

## **ELLIOT LACH, M.D., F.A.C.S.**

### **ADDRESS:**

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Southboro, MA 01772  
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www.bostonsurgical.com

### **PERSONAL:**

Citizenship: U.S.A.

### **EDUCATION:**

Yale University School of Medicine	MD	1977-1981
Massachusetts Institute of Technology	SB	1973-1977
Hebrew College	BJEd	1972-1976
MIT Sloan School of Management	Executive Program	
Artificial Intelligence: Implications for Business Strategy		August, 2018

### **POSTDOCTORAL TRAINING:**

Chief Resident, Plastic & Reconstructive Surgery, Brigham & Women's Hospital, Boston Children's Hospital, Dana-Farber Cancer Institute, Harvard Medical School Boston, MA	Chief, Dr. Elof Ericsson	1986-1987
Resident, Plastic & Reconstructive Surgery, Brigham & Women's Hospital, Boston Children's Hospital, Dana-Farber Cancer Institute, Harvard Medical School Boston, MA	Chief, Dr. Joseph Murray	1984-1986

Hand and Microsurgery Fellow and Resident, Dr. Joseph Upton, (7/1/84-12/30/84. 10/1/85-12/30/85)	1984, 1986
Senior Resident, Department of General Surgery, Brigham & Women's Hospital, Harvard Medical School, Boston, MA	1983-1984
Physician, West Roxbury VA Medical Center, West Roxbury, MA	1983-1987
Clinical Fellow in Surgery, Harvard Medical School, Boston, MA	1983-1987
Fellow, Plastic and Reconstructive Surgery, Cambridge Hospital, Cambridge, MA, Dr. Francis Wolfort	1985-1986
Fellow, Plastic and Reconstructive Surgery, Beth Israel Hospital, Boston, MA, Dr. Robert Goldwyn	1985
Physician, Yukon-Kuskokwim Delta Regional Hospital, Bethel, Alaska	1983
Physician, West Haven VA Medical Center, West Haven, CT	1982-1983
Assistant Resident, Yale-New Haven Hospital, Department of General Surgery, Yale Medical School, New Haven, CT	1981-1983

## **LICENSURE:**

CLIA Lab Director Certification, University of Iowa Carver Medical College	February, 2019
DEA Registration MA	AL3109205
DEA Registration Florida	FL4867264
New York, State University, Department of Education	2015
Licensed Medical Doctor, # 60-280996 7/14/15	
Certified, Medical Doctor Expert Witness, Florida, Department of Health , MEEW1694 1/24/14	2014

Certified, American Board of Medical Malpractice,	2009
Florida, Department of Health, Medical Doctor ME 95055 Control #177505 1/12/06	2006
Rhode Island, Board of Registration in Medicine #MD09883 8/11/98	1998
Certificate of Added Qualifications in Hand Surgery, American Board of Plastic Surgery, #332	1994
Certified, American Board of Plastic Surgery, #3832	1990
Massachusetts, Board of Registration in Medicine, #53160	1984

#### **ACADEMIC APPOINTMENTS:**

Associate Professor, University of Massachusetts School of Medicine, Department of Surgery, Worcester, MA	1995-
Associate Professor, UMass School of Graduate Biomedical Sciences, Anatomy/Cell Biology Program, Worcester, MA	1995-2004
Associate Professor, University of Massachusetts School of Medicine, Department of Pediatrics, Worcester, MA	1995-2004
Assistant Professor, UMass School of Graduate Biomedical Sciences, Anatomy/Cell Biology Program, Worcester, MA	1988-1995
Assistant Professor, University of Massachusetts School of Medicine, Department of Pediatrics, Worcester, MA	1988-1995
Assistant Professor, University of Massachusetts School of Medicine, Department of Surgery, Worcester, MA	1987-1995
Clinical Fellow in Surgery, Harvard Medical School,	1983-1987

#### **PROFESSIONAL APPOINTMENTS:**

Staff Physician, MetroWest Medical Center Wound Center,	2014-
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Framingham Campus, MA

Chief of Plastic Surgery, Landmark Medical Center,  
Woonsocket, RI 2008-2018

Department of Surgery, UMASS Memorial Healthcare,  
Worcester, MA (includes pre-merger with UMass) 1987-

Full Time Staff, Division of Plastic & Reconstructive  
Surgery, UMASS Memorial Healthcare, Worcester, MA 1987-2004

Marlboro Hospital, Active Staff, Marlboro, MA 1997

Memorial Hospital, Active Staff, Worcester, MA 1997-1998

Metro-West Medical Center, Dept. Surgery,  
Dept. of Surgery, Framingham, MA 1993-

Southboro Medical Group, Staff Plastic Surgeon,  
Southboro, MA 1993-2004

Massachusetts Hospital School, Plastic Surgery  
Consulting Staff, Canton, MA 1993-2004

Monson State Developmental Center, Plastic Surgery  
Consulting Staff, Palmer, MA 1991-2004

St. Vincent Hospital, Courtesy Staff Worcester, MA 1989-

Founder, New England Burn Unit Consortium (NEBURC) 1989

Director and Founder, Worcester Regional Burn Center,  
Worcester City Hospital, Worcester, MA 1987-1989

Chief, Plastic & Reconstructive Surgery,  
Worcester City Hospital, Worcester, MA 1987-1989

Full Time Staff, Division of Plastic & Reconstructive  
Surgery, University of Massachusetts Medical Center,  
Worcester, MA 1987-2004

