



Subscribe Now Limited Time Offer

Sign Up for the Boston Business Journal Afternoon Edition Newsletter

Sign Up

See all newsletters

Connect with us:



Search



Sponsored by:

## Former UMass researcher aims to diagnose disease by the smell of a patient's breath



Don Seiffert BioFlash Editor-Boston Business Journal Email | Twitter



Enlarge Photo

Courtesy TeraBAT

Eyal Gerecht is co-founder and CEO of TeraBAT, a Colorado company based on his research at UMass Amherst.

A technology developed at the University of Massachusetts Amherst can diagnose diseases ranging from diabetes to heart trouble based on the smell of a patient's breath.

Eyal Gerecht, the former UMass Amherst researcher who invented the technology, said it can quickly analyze breath for the presence and density of particular molecules. While it goes by the technical name of "chirp-pulse terahertz spectroscopy," Gerecht likens it to how dogs are able to diagnose a person's disease simply by smell.

"What we're trying to do is replace the dogs," he said.

The advantage of breath-based diagnostics over blood-based ones is that they are faster — results are available in seconds — and less expensive, and also can be done whether or not the patient is conscious, Gerecht said.

A person's breath contains so-called volatile organic compounds, or VOCs — the same compounds that cause fresh paint to have a smell — that can give clues to what's in the blood that may be causing health problems, Gerecht said. While there are other companies working on breath-based tests — which Gerecht expects to be in common use in the next five to 10 years — TeraBAT's method is unique in that it can directly measure VOCs rather than the secondary effects of them, thereby making them more accurate, he said. In addition to diabetes and heart attacks, Gerecht said sepsis and many cancers may also be diagnosed using the same approach.

Gerecht co-founded TeraBAT in 2010 after several years working on the technology at UMass Amherst in a collaboration with the National Institute of Standards and Technology, or NIST. Today it announced that it received a patent for the technology with the help of UMass Amherst's technology transfer office, clearing the way for commercialization of the product in coming years.

TeraBAT is now headquartered in Boulder, Colo., near the NIST headquarters and in offices owned by HEI Inc., a Minnesota-based electronics manufacturing firm with whom TeraBAT is now working on developing a prototype of a diagnostic test to be used in hospitals or other healthcare facilities. The company has four full-time employees, and is working with several others at HEI to develop the product.

In the next year or two, Gerecht plans to work with hospitals nationwide — including many in the Boston area — to test the product. It is now raising private capital financing, and gets funding through strategic partnerships, mainly from HEI.

Related links: Medical Devices Industries: Health Care

### We Recommend

Promoted by Taboola



Despite rising prices, pending home sales homes reached record...



Gaming Commission to meet Tuesday to discuss Boston's opting out of ar...



Westwood's Meketa Investment Group continues expansion wit...



Gainers and losers: The biggest moves in life science stocks last week

### Comments

If you are commenting using a Facebook account, your profile information may be displayed with your comment depending on your privacy settings. By leaving the 'Post to Facebook' box selected, your comment will be published to your Facebook profile in addition to the space below.



Comment using...

Facebook social plugin

### Trending

In Partnership with newsle



Jeffrey Blumberg



Ken Levine



Brooke Ferencsik



Dharmesh Shah



Thomas Menino

### Inside the Boston Business Journal



#### ONLINE

- News
- People
- Events
- Jobs
- Resources
- Store
- Contact Us
- Account

#### SERVICES

- Book Of Lists
- Commercial Property
- Local Business Directory
- Jobs
- MyBookOfLists
- Search
- Subscribe

#### SUBSCRIPTIONS

- Start Subscription
- Trial Subscription
- Renew Subscription
- Single Issues
- Digital Edition
- Subscriber Content
- Subscriber FAQs
- Help
- Book Of Lists
- Change Mailing Address

#### TOOLS

- Newsletters
- Syndication/RSS
- Twitter
- Mobile
- Submit People On The Move
- Mobile App
- LinkedIn Today

#### ABOUT

- Advertise
- Contact Us
- About The Paper
- About The Business Journals

#### AFFILIATES

- Upstart Business Journal
- Sports Business Journal
- SportsBusiness Daily
- Sporting News
- Sustainable Business Oregon
- Hemmings Motor News

