

45th ISMH World Congress Dax 2021 June 10-11

**Of waters and persons - balneology :
the new decade or Covid era?!**
What about the future in the covid era



ISMH

INTERNATIONAL SOCIETY
OF MEDICAL HYDROLOGY
& CLIMATOLOGY

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Message of the President of the congress

20 centuries ago, the troops of the famous roman general Cneius pompeius magnus, were already benefiting from the Dax matured muds. The roman soldiers returned home long ago, but patients with musculo-skeletal conditions continue to be successfully treated. The peloids made Dax one of the most antique, much-acclaimed and active spa resort in France.

20 years ago, an academic institute was created in Dax. It is dedicated to the training of professionals for balneotherapy care facilities and other hydrotherapy activities as well as to scientific research. The Dax institute will host the venue of the 45th ISMH Congress. We hope the delegates will share the best and most novel of the scientific knowledge and professional experiences.

2021 June 10 & 11, Dax will be proud to offer you the traditional and celebrated hospitality of the south-west of France. I am sure all of you will enjoy it.

Welcome in Dax.

Pr. Christian-F. Roques
Acad Nat Med

Message of the ISMH President

Dear Friends and Colleagues,

Welcome to the 45th World Congress of Medical Hydrology.

The International Society of Medical Hydrology (ISMH) is proud to have its 45th Congress in Dax under the Presidency of Prof. Christian-François Roques-Latrille.

France has a great tradition in Balneology. Not only historical but also in scientific, social and cultural aspects. Dax is a very good example of this with its rich history and its Institute of Thermalism where Education and Research get together allowing a very important development on Balneology knowledge. Thus, having an ISMH Congress in this thermal city constitutes a very special occasion. We are expecting participants from all over the world. ISMH is spreading its presence on more places allowing the contact of scientists from different countries, regions and cultures. With this we are giving people more opportunities to share their knowledge and experience with their colleagues from all over the world. I am convinced that the presentations within the proposed topics will reach a high level and will interest you. Besides the scientific contents this congress aims to increase the participation of all the ISMH members in its activities. To start this process we would like to invite you all to our General Assembly to share and discuss our ideas and future plans. We will talk there about statutes review, website renewal, financial situation, next congresses, international courses, cooperation with other balneology institutions. For this we do need the contribution of all of you.

In conclusion we may say that this 45th Congress has many important aspects to the future of Medical Hydrology. We trust on a good participation in the success of the organization. Wish you a fruitful meeting and a wonderful stay in Dax that can bring you excellent memories.

Sincerely yours,

Pr. Pedro Cantista

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SOLEMNITY (CONGRESS OPENING CEREMONY)

THE HISTORY OF BALNEOLOGY IN THE CITY OF DAX, FRANCE

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Key words : Dax ; history of balneology ; mud therapy ; medicine history

Dax is a medium-size city from Southwestern France located on the banks of the Adour river which is world famous for its balneology activity and especially mud-based therapy. The beginning of this practice traces back to some decades after the Roman conquest of the Aquitaine province. The legend of the legionnaire abandoning its old rheumatic dog that, thereafter, has totally healed after immersion in Adour muds, symbolizes this period. The successive names of this city have been associated with water (*aqua* in latin) : *Aquae Tarbellicae*, *Civitas Aquensium*, d'Acqs, and finally Dax. The emblematic monument at the heart of Dax is the hot fountain ('fontaine chaude'), water temperature 64°C, which was edified during the second century AD. Its waters were used for baths during many centuries after water cooling in large pools. As elsewhere, the balneology activity declined after the fall of Rome and was limited to care of soldiers and local population ('hole of the poors').

In the 18th century the rebirth of thermal activity is reported on historical writings and associated with the first scientific studies. At that time there were already a large panel of unorganized and dirty facilities and, furthermore, drinkable water was rare ! At the end of the 18th century thermal facilities were numerous about fifteen (nearly the same number as today), of various class level, and among the biggest in Europe. They included among others the 'Grands Thermes' (luxury, recently opened), and the ancient 'Baignots' (high range), 'Séris' or 'Saint-Pierre' (middle range) plus some resorts around the 'fontaine chaude' (low class).

