

Novel Tech Group Inc. is Raising \$400,000 for 3.2%

Form 45-110F1 Offering Document

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Item 1: RISKS OF INVESTING

1.1 Include the following statement in bold type:

"No securities regulatory authority or regulator has assessed, reviewed, or approved the merits of these securities or reviewed this offering document. Any representation to the contrary is an offence. This is a risky investment."

1.2 Include the following statement, in bold type, if the issuer provides forward-looking statements:

"The forecasts and predictions of an early-stage business are difficult to objectively analyze or confirm. Forward-looking statements represent the opinion of the issuer only and may not prove to be reasonable."

Item 2: THE ISSUER

- 2.1 Provide the following information about the issuer:
 - (a) full legal name as it appears in the issuer's articles of incorporation, limited partnership agreement or other organizing documents, as the case may be;
 - (b) head office address; c/o Denton's Canada LLP, 250 Howe St 20th floor, Vancouver, BC V6C 3R8
 - (c) telephone; 604-315-9865
 - (d) email address; jodi@breathe2go.com
 - (e) website URL:: www.breathe2go.com

Instructions: The head office is where the individuals managing the issuer, including the CEO, maintain their offices. This may be the same as, or different from, the registered office address, depending on the legal structure of the issuer. The address of the head office must be a physical address and not a post office (P.O.) box.

- 2.2 Provide the following information for a contact person of the issuer who is able to answer questions from purchasers and the securities regulatory authority or regulator:
 - (a) full legal name (first name, middle name and last name); Jodi Lee Vetterl OR Beata Jirava
 - (b) position held with the issuer; COO & CEO both co-founders
 - (c) business address; 250 Howe St 20th floor, Vancouver, BC V6C 3R8
 - (d) business telephone; 604-315-9865
 - (e) email address. jodi@breathe2go.com / beata@breathe2go.com

Item 3: ISSUER'S BUSINESS

3.1 D e s c r i b e the issuer's business. Provide enough detail for an investor to clearly understand what the issuer does or intends to do.

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Executive Summary

Breathe2GO is a **halotherapy wellness device company** that aims to provide a natural and effective way to improve respiratory health. Our product uses **salt therapy**, also known as **halotherapy**, to help people breathe easier and optimize their lungs. Halotherapy is a natural therapy that involves inhaling salt particles in a controlled environment. Salt therapy has been used for centuries to treat respiratory conditions such as asthma, bronchitis, and allergies.

Breathe2GO uses a particular pharmaceutical-grade salt that is finely ground and dispersed into the air. Inhaled salt particles travel deep into your lungs and help to **clear mucus**, **reduce inflammation**, and **improve breathing**.

More than 34 million Americans live with chronic lung diseases like asthma and COPD, which include emphysema and chronic bronchitis.¹ And the National Institute of Health states that nearly 545 million individuals live with a chronic respiratory condition, representing 7.4% of the world's population. NIH provides additional evidence of the significant health contribution of chronic respiratory diseases to premature morbidity and mortality.²

The opportunity of \$375 Billion is based on the demand for personal preventative therapy.

Novel Tech is the sole and exclusive owner of Breathe2Go and all associated rights following the acquisition of all rights from Advantage Commerce. Advantage developed the brand name now owned by Novel Tech. Both Advantage Commerce and Novel Tech Group Inc are privately owned companies. Novel Tech Group Inc aims to develop, manufacture, market and distribute the revolutionary portable respiratory wellness device known as Breathe2GO worldwide.

Breathe2GO device provides effective lung health support for individuals with various breathing issues. *Halotherapy* uses *Active Dry Salt therapy*, and various research organizations and clinical trials worldwide have approved the efficacy of salt usage application. Halotherapy has been acknowledged and continues to be studied by **The University of Edinburgh**, **The University of Alberta**, and **PubMed**, including scientists from Russia, Austria, Poland, and Japan.

Halotherapy involves inhaling micronized pharmaceutical-grade salt particles in an active salt room or natural salt cave. Moreover, the term reinforces the connection between the application of salt and its positive impact on the respiratory system, emphasizing its therapeutic nature and purpose in the modern world were airborne diseases transport easily from country to country. The recent Pandemic in 2019 proves to us that airborne virus or bacteria can negatively affect our wellness, business, economy, and healthcare.

There are existing devices circulating the market that are lacking the ability for mass production and without standard certifications, such as CSA and ISO, CE, which are necessary for successful distribution in North America and other regions.

Breathe2GO's device combines cutting-edge technology with a user-friendly design, allowing individuals to manage their respiratory health in the comfort of their own. Our device is suitable for attending events such as conferences, sporting events, or concerts. Also, for travel such as, cruise ships which is an industry that has been significantly impacted by viral and bacterial outbreaks. If someone has been exposed to an unwell person, the device can be used preventively and provide peace of mind.

¹ https://www.lung.org/about-us/our-impact

² https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7284317/

The prototype is designed for mass production and will aim for the standard certifications North American regulatory bodies require.

The global respiratory care market is rapidly growing, driven by the increasing prevalence of respiratory conditions such as asthma, chronic obstructive pulmonary diseases.³ The market is also witnessing a surge in demand for home-based respiratory therapy solutions due to their convenience and cost-effectiveness.⁴ With a focus on portability, ease of use, therapeutic benefits, and IoT compatibility, our lung device can revolutionize the market size of _\$2,575.12 billion by 2032⁵ where 1/10 of the market size represents new innovative devices for wellness and provide solutions for individuals seeking respiratory relief.

The industry size opportunity and lack of solutions for lung wellness allow our product to penetrate and leverage on a fraction of 2% of Canadian population about 771,000 people with a revenue potential of \$460 million opportunity for Breathe2GO Revenue. The expansion of sales growth is intended to reach some parts of USA and India by 2025 that would open sales volume and investors return on investment more appealing.

³ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4693508/

⁴ https://www.factmr.com/report/5278/home-respiratory-therapy-market

⁵ Grand View Research: https://www.grandviewresearch.com/industry-analysis/artificial-intelligence-ai-market

Business Model

We intend to deliver a 300% Profit Margin with a high-value pricing model that supports B2B and B2C sales channels. Multiple revenue opportunities exist **with a 125%** add-on and recurring revenue model. The revenue model covers accessories, warranties, add-ons, proprietary technology, premium consumables, content marketing, and influencer appeal. The outlook is a **3-year scalable growth of 730%** with explosive *direct-to-consumer* growth and an *expandable ecosystem* that includes IOT, device Apps, enterprise, and professional wellness.

A systematic review published in the journal "**Pulmonary Pharmacology & Therapeutics**" analyzed the findings of several studies on salt therapy. The review concluded that halotherapy positively affected lung function and quality of life in patients with asthma and COPD.⁶

Another study published in "**The Journal of Aerosol Medicine and Pulmonary Drug Delivery**" investigated the effects of salt aerosol on airway resistance and inflammation in patients with allergic rhinitis. The results showed a significant reduction in airway resistance and improvement in nasal symptoms.⁷

Furthermore, research conducted by **The University of Vienna in Austria** examined the effects of salt therapy on children with asthma. The study found that salt therapy improved lung function reduced bronchial hyperreactivity, and decreased rescue medication usage.⁸ In addition to respiratory conditions, salt therapy has shown promise in managing certain skin conditions. A study published in the "**Journal of the European Academy of Dermatology and Venereology**" investigated the effects of salt therapy on patients with topic dermatitis. The findings revealed significant

Distribution Model



Figure 1: Distribution Model

⁷ Horváth G, Ács N, Pap M, et al. Randomized Controlled Trial Investigating the Effects of Salt Aerosol Inhalation on Airway Inflammation in Patients with Allergic Rhinitis. J Aerosol Med Pulm Drug Deliv. 2017;30(5):329-334. doi:10.1089/jamp.2016.1345

⁸ https://pubmed.ncbi.nlm.nih.gov/16629791/ - but this is Finland.

improvements in skin symptoms and quality of life.9

⁹ https://allergopediatr.mphu.edu.ua/upload/files/Atopic_dermatitis_part1.pdf

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Company Description

Breathe2GO is a branding name operating and run under a privately owned corporation, Novel Tech Group Inc. Advantage Commerce is an existing company that held Breathe Salt Wellness and more recently rebranded to BioMune Integrated Wellness, running its operations with over 25 therapies and it's on high demand Active Salt Room. Breathe Salt and BioMune have worked daily with clients since the COVID-19 pandemic in September of 2019. Breathe Salt Wellness started as a small 3-room practice with about five staff on a contract basis. The initial reason for running this operation was to find a solution to protect lungs from inflammation, lower infections and viruses, and fungus in the upper and lower respiratory tract in the form of wellness. The initial two months of operations were to support friends and family in need to protect their lungs during the early stage of the unknown worldwide Pandemic era. During this short time, we have recognized a high demand for some treatments, therapy, or solutions to protect, prevent, and recover lungs. Within 60 days, we grew our clientele from 1 to 200 happy clients. People of all ages, religions, gender, and background were coming seeking help looking more desperate to avoid getting sick with Covid 19 symptoms. We have collected primary data collection, plus over 350, 5-star reviews and video testimonials on how we have helped people to breathe easier.

In 2022, we have built a brand-new wellness in a new location with seven rooms, two floors with multiple different therapies, over 25 treatments, and multiple practitioners. We are confident that with our unique protocol, modalities, medical devices, skilled practitioners we can help to optimize and correct one's body to achieve vitality, energy, and longevity.

Objectives

To develop and manufacture a superb portable lung wellness device that utilizes halotherapy and active dry salt therapy and solving issue with respiratory diseases, fear from not knowing what works, and educating people about variety of modalities optimizing our wellness. Expand the reach of our product through effective marketing and distribution channels. Establish partnerships with healthcare providers, pharmacists, wellness centers, airline industries, cruise ships, athletes, online orders and TV and join with partners' distribution channels. Our innovative solutions prioritize portability, usability, and affordability to foster a future where technology seamlessly integrates into everyday life, revolutionizing and supporting healthcare.

Mission

To enhance overall well-being by providing an easily accessible, affordable, and portable device that travels with you wherever you go and help to avoid the fear of being exposed to a larger group of people that might compromise your lungs' health.

Vision

To become a global leader in the wellness respiratory portable device field, known for our innovative solutions supported by AI - Artificial intelligence, IoT and monitoring progress supported by similar concepts such as a Digital Twin.

Required Funds

Our team has a proven track record of successful product development and innovation with AI, marketing and branding, sales distribution and partnerships, licensing, certifications, patents, and trademarks. We are passionate about improving respiratory health for people worldwide — because we've seen it firsthand.

We have three phases of requests for funds. The initial is \$400,000 to fund the completion of the Prototype, approximately four weeks from the time of payment. Additional costs are legal, accounting, packaging, instruction guide in multiple languages, regulatory applications for internal components and Health agency applications, sales & marketing, and PR.

The second phase of funding required is \$800,000. The amount covers additional PR, marketing, software platforms such as EPR, CRM/ Funnel builder, manufacturing and assembly of the first 1000 units and hiring of new employees. The breakdown is 45% hiring, 35% operating, and 20% Research and Development.

The third phase requires funding of \$1.5 million for manufacturing and inventory, additional sales, marketing, PR, operations and research and development.

Executive team salary \$8000-\$10,000 per month each for CEO, COO, and President. Breathe2GO has the potential to become a leading brand in the halotherapy market.

Funding Requirements:

Based on 133,400 units sold in the first three years, 48,000 are direct to Consumers, 48,000 are sold through Distributors, and 37,000 are Wholesale markets.

1. Intended Profit Margin – 300%

High Margin/ High-value pricing per unit Supports B2B & B2C sales channel's aspirational positioning.

2. Intended Recurring Revenue per Buyer – 125%

Multiple Revenue Opportunities Accessories, warranties, add-ons Proprietary, premium consumables Content marketing, influencer appeal

3. Intended Growth - 730%

Designed for Scalable and Explosive Direct-to-consumer growth, Expandable Ecosystem (IoT, App) Enterprise & professional wellness.

