



## Case Study– Ingredient Scouting

---

# ADAPTOGENS

# ADAPTOGENS

## Client Background & Requirements

**The client operates within the FMCG sector and, in response to the growing popularity and diverse applications of adaptogens – spanning from food and beverages to household products, is seeking to conduct an ingredient-scouting initiative. The objective is to identify the most effective and versatile adaptogenic ingredients that can be leveraged across various product categories, aligning with both consumer demand and functional benefits.**

The client is seeking a comprehensive overview that combines both technical and market insights on adaptogenic ingredients. This will enable informed decision-making for incorporating these ingredients across various product lines, while also streamlining the innovation process by reducing the need for time-intensive independent research.

## Benefits to the Client

- The client receives updates on the technical attributes of adaptogens, along with their current market positioning and IP landscape.
- The client receives a ranking of the ingredients, based on a comprehensive analysis across multiple attributes.
- The client was provided with actionable insights.
- The client was briefed on future-proofing strategies derived from the analysis.
- The client was provided with recommendations aligned with the various specified requirements.

## Research Methodology

- Conducted secondary research on Company's official websites, Blogs, News articles, Crunchbase, Factiva, Annual reports, White papers, etc.
- The study was further executed by information from patents & scientific journals from paid and publicly available databases.

# INTRODUCTION

## Adaptogens



- **Adaptogens are botanicals** (plants & mushrooms), **that help your body respond to stress, anxiety, fatigue, and overall wellbeing.**
- **There are three qualities that plants must have to be an adaptogen:**
  - ✓ It is non-toxic when taken in normal doses.
  - ✓ It helps your body cope with stress.
  - ✓ It allows your body to return to balance (homeostasis).
- **Adaptogens work as a temporary bandage but aren't the solution to long-term stress.**

## Examples

**Ashwagandha, Rhodiola Rosea, Holy Basil, Schisandra Berry, Siberian Ginseng, Maca Root, Cordyceps, Reishi Mushroom, Licorice Root, Shatavari, Panax Ginseng, Curcuma longa, Gotu Kola, Chaga Mushroom, Lion's Mane Mushroom, Alfalfa, Angelica Root, Ginkgo Biloba, Rehmannia, Ashitaba, Bacopa Monnieri, Moringa, Dandelion Root, Wheatgrass, Mulberry Leaf, Ziziphus, etc. are some of the popular adaptogens.**

## Regulatory Compliance

**The FDA does not specifically "approve" adaptogens, because adaptogens are typically classified as dietary supplements under the Dietary Supplement Health and Education Act (DSHEA) of 1994. Since adaptogens are used for general wellness (like reducing stress or improving energy), they do not fit the criteria for FDA approval as drugs, which are typically intended to treat specific medical conditions.**

# INGREDIENT'S SNAPSHOT

---

1. LICORICE ROOT (*Glycyrrhiza glabra*)
2. CHINESE GINSENG (*Panax ginseng*)
3. ASHWAGANDHA (*Withania somnifera*)
4. REISHI MUSHROOM (*Ganoderma lucidum*)
5. BRAHMI (*Bacopa monnieri*)
6. MORINGA (*Moringa oleifera*)
7. ARCTIC ROOT (*Rhodiola rosea*)
8. HOLY BASIL (*Ocimum tenuiflorum*)
9. LION'S MANE (*Hericium erinaceus*)
10. SHATAVARI (*Asparagus racemosus*)

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<i>Glycyrrhiza glabra</i>	Native to West Asia, North Africa, and Southern Europe	Roots & Rhizomes (Underground stems)	Glycyrrhizin, Glycyrrhetic acid, Flavonoids, Isoflavonoids & Chalcones	Supporting adrenal and hormonal health   Normalization of blood pressure & Heart rate   Stress management	FDA has deemed licorice root generally safe for use in foods	-----