The so-called 'golden age' occurred with the 19th century. The inauguration of the railway station in the presence of Eugénie, wife of Emperor Napoleon III and 'balneology fan', allowed to significantly increase the number of customers, especially those of upper social classes such as aristocrats and artists. In 1882 Dax hosted the first international congress on mud therapy. A series of local community leaders (especially the two mayors Milliès-Lacroix) contributed significantly in the development of thermal activity.

With the advent of the 20th century began the era of large scale balneotherapy symbolized by the creation of the summer feast including corridas taking place in the new bull ring (1913). Lot of modern buildings changed the face of the city, as for instance the

‘Splendid’ hotel, a art-déco palace (inaugurated in 1929 just before the Wall street krach) and, just beside, a thermal complex designed by Jean Nouvel. After the second World War and reimbursement of thermal stays by the French health system, balneology entered its social period. Water- and mud-based therapies were accredited for rheumatology and phlebology. In 1948 a geothermic project did not move to reality. From the end of the 1970’s a rehabilitation center, a balneotherapy facility for phlebology and a spa complex (inspired from Baden-Baden) were created in Saint-Paulles-Dax, a small locality adjoined to Dax.

Since 2000, Dax is home for the ‘Institut du Thermalisme’ which is part of the University of Bordeaux and dedicated to education and research in the field of balneology. Before the current pandemic, Dax and its suburbs represented the first French thermal site owing to the number of patients (over 50.000 per year, about 10 % of our national attendance). What will be the future of this activity in the post-covid era ?

SCIENTIFIC PROGRAMME

COVID 19

COVID 1

COVID19: SARS Cov2 TRANSMISSION ISSUES, CLINICAL PECULIARITIES OF LASTING SYMPTOMS. MED. GEN. INSP. Y. BUISSON (ACADÉMIE DE MÉDECINE, PARIS) (FRANCE) (LECTURE)

CLIMATOLOGY AND CORONAVIRUS. ARE THEY RELATED ? D. MONIZ COSTA, P. CANTISTA, R. BRITO, V. MARQUES (PORTUGAL)

BALNEOLOGICAL TREATMENTS FOR POST-COVID PATIENTS, FACT OR FICTION ? M-Z. KARAGÜLLE, M. KARAGÜLLE (TURKEY) (LECTURE)

COVID-19: SPA THERAPY FOR PATIENTS WITH LONG-LASTING SYMPTOMS. J-M. COUSIN, C-E. BOUVIER, X. COLIN, C. HÉRISSE, G. KANNY, M-C. TALLOT, N. VIDAL (FRANCE)

COVID 2

BIOETHERAPIES AND RISK OF SEVERE FORMS OF COVID. A. FRANÇON, A. MUELA GARCIA, B. EROL-FORESTIER, I. SANTOS, R. FORESTIER (FRANCE, PORTUGAL, SPAIN, TURKEY)

SPA TREATMENTS FOR STRESS RELATED SYMPTOMS OF COVID 19. O. DUBOIS (FRANCE)

MENTAL HEALTH AND COVID-19 – THE ROLE OF BALNEOTHERAPY. J. MARQUES DOS SANTOS, J-V. GONÇALVES, P. CRUZ, A. CAMPOLARGO, P. CANTISTA (PORTUGAL)

REHABILITATION CENTER AS A TEMPORARY COVID HOSPITAL - OUR EXPERIENCES. A. JOKIC, (SERBIA)

CHALLENGES BEFORE BALNEOLOGY IN BULGARIA IN A PERIOD OF COVID 19. T. ANGELOVA, J. NEDELCHEV (BULGARIA)

COVID 19 AND THERMAL CARE FACILITIES IN FRANCE: 2020 EXPERIENCE, 2021 PROJECTS. C-E. BOUVIER, L. DOROTHÉE, T. DUBOIS (FRANCE)

