Greg Fenton Discusses Zentek's 2024 Progress and Exclusive Aptamer Technology Rights

written by InvestorNews | February 21, 2024 In a detailed interview with Tracy Weslosky, Greg Fenton, CEO and Director of Zentek Ltd. (NASDAQ: ZTEK | TSXV: ZEN), shared insights into the company's strategic progress and emerging opportunities, particularly emphasizing its work with aptamer technology. With an exclusive global license for innovative Aptamer-based platform technology developed by McMaster University, Zentek is pioneering advances in both diagnostic and therapeutic applications, underscoring its dedication to healthcare innovation. The company has made breakthroughs in COVID-19 therapeutics with its C19HBA aptamer, significant promise in preclinical trials showing outperforming leading monoclonal antibodies. This success has paved the way for Phase 1 clinical trials for COVID-19 and exploration into other areas such as oncology, immunology, and neurology.

Fenton highlighted the positive reception from major pharmaceutical companies, reflecting a broad industry interest in Zentek's aptamer technology. Additionally, Zentek's ZenGUARD™ technology platform, known for its 99-percent anti-microbial activity, has been instrumental in enhancing the bacterial and viral filtration efficiency of surgical masks and HVAC systems. A recent study on ZenGUARD™ Enhanced Air Filters revealed its potential to offer significant energy, emission, and cost savings for commercial buildings, showcasing a scalable solution for improving indoor air quality and addressing climate change.

Throughout the conversation, Fenton articulated Zentek's

ambitious plans for partnerships and expansion, leveraging the favorable market conditions to boost the company's visibility and impact. His vision for Zentek includes strategic partnerships, leveraging its proprietary technology, and a commitment to revolutionizing the approach to managing infectious diseases and enhancing environmental sustainability.

To access the complete interview, click here

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About Zentek Ltd.

Zentek is an ISO 13485:2016 certified intellectual property technology company focused on the research, development and commercialization of novel products seeking to give the Company's commercial partners a competitive advantage by making their products better, safer, and greener.

Zentek's patented technology platform ZenGUARD™, is shown to have 99-per-cent anti-microbial activity and to significantly increase the bacterial and viral filtration efficiency of both surgical masks and HVAC (heating, ventilation, and air conditioning) systems. Zentek's ZenGUARD™ production facility is located in Guelph, Ontario.

Zentek, through its wholly-owned subsidiary Triera Biosciences Ltd., has a global exclusive license to the Aptamer-based platform technology developed by McMaster University, which is being jointly developed by Zentek and McMaster for both the diagnostic and therapeutic markets.

The Company is not making any express or implied claims that its aptamer technology has the ability to eliminate, cure or contain COVID-19 (or the SARS-CoV-2 coronavirus) at this time.

To learn more about Zentek Ltd., click here

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Greg Fenton on how Zentek's Advancement in Aptamer Technology is Revolutionizing Biotech

written by InvestorNews | February 21, 2024 In an interview with host Tracy Weslosky from InvestorNews, Zentek Ltd.'s (NASDAQ: ZTEK | TSXV: ZEN) CEO Greg Fenton began their discussion on the substantial improvement in the aptamer platform's binding affinity and yield as announced in their November 15th, 2023, release. Greg explains how the new platform

may reduce the rapid clearance from the body, the researchers have increased the aptamer platform production to a 95% yield, which substantially reduces costs and positions them as potential replacements for monoclonal antibodies, offering efficiency and cost benefits.

Fenton highlights the rapid production capability of aptamers, taking only 6-8 weeks compared to longer durations for vaccines. Aptamers, composed of DNA sequences, are deemed safe and can be synthesized quickly for specific targets. This speed and costeffectiveness give aptamers a competitive edge in the market, especially against antibody therapies.

He also discusses Zentek's collaboration with McMaster University in medical research, noting that the aptamer platform is still in early stages but shows great potential. He emphasizes the importance of safety, dosing ranges, and further research to establish the platform's market value.

Additionally, Zentek's recent developments include ZenGUARD™ enhanced air filters, which offer significant cost savings in healthcare and energy efficiency. The filters reduce absenteeism and energy costs by requiring fewer air exchanges, representing economic benefits for building owners, businesses, and public healthcare systems.

