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BioSig Technologies Announces Intent to Acquire the Assets of Neuro-Kinesis Corporation

Los Angeles, July 31, 2024 (GLOBE NEWSWIRE) -- BioSig Technologies, Inc. (OTCQB: BSGM) (“BioSig” or “Company”), a medical technology company delivering unprecedented accuracy and precision to intra-cardiac signal visualization for electrophysiology (EP) procedures, today announced the intent to acquire the assets of Neuro-Kinesis Corporation (NKC), a privately held Los Angeles-based medical technology company developing smart EP tools.

A non-binding letter of intent (LOI) has been executed confirming BioSig’s preliminary interest in the proposed acquisition of the assets of NKC. The purchase price will be paid through the issuance of shares of BioSig’s common stock to the shareholders of NKC. In addition, at closing, NKC will provide a minimum of $2.5 million, but could provide up to $6 million, of unrestricted cash to BioSig. The proposed acquisition will require extensive due diligence, potentially through year-end, with full disclosures in the Company’s next proxy statement for shareholder vote.

BioSig’s CEO, Anthony Amato stated, “The Company’s management team and board of directors are strategically aligned to continue to execute attainable goals for 2024. We feel we have the ability to leverage our improving balance sheet, along with our expertise, to expand our product portfolio beyond PURE EP™. With this in mind, we will continue to evaluate opportunities with a focus on new and exciting innovative technological platforms. I want to thank the NKC team for recognizing our complimentary core technologies and providing the initial due diligence. I look forward to the progression of this process.”

Neuro-Kinesis’ CEO, Josh Shachar stated, “I’m very excited about the potential collaboration with BioSig. Joining forces will enable us to accelerate the market entry of our breakthrough technology for the diagnostic and therapeutic treatment of complex cardiac arrhythmias. For the last couple of decades, EP physicians have relied on an equal amount of historical results: the bioelectric voltage realms they can measure, and intuitive instincts they have learned to guide their healing art. The Huygens™ Catheter should allow them to finally be able to visualize the low-voltage landscape of the heart, where many believe the important information related to complex arrythmias lie.”

Neuro-Kinesis Overview
NKC is an advanced medical technology company based in Los Angeles that focuses on the development of its patented catheter-based diagnostic system that is aimed at addressing

the limitations of the existing art of EP mapping. The centerpieces of this technology are the Huygens™ Catheter, which aims to improve the resolution of signal detection by a significant order of magnitude, and the Proteus™ Robotic Arm, which delivers to the physician a computer-assisted robotic guidance system for EP catheters that significantly improves the accuracy and repeatability of anatomical target acquisition during mapping, ablation, and other EP-related procedures. NKC brings new opportunities to the EP market, as the Huygens™ Catheter allows for improved signal processing, which is crucial for better treatment of arrhythmia. Following regulatory approval, NKC will be able to sell its consumables technology in a variety of lucrative markets.

NKC Management Team

NKC is managed by a group of seasoned professionals with extensive backgrounds in medical technology engineering, electrophysiology, clinical and practical research, regulatory affairs, and technology commercialization. Their collective experience intersects to provide NKC (and post-closing, BioSig) with the strategic leadership and forward-thinking vision that has enabled the advancement of what is a fundamental shift in the advancement of the art of cardiac-based EP diagnostics and treatments.

Josh Shachar, *NKC's Board Chairman, Chief Executive Officer, and Chief Technology Officer*
Josh Shachar is the founder and developer of several technologies and related engineering advancements through entities that include EDEL Engineering Corp. and Engineered Magnetics, Inc. ("EMI"), which have been trusted partners of the US Department of Defense for over 20 years. Virtually all free-world missile programs are operating with EMI equipment abroad. He is the developer of several advanced medical device innovations, including an advanced biomarker detection platform that was purchased by Larry Ellison for global commercialization. Josh is the creator behind all of NKC's patented technologies.

Dr. Roger Kornberg, PhD, *NKC's Director of the Science Advisory Board*
Dr. Kornberg is a respected biochemist who received the Nobel Prize in Chemistry in 2006 for his studies of the molecular basis of eukaryotic transcription. He was the first to create a picture of how transcription works at a molecular level. He has been a Professor of Structural Biology at Stanford University School of Medicine since 1978 and previously was an Assistant Professor of Biological Chemistry at Harvard Medical School.

Dr. Eli Gang, MD, FACC, FACP, *NKC's Board Member and Chief Medical Officer*
Dr. Gang is a Clinical Professor of Medicine at the David Geffen School of Medicine at UCLA. He is a board-certified physician in Internal Medicine, Cardiology, and Clinical Electrophysiology. He is an expert in catheter ablation and implantation of pacemakers and automatic defibrillators. Dr. Gang is a Fellow of the American College of Cardiology, American Heart Association, Heart Rhythm Society, and the American College of Physicians.

