FROST & SULLIVAN





Malaysia Halal Pharmaceutical Industry

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Duopharma Biotech Berhad excels in many of the criteria in the halal pharmaceutical space.

AWARD CRITERIA	
Visionary Innovation & Performance	Customer Impact
Addressing Unmet Needs	Price/Performance Value
/isionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

Malaysian Halal Pharmaceutical Market Potential

The growing Muslim population offers tremendous potential and opportunities for halal pharmaceutical businesses. According to the State of Global Islamic Economy Report 2022, the value of the halal pharmaceutical market was \$100 billion in 2021, an increase of 6.5% from 2020. The market is estimated to grow 6.7% in 2022 to \$106 billion and reach \$129 billion in 2025 at a 4-year CAGR of 6.7%. Currently, this market's demand outstrips supply, and various governments, including Malaysia, have made it their mission to develop halal products and services to cater to demand.

Although the demand is growing, the market awareness of halal products is not strong, and raising awareness is a recurring annual industry theme. Industry players want to see aggressive halal pharma awareness sessions and government-led ecosystem development programs, not limited to addressing the meaning of halal pharma¹. The evolution and improvement of the industry require an ecosystem that includes policies supporting product awareness, development, market entry, and procurement.

Duopharma Biotech Berhad (Duopharma Biotech) remains committed to producing safe, effective, quality and hygiene halal products for all consumers and leading the way for the halal pharmaceutical industry in Malaysia and the world. Duopharma Biotech's 335 out of 346 (or 96.8%) active products (96.6% in Bangi and 97% in Klang) were halal certified as of 31 December 2021, and the certification process for the

¹ <u>"Q&A with Malaysia's Duopharma Biotech: Making Inroads into Halal Pharmaceuticals,"</u> Salaam Gateway

remaining (3.2%) is ongoing. Its range of 100% halal consumer healthcare (CHC) products has expanded to include over-the-counter medicines, such as painkillers or analgesics, eye drops, cough mixtures, ointments for wounds/cuts/bruises, creams for rash/itchiness, and many more.

Implementation of Best Practices

Supporting Malaysia's halal agenda, Duopharma Biotech was part of the technical committee established by the Department of Standards Malaysia, which developed the world's first halal standard, MS 2424, Halal Pharmaceuticals - General Requirements. According to the Ministry of International Trade and Industry (MITI), the MS 2424 standards entail specific technical requirements for the product to be halal and Shariah compliant².

In addition to participating in setting standards, Duopharma Biotech committed to deliver its "halal builtin" concept in its manufacturing practices, guaranteeing halal products and eliminating the need for testing. In 2020, Duopharma HAPI Sdn Bhd, Malaysia's first and only Highly Potent Active Pharmaceutical Ingredient (HAPI) plant, manufactured its first product, Letrozole (Lebreta), for breast cancer treatment. For the HAPI plant, all manufacturing facilities adhered to the requirements of MS2424:2019. The plant has adopted the Malaysian Halal Management System and "Manual Prosedur Pensijilan Halal Malaysia (Domestik) 2020" issued by the Department of Islamic Development of Malaysia (JAKIM) and complied with the halal requirements of Lembaga Pengkajian Pangan Obat- Obatan Dan Kosmetika Majelis Ulama Indonesia (LPPOM MUI). After commercializing Letrozole (Lebreta) in 2020, Duopharma's Cancer Care

"As the world's first halal biosimilar, ERYSAA® secures Duopharma Biotech's leadership in the halal pharmaceutical industry. In 2021, as more dialysis patients were prescribed ERYSAA®, sales of this product grew by 52%. Despite the fierce competition from short and long-acting erythropoietin stimulating agents, ERYSAA® expanded into the dialysis market, with approximately 49% of dialysis centers and hospitals prescribing it to their renal anemia patients.."

- Dr. Maeirah Ashaie, Consultant

Franchise obtained a 3-year Ministry of Health (MOH) contract in 2021 for its first made-in-Malaysia HAPI drug. The HAPI plant products reduced Malaysia's reliance on imported oncology, ensuring a continued supply of some oncology products to local hospitals and minimizing the impact of the pandemic, even in the face of global supply chain disruptions.

