

**COVER
FEATURE**

Eye on Industry Glaucoma treatment from a different angle

by Matt Young EyeWorld Senior Staff Writer



**SOLX
President and
CEO Doug
Adams**
Source: SOLX



**The SOLX headquarters at
the Boston University Photonics
Center, Boston.**
Source: SOLX

SOLX focuses on glaucoma treatment system

In a world with a wide variety of glaucoma treatments, SOLX Inc. (Boston) is trying to distinguish itself by ultimately offering not a single new treatment product, but what it calls a new treatment system. This system, involving both a gold micro-shunt and a 790-wavelength laser, ultimately would combine to provide a titratable micro-shunt in vivo that would drain a customized amount of aqueous to reduce IOP. "If and when that is approved, we will have introduced what I call the ultimate product promise to the glaucoma community," said Doug Adams, president and CEO of SOLX. SOLX is still awaiting Food and Drug Administration approval for each

component individually. The company has received the European CE mark for each and revenue has just begun to trickle in, as Mr. Adams' plan first involves selling the products separately. Mr. Adams declined to discuss revenue amounts or mention a timetable for profitability, but said SOLX was operating on a \$13 million investment by private investors. But if all goes as planned, Mr. Adams could take credit for what would be his third successful startup company and perhaps a refreshing new way of treating glaucoma.

The individual products

Of SOLX's two products, the DeepLight Gold Micro-Shunt may be the most promising individually.

"SOLX wanted to develop blebless glaucoma surgery," Mr. Adams said.

"That led us to development of this device. It communicates from the anterior chamber to suprachoroidal space and drains fluid from inside the eye to inside the eye."

The device therefore compares favorably to a typical shunt, which drains fluid from inside the eye to outside the eye via bleb, Mr. Adams said.

"It's a very different approach to any current surgical approach or device that is currently available or being developed," said Ike K. Ahmed, M.D., professor of ophthalmology, University of Toronto. "The gold shunt is basically an attempt to avoid some of the major issues we have with traditional surgery. The major issues are early complications from excessive flow, hypotony, and all the rest of it that can happen with uncontrolled outflow."

The DeepLight 790 Titanium Sapphire Laser, meanwhile, used for trabeculoplasty, has yet to prove it is better than laser treatments already available on the market.

"The difference between the 790 and SLT is really around depth of penetration and tissue," Mr. Adams said. "At the current wavelength in SLT, it penetrates perhaps 10% to 15% of the depth of the trabecular meshwork. The 790 penetrates over 90% of the depth of meshwork. Plus, it can reach the inner wall of Schlemm's canal."

However, no clinically significant difference has yet been shown between the two methods, Mr. Adams said.

"We are doing a lot of work to try to demonstrate that," Mr. Adams said. Deeper penetration "may or may not be an advantage, we don't know yet," Dr. Ahmed said. "But it has potential."

A combined effort

Mr. Adams remembers SOLX's eureka moment well.

He was in the lab with Gabriel Simon, M.D., director of ophthalmic research at the Boston University Photonics Center, who had just ablated a hole into a piece of gold.

"We have just developed the first titratable gold micro-shunt," Mr. Adams recalls Dr. Simon saying.

"We're not there yet," Mr. Adams acknowledges now. "We have a laser and we have an implant. The next step is to link these two together to have a titratable implant that doctor can use to set target IOP for each patient."

Mr. Adams doesn't envision the DeepLight Glaucoma Treatment System as a replacement for IOP medication as a first-tier treatment.

"We believe pharmaceuticals are the primary therapy," Mr. Adams said.

"We also believe not to put your patient on more than one med."

That's where the SOLX Glaucoma Treatment System could come into play if a single medication doesn't work, Mr. Adams said. It therefore has the potential to replace traditional trabeculoplasty, trabeculectomy, and other shunts, he said.

"This is the first device that is going to allow us to titrate the amount of flow, or how many channels are open at what time," Dr. Ahmed said.

"Before when we put a shunt in, you basically got what you put in."

Getting up to speed

SOLX was started in June 2001 at the Boston University Photonics Center, where it continues to be headquartered. The center has \$40 million worth of laboratory equipment, which makes it an attractive place to operate, Mr. Adams said.

"We have never made a profit," Mr. Adams acknowledges, but the company is still "in a start-up mode," he said.

The company began selling products in September.

Whether SOLX is ultimately a successful business is yet to be determined, but if Mr. Adams' perseverance is any indication of ultimate success, the company would be in good shape.

Mr. Adams recalls sitting in a hot tub many years back pondering two failed startup attempts.

"My wife was telling me, 'Well, you don't recognize the symptoms but you have really been unemployed for three years,'" Mr. Adams said. "I told her, 'Yeah, I noticed that was getting to be a trend' and I told her I was going to do one more."

That one was a success, said Mr. Adams, although he wouldn't discuss details of it or the one other company that he eventually sold for a profit.

"The goal of SOLX is to build a legendary company," Mr. Adams said. "If SOLX gets this right, we will have a huge impact for millions of people around the world."

Editors' note: *Dr. Ahmed has no financial interests related to his comments.*

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