## Clinical Trials

107

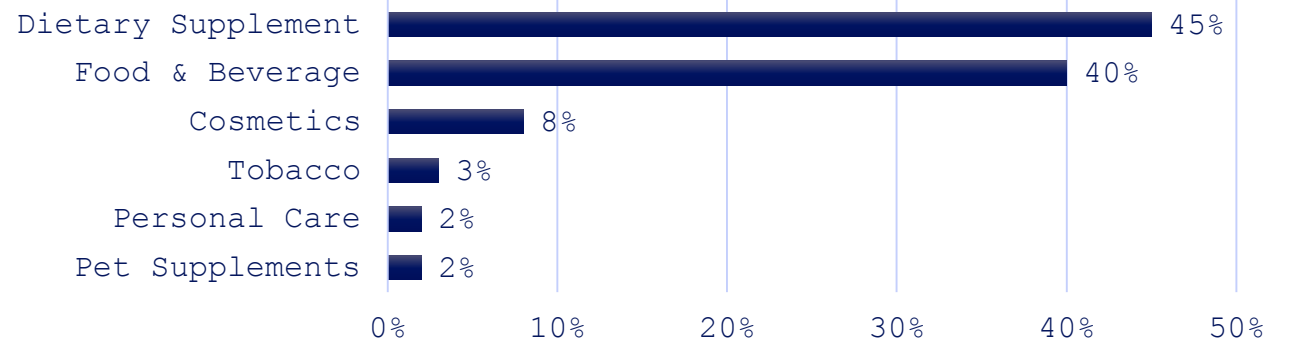


## RECENT DEVELOPMENTS

### STUDY PHASE

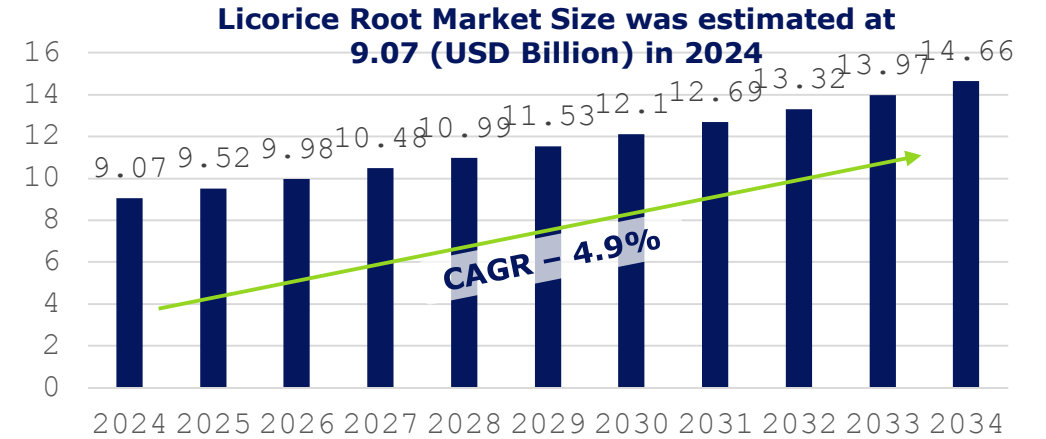
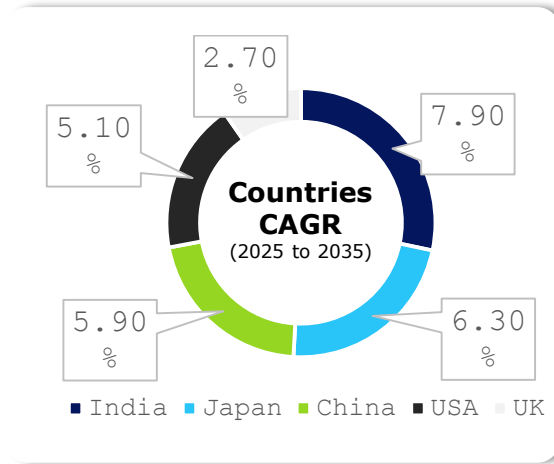
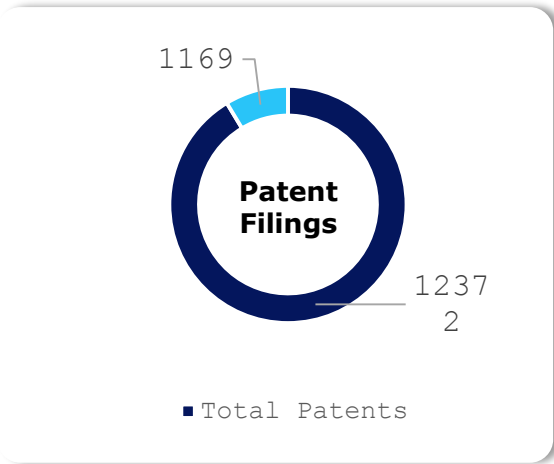
1. Early Phase 1 (5)
2. Phase 1 (17)
3. Phase 2 (32)
4. Phase 3 (14)
5. Phase 4 (6)
6. Not Applicable (45)

- Norevo GmbH introduced a new range of organic licorice extracts in 2024 to ensure sustainable sourcing and respond to increasing demand from the food and pharma industries for clean-label options.
- In December 2024, BGM Group and Jointown signed a strategic partnership deal with a focus on licorice fluid extract and Gandixin.
- In September 2024, Uncover, a Pan-African skincare brand, launched the "I Am Enough" licorice root dark spot serum, targeting hyperpigmentation in women of color.



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.

# LICORICE ROOT



## MARKET PLAYERS

no:revo | F&C Licorice Group | Ma:fc | NütraGreen | HPGC | BGG | MARUZEN PHARMACEUTICALS CO., LTD.

### Market Drivers

- Applications across multiple industries
- Escalating demand for natural ingredients

### Market Opportunities

- Demand for natural and clean-label products
- Increased R & D

### Market Restraints

- Declining tobacco industry : Licorice gives smoke - a sweet & earthy flavor
- Fluctuating raw material prices

### Market Challenges

- Regulatory restrictions
- Negative or misunderstood perception

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

# CHINESE GINSENG

(1/2)

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<i>Panax ginseng</i>	Native to mountainous regions of the Russian Far East, Northeast China, and the Korean Peninsula	Root	Ginsenosides - Triterpene saponins	Helps the body manage stress and adapt to stressors   Improve overall resilience to physical and emotional stress   Enhance stamina   Promote mental clarity   Reduce fatigue	As a medicinal herb - European Medicines Agency (EMA)   In the EU, it's also listed as a feed additive	-----