During the pandemic, the company switched to an online platform for product technology transfer. It involves transferring the entire manufacturing process, with documentation and expertise, from a manufacturing site in another country to

Duopharma Biotech in Malaysia. The company can do this virtually while meeting the National Pharmaceutical Regulatory Agency (NPRA) requirements and following the Good Manufacturing Practice (GMP) guidelines. Duopharma Biotech has also done many of its successful equipment certifications virtually. These innovative solutions support the HAPI plant operations, offering customers a unique value proposition that is difficult to replicate or replace by competitors.

² "MS 2424:2019, Halal Pharmaceuticals - General Requirements (First Revision)," Department of Standards Malaysia

Duopharma Biotech is expanding and enhancing its halal portfolio to distinguish itself from its peers. Flavettes Effervescent, a halal-certified vitamin C product, is the best seller among immunity boosters. Duopharma Biotech met Flavettes Effervescent's recent surge in demand by increasing its manufacturing with innovative solutions, such as partnerships with contract manufacturers and process improvements. Duopharma Biotech is the first pharmaceutical company to commercialize erythropoietin, branded as ERYSAA[®], a biosimilar product manufactured in a fill-and-finish facility in Klang, Malaysia. Erythropoietin stimulates the production of red blood cells and is used to treat anaemia in conditions like chronic kidney disease. Approved by Malaysia's National Pharmaceutical Regulatory Agency in February 2019, ERYSAA® has already received halal certification from the Korean Muslim Federation in 2020. Currently, the Malaysian halal certification body JAKIM is assessing ERYSAA®. In 2021, Duopharma Biotech embarked on a study with Universiti Sains Islam Malaysia (USIM) on the halal status of ERYSAA® active ingredients, which would help obtain JAKIM's certification. As the world's first halal biosimilar, ERYSAA® secures Duopharma Biotech 's leadership in the halal pharmaceutical industry. In 2021, as more dialysis patients were prescribed ERYSAA[®], sales of this product grew by 52%. Despite the fierce competition from short and long-acting erythropoietin stimulating agents, ERYSAA® expanded into the dialysis market, with approximately 49% of dialysis centers and hospitals prescribing it to their renal anemia patients.

Leadership Focus

In 2021, the Halal Development Corporation (HDC) introduced a Sectoral Roadmap for halal pharmaceuticals to promote industry development. Duopharma Biotech is a member of the Sectoral Working Group, whose mission is to review and monitor the implementation of established measures. The company seeks to establish itself as a global thought leader in halal pharmaceuticals. It participates in local and international conferences, exhibitions, seminars, and platforms, such as the Standards and Metrology Institute for Islamic Countries Technical Committee on Halal Pharmaceuticals Issues. In 2021, Duopharma Biotech attended 2 separate World Halal Business Conference (WHBC2021) webinars hosted by the Ministry of International Trade and Industry and organized by HDC. The company received the Halal Healthcare Excellence Award at the World Halal Excellence Award 2021 by HDC. In addition, Duopharma Biotech participates in several governments- and stakeholder-based discussions as a key speaker and shares its views on halal pharmaceuticals, supporting the national agenda, addressing the unmet needs and initiatives, and demonstrating the value of products. For branding and communication, Duopharma Biotech engaged in initiatives in 2021, targeting thought leadership and improving halal pharmaceutical awareness, which brought RM0.8 million (approximately \$0.19 million) in total estimated return of PR Value.

Duopharma Biotech is exploring international collaborations to share halal-certified products. It is building clusters of international partners to raise awareness, starting in predominantly Muslim markets for commercial viability. The company is expanding into smaller markets, like the Maldives, outside ASEAN. In the future, Duopharma Biotech will aim for more-obvious halal-ready markets, such as United Arab Emirates (UAE) and Gulf Co-operation Council (GCC) countries, to sell products and increase halal pharmaceutical awareness.

