

# THE REPAIRING ENERGY OF PHOTONS





Since its creation, Swiss Bio Inov has displayed its competence in the domains of design and manufacture of all types of lasers and electromagnetic spectrum sources.

Swiss Bio Inov, Swiss designer of medical lasers, develops, designs and distributes medical devices for Photon treatment using Bio Photonic modulation, which, with its healing, anti-inflammatory and analgesic actions, helps the practitioner with numerous pathologies.

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Over the years, the company has reinvested a large part of its revenue into R&D and has oriented itself in the development of a device using the new medical applications of Athermotherapy®: "LLLT" (Low Level Light Therapy).

The ATP38® concept is the result of ten years of study and innovation.

Thanks to its founder's knowledge of the impact of Bio Photonic modulation on cells, innovation and research are at the heart of Swiss Bio Inov.

By partnering with physicians, researchers and scientists, Swiss Bio Inov introduces its 4th generation of the ATP38® and is becoming the benchmark in the medical field.

Swiss Bio Inov is ISO 13485 certified and the ATP38® device is marked CE 0459.

This technology and innovation is meant for practitioners, to make excellence in patient care affordable.

Today, the ATP38® device is distributed worldwide.

Given the technological possibilities, the device is used in various domains, such as:





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## THE REPAIRING ENERGY OF PHOTONS



- 8 wave lengths Biostimulation
- Cellular regeneration





- Painless
- Non-invasive



- Healing
- Anti-inflammatory
- Analgesic



# LLLT (LOW LEVEL LIGHT THERAPY TECHNOLOGY)

The device functions according to the LLLT (Low Level Light Therapy) principle and has 8 wavelengths. They are transmitted locally and captured by weakened cells. Penetrating in depth to the heart of the cells, the wavelengths stimulate them and accelerate their regeneration processes.

ATP38<sup>®</sup> is a tool that reduces and relieves pain, improves and accelerates healing, treats inflammation, relieves muscular tension and regenerates cells without side effects.



Photons were first used by NASA to accelerate the healing of astronauts' wounds, and since then many clinical trials have proved their efficacy and safety. Thanks to these stimulatory, anti-inflammatory, analgesic and curative properties, today they are applied in all areas of medicine.

The benefits of the sun's electromagnetic spectrum have been used for many centuries in the medical field.



#### **ATHERMOTHERAPY®**

Polychromatic collimated semiconductors (PCSC) emit polychromatic wavelengths, whose radiation optimises cellular metabolism and produces a stimulating effect on ATP (the main energy molecule of cells and the structural unit of DNA). At the dermal level, this leads to an increase in the synthesis of collagen and elastic fibres. This process activates the reparative metabolism of cells and improves the condition of all the layers of skin, muscles, tendons and bone.

The performance of this technology allows the penetration of the dermis and the stimulation of the cell's activity by creating bio-photonic modulation.



PCSCs do not emit heat. The panels emit a combination of 8 wavelengths, from 400 to 820 nm, on the defined area.

This exposes the cells simultaneously to different wavelengths, intensities and pulsations predefined according to the type of treatment prepared based on defined protocols.

Each wave length has its own specificity in terms of area and type of action.

ATP (adenosine triphosphate) is synthesised by a protein called Cytochrome C Oxidase. This protein is made up of Iron and Copper, which renders it hypersensitive to Photons. Once a Photon touches it, it gives the order to make ATP and the cell regenerates. The Cytochrome C Oxidase mitochondrial complex catalyses the transfer of electrons to molecular oxygen during oxidative phosphorylation.

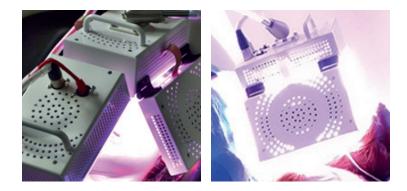
## ATP38® DEVICE

## An exclusive, painless and non-invasive treatment.

The coming together of new technologies associated with the best techniques based on the principle of biostimulation.