Dr. Thomas Chen, MD, PhD, *NKC's Director*
Dr. Chen is a tenured Professor of Neurosurgery and Pathology at the University of Southern California. He serves as the Director of Surgical neuro-oncology at the university and is one of the few surgical neuro-oncologists in the country who specialize in spine cancer surgery. He has published extensively on glioma biology and neurosurgery and heads up a research laboratory focused on glioma biology. Dr. Chen maintains a clinical

practice in both surgical neuro-oncology and spine surgery.

Dr. Eustaquio Abay II, MD, FACS, *NKC's Director*
Dr. Abay II is a recognized neurosurgeon specializing in micro-neurosurgery, neurovascular surgery, neuro-oncology, stereotactic functional neurosurgery, radiosurgery, spine, and peripheral nerve repair. He was the founder of the Kansas Spine Hospital, as part of a Neuroscience Center of Excellence in Wichita, Kansas. He served as the Clinical Assistant Professor, Section of Neurosurgery for the Department of Surgery at the University of Kansas School of Medicine, as well as being the Chief of Section for Neurosurgery at the Via Christi Regional Medical Center, St Francis and St Joseph Campuses in Wichita, Kansas.

Huygens™ Catheter – Clinical Application

Current EP mapping catheter technology utilizes electrodes at the tip of a 95cm long and 2mm wide wire to capture bioelectric signals in the human heart, which are used to determine the fidelity of the tissue to be able to process the pacing signals required to maintain a healthy heart rhythm. By combining these measurements with trilateration position data, the EP physician can build a three-dimensional map of the patient's heart to determine where electrical energy is being blocked or interrupted so that ablation techniques can be used to restore normal heart rhythm.

The problems with the current mapping catheter are twofold. The first is that current technology uses analog technology to capture the relevant bioelectric information that is then sent down the catheter and through wires to a mapping station in the operating room theater for post-processing and analysis of the signal. Because of the analog nature of the capture and transmission, the signal is subject to noise contamination from a variety of sources, including the blood pool in the heart and all of the various energy sources, including radiofrequency ("RF"), in the operating room. As a result, the true nature of the complex bioelectrical wavefronts can be distorted with substantial clinical details being "washed out". This can result in a limited or inaccurate map and, thus, lead to an imperfect diagnosis of the underlying nature of the disease mechanism.

This limited or inaccurate mapping is especially true for any signal capture that occurs in the lower ranges below 100μV (microvolts), which leads to the second problem. Most simple arrhythmia issues are found to be in the area above the 100μV range and as high as 1000μV. These large signals are easily able to be seen above the noise threshold so the EP physician can determine where ablation can be effective. But for the 35% of patients who suffer from complex arrhythmias, traditional ablation therapy is not effective, which leads to repeated ablations creating more scar tissue and requiring a move to drug therapies even while continuing to face a higher chance of arrhythmia-related heart disease issues, including death. It is believed that many of the issues with complex arrhythmia cases lie in interruptions that occur on the low microvolt range to which current catheters tend to be virtually blind.

The Huygens™ Catheter addresses these shortcomings by embedding micro-electronics into the tip of the catheter, enabling signal amplification and digital processing to be performed at the point of signal capture. There, the signals are digitized for transmission to the mapping station, which eliminates signal corruption. As such, signal degradation and noise contamination are greatly reduced and the resolution of the signals of interest is

greatly enhanced, including the ability to see the important low-voltage scar tissue information.

The Huygens™ Catheter also incorporates a unique series of half-round electrodes that allow discrete measurements to be taken and analyzed from each electrode. This allows the system to isolate the near-field signals, signals taken from tissue contact, from far-field signals, the unwanted signals from the blood pool and surrounding environment, again improving the quality of the data being captured to create a better heart map.

Finally, the Huygens™ Catheter includes a new feature not present in existing EP catheters: the ability to measure the impedance of the tissue to generate a substrate conductivity map. Current EP maps only provide a picture of the surface of the heart tissue fidelity. Scar tissue though is a three-dimensional structure. Much like an iceberg, a small scar on the surface could have a large subsurface structure that impacts electric flow differently than the appearance of disruption on the surface. Being able to measure what lies beneath the surface is important because such features have a great impact on how the cardiac signal propagates through the tissue. The Huygens™ Catheter substrate-mapping capability is able to identify true dimensions of the scar tissue, which can be critical in determining the proper location for an ablation procedure. The Huygens™ Platform is an ASIIC microelectronic structure that enables local detection, amplification of small signal, digitization, and varieties of embedded AI routine, providing the physician with an improved understanding of the underlying mechanism of pacing disturbance.

