



# zentek

Investor Presentation

TSXV: ZEN  
OTCQB: ZENYF

This presentation contains "forward-looking information" within the meaning of applicable Canadian securities legislation and United States federal securities laws. Forward-looking statements include, but are not limited to, estimates and statements with respect to Zentek objectives or goals, to the effect that Zentek or management expects a stated condition or result to occur, regulatory approvals, the adequacy of Zentek's financial resources, business plans and strategy, and other events or conditions that may occur in the future. Generally, forward-looking information can be identified by the use of forward- looking terminology such as "potential", "plans", "expects", or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "does not anticipate", or "believes" or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might", or "will be taken", "occur", or "be achieved". These forward-looking statements are subject to a number of assumptions, risks and uncertainties, many of which are beyond our control, which could cause actual results to differ materially from such forward-looking statements. As such, undue reliance should not be placed on these forward-looking statements. The forward-looking statements in this presentation are made as of the date hereof and Zentek disclaims any intention or obligation to update or revise any forward-looking statements in this presentation as a result of new information or future events, except as may be required under applicable Canadian securities legislation or applicable US federal securities laws.

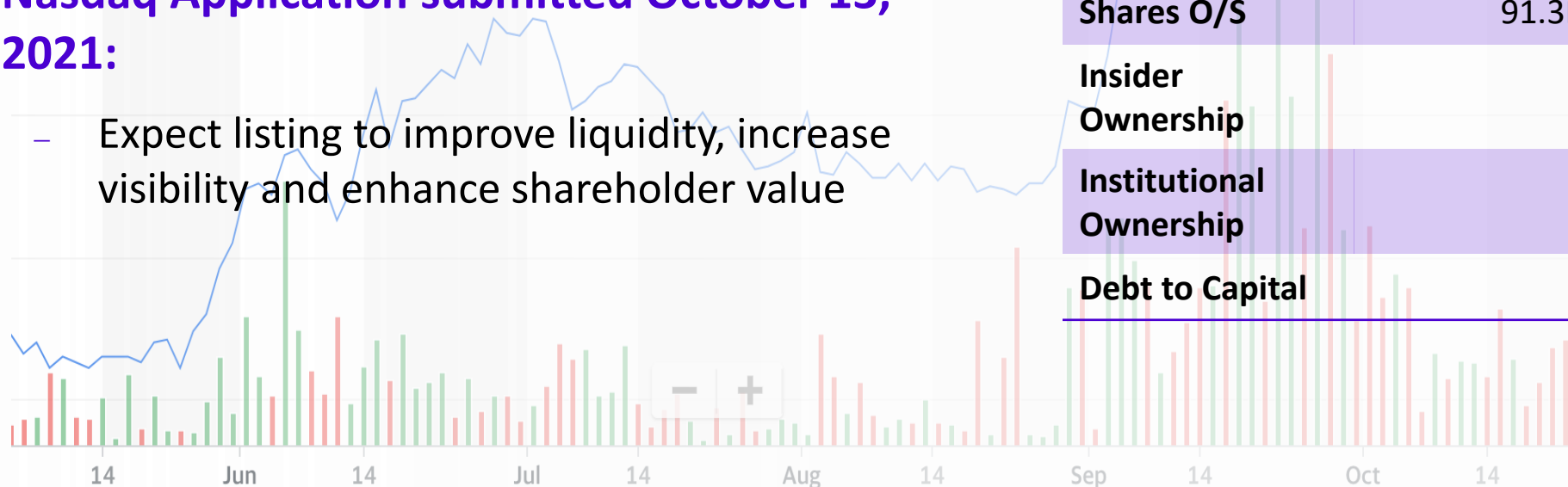
**Zentek** is a Canadian, IP development and commercialization company focused on next-gen healthcare solutions in the areas of prevention, detection and treatment.

