

# Nanogen Issued Patent for Enhancing Molecular Biological Reactions

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Nanogen, Inc., developer of molecular and point-of-care diagnostic products, announced today that it was issued U.S. Patent No. 6,780,584, "Electronic Systems and Component Devices for Macroscopic and Microscopic Molecular Biological Reactions, Analyses and Diagnostics," by the U.S. Patent and Trademark Office. The '584 patent covers the design, development, and **capability of an electronic system to carry out and control multi-step and multiplex reactions in macroscopic or microscopic formats**. The system described in the patent is at the core of Nanogen's electronic microarray technology, which uses electricity to move and concentrate biological samples in miniature formats for diagnostic applications.

The '584 patent covers technology that controls biological reactions by managing the localized concentration of two or more reaction-dependant molecules and their reaction environment. This approach greatly enhances the rate and specificity of the molecular biological reaction, as evidenced by the Nanogen microarray's ability to accelerate molecular binding up to 1,000 times faster than traditional passive methods. The technology described in this broad patent enables control over a wide range of molecular reactions involved in molecular analyses and diagnostics, including nucleic acid hybridizations and amplification, antibody and antigen reactions, and more.

"Nanogen's unique approach of integrating sophisticated microelectronics and molecular biology made the NanoChip(R) Electronic Microarray the first to be used in developing fast and accurate

molecular diagnostic tests," said Howard C. Birndorf, Nanogen chairman and chief executive officer. "With the issuance of patent '584, Nanogen increases its intellectual property portfolio enabling the continued development and commercialization of advanced diagnostics that provide physicians and patients valuable healthcare information."

Source: Nanogen

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