



## active cell therapy







EXPERIENCE GOING BACK TO 1983 WITH MORE THAN 19,000 DEVICES ON THE MARKET CONFIRMS INDIBA S.A. AS A LEADING COMPANY AND INDIBA® ACTIV THERAPY AS A VERSATILE. SAFE AND PRECISE TOOL FOR THE COMPREHENSIVE TREATMENT OF PHYSIOTHERAPY PATIENTS.

The latest scientific research in the field of molecular biology has demonstrated significant "frequency dependent" benefits within our bespoke 448 kHz range.

The integration of two operational modes CAP and RES, makes it possible to combine sub-thermal (electric) and thermal effects, resulting in:

- Regulation of cellular metabolism processes <sup>12</sup>
- Tissue regeneration <sup>1,3</sup>
- Stem cell stimulation and differentiation <sup>1,3</sup>
- Blood flow activation <sup>4</sup>
- Tissue compacting effect <sup>5</sup>
- Analgesic and anti-inflammatory activity 6.7

Using a technique that is:

- Harmless
- Safe
- · Has proven efficacy with thousands of treatments carried out daily in many countries

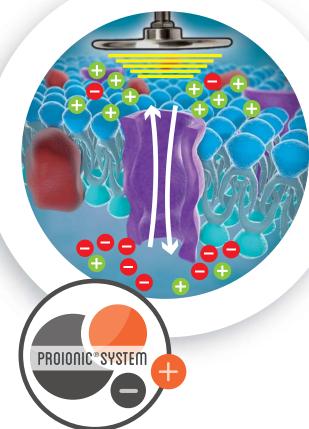
This underpins INDIBA® Activ Therapy as a broad spectrum **CELL THERAPY** intended for both acute and chronic stages of treatment.

## **INDICATIONS**

- Musculoskeletal injuries
- Joint pain
- Pelvic floor
- Physio-aesthetics

#### CONTRAINDICATIONS

- Pacemaker or other electronic implants
- Pregnant women
- Wounded skin
- Thrombophlebitis



#### IT IS NOT CONTRAINDICATED IN PATIENTS WITH METALLIC PROSTHESES <sup>6</sup>

- 1 Hernández-Bule, ML, Paíno CL, J, Trillo, MA, Úbeda, A. Electric stimulation at 448 kHz promotes proliferation of human mesenchymal stem cells. Cell Physiol Biochem 2014;34(5):1741-1755
- 2. Hernández-Bule ML, Roldan E, Matilla J, Trillo A, Úbeda A. Radiofrequency currents exerts cytotoxic effects in NB69 human neuroblastoma cells but not in peripheral blood mononuclear cells. Int J Oncol 2012; 41:1251-1259
- Hernández Bule ML, Paino Cl, Úbeda A. In vitro stimulation with 0.45 MHz electric currents promotes proliferation in human ADSC. 10th International Congress of the European Bioelectromagnetic Association. Rome, 21 24 February 2011.
   Kumaran B, Watson T. Capacitive Resistive Monopolar Radiofrequency (CRMRF) therapy at448 kHz: The effects on deep blood flow and elasticity of tissues.
- Physiotherapy UK 2015 Conference, 16-17 October 2015,Liverpol, United Kingdom. 5. Internal Report. Medical Department. Indiba SA. Sant Quirze del Vallés (Spain), July 2016
- Terranova A, Vermiglio G, Arena S et al. Tecarterapia nel trattamento post-chirurgico delle fracture di femore. Eur J Phys Rehabil Med. 2008 ; 44 (Suppl 1) (3):1-2.
   Stagi, P., M. Paoloni, F. Ioppolo, V. Palmerini and V. Santilli (2009). A randomised, double blind, placebo controlled clinical trial on Tecartherapy in the treatment of
- undogo [Stagi P, Paoloni M, loppolo F et al. Studio Clinico randomizzato in dioppio ciego tecarterapia versus placebo nell trattamento della lumbalgia. XXXVI Congresso Nazionale Simfer. 16-20 november 2009. Rome



## Greater precision, control and functionality

## **NEW FEATURES**



#### **Continuous modulation**

- Modulated frequency to improve the following effects of:
  - Liquid extravasation
  - Oedema reduction
  - Reabsorption of internal bleeding
  - Prevention of bruising
  - Erosions of internal origin
  - Fistula treatments
  - Perioperative applications

#### **Precision**

- Accuracy in increase and decrease of power adjustment
- Strictness in time control (real and accumulative)

#### Free mode treatments

- Three power ranges depending on the application for better precision and safety
- Control of time and delivery of energy, monitoring: tissue resistance, impedance and other parameters

#### **Pre-set protocols**

- More than 30 protocols
- Updates via WiFi

### **Customised protocols**

- Set up your own protocols
- Possibility of exchanging protocols within a virtual community

## **Monitoring software**

The most professional way of controlling all parameters of a session and monitoring your patients' progress:

- Graphics of tissue evaluation
- Record of sessions
- Printable / deliverable report
- Can be customised by centre
- · Clinical case data sharing

448 kHz Standard signal Continuous modulation

4 % 40 %

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100%

0

3 4

--- Q 0 11.07k.

