



UDC 615.32:338.48(73):338.48(477)

DOI: 10.31548/economics/3.2025.145

Anatolii Olshanskyi*

Master

Donetsk State University of Internal Affairs

25000, 1 Velyka Perspektyvna Str., Kropyvnytskyi, Ukraine

<https://orcid.org/0009-0001-5270-4937>

Integration of the uniquely designed invention into the apitherapy market in the USA and Ukraine: Comparison of demand and current state of the industry

Abstract. The purpose of the study was to determine the prospects for introducing the innovative apitherapeutic technology “bee therapeutic bed in a pyramid” to the US and Ukrainian markets, based on market trends, regulatory requirements and consumer interest. As part of the study, scientific publications, market reports, and patent documentation were analysed. Methods of comparative analysis, political, economic, social, and technological analysis and assessment of the competitive environment were used to determine the factors affecting the integration of technology. As a result of the analysis, it was found that in the United States, the apitherapy market is characterised by a high level of regulation and demand for natural methods of treatment, which created opportunities for the commercialisation of the invention. In Ukraine, apitherapy remained mainly a part of traditional medicine, and the main barriers to entering the market were the lack of certification standards, low level of scientific verification of effectiveness, and financial restrictions of consumers. In 2024, beekeeping revenue in the United States was 3,958.41 million USD, and North America accounted for more than 40% of the global market (5,017 million USD). The beekeeping market in North America was estimated at 2.94 billion USD in 2023 and is expected to reach 5.46 billion USD by 2031, with a growth rate of 8.53% per year. Based on the results obtained, a business model for integrating the “bee therapeutic bed in the pyramid” was developed, which included identifying key partners, value proposition, distribution channels, and potential sources of income. It was determined that for successful implementation of the technology, it is necessary to adapt to regulatory norms, pass product certification, and develop a marketing strategy that will promote the method among potential consumers. It was concluded that the US market had a significant potential for commercial scaling of technology through a developed wellness industry and high demand for alternative medicine, while in Ukraine, there were opportunities for local development and further export of services

Keywords: beekeeping; health centres; marketing strategy; treatment; methods; bee therapeutic bed in the pyramid

Suggested Citation:

Olshanskyi, A. (2025). Integration of the uniquely designed invention into the apitherapy market in the USA and Ukraine: Comparison of demand and current state of the industry. *Economics and Business Management*, 16(3), 145-159. doi: 10.31548/economics/3.2025.145.

*Corresponding author



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

INTRODUCTION

The current development of alternative medicine and wellness technologies indicates a growing need for effective, safe and natural methods of maintaining health. Apitherapy, based on bee products, has a high potential for integration into the field of preventive and health-improving medicine. In many countries around the world, in particular in the United States and Ukraine, there is a constant increase in interest in natural healing methods. This helps to increase the market and create new opportunities for selling inventive products. However, despite the rapid development of the industry, there are several problems that hinder the introduction of the latest apitherapy technologies. These include regulatory obstacles, building customer trust, requiring scientific confirmation of effectiveness, and adapting technologies to market conditions. In this context, it is important to analyse the comparative aspects of demand for innovative apitherapy drugs in the United States and Ukraine, identify industry trends, and develop the best methods to enter these markets.

In the field of apitherapy, there are no standards for the use of bee products and their integration into medical practice in different countries. W.A. Weis *et al.* (2022) reviewed the use of honey, propolis, royal jelly, and bee venom for the treatment and prevention of diseases. Studies have confirmed their antioxidant, anti-inflammatory, and immunomodulatory properties, but the lack of global standards and a limited number of clinical trials are holding back the widespread acceptance of apitherapy in healthcare systems. Apitherapy does not have uniform standards for the use of bee products in medicine, which makes it difficult to integrate them into official therapeutic practice. R.C. Joshi & L. Kafle (2023) investigated the medicinal properties of honey, propolis, bee venom, and wax, focusing on their antioxidant, anti-inflammatory, and antimicrobial effects. The researchers noted the effectiveness of apitherapy in the treatment of skin diseases, infections, arthritis and chronic pain, and the potential of bee venom in the treatment of cancer and neurological diseases. In addition, they emphasised the need for large-scale clinical trials, standardisation of dosage, and development of uniform regulatory

requirements for the wider use of apitherapy in modern medicine.

The growing prevalence of dangerous diseases, such as cancer, autoimmune and chronic pathologies, bacterial, fungal, and viral infections, is complicated by antibiotic resistance and the negative effects of synthetic drugs. S.E. El-Didamony *et al.* (2024) analysed the composition of bee products, their therapeutic effect, and the latest approaches to improving their effectiveness. Beekeeping products have been found to promote wound healing, reduce inflammation, improve blood circulation, and stimulate the immune response. In addition to traditional methods, researchers have developed innovative approaches such as using nanoparticles, biomaterials, and other state-of-the-art technologies to improve the bioavailability of these products.

Insufficient large-scale clinical trials make it difficult to confirm the effectiveness of apitherapy, in particular the use of bee venom to treat diseases such as Parkinson's disease and arthritis. S. Jang & K.H. Kim (2020) identified the potential benefits of apitherapy, but noted mixed results due to different methods and small samples. The researchers emphasised the need for large-scale clinical trials, and the investigation of molecular mechanisms of action and standardisation of the method. K.I. Kasozi *et al.* (2020) studied the potential of bee venom in the treatment of infections, particularly in COVID-19, pointing to the possibility of activating the immune response. G. Özdemir *et al.* (2021) analysed honey, propolis, royal jelly, bee venom, and parchment to determine their antibacterial, antioxidant, and anti-inflammatory properties. Propolis is effective for strengthening the immune system, and bee venom – in the treatment of inflammatory and rheumatic diseases.

Apitherapy is considered as a promising approach to the treatment of allergic reactions and diseases of the respiratory system. N.D. Widjanarko *et al.* (2024) investigated the effects of bee products on the course of allergic asthma, in particular, the use of honey, propolis, and bee venom. These components have been found to reduce inflammatory processes, reduce the level of immunoglobulin E, and regulate cytokine

balance, which helps reduce bronchospasm and improve respiratory function. I.I. Pylypchuk & I.S. Pylypchuk (2021) analysed their composition and medicinal properties, focusing on their use in the treatment of cardiovascular, gastrointestinal, and endocrinological diseases. Apitoxin, which has anti-inflammatory and immunomodulatory properties, is particularly noteworthy. The purpose of this study was to identify the features of introducing the latest therapeutic technology in the field of natural wellness methods in the USA and Ukraine, considering market trends and consumer interest.