THE IMPACT OF THE COVID 19 PANDEMIC ON THE FUNCTIONING OF THERMAL TREATMENT IN POLAND - MEDICAL, ECONOMIC AND SOCIAL ASPECTS. J. CHOJNOWSKI (POLAND)

MUDS

MUDS 1

AN OVERVIEW OF THE USES OF THERMAL MUD IN FRENCH THERMALISM. R. AINOUCHE, J-P. FOUQUEY, W. TERRY (FRANCE)

BARIUM TRANSFER FROM THERMAL MUDS TOWARD HUMAN BODY: THE T2BT STUDY. K. DUBOURG, S. LABARTHE, F. BAUDUER (FRANCE)

LEAD, STRONTIUM, ALUMINUM, THORIUM AND MANGANESE TRANSFERS FROM THERAPEUTIC MUDS TOWARD HUMAN BODY. FATE OF THESE METALS IN NATURAL MINERAL WATERS AND MUDS. S. LABARTHE, K. DUBOURG, F. BAUDUER (FRANCE)

THERMAL FLOW OF PELOIDS. F. ARMIJO, M-A. FERNANDEZ-TORÁN, J-M. CARBAJO, F. MARAVER (SPAIN)

HEAT HYGIENIZATION OF THERAPEUTIC MUDS. T. DEGOS, K. DUBOURG, S. LABARTHE, F. BAUDUER (FRANCE)

THERMOPHYSICAL STUDY OF A PELOID WITH MINERAL WATER FROM THE LAIAS SPA. C-P. GÓMEZ, M. D. F. MARCOS, M. L. MOURELLE, M. M. MATO, L. CASAS, J. L. LEGIDO (SPAIN, FRANCE)

EVALUATING METHOD FOR THE THERAPEUTIC EFFECTS OF A TECHIRGHIOL SAPROPELIC MUD EXTRACT BY HYPERSPECTRAL IMAGING AND BIOLOGICAL INVESTIGATIONS (HISMUD METHOD). C. MUNTEANU, M-A. CALIN, M. HOTETEU, D. MUNTEANU, G. ONOSE (ROMANIA)

MUDS RECONDITIONING AFTER USE. F. ALBRECHT, G. ALBRECHT (FRANCE)

EVOLUTION OF THE HEALTH SAFETY FRAMEWORK FOR MUD AND UPDATE OF THE GOOD PRACTICES GUIDELINES FOR BALNEOTHERAPY CARE FACILITIES. W. TERRY, J-P. FOUQUEY, R. AINOUCHE, C-E. BOUVIER, C. ROBIN (FRANCE)

MUDS 2

MUD-BATH THERAPY – BIOLOGICAL MECHANISMS OF ACTION. A. FIORAVANTI, S. CHELESCHI, E. ORTEGA RINCÓN (ITALY)(LECTURE)

HISTOLOGIC AND IMUNOHISTOCHEMICAL STUDY ON ASPECT OF DERMIS AFTER BALNEOTHERAPY WITH SAPROPELIC MUD FROM TECHIRGHIOL LAKE, ROMANIA. O. SURDU, C.M MEHEDINTI, T.V SURDU, S DEMIRGIAN, M.A HINCU (ROMANIA)

HISTOLOGICAL AND BIOHISTOMETRICAL SIMPLE STUDY ON EPIDERMIS MELANIN DEPOSITS AFTER BALNEOTHERAPY WITH SAPROPELIC MUD FROM TECHIRGHIOL LAKE, ROMANIA. O. SURDU, C.M MEHEDINTI, T.V SURDU, S DEMIRGIAN, M.A HINCU (ROMANIA)

MUD THERAPY – THE ACTUAL MEDICAL BENEFIT AND DATA OF EVIDENCE. T. BENDER (HUNGARY) (LECTURE)