Active Staff, Cambridge Hospital, Cambridge, MA 1986-1989

Consulting Staff, Youville Hospital, Cambridge, MA 1986

## **COURSES AND TEACHING ACTIVITIES AT UMASS MEDICAL SCHOOL**

Research Techniques in Wound Healing and Plastic Surgery, Umass Medical Graduate Program, Dept. Cell Biology and Anatomy,	1999-2004
Thesis advisor, Undergraduate qualifying engineering requirement, Worcester Polytechnic Institute,	1995-2004
Physician, Patient and Society, 2nd year Medical Students	1995-1997
Ethics Block for 2nd year Medical Student Class	1995-1997
Physical Diagnosis and Medical Ethics	1994-1996
Preceptor, Summer Health Careers Program, Office of Minority Affairs, Worcester, MA	1992-2002
Advanced Anatomy for Plastic Surgeons	1990-2004
Undergraduate Medical Student Advisor	1989-2001
Clinical Problems in General Surgery Course	1988-2000
Basic Suture and Wound Management Techniques	1988-2004
Microsurgery Laboratory Techniques	1987- 2001
Advanced Trauma Life Support Instructor	1987-1999

### **Recent Lectures and UMass Courses:**

History of Surgery of the Hand: 5000 years from Chaldea to Boston  
Mass Society of Plastic Surgeons, Winter Meeting, Boston, MA 2009

History of Surgery: New technology meets old with Biblical references.  
Jewish War Veterans, Worcester region, Worcester, MA November, 2008

SmartLipo Laser Lipolysis with MPX technology, Cynosure Workshop,  
Burlington, MA , November, 2008

SmartLipo Laser Lipolysis, Clinical Applications and Methods, Cynosure Workshop,  
Burlington, MA , May, 2008

Webinar host and main discussant, “Smoothshapes: Laser fat and cellulite reduction ”, Eleme Corporation,  
Merrimack, NH, May, 2008

Laser Hair Removal, Electrolysis Council of New England  
Stonington, CT, April, 2007

Massachusetts Health Information Management Association, Coding Seminar  
Leonard Morse Hospital, Natick MA: 1. “Options for Breast Reconstruction and Treatment of  
Breast Cancer”, 2. “Bugs, Bugs, Bugs and their Medicinal Uses”, April 4, 2006

Professional Medical Education Association Laser Training Workshop,  
Puerto Rico 2004

Professional Medical Education Association Laser Training Workshop,  
Orlando, FL 2003

“Aesthetic Laser Workshop”, Columbus, OH, Hyatt Regency Hotel, February 8, 2003

“Aesthetic Laser Workshop”, Buffalo, NY Radisson Hotel, November 9, 2002

“Wound Healing and Burns”, Clinical and Scientific Surgery Course,  
UMass Medical School, Worcester, MA October 30, 2002

“Aesthetic Laser Workshop”, Boston Sheraton Hotel, October 26, 2002

“Aesthetic Laser Workshop”, Chicago, IL Marriott Hotel, October 4, 2002

“Ethics in Plastic Surgery and Burn Care 1.01”,  
Grand Rounds, Umass Plastic Surgery,  
Umass Memorial Medical Center, Worcester, MA, February 27, 2002

“Vascular Laser Applications in Plastic Surgery”,  
Grand Rounds, Umass Plastic Surgery,  
Umass Memorial Medical Center, Worcester, MA, October 3, 2001

Ethics for Surgeons 1.01”, General Surgery Grand Rounds,  
Umass Memorial Medical Center, Worcester, MA, February 2, 2000

“From Caveman to Modern Man: How medicine has changed;  
How medicine has stayed the same”, Frontiers in Science Conference,

Umass Medical School, Worcester, MA, May 3, 1999

“Suturing and Wound Care Techniques,” Hoagland Pincus  
Educational Center, Shrewsbury, MA, March 20, 1999

“Advances in Wound Healing: Growth Factors,” Taking Healing  
into the Next Century, Newburyport, MA, December 10, 1998

“New Technologies in Wound Care” Conference on “Wound Care:  
What’s New and What You Can Do”, Baystate Medical Center, Springfield, MA,  
November 18, 1998

“Overview of Venous, Ischemic, Diabetic Wounds of the Extremities,  
and Pressure Ulcers,” “One Step Forward,” An Amputation Rehabilitation  
and Limb Preservation Seminar, Whittier Rehabilitation Hospital,  
Westboro, MA, October 23, 1998

“New Technologies in the Care and Management of Diabetic Foot Ulcers,”  
Beechwood Inn, Worcester, MA, October 22, 1998

“Venous, Ischemic, and Pressure Ulcers,” Centers of Wound Healing  
Excellence, Brigham and Women’s Hospital, Harvard Medical School,  
Boston, MA, October 20, 1998

“New Science of Wound Healing: A Practical Guide for the  
Management of Diabetic Foot Ulcers,” Beechwood Inn, Worcester, MA  
June 18, 1998

Invited Discussant, “Utilizing Small Pulsing Cells to Prevent and Treat Pressure Ulcers”,  
University HealthSystem Consortium, Oak Brook, IL, December 17, 1997

Grand Rounds Dept. Medicine, "Ethics of Futility in Medicine," December 1, 1994

Grand Rounds Plastic Surgery, "Laser Skin Resurfacing," January 18, 1995

"Hands-On Course Laser Skin Resurfacing," March 16, 1995

"Maxillofacial Bioskills Lab Session," Plastic Surgery  
Grand Rounds, March 22, 1995

"Hands-On Course Laser Skin Resurfacing," May 11, 1995

"Ethics Rounds," Dept. of Surgery Grand Rounds, June 7, 1995

“Microsurgical Lab Techniques for Plastic Surgeons”  
Residency Training Series, August 12, 1995

“Microsurgical Lab Techniques for Plastic Surgeons”  
Residency Training Series, August 26, 1995

Grand Rounds Plastic Surgery,  
"Splinting and Casting Workshop," July 12, 1995

“Advanced Preceptorship in Laser Skin Resurfacing”  
Course Director, December 7, 1995

Grand Rounds Plastic Surgery,  
"New Horizons in Laser Surgery," September 17, 1997

“Advanced Preceptorship in Erbium Laser Skin Resurfacing”  
Course Director, September 18, 1997

Grand Rounds Dept. Medicine, Panelist, "Ethics in  
Medicine- You What?," December 4, 1997