MATERIALS AND METHODS

The study of the integration of the “bee therapeutic bed in the pyramid” into the apitherapy market in the USA and Ukraine was based on a comprehensive analysis of market conditions, assessment of the effectiveness of the technology, and comparison of regulatory requirements in the two countries. The main materials of the study were research papers, international publications on the effectiveness of beekeeping products, including research on the use of honey, propolis, royal jelly, and bee venom in medicine, and market analytical reports on the use of beekeeping products in medicine (Dankevych *et al.*, 2018; Shirsath, 2025; Future Market Insights, n.d.). In addition to academic sources, patents and copyright certificates for inventions related to the use of bee products for health improvement were analysed. This allowed assessing the level of scientific and technical development in the field of apitherapy and understanding the uniqueness of the “bee therapeutic bed in the pyramid” among the available solutions (Kononenko, 2025). The regulatory framework of the study included laws and bylaws regulating the use of natural medical products in the United States and Ukraine. The requirements for certification of apitherapy technologies were investigated, in particular, the provisions of U.S. Food and Drug Administration (FDA) (n.d.) and National Centre for Complementary and Integrative Health (n.d.).

Analysis using secondary data helped to assess the level of development of the apitherapy industry, the main competitors, consumer demand features, and potential barriers to

entering the market. To assess the overall market attractiveness, PEST analysis was used, which considered political, economic, social, and technological factors influencing the development of apitherapy in the two countries. Not only the current state of the market, but also its prospects were assessed. Trends in growing interest in alternative medicine, changes in legislative regulation, the development of scientific approaches to assessing the effectiveness of natural treatments, and potential barriers to investment in this area were considered. As part of the study, a business model and strategy for integrating the invention into the apitherapy market were developed. For this purpose, key partners, target audience, and possible distribution channels were analysed. The main parameters of the value proposition based on the uniqueness of the product were determined, and possible mechanisms for its entry into the market were considered. In particular, potential ways of adapting the product to the requirements of various market segments were investigated, which determined the optimal strategies for promoting and implementing the invention within the United States and Ukraine.

RESULTS

Apitherapy, as a field of alternative medicine, is actively developing in the world, integrating into various sectors of the economy, in particular, pharmaceuticals, cosmetology, and the food industry. Due to the therapeutic properties of bee products such as bee venom, honey, propolis, and royal jelly, this market is showing steady growth and attracting more and more investment. The demand for natural and eco-friendly products increases interest in apitherapy both in advanced economies and in regions where traditional treatment methods predominate. In the United States, the apitherapy market is an important part of alternative medicine, which is actively developing due to the growing interest in natural treatments, the expansion of the pharmaceutical and cosmetic industries, and the growing demand for bee products. In the United States, beekeeping revenue was estimated at 3,958.41 million USD in 2024. North America took the main market share, accounting for more than 40% of global revenue, with a

market volume of 5,017.00 million USD in 2024. The combined annual growth rate is estimated to be 4.2% between 2024 and 2031. This shows the steady growth of an industry where apitherapy plays a significant role (Shirsath, 2025).

North America is the world's largest market for bee venom extract, accounting for 32.1% of all sales. In 2023, the beekeeping market in North America was estimated at 2.94 billion USD and is expected to reach 5.46 billion USD by 2031, with an average annual growth rate of 8.53%. This increase is the result of the growing use of bee venom in medicine, cosmetology, and the pharmaceutical industry (DataBridge, 2024). Increasing demand for natural and organic medicines is the main driver of market growth. According to the American Apitherapy Association, bee products, such as propolis, honey, and bee venom, are highly effective in treating diseases that do not respond well to conventional therapy. These include neuropathic pain, multiple sclerosis, rheumatoid arthritis, psoriasis, cancer scars, and acne. Apitherapy has also gained considerable popularity in the cosmetics industry in the United States. Bee venom is widely used in anti-ageing cosmetics because it increases collagen production and improves blood circulation, making the skin look younger. This encourages market growth due to the inclusion of bee venom in a number of cosmetic products of American brands (Future Market Insights, n.d.).

The apitherapy product segment in the United States includes several main areas. Medical applications include the use of bee venom, propolis, and royal jelly in pharmaceuticals for the treatment of musculoskeletal diseases, autoimmune diseases, and skin pathologies. In the cosmetics sector, bee products are part of creams, masks, serums, and other skin care products. Natural sweeteners such as honey are actively used as a substitute for sugar, especially among consumers who follow a healthy diet. In addition, apitherapy centres offering bee sting treatment are growing in popularity. Honey dominated the market in 2023 with a market share of 60.3% and is expected to maintain its dominance in the forecast period 2025-2034 (Future Market Insights, n.d.).

Despite the positive trends, the US market faces several challenges that may slow progress.

One of the biggest threats is the decline in the number of bees. In 2023-2024, more than 55% of bee colonies were lost, which is the highest figure since the 2010-2011 beekeeping season. This is almost 15 percentage points higher than the average annual loss rate for 13 years, which is 40% (Kendall, 2024). In addition, environmental factors, in particular, urbanisation and climate change, have a negative impact, as they reduce the number of flower fields necessary for the normal functioning of bee colonies. Limited clinical trials of apitherapy products are also a problem. Although bee venom and propolis have proven to be effective therapeutics, the lack of significant clinical trials limits their widespread use in traditional medicine (Shirsath, 2025).

Among the largest companies operating in the apitherapy market in the United States as of 2024 are Beehive Botanicals, Georgia Honey Farms, Burleson's Honey, Mann Lake Bee & AG Supply, Walker Honey Farm. These enterprises invest significantly in expanding their production capacity and researching new medicines that beekeeping products have. In addition to major manufacturers, more and more startups are entering the market that focus on the use of bee products in nutraceuticals and natural cosmetics (Shirsath, 2025). Expanding the clinical use of bee venom, its use in premium cosmetic products, and implementing environmental initiatives aimed at preserving the bee population and sustainable production of bee products are the most promising areas of development. Thus, there is significant potential for the growth of the apitherapy market in the United States, especially in the fields of medicine, cosmetology, and functional nutrition.

