

KEY SPEAKERS

Prof. Arvanitakis C. Aristotle University of Thessaloniki, Fourth Department of Medicine, Hippocraton General Hospital, GR
Prof. Betcheva R. University of Chemical Technology and Metallurgy, BG
Prof. Bruschi F. Dipartimento di Patologia Sperimentale, B.M.I.E. Scuola Medica, Università di Pisa, IT
Dr. Carpentier B. AFSSA - Agence Française de Sécurité Sanitaire des Aliments, FR
Ass. Prof. Cencic A. Department of Microbiology, Biochemistry, Biotechnology, University of Maribor, SI
Prof. Coenye T. Laboratorium voor Farmaceutische Microbiologie, Universiteit Gent, BE
Prof. Comi G. Department of Food Science, University of Udine, IT
Dr. Costigliola V. European Medical Association "EMA", Brussels, BE
Prof. Creusy C. Anatomie et Cytologie Pathologiques, Institut Catholique de Lille/ Hôpital St. Vincent, FR
Prof. Crisanti A. Dipartimento di Medicina Sperimentale e Scienze Biochimiche, Sezione di Microbiologia, Università degli Studi di Perugia, IT
Prof. Dei-Cas E. Lille-2 University Faculty of Medicine & Lille Pasteur Institute, FR
Prof. Davies S. J. Uniformed Services University of the Health Sciences, Department of Microbiology and Immunology Bethesda, USA
Prof. Doskar J. Masaryk University, Faculty of Science, Department of Experimental Biology, CZ
Dr. Felsmann K. SIRS-Lab GmbH, DE
Prof. Gheber L. A. Department of Biotechnology Engineering, Ben-Gurion University of the Negev, IS
Prof. Harnett W. Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, Glasgow, UK
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Prof. Tozun N. Marmara University Hospital, TR
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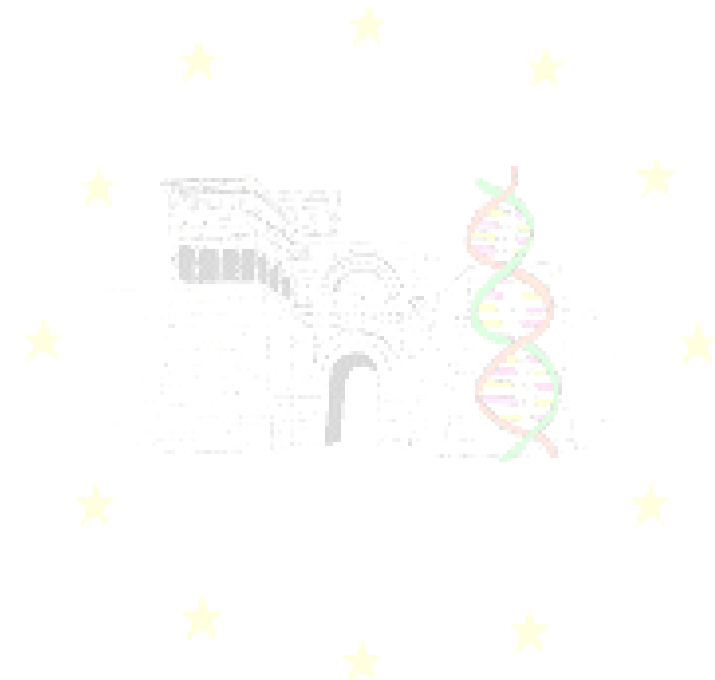
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DETECTION OF BACTERIA, VIRUSES, PARASITES AND FUNGI

Perugia, 18- 21 November 2008



*This publication
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and Security Programme**

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In fact it is very easy to contaminate foods and water thus causing a great emergency.

The terrorists know that it is possible to reveal some military attacks, but it is less easy to detect infective contamination. Radioactive contamination are easy to detect, chemicals change some characteristics like flavour or taste easily detectable.

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Basically, the workshop will be divided in 3 sections:

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- 2) viral infections with particular attention to the viral hepatitis,
- 3) fungi and parasites, with a specially attention paid to plasmodia.

The invited speakers, world-wide known experts in the respective fields, will present the most up-dated outcome of their ongoing efforts in different research centers.

Epidemiology, biology, pathogenesis, and diagnosis via biotechnological methods, in particular, as well as clinical aspects will be the covered aspects of each disease examined. A special emphasis will be given to techniques useful to a screen procedure applicable to a large scale the population.

