Third World Congress on

Targeting Microbiota

Workshop on Exploration & Sequencing of Human Microbiota: The Perfect Signature

October 21-22-23, 2015
Institut Pasteur
Paris, France

Microbiota 2015 - 3 days Program
Dear Colleagues,

It is a pleasure to welcome you for the 3rd World Congress on Targeting Microbiota which will be held at Institut Pasteur, Paris, France on October 21-23, 2015.

During Pasteur Congress, many hot topics will be discussed:

- The Role of Microbiota in Health and Diseases: The Mechanistic Aspects
- Recent Advances on Microbiota Clinical Researches & Innovations in 2015
- Microbiota & Biomarkers: From Predictive to Personalized Medicine
- New Challenges to Prevent and Treat Metabolic Diseases, Cancer, Liver, Kidney, Lung and Inflammation-Related Diseases Impact of Environment, Food Conservators & Antibiotics on the quality and biodiversity of microbiota
- Can we modulate the diversity and quality of microbiota?
- Skin Microbiota: Recent advances on its characterization and manipulation in diseased conditions
- Fecal Microbiota Transplantation: Practical Issues & Regulation

**Workshop: Exploration & Sequencing of Human Microbiota: The perfect signature**

All you need to know about the recent methods, devices and platforms will be presented during this workshop, organized on October 21.

To conclude this congress, a general discussion will be held between speakers, scientists and industry sector about Microbiota and medicine of tomorrow. Among questions which will be discussed:

- Can one strain fit with all populations?
- To date, the most relevant challenge: can we modulate and manipulate the human gut microbiota?
- How diet, food, antibiotics, hormones, prebiotics and faecal microbiota can affect resident microbiota?
- How to avoid speculations and marketing on microbiota not supported by actual data?

We look forward welcoming you during Targeting Microbiota congress.

Dr Yuri Ikeda – Dr Marvin Edeas
Chairmen of the International Society of Microbiota
Workshop on Exploration & Sequencing of Human Microbiota: The Perfect Signature

October 21, 2015 – Institut Pasteur - Paris

The scientific committee of the International Society of Microbiota (ISM) dedicates a workshop on *Exploration & Sequencing of Human Microbiota: The Perfect Signature*.

All you need to know about microbiome and microbiota, studies, analysis, devices, recent methods and platforms will be presented during the workshop organized on **October 21**, at Institut Pasteur.

One of the critical questions which will be discussed is **how to interpret these analyses?**

The scientific committee of ISM invites the academics and the industrials to present their innovations. Without the innovations coming from the industrial side, we cannot translate the fundamental researches undertaken by clinicians and academics.

During Pasteur workshop, a special timing will be allocated to industrials to present the methods and devices to analyze and sequence the microbiota. Among the industrials who will participate to this session: *Libragen, Genoscreen, Lifesequencing, DNAVision, Vaiomer...*

Among the strategic questions which will be discussed:

- All steps you need to know to study microbiota: from faecal extraction to bioinformatics
- What are the recent and recent methods to sequence and analyze human microbiota?
- How to interpret the analyses? The strategic role of bioinformatics
- How to standardize protocols for exploring human microbiota? Focus on gut & skin microbiota
- Can we identify a specific signature of each person: towards a new era in personalized medicine?
- Can we talk about a revolution in medicine?

At the end of the workshop, the scientific committee will discuss the following questions:

- Can we manipulate skin microbiota?
- Can we talk about diversity and quality of skin microbiota?
- Microbiota or Metabolites: the subtle balance
Day 1: October 21, 2015

Workshop on Exploration & Sequencing of Human Microbiota: The Perfect Signature

8h15 Registration & Welcoming for Workshop

9h25 Opening Ceremony by chairman of International Society of Microbiota

Microbiota/Microbiome: Steps & Methods

9h30 Why should we care about primers and platform in microbiota analysis?
Francisco Codoñer, Lfesequencing, Spain

Mr Codoñer will highlight the following points:

a) Sample taken and conservation. Some considerations have to be taken in order to avoid the increase of aerobic bacterial and decrease of anaerobic ones that could affect to the bacterial detection and count and to the conclusions.

