

Final Minutes for the MASC Annual Meeting at the 17th Annual ICAR (Thursday, June 29, 2006, Madison, WI)

(written by Joanna Friesner, MASC Coordinator)

1) Welcome by Philip Benfey

- Introduction of participants:

MASC Chair: Philip Benfey (U.S.)

MASC Co-chair: Ian Small (Australia)

MASC Coordinator: Joanna Friesner

MASC Country Representatives: *Philip Benfey* (U.S.), Thomas Altmann (Germany), Bill Crosby (Canada), Ian Furner (U.K.), Pierre Hilson (Belgium), Minami Matsui and Masatomo Kobayashi for Kazuo Shinozaki (Japan), Javier Paz-Ares (Spain), Ben Scheres (Netherlands)

Arabidopsis Resources Representatives: Eva Huala (TAIR), Randy Scholl (ABRC), Sean May (NASC/European Stock Center), Ruth Bastow (GARNet), Bernd Weisshaar (GABI/GABI-Kat)

MASC Subcommittee representatives: Chris Town (chair, Bioinformatics), *Pierre Hilson* (chair, ORFeomics), *Eva Huala* (co-chair, Phenomics), *Sean May* (co-chair, Phenomics, and member of Bioinfo.), Harvey Millar (co-chair, Proteomics), Wolfram Weckwerth (co-chair, Proteomics and member of Metabolomics), *Thomas Altmann* (Natural Variation), Justin Borevitz (Nat. Var.), Kathleen Donohue (Nat. Var.), *Minami Matsui* (Phenomics), Johanna Schmitt (Nat. Var.), Heiko Schoof (Bioinfo.), *Ian Small* (ORFeomics)

Arabidopsis funding representatives: Parag Chitnis (NSF), Machi Dilworth (NSF), Diane Okamuro (NSF),
Observer: Wilhelm Gruissem

2) MASC Discussion

- New MASC Chair/co-chair and terms of service.

P. Benfey concludes two years of service as Chair at this meeting. Ian Small, previous co-chair, will become the new MASC Chair. Xing Wang Deng will become the new co-chair.

Discussion

██████: *Members don't have much input in electing MASC representatives, or subcommittee representatives. Some people are self-nominated, and/or remain MASC reps or subcommittee chairs for long periods of time.*

██████: *In some countries, people are elected to be MASC representatives.*

██████: *Does the MASC want to continue to be ad hoc in our leadership or more organized? (by silent agreement, members consented to remain ad hoc).*

- What should be the term for the chair and co-chair?

Action

Ian Small will discuss with Xing Wang Deng about whether the terms of service for each will be for 1 or 2 years.

- MASC Coordinator - funding/utility, goals, priorities.

Current NSF coordinator funding expires 12/31/06. Members agreed that the coordinator is useful to furthering the goals of the MASC.

Discussion about next funding cycle:

Due to time constraints, it was proposed that the next 2 year grant (1/07-1/09) be submitted to the NSF.

Action

It was agreed that future coordinator funding (following 1/07-1/09) should be obtained by a non-U.S. MASC member.

-Ruth Bastow agreed to look into ERA-PG (and EU) funding for the next cycle.

-Ian Small agreed to look into the possibility of matching grants/funds of some sort.

- Larger MASC role at midpoint of the 10 year genomics project (P. Benfey)

Discussion

██████████: *Suggests advocacy would be helpful; that MASC members/leaders could talk with senior members of funding agencies to convey the size and impact of the Arabidopsis community.*

██████████: *This approach is very 'country-specific' - MASC shouldn't be 'lobbying.'*

██████████: *It would be useful to collect examples of where Arabidopsis work has been translated into other areas (e.g. crop-breeding, optimization)*

██████████: *Structure of funding in several important European nations indicates that the research focus is swayed from Arabidopsis to crops.*

Action

It was proposed that examples of how Arabidopsis is involved in translational work should be the focus of next year's MASC report.

- Ruth Bastow volunteered to help with the UK perspective.
- Jens Freitag was suggested as a resource (Germany).
- Ian Small (Australia)
- Michel Caboche was suggested as a resource as well.

Initiated: Joanna Friesner met with Ian Small in Australia to further discuss the focus of next year's annual report.

More discussion on where the MASC should be heading for the next year:

██████████: *Proposes more extensive work with comparative genomics/natural variation.*

██████████: *It would be very helpful if subcommittee members could meet during the year.*

██████████: *Subcommittees should be encouraged to seek out funding for meetings.*

██████████: *the U.S./Germany student/post-doc exchange (NSF) is a very good idea.*

██████████: *Proposes formation of a new MASC Systems Biology Subcommittee.*

██████████: *Sees some overlap with other subcommittees.*

Action

P. Benfey will spearhead the establishment of this new Systems Biology subcommittee.

Follow-up: Benfey has identified a list of potential members to be contacted.