Management of Diabetic Foot Ulcers: Growth Factors, Ortho-Mcneil  
Sponsored lecture series, Beechwood Hotel, Worcester, June 3, 1999  
Grand Rounds Plastic Surgery,  
"Splinting and Casting Workshop," July 22, 1998

“Understanding Medical Ethics and Principles”,  
Massachusetts College of Pharmacy and Health Science University,  
Graduating Nurse Practitioner lecture Worcester, MA, May 2, 2018

“Management of Non-Healing Chronic Wounds using Laser and Light Based Therapies.”  
International Society for Laser Medical Applications, 16<sup>th</sup> International Conference,  
San Diego, CA, February 2, 2019

“FunLipo Educational Seminar”, Bodyologie, Southborough, MA 2018-2019

## **HONORS AND DISTINCTIONS:**

Vitals Top 10 Doctor (MA Plastic Surgeons) 2014-

Patients' Choice 5th Anniversary Award (2012 - 2019)



Compassionate Doctor Award - 5 Year Honoree (2013 – 2019)

American Registry Patient's Choice Award 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015-2020

American Registry Patient's Compassionate Doctor Award 2009, 2010, 2011, 2014, 2015-2020

America Registry Most Honored Professional- Top 1% 2018-2020

American Registry Patient's Choice On-Time Physician Award 2009, 2015-2020

The American Society for Aesthetic Plastic Surgery, Member 2009-

American Board of Medical Malpractice, Diplomate 2009

American College of Legal Medicine, Member, 2009-

Massachusetts Medical Society House of Delegates, Representative 2009-

MIT Educational Council, MIT Educational Counselor 2008-

Massachusetts Society of Plastic Surgeons, President 2008-2011

Editorial Reviewer, Annals of Plastic Surgery 2006-

Massachusetts Society of Plastic Surgeons, Secretary and President-Elect 2006-2007

International Commission for Hair Removal Certification, Commissioner and Exam Question Writer 2005-

Editorial Reviewer, Journal of Plastic and Reconstructive Surgery 2004-

Massachusetts Medical Tribunal Physician 2004-

Massachusetts Society of Plastic Surgeons, Treasurer 2004-2005

Society of Clinical and Medical Hair Removal, Physician member 2004-

Information Management & Communication Technology, Executive Council, Massachusetts Medical Society 2002-

Physician's Advisory Council, Honorary Chairman, 22 <sup>nd</sup> District of Congress, Texas	2001
Editorial Reviewer, Journal of the American Medical Association	2000-
Harvard University Juggling Club, Cambridge, MA	2000-2006
Team Plastic Surgeon, Framingham Professional Soccer League, Worcester, MA	1997-2000
Team Plastic Surgeon, Worcester Professional Soccer League, Worcester, MA	1997-2000
Biomedical Optics Society, Member	1995-
Massachusetts Legislature Task Force/ Massachusetts Medical Society, Worcester District	1995-2000
Association for the Advancement of Medical Instrumentation, Member	1995-1997
Team Plastic Surgeon, Worcester ICECATS, American Hockey League, Worcester, MA	1994-1998
Medical Director, Co-Founder, Center for Advanced Clinical Technology, University of Massachusetts Medical Center, Worcester, MA	1994-2004
SPIE- The International Society for Optical Engineering, Member	1994
Osler Institute Faculty, Plastic Surgery and Hand Surgery Courses	1994
Massachusetts Legislature/ Massachusetts Medical Society Doctor-for-a-Day Program, Sponsoring Physician	1993,1996
Employee Recognition Award (U. Mass)	1993,1998, 2003
American College of Physician Inventors, Fellow,	1993
Plastic Surgery Educational Foundation Instructional Course Instructor	1992-1995

American College of Surgeons, Fellow	1992-
Worcester County Medical Society, Member	1991-
American Society for Laser Medicine and Surgery, Fellow	1991-
American Board of Plastic Surgery, Diplomate	1990
Massachusetts Society of Plastic Surgeons, Member	1989-
ROFEH International Volunteer Physician Team	1989-
American Medical Association	1989
Advanced Burn Life Support Instructor	1988-
Association of Academic Chairman of Plastic Surgery	1988-
American Society of Plastic and Reconstructive Surgeons	1987-
American Burn Association, Member	1987-
Advanced Trauma Life Support Course, Instructor	1988-
Advanced Basic Life Support	1987
MIT Alumni Association, Officer	1986-1987
Massachusetts Medical Society	1986-
Middlesex County Medical Society	1986-1991
Diplomate, National Board of Medical Examiners	1982
Johns Hopkins University Personal Computing to Aid the Handicapped National Search Award	1981
American Medical Association, Joseph Goldberger Scholar in Nutrition	1980
Fellow, Clinical Nutrition, Albany Medical College	1980
Massachusetts State Science Fair Judging, M.I.T., Cambridge, MA	1977-

Joseph Collins Foundation Scholar, Yale University School of Medicine	1977-1981
Bette K. Fein Award	1976
MIT Innovation Contest Winner	1975
Editor-in-Chief, MIT Undergraduate Scientific and Engineering Journal	1974-1976
Exxon Scientists and Engineers National Competition, Northeast Regional Winner	1973
Massachusetts State Science Fair, Winner	1972, 1973