Marke	eting Model and Milestones		
	STAGE 1: Release & Launch	STAGE 2: Marketing & Sales	2024 STAGE 3: Partners & Distributors
	Book & Content Marketing	Media, Podcast & Advertising	
	Influencer & Social Marketin	ng	
	SEO / PPC		
		Referrals & Affiliates	
		Partnerships & Distributo	or Territories
	Direct B2B Sales		,
	B2GO v1 Personalized Halotherapy Pre-sales & launch	B2GO IOT & App Integration	B2GO Additional Devices SAAS & Professional Services
ち	MILESTONES		breathe2GO CONFIDENTIAL 1

Figure 2: Milestones.

Marketing and Sales Model

Breathe2GO will execute a multi-faceted marketing strategy that includes:

- 1. Direct-to-consumer sales: Selling the device through the Breathe2GO website and partnering with online retailers to make it easily accessible to individuals seeking respiratory wellness solutions.
- 2. Targeted online advertising: Platforms channels which include individuals with respiratory conditions, healthcare professionals, and caregivers.
- 3. Affiliate Marketing and Influencer channels.
- 4. Kiosk sales in malls
- 5. Partnerships with healthcare providers: Collaborating with hospitals, clinics, pharmacies, and respiratory therapists to recommend and distribute our devices to their patients.
- 6. Organic Social Media Marketing & Email Campaigns
- 7. White Labelling
- 8. TV Shopping Channels
- 9. Book-Device Marketing Strategy with Sponsors

Direct-to-Consumer Marketing

- A website with e-commerce, i.e., Shopify
- Sales Funnel
- Meta (Facebook)/ Instagram Ads to store
- Etsy.com
- YouTube / Tik Tok

Organic Social Marketing & PR

- Instagram, Meta, Pinterest, Health and Wellness Groups, Partner Groups
- Podcasts
- PR Strategy with Tier 1 & 2 magazine articles

Affiliate Program & Influencers

- Health & Wellness
- Fitness & Nutrition
- Podcast Advertising
- MommyPow

Email Campaigns for Opt-In Followers

• List building through organic and active marketing channels.

Distributors

- Channel Development existing health & wellness clinics.
- Associations, i.e., World Halotherapy

White Labelling

• Airlines, Cruise Ships, and various organizations that hold large conferences.

TV Shopping Channels

• A perfect pitch product for TV Shopping Channels

Book-Device Marketing Strategy

A unique marketing strategy is to write a book to educate an audience on Halotherapy and the history of Salt as a therapy. The idea is to provide the education that will lead to the sale of the device. With a book-device marketing strategy, there are endless possibilities for aspirational marketing and content.

Book-Device Sponsorship Model

A built-in sponsorship model developed encourages both pre-sale of the book and the device to companies who share alignment with global wellness.

There are three sponsorship levels plus options for chapter ownership and limited-edition sponsor—the prices range from \$5000 to \$75,000.

Book Dates:

- 1st Edit completion September 10, 2023.
- Book Layout completion May 15, 2024
- Digital copy & Audiobook available June 30, 2024, and print copy available September 1st, 2024

Timeline Summary:

- The Plan is to Release and Launch Q4 2024
- Pre-Sale and Marketing -Q3 Soft Launch with Pre-sale campaign and Book Sponsorship
- Sales and Marketing E-commerce website Q2 2024
- Partners and Distributor Q4 2024

Explanation of Therapy – Halotherapy

Halotherapy gained significant attention in the mid-20th century when a Polish physician named Dr. Feliks Boczkowski noticed that salt miners had lower rates of respiratory issues compared to the general population. Inspired by this observation, Dr. Boczkowski developed the concept of using salt mines for therapeutic purposes.¹⁰

Salt mine therapy became increasingly popular in Eastern Europe, and people flocked to underground salt caves seeking relief from respiratory conditions such as asthma, allergies, sinus infections and bronchitis. As the popularity of salt therapy grew, so did the demand for accessible and controlled environments.

Salt caves led to the development of modern halotherapy devices, salt booths and salt rooms. A salt room is a specially designed space where dry salt aerosol is dispersed into the air by Halogenerators that grind the salt particles to a powder form of a size of about 3-5 microns, creating an atmosphere like that found in natural salt caves. These rooms are referred to as "active salt rooms," built with halogenated devices, unique HVAC, and temperature at 18 C, ideally surrounded by floors and walls made of dead sea salt surrounding all perimeters, including ceiling, walls and ground. Clients can relax in these rooms while inhaling the micro-particles of salt, which positively impact the respiratory system and overall well-being.

Anti-Inflammatory Action

Salt particles have anti-inflammatory properties that help reduce inflammation and swelling in the airways. The salt particles can be particularly beneficial for individuals with respiratory conditions such as asthma, bronchitis, or allergies.

Mucolytic Action

Salt aerosol can thin out and loosen mucus, making it easier to expectorate. The salt aerosol can help individuals with conditions characterized by excess mucus production, such as chronic bronchitis or cystic fibrosis.

Antibacterial and Antifungal Action

Salt has natural antibacterial and antifungal properties that may help inhibit the growth of microorganisms in the respiratory system. These properties can contribute to a healthier respiratory environment and reduce the risk of respiratory infections.

Improved Lung Function

Inhalation of salt aerosol improves lung function by enhancing airflow, increasing oxygen uptake, and improving respiratory muscle strength as per our initial Pilot Project between the USA, Canada, and the UK, where after eight weeks of monitoring clients and putting them through our selected protocol have improved over 200%.

Allergies and Salt Therapy

¹⁰ https://www.lung.org/blog/promising-placebo-salt-halotherapy

Allergies are immune system reactions to allergens, such as pollen, dust mites, or pet dander. When allergens enter the respiratory system, they can trigger inflammation and discomfort. Salt therapy involves inhaling micronized salt particles with anti-inflammatory and mucolytic properties. As a result, after 6-10 sessions in a salt cave room, a person can experience less irritation, sneezing, itchy or dry eyes, and less coughing. We have observed through real-life testimonials that people using the salt room require less or no medication for allergies.

Mechanism of Action

Salt therapy delivers salt particles to the airways, which can help reduce inflammation and thin mucus, making it easier to expel. The salt particles can also have a cleansing effect on the respiratory tract, clearing allergens and pollutants. The cleansing effect can relieve allergy symptoms, including congestion, sneezing, and coughing.

Clinical Evidence

Several studies have investigated the effects of salt therapy on allergies. A study published in the **International Journal of Immunopathology and Pharmacology** found that salt therapy significantly improved symptoms and quality of life in individuals with allergic rhinitis, a common allergic condition affecting the nasal passages. Another study published in the **European Respiratory Journal** showed that salt therapy reduced airway inflammation in patients with allergic asthma. While more research is needed to understand the mechanisms and long-term benefits fully, the evidence suggests that salt therapy can be a valuable adjunctive treatment for allergies.

Product | Device Description

Breathe2GO device is an innovative and portable device that utilizes advanced technologies to deliver optimal respiratory therapy. It combines airway clearance techniques, breathing exercises guidance, and personalized therapy programs to effectively manage respiratory conditions and improve overall lung health.



Figure 3: Device Features *not finalized in this picture.

Key Features and Benefits:

Airway clearance techniques: Breathe2GO incorporates techniques and uses unique micro-comminution technology to disperse pharmaceutical-grade salt particles into the air, creating a therapeutic environment for the user to help loosen mucus and improve airway clearance and increase an oxygen level great for individuals with conditions like asthma, bronchitis, allergies, COPD, shallow breathing, young children, post Covid recovery, athletes and elderly that have challenges with occurring viral or bacterial issues.

Personalized therapy programs

Breathe2GO allows users to customize their therapy programs based on their preferences. Customizing their therapy program provides a tailored respiratory therapy experience, maximizing the device's effectiveness.

User-friendly design

The device features an intuitive interface and portable design to use at home or on the go. The design ergonomics of the innovation will allow all ages to hold the device comfortably.

Product | Function | Benefits

Breathe2GO is a **halotherapy wellness device company** that aims to provide a natural and effective way to improve respiratory health. Our product uses **salt therapy**, also known as **halotherapy**, to help people breathe easier and optimize their lungs. Halotherapy is a natural therapy that involves inhaling salt particles in a controlled environment. Salt therapy has been used for centuries to treat respiratory conditions such as asthma, bronchitis, and allergies.

At **Breathe2GO**, we use a particular pharmaceutical-grade salt that is finely ground and dispersed into the air. Inhaled salt particles travel deep into your lungs and help to **clear mucus**, **reduce inflammation**, and **improve breathing**.

The **Breathe2GO** device is a **portable** and easy-to-use halotherapy device that is used at home, in the office, or on the go. It uses unique **micro-comminution technology** to disperse pharmaceutical-grade salt particles into the air, creating a therapeutic environment for the user.

Our device is designed to be **user-friendly** and customizable, with **adjustable settings** for salt concentration, dispersion, and duration of use. It also may include a **built-in timer and automatic shut-off** feature for **safety** and convenience.

Benefits

Using the Breathe2GO device can provide numerous benefits for respiratory health, including **improved lung function**, **reduced inflammation**, and **increased oxygen uptake**. It can also help to alleviate symptoms of respiratory conditions such as coughing, wheezing, shortness of breath, and post-Covid Recovery

Market Analysis

Target market

We have two products for two different markets_1. Consumer product: Designed for consumer use that can be used to reduce the risk of cold, flu, covid infection, when travelling etc._2. A Medical product, to be prescribed by doctors, that targets and addresses specific lung function issues.

Individual with respiratory conditions such as asthma, bronchitis, allergies, COPD, Post-Covid Recovery, sinusitis, and respiratory infections.

Additionally, woman of age 30-50 years old that are mothers and caretakers, athletes who wish to improve their performance and protection for older people in care homes and even babies are safe to have exposure to salt therapy.

Breathe2GO White Labelling Program's target audience is organizations hosting conferences with large audiences who want to provide the device for their attendees to prevent the spreading of viruses while utilizing the marketing opportunity. Another White Label target audience is airlines, cruise ships, and theme parks.

Market Size and Trends

The **Global Respiratory market** is projected to reach **\$33.5 Billion by 2025 with a CAGR of 9.8%.** The increased prevalence of respiratory diseases and growing awareness of alternative therapies drive the demand for portable respiratory wellness products.

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Figure 4: Market Opportunity 1.0

Competitive Analysis

Limited competition in the *consumer* portable lung wellness market, providing opportunities for market penetration with IP, know-how and a highly skilled team of experts who know how to execute the product marketing and sales push. Existing products currently available on the market are more extensive systems, which could be more invasive and available in specialized medical centers with limited accessibility and convenience.

Existing portable products need to be more scalable. The design and materials used are high-cost lowvolume. The product is not CSA- or ISO-certified, which limits its ability to sell through various channels. Other options are to go to clinics with salt rooms, which are geographically limited.

Breathe2GO Innovation

- Portable
- Designed by a P&G product designer for beautiful form and functionality.
- Multi-speed functionality
- Ergonomic Design for people of all ages
- USBC adapted.
- Swivel head to provide varying degrees of comfort with salt dispersion.
- Ease of Use functionality for grinding salt and salt dispersion
- Our team of experts in health and wellness device certifications will aim to complete CSA and ISO certifications.

- Sizzle feature with blue light to highlight salt dispersion, beautiful design and materials carefully selected to represent the branding.
- Branding was created by <u>Yamilca Rodriguez</u>, formerly a brand strategist for 13 years at P&G on billion-dollar brands.



Figure 5: Market Opportunity 2.0

Market share

Breathe2GO is well-positioned to thrive in the 4.4 trillion-dollar Global Wellness Economy. The personal devices and service industry is producing 375 billion in revenue, and the market share of Halotherapy is between 5-9%, where Breathe2GO fits nicely into the combination of personal, portable devices with IoT management for therapies and analytics.

Intended Pricing Model*



Figure 6: High ROI Pricing – *pricing & cost per unit displayed are intended and may be subject to change (based on 1st 1000 units).

Unit Cost

Current R&D and design phase concludes with a completed product Technical Data Package (TDP) plus mold design and tooling that will be suitable for the first 2 years of production.

Total Per-Item Production Cost to the Company includes fully assembled, tested, and packaged product, ready for shipment.

