GMG Supports Queensland University of Technology Development of Piezo-Supercapacitors for Self-Powered Medical Implants

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BRISBANE, QUEENSLAND, AUSTRALIA - TheNewswire - September 13th, 2021 - Graphene Manufacturing Group Ltd. (TSXV:GMG) ("GMG" or the "Company") is pleased to formalise its support to Queensland University of Technology - Centre for Biomedical Technologies ("CBT") for the development of Piezo-Supercapacitors for Self-Powered Medical Implants by a Pilot Project Agreement (the "Agreement"). The Agreement details GMG's contribution of expertise and graphene for the project.



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Figure 1: Human Peizoelectric Supercapacitors Requirements

The initial Industry Engagement Grant entitled "Piezoelectric Supercapacitors for Self-Powered Medical Implants" was awarded to Professor Cameron Brown, Associate Professor Deepak Dubal, Dr. Hong Duc Pham and the Chief Scientific Officer of GMG, Dr. Ashok Kumar Nanjundan.

Most modern electrical medical implants (such as pacemakers, insulin delivery pumps and as shown in the figure 1) actively regulate or replace bodily functions, and thus require batteries capable of reliably functioning for many years without failure. Implanted batteries typically require secondary surgeries for replacement, incurring significant inconvenience to patients in the forms of high costs, discomfort, and the risk of infection.

This project aims to develop capability for self-charging medical implants by engineering a novel power unit called a "Piezo-Supercapacitor", which can harvest human body-motions, converting that energy into electricity and store it, in a single unit. The concept is based on a mechanism that hybridizes the two processes into one, where the mechanical energy is directly converted and simultaneously stored as electrochemical energy without going through the intermediate step of converting into electricity.

About GMG

GMG is an Australian based clean-tech disruptive company listed on the Canadian TSXV (TSXV:GMG) that produces graphene and hydrogen by cracking methane (natural gas) instead of mining graphite. By using the company's proprietary process, GMG can produce high quality, low cost, scalable, 'tuneable' and no/low contaminant graphene – enabling demonstrated cost and environmental improvements in a number of world-scale planet-friendly/clean-tech applications. Using this low input cost source of graphene, the Company is developing value-added products that target the massive energy efficiency and energy storage markets.

The Company is also pursuing additional opportunities for GMG Graphene, including developing next-generation batteries, collaborating with world-leading universities in Australia, and investigating the opportunity to enhance the performance of lube oil, biodiesel and diesel fuels.

For further information, please contact:

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Cautionary Note Regarding Forward-Looking Statements

This press release contains "forward-looking information" and "forward-looking statements" within the meaning of applicable securities legislation. The forward-looking statements herein are made as of the date of this press release only, and the Company does not assume any obligation to update or revise them to reflect new information, estimates or opinions, future events or results or otherwise, except as required by applicable law. Often, but not always, forward-looking statements can be identified by the use of words such as "plans", "expects", "is expected", "budgets", "scheduled", "estimates", "forecasts", "predicts", "projects", "intends", "targets", "aims", "anticipates" or "believes" or variations (including negative variations) of such words and phrases or may be identified by statements to the effect that certain actions "may", "could", "should", "would", "might" or "will" be taken, occur or be achieved. Forward-looking information in this press release includes, but is not limited to, statements relating to the development of the Piezo-Supercapacitor by GMG contemplated by the Agreement and the viability and effectiveness thereof, and the benefits of the Piezo-Supercapacitor versus implanted batteries. Forward-looking statements and information are subject to various known and unknown risks and uncertainties, including, but not limited to, the risk factors set out under the heading "Risk Factors" in the Company's final long form non-offering prospectus dated March 31, 2021 available for review on the Company's profile at www.sedar.com, many of which are beyond the ability of the Company to control or predict. Such risk factors may cause the Company's actual results, performance or achievements to be materially different from those expressed or implied thereby, and are developed based on assumptions about such risks, uncertainties and other factors set out herein, including, assumptions that the development and effectiveness of the Piezo-Supercapacitor will be consistent with anticipated results. Such forward-looking information represents management's best judgment based on information currently available. No forward-looking statement can be guaranteed and actual future results may vary materially. Accordingly, readers are advised not to place undue reliance on forward-looking statements or information.

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