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New Algorithm for More Accurate Analysis of QPCR Data



DESCRIPTION

The mathematical equations used to describe the polymerase chain reaction (PCR) do not align with the nature of the data. This limits accuracy when measuring the number of DNA copies in a quantitative PCR (QPCR) reaction, especially when the target gene is weakly expressed. The *featured technology* is an entirely new description of the PCR process based on fundamental characteristics of the polymerase enzyme along with a computer algorithm that employs this description to better analyze QPCR data. This new approach

to QPCR analysis allows the use of the entire discrete data set across the full 50-cycle course of a QPCR reaction. Thus, it provides improved reliability when determining expression levels of the target gene. This technology can add considerable value to diagnostic applications where accurate detection of rare signals is essential.

KEY ASPECTS

- Entirely novel mathematical description of the QPCR reaction
- New approach to QPCR analysis allows use of data from all 50 cycles of the QPCR reaction
- A computer algorithm that can be used to more accurately quantify QPCR data.

PUBLICATIONS

• Detailed manuscript available upon request: "Quantitative PCR as a Discrete Dynamical System."

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