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Communicating Genomes to Life

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For the past 14 years, the Human Genome Management Information System (HGMIS) has focused on presenting Human Genome Project information and imparting knowledge to a wide variety of audiences. Our goal has been to help ensure that scientists could participate in and reap the scientific bounty of this revolution, that new generations of students could be trained in the science, and the public could make informed decisions regarding complicated genetics issues. Building on that experience, for the past 2 years HGMIS also has been involved in communicating about the DOE Office of Science Genomes to Life program, sponsored jointly by the Office of Biological and Environmental Research (BER) and the Office of Advanced Scientific Computing Research (OASCR).

The Genomes to Life systems biology program is a departure into a new territory of complexity and opportunity requiring contributions from teams of interdisciplinary scientists from the life, physical, and computing sciences, necessitating an unprecedented integrative approach to both the science and to science communication strategies. Because each discipline has its own perspective and language, effective communication, in addition to technical achievement, is highly critical to GTL's overall scientific coordination and success. Part of the challenge is to help groups speak the same language from the team-building and strategy-development phases through program implementation and the reporting of results to scientific and public audiences. Our mission is to inform and foster participation by the greater scientific community, science administrators, educators, students, and the general public. Specifically, GTL communications goals include the following:

- Facilitate science by fostering information sharing, strategy development, and communication among scientists and across disciplines to accomplish synergies, innovation, and increased integration of scientific knowledge.
- Help reduce duplication of scientific effort.
- Increase public awareness of the importance of understanding microbial systems and their capabilities.

In our work with interdisciplinary teams assembled by BER to hold discussions and develop scientific and programmatic strategies to accelerate GTL science, we create internal documentation Web sites that organize draft texts, presentations, graphics, and supplementary materials and links. From such team activities arose a number of important documents including more than 20 texts and presentations since October 2000:

- Roadmap and Web site, April 2001.
- Handouts for several BER and OASCR advisory committee meetings.
- Workshop reports.
- Numerous overview documents, including abstracts and flyers.
- Contractor-grantee workshop research abstracts book.

All GTL publications are on the public Web site. The GTL site also includes an image gallery, research abstracts, and links to program funding announcements and individual researcher Web sites. Site enhancements are under way.

In addition to the GTL Web site, we produce such related sites as Human Genome Project Information, Microbial Genome Program, Microbial Genomics Gateway, Gene Gateway, Chromosome Launchpad, and the CERN Library on Genetics. Collectively, HGMIS Web sites receive more than 10 million hits per month; one million text file hits from more than 270,000 user sessions that last an average of more than 12 minutes—well over the average time for Web visits. We are leveraging this Web activity to increase visibility for the GTL program.

HGMIS also identifies venues for special GTL symposia or presentations by program managers and grantees. We present the GTL program via our exhibit at meetings of such organizations as the American Association for the Advancement of Science, American Society for Microbiology, American Chemical Society, and the Biotechnology Industry Organization, as well as the G8 energy ministers' conference hosted by DOE Secretary Abraham.

As HGMIS anticipates communications needs and new avenues to more comprehensively

represent GTL science, we continually seek ideas for extending and improving communications and program integration efforts. We welcome suggestions and input. DOEGenomesToLife.org

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