Jennifer takes Manhattan

SNEAK PREVIEW: On the set with J.Lo, De Niro and other stars

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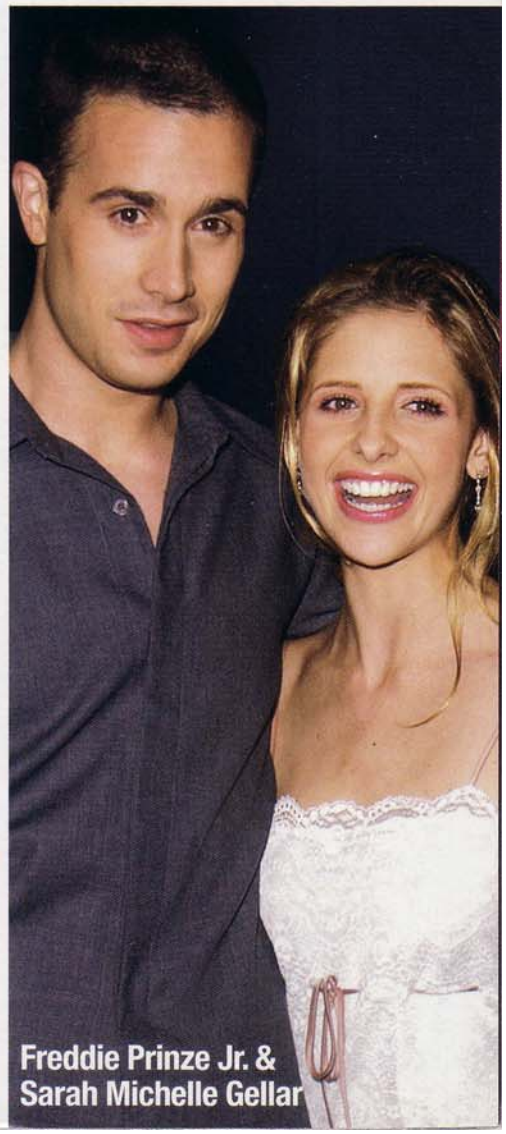


Freddie Prinze Jr. & Sarah Michelle Gellar

"To me, the chip is a success," says Bennett (at her snack bar), who can tell light from dark for the first time in 23 years.

Help in Sight

Alan and Vincent Chow's experimental silicon eye chip may help correct a common type of blindness

Debbie Bennett may be blind, but her wry sense of humor is 20/20. "You look so nice today—I love what you're wearing," she tells patrons at Deb's Place, the snack bar she runs in downtown Indianapolis. Newcomers often don't catch the joke until the automated voice of her cash register tells her how much change to give back. Bennett, 47, has been blind since she was 24, but, says employee Lakisha Taylor, "she manages so well that sometimes I think she can see."

Now, thanks to an experimental procedure, she has recaptured a glimmer of her former sight. Bennett is one of approximately 100,000 Americans with retinitis pigmentosa, a disease that gradually damages the light-sensing cells that line the back of

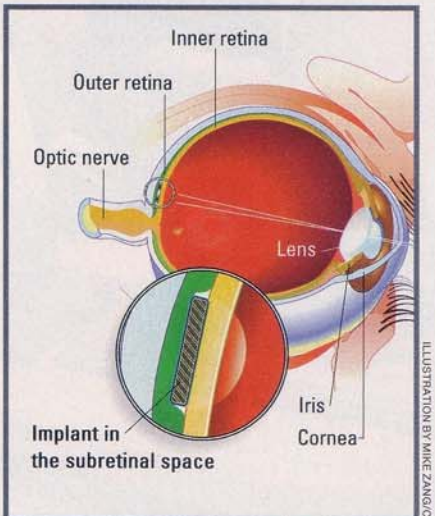
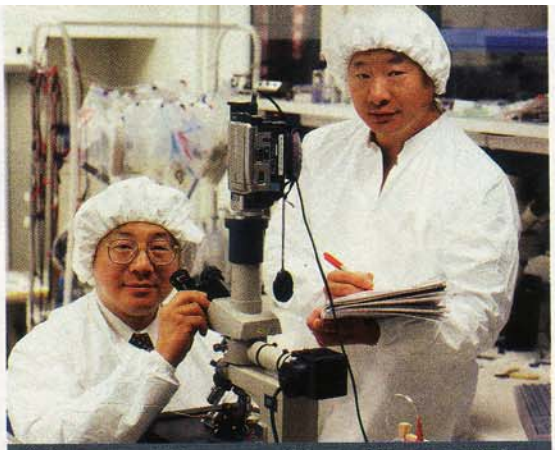


