

Dermatologist Designs New LED Device for Skin Rejuvenation

By Bob Kronemyer, Associate Editor

With the scheduled launch early next year of the LumiPhase-R, a new generation light-emitting diode (LED) device, OPUSMED Inc. (Montreal, Canada) hopes to significantly penetrate the U.S. market. The company's first product, the F1 Diode Laser for hair removal, is currently sold exclusively in Canada.

Within the next three years, "we expect that U.S. sales will represent more than 50% of our overall business," said Daniel Barolet, M.D., a dermatologist who founded the company in 1997 and is chairman of the board and chief scientific officer. In November 2003, the firm changed its name from Opus Medical, so as to avoid confusion with a California orthopedic business that has the same name.

OPUSMED is a rapidly growing medical technology company "dedicated to providing better, innovative and scientifically proven light-based solutions to physicians and health professionals," Dr. Barolet stated. "Our approach is to take clinical work experience and make it easily available to the end user."

The F1 Diode Laser (\$76,000 U.S.) debuted in 2001 "and has exceeded sales projections in our market," Dr. Barolet said. "Rental among users is very popular." Weighing only 33 lbs., the diode



Daniel Barolet, M.D.

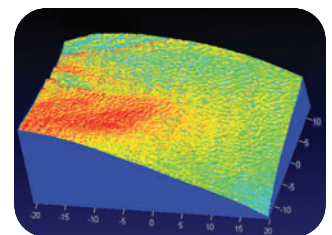
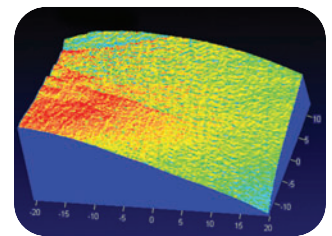
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laser is highly portable. In addition, the laser energy is fiber-optically delivered through a specialized handpiece. "There is also an aiming beam, so you know exactly where you are targeting the laser treatment," Dr. Barolet noted.

A study involving 17 patients and four treatments (monthly) indicated a 64% hair reduction

with the F1 Diode Laser at 36 months. "Soon we will introduce a more powerful laser with a larger spot size, which is now 7 mm," Dr. Barolet said. Meanwhile, the current model is able to maintain a 4 Hz repetition rate, even at 40 J/cm².

The new LumiPhase LED system (approximately \$35,000) will combine high-power density and optical positioning, for faster and more efficacious skin rejuvenation and acne treatments. "In my own practice, I've been using low-level laser therapy since 1993 to optimize wound healing," Dr. Barolet explained. Using similar photobiochemical principles, the company has conducted extensive in-vitro testing on monolayers of fibroblasts, as well as on cultured skin equivalents (dermis and epidermis), with the LumiPhase-R. A



PRIMOS images of wrinkles treated with LumiPhase-R

split-face study of 53 photoaged subjects also had four month follow-up. "We were able to achieve great results," Dr. Barolet reported. "Wrinkles on the treated side were improved by 58% based on PRIMOS digital profilometry measurements."

In the study, patients were treated three times a week, for four weeks. The proprietary sequential pulsing pattern is delivered through 18 LED modules, comprised of approximately 2,000 light elements. Patients were exposed to the LED for a few minutes at each session.

Dr. Barolet believes that LED devices epitomize a major trend in aesthetic procedures. "The goal is to achieve a photobiochemical subcellular response using unique LED treatment parameters. In particular, the high-power density and the optical positioning system of the LumiPhase-R, provide enhanced clinical efficacy. We embody the cutting edge of LED technology." ■