

CRUNCHED: REGION'S  
TOP-PAID SPEAKERS 8

APPTITUDE: MAKING  
GIFT LISTS EASY ... 10

MISS MANNERS TELLS  
IT LIKE IT REALLY WAS 28

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**The Brilliant, Visionary, Millionaire,  
Transgender CEO and Lawyer.**  
**And that's just for starters.**

BY NEELY TUCKER

Martine Rothblatt  
founded SiriusXM  
satellite radio,  
a religion and a biotech.



THE  
**GENIUS**  
OF  
SILVER  
SPRING

**MARTINE  
ROTHBLATT  
BENDS SPACE,  
BIOMEDICINE  
AND THE  
MYSTERIES  
OF LOVE**

STORY BY NEELY TUCKER  
PHOTOGRAPHS BY ANDRÉ CHUNG



**Left:** Rothblatt and United Therapeutics Creative Director Bill Rock, left, work on a presentation. **Right:** Bina48 is a bodyless robot modeled after Rothblatt's second wife, Bina.

Therapeutics' board of directors and thinks Bina48 is a glimpse of the future.

In the late 1980s, Rothblatt conceived of and created a crazy company devoted to the idea of worldwide satellite radio. Today that's Sirius XM. It's in your car's dashboard, next to the satellite navigation device ... and she was president of Geostar, the first company to market that, too. Her college thesis became the first private satellite phone company.

"She has to my knowledge a perfect track record in making [her] visions real," Kurzweil writes in an e-mail.

Rothblatt dropped out of the satellite orbit because her and Bina's daughter was diagnosed at 5



with what is now called pulmonary arterial hypertension, an incurable lung disease. It progressively narrows the lung's arteries to the point of death. By 12, Genesis would faint all the time, her life seeping away in intensive care units.

So Rothblatt sold out of Sirius, set to studying biology — the last such course she had taken was in 10th grade — and formed U.T.

Today, Genesis is 30, in good health and does film-production work for the now-\$6 billion firm. Martine led the company to developing a new FDA-approved pill for pulmonary arterial hypertension, Orenitram ("Martine Ro," backward). The stock price soared, and so did her incentive package.

Amid all this, Martine and Bina have been married for 32 years, before and after Rothblatt's gender surgery. They're so joined at the hip that the kids refer to them as "Marbina." Their younger son, Gabriel, just ran for Congress in Florida's Eighth District (Democrat, lost, but a respectable debut). When Rothblatt set up a \$225,000 super PAC to fund Gabriel's campaign — without his knowledge, he says — she drew a rebuke from the New York Times editorial page for parental abuse of electoral process.

Let's see ... what else? She flies airplanes. And helicopters. Kills on the piano. Runs half-triathlons.

## Let's be clear: **Martine Rothblatt** is just plain *more* of a lawyer than anybody else in this town.

The 60-year-old grandmother and CEO of United Therapeutics, the Silver Spring-based biotech she founded to help save her younger daughter's life, banked \$38 million last year. It made her the nation's highest-paid female executive. It also made her the nation's highest-paid transgendered person, as she had sex reassignment surgery in 1994. ¶ In a lab on Spring Street, Rothblatt's newest project appears lifted from science fiction: disembodied but breathing human lungs, hissing away in dome-like incubators, part of a clinical trial attempting to repair donated but not-quite-accepted-for-transplant lungs so that they can actually be placed in living human beings. ¶ On a Virginia farm, she's also raising genetically altered pigs, in the hope that someday *their* lungs (and other organs) will be modified for use in human transplant, creating a nearly inexhaustible supply of organ donors. ¶ She just published "Virtually Human," a big-think manifesto on the rights of yet-to-be-created cyber-humans, who might one day be uploaded with all of your thoughts, dreams, memories and online activity and live for eternity as a sort-of you.

She founded a religion, the Terasem Movement, which puts together her cultural Judaism (she puts on a mean seder), Zen-like yoga and a deep belief in technology. One of the four founding beliefs: "Death is optional."

The physical manifestation of this faith is a bodyless robot, named and modeled after Rothblatt's second wife, Bina. The robot, Bina48, is just a head. It has a face made of frubber, wears a good-looking wig, has facial-scanning software in her "eyes," so that when her head whirs and clicks, then locks on your face, she's running your profile to see if she "knows" you.

Bina48 lives on a desk in rural Vermont, awaiting the day when man and machine are one.

Far-fetched?