b) 16s rRNA region of study. Depending on the region we are going to detect different profiles, optimal V3-V5.

c) Set of primers used. This is another key point, since different set of primers will pick different groups of bacteria. We will provide a comparison between two sets of primers mostly used.

d) Massive sequencing platform. 454 has been describe as gold standard in this kind of studies, specially to reach a good species taxonomical identification, we will show how MiSeq can be used as a real alternative to the 454.

e) Databases. This is another key point, not only for the analysis, but for the primer design and improvement, there is no complete database that can make the thing easy to analyse and interpret. He will highlight that through the microbiome (mostly coming from faeces), they will be able to disentangle the alterations or illnesses that a patient is suffering and maybe change to normal conditions with the introduction of an antibiotic, prebiotic or probiotic.

10h15 Evolution and challenges of NGS technologies for microbiota analysis and their validation for diagnostic
Sébastien Massart, DNA Vision, Belgium

NGS technologies have revolutionized the landscape of microbiota studies. Through a critical overview, the talk will review the pros and cons of the 3 main protocols to study microbiota by NGS. The challenges and opportunities of these developments will be underlined as well as the road toward their use in diagnostics.

11h00 Coffee Break & Exhibition Session

11h30 Screening method to study host microbiota interactions in human intestine
Hervé Blottière, MetaGenoPolis, France

Dr Blottière proposes to use a functional metagenomic approach in order to model the microbiota’s interaction with the host by combining the heterologous expression with intestinal reporter cell lines. He presents a methodology allowing a high throughput screening combining two biological systems. Therefore ideal conditions for homogeneity, sensitivity and reproducibility of both metagenomic clones as well as reporter cell lines have been identified and validated. We believe that this innovative method will allow the identification of new bioactive microbial molecules and, subsequently, will promote understanding of host-microbiota interactions.
**International Society of Microbiota**

12h30  **Short Oral Presentations upon Abstracts Submission**  *(you have until September 21 to submit your abstract)*

13h00  **Lunch Break & Exhibition Session**

**Clinical & Industrial Innovations**

An exhibition space will be dedicated to industrials. Among exhibitors: Libragen, Genoscreen, MoBio, Valomer

14h30  **Practical aspects of microbiota and kidney diseases: how to evaluate the impact of microbiota variations on hemodialysis patients?**  
Mokthar Chawki, Clinique du Parisis, France

Dr Chawki is studying the impact of probiotics on hemodialysis patients. He will present the clinical protocol and discuss how to interpret the variability of microbiota.

15h00  **Industrial Presentations**

16S sequencing analysis: comparison between RSII PacBio versus Illumina MiSeq  
David Vilanova, Bioinformatics & Bioanalysis Director, Libragen, France

The complete list of industrial presentations will coming soon.

16h00  **Coffee Break & Exhibition Session**

**What we can learn from microbiota analysis and how to apply this to animal health?**

16h30  **Dynamic interactions of the equine hindgut microbiota in health and disease**  
Knut Rudi, Norwegian University of Life Sciences, Norway

17h00  **Short Oral Presentations upon Abstracts Submission**  *(you have until September 21 to submit your abstract)*

17h45  **Presentation of ISM Platform**

17h50  **Discussion & Conclusion in Presence of the Scientific Committee and Speakers**

Can we manipulate skin microbiota?  
Can we talk about diversity and quality of skin microbiota?  
Microbiota or Metabolites: the subtle balance

18h15  End of the first day

14h30 – 17h30  **Registration & Posters Installation for days 2 & 3**
Day 2: October 22, 2015

7h30  Registration – Posters Installation

Session 1: Recent Advances on Microbiota Researches & Innovations in 2015

9h00  Introduction Lecture - Microbiota 2015: Towards a revolution?
      Yuri Ikeda, Chairman of the International Society of Microbiota, Japan

9h30  The gut microbiota & obesity: from correlation to causality
      Liping Zhao, Shanghai Jiao Tong University, China

10h00  Role of gut microbiota in Parkinson’s disease
       Filip Scheperjans, Helsinki University Central Hospital, Finland

