



# Towards a Standard for HCS Data Interchange

Mark A Collins Ph.D

Senior Product Manager, Informatics

SCREENING

KINETICS

INFORMATICS

CELL-BASED ASSAYS

- The customer wants it
  - **CHI-HCA Conference Jan 2006**
    - *Joe Trask's User report*
    - *Encourage vendors to have a standard for images and data*
- The vendors are supportive
  - **CHI-HCA Conference Jan 2006**
    - *Cellomics encouraged the other vendors to collaborate with us and NIST to establish a standard*
      - General agreement
      - Not much action!
- It makes sense
  - **Expands the usage/utility of HCS**
  - **Opens up opportunities for innovative products that leverage the standard**
- Plenty of good examples
  - **E.g. Flow, Microarray**

- Standard for Images and Data
  - **An image standard *alone* is not enough**
    - *To analyse an image between different packages need more than just it's type and format*
      - How acquired
      - Magnification
      - Filters etc
    - *Need a standard for data interchange that uses appropriate meta data to describe HCS/HCA images and data*

- Self describing format of XML proposed
- Embrace and extend two existing standards
  - **OME – Open Microscopy Environment**
    - <http://www.openmicroscopy.org/>
  - **MIACA – Minimum Information for A Cellular Assay**
    - <http://miaca.sourceforge.net/>
- Action
  - **CHI-HCA 2007**
    - *Draft specification for HCS/HCA Data Interchange*
      - MIAHA?
        - » **Minimum Information for A High Content Assay**