The apitherapy market in Ukraine has significant differences from the American one due to a different development model. In Ukraine, apitherapy is more focused on traditional methods of treatment, in particular therapy in special apiary huts, the use of bee stings and inhalation from bee hives. One of the most striking examples of this approach is beekeeper Bohdan Lymar from the Rivne Oblast, who conducts free therapy with the help of bees in a special hut where hives are located. Military personnel of the Armed Forces of Ukraine note the positive impact of such rehabilitation on the nervous system and general

well-being, which is especially important for people who are in a state of chronic stress (Danylyshyna & Savchuk, 2024). Another unique approach in Ukraine is the bee bath, which operates in Cherkasy Oblast. This method of treatment involves inhalation of honey and beeswax vapours, which helps to strengthen the immune system and relax the nervous system. Beekeepers Andriy and Tetiana Stoliarevskyi created a complex for recreation and treatment on the basis of their apiary, which also uses apitherapy with bee stings. In general, the hives on which the bath is located contain from 20 to 80 thousand bees, which creates a favourable environment for medical procedures (Kovalenko, 2019).

Despite the existence of such programmes, the apitherapy market in Ukraine faces serious problems. Insufficient commercialisation of the industry is one of the main problems. Without a clear licensing and standardisation system, most apitherapy services are provided by private beekeepers. This makes it more difficult to expand your business and reach the global level. However, the potential for development is significant. Ukraine is one of the world's largest honey producers, and the second (after China) largest exporter of honey to the European Union (EU), which creates prerequisites for the export of not only honey, but also other bee products (Dankevych *et al.*, 2018). The recovery of the Ukrainian economy after the war can give an impetus to the growth of the apitherapy industry, in particular, by attracting investment in the creation of specialised apitherapy centres and the development of the export direction.

Apitherapy markets in Ukraine and the United States differ significantly. In the United States, apitherapy is a commercial field with a high level of regulation, research, and investment in cosmetic, pharmaceutical, and alternative medicine. In Ukraine, apitherapy is mainly

used in folk medicine, but due to the large volume of production of bee products and interest in natural methods of treatment, there is a great potential for development. Creating conditions for commercialisation, standardisation of procedures, and expanding international cooperation in the field of apitherapy is necessary for the integration of the Ukrainian invention "bee therapeutic bed in the pyramid".

"Bee therapeutic bed in the pyramid", designed by apitherapist Anatolii Olshanskyi, combines apitherapy and pyramid therapy. The invention includes a pyramidal structure with wooden beehives containing up to 400 thousand bees. Special vents allow the aromas of propolis, nectar, and pollen to reach humans, and vibration from the wings of bees creates a micro-massage effect. The technology is used to improve the health and normalisation of the psychophysiological state. The invention has received patents in Ukraine and Germany, and an international certificate in the field of green agriculture. Olshanskyi investigated the effect of this method on brain activity (Kononenko, 2025).

Potential areas of implementation are sanatoriums, hospitals, dispensaries, and eco-hotels that specialise in natural treatment and the wellness industry. The introduction of this technology could have significant commercial potential due to the growing popularity of natural treatments in Europe and the United States. In addition, the "bee therapeutic bed in the pyramid" does not have many competitors due to the fact that it is unique. In 2024, the alternative medicine market did not have a complete combination of apitherapy and pyramid energy. To determine the prospects for implementing this method in the markets of Ukraine and the United States, a PEST analysis was conducted, which allowed assessing political, economic, social, and technological factors of influence (Tables 1, 2).

Table 1. PEST analysis of the implementation of the "bee therapeutic bed in the pyramid" in Ukraine

Factor	Impact on the apitherapy market in Ukraine
Political	Lack of state regulation of apitherapy; need for certification of treatment methods; weak state support for the wellness industry.
Economic	Low purchasing power of the population; high exports of honey and bee products; ability to attract investment after the economic recovery.

Table 1, Continued

Factor	Impact on the apitherapy market in Ukraine
Social	Prevalence of apitherapy among the population; high level of trust in natural methods of treatment; low awareness of the latest methods.
Technological	Lack of innovations in the field of apitherapy; strong traditions of beekeeping; need to standardise the technique for official medical use.

Source: compiled by the author based on V. Dankevych *et al.* (2018), O. Kovalenko (2019), O. Danylyshyna & Y. Savchuk (2024)

Table 2. PEST analysis of the implementation of the “bee therapeutic bed in the pyramid” in the United States

Factor	Impact on the US apitherapy market
Political	Need for certification through the FDA; support for alternative medicine; the possibility of obtaining research grants.
Economic	High purchasing power; growing demand for wellness products; access to venture capital.
Social	Popularity of medical tourism; high trust in environmental methods of treatment; active introduction of natural medicine.
Technological	High level of biotechnology development; digitalisation of the wellness industry; possibility of conducting large-scale clinical trials.

Source: compiled by the author based on O. Kovalenko (2019), DataBridge (2024), O. Danylyshyna & Y. Savchuk (2024), Future Market Insights (n.d.)

“Bee therapeutic bed in the pyramid” combines pyramid therapy and apitherapy and is a unique and innovative product in the field of natural medicine and health. According to the analysis, the United States is the most attractive market for large-scale implementation due to the significant demand for alternative medicine, the willingness to invest in the latest technologies and support scientific research. Meanwhile, in the field of health improvement and medical tourism, Ukraine has a great potential for development, which can be used for local implementation and export of services to the international level. The implementation of the invention requires a marketing strategy, standardisation of methods and government programmes to help it successfully integrate into the global wellness market.

The integration of the “bee therapeutic bed in the pyramid” in apitherapy faces many challenges. These challenges include infrastructure and technology challenges, regulatory constraints, funding challenges, consumer

confidence levels, and the need for scientific verification. The development of apitherapy as an alternative medicine depends on its legal status, government support, prevalence in the medical community, and accessibility to end users. Despite the fact that the method of “bee healing bed in the pyramid” has numerous advantages and is proven effective, in order for it to become widespread in the United States and Ukraine, it is necessary to overcome numerous obstacles that hinder the commercial application of the technology.

One of the biggest obstacles to the introduction of innovative apitherapy methods is the lack or lack of legislation in this area. Treatment with bee products in the United States and Ukraine mainly refers to alternative medicine, which significantly complicates the process of certification and official recognition of the technique. Any treatment that can be used in the United States must be approved by the FDA (n.d.). This requires documented safety evidence, large-scale clinical trials, and evaluation of possible

side effects. The requirements for double-blind placebo-controlled trials significantly complicate and increase the cost of obtaining certification. In addition, there is a clear line between conventional and alternative medicine in the United States, which limits the possibility of introducing this technology into clinical practice. The situation in Ukraine is somewhat different, since apitherapy is a common practice of alternative medicine. However, the lack of uniform certification standards, laws, and state control over treatment methods creates certain risks for the commercial use of the technology. The lack of approved clinical trial protocols, low government involvement in supporting the industry, and lack of clear licensing procedures are major concerns. To address these challenges, it is necessary to create institutional support tools and standardise procedures so that it can be officially incorporated into the health system.

