After her divorce, Melissa went looking for a guy who could be a good father to the children she always hoped for. When pickings proved slim, she started searching instead for the perfect donor. "I was 39," says Melissa, who chose not to reveal her last name. "I was running out of time."

His codename was "Finn," and for $1,250 payable to the Scandinavian Cryobank office in New York City, Melissa walked away with 5 vials of his sperm. After shelling out another $15,000 for hormone drugs, doctor consultations and her in vitro fertilization process, Melissa is now the proud mother of 13-month-old twin boys.

Melissa's twins are just two of the estimated 30,000 babies born each year from donated sperm. Melissa herself is among the growing ranks of single moms and lesbian couples that now make up around half of the market for gamete donation, which, until the 1980s and 1990s, had been available almost exclusively to married, heterosexual couples.

Throw in an array of new reproductive technologies like in vitro fertilization and the advent of the Internet, where soon-to-be moms can go "shopping" for donors, and you get a whole new kind of baby boom. Today, the U.S. fertility industry is worth some $3.3 billion. That means big business for sperm banks—which have grown their ranks by at least a third since 1980 and now pull in an estimated $75 million—and the 400 or so fertility clinics in the U.S. Those figures, however, are slippery, since the market for donor sperm is largely unregulated.

Now a push from customers for full donor disclosure threatens to shake up the sperm supply chain.

Back when most customers were heterosexual couples, donor anonymity was preferred: Parents didn't want anyone to know they had fertility problems or that their baby wasn't genetically their own.

Nowadays, though, single moms and gay parents don't have the same hang-ups that infertile heterosexual couples did. This new flock of parents wants their children—the first generation born since sperm donation exploded on a large scale—to have access to their biological parents, both for medical and personal reasons.

Donor-disclosure advocates say children have no way of knowing what kind of health issues they might be inheriting later in life and feel their children deserve to know where the other half of their genetic makeup comes from.

"Part of determining who you are [as a teenager] has a lot to do with where you came from," says Wendy Kramer, co-founder of the Web site DonorSiblingRegistry.com, which matches genetic siblings with each other and their biological parents. Kramer helped create the online registry for her son, Ryan, who was conceived using donor sperm after Kramer and her ex-husband realized they couldn't have a baby on their own.

Catering to customers is always wise, but in the U.S., donor disclosure could hurt the sperm-bank industry. In countries where governments have ruled against anonymous donation, the number of sperm donors has plummeted.

In the U.K., for example, the number of donors dropped 86% between 1994 and 2003 in anticipation of an April 2005 amendment to the U.K.'s Human Fertilisation and Embryology Authority Act mandating that children born of donated sperm, eggs or embryos can find their genetic parent when they turn 18. The Netherlands banned anonymous sperm donations in June 2004, with similar results. Like laws have been also been passed in Sweden, Austria, and Australia.

Why are donors so bashful? "Many are young and [donating]'s all they want to do," says William Jaeger, vice president of Fairfax Cryobank, one of the largest sperm banks in the U.S. "They're not doing this to be fathers."
While it’s easy to track down donors in countries with centralized health care systems, such as the U.K., U.S. donors wishing to hide in the shadows are fairly safe. Assuming the supply of sperm doesn’t dry up, the push for full donor disclosure could offer a chance for U.S. sperm-bank operators to differentiate themselves in this fragmented, highly unregulated industry.

Indeed, until May 2005, when the U.S. Food and Drug Administration implemented specific donor-testing guidelines, the only regulations that existed were those at the state level in New York, Maryland and California, which were complemented by suggested guidelines from the American Society for Reproductive Medicine and the American Association of Tissue Banks.

To gain an edge with customers, most sperm banks were conducting these tests even before the FDA mandated them. Now, outfits like Fairfax Cryobank and California Cryobank are offering donor-consent lists containing names of donors who voluntarily agree to be contacted by their genetic offspring. (To cover the cost of tracking donors, most of these banks charge more for sperm from donors on their consent lists.)

Every month California Cryobank, one of the world’s largest sperm banks, ships 2,500 vials of sperm—each costing between $250 and $400—throughout the U.S. and 28 countries. Prospective parents can search by everything from the donor’s hair color to his profession using the bank’s online donor catalogue. Short personal profiles come free with each donation, but for an additional $70 parents can buy a "combination package" including the donor’s baby photo, a long medical history, an audio interview, a Keirsey personality report and a "facial features report" to help parents picture what their child will look like as an adult.

"I've been married to my wife for 38 years and she doesn’t even know as much about me as parents know about their donors with our long-form medical history," says Dr. Cappy Rothman, who founded the California Cryobank in 1976. Another perk: The bank now archives blood samples from each donor in case further testing is needed as donor offspring grow up.

For all the hullabaloo, the push for disclosure probably won’t trigger U.K.-like regulations in the U.S. anytime soon. In one skirmish last month, a bill outlawing anonymous sperm donations in Virginia was rejected by the state’s House Health, Welfare and Institutions subcommittee in a six-to-one vote.

For now, voluntary registries like DonorSiblingRegistry are helping donor-conceived children find their genetic families. So far the company has connected more than 2,900 offspring with their biological siblings and donor parents.

One donor, named "Sandman," recently met his two "bio-daughters" through the registry. Sandman says it was nice to meet the girls, but prefers to maintain more of an avuncular rather than a paternal role: "I found out they like mint ice cream and Dr. Pepper just like me."