



ANSWERS FOR CANCER

## Genetron Health Announces Publication of Enhanced Variant Caller Performance Data in Briefings in Bioinformatics

November 15, 2021

### Findings Suggest Promising Applications for UVC in Clinical NGS in Addition to Accurate Detection of Cancer Mutations

BEIJING, Nov. 15, 2021 (GLOBE NEWSWIRE) -- Genetron Holdings Limited ("Genetron Health" or the "Company", NASDAQ: GTH), a leading precision oncology platform company in China that specializes in molecular profiling tests, early cancer screening products, and companion diagnostics development, today announced the publication of a new computational method in *Briefings in Bioinformatics* (2020 Impact Factor: 11.62) demonstrating performance improvements of the UVC (Unity-of-opposites Variant Caller) algorithm, an important component of Genetron's bioinformatics platform. The full computational method can be found [here](#).

UVC is a patent-protected algorithm developed by Genetron for use in the company's NGS products for optimization of the variant calling process. The accurate detection of somatic variants is crucial to the diagnosis, prognosis, and treatment monitoring of cancer.

The publication describes the outperformance of UVC versus other variant callers on the GIAB germline truth sets, 192 scenarios of *in silico* mixtures simulating 192 combinations of tumor/normal sequencing depths and tumor/normal purities, the GIAB somatic truth sets derived from physical mixture, and the SEQC2 somatic reference sets derived from the breast-cancer cell-line HCC1395. UVC achieved 100% concordance with the manual review conducted by multiple independent researchers on a 71-gene-panel dataset derived from 16 patients with colon adenoma.

Key findings<sup>1</sup> from the publication include:

- By utilizing extreme-case analysis to build statistical models, researchers found new principles to improve variant calling.
- Researchers performed comprehensive evaluation on all NGS scenarios that were evaluated involving different samples, assays, sequencing platforms, tumor and normal purities and sequencing depths, human reference genomes, aligners, and calling modes. Their evaluation shows that UVC indeed performs well in all the evaluated NGS scenarios.
- UVC may have important applications in clinical NGS and is especially useful for accurately detecting cancer mutations.

"Continuing R&D to optimize our products and generating clinical data to drive adoption and utilization of our tests remains a top priority at Genetron," said Sizhen Wang, Co-Founder and CEO of Genetron Health. "We are very pleased with the findings in this publication and the execution from our bioinformatics team to drive growth initiatives. We plan to implement these findings from UVC to enable higher sensitivity and precision with our tests and to provide additional actionable insights for healthcare providers."

### About the Journal

Briefings in Bioinformatics is an international forum for researchers and educators in the life sciences. The journal will also be of interest to mathematicians, statisticians and computer scientists who apply their work to biological problems. The journal publishes reviews for the users of databases and analytical tools of contemporary genetics, molecular and systems biology and is unique in providing practical help and guidance to the non-specialist in computerized methodology. Papers range in scope and depth, from the introductory level to specific details of protocols and analyses encompassing bacterial, plant, fungal, animal and human data.

Detailed subject areas covered by the journal include: genetic studies of phenotypes and genotypes, mapping, DNA sequencing, expression profiling, gene expression studies, microarrays, alignment methods, protein profiles and HMMs, lipids, metabolic and signalling pathways, structure determination and function prediction, phylogenetic studies and education and training. For more information, please visit: <https://academic.oup.com/bib>

### About Genetron Holdings Limited

Genetron Holdings Limited ("Genetron Health" or the "Company") (Nasdaq:GTH) is a leading precision oncology platform company in China that specializes in cancer molecular profiling and harnesses advanced technologies in molecular biology and data science to transform cancer treatment. The Company has developed a comprehensive oncology portfolio that covers the entire spectrum of cancer management, addressing needs and challenges from early screening, diagnosis, and treatment recommendations, as well as continuous disease monitoring and care. Genetron Health also partners with global biopharmaceutical companies and offers customized services and products. For more information, please visit <https://ir.genetronhealth.com/>.

### Safe Harbor Statement

This press release contains forward-looking statements. These statements are made under the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. Statements that are not historical facts, including statements about the research results and genomic research, Company's One-Step Seq Method, studies on optimizing clinical routine diagnosis methods are forward-looking statements. Forward-looking statements involve inherent risks and uncertainties, and a number of factors could cause actual results to differ materially from those contained in any forward-looking statement. In some cases, forward-looking statements can be identified by words or phrases such as "may", "will," "expect," "anticipate," "target," "aim," "estimate," "intend," "plan," "believe," "potential," "continue," "is/are likely to" or other similar expressions. Further information regarding these and other risks, uncertainties or factors is included in the Company's filings with the SEC. All information provided in this press release is as of the date of this press release, and the Company does not undertake any duty to update such information, except as required

under applicable law.

## References

1. Xiaofei Zhao, Allison Hu, Sizhen Wang, and Xiaoyue Wang. Calling small variants using universality with Bayes-factor-adjusted odds ratios. *Briefings in Bioinformatics*, BIB-21-0990.R1, 2021

## Investor Relations Contact

### US:

Hoki Luk

Head of Investor Relations

Email: [hoki.luk@genetronhealth.com](mailto:hoki.luk@genetronhealth.com)

Phone: +1 (408) 891-9255

Philip Trip Taylor

Vice President | Gilmartin Group

[ir@genetronhealth.com](mailto:ir@genetronhealth.com)

## Media Relations Contact

Yanrong Zhao

Genetron Health

[yanrong.zhao@genetronhealth.com](mailto:yanrong.zhao@genetronhealth.com)

Edmond Lococo

ICR

[Edmond.Lococo@icrinc.com](mailto:Edmond.Lococo@icrinc.com)

Mobile: +86 138-1079-1408

[genetron.pr@icrinc.com](mailto:genetron.pr@icrinc.com)