In addition, the introduction of the “bee therapeutic bed in the pyramid” is a significant obstacle due to financial problems. The commercialisation process is complex due to high development costs, the need to scale technologies, and the need for investment. There are many grant programmes in the United States that support alternative medicine. One of them is the National Center for Complementary and Integrative Health (n.d.). To receive funding, it is necessary to demonstrate that the method works and that it is useful for society. Apitherapy can also attract private investors in the healthcare industry. On the other hand, due to the high level of competition in wellness technologies in the United States, it is necessary to use a clear marketing strategy to promote the product. Financing alternative medicine in Ukraine is more difficult, as this sector is developing mainly through private initiatives. The main financial problems are the low level of public funding, the lack of venture funds and the need to develop a new business model that would attract private and international investment. Engaging strategic partners and international organisations that support ecotourism and alternative treatments may be an option.

The need for scientific verification of the methodology is another significant obstacle. The perception of apitherapy as an alternative

medicine, the lack of large-scale clinical studies and the difficulty of confirming the effectiveness of the method in evidence-based medicine are the main problems. Alternative medicine in the United States is based on scientific evidence, so without a proper evidence base, the method will not receive the support of the medical community. The situation in Ukraine is more flexible, as many folk remedies are widely used without additional scientific research. However, international certification requires an evidence base that will confirm the effectiveness and safety of the technology. Social barriers also play an important role in the introduction of new technologies. The level of consumer confidence is crucial for product promotion. The main social problems include scepticism about apitherapy among the population, low awareness of the benefits of the method, and limited access to the service due to its cost. In the United States, apitherapy is mostly associated with eco-tourism and alternative medicine, which may limit its distribution to the mass consumer. In Ukraine, apitherapy is more popular, but the lack of state regulation and standardisation may hinder its development.

Infrastructure and technological challenges are also a significant challenge. The construction of health centres that use the “bee therapeutic bed in the pyramid” requires compliance with high environmental standards, proper placement of apiaries and training of qualified personnel. In the United States, the creation of such complexes requires significant investment and compliance with strict standards regarding sanitary conditions and safety. In Ukraine, the main problem is the lack of funding for the large-scale implementation of the project. The introduction of the “bee therapeutic bed in the pyramid” in the apitherapy market requires the development of an effective business model that considers the features of the market environment in the USA and Ukraine, and a comprehensive strategy for promoting innovative technology among potential consumers. For successful commercialisation, it is important to adapt the product to market requirements, find the most effective sales channels, and develop marketing solutions that promote it. The proprietary business model is presented in Table 3.

Table 5. Business model of the “bee therapeutic bed in the pyramid”

Key partners	Key activities	Value proposition	Customer relations	Customer segments
- beekeepers and manufacturers of beehive structures; - suppliers of materials for the production of pyramids; - medical institutions and sanatoriums; - organisations engaged in alternative medicine.	- production of beds; - product certification and testing; - conducting scientific research to confirm the effectiveness; - development of marketing campaigns.	- unique combination of hive therapy and pyramid energy properties; - natural, safe, and environmentally friendly method of improving health; - innovative product that has no analogues on the market.	- personalised approach to customers (consultations, individual bed settings); - quality assurance and after-sales service; - educational programmes and trainings on the use.	- people who are interested in natural treatment methods; - patients with chronic diseases and weakened immune systems; - medical and sanatorium-resort institutions.
Key resources		Distribution channels		
- high-quality materials for creating a structure; - technologies for preserving the energy properties of the pyramid; - experienced specialists in the field of apitherapy and structural design.		- official website; - social networks and marketplaces; - speciality health stores and clinics; - exhibitions and fairs of alternative medicine.		
Cost structure		Sources of income		
- purchase of materials and production costs; - logistics and storage of products; - marketing expenses; - certification and scientific research.		- sale of beds through online and offline channels; - rent of equipment for sanatoriums; - educational courses and consulting.		

Source: compiled by the author

The developed business model of the “bee therapeutic bed in the pyramid” shows how effective it is to introduce an innovative product to the apitherapy market when modern technologies and traditional healing methods cooperate. The success of this project depends on a strategic partnership with key market participants, who guarantee production stability, scientific verification, and access to the target audience. Creating added value for customers through a combination of natural therapy and the bioenergetic properties of pyramid construction is the goal of the business model. This allows creating a unique market and distinguishing the product from competitors. A personalised approach to the client, which increases the level of trust and promotes the spread of recommendation marketing, is an important component. As the analysis of the business model has shown, a serious educational campaign is needed regarding the mechanism of action and effectiveness of the product. Given that the idea of a bed is based on a unique combination of two wellness approaches, it is very important to build the trust of potential users through scientific research, publications, and hands-on demonstrations.

Marketing strategies of sales channels require a comprehensive approach, which includes cooperation with health resorts and medical institutions, participation in exhibitions and partner programmes with apitherapy centres. Special attention should be paid to the international market, especially in the EU and the United States, where alternative medicine is becoming increasingly common. From a financial standpoint, the business model is aimed at long-term payback by diversifying revenue sources. Sanatorium equipment rental, franchising, training programmes, and wellness consulting are potentially lucrative areas beyond direct sales.

The development of an effective strategy for promoting and popularising the “bee therapeutic bed in the pyramid” in the US and Ukrainian markets is an important stage of its commercial integration. Since these markets have significant differences in consumer habits, levels of trust in alternative medicine, regulatory requirements and financial capabilities of the population, it is necessary to adapt marketing approaches to their characteristics. The US market is highly competitive in the field of

wellness, but at the same time demonstrates openness to new treatments based on scientific evidence and natural ingredients. The wellness industry in the United States reached a market volume of more than 20 billion USD in 2024. There were approximately 373 thousand employees in this industry and almost 20 thousand enterprises in total (Statista, 2024). The main clients are middle- and high-class people who are willing to spend money on their own health, and on medical and wellness facilities that offer alternative treatments. FDA certification is essential for successful entry into the U.S. market. This will increase trust in the product and expand potential implementation channels. Independent clinical trials are also important; these findings should be widely used in marketing materials to attract consumers and the professional community.

