

# NANOBIOTECH NEWS

*The global nanobiotechnology intelligence source*

Volume 4

Number 13

March 29, 2006

## Nanomix, University of California to develop, commercialize e-nose device

By Russell A. Jackson

Nanomix Inc., of Emeryville, CA, will join with the University of California at Berkeley (UCB) to develop an in-office diagnostic device based on the private company's Sensation technology platform. The pair, according to Nanomix, hope to prototype a device this year.

The approach they'll use, says Bill Perry, Nanomix's vice president of business development, marketing and sales, is "significantly different" from other e-nose technology in the works. "It benefits directly from a better understanding of how a real nose works," he explains. "Studying the mechanism of sensing of a real nose was, in fact, what initiated the early collaboration between the groups."

Perry won't disclose details now, saying "most artificial noses use some kind of pattern recognition algorithm based on the various differing responses obtained from an array of sensors -- and so does this one. However, we differ in that we have found additional critical parameters/dimensions that greatly enhance the probability of successful recognition of the analyte."

That, he says, "combined with the fast response time and very good sensitivity inherent in the Sensation platform, is what makes our approach very competitive."

Nanomix developed its "ultra-sensitive" nanoelectronic detection platform based on carbon nanotubes, Perry explains. "The devices are treated with proprietary chemistries to produce a wide variety of products that are applied to large, fast-growing market opportunities," he says. "An initial product has been launched and additional ... applications are in the pipeline."

Nanomix brought the first nanoelectronic product to market in 2005. Its devices are "functionalized with highly specific recognition layers for single- or multi-analyte detection," Perry says. "The principal competitive advantages of the technology include:

- It has a wide variety of disruptive industrial and medical applications, providing access

to critical information.

- It's ultra-sensitive, specific and reproducible.
- Electronic detection eliminates the need for expensive labeling chemistries and optical equipment.
- Ultra-low power consumption enables point-of-care product formats.

And it features sensor arrays, which enable multi-analyte detection and maximum flexibility in test designs."

Also, Perry reports, "our know-how and manufacturing scalability allow very low production costs in high volume."

Under the collaboration agreement with UCB, Nanomix will leverage its detection platform and further enhance its product development portfolio in point-of-care detection applications. This deal includes joint development of a device for diagnosis of disease directly in the physician's office or outpatient clinic."

Further details on the alliance were not revealed.

Point-of-care diagnosis with an electronic olfactory sensor system based on a detection array can provide multiple advantages versus traditional lab-based techniques in terms of speed, convenience, cost and improved patient outcomes, Perry says. "We are excited about our collaborative efforts with researchers at the Berkeley Olfactory Research Project," adds Nanomix CEO and president David Macdonald. "And we're delighted with the prospects offered by the device in point-of-care diagnostic applications."

He adds: "Collaborating with a world-class team like the one led by Noam Sobel at Berkeley is an important part of our application-driven commercialization strategy." For his part, Sobel adds that "incorporating the Sensation technology and working with Nanomix will assist us in bringing product application projects through to final development. We look forward to combining Nanomix technology and know-how with our extensive experience in electronic olfactory applications."

*Editor's Note: Contact Bill Perry at (510) 428-5302. ©*