ATP38® focuses on power density; i.e. a large concentration of Photons to quickly deliver the total intended dose of energy. The practitioner can configure his or her own treatment protocols.

ATP38® allows large areas to be treated with more precision by scientifically guaranteeing the dose of energy on the treated surface.



This device will help you to:

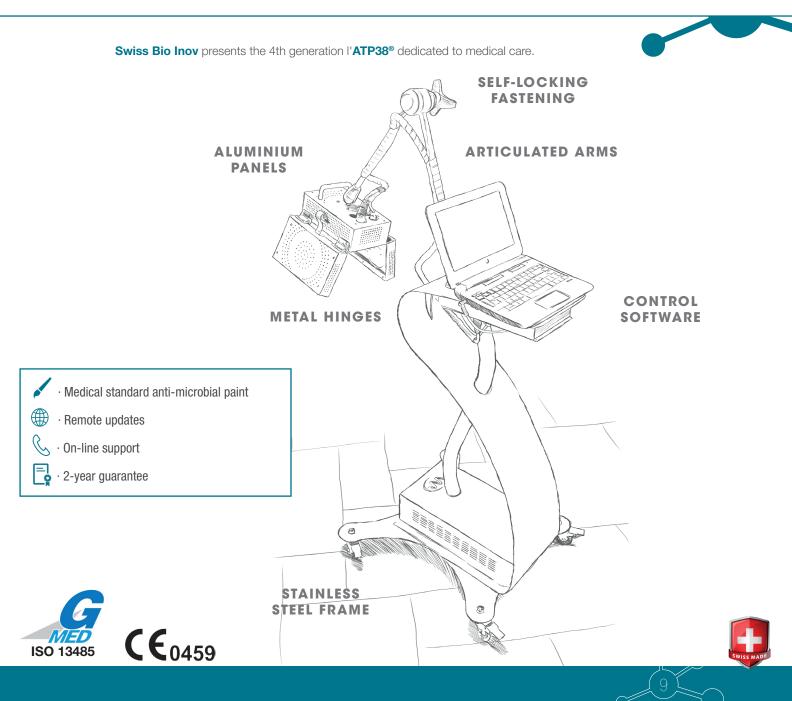
- Diversify the care offered,
- Save time on each type of care,
- Optimise your patient care.

The ATP38® has beneficial effects for your patients:

- Psychological effects (high technology, progress),
- Physiological effects (reduces pain, attenuates inflammation, accelerates healing),
- **Economic effects** (different treatments offered in a single session).

We also provide support and training for concept launch.

## THE ATP38® DEVICE



#### **THE ATP38® DEVICE**

## **OCTO-SPECTRAL TECHNOLOGY**

ATP38<sup>®</sup> uses the 8 wavelengths that correspond to Cytochrome C Oxidase and Porphyrin absorption peaks.

#### ACCURATE

A cooling system allows temperature maintenance to ensure the accuracy of the wavelength.

#### QUIET

Unique in the world: no fans or similar accessories in the panels, so no dust or bacteria can accumulate in the device or its immediate environment.

#### **ERGONOMIC**

Individual control of wavelengths, frequency and duty cycle. Programming of protocols, patient file (photos and videos), software compatible with Windows 7, 8 & 10. Automatic updates are performed via internet. Not dependent on operator.

#### **SYNTHON PROCESS**

Homogeneity of the impact point of the different wavelengths to ensure treatment quality.

#### POWER

Variable power allowing for treatments calculated in seconds. Saves time for the professional and the patient

#### ATHERMIC TREATMENT

Healing aid Anti-inflammatory Analgesic



## **ACTION PRINCIPLE**

**Photostimulation** (or phototherapy) is a non-aggressive non-thermal treatment based on the use of different wavelengths corresponding to a precise scope of action. The photons penetrate the body and are absorbed by the cells.