Hey, go ahead, yuk it up. Rothblatt is buddies with Larry Page and Ray Kurzweil, who sort of run a little company called Google. Kurzweil, the futurist and director of engineering at Google, is on United



Has several houses and apartments and says she hasn't stayed in one place more than a month in 20 years. During September and October, she and Bina touched down in Greece, Crete, Washington, Los Angeles, Bora Bora, back to Silver Spring, took the grandkids trick-or-treating in Melbourne Beach, Fla., while Gabriel was out campaigning, then flew to London and popped back to D.C.

Oh. She's taller than you, too.

**You've heard this one** a million times: Idealistic Young Lawyer Comes to Your Nation's Capital to Make a Difference and Gets Kicked in the Teeth. With Rothblatt, it's the real story.

She — he, then — joined Covington and Burling in 1981 as an entry-level policy wonk in telcom law. She was 27 and already on a second marriage with two kids and two more on the way. The young couple was scraping by, living in a one-bedroom flat near the National Zoo.

Idealistic Young Lawyer went nowhere at Covington. When I called the firm recently to chat with someone who remembered her work there ... no one did.

"They wanted me to lobby for broadcasters against the beginnings of satellite radio," Rothblatt offers, "and I was all for the other team."

"The most brilliant student

I had in 13 years of teaching at UCLA law school."

**CHARLIE FIRESTONE**

She quit after 12 months and enrolled in the graduate astronomy program at the University of Maryland. Mom, Dad and the kids piled into married student housing.

This slightly idealistic poverty was nothing new.

Rothblatt was born in Chicago, raised in San Diego and Los Angeles, the grandchild of Jewish immigrants from Eastern Europe. Dad Harold worked as a dentist at a labor union, and mother Rosa Lee worked as a speech therapist.

Marty, as Rothblatt was called, and a sister, Janet, were the only children in a household that believed in faith, decency and hard work.

"There was no cursing, not even 'damn,' and the children were expected to be courteous," says Rosa Lee Rothblatt, now retired and living just outside Los Angeles in a house with Bina's mom, Bertha. "They were to study, and they knew to volunteer their time to charitable causes."

(Rothblatt's father is deceased; her sister politely declined to comment for this story.)

The family was observantly Jewish — Marty played the theme from "Exodus" at the bar mitzvah — and lived on modest means.

Marty enrolled in UCLA but quit after a year to travel on the cheap with buddies. Van rides across Europe, selling the van in Turkey, teaching English in

Iran, touring eastern Africa ... wound up living in a ratty house in the Seychelles Islands, which was supposed to be cool. It wasn't.

While there, a buddy took Rothblatt to a U.S. satellite installation. There — right *there* — is where she says her mind took an exponential leap forward, imagining how close future worlds really were.

Marty went back to UCLA with a wild new energy and a family in tow. The marriage to a Kenyan woman soon collapsed, but Marty raised their son Eli on his own. Father and son lived in dire, if self-imposed, poverty while dad spent seven years going through undergrad, law and the MBA programs.

"Martine wanted to do things on her own," her mom remembers.

"Literally the starving student," remembers Paul Rosenthal, then chairman of the communications school. "I remember her wearing one checked shirt and pair of jeans every day. It may have been all she had."

Charlie Firestone remembers Marty clearly — "the most brilliant student I had in 13 years of teaching at UCLA law school. ... Just a fascinating mind."

It was 1979 when Marty met Bina, a real estate agent, at a mixer in Hollywood. The two shared an instant attraction and mutual life circumstances: Bina was a single parent, too, of a young daughter named Sunee.

They soon married, moved to D.C., cross-adopted Eli and Sunee and eventually had Gabriel and Jenesis.

By the mid-1980s, Rothblatt was getting a reputation among the space law cognoscenti for brilliance and knowledge of FCC regulations and of the intricacies of broadcasting wavelengths.

"A conceptual genius," says Tobey Marzouk, partner at Marzouk & Parry, who was legal partners with Rothblatt in the 1980s. "Her ideas were quantum leaps of the technology at the time."

Rothblatt was hired as a lobbyist for a fledgling concern called Geostar, initially a satellite tracking

The Rothblatts, Martine and Bina, have been married 32 years and have four children. Pictured with them below is their younger daughter, Jenesis, whose lung disease prompted Martine to found United Therapeutics.



PHOTO: COURTESY OF JENESIS ROTHBLATT

service for trucking companies.

