

Curio Genomics Revolutionizes Agrigenomics with Launch of Ultra-Fast, Scalable Imputation Solution

ANN ARBOR, MI, UNITED STATES, April 15, 2024 /EINPresswire.com/ -- Curio Genomics today announced the integration of breakthrough imputation analysis into its acclaimed CURIO™ agrigenomics software platform. CURIO now empowers large-scale genotyping programs with low-pass sequencing (LPS), delivering accurate, almost instant results for breeders regardless of sample number, size, species, or prior bioinformatics expertise.



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*Hikmet Budak, Ph.D.,
Professor, Western Arizona
University*

CURIO utilizes best-in-class imputation algorithms, such as Beagle and GLIMPSE2, in a user-friendly platform so geneticists can answer important questions themselves, without waiting for bioinformaticians to run extensive pipelines. “Breeders and bioinformatics scientists have been held back by the bottlenecks of traditional imputation methods,” said Shawn Quinn, Chief Technology Officer at Curio Genomics. “The CURIO platform was architected from the ground up for speed and adaptability. CURIO’s imputation removes a longstanding barrier, accelerating the transformative impact of LPS in animal and plant breeding programs globally.”

Key Benefits of Curio’s Imputation Solution:

- Unmatched Speed: Minutes, not days or weeks, to process data for hundreds or tens of thousands of samples.
- Species-Agnostic: Proven performance across livestock, crops, and other economically important organisms.
- Massive Scalability: Cost-effective analysis for projects of any size, democratizing access to genomic insights.

- User-Empowering: Intuitive graphical interface empowers breeders while offering powerful customization tools (CURIO™ PowerTools) for bioinformatics experts.
- Visual and Actionable: Seamless integration with CURIO™ Reports and CURIO™ Insights for dynamic variant visualization and data-driven breeding decisions.

Accelerating the LPS Revolution

With its dramatically reduced cost, LPS paired with Curio's imputation is poised to revolutionize large-scale genotyping, unlocking the potential to replace costly genotyping arrays. This shift has profound implications for breeding program efficiency, genetic gain, and the sustainability and precision of agricultural practices.

"Low-pass sequencing now offers a compelling alternative for our genotyping programs, but imputation analysis has been a critical bottleneck," said Hikmet Budak, PhD, a leading crop genomics expert and Professor at Western Arizona University. "Curio's imputation analysis implementation is impressive for its speed and that the results are immediately available for visualization and analysis inside its powerful analysis platform."

About Curio Genomics

Curio Genomics is accelerating agriculture genomics research to deliver better products to the market. Curio Genomics' proprietary parallelized bioinformatics software and data platform, CURIO™, enables unprecedented data processing speed of large and complex genomic data, delivering genomic data to breeders in minutes through intuitive and easy to use interfaces, and all without the need to engage scarce bioinformatics experts. For information about Curio Genomics, visit www.curio genomics.com and follow on Twitter and LinkedIn.

John Prista Freshley

Curio Genomics

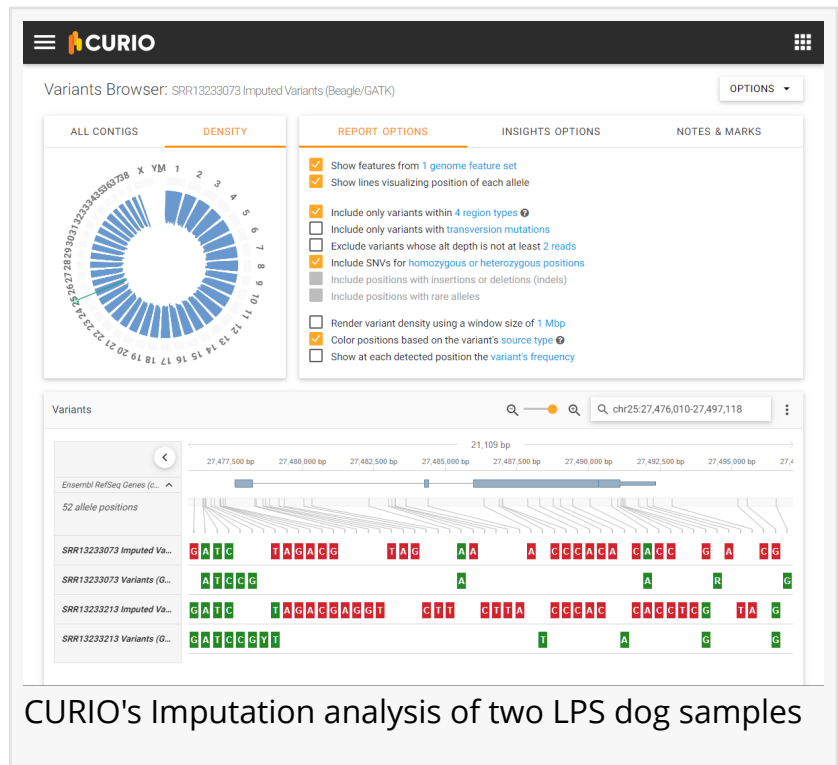
+1 734-926-5530

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CURIO's Imputation analysis of two LPS dog samples

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