

August 2011



## 2011 INVESTOR PRESENTATION Theralase Technologies Inc.

Presented by:  
Roger Dumoulin-White, President & CEO

*theraLASE*  
Healing at the Speed of Light®

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Certain statements contained or incorporated in this presentation, which deal with the Company's financial condition and operating results, include information, analyses and projections as to future corporate developments which are currently in the planning stage, and on the projected operating financial performance of the Company, which constitute forward-looking statements. Such forward-looking statements, made with special reference to the Company's ongoing technologically complex healthcare and medical device research and development efforts, which may include in-house and independent clinical trials, testing new medical technologies and their applications, involve known and unknown risks and uncertainties that could cause actual events and results to differ materially from those estimated or anticipated and which may have been implied or expressed in such forward-looking statements. No conclusions as to the successful outcome of the ongoing and planned research and development projects in which the Company is involved are intended or implied nor can they be foreseen or predicted prior to definitive corporate announcements as to their outcome. Certain forward looking statements are identified by words such as "believe", "anticipate", "estimate", "expect", "intend", "plan", "expect", "project", "may", and "will" and the negative of such expressions, although not all forward looking statements contain these identifying words, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward looking statements. Although Theralase believes that the expectations reflected in any forward looking statements made in this presentation are reasonable, such statement are based on a number of assumptions which may prove to be incorrect, including, but not limited to assumptions relating to the risks and factors set out below. Accordingly, no assurances can be given that any of the events or circumstances contemplated by any such forward looking statements will transpire or occur or, if any of them transpire or occur or, if any of them transpire or occur, what impact they will have on Theralase's results of operations or financial condition. A more complete list of risks and uncertainties inherent to the Company's industry can be found in our MD&A reports listed on [www.sedar.com](http://www.sedar.com).

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All references to dollars herein are to Canadian dollars except as otherwise indicated.



## THERALASE TECHNOLOGIES INC

### **Who we are:**

Medical device company: design, develop, manufacture and market medical lasers

FDA approved therapeutic medical laser for treatment of chronic pain, neural muscular skeletal (NMS) conditions and wound care

➤ >\$2 million revenue run-rate; marketing historically focused in Ontario

➤ Seeking to raise additional capital to expand sales and marketing throughout North America



## TLC-1000 THERAPEUTIC MEDICAL LASER



### Key Benefits

- Current production
- High peak power - up to 4" depth of penetration
- Full medical approvals (FDA, Health Canada, CE) allows sales in over 100 countries
- Best-in-class activation of all three known cellular pathways (ATP, iNOS and Na<sup>+</sup> / K<sup>+</sup> pump)
- Clinically supported and used daily by thousands of practitioners
- Over 1 million patients successfully treated

### 2011 Objectives

- Market penetration into the US (focusing on 5 largest states NY, CA, IL, TX & FL) and international countries
- 2011 Revenue (E): CDN \$3.9 million

### Breakthrough Scientific Research

- 700% increase in production of inducible nitric oxide synthase (iNOS) for 905 nm super-pulsed proprietary Theralase technology versus other wavelengths. (Published in "Lasers in Surgery and Medicine" March 2009)
- Nitric oxide production has been proven to accelerate the natural healing process, as well as activating and controlling inflammation



## Treatment Protocols

### Rule of Thumb:

**Acute injury** (< 3 weeks old) – requires approx. 4 to 6 Tx (Average 5 Tx)

**Sub-Acute Injury** (< 6 months old) - requires approx. 8 to 12 Tx (Average 10 Tx)

**Chronic Injury**(> 1 year old) – requires approx. 15 to 25 Tx (Average 20 Tx)

Latency period of light into tissue is 24 to 72 hours; therefore, treat every 2 to 3 days

Not unusual to “warm up” an injury by treating 3 consecutive days in a row, followed by 3 x per week for 3 weeks, followed by 2 x per week for remaining weeks due to cumulative effects

Treatments times range from 5 to 15 minutes depending on the depth of the injury and the surface area to be treated (Average 10 minutes)

## TLC-1000 TESTIMONIALS

“The Theralase laser is the most effective technology we have ever used. Our players now rely on Theralase to keep them healthy and playing at their peak.

George Poulis and Dave Abraham, Toronto Blue Jays, Athletic Trainers

“The Theralase® laser is now a standard of care treatment methodology within our rehab clinics and is a great tool in helping our athletes return to competition.”

