Two main operational routes:

• **BASIC RESEARCH**, oriented to the study of new therapeutic instrumental strategies, with the use of new biomedical technologies such as three-dimensional (3D) cell cultures (to simulate what happens in our tissues during a therapeutic treatment), nanoparticles (for the development of more effective therapies and future clinical applications) and stem cell (paving the way to “cell therapy” for the repair of damaged tissues).

• **CLINICAL TRIALS**, aimed at verifying the effectiveness of new therapies in clinical applications and the validation of therapeutic protocols. Particularly rigorous criteria of patient enrolment, methodology, evaluation mode, data analysis, in full compliance with the rules laid down by ethics committees.

ASAcampus, the research division of ASAlaser

Overcoming the limits of knowledge, sharing information, making concrete scientific results: the research division of ASAlaser, ASAcampus, directed by Dr. Monica Monici, was born with these objectives. The headquarters is in the Joint Laboratory Department of Experimental and Clinical Biomedical Sciences - University of Florence, Italy-, where research programs are developed in biomedical field, oriented to deepen the interaction between cells / tissues and physical energies (laser radiation, electromagnetic fields, mechanical and gravity stresses). ASAcampus activity is complemented by an international network of research, involving experts and medical professionals from different scientific fields, a close-knit group that continues to grow, open to new collaborations in Italy and worldwide. ASAcampus is also active in several national and international research projects, communication in conferences, publication of numerous articles in international and indexed journals, and in publishing the official review of ASAcampus, “Energy for Health”.

ASAlaser, research and therapeutic solutions

Since 1983 ASAlaser has been the reference point on a world-wide scale for knowledge, production and development of therapeutic solutions based on laser sources and magnetic fields, thanks to the continuous and multidisciplinary research and the sharing of information among professionals in human and veterinary medical fields. A commitment and an awareness that are present at any Company level with a specific objective: giving to doctors and medical practitioners advanced instruments able to face and solve effectively pain pathologies in physio kinesitherapy, orthopedics, traumatology, rheumatology, dermatology, sports and rehabilitative medicine. Technologic innovation, reliability and efficiency are the main features of ASAlaser products for Laser Therapy and Magnetotherapy, strictly tested and periodically undergone quality controls, distributed and daily utilized in the best medical centers in more than 50 Countries around the world.

The affirmation of the international leadership of ASAlaser, in knowledge and development of advanced technologies in the field of “pain management”, had an important confirmation in 2003 thanks to the partnership with El.En. Group, one of the World main protagonists as for producing laser sources and systems for medical and industrial use. The confirmation of a concrete and forward-looking project of innovation and expansion, open and shared, enhanced by human resources, soul and engine of ASAlaser yesterday, today and tomorrow.
Hilterapia® is a therapeutic technique based on an exclusive high-intensity laser emission (HILT® = High Intensity Laser Therapy) that, working in absolute safety, allows to obtain an effective in depth therapeutic action.

Ideal for treatment of painful pathologies affecting the osteo-muscular-articular apparatus, from the most superficial up to the deepest ones. Hilterapia®, thanks to its innovative high intensity laser pulse known as HILT®, patented and approved by the U.S. FDA, can achieve in little time and with long-lasting benefits to the patient its effective bio-stimulating, anti-inflammatory and anti-pain actions.

According to our knowledge no side-effects and pain have been reported during and after treatment. Today, Hilterapia® represents the most up-to-date solution, at step with ground-breaking innovations in the scientific world, in treating and curing painful pathologies such as those associated to tendons, muscles and ligaments; a rapid solution, effective and long-lasting all to the advantage of your patients, for their wellness and quality of life.

Hilterapia® is strikingly effective on the painful symptom and on the articular mobility; this allows to immediately start the rehabilitation program and gives immediate relief to the patient.
**MAIN INDICATIONS**

- Osteoarthritis and degenerative processes
- Bursitis, synovitis, capsulitis, tennis elbow, impingement syndrome
- Tendonitis and tenosynovitis
- Edema and distortion traumas
- Post-trauma pathologies, also due to over-exertion
- Adductors syndromes, tibio-tarsal sprains, insertional inflammations, patellar chondropathies, and all sport traumatology

**SIMPLY UNIQUE**

- Immediate and long-lasting effects
- Rapid treatment, safe and painless
- Certified results from scientific documentation
- Therapeutic technology used by important clinics and medical centers around the world
- Italian research and development

**PATENTED IN THE U.S.A. AND FDA APPROVED**

- **JOINTS**
  - Reduces articular inflammation and stimulates reparative action

- **MUSCULAR SYSTEM**
  - Rapidly resolves contractures, producing an intense analgesic effect