THE EFFECT OF MUD BATH AND MUD WRAP ON THE BLOOD PRESSURE. MONIKA KUMM, A. JÜRGENSON, V.-R. TUULIK (ESTONIA)

PELOIDOTHERAPY IN RHEUMATOID ARTHRITIS, A PILOT RANDOMIZED CLINICAL TRIAL. F. DEMIRCIOGLU GUÑERI, F-B. EROL FORESTIER, R. FORESTIER, S. SERINGEC, KARABULUT, F. KARAARSLAN, M-Z. KARAGÜLLE, M. KARAGÜLLE (TURKEY, FRANCE)

PELOOTHERAPY RESEARCH IN IBEROAMERICA. F. MARAVER (SPAIN)

BIOLOGY

BACTERICIDAL EFFECT OF HOT SPRING WATER FROM KAWAYU ONSEN. Y. OHTSUKA (JAPAN)

BENEFICIAL EFFECTS OF NATURAL MINERAL WATERS ON INTESTINAL INFLAMMATION AND THE MUCOSA-ASSOCIATED MICROBIOTA. N. BARNICH, M. RODRIGUES, P. SAUVANET, C. CHEVARIN, S. DENIS, O. LE GOFF, D. FAURE-IMBERT, T. HANH, C-F. ROQUES, B. CHASSAING, M. ALRIC (FRANCE)

GASES ABSORPTION THROUGH THE GASTROINTESTINAL TRACT. AN APPROXIMATION. J-M. CARBAJO, F. MARAVER (SPAIN)

SALTS ABSORPTION THROUGH THE GASTROINTESTINAL TRACT. AN APPROXIMATION. J-M. CARBAJO, F. MARAVER (SPAIN)

A COMPREHENSIVE ANALYSIS TO UNDERSTAND THE IMPORTANCE OF IN VITRO RESEARCH TO STUDY THE MECHANISM OF ACTION OF BALNEOTHERAPY: WHY, HOW, AND WHERE IT CAN BE USED ? S. CHELESCHI, S. TENTI (ITALY)

AN UPDATED ANALYSIS ABOUT THE MECHANISM OF ACTION OF BALNEOTHERAPY IN RHEUMATIC DISEASES: RESULTS FROM IN VITRO STUDIES. S. CHELESCHI, S. TENTI (ITALY)

ANTI-OXIDATIVE EFFECTS OF WEAKLYALKALINE REDUCED WATER IN RAW 264.7 MURINE MACROPHAGE CELL LINE. T-T. TRINH, S. SHARMA, A. FADRIQUELA, J. BAJGAI, MD. HABIBUR RAHMAN, Y-J. JEONG, S-S KHANG, W-R. KHANG, S-H. GOH, C. SU KIM, K-J. LEE (KOREA)

NATURAL MINERAL WATER : TECHNICAL ISSUES, QUALITY, THERAPEUTIC USE

NMW1

THERMO-MINERAL WATER RESOURCES IN ALGERIA. M. BOUGHLALI, N. MOSTEFAOUI, A. OULED DIAF (ALGERIA)

ALGERIAN SPA RESORTS – THE PRESENT SITUATION. M. BOUGHLALI, N. MOSTEFAOUI, A. OULED DIAF (ALGERIA)

POSSIBILITIES OF REVITALIZING THE FAMOUS NATURAL MINERAL WATER IN GALICIA (SPAIN) IN THE TIME OF A PANDEMIC. O. MARTÍNEZ MOURE, P. SAZ PEIRO (SPAIN)

NATURAL ENVIRONMENT IMPACT ON PHYSICAL AND MENTAL HEALTH OF WORKING-AGE POPULATION. L. VARZAITYTE, U. ZILINSKAITE, A. BALCIUS, K. KULAKAUSKAS, E. NARUTYTE, E. MILINAVICIENE (LITHUANIA)

ADVANTAGES OF A CLIMATOTHERAPY SITE WITH A FOREST ENVIRONMENT. H. KANAYAMA, Y. KUSAKA, H. INOUE, Y. AGISHI, G. IMMICH, A. SCHUH (GERMANY, JAPAN)