James Andrews, MD, Andrews Institute, Orthopedics and Sports Medicine, Florida

“I love the Theralase® medical laser system and use it in our clinic at least 20 times per day.”

Kevin Wilk, DPT, Champion Sports Medicine, Sports Medicine, Alabama

“As a chronic pain specialist, the most advanced laser I have used is the Theralase therapeutic laser system, with which I have treated over 1000 patients.”

Dr. Laurence Altshuler MD, Balanced Healing Medical Center, Oklahoma



“I use the Theralase laser to keep my throwing arm healthy. It reduces fatigue and allows me to play at my peak, game after game.”

Roy Halladay, #32 Toronto Blue Jays, 2003 Cy Young Award



## TLC -THERAPEUTIC MEDICAL LASER COMPARISON

	Theralase TLC -1007H	Microlight ML- 830	Erchonia	Quantum	MEDX	Meditech
Wavelength (nm)	905 and 660	830	635	635	785	840
Drive Platform / FDA Approval	Super Pulse / NHN	Continuous Wave / NHN	Continuous Wave / NHN	Continuous Wave / ILY	Continuous Wave / ILY	Continuous Wave / ILY / NHN
Indicated Use	Knee Pain	Hand and Wrist Pain	Neck and Shoulder Pain	Heat	Heat	Heat / Rotator Cuff Tendonitis
Average Power (mW)	7 X 100 mW 6 x 25 mW	3 X 30 mW	2 X 5 mW	4 X 5 mW	16 X 5 mW	100 X 15 mW
Peak Power (mW)	50,000 mW	30 mW	10 mW	5 mW	5 mW	15 mW
Total Actual Tested Power	850	90	10	20	72	150
Photon Density Per Laser Diode (W/cm <sup>2</sup> )	5000	3	1	0.5	0.5	1.5
Approximate List Price (USD)	\$16,000	\$10,000	\$14,000	\$12,000	\$8,000	\$30,000
Approximate cost per mW (USD)	\$19	\$112	\$1,400	\$600	\$112	\$200

## FDA Approvals

**Theralase TLC-1000 FDA 510(k) Approval: K050342**

(NHN – powered light based non-laser non-thermal instrument with non-heating effect for adjunctive use in pain therapy)

Only 3 main companies approved to this standard:

- 1) **Erchonia** –Minor chronic neck and shoulder pain of musculoskeletal origin ( $p<0.05$ ) (86 subjects, 1 Tx, 1 day follow up, poorly designed study)
- 2) **Microlight** – Hand and wrist pain associated with Carpal Tunnel Syndrome ( $p<0.05$ ) (135 subjects, 15 Tx, 3 month post treatment follow up)
- 3) **Theralase** –Knee disorder pain ( $p<0.01$ ) (101 subjects, 12 Tx, 1 month post treatment follow up, 500% more clinically and statistically significant than competition, 5% versus 1%)

All other competitors approved to ILY – infrared lamp for therapeutic heating approval proving they can increase tissue temperature by 10 degrees Celsius for 10 minutes – **Expensive Heating Pads**

## Patents

1) Theralase has patented its TLC-2000 biofeedback therapeutic laser technology which targets tissue at depth with higher precision than its competitors enabling exact doses of energy to be delivered to injured tissue for enhanced efficacy and accelerated healing. (USA Patent: 6,413,267) (Belgium, Italy, Great Britain, Germany, France, Spain Patent: 1075854)

2) Theralase has patented light sensitive Photo Dynamic Compounds (PDCs), which when combined with its laser technology is able to specifically target and destroy cancers, bacteria and viruses.

(USA Patent: 6,962,910, 7,612,057) (USA Patent Application: 12/610,729, 11/851,689)



## Clinical Support 1

**Efficacy of Low Level Laser Therapy in the Management of Neck Pain: A Systematic Review and Meta-analysis of Randomized Placebo or Active Treatment Controlled Trials** Roberta Chow et al. The Lancet, November 2009

Sixteen randomized controlled clinical trials were identified for analysis totaling 820 patients. In acute neck pain, results of two trials showed a relative risk (RR) of 1.69 for pain improvement for LLLT versus placebo. Five trials of chronic neck pain showed a RR for pain improvement of 4.05 using LLLT. Eleven trials reported reductions in pain intensity when measured using the Visual Analog Scale. Seven trials provided follow up data for 1 to 22 weeks and saw short term pain relief persisting in the medium term using LLLT. Side effects from LLLT were mild and not different from those of placebo.