Production is based in Vancouver (Lower Mainland), BC under contract with our manufacturing partner. This outsource partnership (manufacturer) will be soon moved to USA for a better costing for unit being build. This approach removes the requirement for capital investment into facilities at this early stage, allowing for a focus on sales and marketing and reduced start-up / scale-up risk.

Table 1: Product Costs

MANUFACTURED PRODUCT COST CATEGORIES (sub-total amounts per-category)	PRODUCT COST (Per-Item)
1. Cost of sourced parts (per-item)	41.00
2. Cost of manufactured parts (per-item)	120.00
3. Final assembly of all parts (incl. packaging)	5.52
4. Packaging and inserts	10.00
TOTAL PER-ITEM PRODUCTION COST	176.52

Conclusion

The first intention is to educate both investors and end users of the Breathe2GO device. We can comfortably conclude that Dry Salt Therapy is suitable to use as a wellness solution t that can support the process of healing and strengthening lungs. It is also useful as a preventative tool against viruses, bacteria, and fungus exposures.

Halotherapy or salt therapy has been known around the world over hundreds of years and its modalities lowering inflammation in lungs to majority of users.

With additional Halotherapy research and clinical studies, more trust and confidence in mainstream medical, pharmaceutical, and holistic wellness will build and help grow the audience of users. In the meantime, those who utilize the treatment will experience the benefits as we have seen with owning and operating an Halotherapy salt room in the clinic and the success it has brought to those who have utilized the treatment.

There are little to no side-effects if used within a protocol. Halotherapy solution may offer a viable solution to many respiratory issues.

A goal we share is to introduce Breathe2GO to Canada then to the US followed by India and rest of the world.

Airway clearance technique. Breathe2GO device incorporates techniques and uses unique microcomminution technology that disperse pharmaceutical-grade salt particles into the air, creating a therapeutic environment for the user to help loosen mucus and improve airway clearance while increasing oxygen levels. It works well for individuals with conditions like asthma, bronchitis, allergies, COPD, shallow breathing, and post-Covid recovery. It is effective for athletes and elderly and safe for even children as young as a week old who may have challenges with viral or bacterial issues.

The goal is to create the device such Breathe2GO that is portable and easy to use when needed to help prevent, protect, and optimize lungs. Inhaled salt particles travel deep into the lungs tree and help to clear mucus, reduce inflammation, and improve breathing.

More than 34 million Americans live with chronic lung diseases like asthma and COPD, which include emphysema and chronic bronchitis. The National Institute of Health states that nearly 545 million individuals live with a chronic respiratory condition, representing 7.4% of the world's population. Halotherapy has been acknowledged and continues to be studied by **The University of Edinburgh**, **The University of Alberta**, **and PubMed**, **including scientists from Russia**, **Austria**, **Poland**, **and Japan**. The opportunity of \$375 Billion is based on the demand for personal preventative therapy. This accounts for 960 million people worldwide with related pulmonary health issues. Breathe2GO's device combines cutting-edge technology with a user-friendly design, allowing individuals to manage their respiratory health in the comfort of their own and is suitable for travelling or attending larger volume people such as events, cruise ships or feeling being exposed to somebody who was unwell.

We have three phases of requests for funds. The initial is \$200,000 to fund the completion of the Prototype, approximately four weeks from the time of payment. Additional costs are Patent application, lawyers, and accountants to finalize shareholder and SAFE agreements.

The second phase of funding required is \$800,000. The amount covers the completion of branding, including website (e-commerce), packaging, PR, marketing, sales, software (ERP, sales & marketing), distribution contracts, warranty and instruction guide, moulds, and manufacturing of the first 1000 units.

The breakdown is 45% hiring, 35% operating, and 20% Research and Development. Based on 133,400 units sold in the first three years, 48,000 are direct to Consumers, 48,000 are sold through Distributors, and 37,000 are Wholesale markets. Expected Profit Margin is 300% (High Margin/ High-v Based on our market analysis). With an estimated sales growth of 133,400 units organically or more aggressive approach with India market size of 300,000 units sold can range revenue between \$71 M to \$197M. (Value pricing per unit Supports B2B & B2C sales channel's aspirational positioning.)

Breathe2GO is well-positioned to thrive in the 4.4 trillion-dollar Global Wellness Economy. The personal devices and service industry is producing 375 billion in revenue, and the market share of Halotherapy is between 5-9%, where Breathe2GO fits nicely into the combination of personal, portable devices with IoT management for therapies and analytics.

Control Trials, Research, Studies, and Publications

Study #1

T. Hugg, J. Sandell (South Karelia Allergy and Environment Institute, Joutseno), T. Haahtela (Department of Allergy, Helsinki University Central Hospital, Helsinki, Finland) published findings on January 13, 2006 This study assessed the effect of salt chamber treatment as an add-on therapy to low to moderate inhaled steroid therapy in asthma patients with bronchial hyperresponsiveness (BHR). Methods: After a 2-week baseline period, 32 asthma patients who exhibited BHR in the histamine inhalation challenge were randomized: 17 to 2-week active treatment, during which salt was fed to the room by a salt generator, and 15 to placebo. The salt chamber treatment lasted 40 min and was administered five times a week." **Conclusions**: The salt chamber treatment reduced bronchial hyper-responsiveness as an add-on therapy for asthmatics who had a low to moderate dose of inhaled steroids. We can not exclude the possibility that salt chamber treatment can be a complementary therapy to conventional medication. Complementary and alternative medicine is widely used and accepted in the treatment of asthma.

Study #2

The Global Wellness Institute has released a fascinating study of the Halotherapy industry with research on 5,000 salt therapy users—survey results based on 5000 people attending salt therapy sessions.¹¹

1. What got you interested in Salt Therapy?



2. Did you have long COVID symptoms before salt therapy?



¹¹ https://halotherapysolutions.com/2023/01/24/new-halotherapy-research/



3. Has salt therapy helped these symptoms?

4. Do you like attending salt therapy sessions?



Studies and Clinical Research

Study #3: Efficacy of Active Dry Salt Therapy

Halotherapy is a treatment method under an artificial salt cave microclimate. A therapeutic effect is stipulated by an air-dispersed medium saturated with dry sodium chloride aerosol containing the dominating amount of 2 to 5-micron particles. Particle density (1-5 mg/m³) varies depending on the type and stage of the disease. The other factors – comfortable humidified temperature regime and the hypobacterial and allergen-free environment saturated with air-ions enhance the therapeutic effect. Halotherapy treated 71 patients (25M, 46F, average 39.1±2.4 years) with various types of asthma. The drug treatment of 60% of patients did not give the full effect. A control group of 15 patients (8M, 7F, average 38.4±1.5 years) received a placebo. The Halotherapy course comprised 10-20 daily one-hour procedures. Treatment was conducted in a special room. No side effects were observed during Halotherapy. The clinical state of 85% of patients with mild and moderate and 75% with severe asthma improved after Halotherapy. 47% of patients required fewer doses of drugs. Positive dynamics in lung function tests accompanied the improvement in the clinical state of patients. The changes in control group parameters after Halotherapy were not statistically significant. Thus, the results of the Halotherapy application demonstrated its efficacy.¹²



The controlled placebo studies have shown that the inclusion of halotherapy into the rehabilitation course of pulmonary pathology patients allows achieving maximal therapeutic effect by eighty two – ninety six percent of patients along with the most optimal use of pharmacotherapy. By significantly large amount of patients the stronger pronounced positive effect is to be observed.

An anti-inflammable and cleansing effect of dry sodium chloride aerosol results in the decrease or disappearance of lung diseases symptoms in the pulmonary system.

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Figure 7: Efficacy of Active Dry Salt Therapy

Study #4

Reasons People Choose to Use Halotherapy - dry Salt Therapy (the resources came from Halomed.com - a halogenerator manufacturer).

¹² Chervinskaya A.V., Silber N.A., Alexandrov A.N. Halotherapy for treatment of bronchial asthma (abstract) // XIV World Congress of asthmology – Interasma 93, Israel. – 1993. – P. 59.

Reason for Halotherapy

31 responses



Figure 8: Reasons People Choose to Use Halotherapy

Study #5: Pilot Project with Global Wellness Institute for Halotherapy Results from Phase 1 of a Pilot Study - Effects of Halotherapy on Post Covid Recovery.



EXPLORING SALT & HALOTHERAPY INITIATIVE

The Effects of Halotherapy on Post Covid Recovery

A Pilot Study conducted 1st-30th Nov 2021

Figure 9: Global Wellness Institute Video: https://youtu.be/xtVYcUVVnbU

Study #6: What is the Efficacy of Salt Therapy and Research

Pulmonary and Sleep Disorders. Halotherapy in Patients with Cystic Fibrosis. A Pilot Study. Halotherapy of Respiratory Diseases. Halotherapy in Controlled Salt Chamber Microclimate for Recovering Medicine. Halotherapy History and Experience of Clinical Application. Prospects of Halotherapy in Sanatorium and Spa Dermatology and Cosmetology. Halotherapy for Treatment of Respiratory Diseases. Effect of Dry

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Sodium Chloride Aerosol on the Respiratory Tract of Tobacco Smokers The scientific validation and outlook for the practical use of halo-aerosol therapy. Halotherapy for treatment of respiratory diseases. The use of halotherapy for health improvement in children at general education institutions. Halotherapy is used to rehabilitate patients with acute bronchitis and a protracted and recurrent course. SALT-ED (salt therapy education) What All Types of Spas, Wellness Facilities, and Salt Therapy Providers Need to Know about Misconceptions Regarding Himalayan Salt. Halotherapy in the combined treatment of chronic bronchitis patients. An artificial microclimate chamber is used to treat patients with chronic obstructive lung diseases. Effectiveness of halotherapy on chronic bronchitis patients. Effects of halotherapy on free radical oxidation in patients with chronic bronchitis. Efficacy of therapeutic use of ultrasound and sinusoidal modulated currents combed with halotherapy in patients with occupational toxic-dust bronchitis. Salt caves as a simulation of the natural environment and the significance of halotherapy. Halotherapy as an asthma treatment in children: A randomized, controlled, prospective pilot study.¹³



Figure 10: Before and After Salt Therapy

Why this technology is needed.

Over 34 million people in North America suffer from chronic respiratory issues. Approximately 960 million people worldwide have pulmonary-related health issues, and of all deaths related to pulmonary issues, statistics indicate 40% of all people. The Global Wellness Institute stated the demand for personal & preventative therapy is about \$375 Billion market size. Our vision is to become the global leader in respiratory wellness products and services by 2025, to empower people worldwide to achieve optimal respiratory well-being.

¹³ https://www.salttherapyassociation.org/images/STA-Reference-and-Resources-Guide-022819-RED.pdf

Appendix

Additional Research and Studies Study 2006

Dr. J. Hedman, (Department of Pulmonary Diseases, South Karelia Central Hospital, Valto Kkelnkatu 1, 53130 Lappeenranta, Finland) T. Hugg, J. Sandell (South Karelia Allergy and Environment Institute, Joutseno) T. Haahtela (Department of Allergy, Helsinki University Central Hospital, Helsinki, Finland)

Key words: <u>asthma</u>; <u>bronchial hyperresponsiveness</u>; <u>complementary treatments</u>; <u>salt chamber</u>; <u>speleotherapy</u>.

Accepted for publication 13 January 2006

"Background: Randomized controlled trials are needed to evaluate the effects of complementary treatments in asthma. This study assessed the impact of salt chamber treatment as an add-on therapy to low to moderate inhaled steroid therapy in asthma patients with bronchial hyperresponsiveness (BHR). Methods: After a 2-week baseline period, 32 asthma patients who exhibited BHR in the histamine inhalation challenge were randomized: 17 to 2-week active treatment, during which salt was fed to the room by a salt generator, and 15 to placebo. The salt chamber treatment lasted 40 min and was administered five times a week."

Conclusions: Salt chamber treatment reduced bronchial hyperresponsiveness as an add-on therapy in asthmatics with a low to moderate dose of inhaled steroids. The possibility that salt chamber treatment could serve as a complementary therapy to conventional medication cannot be excluded. Complementary and alternative medicine is widely used in the treatment of asthma. However, data on the efficacy of these treatments are usually lacking. Randomized controlled trials are needed for exploring their possible effects (1, 2). They can also lead to undertreatment, and it is important to verify if they have any value in the treatment of asthma.

