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# Society for Microbial Ecology and Disease

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## SOMED NEWSLETTER

### Society for Microbial Ecology and Disease

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#### Summer 2013

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## Letter from the President

These are exciting times for those of us interested in the human microbiome and the role that microbial communities play in health and disease. Traditionally, it has been scientists trained as microbiologists that have been the major force behind new observations and research related to the human microbiome. This is no longer the case as we recognize the research and interests of a broad array of biologic disciplines ranging from immunology to systems biology. While some microbiologists may find this a disturbing invasion of their research world, it is in fact an acknowledgement of the important early work of microbiologists that has convinced the rest of the biologic science community that the interactions between humans and microorganisms is an essential part of our development and survival. Recent work by immunologists, working closely with microbiologists has shown that the intestinal microbiome is essential for the development of the

human immune response. Similarly, observations by those interested in reproductive biology have demonstrated the protective role of certain members of the vaginal microbiome against potentially pathogenic species and their ability to down regulate the inflammatory process. Studies of the oral microbiome have led to a better understanding of periodontal disease and has identified members of the bacterial community that serve as indicators for both healthy and diseased tissues. In the 1970's when *Clostridium difficile* was identified as the causative agent of antibiotic associated colitis, largely due to work in our laboratory in Boston, we also recognized that recurrent disease occurred in about 20% of patients. I remember well discussions about the best way to reconstitute the intestinal microbiome with other scientists and the universal revulsion when it was suggested that the best way to reconstitute the gastrointestinal (GI) microbiome

would be to take intestinal contents from a healthy GI microbiome and transplant this to the affected patients. Today, we find that after years of trials with various probiotics, antibiotic regimens and alternative therapies, that fecal transplantation is a highly effective method for reconstituting the intestinal microbiome in patients with recurrent *C. difficile* associated disease. Trials of this therapeutic approach for other inflammatory disorders are ongoing at a number of institutions. On a personal note, I have just completed a thirty day course of IV antibiotic therapy for a serious neurologic infection and as part of this therapy it was recommended that I use probiotics before, during and after antibiotic treatment in order to avoid the problems that often occur with long term broad spectrum antibiotic therapy. Clearly, probiotics have become part of mainstream clinical medicine, a role that they rightfully deserve.

We have made great strides in bringing microbial ecology to the forefront of scientific research. However, there is much to be done to advance our knowledge of the interactions between humans and microbes. We need to work closely with other scientists from different disciplines to maximize our understanding at the molecular level of the interactions between host and microbes. We need to listen carefully to each other so that we can leverage all of the information available to us as we continue our exploration of the human microbiome. In Kosice this September we have an opportunity to extend this dialogue among the many scientific disciplines that will be represented at this meeting and to continue these conversations when we meet in Chicago in June of 2014 at a joint meeting of the ASA and SOMED. I encourage all of you to enthusiastically embrace these meetings and to participate in this exciting dialogue.

Andy Onderdonk,

President

Dear Colleagues and Friends,

the letter from our President has outlined the general characteristics of our Society, updated the main issues on the relationship between microbial communities and host, and presented the challenges that lie ahead.

SOMED 36th International Congress will be held in September, in spite of the complicated financial world and the reductions in funding for research. On behalf of the SOMED Council and Organizing Committee I warmly invite you to join in Kosiče on 23<sup>th</sup> to 26<sup>th</sup> September 2013. This international meeting will review and update recent progress in key areas of post-genomics research in biology and medicine, as well as future developments in basic research, clinical studies, and industrial applications. It is our hope that the meeting offers the opportunity to develop our knowledge of the complexity of microbial ecology and disease and the possibility of microbiota

modulation. It provides a good opportunity for each participant to exchange information, to dialogue and to connect directly with other people by a multidisciplinary approach. Not only do you benefit from scientific exchanges during the formal activities, but also networking with colleagues with a mixture of backgrounds encourages new research ideas and innovative solutions.

I look forward to the wide attendance and fruitful results. I hope to see many delegates in Kosiče !

Kind regards,

Elisa Bertazzoni,

President - Elect

Verona, 17 July 2013

## Upcoming SOMED meeting 2013:

**The 36<sup>th</sup> International Congress of the Society for Microbial Ecology and Diseases – SOMED 2013 CONGRESS** - will be held between 24th-26th September 2013 in Kosice (Slovakia), European Capital of Culture 2013.

**Focus areas are current advances in clinical microbiology, dietary modulation of the GIT ecosystem, the effect of antibiotics on microbial ecology, host microbe interactions and the role of biofilms in health and disease.**

More information with the hyperlink <http://www.somed2013.org/>

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## The program of the 36th International Congress of the Society for Microbial Ecology and Disease SOMED CONGRESS, the 24<sup>th</sup> – 26<sup>th</sup> September 2013:

### Day 1 24.9.2013

10:00 10:40 Opening speech

#### SESSION 1

10:45 11:15 *Bomba, A.*

The Role of Gut Microflora in Pathogenesis of Chronic Disease and Possibilities of its Modulation in their Prevention

