

# **PUGET SOUND** **Business Journal**

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## Fat-busting ultrasound attracts investors

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It may sound like the latest diet fad, but a new Bothell-based medical device company hopes to re-move fat with ultrasound waves.

LipoSonix Inc. has raised \$10 million to develop what could be a safer alternative to liposuction — use of high intensity ultrasound to loosen and liquify fat, then let the body break it down and eliminate it naturally. The technique has already been demonstrated in animals.

In recent months, the company has hired three former ATL Ultra-sound employees — Jens Quistgaard, Charles Desilets and Greg Darlington — to lead LipoSonix as it begins clinical trials next year. Quistgaard, the president and chief executive of LipoSonix, was most recently the chief product and strategy officer at handheld ultrasound company SonoSite Inc. of Bothell.

If the LipoSonix device proves success-ful in humans, it could help reduce deaths from invasive liposuction surgery. Ultrasound has been shown to decrease bruising, tighten the skin and help speed up recovery.

“These days liposuction procedures are pretty safe, but there’s still significant morbidity (fatalities) associated with it,” Quistgaard said.

About 230,000 patients undergo liposuction operations each year in the United States, according to the American Society of Plastic Surgeons. Of those, about 44 people — or 1 in 5,000 — die each year, re-ported a January 2000 article in the medical journal *Plastic and Reconstructive Surgery*. By comparison, about 1 in 6,100 people die from auto accidents. The most

common cause of death following a liposuction procedure is a blood clot in the pulmonary artery, which brings blood from the heart to the lungs.

As unusual as it may seem, ultrasound has actually been used in conjunction with liposuction surgery for several years. The Department of Plastic Surgery at the University of Texas Southwestern Medical Center in Dallas is one of the leading centers for ultrasound-assisted liposuction, and more than 2,000 plastic surgeons have been trained in the technique there since the mid-1990s.

The most common type of ultrasound-assisted liposuction uses a hollow wand, called a cannula, that emits ultrasound waves and suctions out the fat at the same time. Ultrasound-assisted liposuction is often better than traditional liposuction at removing fat from muscular areas, such as the back, chest and sides, between the ribs and the hip.

But this type of internal ultrasound can sometimes burn tissue and densensitize nerves for 10 weeks, rather than six weeks using traditional ultrasound, according to UT Southwestern’s Web site.

LipoSonix hopes to avoid some of these side effects by developing an external ultrasound device, which is a much newer and less studied technology.

“We see it as an independent, stand-alone procedure,” said Steve Waite, president and chief operating officer at The Innovation Factory in Atlanta, a medical device incubation company that founded LipoSonix in 1999.

Before hiring Quistgaard in August, The Innovation Factory helped develop proto-types of the company’s external ultrasound products.

Innovation Factory also brought in LipoSonix’s three major investors: Schroder Ventures of Boston, The Carlyle Group of Washington, D.C., and Versant Ventures of Palo Alto, Calif.

But, in the near term, external ultra-sound is not likely to replace traditional liposuction.

“If you could use external ultrasound and not have to use a cannula inside the body, that would be a great tool,” said Dr. Arshad Muzaffar, an assistant professor of plastic surgery at the University of Washington Medical School, who was trained at UT Southwestern. “I’m skeptical, though, that you could do large amounts of lipoplasty (fat removal) with external ultra-sound alone, because it is unlikely that the body could simply absorb such large volumes of fat.”

Muzaffar said that although he is not familiar with LipoSonix’s technology, early versions of external ultrasound were met with skepticism from many plastic surgeons due to the lack of appropriate clinical studies comparing the procedure with traditional liposuction. He added, however, that external ultrasound may be useful for smaller fat deposits or in addition to traditional liposuction.

LipoSonix now has three employees and 5,000 square feet of lab and office space in Bothell’s North Creek area. By the end of the year, the company expects to add a senior acoustic technician and a vice president of clinical and regulatory affairs to prepare for human clinical trials in 2003.

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