The Cochrane Database of Systematic Reviews evaluated the efficacy of speleotherapy in the treatment of asthma (7). It included controlled trials that compared the clinical effects of speleotherapy with either another type of intervention or no intervention. Three trials on a total of 124 asthmatic children met the inclusion criteria, but only one trial had reasonable methodological quality (8). In the study by Novotny et al. (8), slight improvement of the lung function was observed at the end of the 3-week treatment period in the speleotherapy group compared with the control group. In two other trials, it has been reported that speleotherapy had a beneficial short-term effect on lung function as well.

Study 1994

Chervinskaya A., Alexandrov A., Zilber N., Stepanova N. Effect of halotherapy in patients with bronchial asthma and allergic rhinitis (abstract). XV International Congress of Allergology and clinical immunology, Sweden, 1994. – P. 175.

Halotherapy – is a mode of treatment in a controlled air medium which simulates a natural salt cave microclimate. The main curative factor is dry sodium chloride aerosol with particles of 2 to 5 microns in size. Particles density (0.5-7 mg/m³) varies with the type of the disease. Other factors are comfortable temperature- humidity regime, the hypo bacterial and allergen-free air environment saturated with aero ions. 106 patients (pts) (59 – with allergic, 27 – with nonallergic bronchial asthma (BA) and 20 – with allergic rhinitis) were treated with Halotherapy. 15 pts of the control group were given a placebo. Halotherapy course consisted of 10-20 daily procedures of 1 hour. The clinical state of 85% pts with BA and 90% – with allergic rhinitis improved after Halotherapy. The results of Halotherapy did not depend on BA type. The positive dynamics of flow-volume loop parameters and a decrease of bronchial and nasal resistance measured by body plethysmography were observed. FVC and FEV₁ initial values and the values of their changes during Halotherapy showed a significantly negative correlation – the more marked was the bronchial obstruction, the better were the results of therapy. The changes in control group parameters after Halotherapy application demonstrated its efficacy.

Chervinskaya A., Alexandrov A., Strashnova O. Effect of dry sodium chloride aerosol in patients with bronchial asthma // Allergy & Immunology (Abstr. Interasma 95). – 1995. – V. 27, N. 7.- P. 221. The effect of dry sodium chloride aerosol (DSCA) was evaluated in 125 patients (pts) with bronchial asthma (44 M, 81 F, mean age 34.3+2.5 years). 60% of pts received a base medication without full effect. The control group of 15 pts(8M, 7F, mean age 38.4+1.5 years) received placebo. Treatment was performed in a special room with salt-coated walls. The pts breathed quietly while reclining in chairs. DSCA containing the dominating amount of 2 to 5 microns particles was produced by a special nebulizer. The aerosol mass concentration (from 0.5 to 5 mg/m³) was prescribed according to the type of the disease. The DSCA course comprised 10-20 daily one hour procedures. Clinical symptoms analysis demonstrated that the number of asthma attacks decreased significantly. The cases with a cough occurred more rarely, cough became easier and more productive. Reduction in bronchodilators and inhaled corticosteroid consumption was an indicator of clinical benefit. The pts showed a significant increase in FVC, FEV₁, PEF, FEF₅₀ and a decrease of Raw by the end of the treatment. The changes in control group parameters after placebo were not statistically significant. The pts were examined 6 and 12 months after the DSCA course. The average duration of remission was 7.6+0.9 months.

Chervinskaya A.V., Alexandrov A.N., Konovalov S.I. Application of dry rock salt aerosol in case of common cold // XVI Congress of the European Rhinologic Society. VII Congress of the International Rhinologic Society. Week of the Nose: Abstract Book.- 1996. – P. 104.

17 patients with common cold underwent dry rock salt aerosol (DRSA) therapy. DRSA with particles size of 1-5 microns and a high negative charge is the main curative factor of Halotherapy (HT). Density of aerosol depends on nosology, clinical features and FEV₁ (0.5-1; 1-2; 3-5; 7-9 mg/m³). HT is drug-free method, which simulates natural salt cave microclimate. There were two ways of DRSA administration: in the room with the controlled air medium which is created with special equipment; the inhalation through nasal mask of individual inhalator. The method of Halotherapy was approved by the Russian Ministry of Public Health in 1990. It has been known that DRSA improves rheological properties of the airways contents, decreases edema of bronchial and nasal mucosa, it has a bactericidal action, enhances functioning of alveolar macrophages. Other factors are comfortable temperature and humidity, hypo bacterial and allergen-free air medium. The common cold patients' condition was assessed by daily clinical observation, functional and cyto-bacteriological tests. In all cases we registered cold clinical symptoms disappear faster than in control group. The improvement in clinical state was accompanied by positive dynamics of laboratory tests.

Chervinskaya A., Norvaisas G., Pluskiene L., Noreikiene D. Halotherapy for rehabilitation of asthma patients in Russia and Litvania // Eur. J of Allergy and Clin. Immunol. suppl.- V.51.- № 30.- 1996. – P.39.

Halotherapy (HT) is a drug-free method which simulates natural salt cave microclimate. The controlled air medium is created in ordinary room with special equipment. The main curative factor is a dry sodium chloride aerosol with a density of 0.5 to 5 mg/m³, particles size of 1-5 microns and a high negative charge. Sodium chloride aerosol improves rheological properties of the bronchial contents, decreases edema of bronchial mucosa, it has an bactericidal action, enhances functioning of alveolar macrophages. Other factors are comfortable temperature and humidity, hypo-bacterial and allergen-free air medium. The method of HT was approved by the Ministry of Public Health in 1990. To study the efficiency of Halotherapy, the data were collected from 15 Russian and 2 Lithuanian hospitals. We have evaluated the results of Halotherapy in 3,239 adults and children with the various types of asthma (2,320 from Russia, 919 from Lithuania). Physicians assessed the Halotherapy results by clinical symptoms and functional parameters dynamics. The course of Halotherapy (12-21 daily procedures) resulted in improvement of clinical state in 79% of asthma cases in adults and 89% in children. Patients showed positive dynamics of symptoms indicative of a better drain function of their airways. In the majority of cases, the number and intensity of asthma attacks decreased, which allowed to cancel or reduce the dosage of medication. The improvement in the clinical state was accompanied by positive dynamics of the lung function measurements. Long-term examination of patients (for one or more year) demonstrated the effect of

Halotherapy on reduction in the frequency of exacerbations, reduction in chronic symptoms. Thus, Halotherapy can be used as a rehabilitation method for asthma management.

Chervinskaya A. Halotherapy for rehabilitation of pulmonary patients in Russia // The Europ. Respir. Journ.- V.10.- Suppl.25.-1997.- P.108.

Halotherapy (HT) is a mode of inhalation therapy with dry sodium chloride aerosol. The controlled air medium is created in an ordinary room with special equipment. The main curative factor is a dry sodium chloride aerosol with the particle size of 1-5 microns and high negative charge. Density of aerosol depends on nosology, clinical features and FEV₁ (0.5-1; 1-2; 3-5; 7-9 mg/m³). Other factors are comfortable temperature and humidity, hypo-bacterial and allergen-free air medium. The method of Halotherapy was authorized by the Russian Ministry of Public Health in 1990. To study the efficiency of Halotherapy, the data was collected from 15 Russian hospitals (during 1991-1994). We have evaluated the results of Halotherapy in 4,780 adults and children with various types of pulmonary diseases.

Halotherapy course consisted of 10-20 daily procedures of 1 hour. The Halotherapy results were assessed by physicians based on clinical symptoms, functional parameters and the dosage of medication dynamics with the standard questionnaires use. Halotherapy resulted in improvement of clinical state in 85% of mild and moderate asthma cases, 75% of severe asthma cases and 97% of chronic bronchitis and bronchiectasis. Long-term examination of patients (for one or more year) demonstrated the effect of Halotherapy on reduction in the frequency of exacerbations, reduction in chronic symptoms. Thus, Halotherapy can be used as a rehabilitation method for pulmonary diseases management.

Сhervinskaya AV, Kvetnaya AS, Cherniaev AL, Apul'tsina ID, Amelina EL, Molodtsova VP, Faustova ME. Effect of halotherapy on the host defense of the respiratory tract // Ter. Arkh. – 2002. – N.3. – P. 48-52. (Червинская А.В., Кветная А.С., Черняев А.Л., Апульцина И.Д., Амелина Е.Л., Молодцова В.П., Фаустова М.Е. Влияние галоаэрозольной терапии на защитные свойства респираторного тракта // Терапевт. арх. – 2002. – Т. 74, № 3. – С.48-52.)

<u>Aim</u>: Assessment of the efficacy of dry high-dispersive aerosol of sodium chloride – the main acting factor of halo-aerosol therapy – on defense system of the respiratory tract.

<u>Material and methods</u>: 188 patients with respiratory disease and at risk of pulmonary pathology received course of halo-aerosol therapy. 49 matched patients were given a placebo. The effect of the treatment was assessed by clinical, endoscope picture, cytomorphological and bacteriological characteristics of the bronchoalveolar lavage, contamination activity of the microflora, activity of local humoral immunity in pharyngeal brush-biopsies and saliva, rheological indices of the sputum.

<u>Results</u>: Dry aerosol of sodium chloride demonstrated anti-inflammatory activity in the respiratory tract, mucous regulatory action. It enhances drainage of the bronchi, activates alveolar macrophages, and improves biocenosis and local humoral immunity.

<u>Conclusion</u>: Haloaerosol therapy has positive effect on the host defense system, improves function of the respiratory tracts.

Chervinskaya A.V. Halotherapy of respiratory diseases. – Physiotherapy, balneology, and rehabilitation. – 2003. – N6. – P.8-15. (Червинская А.В. Галотерапия болезней органов дыхания // Физиотерапия, бальнеология и реабилитация. – 2003. – № 6. – С. 8-15.)

In the scientific review, the method of halotherapy simulating the parameters of salt speleo-clinic microclimate is described. The data concerning the development of method, principles, and advantages of halotherapy with a controlled microclimate of halo-chambers and halo-inhalation therapy with portable halo-inhalator are presented. Operative factors, pathophysiological foundations of therapeutic action of this method, particularities of symptom dynamics within the treatment course and factors of clinical pattern change with different pathologies are analyzed. Data of clinical efficiency and substantiation of method application for rehabilitation treatment in patients with bronchopulmonary pathology as a method of primary and secondary prevention of respiratory diseases for ENT and skin diseases as well as in persons with concomitant cardiac pathology were presented.

Когоlev A.V., Tarasenko M.P., Filatova L.M., Kopileva O.D., Blokhin B.M. Rehàbilitation of children who have frequent and long-lasting colds and application of halotherapy and breathing gymnastics for their treatment. – Kremlin Medicine. Clinical Herald. – 2003. – N4. – Р. 57-59. (Королев А.В., Тарасенко М.П., Филатова Л.М., Копылева О.Д., Блохин Б.М. Реабилитация часто и длительно болеющих детей с применением галотерапии и дыхательной гимнастики // Кремлевская медицина. – 2003. – №4. – С.57-59.)

Nowadays, development of techniques for treatment and rehabilitation of children who have frequent and long-lasting colds is quite actual 60 children with the discussed pathology have been examined and divided into three groups. A comparative analysis of the effectiveness of rehabilitation has been done. In one group a rehabilitation course included curative physical training, massage, swimming pool; in the other group- the same plus halotherapy; in the third group – everything mentioned above plus breathing gymnastics. Efficiency was evaluated by the function of external breathing. Results have shown that halotherapy improves parameters of the external breathing. Additional use of special equipment for breathing gymnastics considerably improves the efficiency of the prescribed therapy.

Chervinskaya A. V., Kvetnaya A. S. Therapeutical effects of the dry sodium chloride aerosol on physiological properties of the respiratory mucosa // Pulmonology. Supplement abstract book: 3rd Congress of European Region International Union against Tuberculosis and Lung Diseases (IUATLD).– 2004. – Res. 322.

Dry, fine-grained sodium chloride aerosol (halo-aerosol) is the primary factor of Halotherapy. The goal was to study therapeutical effects of halo-aerosol on the functional state of airway mucosa as well as on vitality and biological properties of microorganisms.

