed in the filings made by the Corporation with the Canadian securities regulatory authorities (which may be viewed at www.sedar.com). Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward looking statements prove incorrect, actual results, performance or achievements may vary materially from those expressed or implied by the forward-looking statements contained in this news release. These factors should be considered carefully and prospective investors should not place undue reliance on the forward-looking statements. Although the forward-looking statements contained in the news release are based upon what management currently believes to be reasonable assumptions, the Corporation cannot assure prospective investors that actual results, performance or achievements will be consistent with these forward-looking statements. The Corporation disclaims any intention or obligation to revise forward-looking statements whether as a result of new information, future developments or otherwise except as required by law. All forward-looking statements are expressly qualified in their entirety by this cautionary statement.

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