MedCu Antiviral Copper Mask Technology

Prevents Coronavirus Infection
Opportunity Highlights

• MedCu developed the only commercial copper oxide self-sterilizing, viral-deactivating face mask technology

• Demonstrated deactivation of >99.99% of Avian Flu and Influenza virions on mask surface within 30 minutes

• **Copper was shown to inactivate the Corona virus, as just confirmed by NIH investigators (April 2020)**

• Antiviral layers on the inside and outside of the mask drastically reduce the risk of viral cross-contamination

• **Anti-viral layer can easily be integrated today in your mask manufacturing processes**

• The only copper technology with FDA Clearance and CE Mark Certification for wound dressings (2019)

• Strong IP portfolio – 30 patents worldwide

• Over 40 publications in peer-reviewed journals

• Strong leadership team

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Copper is a Potent Biocide

- Copper kills the coronavirus\(^1\)
- Copper alloys inactivate within minutes human coronavirus 229E\(^2\)
- Copper oxide has potent antiviral, antibacterial, and antifungal broad spectrum biocidal properties\(^3\)
- Filters, fabrics, and masks embedded with copper oxide microparticles have been shown to kill a wide array of enveloped and non-enveloped viruses within minutes\(^4,5\)

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Copper Antiviral Mechanism

- Permeabilization of the membrane surrounding the virions
- Denaturation of genetic materials (DNA and RNA)
- Alteration of key viral proteins and inhibition of their biological activity

Copper ions released from the mask cause massive damage to viral cell wall components, viral genes, and key proteins.

1Borkow & Gabbay (2005) Copper as a biocidal tool. Current Medicinal Chemistry 12:2163-75;
MedCu Mask Kills Avian & Human Influenza A*

- Tests conducted by independent FDA-approved Lab and protocols
- Good Laboratory Practice (GLP) test procedures
- Simulation of breathing conditions (Nelson labs)

## Strong Performance in All Tests*

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
<th>Conclusion</th>
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<tbody>
<tr>
<td>Elution of copper in Simulated Breathing</td>
<td>Pass</td>
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<tr>
<td>Elution of copper into saliva</td>
<td>Pass</td>
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<tr>
<td>Bacterial Filtration Efficacy</td>
<td>Pass</td>
<td>Met Type IIR Mask requirements and safety (CE registration)</td>
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<td>Differential Pressure Test</td>
<td>Pass</td>
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<td>Flammability Test</td>
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<td>Latex particle challenge</td>
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<tr>
<td>Cytotoxicity</td>
<td>Pass</td>
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<tr>
<td>Skin Irritation Test</td>
<td>Pass</td>
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Scanning Electronic Microscopy and Energy Dispersive X-Ray Spectroscopy analysis

Demonstrated homogenous distribution of copper oxide microparticles

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Typical Antiviral Mask Design

The mask consists of 4 layers:

- **A and D**: External layers of spun bond polypropylene, impregnated with copper oxide microparticles that kill viruses trapped on the masks
- **B**: An internal meltblown filtration layer
- **C**: A hard polyester layer that supports the mask’s 3-dimentional shape
- **Other configurations are possible**
RA/QA

- The only copper technology with FDA Clearance and CE Mark Certification for wound dressings (2019)
- ISO 13485 medical device certification
- Rigorous safety/efficacy testing
- Strict quality control
Simple Integration with Third-party Masks

- Technology can easily and cost-effectively add potent antiviral capabilities to your surgical and N95 masks
- Easy, seamless integration into existing manufacturing process
- Material production process is scalable to support high quantities
Why Partner with MedCu?

- Offers the only commercial copper antiviral technology that can help your surgical and N95 masks prevent coronavirus infection and cross-contamination
- Anti-viral layer can easily and cost-effectively be integrated in your mask manufacturing processes
- MedCu technology is backed by 15 years of research published in >40 peer-reviewed journals
- MedCu Copper technology has FDA Clearance and CE Mark Certification for wound dressings (2019)
- Strong IP portfolio – 30 patents worldwide
- Strong leadership team

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Leadership Team

Danny Lustiger, MBA, CPA
Co-Founder & CEO
Past President & CEO of Cupron;
CFO of Shikun & Binui
conglomerate; GM and president
of Optibase Inc; Over 20 years
experience in high-tech and
biomedical firms; financials
and general management

Gadi Borkow, Ph.D.
Co-Founder & CSO
Biochemist and
Microbiologist, Chief Medical
Scientist of Cupron. World
expert in his field with focus
on Copper and its derivatives.
Published over 130 peer
review scientific articles,
editorial board member of
5 scientific journals

Shaya Kalif, BSc Industrial
Engineering
Chief, Operations
Seasoned Operations leader with
extensive experience managing
logistics and supply chain
operations in the medical industry

Nimrod Bin-Nun,
MBA
Manager, Business
Development
14 years of senior
management, finance, and
BD positions in global
pharma (Teva), medical
device, and diagnostic
companies.

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THANK YOU!