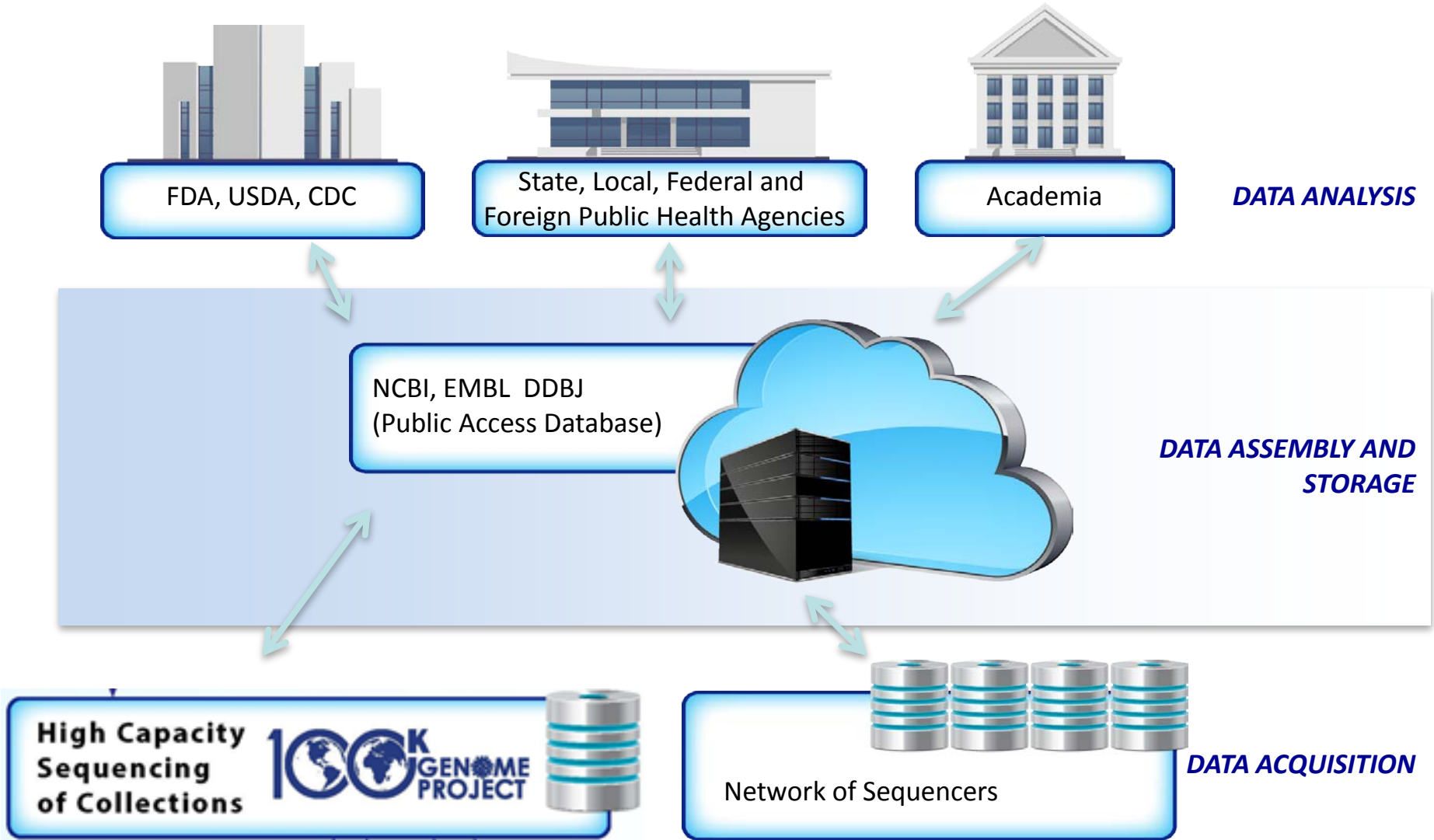


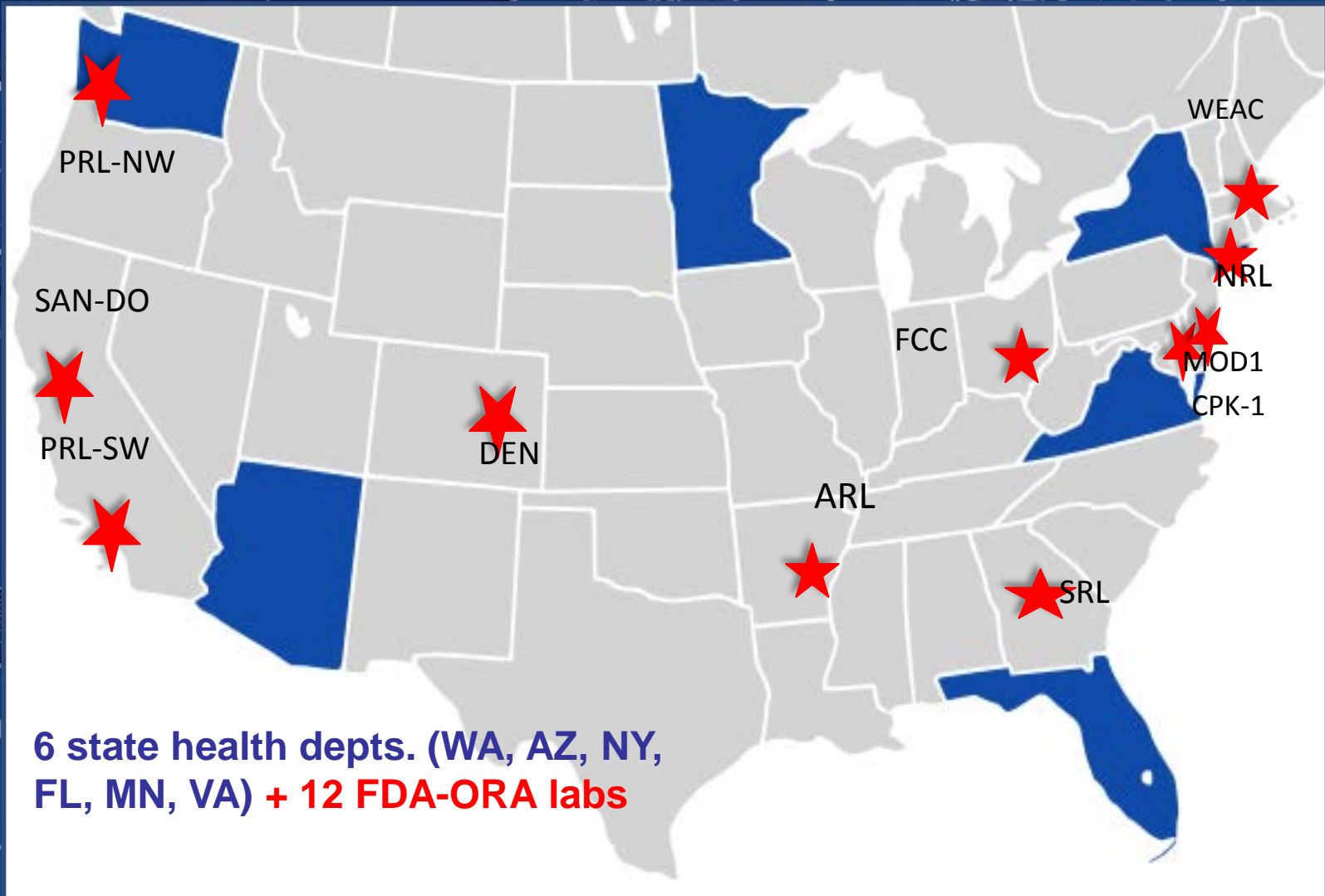