       10h30  Coffee Break, Posters & Exhibition Session

11h00  Role of gut bacteria in host control of appetite
       Serguei Fetissov, Rouen University, France

11h30  Modulation of host microbiota by Listeria monocytogenes
       Javier Pizzaro-Cerda, Institut Pasteur, France

12h00  Short Oral Presentations upon Abstracts Submission (you have until September 21 to submit your abstract)

       12h30  Lunch Break, Posters & Exhibition Session

Session 2: Microbiota, Predictive Medicine & Biomarkers: The Perfect Signature

14h00  Cancer & Microbiota: Potential of fecal microbiota for early-stage detection of colorectal cancer
       Iradj Sobhani, Hôpitaux Universitaires Henri Mondor, France

14h30  Taxonomic and functional metagenomic analysis of the airway samples from cystic fibrosis patients
       with lower and higher pulmonary function decline
       Annamaria Bevivino, ENEA Casaccia Research Centre, Italy

15h00  Short Oral Presentations upon abstracts submission (you have until September 21 to submit your abstract)

       Identification of blood bacterial profiles associated with liver fibrosis in obese patients
       Benjamin Lelouvier, Vaiomer, France

       15h30  Coffee Break, Posters & Exhibition Session

Session 3: Fecal Microbiota Transplantation: Practical Issues & Regulation

16h00  Fecal Microbiota Transplantation: recent scientific data
       Harry Sokol, Hôpital Saint Antoine, France

16h30  Fecal microbiota in pediatric inflammatory bowel disease and its relation to inflammation
       Katri Korpela, Helsinki University, Finland

17h00  Jurisdictional challenges and possibilities for companies providing faecal transplant services
       Andreas Schwiertz, MVZ Institut für Mikroökologie, Germany
17h30  Short Oral Presentations upon abstracts submission (you have until September 21 to submit your abstract)

Anaerobically Cultivated Human Intestinal Microbiota
Atti-La Dahlgren, Karolinska Institutet, Sweden

SYN-004, a novel strategy to protect the gut microbiome from the deleterious effects of residual iv β-lactam antibiotics
John F. Kokai-Kun, Synthetic Biologics, USA

Does the gut microbiome affect mucosal immune activation and intrarectal susceptibility to shiv acquisition in naïve rhesus macaques?
Yongjun Sui, National Cancer Institute, National Institutes of Health, USA

Manipulating the human microbiome using polyphenol rich foods, supplements, and prebiotics, coupled with avoidance of major dietary lectins reverses endothelial dysfunction
Robert Steven Gundry, The Center for Restorative Medicine, The International Heart and Lung Institute, USA

Biomarkers- directed strategies to prevent and treat autism using selected probiotics
Afaf El-Ansary, King Saud University, Saudi Arabia

Association of gut microbiota and host serum cholesterol
Orawan La-Ongkham, Kasetsart University, Thailand

Business, regulatory & clinical challenges in commercializing a next-generation FMT drug for recurrent Clostridium Difficile Infection: A US Perspective
Lee Jones, Rebiotix, USA

Overview of US army nutrition and gut health programs
Kenneth Racicot, United States Army Natick Soldier Research Development and Engineering Center, USA

Bacterial community modulate behaviors of eukaryotic organisms: new perspectives in restoration of threatened coral reefs
Catalina Arevalo Ferro, National University of Colombia, Colombia

Antibiotic effect monitoring using metagenomic signatures
Dmitry Alexeev, Research Institute of Physico-Chemical Medicine, Russian Federation

18h30  End of the Second Day

20h00  Targeting Microbiota Dinner in a typical French restaurant
You can register online until October 9, 2015.
Day 3: October 23, 2015

Session 4: The Microbiota Role in Health & Diseases: Targeting Skin Microbiota

9h00  Lactobacillus salivarius LS01 and Bifidobacterium breve BR03 combination in atopic dermatitis: which evidences?
Lorenzo Drago, University of Milano, Italy

Session 5: The Microbiota Role in Health & Diseases: Targeting Vaginal Microbiota