Fenton also remarks on Zentek's efficient use of funds, highlighting that their current stage of development would typically cost hundreds of millions of dollars, but they achieved it with a fraction of that amount. This efficiency is attributed to their partnership with McMaster University.

Finally, the addition of John Snisarenko, a former pharma industry executive, to Zentek's board is seen as a strategic move to enhance the company's outreach and partnership engagement in the pharmaceutical industry. His extensive

pharmaceutical experience and connections are expected to be valuable for Zentek's future development and commercialization strategy.

The news release from November 15, 2023, corroborates these developments, noting the substantial improvement in the aptamer platform's binding affinity and yield. The release also highlights the potential for Zentek's aptamers in precision therapy, competing with monoclonal antibodies, and the significant cost and timeline advantages inherent to their platform technology. Zentek's CEO comments on the potential of the aptamer platform across various therapeutic areas and the company's shift towards commercialization and partnership strategies. To access the complete interview, click here

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Greg Fenton on China's graphite export restrictions and Zentek's Albany graphite deposit in Ontario

written by InvestorNews | February 21, 2024 In a recent InvestorNews interview with host Tracy Weslosky, Zentek Ltd.'s (NASDAQ: ZTEK | TSXV: ZEN) CEO and Director, Greg Fenton, discussed China's recent move to restrict graphite exports and its potential impact on global supply chains and the electric vehicle (EV) industry.

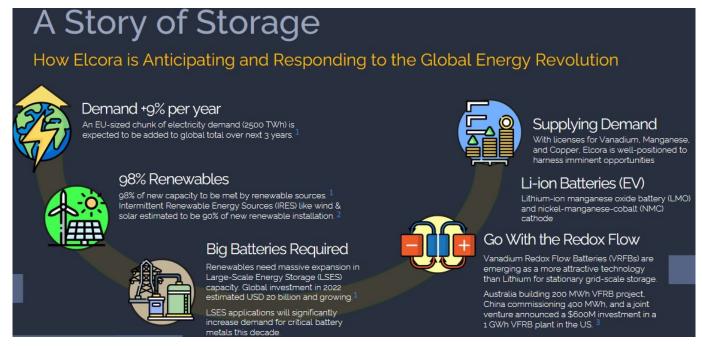
Elcora Ramps Up Manganese Sales with Vanadium Prospects on the Near-Term Horizon

written by InvestorNews | February 21, 2024

<u>Elcora Advanced Materials Corp.</u> (TSXV: ERA) ("Elcora") is a relatively new manganese ore producer and has other battery material projects containing vanadium, graphite, and copper located in Morocco and Canada. Elcora also has exposure to anode materials and graphene. Demand for manganese remains strong both for the steel industry, but also for lithium-ion batteries containing manganese, typically used for electric vehicles.

Elcora's goal is to be a globally competitive extractor and processor of battery-grade minerals and metals. They plan to do this by becoming a vertically integrated battery materials company and use their cost-effective process to purify high-quality battery metals and minerals that are commercially scalable.

How Elcora is anticipating and responding to the Global Energy Revolution



Source: Elcora Advanced Materials company presentation

Manganese production has started in Morocco and new orders are rolling in

As <u>announced</u> in June 2023, Elcora delivered its first manganese order of 500 metric tons of 37%+ high-quality manganese from their Morocco Mine. Elcora owns the Atlas Fox Project in Morocco, which includes the Beni Mellal Manganese Deposit/Mine and the Ouarzazate Project (includes the Omar Mine). Elcora plans to rapidly ramp up their manganese production from these projects with an 8-12 month production target of 20,000 tonnes per month of 37% manganese ore.

As <u>announced</u> on July 6, 2023, Elcora has secured two more orders for a total of 1,500 metric tons of 37%+ manganese ore set to be delivered by the end of July 2023, thereby securing sales revenue for the second month in a row for Elcora.

Vanadium production plans with sales potentially as soon as only 6 months away

Elcora is currently developing their Atlas Lion Vanadium Project in Morocco.

Elcora <u>announced</u> in June 2023 the completion of the first phase of vanadinite comminution testing. The result was 8.9% vanadium concentrate. Elcora then began shipping bulk samples for trial tests in smelters in Asia and Europe, and if results come back positive Elcora say they could potentially have concentrate sales revenue in as quick as <u>6 months</u>.