THERMAL TOURISM EXPERIENCES AND SELF-RATED QUALITY OF LIFE. E. ALÉN GONZÁLEZ, M. LOPES, T. DOMÍNGUEZ VILA, D. LIBERATO (SPAIN)

KITE: KIDS INTERVENTION THERAPY - AQUATIC ENVIRONMENT. V-L. ISRAEL, L-B. ARAUJO, T-R. MELO (BRAZIL)

RHEUMATOID ARTHRITIS AND WATER EXERCISES – SPA THERAPEUTIC PROTOCOL. I. SANTOS (PORTUGAL)

NMW2

RESILIENCE OF MINERAL WATER RESOURCES TO CHANGING CLIMATE. C-C. ROQUES, R. ABHERVE, A. GAUVAIN, G. CHRÉTIEN, P. STEER, J-R. DE DREUZY, E. CHATTON, L. LONGUEVERGNE, O. BOUR, M. KLEPIKOVA, T. LE BORGNE AND L. AQUILINA (FRANCE)(LECTURE)

THE DAX STAINLESS AND C-PVC PILOTS: 2 INNOVATIVE EXPERIMENTAL TOOLS TO MEET HEALTH SAFETY CHALLENGES IN THERMAL CARE FACILITIES. K. DUBOURG, J. LAGIERE, S. LABARTHE, C. OHAYON (FRANCE)

BACTERICIDAL EFFECTS OF A NEW CONCEPT OF HYPOCHLOROUS ACID WATER PRODUCED BY SUBSTANCE-MIXING METHOD AGAINST TYPHOIDAL SALMONELLA. MD. HABIBUR RAHMAN, J. ANTONIO, J. BAJGAI, A. FADRIQUELA, S. SHARMA, TRINH THI THUY, Y-J. JEONG, S-H. GOH, C-S. KIM AND K-J. LEE (KOREA)

BROMINE APPLIED TO DISINFECTION OF SWIMMING POOL WATER. A LITERATURE REVIEW. J. LAGIERE, N. HAMDI EL NAJJAR, K. DUBOURG, S. LABARTHE, C. OHAYON (FRANCE, LEBANON)

INFLUENCE OF POOL WATER RECIRCULATION REGIME ON STAPHYLOCOCCUS SPECIES CONCENTRATION AT SUBSURFACE : PRELIMINARY EXPERIMENTAL DATA. J. LAGIERE, S. LABARTHE, K. DUBOURG, F. BAUDUER (FRANCE)

HYDROTHERAPY ASSOCIATED INFECTIONS : THE DARK SIDE OF THE WATER. N. CARIA RAMALHÃO, R. ARAUJO, S. AFONSO, A-M. RIBEIRO, D. COSTA, P. CANTISTA (PORTUGAL)

SULFIDE WATERS

H₂S INHIBITS HOST PROTEASE TMPRSS2 IN HUMAN AIRWAY CELLS: IMPLI-

CATIONS FOR SARS-COV-2 INFECTION. G. POZZI, C. CARUBBI, M. VITALE (ITALY)
LECTURE)

MOLECULAR MAPPING OF HYDROGEN SULFIDE TARGETS IN NORMAL HUMAN KERATINOCYTES. O. GROSS-AMAT, M. GUILLEN, J-P. GIMENO, M. SALZET, N. LEBONVALLET, L. MISERY, C. AUXENFANS, S. NATAF (FRANCE)

ANTI-INFLAMMATORY EFFECTS OF THE NOVEL HYDROGEN SULFIDE RELEASING PERSULFIDE D-P* ON THE CHONDROGENIC CELL LINE ATDC5. B. KLOESCH, M TRUMMER, E GALARDON, BM MAYER, G STEINER (GERMANY)