***Study Conclusion: LLLT reduces pain immediately after treatment in acute neck pain and for up to 22 weeks after completion of treatment in patients with chronic neck pain.***

## Clinical Support 2

### **Effects of 904 NM Low Level Laser Therapy in the Management of Lateral Epicondylitis: a Randomized Controlled Trial** Lam and Chein, Photomedicine and Laser Surgery, April 2007

The study evaluated the effectiveness of 904 nm Low Level Laser Therapy (LLLT) in the management of lateral epicondylitis. Thirty-nine patients with lateral epicondylitis were examined and treated with pain levels determined by the Visual Analog Scale. The study revealed that LLLT in addition to exercise is effective in improving the grip strength and subjective rating of physical function of patients with lateral epicondylitis.

***Study Conclusion : LLLT is highly effective in treating lateral epicondylitis***

## Clinical Support 3

**Efficacy of 904 nm Gallium Arsenide Low Level Laser Therapy in the Management of Chronic Myofascial Pain in the Neck: a Double Blind and Randomized Controlled Trial** Ali Gur, MD et al. Lasers in Surgery and Medicine, 2004

A prospective, double blind, randomized and controlled trial was conducted in 60 patients with chronic myofascial pain syndrome (MPS) in the neck to evaluate the effects of infrared low level 904 nm Gallium Arsenide (GaAs) laser therapy (LLLT) on clinical and quality of life (30 laser / 30 placebo). Results showed that the laser group experienced a significant improvement in pain at all outcome measures ( $p < 0.01$ ) over the placebo group.

***Study Conclusion: LLLT is highly effective in treating Chronic Myofascial Pain Syndrome***

## Clinical Support 4

**A Randomized Placebo Controlled Clinical Trial to Evaluate an Adjunct Treatment Modality for Pain Associated with Knee Disorders Utilizing a Therapeutic (Non-surgical) Laser is Presented. The Theralase TLC 1000 Laser was used as an Adjunctive Modality to Standard Treatment for Knee Pain using Chiropractic Techniques.**

Anton Cherry, DC, Nelson Marquina, PhD, DC Clinical Technologies Research, Sept. 2002

The primary endpoint was measured by the Visual Analog Scale assessment of pain levels on a scale of 0 - 10. The success criteria for an individual patient in this study was an improvement of 30% or more in the Visual Analog Scale (VAS) from baseline to 12th treatment and/or an improvement of 20% or more in the VAS from baseline to 30 day follow up evaluation. The data obtained in the study demonstrated that the Theralase TLC 1000 therapeutic laser provided significant relief and improvements in all the primary evaluation criteria.

***Study Conclusion: Theralase TLC-1000 therapeutic laser is highly effective in providing relief from chronic pain associated with knee disorders. FDA approval received***



## 2011 Strategic Initiatives Overview

### TLC-1000 THERAPEUTIC MEDICAL LASER

#### Expand sales and marketing of TLC-1000:

- Geographically and demographically into United States and international markets
- Focused on Canadian and US medical doctor, chiropractic and physical therapist markets as well as demographically into equine, large animal and veterinarian markets
- Addition of 6 Inside Sales Representatives , 5 Territorial Sales Managers for US market , European Sales Manager, National Sales Manager and a National Marketing Manager
- Advance Theralase Centers of Excellence program, develop relationships with key sports teams and teaching hospitals

#### Completed Initiatives:

- Territory Sales Managers (TSMs) focused on the 5 largest states (NY, CA, FL, TX, IL) and on the 3 largest provinces (AL, ON, QC)
- Speaking Engagement Trade Shows
- Partnerships and hosted presentations with chiropractors and chiropractic colleges through the Centre of Excellence program and seminar series



## TLC-2000 THERAPEUTIC MEDICAL LASER



### Key Benefits

- Patented biofeedback technology - targets tissue by adjusting for a patient's physical characteristics
- Learning device memorizing effective clinical protocols
- Consumer take-home model / recurring revenue model
- Clinical studies at University of Buffalo for myofascial pain underway

### 2012 Objective:

Market penetration into the US (focusing on the 5 largest states: NY,CA,IL,TX,FL) and international countries

### Revenue Estimates

2012 : \$4.3 million  
 2013 : \$8.3 million  
 2014 : \$16.8 million  
 2015 : \$29.6 million  
 2016 : \$46.6 million