## **CORPORATE AFFILIATIONS:**

Medical Advisor, WBZ Radio, Boston, MA	1997-
Scientific Advisory Board, Obesys Corporation, London, U.K.	1995-
Medical Affiliate Board, A. G. Economics, Inc. Cambridge, MA	1995-1999
Medical Advisory Board, INNOVA Home Therapies, Worcester, MA	1995-1996
Medical Advisor, Smith & Nephew Endoscopy, Andover, MA	1994-2001
Biocellulase, Inc, Chief Scientific, Medical and Technology Officer, Medical Director and co-Founder (now Eleme Corp, Merrimack, NH, company and patents sold to Cynosure, Inc. in 2011)	1995
Medical Advisor, Biovalve Corp, Worcester, MA	2002-2006
Medical Director, Inaara Medspa, Southboro, MA	2004-2006
Boston Surgical Group, President, Boston, MA	2004-

www.MyMedspa.com, editor, “ask Dr. Elliot”	2005-2006
Medical Director, Viva Skin Care Center, Burlington, MA	2006-2008
Board of Directors, Speech-Language & Hearing Associates of Greater Boston, Medfield, MA	2013-
CORE Medical Group, Center of Rejuvenation Experts, Chief Medical Officer, Delray Beach and Boca Raton, FL CORE New England, CORE New York	2014-2019
Orolux Corporation, Medical Advisory Board, Framingham, MA Orthodontic and airway technology	2019-
Laipac Technology Inc., Chief Medical Officer , Ontario Canada Covid19 and infectious disease detection	2021-2022
Grail Company, National Speaker’s Bureau, Menlo Park, CA Galleri Genomic Multi Cancer Early Detection	2022-
OneScan, Advisory Board Member, Longwood, FL Handheld MRI technology (formerly MicroTesla Systems)	2023-
The Wigit Company, Advisory Board Member, Rocklin, CA Unique Wheelchair Development with hand controls	2023-
StatPearls Editor-in-Chief, Online Medical Education	2023-

## **COMMITTEES:**

Continuing Education Committee, ASPS	2016-2017
Ethics and Conflict of Interest Committee, American Society for Laser Medicine and Surgery	2012-2013
Plastic Surgery Advisory Policy Committee, Tufts Health Plan	2008-2012
Specialty Advisory Committee, Blue Cross and Blue Shield of Massachusetts	2008-2011

Mass. Medical Society Interspecialty Committee	2008-2011
Mass. Medical Society Information Management and Communication Technology	2002-2004
Laser and Therapeutics Committee, UMass Memorial Healthcare	2000-2005
Plastic Surgery Educational Foundation, Telemedicine Committee	1999-2002
UMass/Memorial Medical Center Technology Assessment Advisory Committee	1999-2005
Worcester County Medical Society Legislative Affairs Committee	1997-2002
Credentials Committee, UMass Medical Center	1996-1998
Membership and Nominating Committees, American College of Physician Inventors	1994-1997
Program to Achieve Clinical System Superiority (PACCS) Communications Committee, UMass Medical Center	1995
Organ Donation and Procurement Committee UMass Medical Center	1995
Patient Treatment Issues and Ethics Committee, UMass Medical Center	1994-1998
Health Professional Staff Credentials Committee, UMass Medical Center	1994-1996
Devices and Products Committee, American Society of Plastic and Reconstructive Surgeons	1992-1993
Laser Committee, American Society of Plastic and Reconstructive Surgeons	1990-1992
Task Force for High Technology Alternatives to Major Surgery, UMass Medical Center	1989-1991
Nutrition Advisory Committee UMass Medical Center	1989-1993

Laser Therapeutic and Safety Committee, UMass Medical Center	1988-1996
Young Plastic Surgeons Committee, American Society of Plastic and Reconstructive Surgeons	1988-1989
Burn Unit Committee, Worcester City Hospital	1987-1990
Critical Care Committee, Worcester City Hospital	1987-1990

## **UNDERGRADUATE RESEARCH:**

Ballistic Shock Wave Analysis, Strobe and High-Speed Biological Photography. Harold and Esther Edgerton Strobe Laboratory, Department of Electrical Engineering, Massachusetts Institute of Technology with Prof. Harold Edgerton	1974-1976
Development of a Brazing Technique for 6061 Aluminum Alloy Tubing, Department of Mechanical Engineering, Massachusetts Institute of Technology with Prof. Robert Buckley.	1976-1977
Electron Microprobe Analysis of Human Red Blood Cells. Invented rapid monolayer preparation technique for blood cell analysis, Department of Physiology, National Resource for Biotechnology in Electron Probe Microanalysis, Laboratory for Human Reproduction and Reproductive Biology, Harvard Medical School with Prof. Claude Lechene	1975-1977
Connective Tissue Disease and Respiratory Disorders, Human Pulmonary Histamine Receptors, Pulmonary Function and Renal Failure, Department of Pulmonary Medicine, Yale University School of Medicine with Prof. E. Neil Schachter	1978-1980

## **NATIONAL and REGIONAL RESEARCH PRESENTATIONS:**

AESTHETIC LASER & LIGHT BASED PROCEDURES Professional Medical Education Association, Inc. Co-course Faculty, Marathon, FL	2016-
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- “Medical Malpractice: Beyond Consent Forms, Communication, and Office Documentation”, Professional Hair Removal Conference, Miami, FL 2010
- “PIXEL Densitometry as a quantitative measure of fat reduction ” American Society for Lasers in Medicine and Surgery, Orlando, FL 2008
- “Laser Cellulite Reduction” American Society for Lasers in Medicine and Surgery, Dallas, Texas 2004
- “Outpatient Reduction Mammoplasty”, New England Society of Plastic and Reconstructive Surgeons, Manchester, VT 2002
- “Comparison of Q-switched Alexandrite with Q-switched Nd:Yag lasers for hair removal in darker skin patients.” American Society for Lasers in Medicine and Surgery, Atlanta, GA 2002
- Ergonomics of Occupational Hand Injuries”, Society for Clinical and Medical Electrologists, Las Vegas, NV 2001
- “Telemedicine in Plastic Surgery”, New England Society of Plastic and Reconstructive Surgeons, Laconia, NH 2000
- Minimally Invasive Surgery of the Ear: Otoplasty Revisited”  
22nd Annual Congress of the Japan Aesthetic Surgery Society, Tokyo, Japan 1999
- “The Alexandrite Laser: Clinical Applications and Pitfalls”  
22nd Annual Congress of the Japan Aesthetic Surgery Society, Tokyo, Japan 1999
- “Laser Circumcision,” New England Society of Plastic and Reconstructive Surgeons, Chatham, MA 1998
- “Lip Reduction Surgery,” New England Society of Plastic and Reconstructive Surgeons, Chatham, MA 1998
- “Tissue Engineered Nipple Reconstruction,  
Plastic Surgery Research Council, Galveston, TX 1997
- “Laser Excision of Burns of the Hand and Upper Extremity,”