GenomeTrakr: a pilot source tracking network of NGS desktop sequencers

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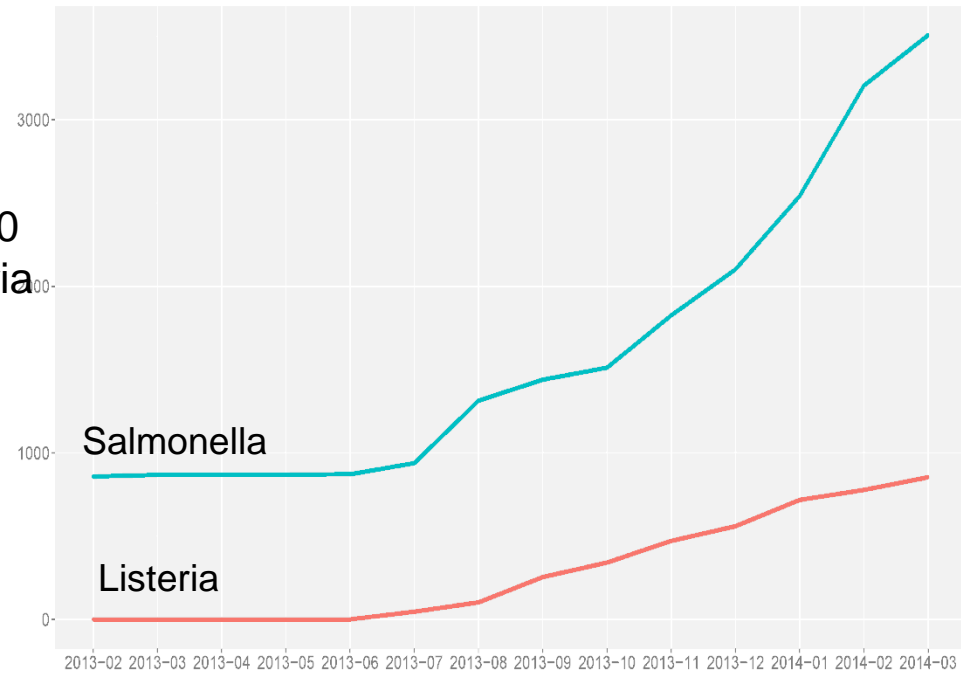