SUSTAINABLE  
DEVELOPMENT **GOALS**



# Investment Highlights

- Commercialization of **ZENGuard™** coating for PPE markets & Indoor Air Quality market; revenue and cash flow generation from **ZENGuard™** in 2021
- TSXV: ZEN; OTCQB: ZENYF
- ~US\$438M market capitalization (no debt)
- Nasdaq Application submitted October 13, 2021:**
  - Expect listing to improve liquidity, increase visibility and enhance shareholder value



	ZENYF	ZEN
Exchange	OTCQB	TSXV
Recent Price	\$5.09 (a/o 11/6/21)	C\$6.33 (a/o 11/06/21)
52 Wk. Range	\$0.96 - \$5.41	C\$1.38-C\$6.70
Market Cap	\$455M (a/o 11/06/21)	C\$563M (a/o 11/06/21)
Avg Daily Vol	83K	238K
Shares O/S	91.3M (98.3M FD)	
Insider Ownership	4.2%	
Institutional Ownership	0.03%	
Debt to Capital	0%	





IP development and commercialization company focused on **next-gen, nanotechnology-enabled healthcare solutions**

Development pipeline is robust with opportunities in three primary verticals:



**ZENGuard™** for PPE & indoor air quality markets



Aptamer-based rapid detection for numerous pathogens



Antimicrobial compound as a therapeutic and healthcare product

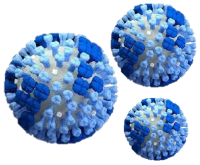


# **PREVENTION**

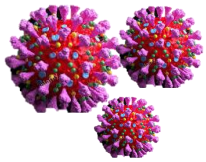
## **ZENGuard™**

## Typical ASTM Level 3, 3-ply Surgical Mask

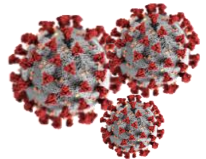
Seasonal Flu



Tuberculosis



SARS-CoV-2



VS

## ZENGuard™ Antimicrobial Coating



- Patent pending, non-toxic, antimicrobial coating that is **99+%** effective deactivating numerous pathogens, including SARS-CoV-2
- BFE/VFE > **99.99%**, which we believe is a first for surgical masks, and **98.9%** more bacteria and **97.8%** more virus particles compared to a typical ASTM Level 3, 3-ply uncoated mask



## ZENGuard™ Antimicrobial Coating

**ZENGuard™** on masks, gloves and other PPE to protect front-line workers and the public and to reduce the spread of pathogens (including and beyond COVID-19)



- Health Canada has authorized the sale of **ZENGuard™** ASTM Level 3 disposable face mask
- Rigorous testing showed no shedding of coating, no skin irritation, no air flow restrictions



**ZENGuard™**



Health Canada  
Authorized

**> US \$52B<sup>1</sup>**

Personal Protective Equipment  
(PPE)



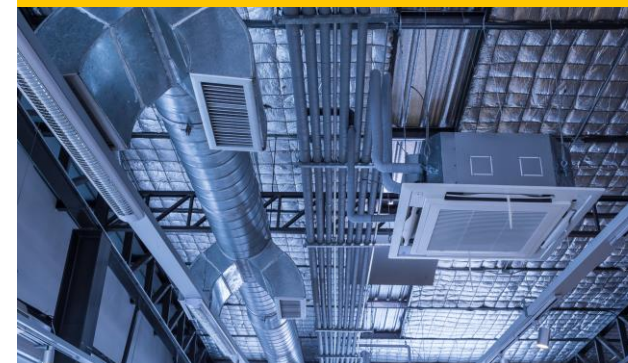
**ZENGuard™** on masks, gloves and other PPE to protect front-line workers, the public and reduce spread of pathogens (including and beyond COVID-19)

**Antimicrobial Coating**



**> US \$66B<sup>2</sup>**

Indoor Air Quality



**ZENGuard™** on air filters to kill airborne pathogens in homes, schools, hospitals and commercial/industrial spaces

<sup>1</sup> Source: 2019 estimate per fortunebusinessinsights.com; over \$90B in 2027

<sup>2</sup> Source: 2020 global HVAC filter estimate of US \$12.9B per fortunebusinessinsights.com; 2020 US furnace filter market estimated at US \$21.3B per researchandmarkets.com. Management estimates US represents 40% of global furnace filter demand for illustrative purposes only