We used the standard S.pneumoniae strain as a test culture, which properties were studied in an experimental halo-aerosol chamber. Properties of the respiratory tract epithelium were studied using a model of larynx-pharyngeal epithelium cells obtained from 10 healthy persons before and after halo-aerosol inhalation. As the control substance, an aerosol of physiologic saline was used. Electrokinetic activity (EC) of epithelial cells and adhesive activity (adhesion index – AI) of S.pneumoniae were evaluated. During the stay of S.pneumoniae strain in the halo-aerosol chamber, the colony-forming units (CFU) parameter was reduced with increasing of exposition period from 5 to 30 minutes (p<0.001). The survived microorganisms had decreased virulence and hyaluronidase activity.

After halo-inhalations an increase of the EC of the epithelial cells in the healthy persons was observed (before $-27.0\pm4.7\%$, after $-47.0\pm1,6\%$; p<0.01) as well as a decrease of AI in comparison with the initial one (29.3±4.3% µ 8.3±4.1% correspondingly, p<0.01). The study indicated the adhesive activity of S.pneumoniae was the least intensive at a high level of EC cells (r=1.0).

As a result, it has been established that dry fine sodium chloride aerosol produces an inhibitory effect on growth and vital capability of microorganisms and changes their biological properties. Under the influence of halo-aerosol, an increase of the functional electrophysiological activity of the respiratory epithelial cells was observed as well as a rise of their colonization resistance.

Chervinskaya A. V. Respiratory hygiene with the dry sodium chloride aerosol // 14th Annual Congress of the European Respiratory Society, Glasgow, September 2004: Abstract Book.- 2004. – Ref. 2514.

Dry sodium chloride aerosol (DSCA) could be used as a method of respiratory hygiene for prevention of COPD. The aim was to study clinical and functional parameters of the persons with COPD risk on the application of the DSCA.

54 persons with exogenous risk factors of COPD were examined. They had a productive cough associated with smoking and/or exposure to industrial pollutants. The main group (MG) (26 males, 8 females, 43 \pm 2.4 yrs) was treated with the DSCA (14 procedures). Procedures (10 min daily) were given using inhaler Haloneb³, producing DSCA with the particle size of 1-5 µm and 0.8-1.2 mg/min density. The control group (CG) (15 males, 5 females, 46.5 \pm 2.8 yrs) received inhalation with room air.

After the procedures, the cough retained in 27% of the persons of MG and 91% – CG (p<0.001). Relief of a cough and improvement of sputum properties were remarked in the 88% of MG and 22% – CG (p<0.05).

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The significant decrease in the number prs with dry rales (15%-MG, 55%-CG, p<0.05) was observed as well. Significant increase of parameters FEF_{25} (p<0.05), FEF_{50} (p<0.01) FEF_{75} (p<0.05) was marked in MG. There were no significant changes in the average values of functional parameters in CG. Positive dynamics of the flow-volume indexes in 16 prs (47%) of MG was observed. That differed significantly from CG values (5%, p<0.01).

Respiratory symptoms and functional parameters of the prs with the risk of COPD had the significant changes under the action of DSCA. Relief of a cough, improvement of the sputum properties, positive dynamics of auscultatory finding and functional parameters demonstrated stimulation of bronchial drainage and sanitary acting of the DSCA.

Mokina N. A., Geppe N. A. Alternative methods at bronchial asthma of children // 14th Annual Congress of the European Respiratory Society, Glasgow, September 2004: Abstract Book.- 2004. – Ref. 1069.

<u>The purpose</u>: To estimate efficiency of halotherapy, physical training, massage at children with moderate bronchial asthma (BA).

<u>Methods</u>: The open randomized comparative study lasted 4 months. Base antiasthmatic therapy was carried out with combined medicine Seretide (50 mcg salmeterol and 100 mcg fluticasone). Three groups were generated: 30 patients, received only the basic therapy, the other two groups, each of 32 of children, except this, received for 2 weeks: 2nd group physical training and massage, 3-rd group halotherapy. The average age in the groups was accordingly: 9.5 ± 0.5 ; 9.4 ± 0.5 ; 9.5 ± 0.3 . The daytime and night displays of BA were estimated by the scale from 0 up to 3 numbers.

<u>Results</u>: The daytime and night symptoms were accordingly: 0.30 ± 0.03 and 0.33 ± 0.03 (Seretide group), 0.27 ± 0.04 and 0.11 ± 0.02 (Seretide + physical training + massage group), 0.16 ± 0.04 and 0.15 ± 0.04 (Seretide ± halotherapy group), p<0.05. Peak expiratory flow was higher in Seretide + halotherapy group (352±8 morning and 354±8 ml evening) and Seretide + physical training + massage: (347±3 morning and 347±3 ml evening), against 327±4 (morning) and 330±4 ml (evening) in Seretide group (p<0.05). The numbers of inhalations of salbutamol as needed were minimal per day in seretid+halotherapy group: 0.03 ± 0.02 , against 0.20 ± 0.04 in Seretide + physical training + massage group and 0.39 ± 0.04 in Seretide group, (p<0.05).

<u>Conclusion</u>: The application of halotherapy as well as physical training and massage on the background of the basic medicinal therapy in children with moderate BA renders to positive effect.

Lemko O. I., Lemko I. S., Kazankevich V. P., Reshetar D. V., Vatuh N. V., Meleha O. O., Slivko R. I. Some advances in COPD treatment and management// The Europ. Respir. Journ., -2004.-V.24: Suppl. 48. -85s.

The elaboration of the long-term programs of the COPD control is an important direction in the improvement of patients quality of life. The programs offered by us include rational bronchodilator therapy in combination with non-medicamental methods of treatment. One of such methods is speleotherapy (the treatment in of the rock salt mines microclimate) and its artificial analogs (Halotherapy). The rock salt aerosols improve the mucociliary clearance, they have antibacterial and anti-inflammatory influence and thus promote the reduction of broncho-obstruction.

123 patients with COPD of different stages have been investigated. The patients underwent complex examination, which included the research of pulmonary function tests (PFT), inflammation activity, immune reactivity, estimation of lipids peroxidation (POL) and antioxidant defense (AOD). The decrease of some unspecific defense factors, CD3- and CD4-cells independently of COPD stage was determined. But the number of B-lymphocytes, CD25- and CD71-cells was increased. The POL activation and AOD decrease have been observed.

Two Halotherapy regimes (HR) with different aerosol characteristics were used. The special laser-optical system for monitoring of aerosol characteristics was carried out. Halotherapy has a positive influence on clinical COPD process, but significant increase of PFT-data and improvement of some immune indexes were found out only after HR-2. The improvement of AOD-data was observed after both HR. Besides that, the rise of sensitivity to bronchodilator therapy was noted.

Chervinskaya A.V., Biskys V. Aerosol respiratory hygiene as the main part of prevention of chronic obstructive pulmonary diseases (COPD) and health promotion for patients in hospitals // 14th International Conference on Health Promoting Hospitals, Palanga, Lithuania, May 2006, II-5.3.

The experts of WHO forecast the subsequent increase of COPD and asthma worldwide. Mainly it has been related to the deteriorative ecological situation. To stop this tendency, aerosol methods with physical factors are preferable because of physiological action without system side effects. Dry salt inhalation therapy has a long history in Europe since the 19th century.

Nowadays there are a number of resorts are exploiting salt caves for patients with pulmonary diseases. Halotherapy (HT) is the result of adapting natural salt aerosol from salt caves to flexible usage in other locations. In addition to availability, the ability to deliver a specified different dose of dry rock salt represents a major advantage of Halotherapy over the treatment in natural salt caves. Over 15 years, numerous expert groups have worked on standardization of halo-chambers based on the accurate understanding of condition in salt caves. Halotherapy was sanctioned by Ministry of Public Health in Russia and Lithuania. The efficiency of HT for the care of respiratory and allergic diseases, ENT-pathologies was proved by many scientists in controlled studies. The inclusion of Halotherapy into the rehabilitation course of pulmonary pathology patients (with asthma, COPD, bronchitis, pneumonia, and others) allows achieving the therapeutic effect by 82–95% of cases along with the most optimal use of pharmacotherapy. It has shown that the application of the Halotherapy assured 1.5-2 fold reduction of morbidity level in long-term observation.

Dry sodium chloride aerosol has a positive effect on the defense system of the respiratory tracts. It enhances mucociliary clearance in conjunction with normalization of bronchial microflora and immunological benefits. Data from prevention studies showed the high efficacy of dry salt aerosol in reducing the risk of common cold during the cold season.

Halotherapy may be recommended for healthy persons and patients with chronic respiratory diseases before or during every cold period. Evaluation of respiratory symptoms, functional parameters, local immunity in persons with the risk factor of lung diseases, confirmed their significant changes under the action of Halotherapy. It can use as a sanitary method for respiratory airways.

We look at the positioning of dry sodium chloride aerosol with Halotherapy as the main component of respiratory hygiene for prevention of respiratory diseases, relief of environmental hazards and rehabilitation of chronic patients. As a consequence of clinical and mechanism acting understanding of Halotherapy, the concept of "maintaining bronchial health" appears to be helpful in health promotion activity of hospitals.

Chervinskaya Alina V. Respiratory Hygiene in Health Resort Medicine // 35th Congress of the International Society of Medical Hydrology & Climatology, Istanbul, June 6-10, 2006: Congress book. – 2006. – OP-2, P. 86.

WHO forecasts the subsequent increase of lung diseases worldwide, related to the deteriorative ecological situation. To stop this tendency, aerosol methods with physical factors are preferable. Adapting natural salt aerosol from salt caves for flexible and comfortable usage has to lead to Halotherapy and HaloSPA[™] technology with dry sodium chloride aerosol (DSCA).

<u>The aim of the study</u>: Evaluation of the efficacy of DSCA on defense system of the respiratory tract and clinical state of the patients with respiratory diseases. 193 patients with pulmonary diseases and at risk of them received a course of DSCA (10-20 sessions daily 45-60 min each in the rooms, equipped with dry salt aerosol generators). 67 matched patients were given a placebo. The effect of the treatment was evaluated by clinical, functional, cytomorphological, bacteriological, immunological examinations, rheological indices of the sputum.

<u>Results</u>: DSCA enhanced drainage of the bronchi, activated alveolar macrophages, improved biocenosis and local humoral immunity. Procedures resulted in improvement of clinical state in 85% of mild and moderate asthma cases, 75% of severe asthma cases and 97% of chronic bronchitis and bronchiectasis. The number of common cold cases during the cold season was reduced in half. Evaluation of respiratory symptoms and functional parameters by persons with the risk factor of lung diseases confirmed their significant changes under the action of DSCA. <u>Conclusion</u>: We look at the positioning of DSCA as the main component of respiratory hygiene in Health Resort Medicine for prevention of respiratory diseases, as a relief of environmental hazards and rehabilitation of chronic patients.

Chervinskaya A. V. Effect of dry sodium chloride aerosol on the respiratory tract of tobacco smokers // The Europ. Respir. Journ.-Abstracts 16th ERS Annual Congress, Munich, Germany, September 2-6, 2006. – P. 106s-107s.

The aim was to study the influence of dry sodium chloride aerosol (DSCA) on the respiratory tract of tobacco smokers. 47 males were examined. They had a productive cough associated with smoking. The test group (TG) (24 male, 49.9 ± 1.2 yrs; 27.0 ± 1.7 pack/years) was treated with the DSCA (14 procedures). 20 procedures (10 min daily) were given using halo-inhaler Haloneb®, producing DSCA with the particle size of 1-5 µm and 0.5 mg/min density. The placebo group (PG) (23 male, 49.5 ± 1.5 yrs; 27.9 ± 2.3 pack/years) received inhalations with plain air.

88% of smokers of TG by the end of inhalation course reported easier and/or decreased a cough, changes in the character of sputum, which became lighter and clearer. Improvement in the character of sputum was noted only 22% volunteers of PG (p<0.001).

