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## **LumenVu lights it up**

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LumenVu is looking to shed some light on a problematic situation.

Every day at hospitals across the country, thousands of tubes and catheters are inserted into patients to help them breathe easier, receive nourishment or perform other essential bodily functions.

Health-care workers responsible for inserting the catheters do the procedure blindly because they can't see where the devices are going. If the tubes or catheters are inserted incorrectly, patients are subjected to additional procedures and X-rays to fix the mistake and ensure correct placement.

Philadelphia-based LumenVu seeks to commercialize a medical device, being developed by researchers at the University of Pennsylvania, that would address the problem.

The device, called CatLite, is a catheter with a light source at its tip that will allow direct observation of the catheter as it is being inserted into the patient's body. The light is designed to enable health-care workers to direct precise placement.

The company's research is led by David F. Wilson, a professor of biochemistry and biophysics at the University of Pennsylvania School of Medicine.

Wilson invented the CatLite with Dr. Gregory J. Shears, assistant professor of anesthesiology and pediatrics at the Mayo Clinic.

"Greg is an intensive-care physician and he is always looking for ways to improve medical treatment," Wilson said. "We were working on a joint research project involving cardiopulmonary bypass and we ended up discussing this problem. We came up with what we think is a reasonable solution."

The device is designed to eliminate the need to confirm placement of tubes and catheters through X-rays or CT scans, saving time and avoiding exposure to unnecessary procedures.

LumenVu's initial target application is PICC lines, which are catheters used to deliver medications to the heart.

The company's researchers will use its \$168,875 in funding from BioAdvance to demonstrate the feasibility of using its optical guidance system and to develop a prototype that can be used for the next stage of commercialization.

ROSS Design Services, an independent consulting group, is working with the University of Pennsylvania and LumenVu to provide engineering and product development services for the design and construction of the CatLite product.