

# AQUAFORUM

European Mineral Water Research, Innovation and Valorisation Forum'21

18<sup>th</sup>- 19<sup>th</sup> June 2021, Chaves, Portugal

## Countries involved

Portugal, Spain, France, Italy, Germany, Poland, Hungary, Iceland, Czech Republic, Slovenia, Serbia, Bulgaria, Netherlands, Turkey, Greece, Romania, Lithuania, Cyprus, Slovakia

## Conference Committee

**Orlando Rodrigues** – Instituto Politécnico de Bragança - IPB (Portugal)

**Fernando Queiroga** – AquaValor – Centro de Valorização e Transferência de Tecnologia da Água - Associação (Portugal)

**Nuno Vaz** – AquaValor – Centro de Valorização e Transferência de Tecnologia da Água - Associação (Portugal)

**Pedro Cantista** - International Society of Medical Hidrology and Climatology – ISMH (Portugal)

**Victor Leal** – Associação Termas de Portugal – ATP (Portugal)

## Summary

Despite the importance and relevance of mineral water there is still a lack of knowledge on its potential merge with existing health, wellness, geothermal and regional development activities. Hence, deepening existing scientific and technical knowledge on mineral water will allow the establishment of new applications and uses of the referred asset in different markets, thus leveraging the regional and national European economies.

By acknowledging the complexity associated with R&D activities related to mineral water and the arise of valid and usable results, one must perceive that the most prospect solution for this issue is the implementation of a European Network focused on leading mineral water research and innovation. This European Network should perform, in a collaborative and cooperative manner, activities that will improve the use of mineral water and the arise of sustainable solutions that not only boost citizens wellbeing, but also regional development.

## Aim of the Event

AQUAFORUM aim to implement and promote a European Mineral Water Research, Innovation and Valorisation Network focused on establishing mineral water as one of the most relevant assets in health, wellness, energetic sustainability, and regional development.

## Established Objectives

Considering the complexity associated with mineral water and the multidisciplinary perspective from which this natural resource can be address, a series of more focused and detailed objectives for the AQUAFORUM have been established and will serve as the basis for all the event panels, discussions, and activities:

- Share methodologies and deepen knowledge concerning the therapeutic use of mineral water;
- Develop knowledge and innovation on mineral water to revitalize the sector and the inherent regions;
- Discuss Mineral (Thermal) Water Sector Digital Transformation (Thermal Water 4.0)
- Promote the reflection regarding the impacts of thermalism in the European national health services;
- Foster the establishment of multidisciplinary synergies aimed at activating mineral water branding;
- Discuss the use of mineral water as a geothermal energy source and a decisive asset for regional sustainability;
- Implementation of the AQUANET project - European Mineral Water Research, Innovation and Valorisation Network;
- Promotion of thematic collaboration protocols between AQUANET members.

## Program Panels

June 18<sup>th</sup> (Friday) - Location: Vidago Palace Hotel

08:30 - Conference Check-In and Welcome Coffee

09:00 - Welcome and Opening Remarks

**Fernando Queiroga**, AquaValor - Centro de Valorização e Transferência de Tecnologia da Água - Associação (Portugal)

**Nuno Vaz**, AquaValor - Centro de Valorização e Transferência de Tecnologia da Água - Associação (Portugal)

**João Noronha**, Comunidade Intermunicipal do Alto Tâmega – CIMAT (Portugal)

**Orlando Rodrigues**, Instituto Politécnico de Bragança - IPB (Portugal)

**Ana Abrunhosa**, Government Representative – Ministra da Coesão Territorial / Minister for Territorial Cohesion, Portugal

09:30 - Panel 1 - Research & Innovation in Mineral Water - Scientific research applied to the industry

**Chair: Maria Lourdes Mourelle Mosqueira** (Universidade de Vigo, Spain)

### Invited Speakers

09:30 - **Alberto Machado** (Município de Vila Pouca de Aguiar, Portugal) - Presencial

09:45 - **“Mechanisms of action of balneotherapy: Role of hydrogen sulfide in osteoarthritis”** - **Rosa Meijide Faílde** (University of A Coruña, Spain) - Presencial

10:00 - **“URIAGE THERMAL WATER – The role of innovation to create a brand image”** - **Mónica Dinis** (Laboratoires Dermatologiques d'Uriage Portugal) - Presencial

10:15 - **“Thermal Spa healing after cancer treatment – StrongerU by Uriage”** - **Liliana Campos** (Laboratoires Dermatologiques d'Uriage, Portugal) - Presencial

10:30 - **“Blue Lagoon Iceland - Research and Development”** - **Ása Brynjólfssdóttir** (Blue Lagoon, Iceland) - Online

10:45 - Discussion

10:50 - **Closing remarks** - **Isabel Ferreira** (Government Representative – Secretária de Estado da Valorização do Interior / Secretary of State for the Development of Inland Improvement, Portugal)