## Business Model

### Assumptions (as verified by over one thousand TLC-1000 installations)

- Average \$50.00 per patient treatment (\$5.00 per minute)
- Average 10 minute treatment per patient
- Average 200 patient treatments per month (2000 treatments minutes per month)
- Practitioners incur a one time fee of \$2,500.00 (covers of our variable cost) – includes a limited lifetime equipment warranty and ongoing marketing support while in the monthly program

### Usage charge per month

- 0 to 500 minutes = \$1.00 per minute (Dr. keeps \$40.00 per treatment, Theralase retains \$10.00)
- 501 to 2000 minutes = \$0.25 per minute (Dr. keeps \$47.50 per treatment, Theralase retains \$2.50)
- 2001+ minutes = \$0.10 per minute (Dr. keeps \$49.00 per treatment, Theralase retains \$1.00)

### Conclusions

- Practitioner Revenue: 200 patient treatments per month = \$10,000.00 monthly revenue
- Theralase Revenue: 500 min. x \$1. + 1500 min. x \$0.25 = \$875.00 per month (\$500.00 min. charge)
- Practitioner is generating 20X return on investment

### 2016 Objective

Installed base of 7,800 units generating an average of \$500.00 per month each, equates to \$46.6 million in annual recurring revenue

## U.S. Sales & Marketing Strategy (Primary)

<b>Primary Practitioners*</b>	<b><u>2008</u></b>	<b><u>2018</u></b>	<b><u>% increase</u></b>
Chiropractors	49,100	58,700	19.6%
Physical Therapists	185,500	241,700	30.3%
<b>Total</b>	<b>234,600</b>	<b>300,400</b>	
<b>7800 unit installed base (target 2016)</b>	<b>3.32%</b>	<b>2.60%</b>	

\* All statistics from the U.S. Bureau of Labor Statistics, Washington, DC, Occupational Outlook Handbook, 2010 – 2011 edition



## U.S. Sales & Marketing Strategy (Secondary)

<b>Secondary Practitioners*</b>	<b><u>2008</u></b>	<b><u>2018</u></b>	<b><u>% increase</u></b>
Medical Doctors	661,000	805,500	21.9%
Dentists	141,900	164,000	15.6%
Veterinarians	59,700	79,400	33.0%
Podiatrists	12,200	13,300	9.0%
Hospitals	5,795	5,795	0.0%
<b>Total</b>	<b>880,595</b>	<b>1,067,995</b>	
<b>7800 unit installed base (Target 2016)</b>	<b>0.89%</b>	<b>0.73%</b>	

\* All statistics from the U.S. Bureau of Labor Statistics, Washington, DC, Occupational Outlook Handbook, 2010 – 2011 edition



# Additional Market Opportunities

## TLC-3000 MEDICAL LASER SYSTEM + PDC

### What?

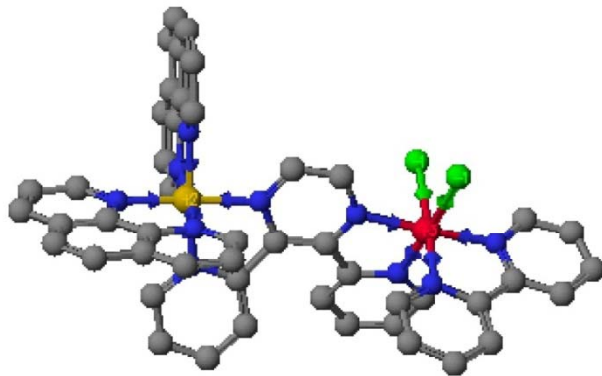
Patented super molecules with active centers and photosensitive keys known as Photo Dynamic Compounds (PDCs) - under worldwide license from Virginia Tech

### How do they work?

- Localize to the DNA of cancer cell or bacteria causing multiple single and double helix breaks leading to apoptosis upon exposure to patented laser sources
- Oxygen independent (Type 1) for use in solid core hypoxic tumours
- Combined with Theralase's biofeedback laser technology platform, they are lethal to cancer, bacteria, and viruses
- Research performed at renowned Princess Margaret Hospital

### How do they target?

PDC targets via pH and higher metabolism of cancer cell. Light source targets cancer cells by fiber optic inserted near cancerous tumor.