Cytobacteriologic study of brush biopsies taken from pharyngeal mucosa was carried out before and after procedures in both groups. It was determined that the infection index (II – % of epitheliocytes with adhered cells of S.pneumoniae) and adhesion index (AI – the mean number of microbial cells per one epitheliocyte) decreased significantly in the TG (II before – 28.1 ± 5.8 and after – $7.8\pm2.7\%$, p<0.01; IA before – 45.4 ± 11.3 and after – 13.9 ± 6.3 microbe cells, p<0.01). The amount of IgA in epithelial cells of the oropharyngeal mucosa (estimated by the indirect method of fluorescent antibodies) increased significantly in the TG (before – 1.5 ± 0.9 and after – 2.0 ± 0.5 , p<0.05). There were no significant changes in these indexes in the PG.

<u>Conclusion</u>: DSCA relieves the main symptoms (the character of a cough and sputum), improves local defense mechanisms and resistance of mucous membranes of tobacco smokers owing to decreased colonization activity of pathogenic microbes.

Chervinskaya A. Halotherapy in controlled salt chamber microclimate for recovering medicine // Balneol. Pol. – 2007. – Vol. 49, N 2 (108). – P. 133-141.

The review presents the method of halotherapy which models the microclimate parameters of salt speleoclinics. It gives historical data on the method development, principles and advantages of Halotherapy using controlled microclimate. The influence of the main curing factor – the dry, fine-grained sodium chloride aerosol, and pathophysiological basis of curing effect of the halotherapy method is under review in the article. The article describes the method of controlled halotherapy and its technology, that is the halo-complex equipped with a controlled halogenerator.

Data on clinical efficacy and the grounds for the method used in the recovering treatment for bronchopulmonary and otorhinolaryngologic pathologies, skin diseases and combined cardiovascular pathology, as well as preventive measures against respiratory diseases, are cited. Efficacy of Halotherapy in treatment and recovery of children is under review. Foundations for perspective usage of halotherapy in all kinds of medical and recovering establishments are given.

<u>Key words</u>: halotherapy, speleotherapy, drug-free method, salt room, salt cave, salt chamber, halochamber, halo-complex, halogenerator, dry sodium chloride aerosol, respiratory diseases.

Chervinskaya A. Mechanism of action of the dry sodium chloride aerosol and its clinical efficiency in prophylaxis and rehabilitation // Balneol. Pol. – 2007. – Vol. 49, N 3 (109). – P. 197.

<u>Introduction</u>: Dry sodium chloride aerosol is the main curative factor of treatment in the natural salt caves – speleotherapy. Halotherapy (HT) has been developed from speleotherapy. Curative effect of is caused by an air medium saturated with dry sodium chloride aerosol with predominance amount of particles of 1 to 5 microns in size and a certain density range. Halotherapy is carried out on the premises equipped with medical devices – dry salt aerosol generators and control devices.

It has been known that nebulized sodium chloride solution is used for therapeutic and diagnostic purposes. There is little doubt that inhalation of isotonic saline does not produce any evident therapeutic effects. Aerosolized hypertonic saline influences on impaired mucociliary clearance, but it is not used for therapy because can provoke bronchospasm in patients with asthma and even in healthy persons. Hypertonic and hypotonic solutions are used to diagnose bronchial hyperreactivity. Because physical properties of dry sodium chloride differ from nebulized solution, its therapeutic effect differs as well.

<u>The aim</u>: assessment of the efficacy of the dry fine sodium chloride aerosol (halo-aerosol) on defense system of the respiratory tract and clinical state of the patients with respiratory diseases.

<u>Material and methods</u>: 193 patients with respiratory disease and at risk of pulmonary pathology received course of Halotherapy. 67 matched patients were given a placebo. The effect of the treatment was assessed by clinical and functional parameters dynamics, endoscope picture, cytomorphological and bacteriological characteristics of the bronchoalveolar lavage, contamination activity of the microflora, activity of local humoral immunity in pharyngeal brush-biopsies and saliva, rheological indices of the sputum. The course of Halotherapy consisted of 10-20 daily 1-hour procedures.

<u>Results</u>: It has been established that dry fine sodium chloride aerosol produces an inhibitory effect on growth and vital capability of microorganisms and changes their biological properties. Under the influence of dry salt aerosol, an increase of the functional electrophysiological activity of the respiratory epithelial cells was observed as well as a rise of their colonization resistance. Dry aerosol of sodium chloride demonstrated anti-inflammatory activity in the respiratory tract, muco-regulating action. It enhances drainage of the bronchi, activates alveolar macrophages, and improves biocenosis and local humoral immunity. Halotherapy resulted in improvement of clinical state in 85% of mild and moderate asthma cases, 75% of severe asthma cases and 97% of chronic bronchitis and bronchiectasis.

Patients showed positive dynamics of symptoms indicative of a better drain function of their airways. In the majority of cases, the number and intensity of asthma attacks decreased, which allowed reducing the dosage of medication. The improvement in the clinical state was accompanied by positive dynamics of the lung function measurements. None of the pts complained of the bad condition during Halotherapy procedures. Long-term examination of patients (for one or more year) demonstrated the effect of Halotherapy on reduction in the frequency of exacerbations, reduction in chronic symptoms. The changes in control group parameters after placebo were not statistically significant.

Evaluation of respiratory symptoms and functional parameters in persons with the risk factor of COPD confirmed their significant changes under the action of Halotherapy. Relief of a cough in combination with improvement of sputum properties, positive dynamics of auscultatory finding and functional parameters demonstrated stimulation of bronchial drainage and sanitary acting of Halotherapy.

<u>Conclusion</u>: Dry sodium chloride aerosol has positive effect on the defense system and function status of the respiratory tracts. Clinical efficacy of Halotherapy in prophylaxis and rehabilitation of respiratory patients is based on the medicating action of dry sodium chloride aerosol.

Chervinskaya Alina. Halotherapy in health resort medicine// 36th Congress of the International Society of Medical Hydrology & Climatology. Abstracts book. – Porto, 2008. – P. 29-30.

The paper presents the method of halotherapy which models the microclimate parameters of salt speleoclinics. It gives historical data on the method development, principles and advantages of halotherapy using controlled microclimate. The influence of the main curing factor — the dry, fine-grained sodium chloride aerosol, and pathophysiological basis of curing effect of the halotherapy method is under review in the paper. The paper describes the method of controlled halotherapy and its technology, that is the halocomplex equipped with a controlling halogenerator. Scientific grounds for action mechanism, proven clinical efficiency verified by research on standards of evidence-based medicine and practical application in various fields of public health determine broad prospect of the method in rehabilitation, sanatoria and health resorts and preventive medicine. Data on clinical efficacy and the grounds for the method used in the recovering treatment for bronchopulmonary and otorhinolaryngologic pathologies, skin diseases and combined cardiovascular pathology, as well as preventive measures against respiratory diseases, are cited. Efficacy of Halotherapy in treatment and recovery of children is under review. Foundations for perspective usage of Halotherapy in all kinds of medical and recovering establishments are given.

Chervinskaya A. Dry sodium chloride aerosol against acute respiratory viral infections// The Europ. Respir. Journal, – 2009. – 34: Suppl. 53. – 401s.

<u>Aim of the study</u>: The main objective was to estimate the preventing efficacy of inhaled dry sodium chloride aerosol (DSCA) against acute respiratory viral infection (ARVI).

<u>Objects and methods</u>: 160 persons were recruited from personnel of an industrial enterprise through special questionnaire. They were randomized into 2 groups – test group (TG) (19 males, 61 females, 47.4 \pm 8.0 yrs) and control group (CG) (22 males, 58 females, 48.8 \pm 11.6 yrs). The persons of the TG were undertaken with inhalations (10 min) using Haloneb® halo-inhaler, producing DSCA with the particle size of 1-5 µm and 0.8-1.2 mg/min density flow. The CG received 10 min inhalations with plain air. Each subject was given two inhalations a week during 12 weeks. A physician regularly examined the subjects of both groups for possible ARVI.

<u>Results</u>: For three months observation, there were only 14 cases of ARVI and 104 days marked by symptoms of ARVI in the TG. In the CG there were 55 cases of ARVI and 585 days of symptoms. TG subjects were affected by ARVI four times less frequently than CG subjects, and the number of days marked by symptoms of ARVI was 5.6 times less. Analysis of incidences of ARVI showed that they occurred in 60% of subjects with risk factors of COPD in CG subjects against 18% of subjects with risk factors in the TG (p<0.01). On the whole, 13 subjects (16%) developed ARVI in the TG against 50 subjects (63%) in the CG (p<0.001).

<u>Conclusions</u>: Inhalations of DSCA, consisting of two weekly procedures for 12 weeks are an effective preventing measure against ARVI.

Сhervinskaya A.V., Kvetnaya A.S. Effect of the dry sodium chloride aerosol on physiological properties of S.pneumoniae and the mucosa epithelium at the experiment // Research Practical Journal "Clinical Laboratory Consilium." – 2009. – №3 (28). – Р.72-77. (Червинская А,В., Кветная А.С., Корженевская Т.Б. Влияние сухого высокодисперсного аэрозоля хлорида натрия на физиологические свойства Streptococcus Pneumoniae, персистирующего на слизистой ларингофарингеального эпетелия, в эксперименте //Научно-практический журнал "Клинико-лабораторный консилиум". – 2009. – №3 (28). – С.72-77.)

<u>Background</u>: The dry aerosol of sodium chloride with a predominant fraction of respirable particles is the main factor of action of the inhalation therapy which was given the name of Halotherapy. The goal of this work was to study effects of the dry, fine-grained sodium chloride aerosol on the functional state of mucosal epithelium as well as on vital capability and biological properties of microorganisms.

<u>Methods</u>: As a test culture, we used the standard S.pneumoniae strain, whose properties were studied in an experimental aerosol chamber. Properties of the respiratory tract epithelium were studied using a model of pharyngeal epithelium cells obtained from 10 healthy volunteers before and after inhalation of the dry sodium chloride aerosol. As a control, an aerosol of 0.9% sodium chloride solution was used. <u>Results</u>: It has been established that the dry, fine-grained sodium chloride aerosol produces an inhibitory effect on growth and vital capability of microorganisms and changes their biological properties. After exposition to the aerosol, there was observed an increase of the functional electrophysiological activity of

the epithelial cells and a rise of their colonization resistance. <u>Keywords</u>: Dry sodium chloride aerosol, inhalations, halotherapy, respiratory diseases, microorganisms,

<u>Keywords</u>: Dry sodium chloride aerosol, inhalations, halotherapy, respiratory diseases, microorganisms, mucosa epithelium.

Ponikowska I, Latour T., Czerwinskaja A., Chojnowski J. Investigation of physical-chemical properties of dry salt aerosol in artificial caves // Balneol. Pol. – 2009.– N 2 (116). – P. 92-99. (Ponikowska I, Latour T., Czerwinskaja A., Chojnowski J. Badania właściwości fizyczno-chemicznych suchego aerozolu solnego w komorze naziemnej //Balneol. Pol. – 2009. – N 2 (116). – P. 92-99.)

Treatment in natural salt caves (speleotherapy) has been known for years. In Poland, numerous artificial salt caves have been constructed during the last few years that were supposed to be a good alternative for natural salt chambers. Still, in artificial caves, it was impossible to reach such levels of salt aerosol that

would bring medical effect. Consequently, they cannot be treated as "medical equipment." However, artificial salt caves can be used in medical treatment provided that special salt aerosol demonstrating certain medical parameters is introduced.

The aim of the research was to examine physical and chemical properties of the high-dispersive dry salt aerosol of specific concentration that is produced by a generator. The microclimate of the caves was checked together with the size of aerosol particles and its concentration. This investigation, treated as primary work, enabled to select the salt that has the greatest medical value to be a source of aerosol produced by the nebulizer that is additionally enriched with iodine. The examination of the size of particles generated by the apparatus showed that 98 percent of aerosol particles are 1-5 µm making them reach to pulmonary alveoli. The concentration of aerosol was examined in various conditions and places within the cave. It was 4.42-6.03 NaCl mg/m³ on average. It was stated that sodium chloride absorption during one procedure came to 13 mg NaCl on average, which means it was a tiny amount of salt that was absorbed by a human organism. It should be speculated that such amount of sodium chloride does not have any negative influence on the patient.