ILLUSTRATION BY MIKE ZANG/OPTOBIONICS

About the size of a pinhead, the chip has 4,000 light-powered electric cells.

PHOTOGRAPHS BY BLACK/TOBY



"We never got discouraged," says Alan Chow (left, in his home laboratory with brother Vincent).

the eye. The condition was long considered incurable, but according to preliminary results of clinical trials announced at a conference of eye specialists on May 8, an experimental device is helping Bennett and five others regain at least some of their vision.

In July 2000 surgeons in Chicago implanted a tiny chip called an Artificial Silicon Retina in Bennett's right eye. Invented by Dr. Alan Chow, 50, a pediatric ophthalmologist, and his brother Vincent, 52, an electrical engineer, the implant converts light into pinpoints of electric current, which stimulates retinal cells and seems to improve their function. Still in its infancy, the technology may offer hope to those with degenerative vision disorders.

Bennett, who was the most severely impaired member of the group, can sometimes make out customers' silhouettes in bright light. "It took six or seven months before I started seeing shadows," she says. Married since 1994 to Kenny, 45, who maintains postal vending machines and is partially sighted, she was astonished when she first glimpsed his heavyset brother Mark, 40: "I said, 'Gosh, are you wide!'" Another patient, Melvin Kehoe, 60, a retired construction worker from Prairie du Chien, Wis., has gone from barely being able to see a hand moving in front of him to reading the first 25 letters on an eye chart. Kehoe's twin, Delvin, an ex-trucker, can identify faces for the first time in 15 years. "The most important face I saw was Dr. Chow's," he says. "He's the first angel I have seen."

The inspiration for the implant came in 1987, when Alan Chow diagnosed an 11-year-old boy with a form of RP at his Glen Ellyn, Ill., practice. Knowing that cells damaged by the disease still respond to electrical stimulation, Alan wondered if a current-producing chip could restore some sight. A year later he broached the idea to Vincent on Thanksgiving at the home of their father, James, 87, a mechanical engineer. A penchant for technology runs in the Chow family, who emigrated from Hong Kong in the '50s; mother Rina, now deceased, trained as a chemical engineer, and youngest brother Calvin, 47, is a biotechnology exec. So no one was surprised when the two siblings spent the evening sketching a prototype.

The pair founded a company called Optobionics and set up a basement lab at Alan's home in Wheaton, Ill. Vincent quit his job in the semiconductor industry to focus on research and development; Alan helped raise $37 million from investors. Once they got the okay from the FDA to try the chip in humans, they had no trouble finding volunteers. Bennett, whose mother and two brothers also lost vision to RP, signed up after her niece Samantha, then 1, was diagnosed with the condition. "That's what pumped me up to get it done," she says.

The Chows remain cautiously optimistic. "We were excited to see the results from the first patients," says Alan. "It doesn't mean the next 20 will have the same responses." Dr. Gerald Chader of the Foundation Fighting Blindness, based in Owings Mills, Md., also sounds a wary note: "The verbal reports are very positive. [But] we're awaiting objective scientific reports."

That will take time. If the FDA approves, the Chows plan to expand their study. If results remain positive, they hope their device will be available to more patients within five years. For Bennett, the experiment is already a success. "It's a joy," she says, "to be able to see light again."

- **J.D. Heyman**
- **Giovanna Breu** in Chicago

"When we get together, we throw ideas around," says Alan (at home with, from left, ex-wife Mary Lynn, son Jeffrey, sister-in-law May, niece Sharon and Vincent).