Status: Completed in-vitro analysis - Q1 2011  
Small animal (mouse model) in-vivo analysis – Q4 2011

## Financial Overview

- Approximately \$500,000 cash as of March 2011
- No long-term debt
- Current burn-rate approximately \$150k per month
- Use of proceeds to ramp up sales and marketing activities in the US, including rollout of TLC-2000 and general corporate purposes
- Targeting sustained profitability by end of 2012

## MANAGEMENT AND ADVISORS

### Management Team

**Roger Dumoulin-White**, P. Eng, President & CEO

Founded Theralase in 1995

24+ years as a senior manager with private and public companies

**Arkady Mandel**, MD, Ph.D., D.Sc., Chief Scientific Officer

20+ years experience as a key founder of therapeutic uses of lasers in dermatology and other areas of clinical medicine

**Kristina Hachey**, CGA, CFO

16+ years of experience in finance and financings in public and private companies

**Rhonda Mostyn** DC, Clinic Director

16+ years experience as a chiropractor / clinical director

### Board of Directors

**S. Donald Moore** – major shareholder, principal, director or senior officer to several public companies

**Roger Dumoulin-White** - Company's founder, President & CEO with previous senior management experience with an international automotive manufacturer

**Randy Bruder** Owner and operator of a wholesale / retail food processing operation for the last 25 years

**John A. Murphy** Professional Corporate Secretary and accountant for many public and private companies over the last 40 years.

### Scientific & Medical Advisors

**Dr. James Andrews**, American Sports Medicine Institute

**Dr. Jeffrey Dugas**, American Academy of Orthopedic Surgeons, ASMI, International Cartilage Repair Society

**Kevin Wilk DPT**, American Physical Therapy Association, ASMI

**Dr. Lyle Cain**, American Orthopedic Society for Sports Medicine, ASMI, ICRS

**Lanier Johnson**, Executive Director, American Sports Medicine Institute, developer of the Sports Medicine Program for the PGA Tour

**Dr. Terry Ruch** DVM, American Association of Equine Practitioners

### Strong Strategic Partnerships

University Health Network

Ontario Centers of Excellence – Photonics

National Research Council

Virginia Tech

University of Buffalo

Scripps Research Institute



## WHY INVEST

- Proven clinical technology (TLC-1000) with \$2 million sales in Ontario market
- Ability to scale sales and marketing to US and International countries to dramatically increase sales
- Commercial therapeutic laser business and brand developed over last 17 years
- TLC-2000 completed Q4 2011, launch Q1 2012 with patented biofeedback technology and recurring revenue model
- Competitive technical advantage only therapeutic laser on the market known to activate all 3 known cellular pathways (ATP, iNOS, Na<sup>+</sup> / K<sup>+</sup>)
- Future technology development (Patented biofeedback technology and patented PDC cancer destruction)
- Experienced management team (20+ years)



## SHARE INFORMATION

Stock Exchange/Ticker Symbol:

**TSX V: TLT**

Number of common shares outstanding

**Basic: 40.4 million**

**Fully diluted: 44.5 million**

Share price (as at August 4, 2011)

**\$0.51**

52 week high/low

**\$0.82/\$0.405**

Market Capitalization

**\$20.6 million**

Insider ownership

**40%**

An investment in Theralase involves a number of risks. These risks should be carefully considered before any investment is made. Risks and uncertainties relating to the following matters are generally associated with Theralase's business:

- The liquidity or any public market for securities of Theralase, and the volatility of its share price;
- Potential additional financing requirements in the future, which may not be available on acceptable terms, if at all;
- Theralase's ability to expand operations as necessary;
- Theralase's dependence on key personnel;
- Theralase's research and development activities, clinical trials, manufacturing operations (including, without limitation, risks associated with the reliance by Theralase on certain suppliers) and the marketing and distribution of Theralase products;
- Theralase's ability to in-license intellectual property, obtain patents, protect trade secrets and operate without infringing the exclusive rights of third parties;
- The degree to which Theralase's products are accepted by patients and healthcare professionals;
- Competition and technological advances of its competitors;
- Regulatory risks associated with the approval, sales and usage of Theralase's products;
- Potential product liability claims;
- Currency risks associated with export sales into the United States; and
- Credit risks associated with its customers.

However, risks relating to the items above are not the only ones that Theralase may face. Additional risks not currently known to Theralase or that Theralase's management currently deems immaterial may also impair Theralase's business operations. For more detailed risk factors, please see Theralase's MDA reports on [www.sedar.com](http://www.sedar.com).

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## THERALASE

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