#### SESSION 2

14:00 14:30 *Haller, D.*

Dietary Factors in the Regulation of Chronic Intestinal Inflammation

14:30 15:00 *Shenderov, A.*

#### SESSION 3

15:45 16:15 *Mikelsaar, M.*

Possibility to apply *Lactobacillus* sp. strains for health in the whole food chain

16:15 16:45 *Štšepetova, J.*

11:15 11:45 *Tlaskalova, H.*

The role of microbiota in immunity development and chronic diseases: gnotobiology as a tool

11:45 12:00 *Claus, S.*

Nutrimetabonomics to link gut microbial modulations to metabolic health

12:00 12:15 discussion

Nutritional and gut microbiota programming of health and diseases

15:00 15:15 presentation

15:15 15:30 discussion

15:30 15:45 coffee break

Health effects by application of probiotic bacteria in different matrices

16:45 17:15 *Lazar, V.*

Assessment of in vivo immunomodulatory effect of non-viable components of probiotic

## Day 2 25.9.2013

### SESSION 4

10:00 10:30 *Venema, K.*  
Different energy extraction in the form of SCFA from fibers by lean and obese microbiota – implications for obesity?  
10:30 10:45 *Roderick, I.M.*

### SESSION 5

11:45 12:15 *Donelli, G.*  
Activity of probiotics on biofilm-growing pathogens of the oral cavity  
12:15 12:30 *Koopman, J.E.*  
Effects of arginine on microbial ecological shifts in oral microcosms

### SESSION 6

14:45 15:15 *Boyko, N.*  
Novel composite antimicrobials in medicine and agri-food chain.  
15:15 15:45 *Bezirtzoglou, E.*  
Occurrence and antibiotic susceptibility profile of *Streptococcus* spp. isolated from ewe's milk  
15:45 16:15 *Bezirtzoglou, E.*  
Implementation of tigecycline and other antibiotics against clinical and environmental isolates  
16:15 16:30 *Aleshkin, V.*

## Day 3 26.9.2013

### SESSION 7

9:00 9:30 *Madarasova Geckova, A.*  
Health of Roma living in Roma settlements  
9:30 10:00 *Rajčničová, I.*  
10:00 10:15 *Kimáková, K.*

### SESSION 8

10:45 11:00 *Le Roy, C.*  
Infection impact of two *Brachyspira pilosicoli* strains on chicken faeces metabolic profile  
11:00 11:15 *Noureddine, A.*  
Microbiological quality of honey Algerian  
11:15 11:30 *Štyriak, I.*  
Binding of extracellular matrix molecules by probiotic bacteria  
11:30 11:45 *Brestenský, M.*

enterococcus faecium culture stimulated with heat-inactivated cultures of *Escherichia coli* and *Bacillus cereus*

Conserved molecular mechanisms used to degrade heteroxylans in gut Bacteroidetes  
10:45 11:00 presentation  
11:00 11:15 presentation  
11:15 11:30 discussion

12:30 13:00 *Jarčuška, P.*  
13:00 13:15 *Reet, M.*  
Microbial ecology of male genital tract  
13:15 13:30 *Reet, M.*  
Genital tract microbiome in infertile couples  
13:30 13:45 discussion

Phage-mediated bioprocessing in decontamination of dairy products  
16:30 16:45 *Desbois, A.*  
Membrane composition changes of *Staphylococcus aureus* in response to a membrane perturbing antimicrobial peptide  
16:45 17:00 discussion  
17:00 18:00 networking bar  
18:00 19:00 City tour - Jewels of Kosice  
19:30 23:00 Conference cocktail

Comparative study of life style within students of Technical University in Košice and Faculty of Medicine at University of P. J. Šafárik in Košice  
10:15 10:30 presentation  
10:00 10:15 discussion  
10:15 10:45 coffee break

The effect of herbal feed additive Digestarom® supplemented to the diets for lactating sows on chemical and microbial composition of faeces  
11:45 12:00 *Nitrayová, S.*  
The pig as a valuable model for monitoring digestion and ecosystem of digestive tract  
12:00 12:15 *Videnska, P.*  
Development of gut microbiota of egg layers and changes induced by antibiotic therapy  
12:15 12:30 discussion  
12:30 13:00 Closing speech



## SOMED MEMBERSHIP 2013 APPLICATION FORM

**First name:**

**Surname:**

**Dept/Laboratory/Center:**

**Institution/Company: Street/P.O.Box:**

**Postal code:**

**City:**

**State:**

**Country:**

**Phone:**

**Fax:**

**E-mail:**

**I authorize the inclusion of my data in the SOMED Membership Directory as above detailed.**

Date

Signature

**Regular membership: EUR 40  
(or USD 55)**

**Corporate membership: EUR 400  
(or USD 550)**

**Student membership: EUR 20  
(or USD 25) (Please add student status  
certification)**

**Supporting membership: EUR 1000  
(or USD 1350)**

Please send your payment to the **SOMED Treasurer, Professor Eugenia Bezirtzoglou**, by:

Bank transfer to: **EUGENIA BEZIRTZOGLOU  
PIRAEUS BANK, Athens, Greece  
IBAN: GR04 0172 3510 0053 5103 0344 567 - BIC:  
PIRBGAA**

By Cheque to: **EUGENIA BEZIRTZOGLOU**

Please send the cheque by registered mail to:

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