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Source Molecular announces revolutionary web platform for pathogen risk assessment.

Web platform will combine state of the art pathogen occurrence databases with predictive models by using quantitative microbial source tracking assays to simulate pathogen presence and to predict public health outcomes.

September 25, 2007 - Miami, FL (USA). Source Molecular, a leading firm in microbial (fecal) source tracking is pleased to announce the development of a revolutionary web platform for pathogen risk assessment. This web platform will incorporate state of the art databases and predictive modes using quantitative microbial source tracking assays to simulate pathogen presence and public health outcomes.

Source Molecular has teamed up with gridGISTICS LLC, a cutting edge solutions provider of .Net 3.0 technology and BCS Laboratories, Inc., a leader in environmental virology and parasitology to develop the web platform. Final validation tests are currently being undertaken to ensure that the web platform is sufficiently robust for immediate use by researchers by the end of 2007.

This risk assessment tool will be open to all interested researchers provided they upload pathogen occurrence, dose-response, inactivation, or transport data. Of particular interest is pathogen data that is linked to the quantitative presence of a myriad of microbial source tracking markers. Allowing researchers unlimited access to the platform will generate greater insights into the relationship of microbial ecology relative to pathogen data and public health outcomes.

Background and Key Concepts

Traditional recreational water quality standards often fail in systems with no known fecal inputs such as those that contain reservoirs of indicators that are likely re-growing or accumulating in the environment. In most cases, levels of indicators also correlate poorly with the presence of the pathogens they are intended to predict. In order to circumvent this indicator paradigm, true pathogen/indicator relationships must be established. Microbial Source Tracking (MST), particularly quantitative MST, bridges the gap between pathogens and indicators by providing not only an identification of source, but also assigning a weight or rank to its presence as it pertains to human health. Thus, MST is directly related to Microbial Risk Assessment.

Microbial Risk Assessment is a process used to evaluate the likelihood of adverse human health effects occurring after exposure to a pathogenic microorganism. Effective risk assessment requires a significant amount of information with regard to pathogen occurrence, distribution, decay, infectious dose, etc.

Research specifically designed to provide data to be used in quantitative risk assessments is needed to fill existing data gaps. The web platform will mine existing pathogen occurrence data in different matrices and provide this information in a web platform. This web-based risk assessment interface will integrate microbial source tracking (MST), particularly quantitative MST, with pathogen occurrence, exposure, and dose-response data, thus providing not only an identification of source, but also an evaluation of its presence as it pertains to human health.

The Web 2.0 Portal is designed to capture inputs and allow users to view previous analysis runs as well various charts and reports. The portal will front-end the management of data pertaining to pathogen occurrence/persistence, dose-response, thermal inactivation, die-off rates, etc. The back-end algorithms will take the input profiles (DNA markers, etc.) and will utilize the mathematical models employed in standard microbial risk assessment (Haas et al., 1999) to perform high performance distributed Monte Carlo Simulations to arrive at various risk approximations.

The Source Molecular Corporation is a team of scientists and business professionals with expertise in genetic and molecular sciences. The company is dedicated to the field of microbial (fecal) source tracking using the most advanced genomic and molecular techniques. Source Molecular has analyzed thousands of samples making it one of the leaders in the microbial (fecal) source tracking industry.

BCS Laboratories is a leading virology and parasitology testing facility that incorporates a multidisciplinary team of researchers to assure the highest level of efficiency and reliable testing processes. BCS has analyzed thousands of viral and parasite samples since its inception. Additionally, BCS is a full scale environmental and food pathogen detection facility. BCS conducts innovative research and provides its services to local, state, and government agencies as well as to private organizations.

gridGISTICS LLC is a world class software company and the creator of Aware Server. The company was created in 2002 with the goal to make distributed computing easy. The company has since grown to address other related architectural concerns such as service virtualization, security, workflow, caching, deployment, synchronization, and human interaction. With world class engineers, gridGISTICS has solved these concerns with Aware Server; the all in one Service Virtualization, Service Oriented Architecture (SOA) and Distributed Computing Environment. Aware Server is engineered from the ground up to make development, deployment, management, and maintenance easy.

For more information concerning this web platform, please contact Mr. Thierry Sam Tamers at (1) 786-268-8363 or info@sourcemolecular.com