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## **CHF Solutions' Aquadex Flexflow® Ultrafiltration System Featured in the May 2017 Journal of The American College of Cardiology Review of Ultrafiltration as a Promising Treatment for Fluid Overload Associated with Heart Failure**

EDEN PRAIRIE, Minn., June 05, 2017 (GLOBE NEWSWIRE) -- CHF Solutions, Inc., (fka Sunshine Heart, Inc.) (NASDAQ:CHFS) announced today that clinical trials using its Aquadex FlexFlow® Ultrafiltration System are featured in the May 2017 Journal of the American College of Cardiology (JACC) Treatment Review Paper, *Extracorporeal Ultrafiltration for Fluid Overload in Heart Failure - Current Status and Prospects for Further Research*. The retrospective treatment review examines a body of clinical research on the use of extracorporeal ultrafiltration (UF) as an alternative or adjunct method of fluid removal to diuretic agents. The reviewed research includes four clinical trials that used CHF Solutions' Aquadex FlexFlow Ultrafiltration System versus, or in conjunction with, loop diuretic agents in patients with heart failure. The review concludes ultrafiltration is an attractive alternative therapy because it predictably removes fluid and total body sodium.

The review notes that, although effective early in heart failure treatment, diuretic agents become increasingly ineffective with disease progression due to the development of unresponsiveness in a significant subset of the patient population. Moreover, the review paper explores in detail the differential characteristics of diuretic agents that entail unpredictable elimination of sodium and water versus UF, which enables precise control of the rate and amount of sodium and fluid removal.

The review further highlights the current unmet clinical need for an improved and more effective standard of care for heart failure patients where annual hospitalizations for heart failure exceed 1 million in both the United States and Europe, and more than 90% are due to symptoms and signs of fluid overload. The review also notes that up to 1 in 4 patients (24%) are readmitted within 30 days, and 1 in 2 patients (50%) are readmitted within 6 months. The review highlights the need for additional research utilizing UF treatment based on the patient's hemodynamic and renal profiles; and recommends that in such research patient selection, fluid removal amount, duration and rate should be guided by objective, complementary, and informative measurements of fluid overload and kidney function. (Costanzo et al., JACC Vol. 69 NO. 19. 2017, 2428-45)

"We believe the clinical evidence shows the Aquadex FlexFlow Ultrafiltration System has demonstrated advantages over loop diuretics in the removal of fluid and total body sodium in the treatment of heart failure," said John Erb, Chairman and CEO of CHF Solutions. "This new research review documents and analyzes the benefits found in clinical trials of the use of UF versus, or in conjunction with, diuretics, which lose efficacy due to the onset of diuretic resistance. Our UF solution can be individualized and adjusted based upon treatment and patient criteria cited in the review paper, which bodes well for our future research focus, as the optimization of treatment protocols and guidelines will improve future patient outcomes. We look forward to gaining further insights into managing fluid overload and removal while mitigating potential renal tubular damage and other adverse events. This review provides meaningful insight into further areas of treatment optimization and we are committed to additional research to establish UF as a standard of care for the treatment of fluid overload in heart failure patients," Mr. Erb concluded.

### **About CHF Solutions**

CHF Solutions, Inc. (Nasdaq:CHFS) is an early-stage medical device company focused on commercializing the Aquadex FlexFlow Ultrafiltration System. The company's commercial product, the Aquadex FlexFlow Ultrafiltration System, is indicated for temporary (up to eight hours) ultrafiltration treatment of patients with fluid overload who have failed diuretic therapy, and extended (longer than 8 hours) ultrafiltration treatment of patients with fluid overload who have failed diuretic therapy and require hospitalization. All treatments must be administered by a healthcare provider, under physician prescription, both of whom having received training in extracorporeal therapies. The company's objective is to improve the quality of life for patients with heart failure and related conditions. CHF Solutions is a Delaware corporation headquartered in Minneapolis with wholly owned subsidiaries in Australia and Ireland. The company has been listed on the NASDAQ Capital Market since February 2012.

### **Forward-Looking Statements**

Certain statements in this release are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding future research, establishing UF as a standard of care for the treatment of fluid overload in heart failure patients, the potential for treatment protocols and guidelines to improve future patient outcomes, and events or developments that we expect or anticipate will occur in the future. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Many factors could cause actual future events to differ materially from the forward-looking statements in this release, including, without limitation, those risk associated with our

ability to execute on our recently announced strategic realignment, the possibility that we may be unable to raise sufficient funds necessary for our anticipated operations, our post-market clinical data collection activities, benefits of our products to patients, our expectations with respect to product development and commercialization efforts, our ability to increase market and physician acceptance of our products, potentially competitive product offerings, intellectual property protection, our ability to integrate acquired businesses, our expectations regarding anticipated synergies with and benefits from acquired businesses, and other risks and uncertainties described in our filings with the SEC. Forward-looking statements speak only as of the date when made. CHF Solutions does not assume any obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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