 CAP
 6 min
 100

 RES
 2 min
 50

 RES
 5 min
 600

 CAP
 9 min
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9 40%





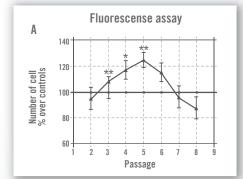


Safety and results are confirmed by scientific studies



MORE THAN 170 REFERENCES AND SCIENTIFIC ARTICLES, UNDERGRADUATE AND PhD THESES SUPPORT THE EFFECTIVENESS OF INDIBA® ACTIV THERAPY

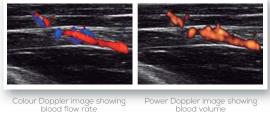
### Stimulates stem cells proliferation <sup>a</sup>



The Proionic<sup>®</sup> System increases human mesenchymal stem cell proliferation by more than 25% compared to the control, without affecting stem cell pluripotentiality.

The graph shows the influence of INDIBA® Activ Therapy on stem cell proliferation in comparison to the control of non-exposed cells normalised as 100.

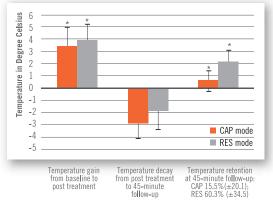
## Improves the rate and volume of blood flow ${}^{\scriptscriptstyle 9}$



Power Doppler image showing blood volume

Positive changes in tissue blood flow at a depth of at least two centimetres under the skin in response to cutaneous application of INDIBA® have been shown in a recent study carried out in healthy volunteers in the United Kingdom as part of a PhD thesis project.

#### The thermal effects persist once active treatment has ended 10



The thermal effects are essential for understanding the mechanism of action of INDIBA® and they last until after the treatment has ended. The thermal increase achieved after treatment is significantly greater with resistive treatment than with capacitive treatment.

Hernández Bule ML, Martínez Botas J, Trillo MA et al. Antiadipogenic effects of subthermal electric stimulation at 448 kHz on differentiating human mesenchymal stem cells. Mol Med Rep. 2016; DOI: 10.3892/mmr.2016.5032.

9. Kumaran B, Watson T. Capacitive Resistive Monopolar Radiofrequency (CRMRF) therapy at 448 kHz: The effects on deep Isomatian System and System and

Int J Hyperthermia 2015; DOI: 10.3109/02656736.2015.1092172

#### ALL THESE CLINICAL STUDIES WERE CONDUCTED WITH INDIBA® DEVICES

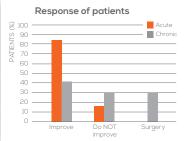


Elite athletes trust in INDIBA® Activ Therapy



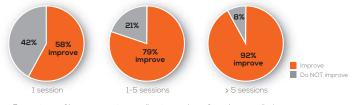
NATIONAL FEDERATIONS, OLYMPIC TEAMS, SPORTS CLUBS, DOCTORS, PHYSIOTHERAPISTS AND HEALTHCARE PROFESSIONALS TRUST OUR TECHNOLOGY.

# Highly effective in the treatment of acute sports injuries "



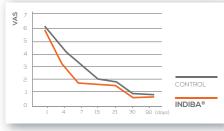
improvement with treatment.

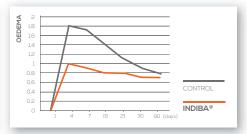
improve iraphic representation of patient classification ccording to the condition of their injury and the Its anti-inflammatory and analgesic efficacy is of great interest for treating acute sport injuries



Percentage of improvement according to number of sessions applied.

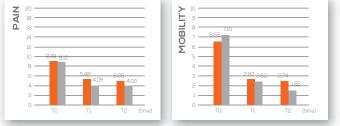
# Evolution of pain and oedema after post-operative treatment for femur fracture <sup>12</sup>





Reduction in pain on the fourth (p = 0.0045) and seventh days (p = 0.033) with INDIBA versus control. Evolution of oedema: Increase in muscle perimeter in both groups up to the fourth day (1 cm INDIBA vs 1.80 cm control) p=0.009. There was subsequently a statistically significant decrease in this value in both groups, although they reached a similar value by the thirtieth day. This reduction in volume occurred sooner in the INDIBA group.