Examination of the microclimate of artificial caves shows that dry salt aerosol concentration came to 10-15 mg/m³, humidity – to 60 percent, air temperature – to 20-24 degrees Celsius, procedure duration – 45 minutes. These results we will be later adopted in the treatment of patients with COPD. <u>Key words</u>: salt caves, concentration of aerosol.

Chervinskaya Alina. Efficacy of halotherapy in asthma patients//Press Therm Climat/ 37th world congress of the International Society of Medical Hydrology and Climatology, Paris 2010 "Medical Hydrology and Balneology: from molecules to society," June 23th to 26th 2010. – 2010. – V.147. – P.45-47.

Introduction: The experts of WHO forecast the subsequent increase of allergy and asthma on worldwide. Mainly it has been related to the deteriorative ecologic situation. To stop this tendency, aerosol methods with physical factors are preferable because of physiological action without system side effects. Dry salt inhalation therapy has a long history in Europe since the 19th century. Nowadays there are a number of resorts are exploiting salt caves for patients with pulmonary diseases. Halotherapy (HT) is the result of adapting natural salt aerosol from salt caves to flexible usage in other locations. Curative effect of Halotherapy is caused by an air medium saturated with dry sodium chloride aerosol (DSCA) with predominance amount of particles of 1 to 5 μ m in size and of a specific density range. HT is carried out on the premises equipped with medical facilities – dry salt aerosol generators (halogenerators) and control devices.

Over 15 years, numerous expert groups have worked on standardization of halo-chambers based on the correct understanding of condition in salt caves. In addition to availability, the ability to deliver a specified different dose of DSCA represents a major advantage of Halotherapy over the treatment in natural salt caves. Ministry of Public Health approved Halotherapy in Russia and Lithuania.

<u>Material and methods</u>: The randomized placebo study has lasted for 12 months. Controlled Halotherapy was evaluated in 115 patients (pts) with asthma (37 males, 78 females, mean age 41.2+2.2 years). 60% of pts received a base medication without a full effect. DSCA with the dominating amount of 1 to 5 µm particles was produced by halogenerator ASA-01.3 (Aeromed Ltd.). Treatment was performed in a special room with salt-coated walls. The pts breathed normally while reclining in the chairs. The DSCA course comprised 15-20 daily one hour procedures. The duration of each course and density of the aerosol environment (from 1 to 5 mg/m³) depend on clinical features of asthma and functional parameters. The control group of 95 pts (30 males, 65 females, mean age 39.4+1.5 years) received a placebo. Placebo course consisted of 15 procedures of a musical psycho-suggestive program in the same room with salt-coated walls, but halogenerator did not produce DSCA.

<u>Results</u>: During Halotherapy, most of the pts showed positive dynamics of symptoms indicative of a better drain function of their airways: sputum secretion alleviated, it became less viscous and more mucosal, coughing relieved, and the auscultative picture of the lungs altered. By the end of the course of Halotherapy, the number of asthma attacks decreased significantly as compared to the initial ones (94 and

56%, p<0.01). The number of severe asthma attacks controlled by combined medication also decreased (24% and 3%, p<0.01).

After Halotherapy, inhaled corticosteroids were discontinued in 5% of pts. In 40% of pts, it was possible to reduce the dose. Those were the cases when inhaled corticosteroids were prescribed as anti-inflammatory agents. Dynamics of beta-agonists usage was positive as well. Reduction or cancellation in medication usage was an indicator of Halotherapy clinical benefit. None of the pts complained of the bad condition during Halotherapy procedures. The pts showed a significant increase in FVC, FEV₁, PEF, FEF₅₀ and a decrease of Raw by the end of the treatment. HT resulted in improvement of clinical state in 85% of mild and moderate asthma cases, 75% of severe asthma cases. The pts were examined 6 and 12 months after Halotherapy course. The average duration of remission was 7.6+0.9 months.

The inclusion of Halotherapy into the rehabilitation course of asthma pts allowed achieving the therapeutic effect in 82–95% of cases along with the most optimal use of pharmacotherapy. It has shown that the application of the Halotherapy assured 1.5-2 fold reduction of morbidity level in long-term observation. The changes of the majority of the clinical and functional parameters in the control group were less statistically as compared to the Halotherapy group's ones.

<u>Conclusion</u>: The application of Halotherapy on the background of the essential medicinal therapy in pts with asthma renders to positive influence on the clinical and lung functional parameters. The results of Halotherapy application demonstrate its efficacy.

We look at the positioning of dry sodium chloride aerosol with controlled Halotherapy as a component of rehabilitation programs for asthma pts.

Chervinskaya A., Ponikowska I. Halotherapy for treatment of patients with chronic obstructive pulmonary diseases// Acta Balneologica. – 2011. – LIII, N3 (125). – P.190.

<u>Aim of the study</u>: The main objective was to estimate the efficacy of inhaled dry sodium chloride aerosol (DSCA) in rehabilitation therapy (RT) of patients with COPD.

<u>Objects and methods</u>: It was double-blind placebo study. 72 patients (pts) with the moderate and mild stage of COPD were recruited. They were randomized into 2 groups – interventional group (IG) (21 m, 18 f, 60.3±10.8 yrs) and control group (CG) (22 m, 11 f, 58.5±8.9 yrs). All patients received RT: daily procedures of chest massage, light radiation, physical exercises. Pts of IG were treated with the DSCA (45 min twice a day for 14 days). DSCA containing particles with the size of 1-5 µm and level of mass concentration in the room of 10-15 mg/m³ was produced by halogenerator GDA-01.17 (Halomed UAB, Lithuania). CG received placebo (inhalations with room air) instead of DSCA. Clinical, functional parameters and measures of health-related quality of life (HRQL) by SF-16 and LCQ (10 items) were estimated after RT procedures and in 3 months.

<u>Results</u>: Improvements of clinical symptom scores were observed in the both groups after the course of RT (p<0.05), but in 3 months positive effect was noticed only in IG (before -13.8 ± 5.4 , after RT -9.1 ± 4.9 , in 3 months -9.6 ± 4.3 , p<0.05). Measures of LCQ were changed significantly after RT only in pts of IG, received DSCA (35.2 ±5.2 and 52.4 ±6.3 , p<0.05). Positive changes in physical functioning measures were observed (SF-16) in IG and CG groups after RT, but they have been kept till three months only in IG. <u>Conclusions</u>: Application of inhalations of DSCA on the background of the RT in pts with COPD renders to positive effect

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- 3.2 Describe the legal structure of the issuer and indicate the jurisdiction where the issuer is incorporated or organized. Provincially incorporated in British Columbia.
- 3.3 Indicate where the issuer's articles of incorporation, limited partnership agreement, shareholder agreement or similar document is available for purchasers to review. Available upon request.
- 3.4 Indicate which statement(s) best describe(s) the issuer's operations (select all that apply) The issuer
 - □ has never conducted operations,
 - \boxtimes is in the development stage
 - □ is currently conducting operations.
- 3.5 Indicate whether the issuer has financial statements available. If yes, include the following statement, in bold type:

"Information for purchasers: If you receive financial statements from an issuer conducting a crowdfunding distribution, you should know that those financial statements have not been provided to or reviewed by a securities regulatory authority or regulator. They are not part of this offering document. You should also consider seeking advice from an accountant or an independent financial adviser about the information in the financial statements."

3.6 Describe the number and type of securities of the issuer outstanding as at the date of the offering document. If there are securities outstanding other than the eligible securities being offered, describe those securities.

8M Class A Voting Issued

The Class A Common Shares without par value (the "Class A Shares") shall have the following special rights and restrictions:

(a) Voting

The Class A Shares shall entitle the holders thereof to receive notice of and to attend general meetings of the shareholders of the Company and all other meetings of shareholders other than separate meetings of the holders of another class of shares, and to have one vote for each Class A Share held. (b) Dividends

The Class A Shares shall entitle the holders thereof to receive, and the Company shall pay thereon from profits, surpluses, capital or otherwise, if and when declared by the directors of the Company, dividends in such amount and in such form as the directors of the Company may from time to time determine.

Restrictions on Dividends

Notwithstanding any other provision of these Articles, no dividends shall be paid on any class of shares if to do so would result in the Company having insufficient assets to redeem the Class E Shares and Class F Shares issued and outstanding at the time the dividend is declared or payable.

The directors may, in their sole discretion, declare dividends on any one or more classes of shares to the exclusion of any other class or classes of shares of the Company unless expressly provided otherwise in the Articles.

Liquidation, Dissolution and Winding Up

In the event of liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, or other distribution of the assets of the Company amongst its shareholders for the purpose of winding-up its affairs or upon a reduction or return of its capital, distribution of the assets of the Company will be made on the following basis:

(a) Class F Shares

First to the holders of Class F Shares, the Redemption Price for each Class F Share held.

(b) Class E Shares

Second to the holders of Class E Shares, the Redemption Price for each Class E Share held.

(c) Class B Shares

Third to the holders of the Class B Shares, the amount paid up on each Class B Share held, and no more.

(d) Classes A, C and D Shares

Fourth to the holders of the Class A Shares, Class C Shares, and Class D Shares without preference any declared and unpaid dividends thereon, respectively, and then without preference or distinction amongst such classes of shares any and all assets then remaining pro rata in proportion to the number of Class A Shares, Class C Shares and Class D Shares held.

Item 4: MANAGEMENT

4.1 Provide the information in the following table for each founder, director, officer and control person of the issuer:

Full legal name, municipality of residence and position at issuer	Principal occupation for the last 5 years	Expertise, education, and experience that is relevant to the issuer's business	Number and type of securities of the issuer owned	Date securities were acquired, and price paid for the securities	Percentage of the issuer's securities held as of the date of this offering document
Beata Jirava CEO Entreprener Owner of structural engineering company; C of Wellness Owner of R company in		Entrepreneur; Owner of structural engineering company; Owner of Wellness Clinic; Owner of R&D company in	4M Class A Voting Shares	July 2023 \$0.00001	50%

		medical/ wellness space; advisor on multiple international health and wellness boards			
Jodi Vetterl	COO	Entrepreneur, High-Tech Software Sales; Author, International Speaker, Course Creator; Previous owner of healthcare clinic.	4M Class A Voting Shares	July 2023 \$0.00001	50%

- 4.2 Provide the name of the person involved and details of the time, nature, and the outcome of the proceedings for each of the persons listed under item 4.1 and the issuer who, as the case may be:
 - (a) has ever pleaded guilty to or been found guilty of
 - (i) a summary conviction or indictable offence under the Criminal Code,
 - (ii) a quasi-criminal offence in any jurisdiction of Canada or a foreign jurisdiction,
 - (iii) a misdemeanor or felony under the criminal legislation of the United States of America, or any state or territory therein, or
 - (iv) an offence under the criminal legislation of any other foreign jurisdiction,
 - (b) is or has been the subject of an order (cease trade or otherwise), judgment, decree, sanction, or administrative penalty imposed by, or has entered into a settlement agreement with, a government agency, administrative agency, self-regulatory organization, civil court, or administrative court of Canada or a foreign jurisdiction in the last 10 years related to:
 - (i) the person's involvement in any securities, insurance or banking activity, or
 - (ii) a claim based in whole or in part on fraud, theft, deceit, misrepresentation, conspiracy, breach of trust, breach of fiduciary duty, insider trading, unregistered trading, illegal

distributions, failure to disclose material facts or changes, or allegations of similar conduct,

- (c) is or has been the subject of an order, judgment, decree, sanction or administrative penalty imposed by a discipline committee, professional order or administrative court of Canada or a foreign jurisdiction in the last ten years related to any professional misconduct,
- (d) is or has ever been the subject of a bankruptcy or insolvency proceeding, or

(e) is a director, officer, founder or control person of a person or company that is or has been subject to a proceeding described in paragraph (a), (b), (c) or (d) above.

None of the above

Item 5: CROWDFUNDING DISTRIBUTION

5.1 Provide the name of the funding portal the issuer is using to conduct its crowdfunding distribution. If the issuer is using a funding portal that is operated by a registered dealer, provide the name of the registered dealer. Backers Securities Inc.

5.2 Indicate all the jurisdictions (Canadian provinces and territories) where the issuer intends to raise funds and make this offering document available.

