



Summary of the 4th MAQC Project Meeting

The MAQC Project: Microarray QC Metrics and Thresholds

Meeting Date: March 25, 2005, 11:00 am CST, teleconference
Summary Date: March 28, 2005
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Update of Pilot Study Progress

- Affymetrix, Agilent, FDA/NCTR, Illumina, and UMass have submitted QC data for the 4 candidate RNA samples.
- **Ambion, Clontech, and Stratagene are expected to submit RNA QC data to Jim Fuscoe (james.fusco@fda.hhs.gov) by Monday, March 28, 2005.**
- All 6 test sites, Affymetrix, Agilent, Ambion, FDA/NCTR, Illumina, and UMass (Michael Lombardi missed the teleconference and was later on contacted) are on schedule to submit microarray data to FDA/NCTR by April 1, 2005.
- Instructions for submitting microarray data to FDA/NCTR went sent to the 6 test sites on Monday, March 28, 2005.

Analysis of Pilot Study Data

- Walter Liggett (NIST) requested to access the Pilot Study datasets and participants of the 4th MAQC teleconference approved the request. Therefore, 11 organizations (Affymetrix, Agilent, Ambion, Applied Biosystems, Clontech, FDA/NCTR, GE Healthcare, Illumina, NIST, Stratagene, and UMass) will have access to the 7 datasets. Each site will rank the 4 RNA samples and the 6 sample pairs based on the 7 datasets.
- It was emphasized again that no organization should make any public presentation and/or publication of the Pilot Study results without the consent of the MAQC project.
- Shawn Baker (Illumina) explained a few suggestions that he made in an earlier email regarding the ranking of sample pairs by fold changes:
 - (1) Limit analysis to those genes which are detected in both samples being compared;
 - (2) Rank each sample pair based on the number of statistically significant changes in expression (based on Mann-Whitney or t-test);
 - (3) Rank each sample pair by the number of large fold changes at some arbitrary cutoff (say, 10-fold); and
 - (4) Rank each sample pair according to the median fold change value.**The final ranking would then be some sort of weighted average of the rankings produced by (2), (3), and (4).**
- It was suggested by Jim Fuscoe that the distribution (e.g., SD) of fold changes might be an additional measure for ranking the sample pairs.
- **Each platform provider (Affymetrix, Agilent, GE Healthcare, and Illumina) was asked to provide a brief guideline of its preferred procedure of data analysis.**

However, each data analysis site has no obligation of completely following such guidelines.

- It was suggested for the **MAQC Bioinformatics Working Group to hold weekly teleconference to exchange ideas on data analysis** with representatives from the 11 data analysis organizations. Leming Shi will schedule teleconferences accordingly.

Face-to-Face Meeting, May 2-3, 2005 (FDA/CDER, Rockville, MD)

- The next MAQC face-to-face meeting will be held on **May 2** (8 am – 5 pm) and **3** (8 am – 12 pm), **2005**, FDA/CDER, Rockville, Maryland. **Block your calendar!** Announcement of meeting dates with hotel reservation information was sent to the MAQC list on March 22, 2005.
- **Please suggest topics that should be covered by the meeting agenda.**

MAQC 5th Teleconference Schedule

Date: **Friday, April 8, 2005**

Time: 12:00 am EST / 11:00 am CST / 9:00 am PST

Dial-in information and discussion topics will be distributed separately.