

Omics & Aspergillosis : past & future

May 3-May 8, 2012
DESHAIES, France

The last meeting took place in Deshaies, Thirty-four participants, including senior and junior scientists from each of the eighteen partner laboratories, met to discuss their experience and results about the future of Omics & Aspergillosis. Eighteen talks were presented and like precedent years, the Fifth annual meeting offered the opportunity to junior scientists to present their research data (eighteen out of thirty four talks). A lot of time was kept for discussions that are essential for the success of such network and have been indeed very fruitful scientifically. Collaborations at the EU level were strengthened at this meeting in a very friendly and cooperative atmosphere.

Programme ESF 2012

Friday May 4th – 08:30 –9:00
 Introduction to ESF 2012 by J.P. Latgé

I. Omics and *Aspergillus fumigatus*

Transcriptomic : Chairman : **Sven KRAPPMANN**
 09:00 –09:25

- Laura ALCAZAR FUOLI : “ A compendium of *Aspergillus fumigatus* transcriptome data, and insights yielded on gene cluster activities”

09:25 –09:50

- Laëtitia MUSZKIETA : “Global transcriptome changes occurring during colony growth in *Aspergillus fumigatus*”

09:50 –10:15

- Raul GARCIA : “Genome-wide screenings to uncover novel genes involved in yeast cell wall integrity”

Proteomics : Chairman : **Olga GENILLOUD**

10:45 –11:10

- Concepcion GIL GARCIA : “Host-pathogen interaction : insights from proteomics”

11:10 –11:35

- Falk HILLMANN : “Proteomics as a tool to study global stress responses of *Aspergillus fumigatus*”

11:35 –12:00

- Christoph HEDDERGOTT : “A short trip to distant relatives: Recent progress in Dermatophyte-omics”

Metabolomics : Chairman : **Nir OSHEROV**

16:00 –16:25

- Sven KRAPPMANN : “Scrutinising metabolic needs of *Aspergillus fumigatus* by advanced molecular biology”

16:25 –16:50

- Sean DOYLE : “Is making gliotoxin a high risk survival strategy for *Aspergillus fumigatus* ?”

16:50 –17:15

- Nicola BECKMANN : “The impact of ornithine and arginine biosynthesis on siderophore production of *Aspergillus fumigatus*”

Chairman : **Jean-Paul LATGE**

17:45 –18:10

- Jorge AMICH : “MetR transcriptional factor involved in sulfur metabolism regulation is important for *Aspergillus fumigatus* virulence”

18:10 –18:35

- Hubertus HAAS : “The link between ergosterol and iron metabolism”

Status of the whole genome deletion project :

18:35

- Thorsten HEINEKAMP

Saturday May 5th

Omic analysis : Chairman : **Concepcion GIL GARCIA**

09:00 –09:25

- Fabian HORN : “ Integrative analysis of omics-based data using ondex”

09:25 –09:50

- Sebastian MULLER : “Comparison and potential of current transcriptome technologies in *Aspergillus fumigatus* research”

II. Omics and the real life ?

Microbial communities :

09:50 –10:15

- Sébastien MONCHY : “Exploring bacterial and fungal diversity using high throughput DNA sequencing : implications for patient management”

Chairman :**Javier ARROYO**

10:45–11:10

- William CRAIG : “Interaction between *Aspergillus* and *Pseudomonas* biofilms and applications for diagnosis”

11:10 –11:35

- Benoit BRIARD : “Modification of *Aspergillus fumigatus* cell wall and surface in response to *Pseudomonas aeruginosa* molecules”

Cell wall :

11:35 –12:00

- Yakir VAKNIN : “Analysis of cell wall proteins containing a CFEM-motif in *Aspergillus fumigatus*”

12:00 –12:35

- Thierry FONTAINE : “Polysaccharides of *Aspergillus fumigatus* cell wall”

Chairman :**Emilia MELLADO**

16:00 –16:25

- Gwenaël RUPRICH-ROBERT : “Functionally characterization of stress-response signalling pathway mediated by histidine kinase receptors (RHK) in *Aspergillus fumigatus*”

16:25 –16:50

- Thorsten HEINEKAMP: "Pyomelanin in *Aspergillus fumigatus*"

16:50 –17:15

- Isabelle MOUYNA : " β (1-3) glucan remodeling activities in *Aspergillus fumigatus* ”

17:15 – 17:40

- Javier ARROYO: "Regulation of cell wall stress adaptive responses in yeast : What’s new ?"

Sunday May 6th :

Antifungals : Chairman : **Sean DOYLE**

09:00 –09:25

- Ulrike BINDER : “Antifungal susceptibility testing and biomarker release in hypoxia”

09:25 –09:50

- Emilia MELLADO : “*Galleria mellonella* : an alternative model host to evaluate *Aspergillus fumigatus* virulence and antifungal drug response”

09:50 –10:15

- Christopher GRICE : “In-house development of inhibitory peptides for targeting stress sensors”

Chairman :**Luigina ROMANI**

10:45 –11:10

- Olga GENILLOUD: "Current trends and future of microbial natural products in antifungal research "

Immunomics ?:

11:10 –11:35

- Stanislaw SCHMIDT : “The interaction of human natural killer cells with *Aspergillus fumigatus*”

11:35 –12:00

- Nir OSHEROV: “Interaction of *Aspergillus fumigatus* with lung epithelial cells”

12:00 – 12:25

- Frank VAN DE VEERDONK : “New insights into innate and adaptive immune responses against *Aspergillus fumigatus*”

Chairman :**Frank VAN DE VEERDONK**

16:00 –16:25

- Leonardo POTENZA : “Specific immune responses in patients with invasive Aspergillosis : implication for the diagnosis and the treatment of the infection”

16:25 –16:50

- Antonia BEITZEN: "iNKT cells and *Aspergillus fumigatus*"

17:20 –18:45

- "Agostino CARVALHO: "Immunogenetics of aspergillosis : towards improved diagnosis and therapy? "

18:45 –19:10

- Luigina ROMANI "From memory to personalized vaccines against aspergillosis"

19:10 :

- Jean-Paul LATGE : After Fuminomics ?

Monday May 7th : FREE

Tuesday May 8th : End of the meeting

General Assembly

Chair

Professor Jean-Paul Latgé, Institut Pasteur

Since no problem arised during the last year of the Fuminomics grant, it was decided to replace the last Steering Committee Meeting by a general discussion on the future of Fuminomics. The discussion was chaired by J.P. Latgé. Several decisions were taken.

1. All participants considered that Fuminomics was a great success and that a high number of collaborations have arisen from these meetings. Unanimously all participants want to continue to meet on a yearly basis on a Fuminomics format. One Senior scientist and one Junior scientist from each laboratory and the junior scientist giving the talk.
2. To foster the cooperation between participants, it was decided to apply for an Initial Training Network (ITN) that would result in the set up of a European School of Basic and Medical Research in Aspergillus and aspergillosis. An application will be sent to FP7 for the November deadline. In the meantime, Craig Williams (Glasgow) and Frank Van de Veerdonk (Nijmegen) have proposed to raise some funds for the next meeting that is planned to be held in France in September 2013. The Fuminomics project has promoted durable links and collaboration between all European laboratories. These European collaborations are essential on the "Omics" world. Moreover, the friendly atmosphere at all Fuminomics workshops has been essential to perpetuate the Fuminomics spirit for next years. All participants have acknowledged the fantastic input of ESF on the advancement of the Aspergillus science in Europe.