The short-term plan is to build a semi-mobile concentrator plant to produce a 46% lead ("Pb") and 9%+ vanadium ("V") concentrate, with a ramp up to 2,500t/month of concentrate production. Elcora's mid-term plan is to build a hydrometallurgical plant scheduled to produce 1,500 t/year of 99.99% V and 15,000t/year 99.99% Pb.

Elcora's graphite products

In addition to manganese, vanadium and lead; Elcora has developed the technology to produce flake graphite, advanced natural graphite anode powder and graphene. Elcora states:

"Elcora has developed a unique low-cost effective process to make commercially scalable graphite nanomaterials ranging from micro-graphite to graphene."

Flake graphite and anode powder are in growing demand for electric vehicles and energy stationary storage where the

graphite is used in the anode part of the battery. Graphene has numerous potential uses and is known as a new wonder material.

Elcora states:

"Elcora has been structured to become a vertically integrated graphite & graphene company that <u>mines</u>, <u>processes</u>, refines graphite, and produces both the graphene and end graphene applications. Elcora's graphene production system is suitable for use with many different graphite sources and has produced industry-leading quality graphene."

Closing remarks

Elcora is executing well on their plans to become a vertically integrated battery materials company. Elcora already has a strong history within the flake graphite, anode powder, and graphene sectors.

Near-term catalysts will be further sales revenue of manganese concentrate from their Moroccan Mine and potentially good news on their vanadium concentrate smelting trials. Looking out a year or so from now Elcora should potentially have ramped up their vanadium concentrate production to 20,000t/month and vanadium concentrate to 2,500t/month. Beyond that, the plan is to potentially produce a final product via more processing thereby value adding to their current situation.

Elcora Advanced Materials trades on a market cap of only <u>C\$6</u> <u>million</u>. Exciting times for Elcora, especially if they can continue to execute well and bring in growing revenues in 2023.

Revolutionary Aptamer-Based Pathogen Technology from Zentek Unveils Rapid and Inexpensive Pathogen Detection Capabilities

written by InvestorNews | February 21, 2024

A Canadian company and their laboratory partner have developed a low cost simple and much faster way to better detect pathogens causing infections in our bodies. In recent weeks the team found a way to dramatically improve the effectiveness of this technology, which is really a medical breakthrough you won't likely see on the news, at least not just yet. Their technology uses 'aptamer' based diagnostics from a simple saliva test.

What is an aptamer?

Aptamers are short sequences of artificial DNA, RNA, XNA, or peptide that bind a specific target molecule or family of target molecules. In the case of today's company, they are using single-stranded DNA molecules capable of binding specifically with target proteins on the surface of pathogens such as SARS-CoV-2 to detect if a person has COVID-19 or potentially other pathogens.

Zentek Ltd.

Zentek Ltd. (NASDAQ: ZTEK | TSXV: ZEN) ("Zentek") is a certified graphene technology company focused on the research, development and commercialization of graphene-based novel products,

typically using nanotechnology.

Zentek's aptamer-enabled <u>Pathogen Detection Technology</u> is a low-cost, rapid, saliva testing, scalable technology initially to be used for COVID-19 testing, but can be adapted to detect other pathogens. Zentek has <u>exclusive worldwide rights to commercialize</u> their COVID-19 antigen testing aptamer-enabled technology. The technology is being developed by Zentek and their technology partners at McMaster University Li Lab, led by Dr. Yingfu Li.

Zentek's collaboration with McMaster University extends beyond its exclusive license and now encompasses all aptamer and DNAzyme uses, including diagnostics, therapeutics, and neutralization agents, not limited solely to SARS-CoV-2 applications.

Aptamer technology breakthrough, up to 250 times increase

Zentek recently announced a breakthrough in the team's aptamerenabled technology, <u>stating</u>:

"Dr. Yingfu Li and his team at the Li Lab have developed a novel aptamer technology that increases the binding affinity of aptamers by up to 250 times. The increased binding affinity enhances the limits of detection for aptamer-based diagnostics. In addition, the enhanced binding affinity may lead to the successful adaptation of these same aptamers for new therapeutic and prophylactic treatments. Binding affinity is a key metric in both diagnostic and therapeutic applications."