- **CIRCULATION AND LYMPHATIC SYSTEM**
  - Encourages the supply of nutrients and re-absorption liquid accumulations

The most complete and up-to-date scientific content, technical and practical (3D animations, videos, tutorials, fact-sheets, ...) dedicated to Hilterapia® according to anatomy, diseases and treatments.
Thanks to a specific patented impulse, Hilterapia® reaches very high peak powers (1-3 kW) with a pulsed Nd:YAG source (wavelength 1064 nm). The high intensity reached (up to 15,000 W/cm²), unattained by other laser technologies currently available, allows to heal effectively even deep chronic lesions. In fact, if the objective is to provide a healing treatment besides symptomatic, it is necessary to supply energy in the most suitable way. It was experimentally proven that chronic and deep seated lesions and osteo-arthritis need to receive a great quantity of energy in depth to be able to induce a biological answer. The high intensity and the big impact of energy of HILT® impulse promote not only the analgesic, anti-inflammatory and anti-edema effect, but also a real reparative and regenerative process. The characteristics of duration and frequency of the HILT® impulse grant to work safely, with respect of the thermal relaxation of tissue, thus avoiding any damaging effects.

The Photomechanical effect:
A fundamental distinctive characteristic of HILT® pulse is its ability to induce photomechanical-type effects. The strength of these effects is directly proportional to the laser emission intensity and inversely proportional to the pulse duration. Thanks to the short pulse duration and the very high intensity, Hilterapia® has the right characteristics to generate this phenomenon, able to induce important therapeutic effects. It is known in fact that this kind of stimuli starts a series of biological signals that promote reparative and regenerative processes in tissues; moreover it activates lymphatic drainage and microcirculation.

Hilterapia®: high intensity, depth, safety in one therapy.
A result unattained by any other laser device.
Intense, deep, safe. Simply beyond reach.

**Intensity**

- **3.000 W**
- **1.000 W SH1**
- **5.000 W/cm²**
- **15.000 W/cm²**

**Depth**

- **5 mm**

**Safety**

- **HIRO 3.0**
  - Intensity: 15.000 W/cm²
  - Temperature: 37°C
  - T > 45°C
- **SH1**
  - Intensity: 1.000 W/cm²
  - Temperature: 37°C

High intensity, up to 15.000 W/cm², necessary to stimulate deep regeneration.

The HILT® impulse is able to reach the deepest tissue layers.

HILT® impulse takes high doses of energy down to considerable depth in complete safety.
Products

Only HIRO 3.0 and SH1 devices are able to reach the high levels of intensity - depth - safety of Hilterapia® at the same time. The two models are aimed at different needs. SH1 combines the effectiveness in treating muscular pathologies with the ease of use of its portability. HIRO 3.0 allows to perform, besides the pain management, also a deep reparative and regenerative action, with the dedicated DJD handpiece.

SH1

As result of our sport medicine experience with Dr. Costa’s Clinica Mobile in MotoGP world championship and the Italian Fencing Team, Hilterapia® is now transportable: reduced dimensions with great performances. In fact it effectively treats muscular pain with analgesic and anti-inflammatory results also in depth and it heals edema. Results on pain symptoms are evident from the first treatment session.

TECHNICAL FEATURES

• High Power Pulsed Nd:YAG Laser
• Peak Power: 1kW
• Energy per pulse (max) 150 mJ
• Average Power: 6W
• Fluence: 760 mJ/cm²
• Pulse Duration <150 μs
• Standard Handpiece Ø 5 mm
• User interface through a touch-screen display with BrightView graphics and colors
• User-friendly operating software
• Programs to modify and save parameters
• Emitted energy calculated automatically according to selected functions

ALARMS AND SAFETY FEATURES

• acoustic signal for the beginning and end of therapy
• date and time
• language option
• machine status signals and alarms
• emergency stop button for laser emission
• laser emission warning light
• interlock

POWER SUPPLY

115/230V~ 50/60 Hz

DIMENSIONS AND WEIGHT

37 x 21 x 43 cm; 14 kg

For pain therapy featuring a spacer for the correct energy delivery on the treatment volume.
HIRO 3.0 is the most complete device for Hilterapia®, FDA cleared. In fact, besides curing the muscular pathologies on antalgic and anti-inflammatory level and edema with great effectiveness also in depth, it promotes reparative and regenerative processes, thus allowing an effective action on insertional pathologies and osteo-arthritis.

