



## Parallel Synthesis Technologies

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health



National Institutes of Health Commercialization Assistance Program  
(NIH-CAP)

### Company Profile

**Industry Sector:** Biotechnology / Diagnostic Tools

**Company Overview:** Working at the interface of biology, materials science and microfabrication, Parallel Synthesis Technologies designs micromachined tools, devices and materials to increase the precision, shorten the analysis time, and lower the costs for many types of biological applications.

**Target Market(s):** Research and clinical diagnostics

### Key Value Drivers

**Technology\*:** Optical encoding technology ("Parallume") for biotechnology to enable researchers and clinicians to perform 10, 20, 30, . . . molecular diagnostic assays for the same cost and in the same time as a single assay.

**Competitive Advantage:** Rare-earth-emitter-based optical encoding allows for access to orders of magnitude more codes over currently available (or planned) encoding technologies. The materials can be decoded with a simple and inexpensive bead reader utilizing already-existing fluorescence microscopy techniques.

**Plan & Strategy:** Currently developing product and commercializing through a Phase 2 Competing Renewal grant. Roll out bead sales followed by equipment sales as products are developed. Ultimately seeking a strategic partnership for the Parallume bead and bead reader system.

\*Technology funded by the NHGRI and being commercialized under the NIH-CAP

### Management

**Leadership:**

Dr. Robert C. Haushalter: Founder and President of PSTI

**Scientific Advisory Board:**

Prof. Ronald W. Davis: Professor of Biochemistry and Genetics and Director, Stanford Genome Technology Center, Stanford University

Prof. John T. Groves: Professor of Chemistry, Princeton University

Prof. Alexander McPherson: Professor of Biological Chemistry, University of California Irvine

### Product Pipeline

**Q1, 2010:** Begin sales of Parallume beads for evaluation and use.

**Q3, 2010:** Begin sales of completed MARS (the Parallume bead reader)

**Q1, 2011:** Begin sales of portable, hand-held version of MARS bead reader (MARS-M1)