Understandably most people will not understand the implications of what is going on here, so I will spell it out. Effective

Aptamer-based pathogen technology opens up a whole new potential to 'rapidly and cheaply' detect pathogens. In time this can be expanded to potentially detect other markers of disease in the body. Furthermore, it has the potential to more effectively treat diseases. But that's the next chapter, best discussed another time and assuming Zentek continues down that pathway.

Dr. Yingfu Li recently stated:

"The novel aptamer technology platform developed in my lab at McMaster University is demonstrating a robust increase in binding affinity to every aptamer we have tried so far. Combining this technology with aptamers that have high specificity has created a very exciting potential for new therapeutics and diagnostics. The enhanced binding affinity from these new aptamers has led to consistent and successful in vitro testing in my lab and the lab of Dr. Leyla Soleymani for diagnostic applications, and more recently, with in vivo testing in the lab of Dr. Matthew Miller for therapeutic applications. These early results are very exciting, and we look forward to future work that applies the technology to other potential therapeutic and diagnostic targets."

Note: Bold emphasis by the author.

The advantages of Zentek's aptamer technology for detecting Covid-19 or potentially other pathogens



Source: Zentek website

The advantages of Zentek's aptamer technology are:

- Simplicity & Comfort uses saliva rather than a nasal swab reducing aversion to testing and risk of error in the sampling process
- Accuracy electrochemical sensing technology rather than lateral flow allows for sensitivity equivalent to a 36 count RT PCR
- Mobility simple hardware lends itself to easy transport and high throughput, point-of-care testing
- Speed results in under 10 minutes
- Low Cost aptamers can be developed more quickly and cost effectively compared to antibodies allowing us to be highly competitive compared to currently available rapid detection tests now and into the future
- Scalability new aptamers can be developed to detect numerous other pathogens giving our technology the ability to enhance safety and empower businesses, governments and our healthcare providers well beyond COVID

The potential for aptamer-based disease detection is truly remarkable. There is also potential one day that aptamers can be used to much more precisely target disease treatment or prevention in the body.

Greg Fenton, CEO of Zentek commented:

"Initially, we were working to develop aptamers for diagnostic purposes......Dr Li's initial breakthrough was important for diagnostic purposes, and now early testing points to the potential to create new therapeutics and prophylactics. I can't emphasize enough how unexpected these results were to our team and how significant this development is if it is confirmed through future testing."

For more details, investors can watch the recent Zentek CEO interview here.

Zentek is now at the stage of commercializing their aptamerenabled technology stating that they are "commercial prototyping

readiness, and working with <u>Halteres Associates</u>, a world-leading bioscience consultancy, to assist us in our commercialization process."

Zentek's product pipeline

Graphene Pipeline: What We're Working On





We know graphene: a key building block for a healthier and more sustainable future

Source: Zentek company presentation

Closing remarks

There is no more exciting company than Zentek. Apart from their aptamer technology Zentek has many other applications for their graphene nanotechnology including: ZENGuard™ (a graphene coating applied to PPE to prevent Covid and other infections; also used for air filtration (HVAC) systems), icephobics (to prevent ice build up on planes etc), ZENArmor (corrosion resistance), fuel additives (helping reduce carbon emissions), Graphene-wrapped silicon anodes, conductive inks, intumescent coatings, and anti-inflammatory therapies.

Furthermore, Zentek makes their own graphene oxide at their Guelph facility and owns the Albany Graphite Deposit (planned to be spun out).

Zentek Ltd. trades on a market cap of <u>C\$216 million</u>. With commercialization of ZENGuard™ underway and Zentek's aptamer technology potentially to follow soon, Zentek is at a great stage to rapidly grow from here. Stay tuned in 2023 to see how Zentek performs and if they can successfully start to monetize their technology.

Greg Fenton of Zentek Discuss Anti-Icing Drone Technology & Spinning Out the Albany Graphite Project

written by InvestorNews | February 21, 2024
In this InvestorIntel interview, Tracy Weslosky talks with Zentek Ltd.'s (NASDAQ: ZTEK | TSXV: ZEN) CEO and Director Greg Fenton about the successful testing of its "best-in-class" icephobic coating for drones, first in wind tunnels and then real-world conditions.

