

CTD² Data Sharing

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We have made CTD² data and methods publicly available

The screenshot shows the CTD2 Data Matrix website. The main table lists various data sharing projects, including 'Small Molecule (SM) Profiling' and 'Cancer Dependencies: Targets and Cell Lines (Broad)'. A sidebar on the left provides details for the 'Small Molecule (SM) Profiling' project, including a description of the assay and links to data files. A blue box highlights the 'Data Files' link in the sidebar, and a blue arrow points from this link to the 'Data Files' link in the main table.

Diseases or	Conv	Small Molecule (SM)	Contact
Targeting Cancer Dependencies with Small Molecules		Small Molecule High-Throughput Screening Data	Kenneth Smith
Small Molecule High-Throughput Screening Data			Barbara Weir
Small Molecule High-Throughput Screening Data			Chun Bu
Small Molecule High-Throughput Screening Data			Jinyu Li
Small Molecule High-Throughput Screening Data			Paul Clemons Aly Shamji

Small Molecule (SM) Profiling

Targeting Cancer Dependencies with Small Molecules

Small Molecule High-Throughput Screening Data

Click to navigate to the PubChem BioAssay page.

Small-molecule microarray projects:

- Small-molecule microarray assay for binding transcription factor STAT3
- Small-molecule microarray assay for binding transcription factor NF- κ B p50 subunit
- Small-molecule microarray assay for binding mutant tumor suppressor p53
- Small-molecule microarray assay for binding helix-loop-helix transcription factor ID4

High-throughput screening projects:

- Plate-reader assay for inhibition of isocitrate dehydrogenase IDH1 mutant R132H

Small Molecule Cancer Cell Line Profiling Data

Left click to view, right click to download.

Broad.CTD2.AUCData.txt Small-molecule profiling of genetically characterized cancer cell lines

Broad.CTD2.ranData.txt Small-molecule profiling of genetically characterized cancer cell lines

All CTD² data can be found here.

Data bulk download restriction:

CSHL

Cancer Dependencies: Targets and Cell Lines (Broad)

SM Profiling

SM Screening

Data Files

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http://ctd2.nci.nih.gov/DataMatrix/CTD2_DataMatrix.html

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Many web environments contain both data and tools

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CTD² Network Centers work with NCI on data sharing

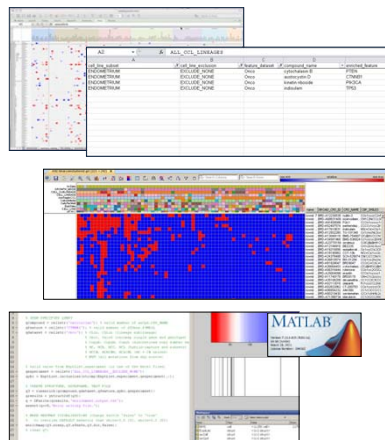
evolving NCI
'Data Matrix' Portal

what can we do quickly to
enhance the usability of
CTD² Data Matrix?

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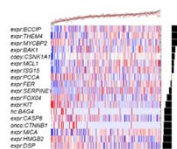
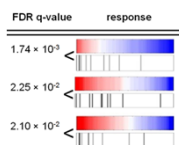
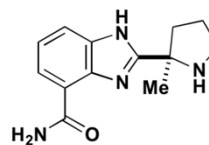
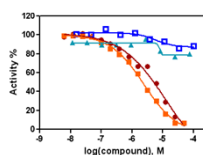
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CTD² Network Centers work with NCI on data sharing



new datasets, pre-computed
result sets, and code

FUTURE PLANS for NCI Portal

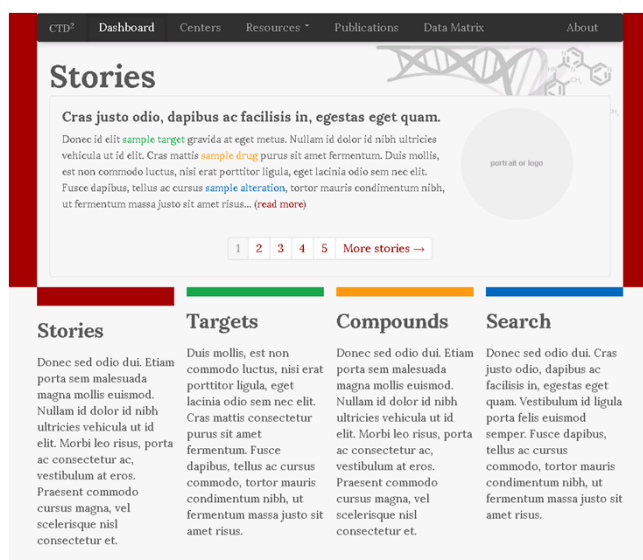


new visualizations for web-
based result display

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CTD² Dashboard aims to present stories from the Network



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CTD² Dashboard aims to present stories from the Network