The Ukrainian market is affected by the low level of income of the population, which affects the pricing policy and the need to provide flexible options for purchasing goods, such as instalments and rent. Moreover, bee products are traditionally popular, and there is a growing interest in natural methods of treatment in society. Health resorts, private health centres, and people looking to strengthen their immune systems may be the main customers. Due to the fact that a large number of consumers in Ukraine do not know about the healing properties of pyramidal energy, the campaign to expand knowledge about this should be particularly effective. The use of online and offline channels is necessary to promote products in both markets. An important part of website SEO optimisation is to attract organic traffic through search queries related to apitherapy, alternative medicine, and wellness. High-quality materials, such as articles, videos, and reviews, will help to increase product confidence and generate demand. The use of social media such as Facebook, Instagram, TikTok, and YouTube allows interacting directly with the audience by showing real user stories, case studies of the bed, and reviews from doctors. In the United States, collaborating with influencers in healthy lifestyle, bioenergy, and alternative medicine will be an effective tool because they have the opportunity to present their products to their audience.

Using the geographical and demographic targeting settings, advertising through Google Ads and Meta Ads will allow reaching target groups of customers. Regional advertising, especially on television and radio, should be widely used in Ukraine to attract the attention of a larger audience. In addition, participation in exhibitions, forums, and festivals dedicated to wellness and health will be a strategic decision. Presentations and consultations can be held at these events. Building long-term partnerships with health and wellness institutions is an important part of successful promotion. In the United States, it is advisable to enter into agreements with alternative medicine centres and rehabilitation centres that can use the product for their patients. In Ukraine, it is very important to cooperate with sanatoriums and apitherapy centres that have the opportunity to include a therapeutic bed in their programmes.

The pricing strategy should consider the financial capabilities of consumers. The US should offer premium product options, including advanced features and personalised settings that will position the bed as a high-tech wellness device. In Ukraine, it is necessary to introduce various options for price availability, for example, instalment or rental programmes for health resorts, which will reduce the barrier to purchase. Special attention should be paid to the franchise model, which can contribute to rapid business scaling. By offering the opportunity to open certified apitherapy centres, the company will be able to expand the network of using the product without the need for significant investments in opening its own institutions.

Thus, the marketing strategy of the “bee therapeutic bed in the pyramid” was based on an integrated approach, which includes certification, marketing communication, partnership and a changed pricing policy. Product development in the markets of the United States and Ukraine requires considering the characteristics of each country, using digital technologies, cooperation with the professional community, and building the trust of potential customers. These strategies can ensure a successful market entry and continuous sales growth and scaling of the company.

DISCUSSION

Bee venom is the object of numerous scientific studies due to its unique biological properties. It demonstrates significant therapeutic potential in the treatment of inflammatory, autoimmune, neurological, and oncological diseases, which is of interest both from medical science and from commercial structures focused on the market of wellness services. R. Bava *et al.* (2023) and M. Stela *et al.* (2024) analysed the effects of bee venom on inflammation, immunity, and neurodegenerative diseases, focusing on evidence-based medicine and standardisation of medical use. The present study examined the poison as part of a commercial product under the “bee therapeutic bed in a pyramid”, focusing on its market implementation, marketing, demand, and regulatory challenges in the US and Ukrainian markets. If M. Stela *et al.* emphasised medical standards, this study focused on product certification.

L.F. Laurindo *et al.* (2024) and the present study analysed the therapeutic potential of bee venom from different approaches. L.F. Laurindo *et al.* investigated biochemical effects of melittin and apamine on cancer cells, while the present study focused on the integration of the poison into health products and marketability. The research by L.F. Laurindo *et al.* was based on preclinical experiments, and the present study focused on marketing strategies and certification. Despite the general recognition of the potential of apitherapy, L.F. Laurindo *et al.* focused on evidence-based medicine, and the present study was aimed at introducing it to the wellness sphere.

A. Kurek-Górecka *et al.* (2021) investigated the effects of bee venom on wound healing, highlighting its antioxidant, antimicrobial, and anti-inflammatory properties, and its ability to stimulate cell proliferation and collagen synthesis. Special attention was paid to its use for the treatment of chronic wounds, in particular in diabetes. In contrast, the present study focused on the commercial use of poison in the wellness industry. Both recognised its regenerative potential, but A. Kurek-Górecka *et al.* focused on traditional medicine, while this study considered its integration into apitherapy products. In addition, A. Kurek-Górecka *et al.* analysed the biochemical mechanisms of melittin

and apamine exposure, while the present study focused on marketing strategies and regulatory challenges. T. Lin & C. Hsieh (2020) reviewed the clinical use of poison injections at acupuncture points, highlighting their effectiveness in treating inflammation, pain, neurological diseases, and even cancer. Attention was paid to the mechanisms of action of the poison at the molecular level, such as its effect on anti-inflammatory processes, neuroprotection, and apoptosis. The anti-inflammatory and analgesic properties of the poison were noted in both studies, however, T. Lin & C. Hsieh focused on conventional and clinically verified methods of its application. The present study focused more on the prospects for integrating bee venom into the wellness market.

Apitourism in Slovenia, as a combination of beekeeping, alternative medicine, and entrepreneurship, was the main area of research by V. Tišler & M. Šuligoj (2020). They examined apitherapist certification, the impact of government policies, and the role of certified providers, emphasising the need for legislative regulation. The present study focused on market integration of an apitherapy product that differs from the approach proposed by V. Tišler & M. Šuligoj, who analysed apitherapy in the context of tourism. If V. Tišler & M. Šuligoj focused on legal regulation, the present study considered marketing challenges and product adaptation strategies for the US and Ukrainian markets. Both studies recognised the prospects of apitherapy, but V. Tišler & M. Šuligoj – through regulation, and this research – through commercial strategy.

P. Shi *et al.* (2022) investigated the pharmacological properties of bee venom, in particular, its effect on the PI3K/Akt/mTOR, NF- κ B, JAK/STAT signalling pathways and its role in the treatment of cancer, neurological, and inflammatory diseases. They applied bioinformatics to analyse the mechanisms of action of the poison, in particular its oncoprotective potential. This study focused on aspects of the safe use and commercialisation of poison-based products, while P. Shi *et al.* analysed molecular mechanisms in more depth, especially the oncoprotective properties of the poison and its effect on apoptosis signalling pathways and the tumour microenvironment.

