Mark Kokoris

Head of SBX Technology, Co-founder of Stratos Genomics

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The Sequencing by Expansion Journey - From Idea to Breakthrough

ABSTRACT: Sequencing by Expansion (SBX) was conceived as a solution to the fundamental signal-to-noise challenges of direct DNA sequencing. SBX overcomes single-molecule measurement limitations through a biochemical process that encodes the sequence of a target nucleic acid molecule into a highly measurable surrogate polymer called an Xpandomer. Xpandomers encode the sequence information with high signal-to-noise reporters, enabling high-fidelity, single-molecule nanopore sequencing. SBX is an important demonstration of what is possible with innovative molecular, protein, and systems engineering. In this seminar, I will describe the journey from an almost inconceivable molecule conversion idea to an exciting new technology that will allow researchers to rethink how sequencing can be implemented.

BIO: With over 30 years of experience working on the cutting edge of biotechnology, Mark's passion is to conceive and develop innovative and transformative technologies. His vision of creating a next generation DNA sequencing technology that would enable broader use in healthcare led him to co-invent the SBX™ technology in 2007. The same year, he co-founded Stratos Genomics, where he held roles as president and Chief Science Officer then later as CEO. In 2020, he led Stratos through the company's acquisition by Roche, where the SBX chemistry could be brought together with Genia's massively parallel IC technology. Kokoris, who heads all SBX research at Roche, is an inventor on over 20 issued US patents.
https://diagnostics.roche.com/global/en/products/product-category/lab-type/sequencing/ngs-next-generation-sequencing-platform.html

Genome Sciences UNIVERSITY OF WASHINGTON

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