

June 11, 2003

To: Confirmed Participants of the ORNL GTL Facility III Workshop:

Thank you for participating in ORNL's GTL Facility III Workshop next Tuesday and Wednesday, June 17 and 18. The meeting will start promptly at 1:30 p.m. in the Sinclair Amphitheater in the Atlanta Airport Hilton. The goals for the workshop are to:

- Assess the needs of the biological community that will drive Facility III
- Define initial capabilities needed
- Define technology needs of the Facility
- Plan operational aspects of the Facility

In addition to plenary talks, two breakout sessions will be held. The first breakout will address **Defining the Needs of the Biological Community** and will include consideration of the following issues.

1. What key biological questions could be answered with new information from Facility III on the comprehensive identification and characterization of protein complexes?
2. What type of data or knowledge does the biological community need that should be provided by Facility III? [This is a general question that should identify technologies at a high level that will be discussed in separation breakout sessions.]
3. What information, supporting data, is needed for the biologist to have confidence in the data?
4. How should the data be made available to the biological community? What types of computational tools need to be available?
5. In what form(s) should samples/requests be submitted to the Facility? Should the Facility establish standard experimental and analytical "templates" or protocols to guide users on the capabilities of the Facility?
6. What skills, background, and capabilities will biologists need to make use of comprehensive data that Facility III will provide?

The second breakout will focus on technology needs for Facility III and will be subdivided into three working groups: **Growth and Expression of Protein Complexes**, **High Throughput Isolation and Identification**, and **Biophysical Characterization/Validation**. Issues to be addressed include:

1. What are the technologies needed for Facility III? [This is in the context of each specific breakout session.]

2. What science breakthroughs are required to enable the goals of the facility? What R&D is needed to fill gaps in current technologies that will be needed prior to Facility III assuming operation? What are longer term (5-10+ years) technology needs?
3. How can these technologies be scaled up for a high throughput production mode?
4. What are computational/bioinformatics needs associated with these technologies?
5. What quality assurance/validation/standardization procedures are needed in conjunction with technologies, data sets, sample preparation, and other aspects to ensure that the Facility provides the biological community highly valid information?

Cross-cutting issues, such as computing and QA needs, will be assessed throughout the workshop. A draft Agenda for the workshop is attached. Please note on the agenda that we have arranged for catered meals for invited participants. If you have any special dietary requests, please let Brenda Campbell know by COB Thursday, June 12, so that we may accommodate your request.

To facilitate our discussions, I ask that you familiarize yourself with the DOE mission challenges and the how the Underlying goals of the Genomes to Life program will support those mission challenges. You can access this information on the DOE GTL web site at <http://doegenomestolife.org/>. Additional information you may find useful includes the attached materials:

- "Genomes to Life: Realizing the Potential of the Genome Revolution," a six-page overview of GTL and the facilities.
- "User Facilities for 21st Century Systems Biology: Providing Critical Technologies for the Research Community." A PDF file of which the back 30 pages describes the facilities in the most currently available detail.
- "Facility Interactions," A PowerPoint file that depicts how Facility III interacts with other GTL facilities.

For your convenience, we have posted these materials on our web site at <http://www.ornl.gov/GenomestoLife/news/2003meeting.html>.

We look forward to your participation and to a productive workshop. Please feel free to contact me or Brenda Campbell (campbellbw@ornl.gov, 865/574-4860) if you have any questions.

Sincerely,



Michelle Buchanan, Director
Chemical Sciences Division