



## **Flow Forward Announces the Issuance of Patents on its Novel Device to Improve Vascular Access in Hemodialysis Patients**

### ***Company Closes Additional Series A Financing***

**OLATHE, Kan. – February 9, 2017 - [Flow Forward Medical Inc.](#)** (Flow Forward), an early-stage company focused on improving outcomes for hemodialysis patients through the rapid creation of high-quality vascular access sites, today announced the issuance of US Patents 9,155,827, 9,539,380 and 9,555,174 for its Arteriovenous Fistula Eligibility (AFE) System™. The '827 and '380 patents protect methods for using blood pump systems to dilate peripheral veins prior to vascular access site surgery. This proprietary technology utilizes rapid blood flow with low pulsatility to provide highly favorable conditions for vein dilation and maturation. Flow Forward is developing medical devices that enable the use of these methods for the creation of both arteriovenous fistula (AVF) and arteriovenous graft (AVG) vascular access sites. The '174 patent protects these AFE System devices.

The success of vascular access surgery is highly dependent on the diameter of the veins and arteries used to create access sites. By providing larger veins prior to construction of an access site, these methods could potentially increase patient eligibility for AVF and AVG surgery, increase AVF maturation rates, reduce AVF maturation time, and increase primary and secondary patency rates for AVFs and AVGs.

These patents are part of an intellectual property portfolio that contains six issued patents and numerous additional patent applications, to which Flow Forward has exclusive rights in the US and major international markets. The portfolio covers four major patent families, including methods of treatment for veins and arteries, and compositions of matter covering related blood pump systems. "We are confident that Flow Forward's extensive patent estate will provide our products with long-term market exclusivity," said F. Nicholas Franano, MD, President and CEO of Flow Forward.

In related news, Flow Forward also announced the closing of \$1 million additional Series A financing, led by a group of individual investors. This financing will support the further development of Flow Forward's AFE System, a small, minimally invasive blood pump system designed for temporary use to rapidly dilate peripheral veins through flow-mediated vascular dilation prior to AVF surgery. Flow Forward previously raised \$6 million in Series A funding, bringing the total funding raised to \$7 million to date.

"The new funding provides Flow Forward with the resources to continue the development and testing of the AFE System," said Franano. "Currently, there are more than 2.3 million people worldwide on hemodialysis who depend on a vascular access site to receive this life-saving treatment. Unfortunately, most of these patients will, at some point, experience failure of their vascular access site, which can often lead to a cycle of painful, expensive repair and replacement procedures. Outflow vein and inflow artery diameter are critical factors in achieving and maintaining a functional AVF. Based on our bench and preclinical study results, we believe the AFE System could provide larger AVF inflow artery and outflow vein diameters, higher AVF flow rates, greater AVF maturation rates, faster AVF maturation, and increases in AVF primary and secondary patency rates."

### **About Hemodialysis and Vascular Access Failure**

Hemodialysis is a lifesaving treatment for more than 2.3 million patients worldwide with end-stage renal disease (ESRD). Before patients can receive hemodialysis, a reliable vascular access site must be created. An AVF, which surgically connects an artery to a vein, typically in the arm, is preferred over other forms of vascular access due to improved patient survival, reduced complications and hospitalization rates, and

large reductions in the cost of care. However, nearly 40 percent of U.S. hemodialysis patients do not currently use an AVF for vascular access, primarily due to inadequate vein diameter and high rates of AVF failure (up to 60 percent) following conventional surgical placement. There are currently no products approved by the U.S. Food and Drug Administration (FDA) to increase AVF eligibility or unassisted AVF maturation, the process by which an AVF becomes ready for hemodialysis.

**About Flow Forward Medical**

Flow Forward is developing a novel approach to rapidly establish high-quality vascular access sites for hemodialysis. Our AFE System comprises a small external blood pump designed for temporary use to stimulate flow-mediated vein dilation to make more patients eligible for an AVF and increase success rates after surgery. Establishment of a reliable AVF reduces morbidity and mortality in hemodialysis patients, as well as the overall cost of care. For additional information, please visit [www.flowforwardmedical.com](http://www.flowforwardmedical.com).

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