# Disposable Mask Market Opportunity



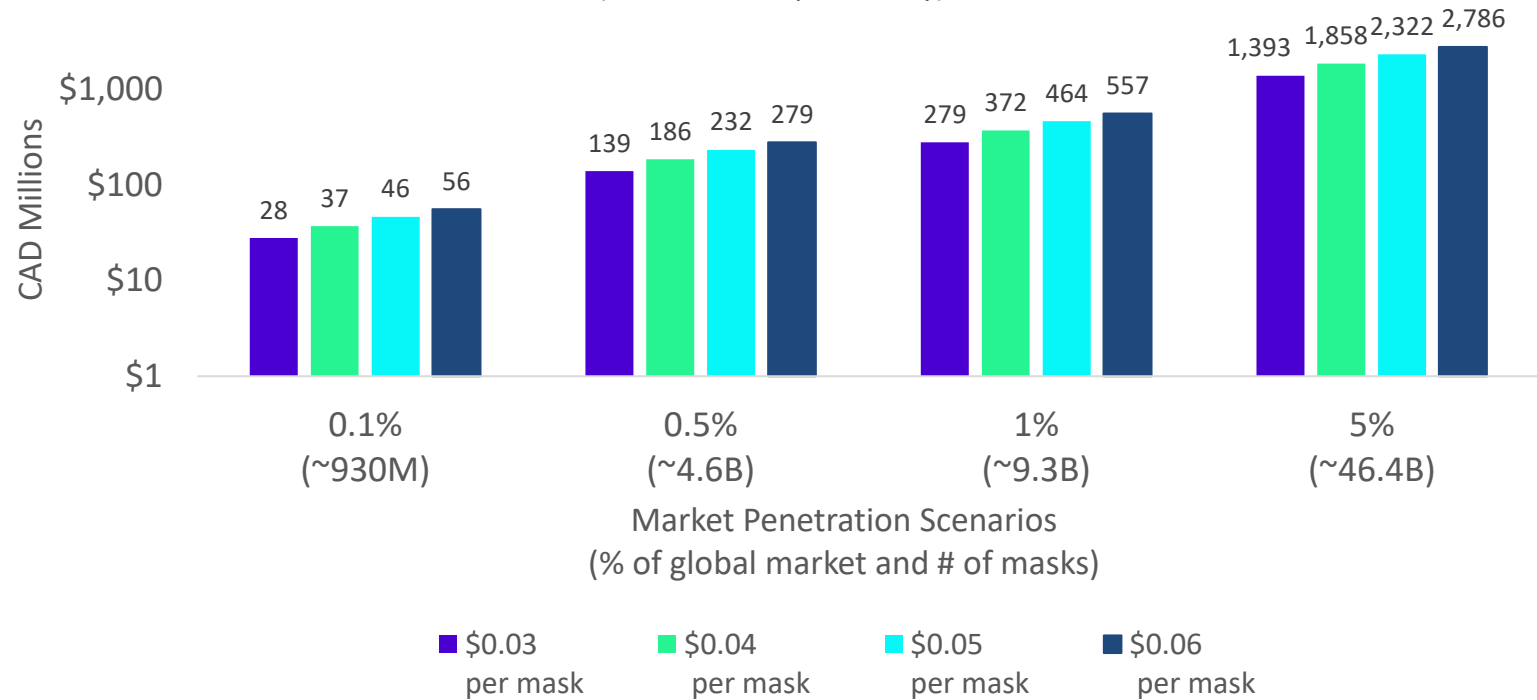
### Assumptions:

- 1.5 trillion masks being used globally per year <sup>1</sup>
- We believe steady state demand could be ~60% of current need or ~930 billion
- We assume gross margin per mask could range from \$0.03 to \$0.06
- Secular shift in approach to PPE expected to support global demand above pre-pandemic levels (hospitality, food, janitorial etc.)



### Market Penetration and Gross Margin Scenario Analysis

(Illustrative Purposes Only)



Potential opportunity above relates to **one type of PPE**; anticipate attractive opportunities with **many other forms of PPE** and **air filtration**

<sup>1</sup> Source: Estimate per ACS Publications "COVID-19 Pandemic Repercussions on the Use and Management of Plastics" (accessed Jan 2021)

## Commercialization & Production

- Partnered with Trebor Rx for masks/filters and nitrile gloves with ZENGuard™
- Initial delivery of ZENGuard™ to Trebor Rx and revenue generated
- Significant interest from other potential partners for ZENGuard™ on PPE and air filtration products
- ZENGuard™ production capacity (coated mask equivalent):
  - Current: ~32 million per month
  - Q1 2022: ~800 million per month
- Engineering company (Bantrel) engaged to design and source equipment for production at industrial scale