The study by A. Małek *et al.* (2023) analysed the anti-cancer activity of bee venom, in particular, the ability of melittin to induce apoptosis without harming healthy cells. They also investigated the synergistic effect of the poison with chemotherapeutic drugs. The present study, unlike A. Małek *et al.*, focused on the broad pharmacological use of the poison, in particular, its effect on inflammation, neurodegenerative processes, and microbial infections. Both studies recognised the cytotoxic effect of melittin, but A. Małek *et al.* considered its oncoprotective properties in more detail, while this study focused on the regulation of inflammation and oxidative stress. K.M. Sadek *et al.* (2024) investigated the therapeutic potential of bee venom from various perspectives. The researchers focused on the biochemistry and effects of the poison on inflammation, neurological and oncological diseases, studying the molecular mechanisms and safety of use. This study examined the poison from a commercial standpoint, focusing on its implementation in the wellness industry, marketing and regulatory challenges in the United States and Ukraine.

M. Carpena *et al.* (2020) investigated the biological activity of bee venom, highlighting its antioxidant, antimicrobial, neuroprotective, and antitumour properties, and its potential in the treatment of various diseases. They focused on the molecular mechanisms of action of the components of the poison. The present study considered marketing aspects, legal regulation, and product adaptation to the market conditions of the United States and Ukraine. Both studies recognised the therapeutic value of the poison and the importance of further research on its safety and efficacy. E.M. Othman *et al.* (2023) investigated the anti-inflammatory and regenerative properties of bee venom, in particular, its use for the treatment of ulcerative lesions by phonophoresis. The effectiveness of poison and ultrasound therapy to improve the penetration of active ingredients was evaluated. The present study examined the poison as part of an apitherapy product for the healthcare sector, with a focus on marketing strategies, regulatory challenges, and product adaptation to the U.S. and Ukrainian markets.

The study by A. Sameh *et al.* (2023) and the present study have a common interest in the antibacterial properties of bee venom. A. Sameh *et al.* focused on the use of poison as an alternative to antibiotics, and on methods of modifying it to reduce toxicity. The present study investigated regulatory and market aspects of product implementation, and the possibilities of its commercial application. The present study and the studies by E. Zeid (2023) and T.G. Gökmen *et al.* (2023) recognised the therapeutic potential of bee venom, in particular, its anti-inflammatory and antimicrobial properties. E. Zeid focused on the treatment of rheumatoid arthritis and skin diseases, and T.G. Gökmen *et al.* – on veterinary applications, such as the treatment of mastitis. The present study focused not only on therapies, but also on the commercial use of the poison, including its integration into the wellness industry, certification, and marketing strategies.

The study by M. Jodidio & R.A. Schwartz (2024) focused on treating skin diseases with bee venom, while the present study covered a wider range of its applications, focusing on regulatory challenges and the commercial introduction of poison-based products to the market. M. Jodidio & R.A. Schwartz investigated mechanisms of action at the cellular level, while this study focused on strategic aspects of implementation. The study by S. Altaf & T. Iqbal (2023) and the present study coincide in recognising the anti-inflammatory properties of bee venom, especially its role in the treatment of rheumatoid arthritis. Both approaches highlighted the importance of melittin and adolapine as active ingredients that help reduce inflammation and pain relief. However, S. Altaf & T. Iqbal focused on pharmacological mechanisms and medical risks, emphasising the need for standard dosage and control of side effects. The present study focused on the commercial introduction of bee venom, its certification, marketing strategies, and entry into the US and Ukrainian markets. If S. Altaf & T. Iqbal analysed mainly medical aspects, the present study examined the possibilities of integrating bee venom into the wellness industry and its prospects as a commercial product.

İ. Yapici *et al.* (2023) investigated the therapeutic properties of bee venom, in particular, its

use for the treatment of neurological, oncological and autoimmune diseases. Their research focused on the pharmacological mechanisms of action of poison components such as melittin, apamine, and phospholipase A2. In contrast, the present study focused on the commercial introduction of a product, its market potential, and adaptation to current market conditions, while İ. Yapıcı *et al.* paid more attention to traditional and alternative medicine.

Research by A.M.H. Ali (2024) and the present study share a common focus on the biological activity of the venom, in particular its antimicrobial and anti-inflammatory properties. However, A.M.H. Ali reviewed bioactive properties, while this study focused more on the practical use of the poison, in particular, marketing strategies and commercialisation opportunities. In addition, A.M.H. Ali emphasised the mechanisms of action of individual components of the poison, while the present study considered the possibilities of its integration into the health industry and mass production. Analysis of publications confirmed that bee venom has a wide range of therapeutic properties, including anti-inflammatory, antimicrobial, immunomodulatory, and oncoprotective effects. Studies are largely focused on the biochemical mechanisms of its action, pharmacological trials, and the potential for medical use.

CONCLUSION

Apitherapy is a promising area of alternative medicine that uses bee products for the prevention and treatment of diseases. Analysis of the US and Ukrainian markets revealed differences in approaches to technology implementation, apitherapy is actively developing in the US due to its high purchasing power, certification procedures, and clinical trials, and in Ukraine, it remains a popular practice with problems of standardisation and regulation. The apitherapy market in the United States is growing due to the demand for natural treatments. In 2024, U.S. beekeeping revenue was 3,958.41 million USD, with projected growth to 5.46 billion USD by 2031. The “bee therapeutic bed in a pyramid” technology combines apitherapy and the energy of pyramid structures, with the potential for commercial implementation in the United

States and Ukraine. However, implementation is hindered by the lack of uniform certification standards, the need for clinical trials, and difficulties in attracting investment. In the United States, the main barrier is obtaining approval from the FDA, and in Ukraine – the lack of support and low purchasing power of the population.

For successful integration of the “bee therapeutic bed in the pyramid” into the US and Ukrainian markets, it is necessary to develop a marketing strategy, including certification, trust building, digital communication channels, and pricing policy adaptation. In the United States, it is important to support the wellness industry, attract investors, and scientifically confirm the effectiveness of the method. Ukraine should focus on cooperation with health resorts, grant programmes and government support. PEST analysis showed that the U.S. has a favourable environment for adoption due to its high purchasing power, alternative medicine support, and grants, but FDA certification and competition can be obstacles. In Ukraine, problems include low purchasing power and the lack of regulation, but the popularity of natural treatments opens up prospects.

