

# **Zenyatta Ventures sign MOU with Ben-Gurion University during their business mission to the Middle East**

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Mr. Aubrey Eveleigh reports

**ZENYATTA SIGNS MOU WITH LARISPLAST LTD., BEN-GURION UNIVERSITY & B.G. NEGEV TECHNOLOGIES DURING ONTARIO BUSINESS MISSION TO THE MIDDLE EAST; CONCRETE ADMIXTURE TO CONTAIN ZENYATTA NANO-GRAPHITE IN COLLABORATIVE PROJECT**

**Zenyatta Ventures Ltd. {TSX.V: ZEN}** has signed a memorandum of understanding with Larisplast Ltd., Ben-Gurion University of the Negev and B.G. Negev Technologies while on the Ontario business mission to the Middle East.

The main objective of the collaborative project between Zenyatta, Larisplast, BGU and BGN is to develop concrete admixtures containing Zenyatta's natural nano-graphite to create enhanced mechanical properties.

The enhanced product will allow the use of less concrete during construction but achieve a better mechanical performance, inhibit premature failure and also large forces, typically produced during earthquakes or explosions. Usage of natural reinforcing high-purity, nano-graphite filler of this kind is also beneficial for the environment.

The concrete industry is a significant contributor of carbon dioxide, a major greenhouse gas. The development of this enhanced product will greatly reduce the amount of concrete used in construction and consequently cut considerable carbon dioxide emissions.

**Dr. Oren Regev**, professor from the department of chemical engineering at BGU, stated: *"Zenyatta's purified graphite material was converted to nano-graphite and tested by our research and development team as an additive in construction material. BGU regularly uses various types of commercially available graphite but found Zenyatta's Albany graphite to separate into layers much easier and with higher yields of graphene nano-particles than any other natural graphite types that we have tried. Producing an enhanced mechanical concrete product but with lesser amounts holds great promise against natural or man-made disasters and can be a significant reducer of pollution. To the best of our knowledge, this will be the first nano-modified concrete product of this kind."*

*"We are proud that Ontario companies, like Zenyatta, are collaborating with partners in the Middle East to expand their research and development on new, innovative products. These types of partnerships developed on our trade mission sow the seeds for greater collaboration between Ontario and Israel, and will help lead to future economic growth in both*

*jurisdictions,”* said **Ontario Premier Kathleen Wynne.**

The unique technical contribution of each partner:

- Zenyatta is responsible for the manufacturing of nano-graphite and any related treatment from its Albany graphite deposit. The company will create nano-graphite in several levels of purity with certain specifications.
- Larisplast specializes in the field of concrete admixtures. It develops, produces, markets and distributes high-quality products and materials for the Israeli concrete industry according to Israeli standards. Larisplast will be responsible for incorporating the nano-graphite material into concrete applications. This will include the study of the nano-graphite dispersion and the development of up-scale procedure for production of nano-graphite concrete admixtures. Larisplast will also conduct field experiments on the resulting enhanced nano-graphite concrete.
- BGU and BGN research groups will be headed by Dr. Regev and professor Alva Peled. BGU is a research leader in alternative energy, robotics and nano-technology while playing a critical role in transforming Israel's high-tech growth. Specifically, the BGU research group will focus on carbon nanotubes and graphene product derivatives for this new application. BGN is the technology transfer and commercialization company for development of university technologies with industry partners. BGU and BGN will aid both companies in the required development of dispersion method and product characterization using advanced testing (flexural, compression and toughness).

**Aubrey Eveleigh, president and chief executive officer for Zenyatta,** stated: *“Our company is delighted to be signing an*

*MOU with our Israeli partners during this Ontario trade mission. It is vital for Zenyatta and Ontario to play an active role in leading-edge technological research and development, especially related to a new innovative construction product in Israel. We are excited to be working with Larisplast, BGU and BGN to play a prominent part in the advancement of this new concrete admixture material."*

Zenyatta continues to develop its Albany graphite deposit in Ontario, Canada. The company's highly crystalline graphite deposit is situated 30 kilometres north of the Trans-Canada Highway, power line and natural gas pipeline near the communities of Constance Lake First Nation and Hearst. A rail line is located 70 kilometres away with an all-weather road approximately 10 kilometres from the graphite deposit. The world trend is to develop products for technological applications that need extraordinary performance using ultrahigh-purity graphite powder at an affordable cost. Albany graphite can be upgraded with very good crystallinity without the use of aggressive acids (hydrofluoric) or high-temperature thermal treatment, therefore having an environmental advantage over other types of upgraded high-purity graphite material.

Dr. Bharat Chahar, PE, vice-president of market development for Zenyatta, is a qualified person for the purposes of National Instrument 43-101, and has reviewed, prepared and supervised the preparation of the technical information in this news release.