## Clinical Trials

## RECENT DEVELOPMENTS

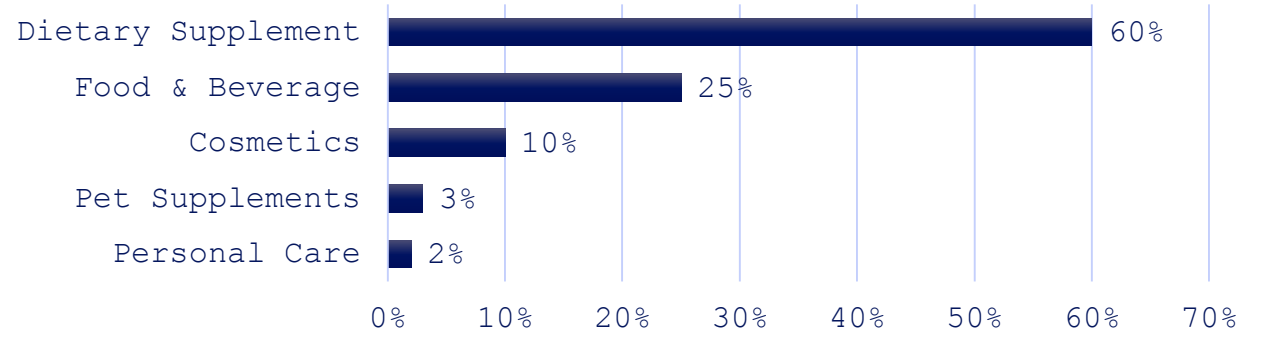
214



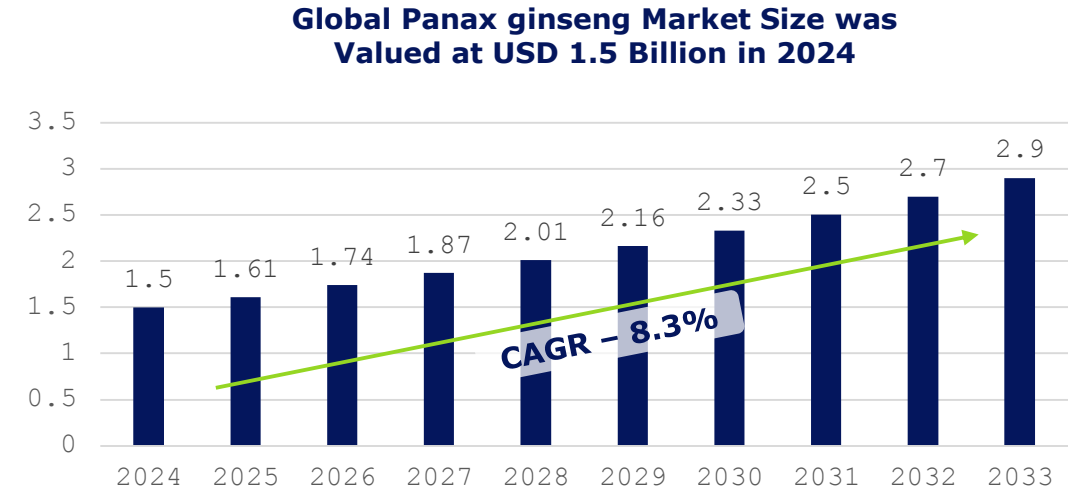
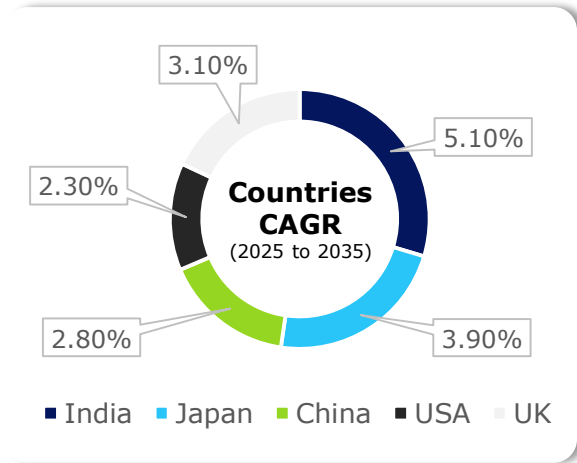
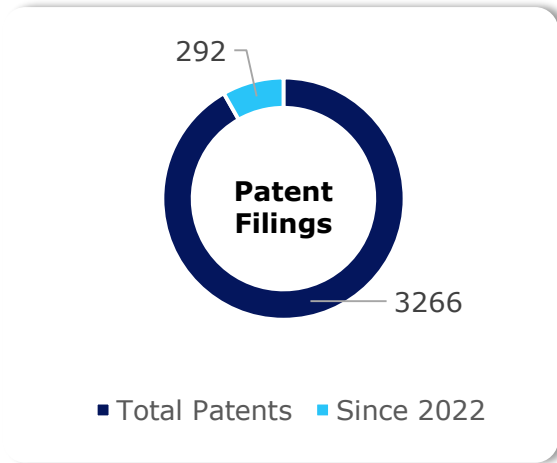
### STUDY PHASE

1. Early Phase 1 (9)
2. Phase 1 (18)
3. Phase 2 (45)
4. Phase 3 (26)
5. Phase 4 (24)
6. Not Applicable (98)

- In August 2024, Canadian ginseng producer, Norland International, secured a significant investment of USD20 million from a leading venture capital firm to support the expansion of their production capacity and global market entry.
- In November 2025, the Chinese government announced new regulations to strengthen the quality control of ginseng products, aiming to improve consumer trust and boost exports.



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.



**MARKET PLAYERS**

**KOREA GINSENG CORP**

**대동고려삼주식회사**  
DAEDONG KOREA GINSENG CO., LTD.

**ORGANIKA**  
AUTHENTICALLY CANADIAN

**RFI**  
FROM FIELD TO PHARMACEUTICAL

**ILHWA CO., LTD.**

**Nature's Way**

**Market Drivers**

- Strong Traditional Use and Global Recognition
- Support from Scientific Research

**Market Opportunities**

- Combination Products with Other Adaptogens
- Beauty-from-Within and Skincare Products

**Market Restraints**

- High Cost
- Slow Cultivation Process

**Market Challenges**

- Formulation Constraints
- Competition from Cheaper or Regional Alternatives

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

# ASHWAGANDHA

(1/2)

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<b>Withania somnifera</b>	Grows in India, Nepal, The Middle East, & Parts of Africa	Root	Withanolides (withaferin A & withanolide A)	Reduce stress & anxiety levels   Improving sleep   Boosting athletic performance   Improving memory	The specific formulation KSM-66 Ashwagandha has been self-affirmed as GRAS	Denmark banned ashwagandha in 2023 in dietary supplements