BALNEOTHERAPY IN SULFUROUS WATER ATTENUATES JOINT PAIN AND PROTECTS AGAINST CARTILAGE DESTRUCTION. R. MEJIDE-FAILDE, C. VAAMONDE-GARCÍA, A. VELA-ANERO, T. HERMIDA-GÓMEZ, E. F. BURGUERA, P. FILGUEIRA-FERNANDEZ, N. GOYANES, F-J. BLANCO (SPAIN)

THOUGHTS: GENOMICS AND SULFUR WATER BATH THROUGH SKIN OF EMOTIONAL RHEUMATOID ARTHRITIS PATIENTS. I. SANTOS, F-B. FORESTIER, A. FRANÇON, A. MUELA GARCIA, R. FORESTIER (PORTUGAL, FRANCE)

SCIENTIFIC INVESTIGATION – METHODOLOGY

NEW EVALUATION METHODS IN BALNEOLOGY: MAIC AND BAYESIAN TRIALS. B. FALISSARD, UNIVERSITÉ PARIS-SACLAY, INSERM, ACADEMIE DE MÉDECINE, PARIS (FRANCE) (LECTURE)

PATIENT PREFERENCE IN BALNEOTHERAPY CLINICAL RESEARCH. V. PARAN, C. ROLLAND, C. EYCHENNE, A. COMTE, A. LEFAIVRE, L. ALBALADEJO, M. FRANCHINO, J-L. BOSSON (FRANCE)

METHODOLOGY AND PRELIMINARY RESULTS OF A STUDY OF THE ASSESSMENT OF THE ECONOMIC IMPACT OF BALNEOTHERAPY. C. BAECHER, C-E. BOUVIER (FRANCE).

SPA DOCTORS: ROLE, PLACE AND RELATIONS WITHIN “LES LANDES” TERRITORY (FRANCE). S. RAMON DUPUY (FRANCE)

CONSEQUENCES OF GIVING UP ON SPA CARES DUE TO THE PANDEMIC: THE PATIENTS WHO COULDN'T HAVE THEIR SPA TREATMENT IN 2020 EXPRESS A POORER HEALTH STATUTE. DATA OF AN INQUIRY IN 55,000 PERSONS. C-E. BOUVIER (FRANCE)

TÉLÉ-CONSULTATION AND TÉLÉ-INCLUSION; AN OPPORTUNITY FOR CLINICAL RESEARCH IN THERMAL SPA THERAPIES: E-CLINICAL RESEARCH. C. EYCHENNE, C. ROLLAND, A. COMTE, A. LEFAIVRE, L. ALBALADEJO, V. PARAN, JL BOSSON (FRANCE)

ASSESSMENT CRITERIA FOR CLINICAL TRIALS EVALUATING THE EFFECT OF SPA TREATMENTS: THE KNEE OSTEOARTHRITIS EXAMPLE (KOA). A.

FRANÇON, A MUELA GARCIA, B EROL-FORESTIER, I SANTOS, R FORESTIER (FRANCE, PORTUGAL, SPAIN, TURKEY)

CLINICAL STUDIES CARRIED OUT IN SPA MEDICINE ENVIRONMENT WITHIN THE FRAMEWORK OF LEGAL REGULATIONS IN FRANCE. THE ACADEMY OF MEDICINE "2016 CRITERIA - 2020 REVISION". C-F. ROQUES, B. FALISSARD, P. QUENEAU (FRANCE)

ACTUAL MEDICAL BENEFIT (AMB)

AMB 1: Cancer, dermatology

POST-CANCER SPA THERAPY: EVALUATION OF THE KNOWLEDGE AND EXPECTATIONS OF PHYSICIANS AND PATIENTS IN A CANCER CENTER. O. DUBROEUCQ, R. CHALTIEL, G KANNY (FRANCE)

«PACTHE» PROGRAMME FOR ACCOMPAGNYING BREAST CANCER PATIENTS IN SPAS AFTER COMPLETION OF CANCER TREATMENT: RESULTS OF A RANDOMIZED TRIAL ON 251 PATIENTS. Y-J. BIGNON (FRANCE)