The radiation emitted by ATP38<sup>®</sup> is characterised by the purity of its 8 wavelengths, which are adjusted to the frequency of absorption peaks of our cellular mitochondria receptors. This correspondence, analogous to 8 open windows with different depths, optimises the dose of energy actually absorbed by the cell, amplifies cell stimulation and produces a significant stimulating effect on ATP (adenosine triphosphate).

ATP38® uses wavelengths based on a dosimetry that is calibrated according to a defined protocol and limited to a certain strength, so as to biostimulate, i.e. cellular activity is boosted, which allows the cell to regenerate and repair itself.



Ultraviolet - 400 Nm



Blue - 470 Nm



Green - 525 Nm



Amber - 590 Nm



Red - 620 Nm



Deep Red - 680 Nm



Deep Red - 760 Nm



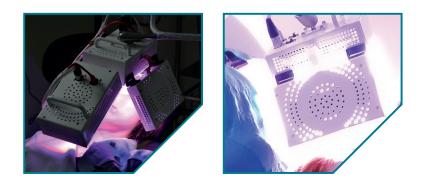
Infrared - 820 Nm



**TREATMENT PLAN** 



## CARE





After having conducted a diagnosis of your patient, a treatment protocol will be determined indicating the number of sessions necessary. Sessions may be shorter or longer depending on the treatment and the patient. ATP38® may be used to complement or as an alternative to conventional treatments and care.

ATP38<sup>®</sup> intervenes in the relief of pain, hair loss or other side effects associated with treatments or with the disease itself.

Clinical case on curative treatment on a grade III epithelitis after five weeks of radiotherapy:



Evolution after 4 sessions. clinical caseperformed by Pr René J. Bensadoun and Dr Gaston CIAIS.





# **EXAMPLES OF TREATMENTS**



Alopecia



Burns



Complicated wounds



Dermatitis





Healing



Inflammatory alopecia Inflammatory mucosal pathologies



Pain Post-inflammatory pigmentation



Sequelae of chemotherapy (mucositis) Sequelae of radiotherapy (mucositis) Sequelae of treatments (fractional laser)



Many studies are available on request:

**«Low-level laser therapy: a standard of supportive care for cancer therapy-induced oral mucositis in head and neck cancer patients?**» Jadaud E, Bensadoun RJ. Laser Ther. 2012 Dec 26;21(4):297-303. doi: 10.5978/islsm.12-RE-01.

«Bull Cancer» vol. 93, nº 2, february 2006. R.-J. Bensadoun

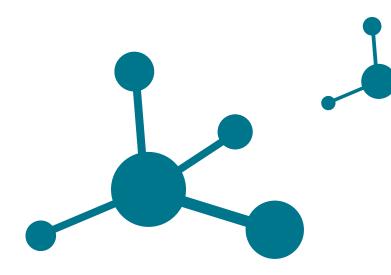
Multinational Association of Supportive Care in Cancer/International Society for Oral Oncology. R.-J. Bensadoun

**«Management of oral and gastrointestinal mucositis: ESMO Clinical Recommendations»** D. E. Peterson1, R.-J. Bensadoun2 & F. Roila3. On behalf of the ESMO Guidelines Working Group

**«Chemotherapy- and Radiotherapy- induced Mucositis in head and neck cancer patients: new trends in pathophysiology, prevention and treatment.»** Eur Arch Otorhinolaryngol 258 (9) : 481-487. BENSADOUN RJ, MAGNE N, MARCY PY, DEMARD F (2001).

Others studies are available, not exhaustive list.





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CITYCARE Clinic



Manufactured by: Swiss Bio Inov. Class IIa medical device – Technology for medical applications: analgesic, anti-inflammatory, healing. CE0459. Not reimbursable by social security. Please read the information leaflet and instructions carefully. Must be used by qualified and trained health professionals. The practitioner and the patient must wear protective goggles. Contraindicated for paediatric use. Noncontractual images. Do not discard in a public place.