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Investigator-Sponsored Study of PLC's RenalGuard(R) Demonstrates Reduced Mortality and Fewer Adverse Events Than Alternatives

First Longer-Term Study Presented at ACC 2012 Reports Reduced Mortality and Reduced Adverse Events in Severe Renal Failure Patients Treated with RenalGuard compared to Hemofiltration and Sodium Bicarbonate

MILFORD, Mass., April 4, 2012 /PRNewswire/ -- PLC Systems Inc. (OTCBB: PLCSF), a company focused on innovative medical device technologies, today announced that results from a new investigator-sponsored clinical trial of RenalGuard(R) in Italy -- the first to follow longer-term outcomes -- were presented at the annual conference of the American College of Cardiology (ACC.12), March 24 - 27, 2012, Chicago, Illinois. These results showed that RenalGuard is superior to two alternative methods at reducing rates of mortality, in-hospital adverse events, the need for dialysis, major adverse cardiac events (MACE) and Contrast-Induced Nephropathy (CIN) in high-risk patients undergoing cardiac catheterizations using iodinated contrast.

The investigators compared the use of three different CIN prevention methodologies in three consecutive blocks of patients: hydration with Sodium Bicarbonate plus N-acetylcysteine (Hy), continuous veno-venous hemofiltration (CVVH), and PLC's RenalGuard System™, in 100 patients with severe renal failure who underwent elective percutaneous coronary and/or peripheral vascular interventions. The results provided evidence that RenalGuard can reduce mortality and adverse events at three different points: in hospital, one month following and six months later, compared to the alternatives.

The study was led by Dr. Giuseppe Sangiorgi, who was also an investigator in the REMEDIAL II study, the randomized multi-center trial that established the superiority of RenalGuard to standard therapy in reducing the rates of CIN in at-risk patients. "Results from this new study, when combined with the results of REMEDIAL II and MYTHOS, provide strong support for the use of RenalGuard in at-risk patients. Based on these results, we use RenalGuard for our at-risk patients, and I encourage my colleagues to do the same," said Dr. Sangiorgi.

Mark R. Tauscher, President and Chief Executive Officer of PLC Systems, said, "We are delighted that the first study to look at the long-term impact of RenalGuard Therapy(R) on patient outcomes found these positive results. The MYTHOS and REMEDIAL II studies established that RenalGuard Therapy reduces the rates of CIN in at-risk patients. These new findings build on that data and demonstrate that reductions in CIN rates can translate

into significant improvements in patients' short and longer-term outcomes, most critically in reducing patient mortality. Although it was a small study, we believe these results offer continued support for our efforts to drive sales of RenalGuard in markets where it is available. Our U.S. pivotal trial, which is currently underway, will also evaluate longer-term outcomes, so that we will have the opportunity to determine from the larger patient population in the U.S. pivotal trial whether we can replicate the conclusions from this 100 patient study."

In this study, which was undertaken by a group of cardiologists at the University of Medona in Italy under the leadership of Dr. Sangiorgi, the investigators reported that none of the RenalGuard-treated patients required dialysis in the hospital as compared to 20% of those treated with CVVH and 6% of hydration patients. Only 6% of the RenalGuard-treated patients experienced in-hospital adverse events versus 37% for CVVH-treated patients and 12% for Hy-treated patients. More importantly, six months after their treatment, none of the RenalGuard-treated patients had died, whereas patients treated with CVVH had a mortality rate of 26% and patients who received sodium bicarbonate therapy had a mortality rate of 6%. Although this aspect of the results was not sufficiently powered to be statistically significant, the researchers reported that CIN occurred less frequently (15%) in RenalGuard treated patients, versus 31% and 25% in patients in the other two groups respectively.

The findings from this study have been published in*ACC.12 supplement to The Journal of the American College of Cardiology* at the following link (http://www.sciencedirect.com/science/article/pii/S0735109712600977) and can also be accessed by visiting PLC's website (www.plcmed.com).

Another study released at ACC last week also demonstrated that CIN remains a significant and growing problem for patients undergoing percutaneous coronary interventions (PCI's) in the U.S. A team of researchers, including cardiologists at major healthcare institutions in the U.S., supported by Cardiac Data Solutions, examined the database of all Medicare beneficiaries receiving PCI's from 2008 to 2010. They found that the rate of CIN in patients undergoing PCI increased between 2009 and 2010 and the need for dialysis increased as well. The investigators concluded that this increase in renal complications warrants increased focus on reducing renal damage associated with CIN.

About PLC Systems

PLC Systems Inc., headquartered in Milford, Mass., is a medical device company focused on innovative technologies for the cardiac and vascular markets. PLC's newest product, RenalGuard, has been developed to help prevent the onset of Contrast-Induced Nephropathy (CIN) in at-risk patients undergoing certain cardiac and vascular imaging procedures. The Product is CE-marked and is being marketed in Europe and selected countries around the world. Two investigator-sponsored European studies have demonstrated RenalGuard's effectiveness at preventing CIN. RenalGuard is being studied in a pivotal trial in the U.S., as required for approval by FDA.

This press release contains "forward-looking" statements. For this purpose, any statements contained in this press release that relate to prospective events or developments are deemed to be forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "will" and similar expressions are intended to identify forward-looking statements. Our statements of our objectives are also forward-looking statements. While we may elect to

update forward-looking statements in the future, we specifically disclaim any obligation to do so, even if our estimates change, and you should not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this press release. Actual results could differ materially from those indicated by such forward-looking statements as a result of a variety of important factors, including that we may not receive necessary regulatory approvals to market our RenalGuard product or that such approvals may be withdrawn, the U.S. clinical trial for RenalGuard may not be completed in a timely fashion, if at all, or, if this clinical trial is completed, it may not produce clinically significant or meaningful results, the RenalGuard product may not be commercially accepted, the need for additional financing, competitive developments may affect the market for our products, regulatory approval requirements may affect the market for our products, and additional risk factors described in the "Forward Looking Statements" section of our Annual Report on Form 10-K for the year ended December 31, 2011, a copy of which is on file with the SEC.

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