ERA-NET PathoGenoMics
Consortium: Glycoshield initiative
Interview with Dr. Jesus Pla

1) If you look back at the first year of funding, what have you managed to achieve?

Most of the first year effort has been devoted to the establishment of general strategies and experimental methodologies to achieve the project defined goals. For example, some groups have developed novel methodologies to analyse the cellular surfaces, others have concentrated on the establishment of *in vitro* and *in vivo* model systems to analyse virulence and fungal-host interactions while, finally, all the groups are identifying novel components of the surface and how glycosylation takes place in the fungus.

2) What do you perceive as being the biggest challenge within the consortium?

I think the biggest challenge is trying to identify the essential components of the cell wall that have clinical value and that could be a potential therapeutic target. The problem is that pathogenicity is normally not the result of a single trait. Therefore, a real critical work is identifying regulatory networks of interactions among the genes/processes involved and understanding their role in the construction of the cell wall "glycoshield".

3) What do you think could be the therapeutic output of your research when the ERA-NET project is finished?

If you are doing research with regard to surface molecules in a pathogen, you normally have two goals: on the one hand, to find a defined structure or molecule that behaves as a therapeutic target to cure infections; or on the other hand, to use it for strategies that can prevent an infection. These two basic ideas would be the ideal goal for our project. Ultimately, we will generate a lot of information before evaluating the results to see if they can fulfil one of these goals. Nevertheless, in general, the clinical relevance of glycosylation processes is high, and although we are using yeasts and fungi as models, the information we obtain will surely also be of significance and relevance for human cells. This is why I am convinced that the more we know about microbial systems the more we can search for equivalences in mammalians.

4) What do you think is the advantage of having a European network under the roof of the ERA-NET PathoGenoMics?

I think this kind of cooperation is very important for maintaining contact with other colleagues, for sharing ideas and defining common goals. In our case, the groups knew each other beforehand, but under the umbrella of the consortium, our cooperation has been enhanced and strengthened. The biggest advantage is that different laboratories with different approaches and methodologies are coming together, for instance structure biologists and molecular geneticists. So everyone can profit from each other, by combining their experiences more rapidly, than before.