EFFICACY AND TOLERABILITY OF BALNEOTHERAPY ON SKIN COMPLICATIONS AFTER BREAST CANCER SURGERY AND RADIOTHERAPY: RESULTS OF A RANDOMISED, CONTROLLED, OPEN-LABEL TRIAL. N. JOVENIN, P. DE BOISSIEU, P-E. CAILLEUX, N. DOHOLLOU, L. STEFANI, E. BOURBOULOUX, A. TOLEDANO, S. ABADIE- LACOURTOUSIE, F. SOFFRAY, V. TUAL, B. DRENO, F. FARSI, I. KRAKOWSKI (FRANCE)

EVALUATION OF THE BENEFIT OF THERMAL SPA TREATMENT IN PLAQUE PSORIASIS: THE PSOTHERMES MULTICENTRE, OPEN-LABEL, RANDOMIZED CLINICAL TRIAL. M. BEYLOT-BARRY, E.MAHÉ, C. ROLLAND, M. AMY DE LA BRETÈQUE, C. EYCHENNE, J. CHARLES, C. PAYEN, L. MACHET, C. VERMOREL, A. FOOTE, C. ROQUES, J.- L. BOSSON (FRANCE)

MOLECULAR MAPPING OF SODIUM SELENITE TARGETS IN NORMAL HUMAN KERATINOCYTES. O. GROSS-AMAT, M. GUILLEN, J-P. GIMENO, M. SALZET, N. LEBONVALLET, L. MISERY, C. AUXENFANS, S. NATAF (FRANCE)

AMB 2: Musculo-skeletal conditions

SPA THERAPY FOR THE TREATMENT OF FIBROMYALGIA: AN OPEN, RANDOMIZED MULTICENTER TRIAL. C. MAINDET, A. MAIRE, C. VERMOREL, C. CRACOWSKI, C. ROLLAND, R. FORESTIER, A. COMTE, C-F. ROQUES, E. SERRA, J-L. BOSSON (FRANCE).

BALNEOTHERAPY AND FIBROMYALGIA: THE EVIDENCE OF THE LAST 5 YEARS IN REVIEW. VASCO MARQUES, P CANTISTA, D COSTA, R BRITO, S AFONSO (PORTUGAL)

THERAPEUTIC PATIENT EDUCATION FOR FIBROMYALGIA DURING SPA

THERAPY: A RANDOMISED CONTROLLED TRIAL. V. JOURNOT, P DUCAMP, P SICHÈRE, H GAYUM, K DUBOURG, CF ROQUES (FRANCE)

EFFECTIVENESS OF REHABILITATION TREATMENTS IN THE ITALIAN THERMAL ENVIRONMENT ON PATIENTS SUFFERING FROM MUSCULOSKELETAL DISORDERS: A MULTICENTER STUDY. S. MASIERO, G. MAGRO, M. C. MACCARONE, L. TOGNOLO, P. MANICA, G. BARBETTA, D. MINUTO, S. MARCOLI, C. SIGURTÀ, S. BARONE, C. CASTALDELLI, C. ALBERTIN, P. POLI, C. FINAMONI, M. MEDIATI, G. RAFFAETÀ. (ITALY)

EFFECTS OF BALNEARY TREATMENTS FROM TECHIRGHIOL AREA ON FUNCTIONING OF PATIENTS WITH DEGENERATIVE LOW BACK PAIN. A-A. LUPU, M-G. ILIESCU, E-V. IONESCU, L-E. STANCIU, D-M. ILIESCU, L. PETCU, I. ION (ROMANIA)

CRENOBALNEOTHERAPY FOR LOW BACK PAIN, SYSTEMATIC REVIEW OF CLINICAL TRIALS. R. FORESTIER, A. FIORAVANTI, T. BENDER, I. SANTOS, F-B. EROL FORESTIER, A. MUELA GARCIA, A. FRANÇON (FRANCE)

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