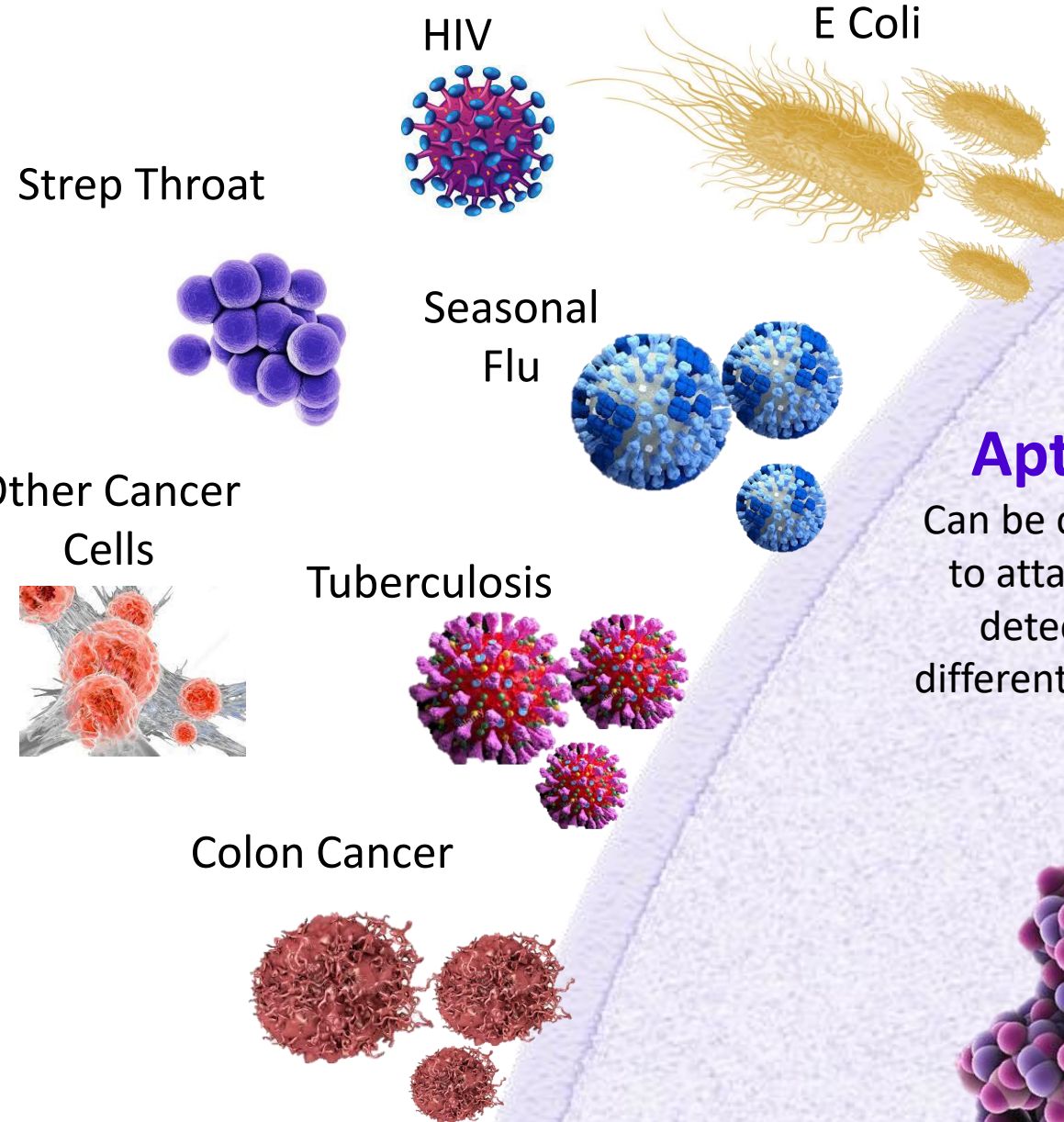
# DETECTION



## Cutting-Edge Disease Detection Platform

Our simple and fast technology can detect numerous pathogens to:

- *Identify infections sooner*
- *End outbreaks faster*
- ***Empower governments, health agencies & individuals worldwide***



