SCOPE AND AIMS:

The scope of the Workshop is to disclose and share information on the physical and chemical properties of geo-resources, such as, special clays, special sands, and thermal spring waters, traditionally used in pharmacy, balneotherapy and cosmetics.

At present there is a growing interest and preference in many areas of human health care for treatments involving natural means rather than for treatments involving only means of conventional medicine. It is the so-called naturotherapy, which involves distinct methodologies, such as: phytotherapy, hydrotherapy, crenotherapy, mudtherapy, pelotherapy, thermotherapy, etc. Whenever naturotherapy involves special clays, special sands, and other mineral resources, such as, sea water and thermal spring water, it could be named Geomedicine or Medical Geology.

The use of mud/clay (both pelitic geological materials) for internal (oral) or external (topical) therapeutic applications, presently deserves more and more attention and interest from people who suffer from some unfortunately very frequent rheumatic, physiatric, orthopaedic and skin diseases, which seriously affect their living quality. The preparation of clay/mud based peloids used in Spas, Thalasso, and Wellness Centres for the treatment of muscular-skeletal and dermatological diseases, requires maturation, a complex treatment that involves the change, under controlled conditions, of some relevant physical and chemical properties of either clay or mud.

OBJECTIVES:

At the completion of the Workshop the attendees will be able to:

- Identify and assess the relevant properties of clay/mud, such as chemical and mineralogical composition, ionic exchange and exchangeable ions, heat capacity and heat diffusiveness, of special clays deposited by thermal springs and special sands traditionally considered to possess curative or healing properties, good for the treatment of both muscular-skeletal and dermatological diseases.
- Identify and measure both radionuclides and global radioactivity in natural clays used in pharmacy, balneotherapy and dermocosmetics.
- Get relevant information about preparation, quality control and recycling procedures of peloids used in balneotherapy, dermopharmacy and dermocosmetics.

KEY SPEAKERS:

Prof. Dr. Celso Gomes, University of Aveiro, Portugal

Prof. Dr. Alberto Lopez-Galindo, Instituto Andaluz de Ciencias de la Tierra (CSIC - Univ. Granada), Spain

Prof. Dr. Saverio Fiori, National Research Council, Potenza, Italy

Prof. Dr. Fernando Rocha, University of Aveiro, Portugal

Prof. Dr. Eduardo Ferreira da Silva, University of Aveiro, Portugal

Dr. Isabel Prudêncio, Instituto Tecnológico Nuclear, Lisboa, Portugal

Dr. Martins de Carvalho, TARH - Terra, Ambiente e Recursos Hídricos, Portugal

POSTERS:

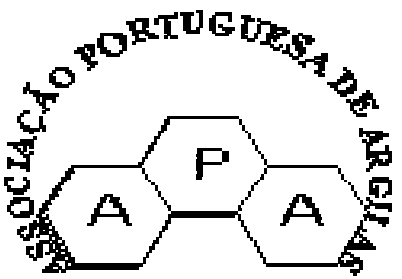
The exhibition of posters is welcome (one A4 abstract should be sent **before 30 April 2006**.

Maximum poster dimensions 120cm x 100cm.

WHO COULD ATTEND:

The Workshop is open to the following professionals: geologists, geochemists, ecologists, chemists, biologists, occupational and environmental scientists, physicians, public health specialists, toxicologists, epidemiologists, pathologists, nutritionists, aestheticians, and bio-statisticians interested on both positive and negative interactions of minerals *sensu latu* (clay minerals, special sands, metals and metalloids concentrated in soils and fixed by vegetables and fruits able to be integrated in diets, dissolved in drinking water or suspended in the air), and human health. Students of the scientific areas referred to are welcome too.

An important aim of the Workshop is to provide the opportunity to establish contacts and networks between professionals interested in public health and specialists in environmental sciences.



WORKSHOP

CLAYS AND HEALTH

BENEFITS AND RISKS

May 27, 2006

University of Aveiro, Portugal

SCIENTIFIC PROGRAM

9:00-9:30 Registration

9:30-9:45 Welcome and review
Prof. Dr. Celso Gomes, President of APA

9:45-10:30 Minerals and Human Health: Benefits and Risks
Prof. Dr. Celso Gomes, University of Aveiro, Portugal

10:30-10:45 Discussion

10:45-11:15 Coffee Break

11:15-12:15 Quality control (chemical, physical, and microbiological) of clay/mud before and after maturation
Prof. Dr. Fernando Rocha, University of Aveiro, Portugal

12:15-12:45 Quality control of mineral waters
Prof. Dr. Eduardo Silva, University of Aveiro, Portugal

12:45-13:00 Discussion

13:00-14:30 Lunch

14:30-15:15 Development and use of clays for dermopharmacy and dermocosmetics
Prof. Dr. Alberto Lopez-Galindo, Instituto Andaluz de Ciencias de la Tierra (CSIC - Univ. Granada), Spain

15:15-16:00 Thermal waters: Management and conservation
Dr. Martins de Carvalho, TARH - Terra, Ambiente e Recursos Hídricos, Portugal

16:00-16:15 Discussion

16:15-16:45 Coffee Break

16:45-17:15 Assessment of global radioactivity and identification and quantification of radionuclides in natural clays used in pharmacy, balneotherapy and dermocosmetics
Dr. Isabel Prudêncio, ITN, Lisboa, Portugal

17:15-17:45 Development of current research opportunities in Europe on the subject of the Workshop
Prof. Dr. Saverio Fiori, National Research Council, Potenza, Italy

17:45-18:00 Concluding Remarks
Prof. Dr. Celso Gomes, University of Aveiro, Portugal

18:15-19:00 APA General Assembly

REGISTRATION FORM

Please complete and return (before 30 April 2006) to:

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Departamento de Geociências
Universidade de Aveiro
3810-193 Aveiro
Portugal
lara@geo.ua.pt

Surname

First Name

Title/Position

Organization

Mailing Address

Postal Code **Country**

Telephone **Fax**

E-mail

Poster submission (yes or no):

Fees:

1. APA member	**25 Euros**
2. No APA member	**50 Euros**
3. Student	**25 Euros**

PAYMENT

Bank transfer before 30 April 2006
bank details:
Associação Portuguesa de Argilas,
account NIB: 0018 0000400453001 30
BANCO TOTTA, AVEIRO
SWIFT: BIC TOTAPTPL
IBAN: PT 0018 0000400453001 30