Proteus™ Robotic Arm

The Proteus™ Robotic Arm represents the culmination of over 20 years of research and development efforts in catheter navigation systems that began with the development of the Catheter Guidance Control and Imaging (CGCI). CGCI provided the world's first catheter guidance system using controlled magnetic fields to navigate a catheter inside a human body, proving the concept of robotic-assisted catheter navigation. The Proteus™ Robotic Arm navigation system builds on this effort by providing a cooperative robotic assistance device that enables precision, fine-grain control of a catheter in an EP diagnostic procedure.

The Proteus™ Robotic Arm is a medical grade and proven robotic system, whose articulated limbs provide 360° in any axis of direction while also delivering repeatable precision control of the catheter with ±0.1 mm to ±0.15 mm of precision. The Gripper is the end-effector of the robotic arm and controls the rotation and deflection of the catheter during an operation. The Gripper, although designed for the Huygens™ Catheter, can be used with any commercially available EP catheter that has a steering wheel design. Finally, the Joystick provides the EP physician with true Human-In-The-Loop navigation control with zero latency and ease-of-use, which lowers any barrier to adoption.

IP Portfolio

NKC has an extensive portfolio of 47 issued patents covering the Huygens™ Catheter and the Proteus™ Robotic Arm technology. In addition, NKC holds almost 200 additional patents related to the other technologies that they own in the Smart Surgical Device arena.

AI Capabilities

NKC will also be focusing on developing automated EP mapping systems that utilize AI-based applications to respond to data received from the Huygens™ Catheter and Ensite-X™ mapping station in real-time. The vision for the NKC Catheter-based diagnostic system is not just to provide the EP physician with robotic-assisted control, but for the platform to respond automatically to and provide the EP physician with feedback based on mapping data, to improve the safety, efficiency, and efficacy of the EP procedure for treating patients with complex arrhythmias. Autonomous grid-mapping or point-of-interest mapping, such as detailed mapping of the SA node, AV node, or His bundle, would also become a reality that would dramatically lower both procedure time and cost to the patient, while providing a more comprehensive map of the patient's heart.

These two components, along with the communication and integration modules that control the catheter and navigation modules, are designed to integrate with many standard EP mapping stations to accommodate existing lab configurations, or as part of NKC's own turnkey comprehensive mapping solution; the NKC EP Operating Suite.

About BioSig Technologies, Inc. (OTCQB: BSGM)

BioSig Technologies is a medical technology company, focused on deciphering the body's electrical signals, starting with heart rhythms. By leveraging a first-of-its-kind combination of hardware and software, we deliver unprecedented cardiac signal clarity, ending the reliance on 'mixed signals' and 'reading between the lines.' Our platform technology is addressing some of healthcare's biggest challenges—saving time, saving costs, and saving lives.

The Company's product, the PURE EP™ Platform, an FDA 510(k) cleared non-invasive class II device, provides superior, real-time signal visualization that allows physicians to perform highly targeted cardiac ablation procedures with increased procedural efficiency and efficacy.

Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements may be preceded by the words "intends," "may," "will," "plans," "expects," "anticipates," "projects," "predicts," "estimates," "aims," "believes," "hopes," "potential," or similar words. Forward-looking statements are not guarantees of future performance, are based on certain assumptions, and are subject to various known and unknown risks and uncertainties, many of which are beyond the Company's control, and cannot be predicted or quantified and, consequently, actual results may differ materially from those expressed or implied by such forward-looking statements. Such risks and uncertainties include, without limitation, risks and uncertainties associated with (i) BioSig's ability to acquire NKC, conduct its business and obtain financing on commercially reasonable terms if and when needed; (ii) BioSig's ability to manufacture its products and product candidates on a commercial scale on its own, or in collaboration with third parties; (iii) BioSig's current or future competitors expanding the size and nature of their respective commercial activities; (iv) BioSig's loss of one or more of its key executives or scientists; and (v) BioSig's difficulties in securing regulatory approval to market its products and product candidates. For a discussion of other risks and uncertainties, and other important factors, any of which could cause BioSig's actual results to differ from those contained in forward-looking statements, see BioSig's filings with the Securities and Exchange Commission ("SEC"), including the section titled "Risk Factors" in BioSig's Annual

Report on Form 10-K, filed with the SEC on April 16, 2024 and subsequent filings. Investors and security holders are urged to read these documents free of charge on the SEC's website at http://www.sec.gov. The Company assumes no obligation publicly to update or revise its forward-looking statements as a result of new information, future events or otherwise, except as required by law.

Todd Adler
BioSig Technologies, Inc.
Investor Relations
tadler@biosigtech.com
203-409-5444 ext. 104

Anthony Amato
BioSig Technologies, Inc.
Chief Executive Officer
aamato@biosigtech.com
203-409-5444 ext. 102

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