9h30  The impact of erythromycin on the vaginal microbiome in women with preterm premature rupture of the fetal membranes (PPROM)
David MacIntyre, Imperial College London, United Kingdom

10h00  Vaginal Microbiota & Relation with Sexually Transmitted Diseases
Jacques Ravel, Institut Pasteur, France

Microbiota & HIV Infection

10h30  HIV infection & microbiota diversity and quality: how HIV modify gut microbiota?
Grégory Dubourg, Université de Marseille, France

11h00  Coffee Break, Posters & Exhibition Session

Session 6: New Challenges to Prevent & Treat Metabolic Diseases, Cancer, Neurodegenerative Diseases, Liver, Kidney, Lung Diseases & all Inflammation Related Diseases

11h30  Tissue microbiota, the next generation paradigm of metabolic disease
Rémy Burcelin, Inserm U1048, France

12h00  Pancreatic beta-cells limit autoimmune diabetes: strategic role of gut microbiota
Julien Diana, Inserm, Université Paris Descartes, France

12h30  Lunch Break, Posters & Exhibition Session

14h00  Regulation of body fat mass by the gut microbiota: possible mediation by the brain
John-Olov Jansson, Sahlgrenska Academy at Gothenburg University, Sweden

14h30  Gut microbiota: novel & strategic players in coeliac disease pathogenesis
Elena F. Verdu, McMaster University, Canada

15h00  The link between depression and gut microbiota
Premysl Bercik, MacMaster University, Canada

15h30  Metagenomic analysis of the microbiota in patients receiving allogeneic SCT: Role of harmful versus protective microbiota and the impact of antibiotic prophylaxis and treatment
Ernst Holler, University Medical Center, Germany

15h45  Coffee Break, Posters & Exhibition Session
16h15  **Short Oral Presentations upon Abstracts Submission** *(you have until September 21 to submit your abstract)*

- **Contribution of human gut microbiota metabolism in anti-inflammatory activities of ellagitannin-rich medicinal plants**  
  **Jakub P. Piwowarski**, Medical University of Warsaw, Poland

- **New insights into post-infectious sequelae: enteropathogen-induced disruptions of human gut mucosal microbiota biofilms cause intestinal inflammation**  
  **Gerald Andre Buret**, University of Calgary, Canada

- **Antibacterial mouthwash blunts oral nitrate reduction and increases blood pressure in treated hypertensive men and women**  
  **Catherine Bondonno**, University of Western, Australia

- **Microbial communities of early-stage Crohn’s disease tissues**  
  **Louise Claire O’Brien**, Canberra Hospital and Australian National University, Australia

- **The effects of Clostridium Ramosum on enterohaemorrhagic Escherichia Coli O157:H7**  
  **Yukako Koyanagi**, Tohoku University, Japan

- **Gut microbiome re-programming in the ATLAS model of colitis**  
  **Steven J. Alexander**, LSU Health – Shreveport, USA

- **Cocoa bioactives, gut microbiota and mitochondria**  
  **Yvan Petyaev**, Lycotec, United Kingdom

- **The microbiota shifts the iron sensing of intestinal cells**  
  **Muriel Thomas**, INRA, France

- **Use of microbial networks as a strategy to recover from gut dysbiosis**  
  **Massimo Marzorati**, Ghent University, Belgium

17h30  **General Discussion of Targeting Microbiota 2015:**

- Can one strain fit with all populations?
- To date, the most relevant challenge: can we modulate and manipulate the human gut microbiota?
- How diet, food, antibiotics, hormones, prebiotics and faecal microbiota can affect resident microbiota?
- How to avoid speculations and marketing on microbiota not supported by actual data?

In the presence of Organizers & Speakers from scientific committee

**Targeting Microbiota 2015 Awards:**

- Scientific Contribution Award 2015
- Scientific Contribution for Oral Presentation
- Scientific Contribution for Poster Presentation

**Concluding Remarks by the chairs**

18h00  **End of Targeting Microbiota 2015**
For all request concerning demonstrations, exhibition and general information, please contact:

John Edwards – Erica Takayama

Targeting Microbiota 2015 – International Society of Microbiota

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