The screenshot shows the CTD² Dashboard interface. At the top, it says "Hypotheses from the CTD² : Candidate Targets and Biomarkers". Below this is a search bar and a list of filters: Cancer genotype, Tumor type(s), Target or biomarker, Narrative, Evidence level, Literature support, and Contact. A callout box points to the "Evidence level" filter, stating "different levels of validation evidence will be defined by the Network". The main content area displays a list of hypotheses, each with a blue dot on the left and a red box on the right. The hypotheses are: BCR-ABL (Entrez) translocations, CML, target YY inhibitors active in cells (link to Portal dataset), project description page, compound XX active in humans (PubMed ID), target X (Entrez), ovarian cancer, project description page, inducible shRNA active in mice (PubMed ID), links to other PMIDs, eIF-4A, eIF-4A as biomarker for mTOR therapy, project description page, compound XX active in cell lines (link to Portal dataset and CCLE), links to other PMIDs, Dr. X (email), etc.

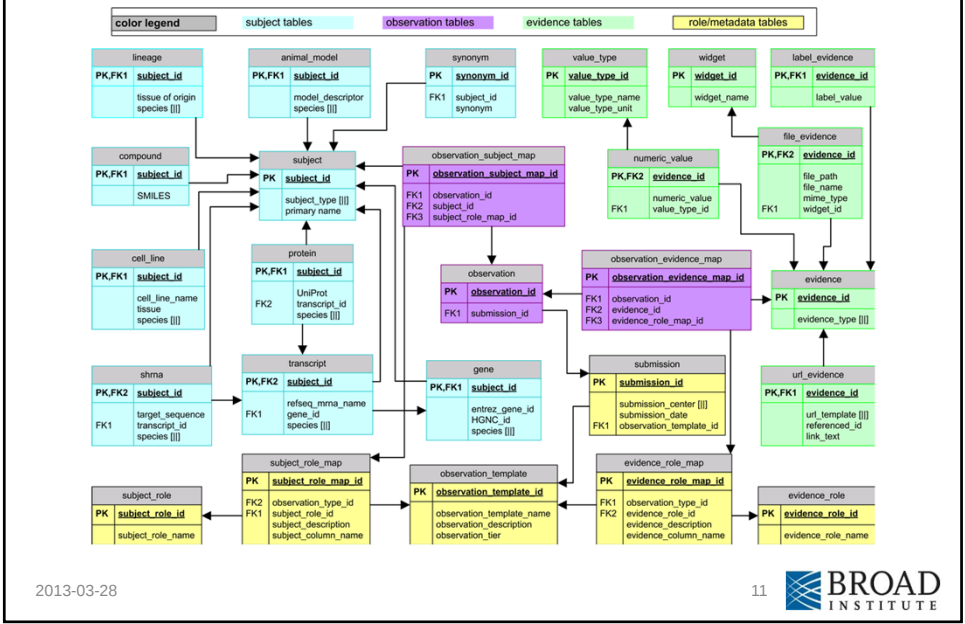


CTD² Dashboard aims to present stories from the Network

The screenshot shows a detailed view of a network story on the CTD² Dashboard. The top section includes "Target(s): CEBPB, CEBPD, STAT3" with links to NCBBI and GeneCards, and "Tumor Context: GBM glioblastoma multiforme" and "Genomic context: SNB19" with a link to the genomic context. A "network context" diagram is shown on the right. The main text area contains a "CTD² Network Stories" section with a paragraph about CEBPD and STAT3 reprogramming neural stem cells, followed by "Publications: Carro, M et al., Nature 2010; Chen, J et al. in review". Below this is a "CTD² Network Analyses and Datasets related to this compound" section with "Tier I Data: Discovery using Master Regulator Analysis", "Tier II Data: Validation in multiple Mesenchymal GBM lines", and "Tier III Data: In vivo validation in mouse xenografts". A "Small Molecules: 5-FU, Etoposide, ..." section is also present, along with "Biomarkers: CEBPB, pSTAT3, ...". A "Target Validated" section shows "Target Validated" with a green checkmark and "Not validated" with a red X.



Dashboard maps data subjects to evidence types for display

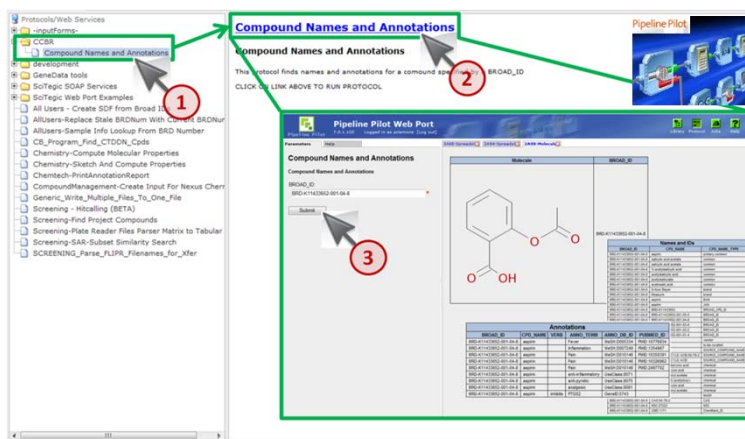


Dashboard maps data subjects to evidence types for display

tabular data templates capture relationships (per each experiment type)