## Aptamer

Can be customized to attach to and detect many different pathogens

## Our Aptamer-Based Rapid Technology is:

### **SIMPLE**

Saliva-based tests are easier to use with less discomfort

### **FAST**

Test results provided in 7-10 minutes

### **ACCURATE**

Impedance-based detection enables extremely low detection limits

### **SCALABLE**

Aptamers are synthetic molecules that can be customized to target numerous different pathogens

### **AFFORDABLE**

Simple, low-cost hardware and disposables lend themselves to frequent point-of-care testing

We believe this combination is unique in the market, and **Zentek** is working diligently with a number of partners to optimize the technology and bring it to market as efficiently and effectively as possible



# Rapid Detection Current and Future Demand

>2.6B

COVID Tests  
Administered Globally<sup>1</sup>

- Pandemic highlights the importance of rapid, accurate testing
- Simple, low-cost options and familiarity anticipated to make testing even more widespread further supporting demand

\$23.4B

2020 Global Rapid Test Kit  
Market Estimate<sup>2</sup>

**Our simple and fast technology can detect numerous pathogens to:**

- *Identify infections sooner*
- *End outbreaks faster*
- *Empower governments, health agencies & individuals worldwide*

**We believe our technology will play a significant role  
in this compelling and enduring growth story**

**Notes:**

1. <https://www.worldometers.info/coronavirus/>
2. <https://www.researchandmarkets.com/reports/5238566>



# TREATMENT



## In Vitro Efficacy

- Our patent pending compound has shown **99.9%** effectiveness against Gram + and Gram – bacteria, including antimicrobial resistant (AMR) organisms and fungi

## Safety

- Cytotoxicity testing results recorded no adverse effects on lab animals after seven days of repeated dosing at several thousand times higher than the MIC

## Potential

- Potential to address common and difficult-to-treat skin conditions and infections in the respiratory tract, digestive tract
- Initial focus will be dermatological applications for highly prevalent conditions





**Greg Fenton** - *Chief Executive Officer, Director*

Seasoned investment professional, with a Bay Street career spanning nearly 30 years. He has worked in various capacities with ever-increasing responsibility in both the Canadian banking and investment management sectors. Greg has been a partner in three investment management firms, heading the Risk Solutions Group at Scotiabank and leading Liability Driven Investment Group at National Bank Financial. His experience spans many disciplines: capital markets, investment management, actuarial, pension, insurance, accounting, tax and risk management.



**Dr. Francis Dubé** - *Executive Chairman, Director*

An entrepreneurial mindset with a science and healthcare background, Francis brings a leadership that is inclusive and leads to strong team building with a focus on success. Previously, Francis was a director and Co-founder of Cannacure Corp., a private cannabis company that he saw to a successful buyout. Francis has significant experience in strategic planning, fundraising and capital markets.



**Brian Bosse** - *Chief Financial Officer, Director*

Brian has been a respected professional investor for nearly 30 years with corporate capital allocation policy being his key business specialty. Formerly Brian served Dundee Corporation's Goodman & Company Investment Counsel as portfolio manager of the Goodman Bluespring Fund. He earned an honors degree from the Lazaridis School of Business and Economics in Waterloo, Ontario plus the Chartered Financial Analyst designation. Brian joined Zentek in May 2018 as director and officer following a successful proxy battle.



## **Dr. Yingfu Li** - *Professor in the Department of Biochemistry and Biomedical Sciences*

Dr. Li is a Professor in the Department of Biochemistry and Biomedical Sciences at McMaster University. He earned a Ph.D. in Biochemistry from Simon Fraser University, where he discovered a DNA molecule that catalyzes porphyrin metalation, which won him the Governor General Academic Gold Medal and Natural Sciences and Engineering Research Council of Canada Doctoral Prize. He was awarded a Medical Research Council of Canada postdoctoral fellow and carried out his postdoctoral research at Yale University where he studied a series of catalytic DNA molecules for DNA phosphorylation, DNA capping and DNA ligation. Dr. Li's addition to our Advisory Board ensures his knowledge, experience and advice will continue to help the Company bring this highly differentiated and scalable rapid detection platform to market.