3) Subcommittee reports

- ORFeomics

P. Hilson (chair):

- Currently, this subcommittee keeps track of a few large-scale projects and keeps a list of what's available. He suggests a Resources Subcommittee to track what's going on. Even better would be if the leaders of the Stock Centers kept track of resources.

- It would be nice to also have a Clone Resources Subcommittee to go 'downstream' to see what's going on - for example, yeast-two-hybrid studies. However, he thinks the state of the research isn't there yet.

██████████: *Thinks it's good for ORFeomics to continue cataloguing resources.*

Action

Proposal: ORFeomics group will maintain a list of resources: highlight what's missing, check off what's been accomplished. This will include Sean May and Randy Scholl, along with P. Hilson.

- Phenomics

E. Huala (co-chair):

- Ontology efforts include the Plant Ontology Consortium (POC) to describe plant anatomy

- PATO (Phenotype, Attribute, and Trait Ontology) is a larger effort that POC is involved with to facilitate phenotype descriptions using controlled vocabulary.
- She had anticipated there would be large-scale standard phenotyping efforts by now.

Discussion:

- Some small-level projects are underway but the conditions are complex.
- Recommends that people should be encouraged to take up PATO.
- It's important to use standard vocabulary and such usage should be encouraged.
- It would be useful to have this information disseminated through the community. Perhaps in the future the Phenomics Subcommittee could advise journals on standards. As a starting point, there should be a set of standards created and people encouraged to use them and also deposit their data.
- There may be a high-through-put phenotyping building established in Australia in the next year or two.
- A complexity is that other ontologies are being developed that are philosophically different and may not work well with others.

- Proteomics

W. Weckwerth (chair):

Goals for the new subcommittee as outlined in the 2006 MASC report:

- (1) (a) develop a common webpage with standards, (b) meet at annual Arabidopsis meeting, (c) discuss international grant proposals on plant proteomics, (d) develop standards for proteomics methods, (e) determine minimal guidelines for proteomic studies and distribute to relevant plant journals, (f) hold workshops on Proteomics methods/practice at annual meeting, (g) develop a 'master list' of Arabidopsis genes identified by mass spec, (h) collaborate w/TAIR and others about proteomic data storage.
- (2) Current Proteomics databases under development:
 - H. Millar/J. Heazlewood: Arabidopsis Mitochondrial Protein Database AMPDB (<http://www.ampdb.bcs.uwa.edu.au/>)
 - K. van Wijk: Plastid Proteomics Database PPDB (http://cbsu.tc.cornell.edu/vanwijk/project_v.htm)
 - K. Lilley: Proteomics database (<http://proteomics.arabidopsis.info/>)
 - S. Reumann: Proteomics database of peroxisomes (in work)
 - S. Baginsky/ W. Gruissem: "Peptide Atlas", Plastids database, organs, organelles, etc.
 - W. Weckwerth, S. Wienkoop, M. Niemann: whole leaf, roots, focus on mass spectra (in work)
- (3) Missing Databases:

Protein Modification Databases: Mass spectrometry as a major tool for identification of protein modification

e.g. Phosphorylation: (a) <http://plantsp.genomics.purdue.edu/>, (b) Scott Peck lab (c) Weckwerth lab (d) others?

Other modifications?
- (4) Database Coordination: (1) Mass spectrometric data/databases should be included/compared with cDNA libraries, RNA expression databases etc. (2) Phenome Subcommittee: Agreement on metadata structure (from MSI, important for metabolomics and proteomics subcommittee)? (3) Specific requirements for protein and metabolite analysis (using mass spec or other) can be discussed and added separately
- (5) Focused plans for the upcoming year:
 - Proteomics workshop in Germany next year: Discussion/Proposals on funding with German Society of Proteome Research (DGPF) in September together with Hans-Peter Braun.
 - Other funding?
 - Look into: Invitation of Speakers to Annual meeting in China; Proteomics Session at Annual Meeting

- Metabolomics

W. Weckwerth (for Ian Graham, chair):

Goals: Integration with Metabolomics Standard Initiative (MSI)

- (1) Establish a mechanism that allows the dissemination of metabolomics datasets to the wider Arabidopsis community;
 - (2) Encourage and facilitate initiatives for the integration of metabolomic datasets with other -omic datasets. This will involve depositing Metabolomic data in a usable format for data integration.
- DISCUSSIONS ON HOW TO BEST ACHIEVE THESE GOALS ARE ONGOING

MSI Important aspects:

- (a) Biological Sample Context, (b) Chemical Analysis, (c) Data analysis, (d) Ontology, (e) Data exchange

MSI Proposed minimum standards:

Species, Genotype, Organ, Organ specification, Cell type, Subcellular location, BioSource amount, Growth support, Growth location, Growth plot design, Light, Humidity, Temperature, Watering regime, Nutritional regime, Date(s) of plant establishment, Treatment factors, Treatment dose or intensity levels, Treatment time, time intervals and duration before harvest, Harvest date. Harvest time relative to the luminescence cycle, Duration of harvest if relevant to the plant study (e.g. for volatile analysis), Plant growth stage, Metabolism quenching method, Harvest method, Sample storage

- Bioinformatics

C. Town (chair) and H. Schoof:

- The first 'web services' workshop was held in Cologne (Germany) from March 14-18, 2006.
- The second workshop was held at TIGR (U.S.) from April 24-28, 2006. This workshop was more streamlined than the first and successful: half the participants have put up web services within the last few months.