## Clinical Trials

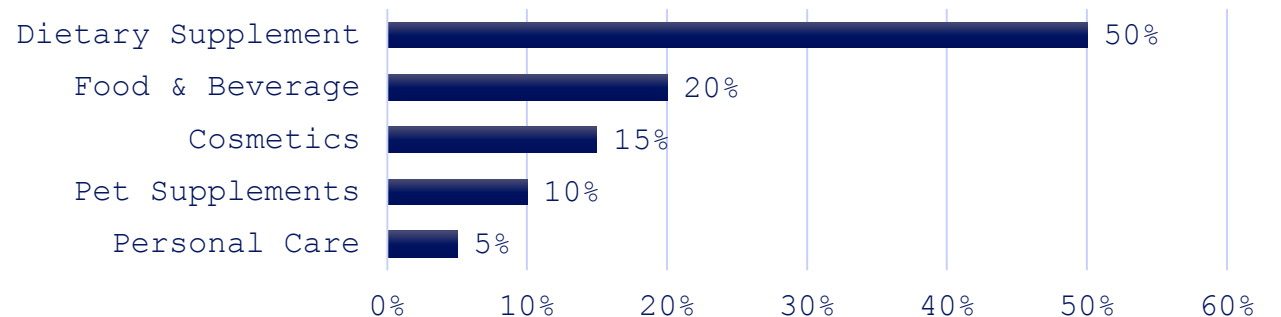


## RECENT DEVELOPMENTS

### STUDY PHASE

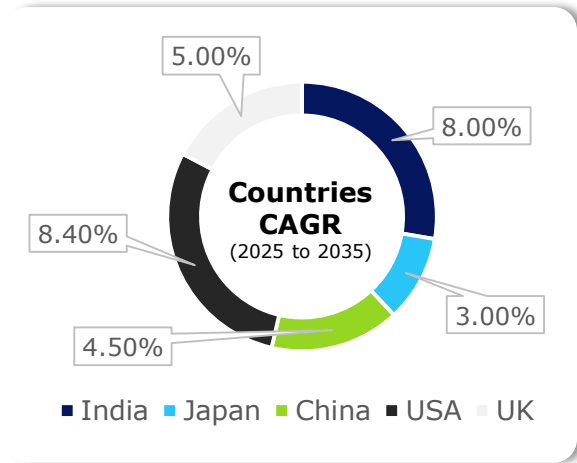
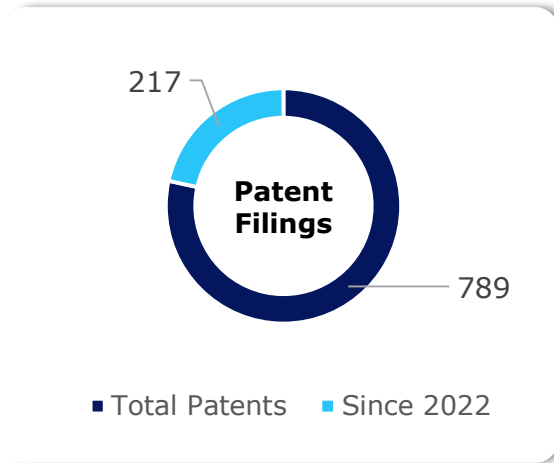
1. Early Phase 1 (3)
2. Phase 1 (5)
3. Phase 2 (11)
4. Phase 3 (3)
5. Phase 4 (2)
6. Not Applicable (38)

- In August 2024, Organic India, USA, launched Ashwagandha Organic Gummies.
- In May 2024, Herbochem launched +91 ASHWAGANDHA ingredients, designed for use in capsules, tablets, gummies, and other supplement formats.
- In April 2024, Tranquilo 500mg Root Ashwagandha Drink was introduced in the U.K., tapping into the expanding market for stress-relief beverages.
- In March 2024, Nutriventia launched Prolanza, a sustained-release ashwagandha supplement, targeting endurance athletes and fitness professionals.

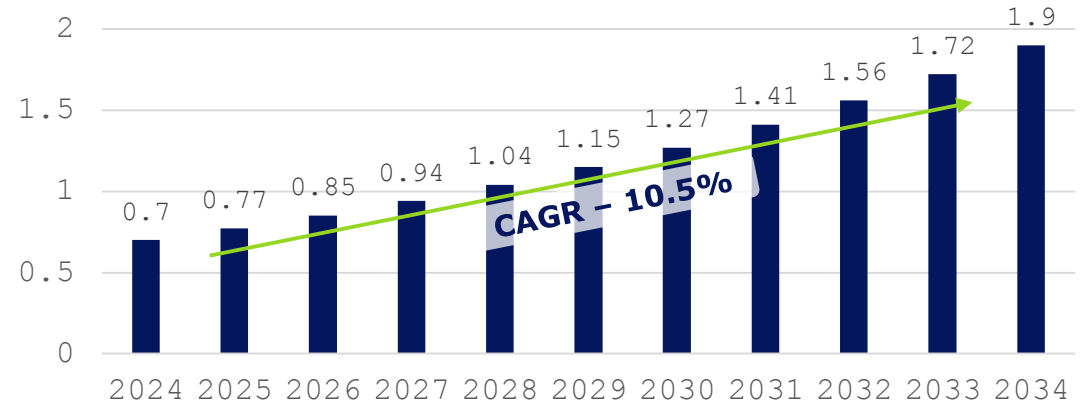


Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.

# ASHWAGANDHA



Global Ashwagandha Market Size was Valued at USD 0.7 Billion in 2024



MARKET PLAYERS



Market Drivers

- Health & Wellness Trend

Market Opportunities

- Rising Demand for Ashwagandha in Sports Nutrition & Performance Enhancement

Market Restraints

- High Cost of Standardized Extracts
- Supply Chain Disruptions
- Raw Material Sourcing Constraints

Market Challenges

- Misleading Claims
- Market Saturation & Strong Competition

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

# REISHI MUSHROOM

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<b>Ganoderma lucidum</b>	Primarily in Asia, especially in China and Japan, where they are found in subtropical regions	Fruiting body & Mycelium	Ganoderic acid, Ganoderiol, Ganoderone	Boost the immune system   Reduce fatigue and depression	FSSAI has approved the use of Reishi mushroom extract	-----