### Improvement in WOMAC osteoarthritis index scale 13



Treating knee osteoarthritis improves control of patients' pain, limitation and quality of life parameters

Where T0 is before treatment, T1 at the end of treatment and T2 one month after the last session.

10 sessions 6 sessions

 Vall J, Sendrós S, Sust F et al. Radiofrecuencia Monopolar Capacitiva/Resistiva a 448 kHz (INDIBA® Activ Therapy), como Terapia de Rehabilitación en Medicina Deportiva. Análisis retrospectivo de su aplicación en un Centro de Alto Rendimiento Deportivo (CAR Sant Cugat, Barcelona) durante el periodo 2009-2011. Congreso de AEMB. Bilbao.España. 20-23, Junio 2012

 Terranova A, Vermiglio G, Arena S et al. Radiofrecuencia Monopolar Capacitiva-Resistiva a 448 kHz en el tratamiento postquirúrgico de las fracturas de fémur. Europa Medicophysica; Vol. 44 - Supl. 1 al n.º 3. Octubre 2008

 Ronconi G., Specchia A., Maggi et al. Evaluation of the effects of capacitive and resistive diathermy on knee osteoarthritis. 18th European Congress of Physical & Rehabilitation Medicine ,28th May - 1st June, 2012 Thessaloniki, Greece

#### ALL THESE CLINICAL STUDIES WERE CONDUCTED WITH INDIBA® DEVICES





# **Knowledge and training**



OUR GOALS ARE TO FACILITATE ACTIVE, PERMANENT LEARNING OF THE INDIBA® ACTIV THERAPY METHODOLOGY AND TO IMPROVE THE KNOWLEDGE, SKILLS AND ATTITUDES OF HEALTHCARE PROFESSIONALS WITHIN A CONTEXT OF SCIENTIFIC AND TECHNOLOGICAL ADVANCES.

The **INDIBA®** Activ Therapy training team consists of physiotherapists specialising in the treatment and follow-up of patients and athletes within a therapeutic and competition setting.

**Ongoing training.** Our commitment is to meet the needs of therapists so that they can improve their clinical practice and optimise the benefits of an **INDIBA® Activ Therapy** device by implementing exclusive protocols using our technology.

**Clinically applied specialised training.** Several tools are needed within a therapeutic setting to ensure comprehensive and effective patient care. The different specialities covered by the **INDIBA® Activ Therapy** training programme ensures that patients' needs can be met.

**Gradual training. INDIBA® Activ Therapy** training is designed so that healthcare professionals are gradually able to build up a sound knowledge, thus optimising their therapeutic results and patients safety with **INDIBA®** certification.

**Customised training.** The Medical and Training departments provide assistance and clinical support for all our clients to accompany and help them with any clinical questions that might arise, either virtually or in person.

**Up-to-date training.** We are in contact with the scientific community, leading research within the sector, innovating and adapting our methodology and our treatment strategy in line with the latest scientific data.

## **TECHNICAL SPECIFICATIONS**

	ACTIV 701	ACTIV 801	ACTIV CT8	ACTIV CT9
Output frequency	448 kHz	448 kHz	448kHz ±1kHz	448 kHz ±1 kHz
Max. output power in RES mode	65 W	100 W	100 W	200 W
Max. output power in CAP mode	250 VA	350 VA	350 VA	450 VA
Continuous modulation	-	-	20 kHz	20 kHz
Return plate warmer	-	-	Integrated in the column	
Pre-set protocols	-	-	YES	
Customised protocols	-	-	YES	
Monitoring software	-	-	Optional	YES





## INDIBA Activ Therapy

#### AT THE WORLD'S BEST PHYSIOTHERAPY AND MEDICAL CLINICS

INDIBA® estimates that over 120,000 patients are treated daily with our technology.

ANDORRA • AUSTRALIA • AUSTRIA • BELGIUM • BOSNIA • BRAZIL • CROATIA CYPRUS • CZECH REPUBLIC • FRANCE • GERMANY • GREECE • HONG KONG INDONESIA • ITALY • JAPAN • LEBANON • LUXEMBOURG • MACEDONIA • MALAYSIA MALTA • MONTENEGRO • NETHERLANDS • NEW ZEALAND • PERU • PHILIPPINES POLAND • PORTUGAL • RUSSIA • SERBIA • SINGAPORE • SLOVAKIA • SLOVENIA SPAIN • SWITZERLAND • TUNISIA • TURKEY • UK • UNITED ARAB EMIRATES

All **INDIBA®** brands

www.indibaactiv.com

