Handling and Analysis of Large Scale High Content Screening Data

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Data management has become one of the central issues in High Content Screening (HCS) having high potential for predictive toxicity assessments. In particular HCS applying automated microscopy, requires a technology and system which is capable of storing and analyzing vast amounts of image and numeric data. HCS data include comprehensive information about the bioactive molecules, the targeted genes, and images as well as their extracted data matrices after acquisition. Here we describe a bioinformatics solution HCS LIMS (Laboratory Information Management System) for the management of data from different screening microscopes. Additionally, the data handling approaches used in HCS for image converting, compression and archiving of images are discussed.

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