Rothblatt worked insane hours — going to the office about 2 a.m. for a day's research and planning before the doors opened seven hours later — but the family was tightknit. Bina had converted to Judaism and often worked as his de facto office manager. Bina's mom, who had moved in with them, watched the kids.

On Friday evenings, they would have "love night" at home. It began with a family song:

*Love night, love night, love is all around  
love night, love night, here love can be found  
family is our source of our strength  
forever we are one and the same  
love night, love night, love is all around*

"That was at the dinner table," says Gabriel Rothblatt, 32, now a father of four and living in Melbourne Beach. "We'd all have dinner or go out to dinner, sitting around the table, bless the bread and light the candles. We'd go from oldest to youngest and everyone say what love meant to them this week. It was an opportunity for everybody to speak while everyone else is quiet, but it was also a session to reflect on the meaning of love during the previous week and how it affected you."

By the early 1990s, Rothblatt had founded CD Satellite Radio, a forerunner of satellite worldwide radio, then changed the name to Sirius, for the brightest star in the sky. Rothblatt came out first to Bina, announcing an affinity for wearing dresses, and Bina said it was no big deal. The kids were not exactly thrilled — some friends stopped coming over, some people stared at Martin in a dress — but they told the kids not to worry. *Martine* was always going to be their dad, Bina was always going to be their mom, and stupid people were always going to be stupid.

The gender switch led to Martine's first manifesto-type book, "The Apartheid of Sex." It argued that people come in vast ranges of sexualities and that two genders simply could not describe the reality.

The book got a \$100,000 publishing contract. Sirius went to its IPO. Rothblatt earned millions.

She was 40 years old.

**Psshhttt, hsshhttt. Psshhttt, hsshhttt.**

Most likely, you've never been in a room with a disembodied set of lungs, watching it breathe via a ventilator. It's kind of creepy, the sides coming together, all wet and fleshy and fluffing back out again. ...

We are in a high-tech lab of Lung Biotechnology, a subsidiary of U.T. We are checking in on Rothblatt's clinical trial to reclaim marginal lungs not accepted for transplant.

The facility is just across from the company's Spring Street headquarters. In a sealed room that looks like a surgical suite — tubes and air lines and flat

screens displaying real-time medical data, everybody wearing paper overalls and masks and booties — are said lungs, in a circular glass incubator.

Yesterday, they were breathing in the chest of a 56-year-old man, a 30-year smoker and drug user.

Last night, he died of a stroke.

This morning, they're here.

They're big — huge, actually, because the lungs tend to expand when not compressed by the rib cage — and the clear plastic dome fogs with condensation.

The staff, led by Thomas Hartnett, has been running fluids and medication through the lungs to maintain and assess them while removing excess fluids. A bronchoscope with a tiny camera runs through the main passageways, offering views of the interior.

The data they're picking up goes to the cloud, so any doctor on the system with Internet access — even a smartphone on a golf course — can determine if it might work for transplant.

Should the process be approved in the United States, it would significantly reshape the high-pressure ecosystem of lung transplants.

About 8,000 lungs are donated each year. But on average over a decade, only 1,600 find continued life in someone else. There are six to eight hours to make the switch — a huge network of jets, helicopters, ambulances and surgeons are on call — yet more than two-thirds are not, in the final analysis, approved for transplant.

Rothblatt's project is to preserve those marginal donations — out of body for up to 24 hours — so that they might be maintained while a suitable recipient is found.

The process is legal in Canada, and Rothblatt's company is among a few trying to win FDA approval. It has worked on more than 40 lungs since May, practicing and documenting results. Once the process is approved, the company will start putting the lungs in patients on a trial basis.

"The idea is to get 40 or 50 donated lungs per week," Hartnett says. "About 2,000 a year. That would double the number of transplants."

And, as he points out, that's no small thing: Transplants are for end-stage lung disease. People who do not get them in time — and there's a long waiting list — do not live.

There are many diseases that can result in the need for a full or partial lung transplant. One of them is pulmonary arterial hypertension. Because it has no known cure, a lung transplant may someday be required for the very soul of the company.

**Jenesis Rothblatt** comes walking down a Bethesda sidewalk on a mid-autumn evening to meet for dinner. The impression is not of a lung patient. She's tall, vibrant, angular, strikingly attractive, high cheek bones, bright smile.

About  
**8,000**

lungs are  
donated  
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But on  
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someone  
else.