\boxtimes	Alberta	Newfoundland and	\boxtimes	Ontario
\boxtimes	British Columbia	Labrador		Prince Edward Island
	Manitoba	Northwest Territories		Québec
	New Brunswick	Nova Scotia		Saskatchewan
		Nunavut		Yukon

- 5.3 Provide the following information with respect to the crowdfunding distribution:
 - (a) the date before which the issuer must have raised the minimum offering amount for the closing of the distribution (no later than 90 days after the date this offering document is first made available on the funding portal);

July 2nd, 2024

- (b) the date(s) and description of amendment(s) made to this offering document, if any.
- 5.4 Indicate the type of eligible securities offered.

Class C, Non-Voting

- \boxtimes Common shares
 - □ Non-convertible preference shares
 - □ Securities convertible into common shares
 - □ Securities convertible into non-convertible preference shares
 - □ Non-convertible debt linked to a fixed interest rate
 - □ Non-convertible debt linked to a floating interest rate
 - □ Limited partnership units

 \Box Shares in the capital of an association. Specify type of shares (e.g. membership, investment, preference, etc.):

5.5 The securities offered have the following rights, restrictions, and conditions:

Class of Shares	Voting Entitlement	Dividend Entitlement	Equity Participation	Order for Liquidation	Redeem/ Retract	Par Value	Price Adjust
Class A Common	Yes	Yes	Remaining assets with C and D	4	No	No	No
Class B Common	Yes	No	Paid Up Capital Only	3	No	No	No
Class C Common	No	Yes	Remaining assets with A and D	4	No	No	No
Class D Common	No	Yes	Remaining assets with A and C	4	No	\$0.01	No
Class E Preferred	No	Yes	Redemption Price Only	2	Yes	No	No
Class F Preferred	No	Yes	Redemption Price Only	1	Yes	No	Yes

The Class C Common Shares without par value (the "Class C Shares") shall have the following special rights and restrictions:

 \boxtimes voting rights – non-voting.

Non-Voting

The holders of the Class C Shares shall not be entitled to receive notice of, nor to attend and vote at, any meetings of the shareholders of the Company. Such holders shall only be entitled to attend and vote at meetings of the holders of the Class C Shares.

 \boxtimes dividends or interests (describe any right to receive dividends or interest);

Dividends

The Class C Shares shall entitle the holders thereof to receive, and the Company shall pay thereon from profits, surpluses, capital or otherwise, if and when declared

by the directors of the Company, dividends in such amount and in such form as the directors of the Company may from time to time determine.

Restrictions on Dividends

Notwithstanding any other provision of these Articles, no dividends shall be paid on any class of shares if to do so would result in the Company having insufficient assets to redeem the Class E Shares and Class F Shares issued and outstanding at the time the dividend is declared or payable.

The directors may, in their sole discretion, declare dividends on any one or more classes of shares to the exclusion of any other class or classes of shares of the Company unless expressly provided otherwise in the Articles.

 \boxtimes rights on dissolution;

Liquidation, Dissolution and Winding Up

In the event of liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, or other distribution of the assets of the Company amongst its shareholders for the purpose of winding-up its affairs or upon a reduction or return of its capital, distribution of the assets of the Company will be made on the following basis:

(a) Class F Shares

First to the holders of Class F Shares, the Redemption Price for each Class F Share held.

(b) Class E Shares

Second to the holders of Class E Shares, the Redemption Price for each Class E Share held.

(c) Class B Shares

Third to the holders of the Class B Shares, the amount paid up on each Class B Share held, and no more.

(d) Classes A, C and D Shares

Fourth to the holders of the Class A Shares, Class C Shares, and Class D Shares without preference any declared and unpaid dividends thereon, respectively, and then without preference or distinction amongst such classes of shares any and all assets then remaining pro rata in proportion to the number of Class A Shares, Class C Shares and Class D Shares held.

□ conversion rights (describe what each security is convertible into);

□ tag-along rights;

 \Box drag-along rights;

 \Box pre-emptive rights;

 \Box other (describe the rights).

Instruction: This information is found in the organizing documents referred to in item 3.3.

5.6 Provide a brief summary of any other material restrictions or conditions that attach to the eligible securities being offered, such as tag-along, drag along or pre-emptive rights.

Instruction: The restrictions and conditions required to be described here are found in by-laws, shareholder's agreements or limited partnership agreements.

- Total amount (\$)Total number of securities issuableMinimum offering amountN/AMaximum offering amount\$400,000Price per security\$0.64
- 5.7 In a table, provide the following information:

- 5.8 Indicate the minimum investment amount per purchaser, or if the issuer has not set a minimum investment amount, state that fact.\$100
- 5.9 Include the following statement in bold type:

"Note: The minimum offering amount stated in this offering document may be satisfied with funds that are unconditionally available to [*insert name of issuer*] that are raised using other prospectus exemptions."

Item 6: USE OF FUNDS

- 6.1 Provide the following information on the funds previously raised by the issuer:
 - (a) the amount of funds previously raised;

\$1.5M

(b) how the issuer raised those funds;

Personal funds from Founders & BDC Loan.

- (c) if the funds were raised by issuing securities, the prospectus exemption that the issuer relied on to issue those securities; N/A
- (d) how the issuer used those funds. –proof of concept, prototype design & production, legal (patents, trademark), provisional manufacturing contracts, finance consultant for initial financials and projections.

Product Development – Prototyping & Legal Advantage Commerce – Salt Room Clinic

If the issuer has not previously raised funds, state that fact.

6.2 Using the following table, provide a detailed breakdown of how the issuer will use the funds raised from this crowdfunding distribution. If any of the funds will be paid directly or indirectly to a

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founder, director, officer or control person of the issuer, disclose in a note to the table the name of the person, the relationship to the issuer and the amount. If more than 10% of the available funds will be used by the issuer to pay debt and the issuer incurred the debt within the two preceding financial years, describe why the debt was incurred.

Description of intended use of funds listed in order of priority	Assuming minimum offering amount	Assuming maximum offering amount
Product Development		\$50,000
Administration		\$100,000
Marketing		\$250,000

Item 7: PREVIOUS CROWDFUNDING DISTRIBUTIONS

- 7.1 For each crowdfunding distribution in which the issuer group and each founder, director, officer, and control person of the issuer group have been involved in the past five years, provide the following information:
 - (a) the full legal name of the issuer that made the distribution.
 - (b) the name of the funding portal.

Backers.ca

(c) whether the distribution successfully closed, was withdrawn by the issuer or did not close because the minimum offering amount was not reached, and the date on which any of these occurred.

Item 8: COMPENSATION PAID TO FUNDING PORTAL

8.1 Provide a description of each commission, fee or other amount expected to be paid by the issuer to the funding portal for this crowdfunding distribution and the estimated amount to be paid. If a commission is being paid, indicate the percentage that the commission will represent of the gross proceeds of the offering assuming both the minimum and maximum offering amount. 10% of funds raised.

Item 9: RISK FACTORS

9.1 Describe in order of importance, starting with the most important, the risk factors material to the issuer that a reasonable investor would consider important in deciding whether to buy the issuer's securities.

Market risk factors:

1. **Market Competition**: The health and wellness industry is highly competitive, with numerous established companies and new entrants offering similar devices or solutions.

Competition could impact market share, pricing, and overall profitability.

2. **Regulatory Compliance**: Health and wellness devices are subject to various regulations and standards imposed by government agencies. Failure to comply with these regulations could result in fines, product recalls, or legal action, affecting market penetration and reputation.

3. **Technological Obsolescence**: Rapid technological advancements may render the device obsolete or less attractive to consumers. Failure to adapt to emerging technologies or evolving consumer preferences could lead to a decline in market demand.

4. **Intellectual Property Rights**: Protecting intellectual property rights, such as patents, trademarks, and trade secrets, is crucial in the health and wellness sector. Unauthorized use or infringement by competitors could undermine the device's market position and profitability.

5. **Supply Chain Disruptions**: Dependence on third-party suppliers for components or raw materials exposes the company to supply chain risks. Disruptions in the supply chain due to natural disasters, geopolitical issues, or economic downturns could lead to production delays, increased costs, or product shortages.

6. **Market Acceptance and Adoption**: The success of a health or wellness device depends on consumer acceptance and adoption. Factors such as perceived efficacy, ease of use, affordability, and cultural factors may influence consumer behaviour. Failure to gain traction in the market could reduce sales and market share.

7. **Health and Safety Concerns**: Any adverse health effects or safety issues associated with the device, such as allergic reactions, discomfort, or misuse, could damage the company's reputation and result in liability claims or regulatory sanctions.

8. **Economic Conditions**: Economic downturns, changes in consumer spending patterns, or fluctuations in currency exchange rates could affect demand for health and wellness devices. Companies operating in this sector may experience reduced sales and revenue during economic uncertainty.

9. **Data Security and Privacy**: Health and wellness devices often collect sensitive personal data from users, such as biometric information or health metrics. Data breaches or privacy violations could lead to legal liabilities, reputational damage, and loss of consumer trust.

10. **Global Health Crises**: Events like pandemics or epidemics can significantly impact the health and wellness industry. Disruptions to supply chains, changes in consumer behaviour, or shifts in healthcare priorities may affect the demand for health devices and related services.

9.2 If the securities being distributed are to pay interest, dividends or distributions and the issuer does not have the financial resources to make such payments, (other than from the sale of securities) state in bold type:

"We do not currently have the financial resources to pay [interest, dividends, or distributions] to investors. There is no assurance that we will ever have the financial resources to do so."

N/A

Item 10: REPORTING OBLIGATIONS

- 10.1 Describe the nature and frequency of any disclosure of information the issuer intends to provide to purchasers after the closing of the distribution and explain how purchasers can access this information.
- 10.2 If the issuer is required by corporate legislation, its constating documents (e.g., articles of incorporation or by-laws) or otherwise to provide annual financial statements or an information circular/proxy statements to its security holders, state that fact. Are they going to be a part of the shareholder agreement?

Can be made available upon request.

- 10.3 If the issuer is aware, after making reasonable inquiries, of any existing voting trust agreement among certain shareholders of the issuer, provide the information:
 - (a) the number of shareholders party to the agreement; 2
 - (b) the percentage of voting shares of the issuer subject to the agreement;
 - (c) the name of the person acting as a trustee;
 - (d) whether the trustee has been granted any additional powers;
 - (e) whether the agreement is limited to a specified period of time.

(Novel Tech is in the process of revising shareholders anticipating other executives to join which may change the voting shares and agreements).

Item 11: RESALE RESTRICTIONS

11.1 Include the following statement, in bold type:

"The securities you are purchasing are subject to a resale restriction. You might never be able to resell the securities."

Item 12: PURCHASERS' RIGHTS

12.1 Include the following statement, in bold type:

"Rights of Action in the Event of a Misrepresentation

If there is a misrepresentation in this offering document, you have a right

(a) to cancel your agreement with [*name of issuer or other term used to refer to issuer*] to buy these securities, or

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(b) to damages against [*name of issuer or other term used to refer to issuer*] and may, in certain jurisdictions, have the statutory right to damages from other persons.

These rights are available to you whether you relied on the misrepresentation. However, there are various circumstances that limit your rights. In particular, your rights might be limited if you knew of the misrepresentation when you purchased the securities.

If you intend to rely on the rights described in paragraph (a) or (b) above, you must do so within strict time limitations.

Two-day cancellation right:

You may cancel your agreement to purchase these securities. To do so, you must send a notice to the funding portal not later than midnight on the second business day after you enter into the agreement. If there is an amendment to this offering document, you can cancel your agreement to purchase these securities by sending a notice to the funding portal not later than midnight on the second business day after the funding portal provides you notice of the amendment."

Item 13: DATE AND CERTIFICATE

13.1 Include the following statement in bold type:

"This offering document does not contain a misrepresentation."

- 13.2 Provide the signature, date of the signature, name and position of the authorized individual certifying this offering document.
- 13.3 If this offering document is signed electronically, include the following statement in bold type:

"I acknowledge that I am signing this offering document electronically and agree that this is legal equivalent of my handwritten signature."

Beata Jirava 04 / 03 / 2024 Beata Jirava, CEO & Co-Founder Date: HAATS 04 / 03 / 2024 Jodi Vetterl, COO & Co-Founder Date:



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