## Clinical Trials

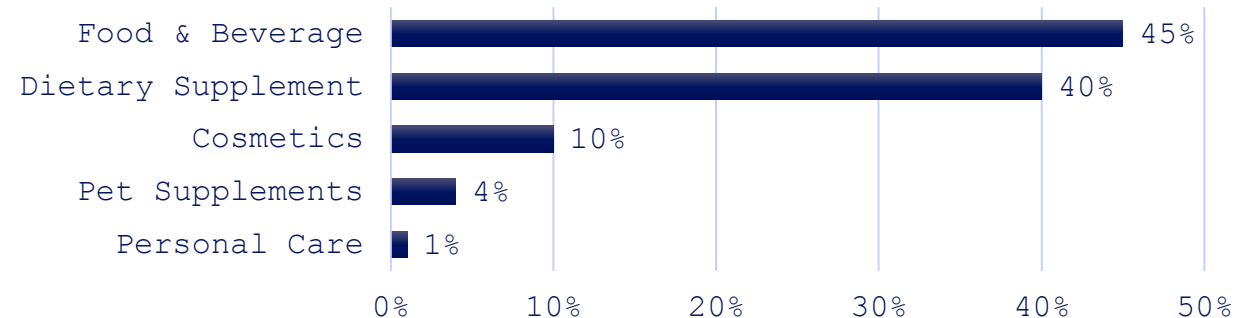
## RECENT DEVELOPMENTS



### STUDY PHASE

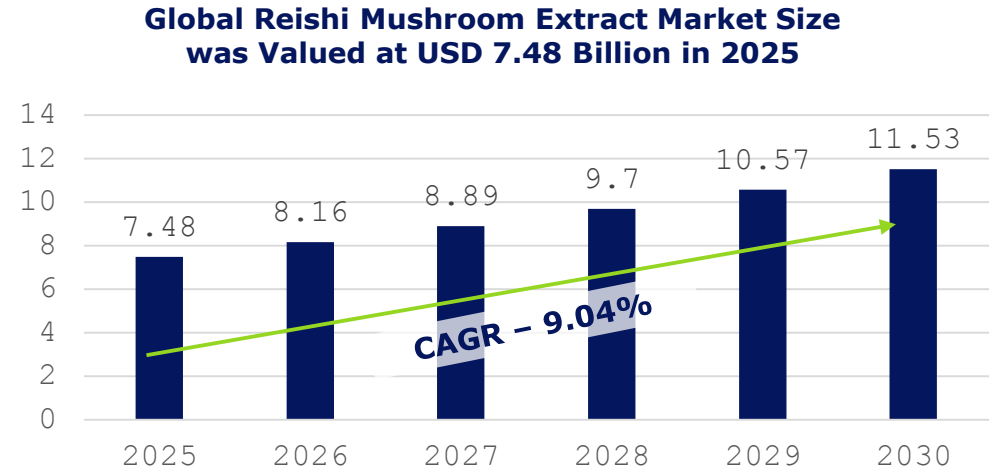
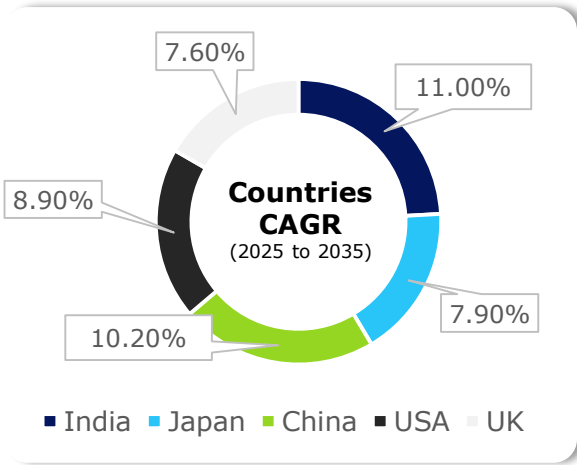
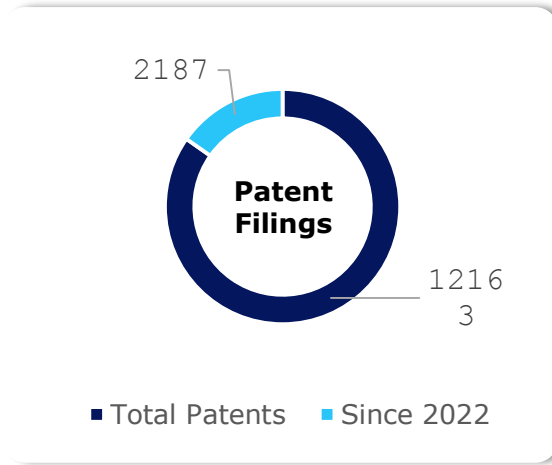
1. Early Phase 1 (0)
2. Phase 1 (4)
3. Phase 2 (16)
4. Phase 3 (9)
5. Phase 4 (1)
6. Not Applicable (18)

**In February 2024, REBBL, the pioneering organic and plant-powered beverage brand, launched the latest addition to its Revive lineup - REBBL Revive Reishi Vanilla. Exclusively available at Target stores, this invigorating blend has been meticulously crafted to promote recovery, balance, and immune support.**



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.

# REISHI MUSHROOM



## MARKET PLAYERS



### Market Drivers

- Applications across multiple industries
- Escalating demand for natural ingredients

### Market Opportunities

- Demand for natural and clean-label products
- Increased R & D

### Market Restraints

- Declining tobacco industry : Licorice gives smoke - a sweet & earthy flavor
- Fluctuating raw material prices

### Market Challenges

- Regulatory restrictions
- Negative or misunderstood perception

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<b>Bacopa monnieri</b>	India, Australia, Europe, Africa, Asia, North America, South America	Leaves & Stem	Bacosides	Prevent anxiety & stress	-----	-----