Administración Nacional de
Laboratorios e Institutos de Salud

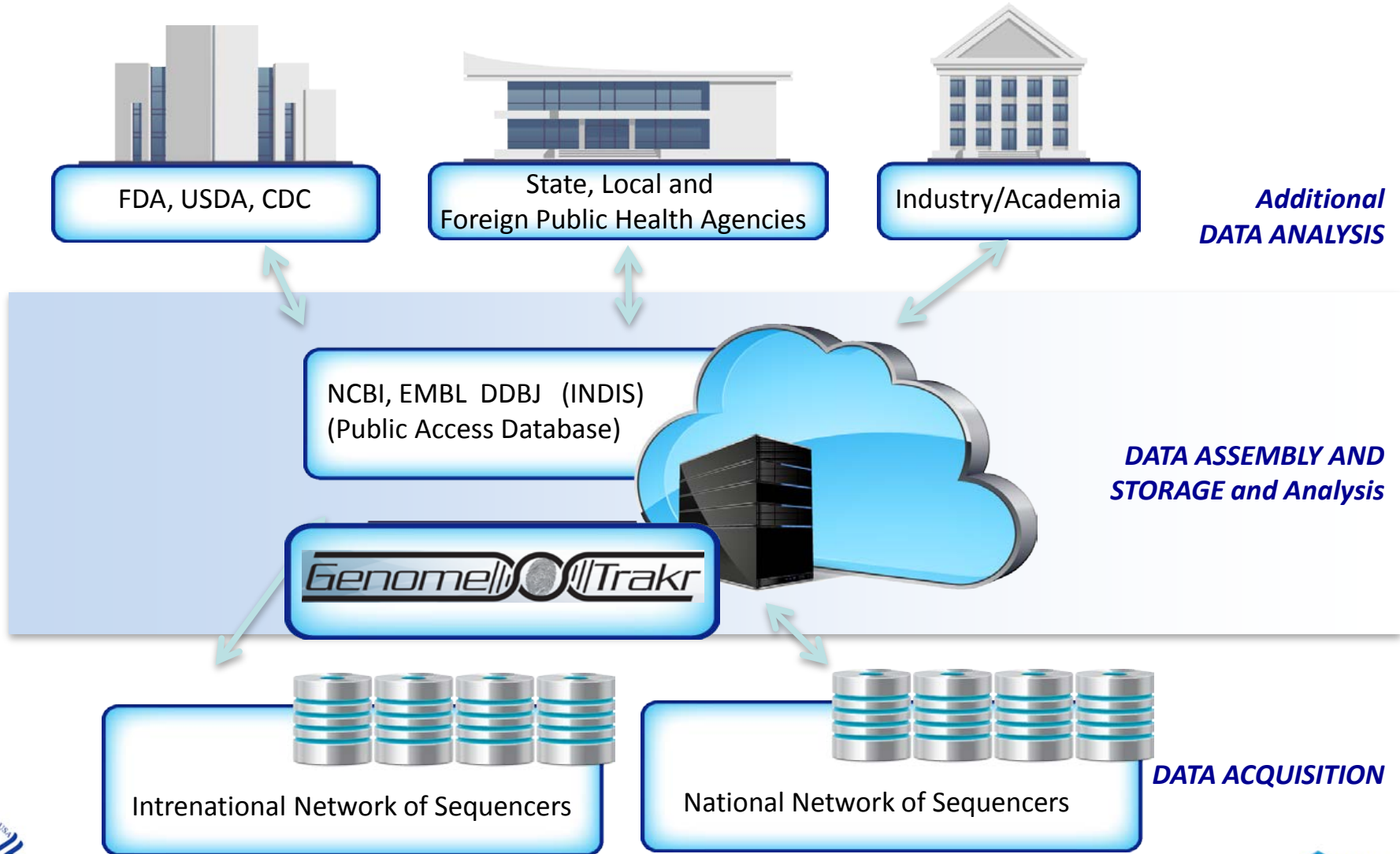


Current status

- Data from the GenomeTrakr project has provided FDA with specific data needed to regulatory action in several cases.
- NGS network is reliable, efficient and can provide very good location specificity of contaminated facilities.
- The project has sequenced more than 7000 Salmonella isolates, more than 1800 Listeria isolates, and closed more than 100 reference genomes. Our current rate is about 600 - 700 sequences a month. Everything is publicly available at NCBI
- There is a need for increased number of well characterized environmental (food, water, facility, etc.) sequences that need to be acquired along with clinical samples
- Highly successful partnership with CDC on real-time tracking of Listeria outbreaks



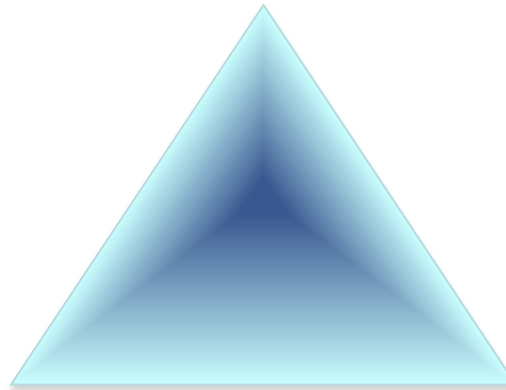
Our Current Model – Publicly available data



Key elements of a national WGS network

\$NIGBI

Sequence data storage,
data provider & analysis



Labs to generate
WGS data

\$\$\$

Network management
and coordination

\$\$

Needs/concerns

- Improved informatics and software development
 - Easier upload to SRA
 - Widely available commercial solutions
 - Custom solutions
 - Automated identification of AMR, virulence markers, etc
- Form of data presentation/analysis to different groups
 - Physicians
 - Epidemiologists
 - Regulatory agencies
 - Researchers