**TECHNICAL FEATURES**
- High Power pulsed Nd:YAG Laser
- Peak Power: 3kW
- Energy per pulse (max) 350 mJ
- Average Power: 10.5 W
- Fluence: 1780 mJ/cm²
- Pulse Duration <120 μs
- User interface through a touch-screen display with BrightView graphics and colors
- User-friendly operating software
- Programs to modify and save parameters
- Emitted energy calculated automatically according to selected functions

**ALARMs AND SAFETY FEATURES**
- acoustic signal for the beginning and end of therapy
- date and time
- language option
- machine status signals and alarms
- emergency stop button for laser emission
- laser emission warning light
- interlock

**POWER SUPPLY**
115/230V~ 50/60 Hz

**DIMENSIONS AND WEIGHT**
30 x 70 x 78 cm; 40 kg

**STANDARD HANDPIECE**
Intensity 15000 W/cm²
For pain therapy featuring a spacer for the correct energy delivery on the treatment volume.

**DJD HANDPIECE**
Intensity 15000 W/cm²
For regenerative therapy, optimizing the HILT® pulse transfer to the tissue. Patented.
Hilterapia® is an effective therapeutic method, performed everyday in important surgeries and clinics, both private and public, in the world, as it is confirmed by the following attestations.

Dr. Kang Ho-Jung
Department of Orthopaedic Surgery, Yongdong Severance Hospital, Yonsei University College of Medicine, SEOUL - Korea

“We use Hilterapia in our everyday practice with great satisfaction for the therapeutic results on patients. Though traditional Nd:YAG lasers are not able to give high dose of energy in depth, because the heat accumulation induces burn to the patient, the Hilterapia, thanks to its specific pulse, is able to give a deep effective action without thermal damage to the skin. Another attractive merit of the Hilterapia is that patients do not have pain or side effects during the treatment and therefore the satisfaction index of patients is very high”.

Dr. Corzilius Hans Ulrich
ORTHOPÄDISCHE PRAXIS, NEUWIED - Germany
Fellow of the ASLMS (American Society of Laser and Medical Surgery).

“Hilterapia is one of the most important treatments in our laser center. It has been a real success because of its efficiency on pain treatment as well as on inflammation. It has also become an attraction to chronic pain patients suffering from chronic tendinitis or bursitis conditions. Even difficult pathologies such as carpal tunnel syndrome or trochanteric bursitis can be treated successfully. With 8-10 treatments in most of the cases the symptoms disappear completely. We have successfully treated high qualified athletes who are now able to compete on an international level”.

Gleiser Jacobo
Alleve Clinic, BOGOTA - Colombia

“We are proud to be the first adopters of this new technology in Bogota. A big number of patients treated with Hilterapia show that few sessions are enough to resolve in full safety a lot of different pathologies, like tendonitis, traumas, hematomas, overload syndromes, inflammatory processes, with remarkable results since the first treatment session”.

Ziad Elchami
Patient Pain Care Specialist, International Medical Center, JEDDAH - Kingdom of Saudi Arabia

“Our Center is pleased to have its own High Intensity Laser Therapy (Hilterapia) device, which is mainly used for treating patients with osteoarthritis and degenerative processes, impingement syndrome and distortion traumas. We noticed from our own experience that the unique characteristics of the Hilterapia offer considerable advantages. These characteristics gave the device a lot of acceptance among our patients, here in the Middle East, where sometimes people are not willing or cannot have interventional pain block procedures performed”.

INTERNATIONAL REFERENCES

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DISCOVER THE EFFICACY OF HILTERAPIA®:
WATCH HERE SOME SUCCESSFUL CASES


2006 pp.88-91


laser as support therapy in the treatment of tendo-desmopathies of athlete horses: a clinical and an experimental trial,


Nd:YAG laser therapy, TENS and NSDAIDs,


Cytoproliferative activity of the HILT: in vitro survey,


Percorso riabilitativo complesso nella sindrome della “spalla dolorosa” da rottura parziale e da tendinopatia calcifica della cuffia dei rotatori


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Nd:YAG laser treatment can favor ECM production and proper fibrinogen assembling, differentialization of connective tissue cells, formation of ordered endothelial monolayers indicates that pulsed Nd:YAG laser treatment can efficacously promote tissue repair processes... Dr. Monica Monici

“HILT confirms to be a good non-pharmacological instrument for rapid pain control in KD, with consequent improvement in patient’s quality of life. Important effects are achievable with few sessions of HILT treatment too...” Dr. Tamara Villani

“Hilterapia is an innovative therapy that can rapidly reduce pain symptomaticity and inflammatory processes in tendinous structure.”...

Andrea Santamato

COMMUNICATION SUPPORT

Thanks to experts and qualified trainers, an intense e-learning educational program has been developed and is available for professionals. On the line course helps learning in an interactive way of the theoretical-practical concepts of Hilterapia® and of the application modalities related to the different pathologies.

www.hilterapia.com