Asperfest 6 Minutes

Asperfest6 was held March 15-17, 2009 at the Asilomar Conference Center. There were 132 registered participants representing institutions in 17 countries.

Announcements: In addition to the scientific program, two important community announcements were made:

(1) The AspGD RO1 submitted by co-PIs Jennifer Wortman and Gavin Sherlock was funded. The successful proposal was accompanied by 55 support letters from *Aspergillus* lab heads, many of whom attended Asperfest6 (letters were assembled by Michelle Momany on behalf of the AGRPC). Gavin and Jennifer presented a talk on AspGD in the Comparative Genomics and Databases session. They updated the community on the progress, stressing that this will be a community resource that will be responsive to community input. They also handed out a questionnaire to solicit more community input and requested that Aspergillus labs register at the site. Jennifer and Gavin also announced that AspGD had gone live just before the meeting and that curation would be starting in earnest in the coming months (http://www.aspergillusgenome.org/).

(2) The NIH Program Project grant "Functional Analysis and Systems Biology of Filamentous Fungi" (PI Jay Dunlap) was renewed. Based on community discussions at Asperfest5, the renewal proposal included plans for making knock out cassettes for gene deletions in *A. nidulans*. Steve Osmani headed up the *A. nidulans* section of the proposal. (See community discussion below for more details.)

Community directions discussions: Community priorities and ideas were discussed in two separate sessions led by AGRPC Chair Michelle Momany. A synopsis follows:

(1) During the community directions discussions, better annotation for Aspergilli was raised repeatedly. Though there have been many improvements to the annotation, there are still errors and improved annotation continues to be a top priority for the community since virtually all genome resources depend on accurate gene calls. The suggestion was made that deep sequencing of RNAs would go a long way toward improving the annotation and, not co-incidentally toward improving the auto-annotation programs for fungi. Mark Caddick (Univ Liverpool) said that in the UK deep sequencing efforts were planned in the very near future for A. nidulans. This should dramatically improve our knowledge regarding transcriptional start sites, differential splicing and the precise location of 3' ends.

(2) Steve Osmani led a spirited discussion of how to proceed with marker selection and construction of knockout cassettes for *A. nidulans*. Steve asked for a show of hands of participants who were using drug selection in *A. nidulans* vs auxotrophic markers. No one reported using drug selection. Many were using nutritional markers. A point was raised that we need "tight" markers so that they can be used for heterokaryon rescue. This point had a lot of support since the ability to rescue heterokaryons gives a major advantage of being able to knockout lethal genes in Aspergilli. Arthur Ram said that they had successfully used drug resistance markers in *A. niger* for het rescue, but no one reported having done it in *A. nidulans*. Bar was mentioned as a good marker, but Michael Hynes pointed out that resistant mutants tended to come up frequently making it unsuitable. Most participants seemed to feel that the pluses of a drug selection were outweighed by the negatives.

The discussion then moved to the specifics of which marker(s) to use. Claudio Scazzocchio raised the issue that some self-sterility had been reported for both *riboB* and *pyrG* mutants. Berl Oakley and Steve Osmani both reported that they had made upwards of 100 knockout mutants using *pyrG* without encountering sterility. Other participants in the discussion suggested that the occasional reports of *pyrG* sterility were probably due to the location of integration rather than to the marker itself. It was also pointed out that FOA could be used with *pyrG* making it possible to remove the marker later if desired. Ultimately, the consensus seemed to be that while the *pyrG* marker was not perfect, it was the best choice given its history of successful use. It was also suggested that a *pyrG* deletion strain should be used rather than the typical *pyrG898* point mutant. David Canovas proposed that the deletion cassettes should be designed to make it easy to swap out markers for later generation of other strains. Several people commented that the deletions should all be made in the same strain background to make a uniform collection. Others pointed out that this could be done fairly easily through crosses, provided that the appropriate markers were in the initial recipient strain.

The discussion next moved to whether to use the available resources to generate a collection in which all genes were deleted or to pick a subset of genes and also do fusions. Basically the fear was that if we made the entire deletion collection many clones would not be used, but that if we made GFP and S tag fusions available for a subset there would be the potential to do more interesting biology. Many comments were made in support of both models, including the observation that the potential for novel discovery was much higher with a complete KO collection, while the potential for more in depth biology was higher with the subset collection. A vote was taken by show of hands on the two models. The numbers supporting each model were virtually the same.

Prizes: Herb Arst presented the Pontecorvo lecture entitled "Calcium: A new Perspective." Randy Berka presented the Novozymes student poster prizes

($250 US) to Dawoon Chung (Brian Shaw lab, Texas A and M) and Nora Grahl (Rob Cramer lab, Montana State University).

Elections: Terms ended for committee members Scott Baker, Masayuki Machida, Michelle Momany and Arthur Ram. All agreed to stand for election for another 3 years and were unanimously re-elected. There were no new nominations from the floor. The AGRPC elected Michelle Momany to continue as Chair and Gustavo Goldman and Gerhard Braus as the meeting organizers for Asperfest 7. Asperfest 7 is scheduled for March 27-29 in Leiden, the Netherlands just before ECFG 10. Because of major organizing duties at ECFG10, AGRPC member Arthur Ram will not be able to serve as local organizer, but will recruit a local organizer to assist with arrangements.

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Submitted by Michelle Momany (Univ. of Georgia)