## 11:00 - Panel 2 - Therapeutic Use of Mineral Water: research and evidence based practices

**Chair: Pedro Cantista** (*International Society for Medical Hydrology and Climatology, Portugal*)

### Invited Speakers

- 11:00 - “Recent contributions of the Research Group 911757- Medical hidrology of the Universidad Complutense de Madrid” - Francisco Maraver** (*Sociedad Española de Hidrología Médica – Universidad Complutense de Madrid, Spain*) - Online
- 11:15 - “Clinical Research involving Natural Mineral Water: opportunities and limitations” - Luís Taborda Barata** (*University of Beira Interior, Portugal*) - Presencial
- 11:30 - “The role of in vitro studies to understand the mechanism of action of Balneotherapy” - Antonella Fioravanti** (*International Society of Medical Hidrology and Climatology - ISMH, Italy*) - Online
- 11:45 - “Inhibition of TMPRSS-2 expression in human airway cells by hydrogen sulphide: implications for SARS-COV-2 infection” - Marco Vitale** (*Department of Medicine, University of Parma; Fondazione per la Ricerca Scientifica Termale - FoRST, Italy*) - Presencial
- 12:00 - “Methodological issues in clinical balneology: problems and opportunities” Christian-François Roques** (*Association Française pour la Recherche Thermale – AFRETh, France*) - Presencial
- 12:15 - Discussion**
- 12:25 - Closing remarks - João Sobrinho Teixeira** – *Government representative – Secretário de Estado da Ciência, Tecnologia e Ensino Superior / Secretary of State for Science, Technology and Higher Education, Portugal*

## 12:45 - Lunch

## 14:30 - Panel 3 – Digital Transformation of the Mineral Water Sector

**Chair: Manuel Baltar** (*European Historic Thermal Towns Association – EHTTA, Spain*)

### Invited Speakers

- 14:30 - “AI/ML to unburden people from robotic work: Case study for accounts payable” - Jorge Pereira** (*Joyn Group, Portugal*) - Presencial
- 14:45 - “Time To Be” - Filipa Maria Cardoso** (*Turismo de Portugal, Portugal*) - Online
- 15:00 - “Transforming Mineral Water Data into Knowledge at DGEG” - Rita Pascoal** (*Direção Geral de Energia e Geologia de Portugal -DGEG, Portugal*) - Presencial
- 15:15 - “Virtual Reality and the Mineral Water Industry” - Maximino Bessa** (*MASSIVE VR Laboratory - INESC TEC, Portugal*) - Presencial
- 15:30 - “Water as a tourism resource” - Susana Ribeiro** (*Turismo Porto e Norte, Portugal*) - Presencial
- 15:45 - Discussion**
- 15:55 - Closing remarks - Rita Marques** (*Government Representative – Secretária de Estado do Turismo / Secretary of State for Tourism, Portugal*)

## 16:15 - Panel 4 - Geothermal Energy for Sustainable Development

**Chair: José Martins de Carvalho** (*Instituto Superior de Engenharia do Porto, Portugal*)

### Invited Speakers

**16:15 - “The Origin of Geothermal Energy and its Sustainable Use” - Manuel Antunes da Silva** (*Consultant in Geology and Water Sommelier, Portugal*) - *Presencial*

**16:30 - “Sustainable use of geothermal resources in the Azores” - António Peixoto Franco** (*Eletricidade dos Açores - EDA, Açores, Portugal*) - *Presencial*

**16:45 - “Technical challenges and solutions for integrating low-temperature geothermal energy resources: lessons learned from France” - Miklos Antics** (*European Geothermal Energy Council – EGEC, France*) - *Presencial*

**17:00 - “Chaves Geothermal Energy” - Joaquim Esteves** (*Empresa Municipal de Gestão de Equipamentos do Município de Chaves, Portugal*) - *Presencial*

**17:15 - Sanjeev Kumar** (*European Geothermal Energy Council – EGEC, Belgium*) - *Online*

**17:30 - Discussion**

## 17:30 - Closing Session

**Manuel Heitor** - *Government Representative – Ministro da Ciência, Tecnologia e Ensino Superior / Minister of Science, Technology and Higher Education, Portugal*

## June 19<sup>th</sup> (Saturday) - Location: Solverde – Hotel Casino Chaves

### 09:00 - Opening and Welcome Coffee

### 09:15 - Roundtable Discussion - Integration of thermalism in the health service (education, legislation, clinical aspects, and patients' pathways)

**Chair: Pedro Cantista** (*Sociedade Portuguesa de Hidrologia Médica e Climatologia – Portugal / International Society of Medical Hydrology and Climatology – ISHM, Portugal*)

- **Francisco Maraver** (*Sociedad Española de Hidrologia Médica – Universidade Complutense de Madrid, Spain*)
- **Gisèle Kanny** (*Société Française de Médecine Thermale, France*)
- **Marco Vitale** (*Fondazione per la Ricerca Scientifica Termale - FoRST, Italy*)
- **Jacek Chojnowski** (*Polish Association of Balneology and Physical Medicine, Poland*)
- **Claude-Eugène Bouvier** (*Conseil National des Exploitants Thermaux - CNETH, France*)
- **Mássimo Boaron** (*World Federation of Hydrotherapy and Climatotherapy – FEMTEC, Italy*)
- **Müfit Zeki Karagülle** (*Istanbul Medical Faculty, Istanbul University, Turkey*)
- **Tamás Bender** (*Buda Hospital of the Hospitaller Order of Saint John of God, Hungary*)