The business model of the “bee therapeutic bed in the pyramid” involves multi-channel promotion through the website, social networks, health stores, and medical institutions. The sales strategy is based on a personalised approach and educational programmes. The long-term strategy includes partnership with wellness centres, participation in exhibitions and influencer marketing. The main limitation was the lack of sufficient clinical trials, which makes it difficult to implement the technology in medical practice. Prospects include large-scale clinical trials and the development of use protocols that will contribute to the development of the apitherapy product market.

ACKNOWLEDGEMENTS

None.

FUNDING

None.

CONFLICT OF INTEREST

None.

REFERENCES

- [1] Ali, A.M.H. (2024). [Advancements in bee venom bioactivities for current therapeutic applications: A review](#). *Advancements in Life Sciences*, 11(1), 49-55.
- [2] Altaf, S., & Iqbal, T. (2023). Bee venom used for the treatment of rheumatoid arthritis. *Biomedical*, 53(2), 44503-44507. doi: [10.26717/BJSTR.2023.53.008370](#).
- [3] Bava, R., Castagna, F., Musella, V., Lupia, C., Palma, E., & Britti, D. (2023). Therapeutic use of bee venom and potential applications in veterinary medicine. *Veterinary Sciences*, 10(2), article number 119. doi: [10.3390/vetsci10020119](#).
- [4] Carpena, M., Nuñez-Estevez, B., Soria-Lopez, A., & Simal-Gandara, J. (2020). Bee venom: An updating review of its bioactive molecules and its health applications. *Nutrients*, 12(11), article number 3360. doi: [10.3390/nu12113360](#).
- [5] Dankevych, V., Dankevych, Y., & Pyvovar, P. (2018). Forming conjuncture in the world honey market: Current state and prospects for Ukrainian exporters. *Agricultural and Resource Economics: International Scientific E-Journal*, 4(2), 37-54. doi: [10.51599/are.2018.04.02.03](#).
- [6] Danylyshyna, O., & Savchuk, Y. (2024). *He organized bee therapy in the Rivne region. The story of beekeeper Bohdan Lyman*. Retrieved from <https://suspilne.media/rivne/761705-organizuvav-bdzolinu-terapiu-na-rivnensini-istoria-pasicnika-bogdana-limara/>.
- [7] DataBridge. (2024). *North America bee products market size, share, and trends analysis report – industry overview and forecast to 2032*. Retrieved from <https://surl.li/xrsurq>.
- [8] El-Didamony, S.E., Gouda, H.I.A., Zidan, M.M.M., & Amer, R.I. (2024). Bee products: An overview of sources, biological activities and advanced approaches used in apitherapy application. *Biotechnology Reports*, 44, article number e00862. doi: [10.1016/j.btre.2024.e00862](#).
- [9] Future Market Insights. (n.d.). *Bee venom extract market growth & demand forecast 2023-2033*. Retrieved from <https://www.futuremarketinsights.com/reports/bee-venom-extract-market>.
- [10] Gökmen, T.G., Yazgan, H., Sevin, S., Turut, N., Karahan, Ş., Eşki, F., Kıvrak, İ., Sezer, O., & Ütük, A.E. (2023). The antibacterial effect of bee venom on subclinical mastitis agents: An alternative for local treatment. *Journal of Applied Animal Research*, 51(1), 323-332. doi: [10.1080/09712119.2023.2197477](#).
- [11] Jang, S., & Kim, K.H. (2020). Clinical effectiveness and adverse events of bee venom therapy: A systematic review of randomized controlled trials. *Toxins*, 12(9), article number 558. doi: [10.3390/toxins12090558](#).
- [12] Jodidio, M., & Schwartz, R.A. (2024). Bee venom: Apitherapy and more. *Italian Journal of Dermatology and Venereology*, 159(1), 4-10. doi: [10.23736/S2784-8671.23.07683-1](#).
- [13] Joshi, R.C., & Kafle, L. (2023). [Apitherapy: An overview](#). *Journal of Applied Zoological Researches*, 34(2), 1-7.
- [14] Kasozi, K.I., et al. (2020). Bee venom-A potential complementary medicine candidate for SARS-CoV-2 infections. *Frontiers in Public Health*, 8, article number 594458. doi: [10.3389/fpubh.2020.594458](#).
- [15] Kendall, J. (2024). *US honeybee losses reach highest level in a decade*. Retrieved from <https://www.foodbusinessnews.net/articles/27311-us-honeybee-losses-reach-highest-level-in-a-decade>.
- [16] Kononenko, O. (2025). *Apiconsultant Anatoliy Olshansky introduces the “Bee therapeutic bed in a pyramid” method and explores its effect on the cerebral cortex*. Retrieved from <https://surl.li/ffenok>.
- [17] Kovalenko, O. (2019). *A unique bee bath operates in the Cherkasy region: How is it useful?* Retrieved from <https://surl.li/frxqfl>.
- [18] Kurek-Górecka, A., Komosinska-Vassev, K., Rzepecka-Stojko, A., & Olczyk, P. (2021). Bee Venom in wound healing. *Molecules*, 26(1), article number 148. doi: [10.3390/molecules26010148](#).
- [19] Laurindo, L.F., et al. (2024). The therapeutic potential of bee venom-derived apamin and mellitin conjugates in cancer treatment: A systematic review. *Pharmacological Research*, 209, article number 107430. doi: [10.1016/j.phrs.2024.107430](#).