## Clinical Trials

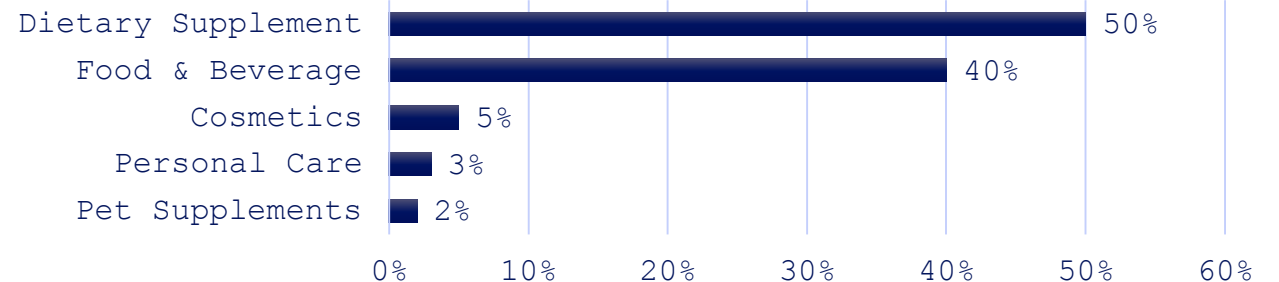


## RECENT DEVELOPMENTS

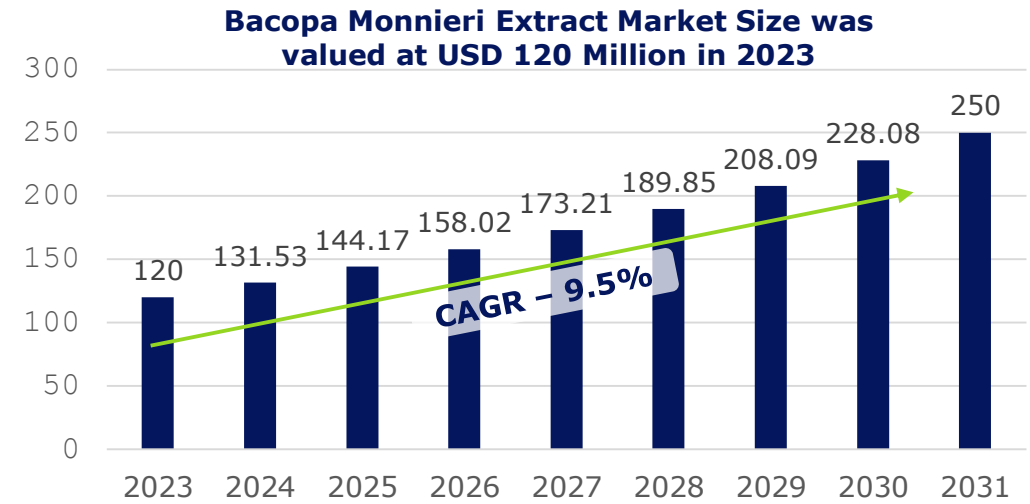
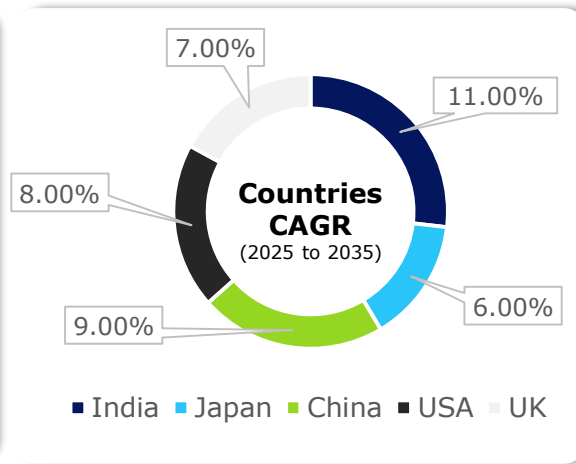
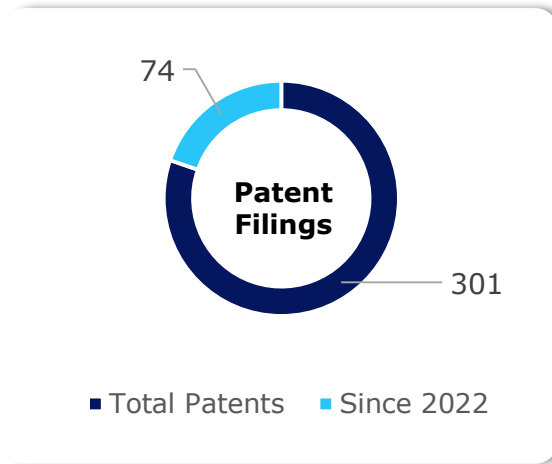
### STUDY PHASE

1. Early Phase 1 (4)
2. Phase 1 (10)
3. Phase 2 (21)
4. Phase 3 (11)
5. Phase 4 (9)
6. Not Applicable (28)

August 2024, Natural Remedies Launches Herb Secure Sustainability and Quality Program. The company's herbal ingredients, such as BacoMind Bacopa monnieri, are being cultivated under a new model which combines ancient and modern methodologies. BacoMind™, this groundbreaking, clinically proven, and pioneering Bacopa monnieri extract unleashes the power of 9 bioactive compounds to organically boost memory, focus, learning, and overall brain function across all age groups.



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.



**MARKET PLAYERS**



**Market Drivers**

- Efficacy in improving cognitive performance has contributed to its rising popularity

**Market Opportunities**

- Increasing trend of plant-based diets and clean-label products

**Market Restraints**

- Lack of standardization in herbal supplement formulations
- Limited Scientific Research

**Market Challenges**

- Low Consumer Awareness in Western Markets

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<b>Moringa oleifera</b>	Tropical & subtropical regions globally, particularly in Africa, Asia, the Caribbean, & Latin America	Leaves	Flavonoids like Quercetin, Kaempferol, Apigenin, Luteolin & Myricetin	Help manage stress   Boost energy   Support mental clarity	-----	2019 - Brazil's ANVISA has announced that the use of Moringa oleifera in food and supplements is prohibited based on the fact that there is no evaluation and proof of safety

