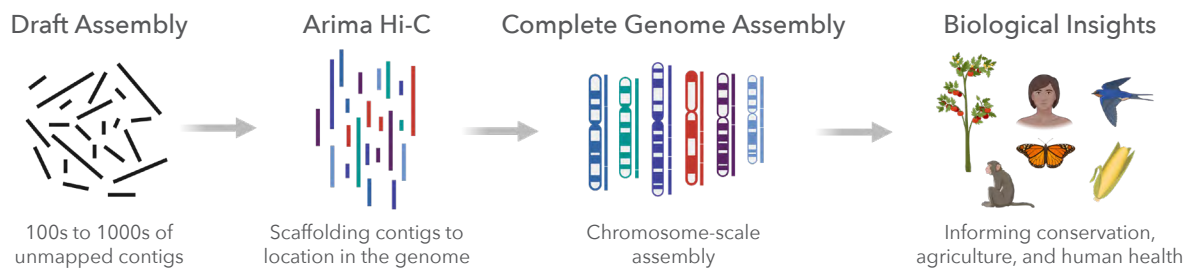


Discover the Power of 3D Genomics for Genome Assembly

Leverage Arima Hi-C technology to empower your research in conservation biology, agriculture, and human health.

Why include Arima Hi-C in your genome assembly pipeline? Because you cannot achieve phased, chromosome-scale genome assemblies with sequencing alone.



Four Ways Arima Hi-C Data Can Improve Your Genome Assemblies^{1,2}

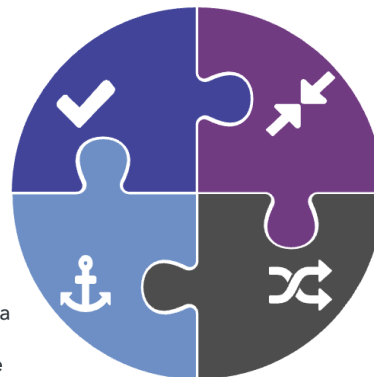
Scaffolding

Ordering and orienting contigs

Incorporating 3D chromatin proximity data enables interaction probabilities to be used to correct order and orientation of contigs for a linear representation of scaffolds in a genome.

Anchoring contigs to chromosomes

Leveraging 3D information to identify centromeric and telomeric regions, Hi-C data is used to characterize breakpoints and clearly delineate chromosomes in a genome assembly.



Fixing mis-assemblies and identifying structural variation

Visualizing Hi-C data mapped to sequence data reveals non-linear patterns that denote potential structural variation and incorrect assembling of contigs for manual correction.

Phasing haplotypes

Utilizing predictable patterns of intra- vs inter-chromosomal interactions to cluster and scaffold individual haplotypes, Hi-C data helps phase contigs by clustering before scaffolding.

Why Choose Arima Hi-C for Your Genome Assembly?

Arima is the chosen Hi-C solution for some of the largest and most diverse genome sequencing consortia because of the quality, consistency, and user-friendly workflows that “just work,” regardless of the species.



Arima’s science-first approach with outstanding service and support



Compatible with the latest assembly and scaffolding pipelines³

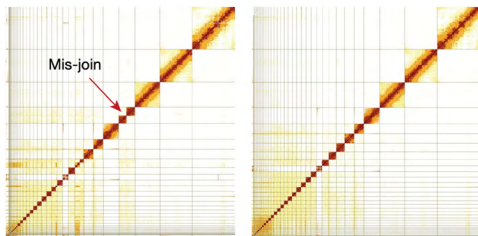


Proven performance and quality trusted by large consortia so that you can focus on genome biology



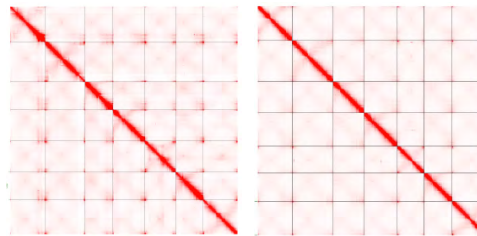
Chromosome-Scale Genome Assemblies: The Foundation for Biological Insights

Arima makes scaffolding of contigs quick and easy for chromosome-spanning contiguity in any assembly. See how scientists use Arima Hi-C to generate reference-quality assemblies across a range of species.



Comparative analysis of Anna's hummingbird genome assemblies to optimize sequencing and assembly strategy for high-quality reference genomes.

Rhie, A., et al. (2021). [Towards complete and error-free genome assemblies of all vertebrate species](#). *Nature*.



Hi-C heatmaps place contigs from two different lentil species into the correct order and orientation and build scaffolds to represent the chromosome-scale structure of these genomes.

Ramsay, L., et al. (2021). [Genomic rearrangements have consequences for introgression breeding as revealed by genome assemblies of wild and cultivated lentil species](#). *BioRxiv*.

Explore >200 papers using Arima Hi-C for genome assembly at arimagenomix.com/publications

Get Started with Arima Hi-C for Genome Assembly

- Utilize a variety of sample types, including plant tissue, cell culture, vertebrate tissue samples, and invertebrates⁴
- Fast and user-friendly workflow to go from sample to Hi-C library in 6 hours
- Quality you can trust, with built-in QC steps to ensure you get reliable sequencing results every time



8

Reaction kit to get you started

48

Reaction kit for high-volume projects

Arima Services: let our scientists share their expertise in sample prep and library construction for projects of any size.

From sample to chromosome-scale genome assembly



Hi-C Prep

Easy to follow, rapid 6-hour protocol



Library Prep

Use Arima Library Prep Module for standard or low input samples



Sequencing

200 million paired-end reads per Gb of genome



Data Analysis

Assemble and scaffold with tools of your choice

Resources

1. Infographic: [Five Research Areas Improved with Chromosome Scale Reference Genomes](#)
2. Blog: [Defining a High-Quality Genome Assembly and How Hi-C Can Get You There](#)
3. Blog: [Tools for Getting the Most Out of Hi-C Data for Genome Assemblies](#)
4. Case Study: [Chromosome-Scale Assembly Reveals Complex Chromosomal Fusions in a Fritillary Genome](#)
5. Documentation: [Arima Hi-C for Genome Assembly](#)

Contact an Arima Genomics scientist for a quote or project consultation.