While the drone with uncoated propeller blades rapidly lost the ability to maintain flight in an outdoor icing environment, Greg discusses how the drone coated with Zentek's icephobic coating prevented ice from adhering to the surface and was able to maintain flight until the end of the battery life. Greg explains

how Zentek is positioned to potentially be the only company in Canada with a product to help drones fly in winter conditions to meet Transport Canada's anti-icing requirements for drones.

Greg also provides an update on Zentek's Albany Graphite Project. With an increased demand for North American battery supply chains, Greg discusses how there has been a renewed market interest in their Albany graphite project. Recognizing this, Greg talks about Zentek's decision to resume work on the project and transfer the project to its wholly-owned subsidiary Albany Graphite Corp., to secure funding for its development and attract investors, including discussions with battery manufacturers and car companies.

To access the full InvestorIntel interview, click here

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About Zentek Ltd.

Zentek is a graphene technology company focused on the research, development, and commercialization of graphene-based novel products to give its commercial partners a competitive advantage by making their products better, safer, and greener.

Zentek's patented ZenGUARD™ coating is shown to have 99-per-cent anti-microbial activity and to significantly increase the bacterial and viral filtration efficiency of both surgical masks and HVAC systems. Zentek's ZenGUARD™ production facility is located in Guelph, Ont. Zentek's second technology is the patent-pending ZenARMOR™ platform focused on corrosion protection applications.

To know more about Zentek Ltd., click here

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Zentek's ZenARMOR is potentially a major breakthrough in the US\$23.8B+Global Anti-Corrosion Coatings Market

written by InvestorNews | February 21, 2024
The anti-corrosion coatings market may not sound very glamorous, but it is a multi-billion dollar business. According to Vantage Market Research, the global anti-corrosion coatings market was valued at US\$23.8 billion in 2021 and is forecast to grow to \$43.2 billion by 2028. Zentek quoted from a 2012 U.S. Congressional Briefing that "corrosion-related costs amounted to US\$452 billion per year in the US, including US\$22 billion for the Department of Defense." This just highlights the importance of anti-corrosion coatings and the fact the market for coatings can grow much larger over time.

According to a November 2022 <u>report</u>: "The anti-corrosion coating material is widely used in marine industries, oil & gas, automotive, and infrastructure... Additionally, increased infrastructure investment, particularly in developing and emerging countries, has been a major driver of demand for anticorrosion coatings."

Canadian graphene technology specialist company Zentek Ltd. (NASDAQ: ZTEK | TSXV: ZEN) has just announced that they have developed a novel corrosion protection technology known as ZenARMOR™. The technology is based on graphene oxide and Zentek's CEO and Director Greg Fenton stated it is "better than the best existing anti-corrosion systems currently in the marketplace."

Given that Zentek trades on a market cap of just C\$228 million, the opportunity to break into a US\$23.8 billion market with a major breakthrough technology could be potentially game-changing for Zentek.

ZenARMOR™

ZenARMOR™ is a graphene oxide additive that can be added to existing paint and applied to surfaces to help prevent corrosion. Initial testing results on ZenARMOR™ showed <u>no signs of corrosion even after 1,500 hours</u> of salt spray testing. The best systems on the market start breaking down at 1,000 hours. Zentek spent 2 years developing ZenARMOR™ and it has been third-party validated. Greg Fenton commented (video here) that he sees ZenARMOR™ as a "potentially game-changing technology".

The next steps will be further testing by potential end users over the next 6-9 months, if successful, it is to be followed with the commercialization of ZenARMOR™. If Zentek gets to the stage of selling the product, the Company believes it can ramp up supply to meet demand.

In the February 8, 2023 announcement, Zentek stated:

"The Company also reports that the ZenARMOR™ corrosion protection self-healing coating was submitted to the Innovative Solutions Canada (ISC) testing stream — Military Call for

Prototypes. The Company is pleased to announce that it has been advised that ZenARMOR™ has met the mandatory and technical evaluation criteria of the Military Call for Prototypes, Military Component, and is considered conditionally qualified, pending further steps such as matching our innovation with a Government of Canada Organization (GCO) interested in testing ZenARMOR™."

