New host factor study data and capability for cross experiment comparison

IRD has released another four gene expression microarray studies including influenza A/CA/04/09 (H1N1) infection of mice and human Calu3 cell lines, A/Vietnam/1203-CIP048_RG1/2004 (H5N1) infection of mice, and SARS coronavirus infection of Calu3 cell lines. To access the data, mouse-over the “Search Data” menu and click the “Host Factor Data” option.

Besides providing host factor data, IRD also allows for customized data-mining analyses. In this release, IRD has added the capability to compare significant host factor lists from multiple biosets/experiments. This facilitates the identification of subsets of differentially expressed genes that are shared or unique under different experimental conditions or across different experiments.

To do so, on the host factor data landing page, click next to one or more studies to show the experiments associated with the study, then check the box next to one or more experiment names and click the “View Associated Biosets” button to load the Host Factor Bioset Information page. On the next page, select two desired biosets, mouse-over the “Run Analysis” button located above the bioset list table and click one of the Boolean analysis options: “Find shared factors”, “Find all factors”, or “Find unique factors”. This will generate a list of genes found to be significantly up- or down-regulated across your selected experiment(s).

Influenza serology data in IRD!

IRD just added influenza serological testing data generated from influenza virus surveillance studies by the NIAID-funded Centers of Excellence for Influenza Research and Surveillance (CEIRS). The serum samples collected from avian, non-human mammalian, and human subjects were tested for the presence of antibodies against specific Influenza serotypes. IRD provides both browsing and searching capabilities for viewing the data, accessible from the “Serology Experiments” option under the “Search Data” menu. More serology data will be added in future releases.

Spinning 3D protein structure movie

IRD imports experimentally-determined Influenza virus protein structures from the Protein Data Bank and provides various visualization options that include: displaying influenza sequence conservation, highlighting sequence features, ligands, immune epitopes, and specific residues on the structure. Now you can generate and download a movie of a spinning 3D protein structure of your interest. Check out the tutorial for details.

The July 2012 release of IRD is now available, visit www.fludb.org