## **Dr. Joseph Armand Korkis** - *Board-Certified Otolaryngologist*

Dr. Korkis is a board-certified Otolaryngologist and Head and Neck surgeon. He is a graduate of the Royal College of Surgeons in Ireland and spent 9 years in post-graduate studies in Ireland and Canada. He is the assistant Clinical Professor in the department of Otolaryngology and Head and Neck surgery at McMaster University. Dr. Korkis' experience and advice – along with that of Dr. Li and Dr. Ken Reed, a Harvard trained dermatologist as announced on June 30th 2021 – is expected to add tremendous value as ZEN continues to execute on its health care strategy



## **Kenneth Reed** - *M.D.*

Kenneth Reed, M.D. is a board certified dermatologist in private practice and serves as a scientific advisor to several innovative biotechnology companies. After completing a residency at the Harvard-MGH combined dermatology program, he established a clinical practice in a Boston suburb, DermAsap, and has continued as a principle investigator for a number of biopharmaceutical companies. He currently serves on the board of directors of Red Hill Biopharma and Minerva Biotechnologies. Dr. Reed is also a cofounder of Early Cell, a company focused on early detection of circulating fetal cells, and Lispiro LLC, which focuses on idiopathic pulmonary fibrosis, and age related disorders.

**Zentek develops and commercializes IP for next-gen, nanotechnology-enabled healthcare solutions**  
**Robust IP pipeline in multiple verticals with large-scale, high-growth commercialization opportunities**



## PREVENTION

- Building on Health Canada approval of **ZENGuard™** enhanced masks
- Further commercialization of **ZENGuard™** coating for **PPE markets & Indoor Air Quality market**



## DETECTION

- Additional testing and discussions with potential partners for manufacturing, marketing and distribution of our **leading-edge rapid detection solution**



## TREATMENT

- Indications targeted and milestones related to our **broad-spectrum, highly-effective antimicrobial therapeutic**



## IP PIPELINE

- Continuing to develop **high-impact healthcare applications**
- Existing and growing **sustainability-focused IP** pipeline in the areas of advanced materials and clean tech



# Contact Page

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FOR ALL INQUIRIES PLEASE CONTACT:

**Matt Blazei**

*CoreIR*

[mattb@coreir.com](mailto:mattb@coreir.com)

**Ryan Shacklock**

*Zentek*

[rshacklock@zentek.com](mailto:rshacklock@zentek.com)

1205 Amber Drive, Suite 210  
Thunder Bay, Ontario P7B 6M4  
Canada

[www.zentek.com](http://www.zentek.com)

The Zentek logo is prominently displayed in the center of the slide. The word "zentek" is written in a lowercase, sans-serif font. The "ze" is in a medium blue color, while "ntek" is in white. The logo is overlaid on a background of a purple gradient with diagonal yellow stripes. In the background, there is a faint, high-resolution image of a printed circuit board (PCB) with various electronic components and solder points.

The background of the slide features a close-up of two petri dishes held by hands in blue nitrile gloves. The petri dishes contain agar with several circular bacterial colonies. The colonies vary in size and color, with some appearing white and others more translucent or slightly pinkish. The lighting is focused on the dishes, creating a professional laboratory atmosphere. Large, semi-transparent colored circles in teal, purple, and yellow are overlaid on the image, adding a modern, graphic design element.

# APPENDIX

## Clean Tech



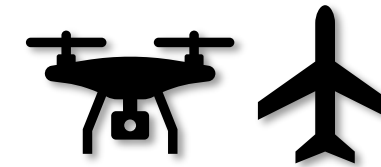
SUSTAINABLE DEVELOPMENT GOALS



### Graphene-Based Fuel Additive

- Stable additive that ***increases the fuel economy of diesel combustion by up to 10%*** in initial testing
- Global diesel fuel market approximately \$1 trillion
- Attractive sustainability-oriented opportunity

## Advanced Materials



### Carbon-Based Icephobic Coating

- 96% improvement over aluminum and 80% improvement over icephobic threshold
- Aircraft de-icing market approximately \$1.3 billion<sup>1</sup>
- We believe our coating has the best results in the market

Robust and ***growing IP pipeline*** in multiple verticals with large-scale, high-growth, ***sustainability-oriented*** commercialization opportunities

<sup>1</sup> [https://www.marketsandmarkets.com/Market-Reports/aircraft-de-icing-market-59898956.html?utm\\_source=Prnewswire&utm\\_medium=Referral&utm\\_campaign=PaidPR](https://www.marketsandmarkets.com/Market-Reports/aircraft-de-icing-market-59898956.html?utm_source=Prnewswire&utm_medium=Referral&utm_campaign=PaidPR)