American Association for Surgery of the Hand, Nashville, TN	1996
"Laser Burn Debridement," Dermatology 2000, Vancouver, Canada	1996
"Laser Excision of Burns of the Hand and Upper Extremity," New England Hand Society, Sturbridge, MA	1995
"Aesthetic and Other Cutaneous Applications of Flashscanning CO <sub>2</sub> Laser Surgery: Hype or State of the Art?," American Society for Plastic and Reconstructive Surgeons, Montreal	1995
"Model Acquisition and Reasoning and Robotic Burn Debridement," Virtual Reality in Medicine and Developer's Expo, Cambridge, MA	1995
"Skin Resurfacing and Hair Transplantation using Novel Laser Flashscanner Techniques," Instructional Course, Massachusetts General Hospital, Harvard Medical School, Boston, MA	1995
"Aesthetic and Other Cutaneous Applications of Flashscanning CO <sub>2</sub> Laser Surgery: Hype or State of the Art?," American Society for Laser Medicine and Surgery, San Diego, CA	1995
"CO <sub>2</sub> Laser for Long-Term Salvage and Reconstruction of Massive Ventral Hernia Following Post-Operative Abdominal Wall Dehiscence," American Society for Laser Medicine and Surgery, San Diego, CA	1995
"Current Concepts in Cutaneous Laser Surgery: A Hands-On Course," Harvard Medical School, "Skin Resurfacing, Incisional Laser Surgery, General Laser Panel," Cambridge, MA	1995
"Hand Dislocations and Fractures," Annual Hand Review Course, Chicago, IL	1994
"New Laser Surgery Techniques," Educational Course, American Society for Plastic and Reconstructive Surgeons, San Diego, CA	1994

- "Nerve Compression Associated with Ganglions of the Hand and Wrist," New England Society of Plastic and Reconstructive Surgeons, Mystic, CT 1994
- "The Prudent Duo: Irrigation and the Safety Lock Needle Systems for Use in Hand Surgery," New England Society of Plastic and Reconstructive Surgeons, Mystic, CT 1994
- "The Flash Scanning CO2 Laser: A Revival of the CO2 Laser in Plastic Surgery Applications," International Society for Optical Engineering International Symposium on Lasers, Fibers, and Clinical Imaging in Medicine, Los Angeles, CA 1994
- "Laboratory Model for the Study and Treatment of Traumatic Tattoos with the Q-Switched Ruby Laser," International Society for Optical Engineering International Symposium on Lasers, Fibers, and Clinical Imaging in Medicine, Los Angeles, CA 1994
- "Ganglions of the Hand and Wrist Associated with Neurological Compression Symptoms," New England Hand Society, Sturbridge, MA 1993
- "Robotized Flash Scanning CO2 Laser Surgery, Tunable Dye Laser Surgery, Treatment of Congenital Vascular Malformations," Plastic Surgery Educational Foundation Laser Surgery Course, Orlando, FL 1993
- "New Laser Surgery Techniques," Educational Course, American Society for Plastic and Reconstructive Surgeons, New Orleans, LA 1993
- "Laser Surgery Update for Plastic Surgeons," Educational Course, Northeast Society of Plastic Surgeons, Pittsburg, PA 1993
- "Ethical Applications of Lasers for Plastic Surgery," Expert Panel Presentation on "Lasers: High Tech Surgical Adjunct for Plastic Surgery?," New England Society of Plastic and Reconstructive Surgeons, Newport, RI 1993
- "Third Generation Lasers: New Laser Surgery Techniques," Educational Course, American Society for Plastic and Reconstructive Surgeons, Washington, D.C. 1992

- "The Q-Switched Ruby Laser: Applications and Limitations in the Treatment of Traumatic and Decorative Tattoos and Hyperpigmented Lesions," American Society for Plastic and Reconstructive Surgeons Seattle, WA 1991
- "A Computerized System for Photographic Slide Storage and Retrieval for Plastic Surgeons, New England Society of Plastic and Reconstructive Surgeons, Portland, ME 1991
- "Treatment of the Port-Wine Stain with the Flashlamp Pulsed Dye Laser: Refinements and Complications from the Learning Curve," American Society for Laser Medicine and Surgery, San Diego, CA 1991
- "Treatment of Cutaneous Vascular Ectasias with the Flashlamp Pumped, Pulsed Tunable Dye Laser" American College of Surgeons, San Francisco, CA 1990
- "Something New for the Treatment of Port Wine Stains: The Flashlamp Pumped, Pulsed Tunable Dye Laser," Second International Esthetic Surgery Symposium Aachen, West Germany 1990
- "Tunable Dye Lasers for Treatment of Vascular Skin Ectasias," Educational Course, Second International Laser Surgery Symposium Aachen, West Germany 1990
- "Multiple Digital Distraction-Lengthening in the Hypoplastic Hand," American Association of Hand Surgery, Seattle WA 1989
- "Something New for the Treatment of Vascular Birthmarks: The Flashlamp Pulsed Tunable Dye Laser," Northeast Society of Plastic Surgeons, Newport, RI 1989
- "Something New for the Treatment of Vascular Birthmarks: The Flashlamp Pulsed Tunable Dye Laser," American Society for Plastic and Reconstructive Surgeons, San Francisco, CA 1989
- "Multiple Digital Distraction-Lengthening in the Hypoplastic Hand," New England Hand Society, Sturbridge, MA 1989