1st day OPENING WORDS Mariapia Viola Magni

Goals of workshop: The use of biotechnology for rapid and accurate diagnostic tests

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09.00-11.00 Bioterrorism: a possible weapons for terrorist attack through food and water contamination by Vincenzo Costigliola

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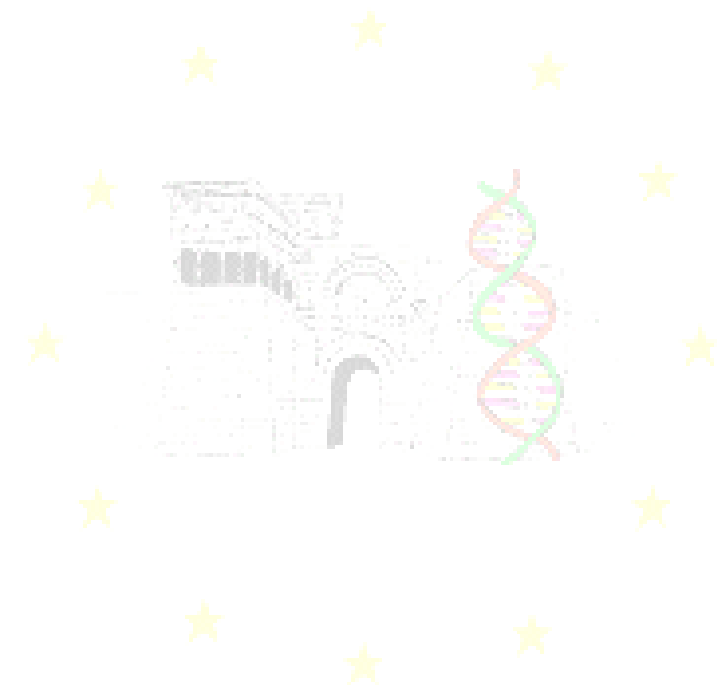
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+
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SCOPO DEL SEMINARIO

Lo scopo del seminario è di mostrare qual'è la situazione in termini di strumenti diagnostici ai fini della scoperta di infezioni batteriche, virali e parassito/funginee che possono avere una maggiore prevalenza e rilevanza tra i civili così come tra le persone coinvolte in azioni militari.

In fatti è molto semplice contaminare cibi e acqua causando una gravi emergenze.

I terroristi sanno che è possibile rilevare attacchi militari, ma è meno facile identificare contaminazioni infettive. Contaminazioni radioattive sono facili da scoprire, quelle chimiche cambiano qualche caratteristica come il sapore o se assaggiate facilmente individuabili.

Gli agenti infettivi sono più insidiosi perché apparentemente non cambiano alcuna caratteristica e non possono essere scoperti da strumenti fisici.

Il seminario sarà quindi principalmente dedicato all'individuazione di metodi applicabili su larga scala che possono rilevare facilmente la presenza di agenti infettivi. Un' enfasi particolare sarà data agli aspetti biotecnologici di questa ricerca (biologia molecolare) per un' analisi puntuale e tempestiva della progressione di queste malattie.

Il seminario si dividerà principalmente in tre sezioni:

- 1) infezioni batteriche più frequenti,
- 2) infezioni virali con particolare attenzione all'epatite virale,
- 3) funghi e parassiti, con un' attenzione particolare rivolta ai plasmodi.

Gli oratori, esperti mondiali nei loro rispettivi campi, presenteranno i risultati più aggiornati dei loro sforzi in corso nei differenti centri di ricerca.

Epidemiologia, biologia, patogenesi e diagnosi con metodi biotecnologici in particolare, così come aspetti clinici saranno cop di ogni malattia esaminata.

Particolare enfasi sarà data alle tecniche utili a procedure di indagine applicabili ad una larga scala di popolazione.

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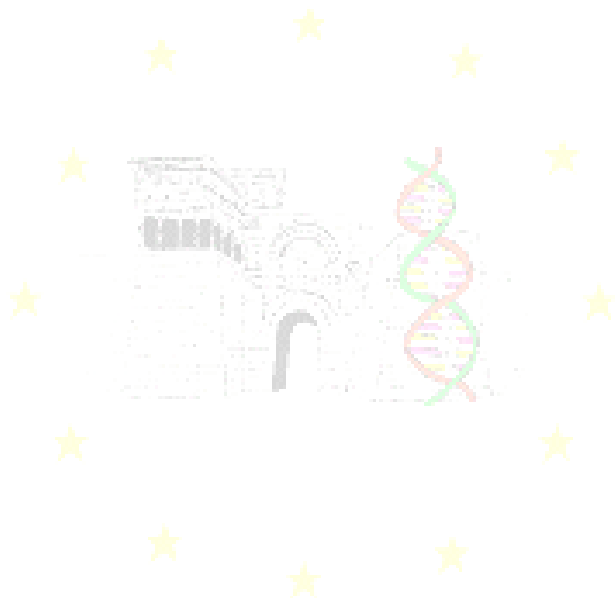
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SCOPO DEL SEMINARIO

Lo scopo del seminario è di mostrare qual'è la situazione in termini di strumenti diagnostici ai fini della scoperta di infezioni batteriche, virali e parassito/funginee che possono avere una maggiore prevalenza e rilevanza tra i civili così come tra le persone coinvolte in azioni militari.