Financial Performance

Duopharma Biotech recorded a 12.2% increase in revenue in 2021, from RM569.90 million in 2020 to RM639.18 million, becoming the top company by sales and volume in Malaysia. It is the only local manufacturer in the Top 10 for sales and captures 7.1% of the market. Duopharma Biotech's revenue comes primarily from CHC business and the double-digit growth of Ethical Classic and Ethical Specialty businesses due to the strong performance of ERYSAA[®]. Duopharma Biotech's profit after tax has grown by 12.07%, from RM58.61 million to RM65.68 million. The company's performance reflects in the earnings per share, which increased from 6.31 sen in 2020 (adjusted to reflect the effect of the bonus shares issued on 7 September 2021) to 7.08 sen. Its immunity-boosting business rose with the Vitamin C for adults and children product market increasing 20% YoY throughout the pandemic. While the private market was less active, the government sector expanded.

Customer Service & Ownership Experience

Duopharma Biotech launches a virtual survey annually to ensure high standards and focus on customer service. In 2021, based on feedback obtained in 2020, Duopharma Biotech redesigned the survey questions to focus on COVID-19's impact on customer purchasing behaviors and their future preferences. It had an encouraging performance, achieving a score of 98% on the customer satisfaction index, higher than the previous 2 years' figures and its target of 95%. Duopharma Biotech has the highest market penetration with several medical sales representatives. During the pandemic, considering restrictions like Movement Control Order (MCO), the company conducted virtual and telephone calls in 2021. The inclusion of this mode of communication has increased the customer base for the company. Each of Duopharma Biotech's Ethical Classic Business (ECB) clients receives support from physical representatives

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- Dr. Maeirah Ashaie, Consultant and telemarketing teams. The company has a dedicated team of trained product specialists, maintaining constant interaction between the business team and healthcare professionals through various means of communication, including Zoom, Google, WhatsApp, and phone calls.

To enhance the ownership experience, Duopharma Biotech has structured its products into Flagship, Star, Silver, and Controlled groups for differences in how the sales and marketing teams engage with customers. The company improved services, such as delivery lead time, ease of ordering, and providing quality products,

and is continuously increasing market penetration. Duopharma Biotech is working to strengthen its IT security (achieved an A-rating), migrated to a cloud server, and has invested in Systems, Applications and Products (SAP) so customers can place orders digitally. Instead of its customer feedback, the company plans to digitalize its catalog by 2023, reducing face-to-face interactions and increasing the reach and process of ordering the products. Engagement of healthcare professionals in company activities, such as speaker engagement and clinical studies, keeps the customers satisfied.

Brand Equity

Duopharma Biotech's products are halal-certified, giving Muslim consumers and patients reassurance and confidence. Benefits can be extended beyond the Muslim population, as halal is an additional good manufacturing practice; it constitutes the foundation of the brand equity of Duopharma Biotech. Brand equity not only gives healthcare professionals and patients confidence in the quality of the company's products but also affects its revenue growth and profitability. Duopharma Biotech's brand equity allows it to maintain Lebreta's pricing even though its production is local (locally manufactured products are usually at lower prices). As a pioneer of the halal initiative, Duopharma Biotech aims to promote the halal identification process, strengthen brand equity, and give consumers more confidence in the quality of the products delivered in the market. The company invested in SCM Lifescience for halal-certified stem cell therapy for atopic dermatitis and is collaborating for future clinical trials.

Conclusion

Through its diverse product portfolio, Duopharma Biotech is committed to providing the best halal pharmaceutical products and solutions to improve medicine access. As a leader in the halal pharmaceutical industry, the company has championed halal locally and expanded internationally. With its strong overall performance, Duopharma Biotech Berhad earns Frost & Sullivan's 2022 Malaysia Company of the Year Award in the halal pharmaceutical industry.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends: Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first-to-market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

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The Growth Pipeline Engine™

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Key Impacts:

- **Growth Pipeline:** Continuous Flow of Growth Opportunities
- **Growth Strategies:** Proven Best Practices
- Innovation Culture: Optimized Customer Experience
- ROI & Margin: Implementation Excellence
- Transformational Growth: Industry Leadership

The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- Mega Trend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)