"Treatment of Vascular Birthmarks: The Flashlamp Pulsed Tunable Dye Laser," New England Society of Plastic and Reconstructive, Hyannis, MA	1989
"The Myoelectric Hand Orthosis: Rehabilitating the Disabled Hand," American Association of Hand Surgery, Toronto, Canada	1988
"Tumor Necrosis Factor in Burn and Trauma Patients," Surgical Infection Society, Denver, CO	1988
"The Art of Hand Moulage," New England Hand Society, Enfield, CT	1987
"Rapid Tissue Expansion: How Fast is Too Fast?," New England Society of Plastic and Reconstructive Surgeons, Providence, RI	1987
"Upper Extremity Amputations in Children" American Association of Hand Surgery, Los Angeles, CA	1986
"Dynamic Distraction Lengthening of the Mandible in Temporomandibular Joint Ankylosis," American Society for Plastic and Reconstructive Surgeons, Los Angeles, CA	1986
"Dynamic Distraction Lengthening of the Mandible," New England Society of Plastic and Reconstructive Surgeons, Bretton Woods, NH	1986
"Upper and Lower Extremity Amputations in Children," New England Surgical Society, Dixville Notch, NH	1986
"Pediatric Hand Amputations," New England Society of Plastic and Reconstructive Surgeons, Boston, MA	1985
"Iatrogenic Complications of the Pediatric Hand," Southern New England Hand Society, Enfield, CT	1985
"CIFORHAND: A Computerized Innovation for the Speech Impaired Handicapped," Johns Hopkins Personal Computing for the Handicapped, Boston, MA	1981
"The Role of Histamine and Histamine Receptors in Asthma," National Student Research Forum, Galveston, TX	1980

"Pleuropulmonary Complications in Mixed Connective Tissue Disease," American Federation for Clinical Research, Miami, FL 1979

## **MILITARY EXPERIENCE:**

Major, U.S. Army Reserve, Medical Corps	1990- 2004
Captain, U.S. Army Reserve, Medical Corps	1983-1990
1st Lieutenant U.S. Army Reserve, Medical Corps	1981-1983
2nd Lieutenant U.S. Army Reserve, Medical Service Corps	1980-1981

## **PATENTS:**

Patent No. 11065174 July, 2021  
Rebecca Lach and Elliot Lach  
Wearable Interactive System and Method Of Non-Opioid And Drug-Free Pain Control

Patent No. US 6,673,096 B2  
System and Method of Tissue Treatment January 6, 2004

Patent No. US 7,033,382 B2  
System and Method of Tissue Treatment April 25, 2006

Patent No. US 20060161228  
System and Method of Tissue Treatment July 20, 2006

Patent No. US 20070173749, Suction massage device, January, 2007

PCT/US2007/001283, Suction massage device, January, 2007

(WO/1998/009569) TISSUE RETRIEVAL BAG AND METHOD FOR REMOVING CANCEROUS TISSUE, Dec, 1997

[WO 1995/034245\) SAFETY LOCK NEEDLE](#) , Dec, 1995

## **PUBLICATIONS:**

1. Lach, E., An Analytical Determination of Fecal Pollution Sources in the Charles River. Tech Eng. News 66:3, 1974.
2. Lach, E.: Ballistic Shock Waves and Ernst Mach. Tech Eng. News 67:2, 1975.
3. Luoma, I. and Lach, E.: Biomaterials: The Orthopedic Application of Plastics and Ceramics. Tech Eng. News 67:4, 1975.
4. Dudley, G. and Lach, E.: Removal of Organic Wastes from the Aquarium. The Glass Cage, J. New Eng. Aquar. Hob. Soc. Fall, 1975.
5. Lach, E.: Alcoholism at M.I.T., The Tech 96:11, March 12, 1976.
6. Lach, E.: The Use of Araneids in Sensory Research Study. Tech Eng. News 68:2, 1976.
7. Lach, E.: Some Aspects About Cigarette Smoke and Health. Tech Eng. News 68:4, 1976.
8. Lach, E.: Transplantation Immunology and Associated Reactions. Tech Eng. News 69:1, 1976.
9. Lach, E.: Pleuropulmonary Manifestations in Mixed Connective Tissue Disease. Proceedings of the Eastern Student Research Forum of the American Federation of Clinical Research, Miami, FL, 1979.
10. Lach, E.: and Schachter, E.N.: Marijuana and Exercise Testing. New Eng. J. Med. 301:438, 1979.
11. Schachter, E.N., Lach, E., Gerstenhaber, B., and Smith, G.J.W.: Pleuropulmonary Manifestations of Mixed Connective Tissue Disease. Clin. Res., 27:598A, 1979.
12. Lach, E.: Pleuropulmonary Manifestations of Mixed Connective Tissue Disease. Clin. Res., 27:3, 605A, 1979.
13. Schachter, E.N., Lach, E., and Lee, M.: Protective Effect of a Mask on Exercise-Induced Bronchospasm. Resp. Care 24:12, 1207, 1979.
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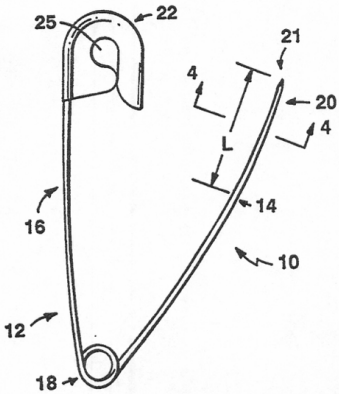
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PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : A61B 17/04		A1	(11) International Publication Number: <b>WO 95/34245</b> (43) International Publication Date: 21 December 1995 (21.12.95)
(21) International Application Number: PCT/US95/07237 (22) International Filing Date: 6 June 1995 (06.06.95) (30) Priority Data: 08/258,480 10 June 1994 (10.06.94) US (71) Applicant: UNIVERSITY OF MASSACHUSETTS MEDICAL CENTER [US/US]; 55 Lake Avenue North, Worcester, MA 01655 (US). (72) Inventor: LACH, Elliot; 16 Gaslight Lane, Framingham, MA 01701 (US). (74) Agent: CLARK, Paul, T.; Fish & Richardson P.C., 225 Franklin Street, Boston, MA 02110-2804 (US).			(81) Designated States: AU, CN, JP, KP, KR, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  Published With international search report.
(54) Title: SAFETY LOCK NEEDLE			
(57) Abstract <p>An improved needle (10) for fixing body material, e.g., tendons, during surgery is provided. The needle includes an elongated member (12), comprising a first leg (14), having a first end including a tip portion (20) having a triangular cross section to enable the tip portion to pierce the body material, a second leg (16), having a second end, and a resilient portion (18) disposed between said first leg and said second leg; and a blunt shield (22) disposed at said second end and dimensioned to receive said tip portion. The elongated member (12) is bent at an acute angle, and the resilient portion (18) is positioned to enable said first leg (14) to be moveable between an open position, in which the tip portion is exposed and spaced from the shield (22), allowing the tip portion (20) to pierce and to be inserted through a body material, and a closed position, in which the tip portion is received and enclosed by the shield.</p>			
			