## Clinical Trials

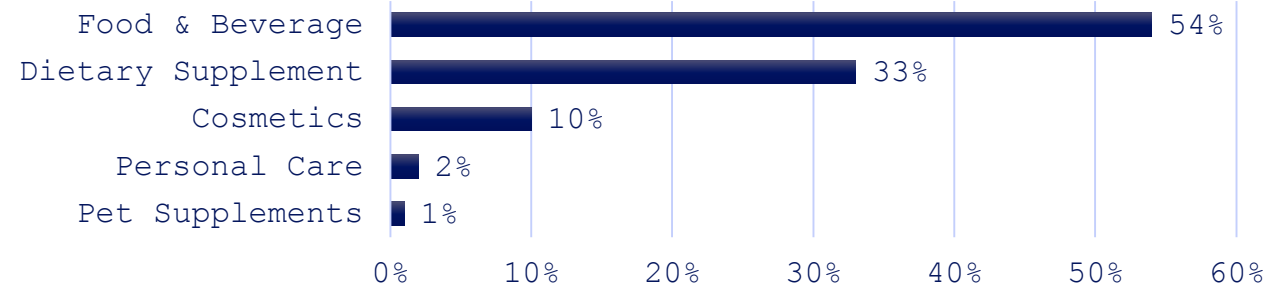
## RECENT DEVELOPMENTS



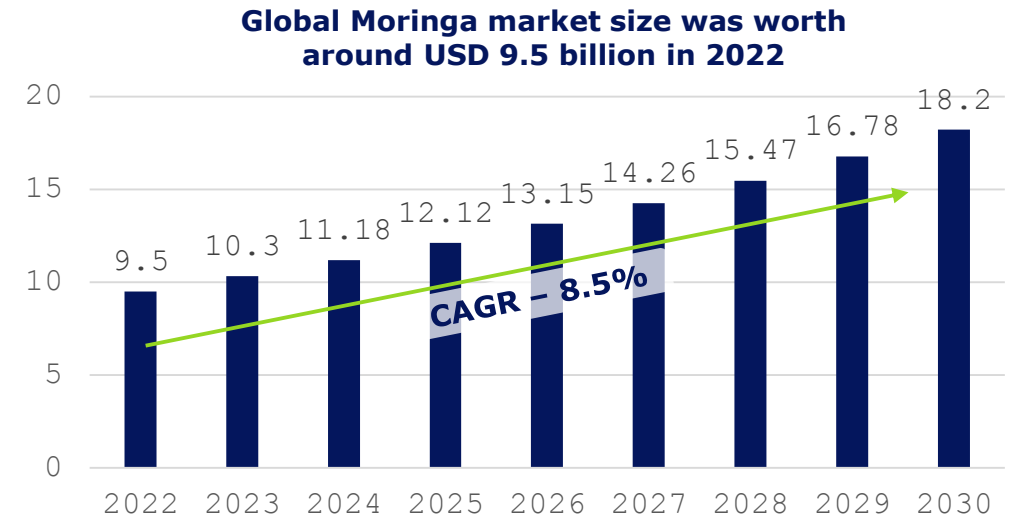
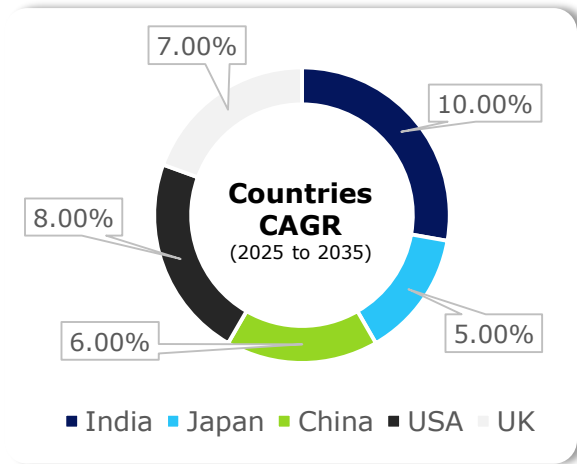
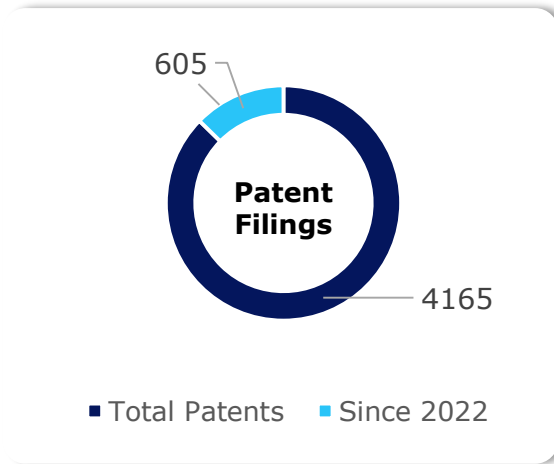
### STUDY PHASE

1. Early Phase 1 (1)
2. Phase 1 (3)
3. Phase 2 (5)
4. Phase 3 (4)
5. Phase 4 (0)
6. Not Applicable (27)

**May 2024, Ajooni Biotech Limited Launches Innovative Moringa Project in Bikaner to Boost Animal Nutrition and Renewable Energy. Moringa oil, extracted from the seeds, is a viable feedstock for biodiesel and aviation fuel. Additionally, the bark of the Moringa tree can be utilized to produce activated carbon and has the potential to generate lithium for electric vehicle batteries.**



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.



**MARKET PLAYERS**



**Market Drivers**

- Valuable crop in climate-stressed regions
- Increasing number of clinical studies support health claims, improving credibility

**Market Opportunities**

- Growing demand in the natural and organic beauty segment

**Market Restraints**

- Moringa has a bitter, earthy flavor
- Competes with better-known superfoods like spirulina, matcha, or turmeric

**Market Challenges**

- Storage and transportation can degrade active compounds if not handled properly

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

# ARCTIC ROOT

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<b>Rhodiola rosea</b>	High-altitude, High-latitude, Typically mountainous regions of the Northern Hemisphere. Specifically, it grows in Arctic, Asia, Europe, and North America	Roots	Salidroside, Rosavin, Rosarin, Rosin	Stress reduction   Fatigue alleviation   Enhanced cognitive function   Potential support for athletic performance	Rhodiola rosea extract approved by FSSAI for use in food and food ingredients   Nektium obtains CITES approval for endangered adaptogen Rhodiola rosea	-----