In fatti è molto semplice contaminare cibi e acqua causando una gravi emergenze.

I terroristi sanno che è possibile rilevare attacchi militari, ma è meno facile identificare contaminazioni infettive. Contaminazioni radioattive sono facili da scoprire, quelle chimiche cambiano qualche caratteristica come il sapore o se assaggiate facilmente individuabili.

Gli agenti infettivi sono più insidiosi perché apparentemente non cambiano alcuna caratteristica e non possono essere scoperti da strumenti fisici.

Il seminario sarà quindi principalmente dedicato all'individuazione di metodi applicabili su larga scala che possono rilevare facilmente la presenza di agenti infettivi. Un'enfasi particolare sarà data agli aspetti biotecnologici di questa ricerca (biologia molecolare) per un'analisi puntuale e tempestiva della progressione di queste malattie.

Il seminario si dividerà principalmente in tre sezioni:

- 1) infezioni batteriche più frequenti,
- 2) infezioni virali con particolare attenzione all'epatite virale,
- 3) funghi e parassiti, con un'attenzione particolare rivolta ai plasmodi.

Gli oratori, esperti mondiali nei loro rispettivi campi, presenteranno i risultati più aggiornati dei loro sforzi in corso nei differenti centri di ricerca.

Epidemiologia, biologia, patogenesi e diagnosi con metodi biotecnologici in particolare, così come aspetti clinici saranno coperti da ogni malattia esaminata.

Particolare enfasi sarà data alle tecniche utili a procedure di indagine applicabili ad una larga scala di popolazione.

1st day OPENING WORDS Mariapia Viola Magni

Goals of workshop: The use of biotechnology for rapid and accurate diagnostic tests

BIOTERRORISM PREVENTION coordinated by Albert Marinculic

09.00-11.00 Bioterrorism: a possible weapons for terrorist attack through food and water contamination by Vincenzo Costigliola

11.30-12.30 SPM- based approaches towards integrated, portable, nano-biochips by Levi A. Gheber

14.00-16.00 Biosensor by Rossica Becheva

Production of biopharmaceuticals by mammalian cell fermentation by Dethard Muller

16.00-17.00 Discrimination between infectious and non-infectious disease states by transcriptomics by Karem Felsmann

2nd day BACTERIA DIAGNOSTIC TESTS coordinated by Constantine Arvanitakis

09.00-11.00 Novel approaches to microbial taxonomy using information from whole-genome sequencing projects by Tom Coenye

Quick tube-a multiplex PCR-based method for rapid microbiological testing by Stephan Rußwurm

Molecular methods to detect *Bacillus cereus* and *B. thuringiensis* in foods by Marisa Manzano

11.00-13.00 DNA diagnostic of micro organisms by Steven Lory and Peter Sebo

Taxonomy and identification of Bacteria by Tom Coyne

Evaluation of different methods to eliminate *Listeria monocytogenes* from dry cured ham by Giuseppe Comi

14.00-16.00 *Escherichia coli* tests by Brigitte Carpentier

Salmonella enteric infections by Constantine Arvanitakis

Molecular diagnostics of pathogenic Staphylococci by Jiri Doskar

16.00-17.00 Genetic diversity of *Enterococcus faecium* isolated from Brynda cheese by Jurai Krakovich

Microarray technology in infection diagnosis by Mojca Narat

3rd day VIRAL INFECTIONS coordinated by Robert Marks

09.00-11.00 Monoclonal antibodies against HIV infections by Gabriela Stigler

Epidemiology and diagnosis of hepatitis B in the Mediterranean Region by Nurdan Tozun

11.00-13.00 Avian flu by Mojca Narat

HEV (an emerging pathogen) interactions with the host intestinal tract by Avreljija Cencic

15.00-17.00 Fiber- optic immunosensors to viral pathogens by Robert Marks

4th day PARASITES AND FUNGI coordinated by Fabrizio Bruschi

09.00-11.00 Infective forms of parasites in food :human embedded in ecosystem by Eduardo Dei-Cas

Parasites – induced neoplasia by Colette Creusy

Development of attenuated blood stage malaria parasite model in *Plasmodium berghei* by Andrea Crisanti

11.00-13.00 Mechanism of innate immunological response in animals infected with parasitic nematode *T. Spiralis* by Wojtek Elzbieta Valaytis Rhode

Immunomodulation induced by helminths: towards a new strategies for treatment of immune-mediated diseases? by Fabrizio Bruschi
Inhibition of mast cell activation by the filarial nematode product ES-62 by William Harnett

15.00-17.00 Advances in blood fluke immunobiology and their implications for the diagnosis and therapy of schistosomiasis Stephen J. Davies
Improved separation of bacterial and fungal DNA by Pureprove by Marc Lehman
Rapid quantification and identification of airborne pathogens(including Aspergillus) using solid phase cytometry by Tom Coenye

17.00-18.00 Conclusion by Vincenzo Costigliola

ORATORI

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