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau

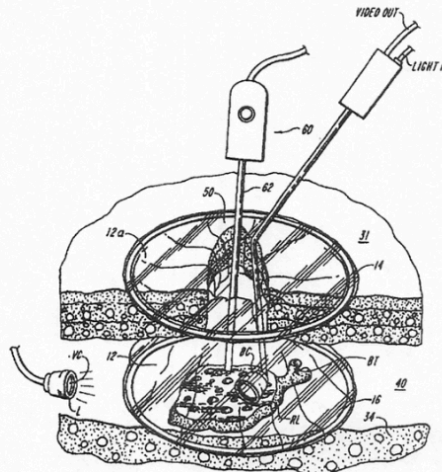
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : A61B 17/00		A1	(11) International Publication Number: <b>WO 98/09569</b>
			(43) International Publication Date: 12 March 1998 (12.03.98)
(21) International Application Number: PCT/US97/15427		EK, Steven, W. [US/US]; 59 Bolton Woods Way, Bolton, MA 01740 (US). SOLLER, Babs, R. [US/US]; 15 Franklin Circle, Northboro, MA 01532 (US).	
(22) International Filing Date: 2 September 1997 (02.09.97)		(74) Agents: FALKOFF, Michael, I. et al.; Lahive & Cockfield, LLP, 28 State Street, Boston, MA 02109 (US).	
(30) Priority Data: 08/707,698 4 September 1996 (04.09.96) US		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW. ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).	
(60) Parent Application or Grant (63) Related by Continuation US 08/707,698 (CIP) Filed on 4 September 1996 (04.09.96)		Published With international search report.	
(71) Applicants (for all designated States except US): UNIVERSITY OF MASSACHUSETTS [US/US]; 55 Lake Avenue North, Worcester, MA 01655 (US). SMITH & NEPHEW, INC. [US/US]; 160 Dascomb Road, Andover, MA 01810 (US).			
(72) Inventors; and (75) Inventors/Applicants (for US only): LACH, Elliot [US/US]; 55 Lake Avenue North, Worcester, MA 01655 (US). CONLAN, A., Alan [US/US]; 55 Lake Avenue North, Worcester, MA 01655 (US). NIEMANN, Allison [US/US]; 89 Myrtle Street #4, Boston, MA 02114 (US). KAZAKEVICH, Yuri, E. [US/US]; 26 Farwood Drive, Andover, MA 01810 (US).			

(54) Title: TISSUE RETRIEVAL BAG AND METHOD FOR REMOVING CANCEROUS TISSUE

## (57) Abstract

A tissue retrieval bag collapses for insertion and withdrawal through an incision to a body cavity where it forms a flat tray to receive excised tissue. The tissue is dropped onto the floor of the bag and the mouth of the bag is then drawn back through the incision, where it drapes the opening and provides a protected tunnel to the resected tissue still lying within the cavity. The bag is preferably transparent, and the enclosed tissue may be viewed endoscopically while a morcellizer is inserted through the tunnel and operated to aspirate the tissue, after which the bag is readily withdrawn through the incision, together with residual tissue. An endoscope may be inserted through the tunnel directly into the bag to monitor and control morcellation. In a preferred embodiment the tissue is resected lung tissue and the morcellizer blade selectively morcellates only the parenchyma, leaving lymphatic tissue and the bronchial tree in the bag for histologic analysis. The bag may have pleated walls or inflatable ribs which provide dimensional stability in a shape that avoids cutter damage and cleanly catches and contains the resected tissue, thus reducing the risk of seeding tumor cells. Indicator material in the wall shows when the wall is damaged, and a bumper ring may be provided on the morcellizer stem to reduce the risk of damage.





US006673096B2

(12) **United States Patent**  
**Lach**

(10) Patent No.: **US 6,673,096 B2**  
(45) Date of Patent: **Jan. 6, 2004**

(54) **SYSTEM AND METHOD FOR TISSUE TREATMENT**

(75) Inventor: **Elliot Lach**, Framingham, MA (US)

(73) Assignee: **Biocellulase, Inc.**, Woburn, MA (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 53 days.

(21) Appl. No.: **10/000,459**

(22) Filed: **Nov. 2, 2001**

(65) **Prior Publication Data**

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**Related U.S. Application Data**

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(51) Int. Cl.<sup>7</sup> ..... **A61N 5/067**

(52) U.S. Cl. .... **607/89**; 601/15

(58) Field of Search ..... 607/88.89; 601/15

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Primary Examiner—Michael Peffley

