



Università degli Studi di Palermo  
Dipartimento Chimica e Fisica della Terra

Summer School on  
Medical Geochemistry  
*Effects on Health*

*of Geological Material Exposure.*  
**THE GEOCHEMICAL APPROACH**



Consiglio Nazionale delle Ricerche  
Istituto per l'Ambiente Marino Costiero  
UOS di Capo Granitola

**INVITED SPEAKERS**

Prof. Paolo Censi – Professor of Geochemistry - Dipartimento CFTA Università di Palermo - ITALY

Prof. Yigal Erel – Head of the Fredy and Nadine Herrmann Institute of Earth Sciences - The Hebrew University of Jerusalem - ISRAEL

Dr. Thomas Darrah – PhD, Researcher - Biomineral Research Laboratory - Environmental Earth and Ocean Sciences - University of Massachusetts - USA

Prof. Gaetano Dongarrà – Professor of Geochemistry - Dipartimento CFTA Università di Palermo - ITALY

Prof. Robyn Hannigan – Professor and Chair - Environmental Earth and Ocean Sciences - University of Massachusetts - USA.

Prof. Luigi Marini – Professor of Geochemistry DipTeRis - Università di Genova - ITALY

Prof. Aldo Morrone – Director of Istituto Nazionale per la promozione della salute delle popolazioni migranti e per il contrasto delle malattie della Povertà – Roma - ITALY

Prof. Pierpaolo Zuddas – Professor of Geochemistry - Département Sciences de la Terre - Université Claude Bernard Lyon 1 - FRANCE

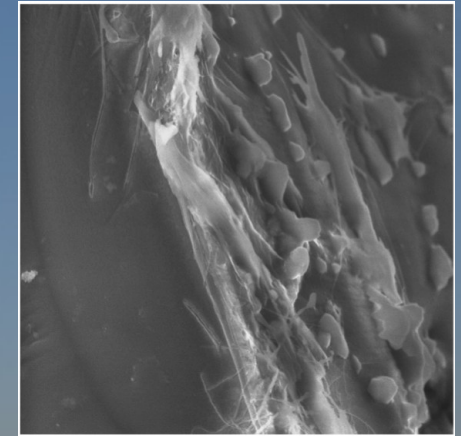
October 4 - 8, 2010 Capo Granitola (Trapani)



**SCOPE AND PURPOSES**

The scope of the summer school is to share the most recent information on the effects of exposure to materials of geological origin on the humans, including the impact of atmospheric particulates of volcanic and sedimentary origin, natural waters and volcanic gases, both according to experimental studies and to modelling approach. A case of study related to particular diseases in people living in less advanced worldwide areas will be also presented.

The summer school will explore also the state of art in terms of analytical capabilities to investigate trace element distributions and isotopic ratios in human tissues and fluids in order to suggest new geochemical proxies able to evaluate origin of materials that interact with human body.



**OBJECTIVES**

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

Know and gain information on the capability of human body fluids to interact with external materials of different geological origin and complex trace elements. Geological sources of potentially dangerous materials and their effects according to a selected case study.

Know and gain information about processes occurring in the human body in the so-called reactive interfaces, gastro-intestinal apparatus, lungs and skin and their description in terms of a geochemical point of view.



Regione Siciliana  
Assessorato delle Attività Produttive



The main effects of exposure to natural and anthropogenic material sources, the impact of trace elements after dissolution of delivered materials and their toxicity for human and environmental health.

Have an wide scenario of the state of art in terms of analytical procedures to investigate geochemical parameters suitable to represent useful tool for medical purpose.

### **ORGANIZATIVE DETAILS**

The Summer School is limited to only 15 participants. The Summer School is intended for PhD students and young scientists in Geochemistry, Medicine, Ecology, Biology with interest on Medical Geology issues, particular interest on the effect of toxicity of trace elements and geological materials on the human health. Further scope of the School is to provide the opportunity to induce stronger contacts and networks between researchers working in different areas of Geosciences, Environment and Human Health.

The participants will receive Certificates of Attendance

The inscription fees are 600 €.

Applicants can receive the application form sending a message to the Prof. Paolo Censi ([censi@unipa.it](mailto:censi@unipa.it)). The account number to perform bank transfers for inscription and/or pre-inscription is reported in the application form.

Applicants can perform a single 600 € payment before August 31 2010, or a pre-inscription payment (300 €) before August 31 2010 and the balance before and not later September 15 2010. In both cases a copy of bank transfers has to be sent with compiled application form, as e-mail attachment, to the Prof. Paolo Censi or to the secretary of summer school, Dr. Anna Lisa Alessi ([annalisa.alessi@iamc.cnr.it](mailto:annalisa.alessi@iamc.cnr.it)).

The accommodation fee pays for a college room, two coffee break, lunch meals, and transfer from Palermo to Capo Granitola day-return. Evening meals are not included. Accommodation allocations are prevented at student houses in single-bed rooms and two-beds rooms at “Casa del Goliardo” and “Residence Schiavuzzo” located in the old fashionable historical Centre of Palermo.



### **LINKS**

Web page:  
<http://www.unipa.it/~cfta/summer/Summer%20School.html>  
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