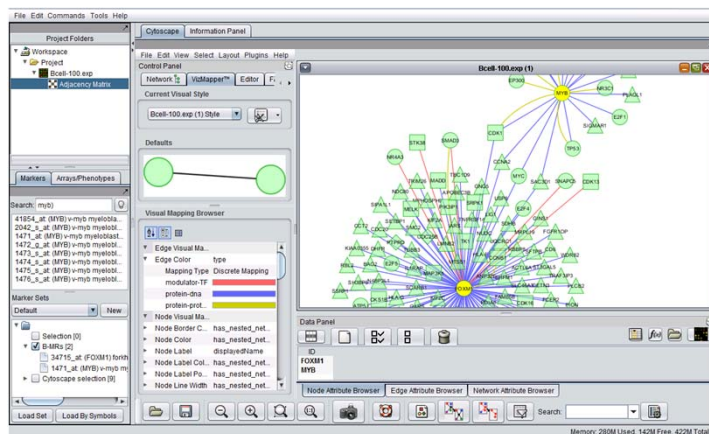


CTD² Dashboard leverages capabilities of participating groups



database housing small-molecule names/synonyms and target annotations

CTD² Dashboard leverages capabilities of participating groups

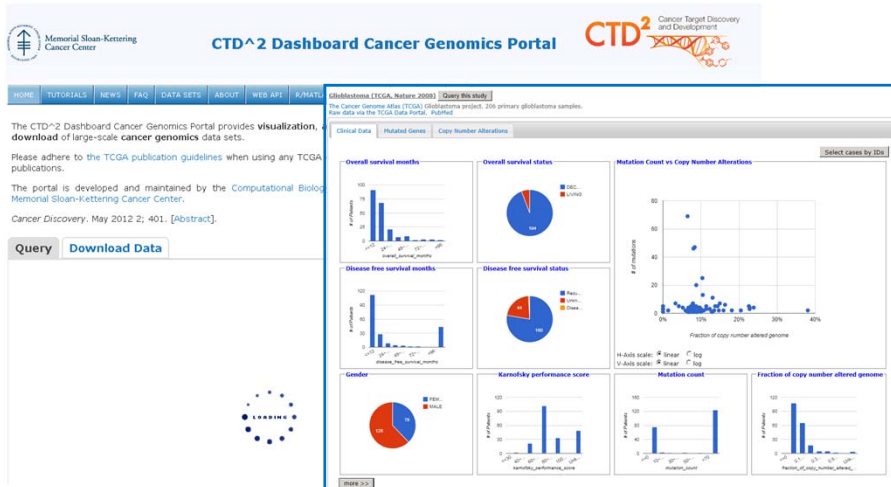


workbench for network biology and visualizations

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CTD² Dashboard leverages capabilities of participating groups

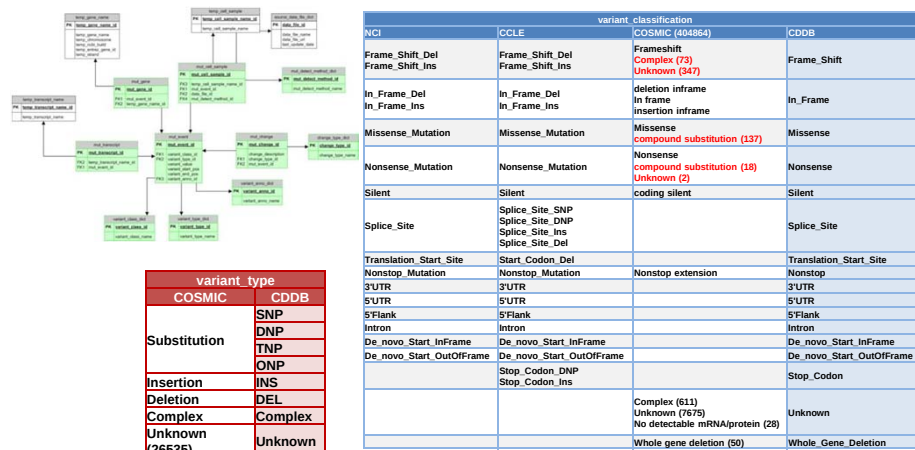


integrated portal for cancer genomics analyses

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CTD² Dashboard leverages capabilities of participating groups



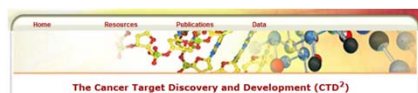
relational schema and vocabularies for cancer cell mutations

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What does LINCS have to do with CTD²?



has constituted a data working group to discuss formats, metadata, contexts, and data-release policies for sharing

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LINCS and CTD² data working data working groups can work together and learn from each other

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