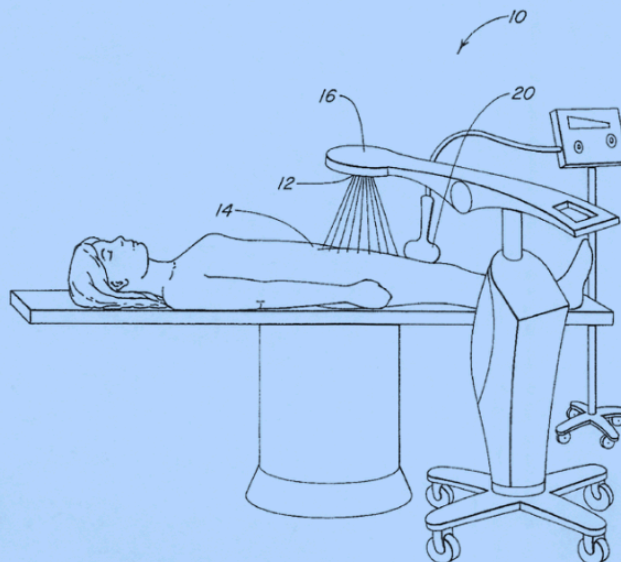
Assistant Examiner—Henry M. Johnson

(74) Attorney, Agent, or Firm—Lahive & Cockfield, LLP

(57) **ABSTRACT**

A system and method for the treatment of body tissue is provided that includes a radiation-emitting device and a massaging mechanism. In accordance with one embodiment, the radiation-emitting device is a laser and the massaging mechanism is an automated mechanical massaging mechanism. The radiation-emitting device can emit radiation in the visible and infrared wavelengths. The radiation-emitting device can emit radiation in a concentric combination of infrared and visible laser light. The method of using the tissue treatment system includes exposing a skin surface of a patient to radiation emitted from the radiation-emitting device at predetermined wavelengths for predetermined periods of time. The method further provides for massaging the exposed skin surface of the patient with the massaging mechanism. The tissue treatment system can be utilized to effect the reduction of excess cellulite.

**19 Claims, 3 Drawing Sheets**







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(12) **Patent Application Publication**  
**Williams et al.**

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(43) **Pub. Date: Jul. 26, 2007**

(54) **MECHANICAL MASSAGE DEVICE**

**Publication Classification**

(75) **Inventors:** **Christopher Edwin Williams,**  
Swansea (GB); **Elliot Lach,**  
Framingham, MA (US)

(51) **Int. Cl.**  
**A61H 15/00** (2006.01)

(52) **U.S. Cl.** ..... **601/123; 601/126; 601/134**

(57) **ABSTRACT**

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A massage mechanism includes a housing containing substantially uni-directional roller components. The rollers are able to rotate in one direction, but either not easily or not at all in the opposite direction. Each roller of a total of two rollers is able to rotate in a direction that is opposite of the other roller. The effect of the described configuration is that as the roller massage device moves across a skin surface of a patient, a leading edge roller is able to roll, while a trailing edge roller is held stationary, or substantially stationary. The stationary roller on the trailing edge of the roller massage device pushes against the skin, generating a skin fold. The skin fold can be further generated and magnified by the provision of a vacuum pressure within a chamber of the roller massage device, suctioning the skin up into the device, working in conjunction with the rollers. In addition, an electromagnetic force can be applied to the skin fold.

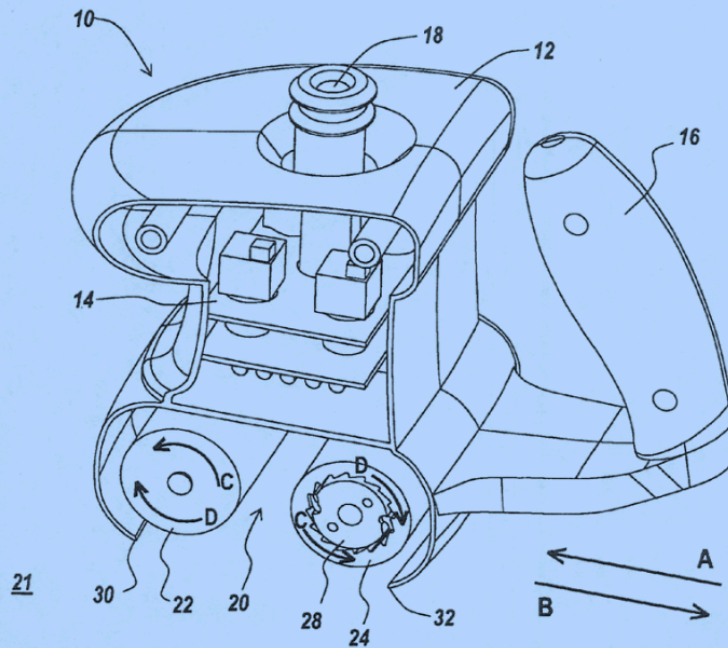
(73) **Assignee:** **BioCellulase, Inc.,** Merrimack, NH (US)

(21) **Appl. No.:** **11/655,548**

(22) **Filed:** **Jan. 19, 2007**

**Related U.S. Application Data**

(60) Provisional application No. 60/760,631, filed on Jan. 20, 2006.





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(19) **United States**

(12) **Patent Application Publication**

**Lach et al.**

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(43) **Pub. Date: Aug. 16, 2018**

(54) **WEARABLE INTERACTIVE SYSTEM AND METHOD OF NON-OPIOID AND DRUG-FREE PAIN CONTROL**

(71) Applicants: **Rebecca Lach**, Philadelphia, PA (US);  
**Elliot Lach**, Boston, MA (US)

(72) Inventors: **Rebecca Lach**, Philadelphia, PA (US);  
**Elliot Lach**, Boston, MA (US)

(21) Appl. No.: **15/932,332**

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**Related U.S. Application Data**

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**Publication Classification**

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**A61H 9/00** (2006.01)

(52) **U.S. Cl.**

CPC ..... **A61H 9/0078** (2013.01); **A61H 9/0071**  
(2013.01); **A61N 5/0613** (2013.01); **A61H**  
**2205/10** (2013.01); **A61H 9/0057** (2013.01)

(57)

**ABSTRACT**

A wearable sleeve is configured to be worn on a limb of a user. The sleeve includes a flexible tubular sleeve body that is elongate along an axis. The sleeve further includes at least one of a series of vibrating elements and a series of pneumatic compression elements that are attached to the tubular sleeve body. During use, the vibrating elements and/or the compression elements are configured to be disposed along a lymphatic drainage path of the user. Targeted photonic stimulation in the form of light generated by LED or laser may be employed to further enhance the circulatory and physiologic changes. Microprocessor incorporated control and interactive capability further results in optimized application and patient compliance due to improved efficacy.