"I haven't fainted in 10, maybe 12 years," she says, sitting down, ordering a glass of red.

She started getting short of breath at about 5, on family skiing trips. Later, the spells would come at random. "I'd start to hear something like the tinkling of fairy dust, if that makes any sense. Then I'd see little dark spots, going from the outside in, until it was one big black spot."

She'd faint, dropping as if shot.

Bina, on the terror of the time: "I was doing her hair one time, just combing it out, and she just collapsed. Right through my hands, I couldn't catch her. She was *out*."

The medication at the time was not particularly effective. There were I.V. pumps, her parents waking her in the night to give her medication.

Rothblatt left Sirius, desperately trying to find better treatment. But the disease had about 3,000 patients in the United States — it was so rare and treatment so expensive that major pharmaceutical companies weren't interested. Rothblatt pestered experts, set up a foundation and sent out requests for proposals.

Then she and Bina took Jenesis traveling.

"She was about 10 or 11, she was on oxygen, and we thought her life was about over," Rothblatt said. "We thought, 'Let's just show her what we can do of the world.'"

They toured, seeing the Great Wall of China, and when they came back, Rothblatt was stunned to find several doctors had answered her requests.

She was impressed with James Crow, a just-retired research scientist who had done work on the condition, and got him to come on board. They eventually developed a key drug, Remodulin, that helped keep blood pathways open in the lungs, though it is delivered by injection or a pump. They developed Tyvaso, which is inhaled; and finally, Orenitram, a pill.

The medications can cost north of \$100,000 per year, but as treatments improved, so did the number of patients able to benefit from them. Today, more than 30,000 patients are treated with these or similar drugs each year.

"All of these are people just would not be alive without these medicines," Rothblatt said at a recent conference.

Jenesis's condition slowly improved. But she tired of the illness and the sheltered lifestyle it imposed. "I still wanted to be able to go out and do the things other kids my age were: sleepovers, roller coasters, staying up past 7 p.m."

So she rebelled. "I drank, I skipped class, I wouldn't take my medication."

But then, as the pages on the calendar turned, she matured, studied audio engineering, then biochemistry. U.T. didn't provide the only medication she took, but it was at the forefront of the field.



Today, she takes three pills per day (one made by U.T.) and feels lazy if she takes an elevator up a floor rather than hoofing it. She just moved to L.A., still working for the company, but a little glad to get out of the home office.

"Because it was founded in my honor, there's really no way I could be disassociated from it, whether I worked there or not," she says. "On one hand, it's very humbling. It's so special. It's kind of cool. But, sometimes, you'd like to be a little more anonymous."

**One of the first things** you notice about Rothblatt is that she has a very offhand manner. Second, she's almost comically upbeat. She effusively praises subordinates in meetings, compliments the waiter at lunch on the tea and praises Bina in all things — even if it's her habit of rearranging furniture, unbidden, even if it's the sitting room of a doctor's office. "She's got a natural sense of feng shui!"

Rothblatt is 6-foot-2, rangy, an athletic lope to her stride. She sometimes wears custom-made women's suits ("women's clothes don't really fit me, men's clothes don't really fit me"), but mostly she knocks around in dark slacks and a pullover.

On this particular recent evening, she has her hair flat-ironed, is wearing dark slacks, a turtleneck and a leather jacket. If she told you she was a yoga instructor, you'd totally go for it.

At United Therapeutics in Silver Spring, James Zhan, left, and Sam Popa work on Ex-Vivo Lung Perfusion, a process for mending damaged organs to make them available for transplant.

She, Bina and I were chatting in a sitting area on the sixth floor of U.T. headquarters. The cubed tables change colors every few seconds. It was after closing hours, and when a stray employee walked past, Rothblatt halts the conversation to call out, "Thanks for working late!"

It grew late. As we were leaving, she pointed out the window, across the street. The lights were still on at the lab. "They're sending our first lung to be transplanted tonight in Toronto," she said. "See the ambulance?"

The transplant was completed at 1 a.m. Eight hours later, she e-mailed me pictures, replete with time stamps.

"Last night one fewer person died on the transplant list," she wrote, exultant. "I feel confident that we'll at minimum double # of transplants by end of 20teens."

Roll your eyes? Sure, go ahead.

Then go back up, near the beginning of this story, and, when betting against the future, reread the handicapping of Ray Kurzweil, generally regarded as one of the planet's great minds, about the track record of Martine Rothblatt. ■

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