ZenGUARD™

In further breaking news, Zentek's Heating, Ventilation, and Air Conditioning ("HVAC") filtration product ZenGUARD™ has performed well in Stage 2 testing. ZenGUARD™ is a graphene-based coating that can be used to upgrade existing HVAC filters. Zentek announced on February 7, 2023 that "ZenGUARD™-treated MERV 8 filters achieved 34.56% filtration efficiency of the Phi6 virus, a surrogate for COVID-19 during a single air exchange. This compares to 7.24% for uncoated MERV 8 filters, a 27.32% net improvement."

Zentek CEO, Greg Fenton, <u>stated</u>: "The ZenGUARD™ technology is a simple and practical way to improve one of the biggest problems facing workspaces, planes, trains, buses, and other indoor spaces: indoor air quality.......we believe our patented ZenGUARD™ technology has the potential to not only protect people's health by removing more pathogens from the air we breathe, but to do so in a way that reduces financial burden and environmental footprint."

More details <u>here</u> in a CEO video discussing ZenGUARD™.

Zentek's Guelph manufacturing center is one of the world's largest graphene-based production facilities (produces the graphene oxide for coatings for ZenARMOR™ and ZenGUARD™)



Source: <u>Zentek website</u>

Closing remarks

Zentek continues to innovate at a rapid pace with all types of graphene-related products. Commercialization is underway with their revolutionary ZenGUARD™ being used in <u>face marks which remove 98.9% more bacteria and 97.8% more virus</u> compared to standard surgical masks. Zentek is also developing numerous other graphene-based products such as <u>icephobics</u> (help prevent ice buildup), <u>fuel additives</u> (to reduce carbon emissions), and <u>fire-retardant coatings</u> just to name a few. Graphene is a revolutionary product and Zentek is at the cutting edge of developing and commercializing numerous uses for graphene-based products.

InvestorIntel will continue to keep investors up to date with Zentek's amazing progress in what promises to be another potentially superb year for the company.

Greg Fenton on ZenARMOR, Zentek's novel corrosion protection technology

written by InvestorNews | February 21, 2024
In this InvestorIntel interview, Tracy Weslosky talks to Zentek
Ltd.'s (NASDAQ: ZTEK | TSXV: ZEN) CEO and Director Greg Fenton
about their novel corrosion protection technology: ZenARMOR™. As

a technology based on graphene oxide, Greg explains how ZenARMOR™ has shown performance that is "better than the best existing anti-corrosion systems currently in the marketplace."

Speaking about the potential environmental benefits of ZenARMOR™, Greg discusses how the initial results on ZenARMOR™ showed no signs of corrosion even after 1,500 hours of salt spray testing. With corrosion-related costs amounting to upwards of US\$ 450 billion per year in the US alone, Greg explains how ZenARMOR™ may find application in naval and marine infrastructure, bridges, buildings, pipelines, and many other industries.

To access the full InvestorIntel interview, click here

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Greg Fenton on the ZenGUARD™ technology patent and how HVAC filter testing results mean better air for everyone

written by InvestorNews | February 21, 2024
In this InvestorIntel interview, Tracy Weslosky has Zentek
Ltd.'s (NASDAQ: ZTEK | TSXV: ZEN) CEO and Director Greg Fenton
discuss Zentek's recent news release on the ZenGUARD™ technology
patent being granted. As an antimicrobial coating used on
personal protective equipment (PPE) and heating, ventilation,
and air conditioning (HVAC) applications, Greg explains how they
took ZenGUARD™ from a concept in the lab to an Intellectual
Property that can be commercialized.

Greg goes on to provide an update on the successful completion of Phase 2 HVAC filter testing of the ZenGUARD™ coating by the National Research Council of Canada. As an economical solution to significantly reduce airborne pathogens and improve indoor air quality, Greg discusses how ZenGUARD™ coating can be applied to HVAC filters without any modification to existing HVAC systems.

To access the full InvestorIntel interview, click here

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About Zentek Ltd.

Zentek is an IP development and commercialization company focused on the research, development and commercialization of novel products using graphene and nanomaterials for use in the healthcare industry and beyond.

Zentek's patented ZenGUARD™ coating is shown to have 99% antimicrobial activity, including against COVID-19, for use in PPE and potentially HVAC systems and other industries. Zentek's ZenGUARD™ production facility is located in Guelph, Ontario.

