



Tell your friends and colleagues about this free newsletter. Click on "Tell A Friend" now! -

>

TELL A
FRIEND
PRINT PDF

HOME

Good News from Connecticut
Bioscience Firms

Raindance Technologies
Manipulates Droplets

Connecticut Venture Capital
Investments Rise

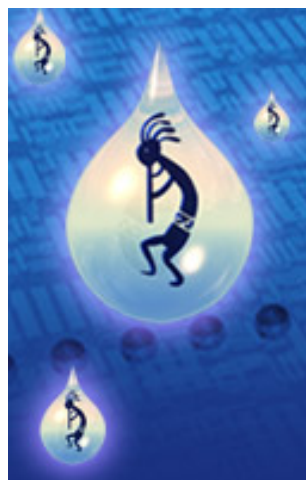
Hartford Panel: Next Steps
for CT Bioscience

Bioscience Women Garner
Awards

CURE Member News Digest

Raindance Technologies Manipulates Droplets

RainDance Technologies is a nanotechnology company devoted to discovering, developing, and commercializing the precise manipulation of minute amounts of fluids in microfluidics devices for a variety of industrial and research applications. After CuraGen and 454 life Sciences, it's the third New Haven-area bioscience company started by its chairman, Jonathan Rothberg.



Based in Guilford, Raindance has developed the chemical equivalent of a personal computer – a technology that is scaleable and configurable to a broad set of research and commercial uses, Rothberg says. Combining droplet technology with microfluidics enables a vast number of analytical reactions to take place using extremely low volumes of drugs or reagents in microscopic droplets – dubbed *NanoReactors*™ by Raindance. The technology hinges on the ability to generate, split, merge, recombine and sort droplets with absolute precision, while simultaneously performing optical interrogation of the droplets' contents.

The company's commercialization strategy is two-pronged.

First, it is developing an instrument called the *Personal Laboratory System*™. Using inexpensive, disposable chips to manipulate millions of individual *NanoReactor* droplets, the *PLS*™ aims to be the most productive and cost-effective lab instrumentation ever developed.

Second, Raindance is applying its core technology to a variety of applications driven by the needs of its customers. Collaborations range from simple validation of partner assays on the *PLS* to the development of novel screening techniques not possible using conventional fluid handling platforms.

The company was founded by Rothberg, a chemical engineer and biologist who serves as the company's chairman, and by David Weitz, a Harvard physicist; Andrew Griffiths, a biochemist at the MRC Laboratory in Cambridge; Darren Link, a physicist from the University of Colorado; and Jerome Bibette, a professor of chemistry at the ESPCI in Paris. The scientific advisory board includes three Nobel laureates – Jean-Marie Lehn, Sir Aaron Klug, and Dr. Richard Roberts, as well as Sir Gregory Winter of the MRC Laboratory.

Comprising chemists, physicists, biochemists and engineers, the Raindance Guilford team now numbers about a dozen. Rothberg said that one reason he has been able to attract strong talent to his ventures is that Connecticut's school systems compare favorably to those of some other states that host bioscience clusters.

Raindance is a natural extension of his previous business activities, Rothberg says. "CuraGen is about creating certain pharmaceuticals. 454, concerned with genome sequencing, is a step up in generalization from that. Raindance, with its broad applicability to materials science and chemistry as well as life science procedures, is more general still. As for The Rothberg Institute, it is focused on finding a cure for a childhood disease, tuberous sclerosis complex. As an orphan drug venture, it needs to make use of the most cost-effective screening procedures available."

Rothberg said he has been intrigued by the possibilities of miniaturization for years, ever since he first saw the Apple Newton, one of the first of the hand-held computing devices.

[Printer friendly version](#)



Connecticut United for Research Excellence, Inc.
The Center of Connecticut's BioScience Cluster

Published by CURE

Copyright © 2006 Connecticut United for Research Excellence. All rights reserved.

Tell your friends and colleagues about this free newsletter. Click on "Tell A Friend" now! ->

Newsletter developed and edited by [HarveyMalis Communications LLC](#), Guilford, Conn.



Tell a friend

Powered by **IMN**