- [20] Lin, T., & Hsieh, C. (2020). Clinical applications of bee venom acupoint injection. *Toxins*, 12(10), article number 618. doi: [10.3390/toxins12100618](https://doi.org/10.3390/toxins12100618).
- [21] Małek, A., Strzemiński, M., Kurzepa, J., & Kurzepa, J. (2023). Can bee venom be used as anticancer agent in modern medicine? *Cancers*, 15(14), article number 3714. doi: [10.3390/cancers15143714](https://doi.org/10.3390/cancers15143714).
- [22] National Centre for Complementary and Integrative Health. (n.d.). Retrieved from <https://www.nccih.nih.gov/>.
- [23] Othman, E.M., Hamada, H.A., Mohamed, G.I., Abdallah, G.A., Ahmed, Z.S., Al-Shenqiti, A.M., & Kadry, A.M. (2023). Clinical and histopathological responses to bee venom phonophoresis in treating venous and diabetic ulcers: A single-blind randomized controlled trial. *Frontiers in Medicine*, 10, article number 1085544. doi: [10.3389/fmed.2023.1085544](https://doi.org/10.3389/fmed.2023.1085544).
- [24] Özdemir, G., Ersöz, E., & Dilek, N. (2021). Apitherapy and health. *Black Sea Journal of Health Science*, 4(2), 168-174. doi: [10.19127/bshealthscience.816036](https://doi.org/10.19127/bshealthscience.816036).
- [25] Pylypchuk, I.I., & Pylypchuk, I.S. (2021). Apitherapy, apitoxin and bee products. In *Modern medical science and education in Ukraine and EU countries: Imperatives, transformation, development vectors: Collective monograph* (pp. 101-117). Riga: Baltija Publishing. doi: [10.30525/978-9934-26-029-2-7](https://doi.org/10.30525/978-9934-26-029-2-7).
- [26] Sadek, K.M., et al. (2024). Harnessing the power of bee venom for therapeutic and regenerative medical applications: An updated review. *Frontiers in Pharmacology*, 15, article number 1412245. doi: [10.3389/fphar.2024.1412245](https://doi.org/10.3389/fphar.2024.1412245).
- [27] Sameh, A., Gouda, A.A., Elmligy, E., Hatem, H., Sadek, S.S., Ahmed, O., & Amir, A.E. (2023). Bee venom as an alternative for antibiotics against *Staphylococcus aureus* infections. *Scientific Reports*, 13, article number 6436. doi: [10.1038/s41598-023-33536-x](https://doi.org/10.1038/s41598-023-33536-x).
- [28] Shi, P., Xie, S., Yang, J., Zhang, Y., Han, S., Su, S., & Yao, H. (2022). Pharmacological effects and mechanisms of bee venom and its main components: Recent progress and perspective. *Frontiers in Pharmacology*, 13, article number 1001553. doi: [10.3389/fphar.2022.1001553](https://doi.org/10.3389/fphar.2022.1001553).
- [29] Shirsath, P. (2025). *Apiculture market report 2025 (Global edition)*. Dubai: Cognitive Market Research.
- [30] Statista. (2024). *Key industry data on the health and wellness spa sector in the United States in 2024*. Retrieved from <https://surl.li/ucbunm>.
- [31] Stela, M., Cichon, N., Szałowska, A., Szyposzynska, M., & Bijak, M. (2024). Therapeutic potential and mechanisms of bee venom therapy: A comprehensive review of apitoxin applications and safety enhancement strategies. *Pharmaceuticals*, 17(9), article number 1211. doi: [10.3390/ph17091211](https://doi.org/10.3390/ph17091211).
- [32] Tišler, V., & Šuligoj, M. (2020). Apitourism as an intersection of tradition, alternative medicine and the beekeeper's sustainable income-generating activity. *Geografski Vestnik*, 92(2), 63-73. doi: [10.3986/GV92204](https://doi.org/10.3986/GV92204).
- [33] U.S. Food and Drug Administration (FDA). (n.d.). Retrieved from <https://www.fda.gov>.
- [34] Weis, W.A., Ripari, N., Conte, F.L., Honorio, M.S., Sartori, A.A., Matucci, R.H., & Sforcin, J.M. (2022). An overview about apitherapy and its clinical. *Phytomedicine Plus*, 2(2), article number 100239. doi: [10.1016/j.phyplu.2022.100239](https://doi.org/10.1016/j.phyplu.2022.100239).
- [35] Widjanarko, N.D., Subagya, J.C., Maksi, J.I., Suryatenggara, F.G., & Sihole, S.C.E. (2024). Utilization of apitherapy in allergic asthma: A systematic review of clinical and preclinical studies. *Tzu Chi Medical Journal*, 36(4), 440-451. doi: [10.4103/tcmj.tcmj_233_23](https://doi.org/10.4103/tcmj.tcmj_233_23).
- [36] Yapici, İ., İzol, E., & Gülçin, I. (2023). *The effect of bee venom in the treatment of diseases*. In E. İzol, Y.K. Haspolat & I. Gülçin (Eds.), *The significance of bee products in health* (pp. 9-17). Ankara: Orient Publications.
- [37] Zeid, E. (2023). *Bee venom therapy: Balancing nature and medicine*. *Journal of Apitherapy*, 10(7).

Анатолій Ольшанський

Магістр

Донецький державний університет внутрішніх справ

25000, вул. Велика Перспективна, 1, м. Кропивницький, Україна

<https://orcid.org/0009-0001-5270-4937>

Інтеграція авторського винаходу на ринок апітерапії США та України: порівняння попиту та актуального стану індустрії

Анотація. Метою дослідження було визначення перспектив впровадження інноваційної апітерапевтичної технології «бджолиного лікувального ліжка в піраміді» на ринки США та України з урахуванням ринкових тенденцій, регуляторних вимог та споживчого інтересу. У межах дослідження було проведено аналіз наукових публікацій, ринкових звітів та патентної документації. Використано методи порівняльного аналізу, політичного, економічного, соціального і технологічного аналізу та оцінки конкурентного середовища для визначення факторів, що впливають на інтеграцію технології. У результаті аналізу встановлено, що в США ринок апітерапії характеризувався високим рівнем регулювання та попитом на натуральні методи лікування, що створювало можливості для комерціалізації винаходу. В Україні апітерапія залишалася переважно частиною народної медицини, а основними бар'єрами для виходу на ринок були відсутність стандартів сертифікації, низький рівень наукової верифікації ефективності та фінансові обмеження споживачів. У 2024 році дохід від бджільництва в США становив 3 958,41 млн доларів, а Північна Америка займала понад 40 % світового ринку (5 017 млн доларів). Ринок продуктів бджільництва в Північній Америці у 2023 році оцінювався у 2,94 млрд доларів і очікується, що до 2031 року він досягне 5,46 млрд доларів, з темпом зростання 8,53 % на рік. На основі отриманих результатів було розроблено бізнес-модель інтеграції «бджолиного лікувального ліжка в піраміді», яка включала визначення ключових партнерів, ціннісної пропозиції, каналів дистрибуції та потенційних джерел доходу. Було визначено, що для успішного впровадження технології необхідно адаптуватися до регуляторних норм, пройти сертифікацію продукту та розробити маркетингову стратегію, яка сприятиме популяризації методу серед потенційних споживачів. Зроблено висновок, що ринок США мав значний потенціал для комерційного масштабування технології через розвинену wellness-індустрію та високий попит на альтернативну медицину, тоді як в Україні існували можливості для локального розвитку та подальшого експорту послуг

Ключові слова: бджільництво; оздоровчі центри; маркетингова стратегія; лікування; методики; бджолине лікувальне ліжко в піраміді