Some lagging areas: a few groups dropped out; some technological problems, the main issue is that people are too busy to continue with what they started at the TIGR workshop.

Discussion:

- *What is the best mechanism to enhance web services? Communication is needed to continue the pilot project.*
- *They're not sure how to make the process interesting so that people will want to put in the effort.*
- *Propose that holding 'web services' workshops is a good way to communicate and inspire effort.*
- *Not sure how the 'flying geek' service will work out since mainly users ask for help remotely.*
- *Currently- can demonstrate a number of tools to show end users: mainly aggregators*
- *The Main Question now: How to continue after this year.*
- *They may need to be more proactive w/people from the workshops and follow up with PI's.*

4) MASC Report

- Measuring gene function knowledge- Thermometers discussion (E. Huala/TAIR)
 - Previously there were designations: Gold standard, Silver Standard, and 'know nothing'
 - During the mid-course evaluation of the AT2010 project came the idea of 'benchmarking gene function' using specific parameters.
 - Eva will discuss this further with Ian Small.
- Report Utility:
 - is the annual report useful? Is it getting to funding agencies?

Discussion:

- *Isabell would send either PDFs or hard copies to funding agencies.*
- *P. Hilson-(Joanna should) send a PDF of the report to all MASC members so they can distribute it as well.*
- *(Joanna should) get names of funding agencies from MASC members and send them hard copies and/or pdfs.*
- *C. Town- There should be an email sent to the Arab-Gen listserv announcing the new report.*

Completed tasks: Joanna Friesner posted the MASC report on TAIR, sent an email to the Arabgen listserv announcing the report, sent 150 copies to the NSF, copies to USDA and DOE contacts, 50 copies to Isabelle Witt at the University of Cologne, Germany, emailed a report pdf to all MASC members including subcommittee members, and requested contact information for relevant people from MASC

members. Based on response, sent reports to several people at the BBSRC in the UK, and to two scientists in the Netherlands and also sent 5-10 hard copies each to MASC members who contacted her.

5) Update on Beijing ICAR- June 20-24, 2007

J. Friesner (for X. Deng, Chair of Conference committee)- presented short powerpoint on meeting details: Beijing International Conference Center (www.arabidopsis.org/news/18ICAR.jsp)

- (a) An international advisory committee, including MASC members, will be established to create the scientific program
 - (b) A local organizing committee will be established including members from:
 - National Institute of Biological Sciences, Beijing
 - Peking University
 - Institute of Genetics and Developmental Biology, Chinese Academy of Sciences
 - (c) Xing Wang would like MASC members to encourage colleagues (and their students and post-docs) to attend the meeting
 - (d) To enable greater participation in the meeting, each MASC member is encouraged to investigate funding possibilities for participants from their individual countries
- Are there any suggestions from MASC members for encouraging U.S. and European participation?
 - Please contact Xing Wang (or MASC coordinator) if you have ideas and suggestions for the meeting: Xing Wang Deng (xingwang.deng@yale.edu) or Joanna Friesner (jdfriesner@stanford.edu)

Discussion re: Beijing Meeting:

██████████: *Women must be included in the organizing committee and/or well-represented in the speaker list for the meeting or the NSF will not provide funds.*

Discussion re: TAIR taking over abstract submission for the meeting:

- All agree this would be a good idea in order for more data to be collected by TAIR.
- In particular, trying to obtain AGI locus numbers is important.
- Question- should submitting locus numbers be mandatory or voluntary?
- It was decided that requesting this information needed to be voluntary on the part of attendees.

Action

Joanna (Coordinator) will work with Eva Huala (TAIR) to develop some sort of submission process via TAIR that applicants to next year's annual meeting could use to submit AGI locus numbers.

Initiated: Joanna Friesner met with Eva Huala to discuss abstract submission via TAIR. Target date for abstract submission through TAIR is Feb. 1st, 2007.

6) Open Discussion

██████████
Previously the DFG (Germany) and the NSF (U.S.) did a joint grant review, and they're currently in the early stages of doing this again. ██████████

██████████ (Updated: The DFG and the NSF are proceeding with a joint review)

- Ruth Bastow (GARNet): The ERA-PG network does something similar for European Plant Biology.