**11:30 - Closing remarks: Frederico Teixeira** (*Comissão de Avaliação Técnica da Direção Geral de Saúde - área da Hidrologia Médica*)

### What is AQUANET?

AQUANET – European Mineral Water Research, Innovation and Valorisation Network is a collaborative partnership, established at European level, between some of the most relevant stakeholders of mineral water. This network is focused on triggering and conducting top level research, innovation, knowledge and technology transfer on mineral water and the directly inherent scopes.

### AQUANET Mission

AQUANET is devoted to implement cutting edge scientific research in order to be internationally recognized as a network of experts on mineral water that has a powerful and cooperative ability to foster innovation and the development of novel solutions and uses for the referred natural resource. By combining a multidisciplinary group of members - from Thermal SPAs and Associations, to Research & Innovation Centres, to Natural Mineral Water Companies, to Medical Hydrology Societies, to Geothermal Energy Companies and to Digital Transformation Consulting Agencies – the AQUANET is able to develop both theoretical and practical research activities and to establish thematic partnerships no apply for funding, to solve specific issues, and to idealize potential future usages of mineral water.

**Chair: Pedro Cantista** (*International Society of Medical Hydrology and Climatology, Portugal*)

- **Umberto Solimene/Massimo Boaron** (*FEMTEC – World Federation of Hydrotherapy and Climatotherapy, Italy*)
- **Antonella Fioravanti** (*Organisation Mondiale du Thermalisme, OMTh, Italy*)
- **Christian-François Roques** (*AFRETh - Association Française pour la Recherche Thermale, France*)
- **Thierry Dubois** (*European Spas Association, ESPA*)
- **Marco Vitale** (*FoRST – Fondazione per la Ricerca Termale, Italy*)
- **Jacek Chojnowski** (*Polish Association of Balneology and Physical Medicine, Poland*)
- **Claude-Eugène Bouvier** (*CNETh - Conseil National des Exploitants Thermaux, France*)
- **Francisco Maraver** (*Sociedad Española de Hidrología Médica – Universidad Complutense de Madrid, Spain*)
- **Gisèle Kanny** (*Société Française de Médecine Thermale, France*)
- **Gerardo Fidalgo** (*Eurocidade Chaves-Verin, Spain*)
- **Manuel Baltar** (*European Historic Thermal Towns Association – EHTTA, Spain*)
- **Ása Brynjólfssdóttir** (*Blue Lagoon, Iceland*)
- **Müfit Zeki Karagülle** (*Istanbul Medical Faculty, Istanbul University, Turkey*)
- **Tamás Bender** (*Buda Hospital of the Hospitaller Order of Saint John of God, Hungary*)
- **Frédéric Bauduer** (*Institut du Thermalisme de l'Université de Bordeaux, Campus Santé Dax, France*)
- **Universidade de Vigo** (*Spain*)
- **Fernando Queiroga** (*AquaValor - Centro de Valorização e Transferência de Tecnologia da Água, Portugal*)
- **Direção Geral de Energia e Geologia de Portugal - DGEG** (*Portugal*)
- **L'Óreal** (*Portugal*) – to be confirmed
- **Laboratoires Dermatologiques d'Uriage** (*Portugal*)
- **Victor Leal** (*Associação de Termas de Portugal, Portugal*)
- **Massimo Caputi** (*Federazione Italiana delle Industrie Termali e delle Acque Mineral e delle Benessere Termale – FEDERTERME, Italy*)
- **Marisol Espiño** (*Asociación de Balnearios de Galicia – BALNEGAL, Spain*)
- **Miguel Mirones Díez** (*Asociación Nacional de Balnearios – ANBAL, Spain*)
- **Olga Surdu** (*World Federation of Hydrotherapy and Climatotherapy – FEMTEC, Romania*)
- **Joaquim Luís Galego Lopes** (*Associação Portuguesa de Geólogos, Portugal*)

### 11:00 - Honourable mention to Professor Pedro Cantista

For the 100 years of ISMH, it will be awarded an Honourable mention by Secretary of State for the Development of Inland Improvement Isabel Ferreira to president of ISMH, Professor Pedro Cantista.

## 12:05 - Closing Session

**Manuel Heitor** - *Government Representative – Ministro da Ciência, Tecnologia e Ensino Superior / Minister of Science, Technology and Higher Education, Portugal*

## 12:30 – Lunch

## 14:00 - Recreational activities

- Termas de Chaves (<http://www.termasdechaves.com/>)
- Museu de Arte Contemporânea Nadir Afonso (<https://macna.chaves.pt/>)
- AquaValor – Centro de Valorização e Transferência de Tecnologia da Água – Associação (<https://aquavalor.pt/a-instituicao/>)