To know more about Zentek Ltd., click here

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If you have any questions surrounding the content of this interview, please contact us at +1 416 792 8228 and/or email us direct at info@investorintel.com.

Zentek's revolutionary graphene based icephobic coating targets billion dollar ice-resistant market

written by Tracy Weslosky | February 21, 2024 Ice build-up on wind turbines, airplanes, and cars in cold regions is a real problem. For example, Texas residents may remember the February 2021 ice storms and extreme cold weather that hit south-central USA. The storm resulted in over 4.5 million homes and businesses being without power for several days. Frozen gas lines and ice buildup on wind turbines were key factors in the power failure as wind generation dropped by almost 50% over the entire state of Texas.

The airline industry spends significant time and money 'deicing' (removing ice and snow build-up) on their planes before take-off. Consumers in cold countries often have to do the same with their car windscreen. The drone market is another industry where deicing is important.

Now there is a better solution to de-icing. Today's company has developed an 'icephobic coating' technology that is effective at preventing ice build-up. 'Icephobic' effectively translates to 'repelling ice'. It is also sometimes referred to as 'iceresistant coating'.

The global market for ice-resistant (icephobic) coatings

It has been reported that the global market for ice-resistant coatings is forecast to reach more than \$1 billion in 2023, growing at a CAGR of 23.3%.

An excerpt from a 2021 report on the ice-resistant coatings and surfaces market

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Source: ResearchAndMarkets

Zentek Ltd. (NASDAQ: ZTEK | TSXV: ZEN) announced in September strong test results supporting their patent-pending, graphene-based, icephobic coating technology. The testing concluded that Zentek's icephobic technology is durable in adverse conditions for both wind turbine and drone industries, which are the initial focus markets for Zentek's icephobic coating.

Zentek <u>state</u> that their icephobic "coatings have demonstrated an adhesion strength repeatedly around 20 kPa (results under 100 kPa are considered to demonstrate low adhesion), a significant improvement over the current commercial products. Testing at the <u>National Research Council</u> (NRC) and <u>Anti-icing Materials</u>

International Laboratory (AMIL) in Quebec is ongoing."

Some of the September <u>announcement</u> highlights included:

- "Flight tests in real-world icing conditions demonstrated good performance of Zentek's coating, with results indicating retardation of ice accretion (icephobicity) and low adhesion to accreted ice....
- Sand erosion testing demonstrated medium to good performance at a high speed of 540 km/h.
- Rain erosion testing at AMIL demonstrated good performance at 160 km/h and 320 km/h based on our interpretation, speeds at which the leading edge of wind turbines blade tips are exposed.
- NRC drone testing demonstrated consistent results of maintaining control of rotor thrust in icing conditions....
- Zentek has filed a full patent application with the Patent Cooperation Treaty, the international patent office, on August 2nd, 2022, for Nanomaterial-Enhanced Elastomer for Passive Ice Accretion Prevention."

Source

Icephobic coatings have many applications and significant demand

An exciting part of the above news is the potential for Zentek's technology to be used in a huge variety of uses globally, particularly the energy and aviation/aerospace industries.

Zentek <u>states</u>:

"Commercial applications of our patent-pending coating could be used in drone technologies allowing for efficient all-weather operation. Other additional applications include powerlines, large wind turbines, ship structures (railings, etc.), and oil rigs, especially in Arctic operations, along with tall buildings

where ice buildup could pose a public hazard."

Icephobic coatings could revolutionize aviation and wind power generation industries



Source: Zentek website/icephobics

In addition to their icephobic coatings Zentek is also advancing multiple other initiatives including the commercialization of their "Canada patent allowed" ZenGUARD™ (a 'graphene-silver coating' shown to have 99% antimicrobial activity used on masks or PPE, also used in HVAC systems to improve air quality), aptamer enabled Pathogen Detection Technology, anti-inflammatory therapies, fuel additives (to reduce carbon emissions), conductive filaments for 3D printing, fire retardant coatings, and graphene wrapped silicon anodes for batteries.

Zentek Ltd. trades on a market cap of C\$235 million on the TSXV or US\$175 million on the Nasdaq.