This Israeli startup’s home ultrasound makes Sonoline B look like a toy

HeraMED will present their technology at the annual GoForIsrael Chinese investor conference in Shanghai on September 20, one of the most notable up-and-coming startups Israel will send to the event.

Gedalyah Reback

When it comes to knowing exactly what is happening with pregnancy, the more knowledge someone can amass the better. At least that has been the prevailing trend the last few years. It’s not just about deciding on a water birth at home anymore. The Mommy Wars have involved debates about cloth diapers, breastfeeding, stay-at-home parenting and virtually everything else under the sun. But you’d be amiss to think that trends are isolated to raising infants and toddlers post-pregnancy. The biggest technology trend in parenting is probably for the unborn: home fetal Doppler machines to track fetal heartbeat.

“My wife was pregnant with our third child,” HeraMED CEO David Groberman retells to Geektime on when he came up with the idea for the device. His company has come up with one of the easiest-to-use, yet seemingly more complex models of at-home baby heart monitor out there: the Compass. The technology is so advanced, it has earned Groberman and co. a spot at the GoForIsrael investor meet-up in Shanghai on September 20, when more than 100 startups will have the chance to meet, greet and pitch to about 1,800 Chinese investors interested in putting cash down on Israeli tech. Thirteen of those companies, including HeraMED, will be focused on life sciences and medicine. The company’s name has a dual meaning. Hera was the goddess of fertility and childbirth in Greek mythology, but ‘herayyon’ is the Hebrew word for pregnancy.
“I realized that while today, self-monitoring was already a big trend outside of hospitals,” he tells Geektime, describing how more people are performing the checks at home. You monitor every aspect of your life, yet in pregnancy for the well-being of the fetus — the most prominent event in life where families are extremely aware of their health, food take and so forth — there is only one solution.”

They started buying whatever they could get their hands on. He claims he read all the manuals (I still haven’t read all the baby books and I’m on kid #2), yet still couldn’t understand what he thought should have been child’s play. Groberman isn’t a medical doctor, but he’s by no means a science novice. He holds a B.Sc. from Tel Aviv University in biomechanical engineering, and thanks to his being a co-founder and CTO of Meytar R&D he has been able to consult on and look at a number of other wearable devices over the last 11 years.

“We consider ourselves the first accurate device on par with professional devices at a fraction of the price. Perhaps we are the first genuinely wireless solution with a multicenter unit which communicates via bluetooth by a designated app on a mobile smartphone. And again, we believe that within five minutes at home, you can receive the same level of assessment for the fetus, at least on the preliminary schedule.”

The Compass will enter a booming market. The global fetal monitoring market might be worth $2.3 billion by 2019 according to Markets and Markets, with home monitoring taking up a chunk of the new growth. Sonoline B is considered the best-quality home Doppler by many people, while a German competitor AngelSounds also has a strong reputation. Sonoline looks like a conventional ultrasound while AngelSounds appears more elegant, but neither have the sophistication HeraMED is hoping to bring to market. There have been attempts to build a more connected kind of home Doppler, for example the now-defunct Android and iOS-compatible Bellabeat (they’ve since pivoted). HeraMED has the big advantage though with a dual interface app that has one front end for expecting mothers and another for physicians. They both get the same data, which should match what a doctor would be able to extrapolate from a standard ultrasound.

The HeraMED has a modern interface on its connected app with options to monitor both fetal and maternal heartrate (Photo credit: courtesy)

Their tech also includes an optical sensor to monitor the mother’s heart rate. It isn’t so much to make sure the mother is healthy (I mean, of course they care about that), but to ensure the device can distinguish between her pulse and that of the fetus. That failure to distinguish is a major drawback to other devices on the market, he tells Geektime. He goes on to
describe a device that includes what they’ve jokingly dubbed a ‘GPS for pregnant women,’ that enables a “guided search” by motion sensors to detect the best place to monitor the unborn child.

What Groberman and co. have going for them is that they can cast a wide net. Instead of having a narrow window where to get good coverage of the fetal pulse, you can place it almost anywhere on the woman’s belly. It also contains an optical sensor to better monitor the mother’s heart rate and filter it out to track the fetus’, eliminating two major points of confusion for users.

The Compass by HeraMED (Photo credit: courtesy)

“You can picture yourself trying to navigate a room you don’t recognize, in the dark, using a thin laser instead of a flashlight. That is what happens in almost all the cases when you give the competitor devices to the pregnant woman. We’ve optimized this ultrasound to produce a wide beam of ultrasound. We almost ‘flash the entire room’ with light,” he says, going back to the flashlight analogy.

Besides clinical trials with clinics and hospitals that integrates their solution into other software platforms, HeraMED is working on three other products right now: one that will use the same technology to more specifically pin down fetal movements in the uterus, the creation of a Labor Alert to more accurately track contractions, and a ballistocardiography (BCG) project with a major corporate partner that he didn’t want to elaborate on.

“I think it’s much easier and much clearer. I think the highlight of our solution is even if you take it a step backward, it is just the ability of the lay person to find the optimal location, maintain this position and maintain a high-quality signal for several minutes.”

The Israeli tech invasion of China

HeraMED has so far received money from Israel’s Office of the Chief Scientist — about $1 million by Groberman’s estimation — but are primarily bootstrapped with funds from co-founders Groberman, Dr. Josef Tovbin, M.D. and Dr. Eli Yehman, M.D. They received a strategic $3 million investment from Hofon Pharma in Hangzhou, a subsidiary of Chinese company the Holley Group and are currently prepping for a Series A fundraising round that they hope will bring in $10 million to continue their R&D. This upcoming trip to China might play into that effort.
They are also confident that they will pass the regulatory hurdles easily. They have already filed a pre-submission with the FDA (something akin to an statement of intent to file for approval, giving the FDA a chance to provide early feedback) and expect to have CE approval next month before launching their commercial pilot in Israel. From there, they will expand to Europe, probably starting in Germany and then moving to other markets from there. If everything goes according to plan according to Groberman, HeraMED’s Compass will be on sale by next year. We asked if he was worried about the falling birthrate in Europe, which Groberman shrugged off.

“Well obviously if it was higher birth rates that would be better, but looking at the positive angle each and every pregnancy and child birth is taken care of on all aspects: medically, financially, and you pay much more attention to it,” Groberman explained to Geektime. “All governments in Europe significantly try to leverage financially or through services and medical care because of those lower birth rates.”

HeraMED will be one of over 100 Israeli hi-tech companies that will be on hand in Shanghai for the GoForIsrael conference on September 20, the first time the event has ever been held outside Silicon Wadi. Reps from Israeli medical device giants like Larry Jasinski of ReWalk Robotics will be on hand. That will be followed by a second meet-greet-and-pitch with more than 800 Chinese investors in Wuhan province on September 22. While this makes the event largely for Chinese investors and precludes a lot of others from around the world, the benefits are clearly seen as outweighing the drawbacks.

“The second child policy in China not only permitted a second child starting a couple years ago, they have significantly changed their strategy and actually subsidize and encourage birth and pregnancy these days making this market more interesting.”

Groberman has visited the country eight times since launching his company, and only expressed optimism about the future.

“I think a lot of others can relate to this. You need to have strong personal relations with the people you’re doing business with. I’ve been there eight times in the last two years. I have never been to Wuhan, but I’m excited to see it.”