Dovetail GENOMICS
Part of Cantata Bio LLC

UNLOCKING MECHANISMS OF GENE REGULATION, DEVELOPMENT, AND DISEASE BIOLOGY

DOVETAIL 3D GENOMICS BIOINFORMATIC SERVICES

Full Service • **Flexible Integration** • **Accelerate Research**

Applications

- **Gene Expression:** Unravel gene regulatory mechanisms during development and disease progression.
- **Drug Development:** Discover novel drug targets and therapeutic strategies.
- **Biomarker Discovery:** Identify biomarkers for diagnostic and prognostic purposes.
- **Developmental Biology:** Gain insights into cellular reprogramming and cell fate determination.
- **Oncology:** Investigate the impact of genetic variants on chromatin structure and gene expression.

Primary Analysis

Data Processing
- Alignment
- Pair Coordinates
- QC
- Contact Matrix

Secondary Analysis

Feature Calling
- A/B Compartments
- TADs
- Loops
- Comparison

Tertiary Analysis

Annotation
- Gene Annotation
- GO Analysis

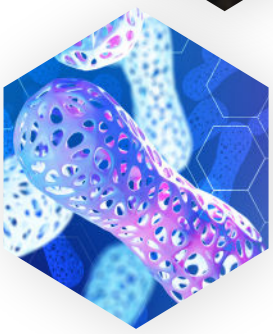
Consulting Serives

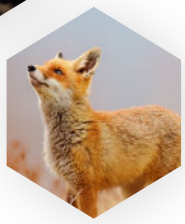
Custom Analyses
- Collaborative
- Access the Experts
- Flexible Solutions

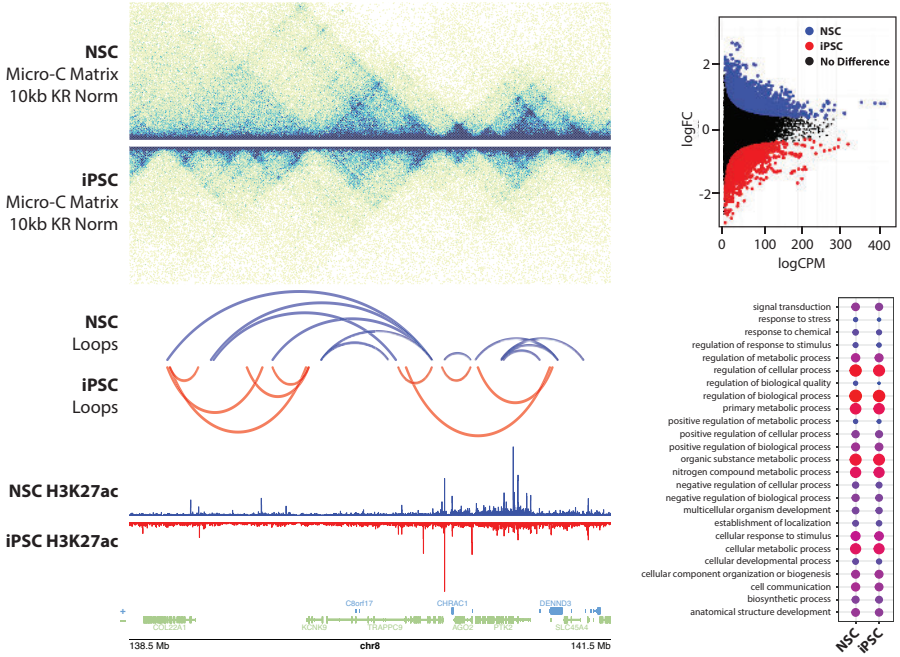
Complete Bioinformatics Solutions Enabling Sample to Insight

Whether you are adding our bioinformatics services to a service project or to your own data generated using Dovetail® Kits, we can get you answers. Our services are compatible with Dovetail® Micro-C, Dovetail® HiChIP and Dovetail® Pan Promoter Panel datasets.

- Our full bioinformatics pipeline takes FASTQs to biological insights.
- Paired sample comparisons (e.g. non-treated vs. treated, normal vs. disease) identifies chromatin conformation differences.
- Gene annotation provides context to your detected chromatin conformation features. Gene ontology analyses uncovers biological insights.
- Available consulting services offer tailored analysis solutions – benefit from customized analysis pipelines, integration of multi-omic data analysis pipelines, and integration of multi-omic data.







Comparison between iPSC and NSC cells in a developmental system. *Plots show 3D genomics signal, chromatin loops, and enhancer signal. Differences between the two conditions are captured in the MDplot and summarized with a GO analysis.*

Why Choose Our 3D Genomics Services?

- Chromatin Conformation Capture experts: Our bioinformatics team specializes in 3D genomics analysis.
- Verified workflows: We employ peer-reviewed tools to ensure quality results from well vetted analysis workflows.
- Biological Insights: Our approach uncovers crucial topological features and regulatory interactions.
- Flexible services: We work closely with you to understand your research objectives and match you with the appropriate resources.
- Timely Results: Our piplines leverage high-performance cloud computing enabling processing of large datasets quickly.

Deliverables

Stage	Primary	Secondary	Tertiary	Consulting
Deliverables	Raw Data (.fastq) Alignment (.bam) Coverage (.bigwig) Valid Pairs (.pairs) Matrix (.cool & .hic) QC stats (.txt)	A/B Compartments (.bed) TADs (.bed) Loops (.bedpe) Comparison of statistically differentiated logFC (.txt)	Annotated Interactions (.bedpe) GO Summary (.txt)	User defined deliverables

Contact us today to discuss how our 3D genomics services can accelerate your research in gene regulation, development, and disease biology!

Cantata Bio

© 2023 Cantata Bio www.cantatabio.com
We are Cantata Bio. Delivering powerful, novel NGS-based products and services.

Quality Control
Actionable Data
Integratable Outputs