Transparency is Key: Data and metadata, Data Analysis Pipeline for Interpretation of Results

NCBI Resources How To

reltime My NCBI Sign Out

BioProject Search

Limits Advanced Help

Display Settings: Send to:

Food and Drug Administration, Center for Food Safety and Applied Nutrition: Accession: PRJNA183844 ID: 183844
GenomeTrakr Project

Currently encompasses whole genome sequencing of cultured pathogens as part of a surveillance project for the rapid detection of outbreaks of foodborne illnesses. Whole genome sequencing of cultured Salmonella as part of the US Food and Drug Administration surveillance project for the rapid detection of outbreaks of foodborne illnesses.

Related Resources:

- FDA Whole Genome Sequencing Program (WGS)
- NCBI Pathogen FTP
- Salmonella Outbreaks

Project Type: Umbrella project (**Subtype:** Disease)

Relevance: Agricultural, Medical, Industrial, Environmental

Keyword: GMI

Project Data:

Resource Name	Number of Links
SEQUENCE DATA	
SRA Experiments	4713
PUBLICATIONS	
PubMed	1
OTHER DATASETS	
BioSample	10262

SRA Data Details

Parameter	Value
Data volume, Classes	2,089
Data volume, Tbytes	1.29

Related Information

- BioProject
- BioSample
- Data projects
- PubMed
- SRA

Related Resources

- FDA Whole Genome Sequencing Program (WGS)
- NCBI Pathogen FTP
- Salmonella Outbreaks

Recent activity

- Food and Drug Administration, Center for Food Safety and Applied Nutrition: [C BioProject](#)
- Ascertainment Bias - SNP FAQ Archive [Bookshelf](#)
- Vibrio parahaemolyticus strain CFSAN07456, whole genome sho [Nucleotide](#)
- 245882[BioProject] AND wgs master[proj] (55) [Nucleotide](#)
- BioSample for BioProject (Select 245882) (57) [BioSample](#)

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CFSAN-Biostatistics

Filters Find a repository...

snp-pipeline Python ★ 0

SNP Pipeline is a pipeline for the production of SNP matrices from sequence data used in the phylogenetic analysis of pathogenic organisms sequenced from samples of interest to food safety.

Updated 4 days ago

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Join the GenomeTrakr communication site

Genomics for Food Safety Communication Site Search: Genomics for Food Safety Communication Site ▾

Activity Task Calendar Documents Wiki **Forums** Settings

Forums

Forum	Topics	Messages	Last message
General Discussion Forum for general discussion	5	15	Added by Peter Evans 22 days ago RE: 2014 CFSAN Proficiency Testing Exercise -- Whole Geno...
wet-lab issues/discussion Questions pertaining to the wet-lab portion of genome data collection	2	3	Added by Ruth Timme 11 days ago RE: CFSAN Proficiency Testing Exercise -- Q&A and discussion
MISeg discussions for issues related to the Illumina MISeg	1	2	Added by Aki Harada 18 days ago RE: Focus Mirror error
Genome Data Transfer Genome Data transfer	0	0	
within FDA data transfer for labs within the FDA	0	0	
external partners data transfer for labs outside the FDA environment	0	0	
Bioinformatics tools Software for sequence analysis and visualization	0	0	
Genome Workbench NCBI's tree-visualization tool	4	20	Added by Ruth Timme 5 days ago RE: Metadata Inconsistencies between BioProject page and ...

Also available in: [Atom](#)

<http://genomelc.jifsan.org>

★ Acknowledgments ★



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WDH Brian Hyatt Chen Li William Glover

CDC Cheryl Tarr, Eija Trees, Duncan MacCannell, John Besser and colleagues

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Lisa Alves Susan Knowles Omayma Al-Awar and colleagues

CLC Bio David Michaels Cecilia Boysen and colleagues





Questions

<http://www.fda.gov/Food/FoodScienceResearch/WholeGenomeSequencingProgramWGS/ucm363134.htm>