## Clinical Trials

## RECENT DEVELOPMENTS

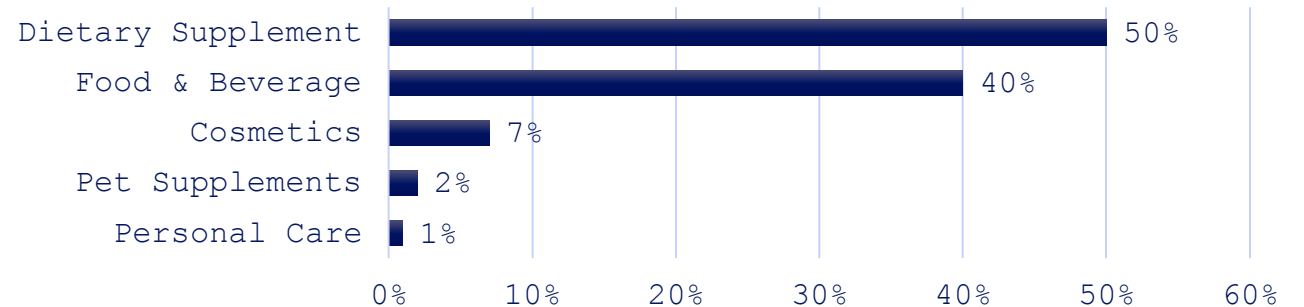
38



### STUDY PHASE

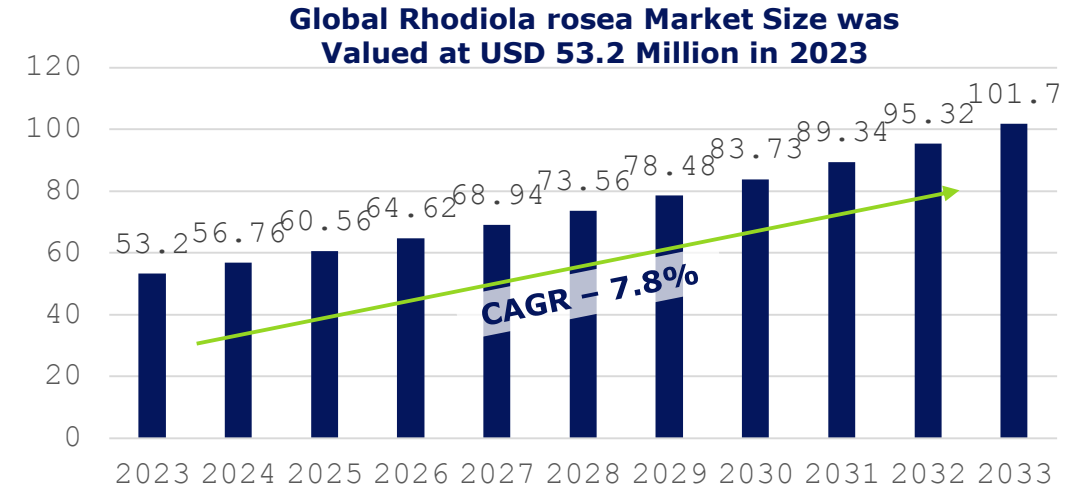
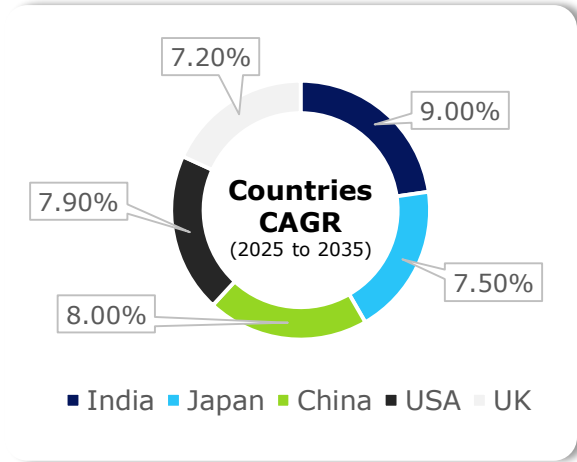
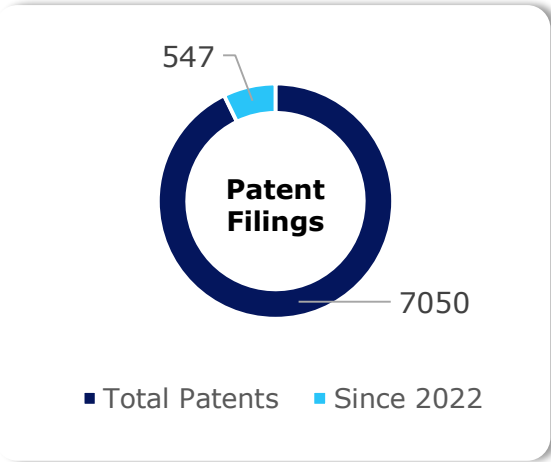
1. Early Phase 1 (1)
2. Phase 1 (1)
3. Phase 2 (9)
4. Phase 3 (5)
5. Phase 4 (5)
6. Not Applicable (17)

**In October 2022, Conagen commercializes 99% high-purity, non-GMO salidroside via bioconversion from Rhodiola rosea. The ingredient, with antioxidant and antimicrobial properties, targets mental well-being and stress relief in supplements, foods, and beverages.**



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.

# ARCTIC ROOT



**MARKET PLAYERS**



**Market Drivers**

- Gaining popularity for its stress-reducing, energy-boosting, and brain-enhancing properties

**Market Opportunities**

- Expansion in the Nutraceuticals Sector

**Market Restraints**

- Limited Availability of Raw Materials
- Regulatory Challenges Across Different Regions

**Market Challenges**

- Consumer Awareness Still Developing
- Supply Chain Volatility

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

# HOLY BASIL

(1/2)

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<b>Ocimum tenuiflorum</b>	Native to the Indian subcontinent and is now widely cultivated and naturalized in tropical and subtropical regions globally.	All parts	Apigenin, Isothymusin, Isothymonin, Orientin	Reduce stress & anxiety	In the US, Holy Basil has been granted "Generally Recognized as Safe" (GRAS) status by the FDA	-----

## Clinical Trials

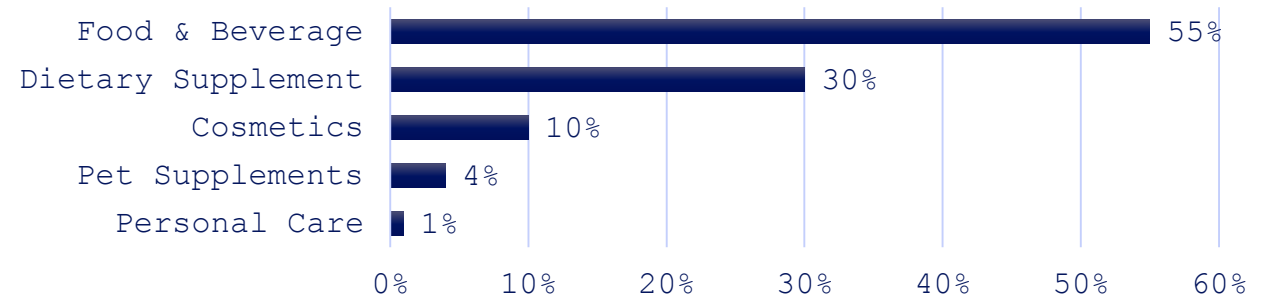
## RECENT DEVELOPMENTS



### STUDY PHASE

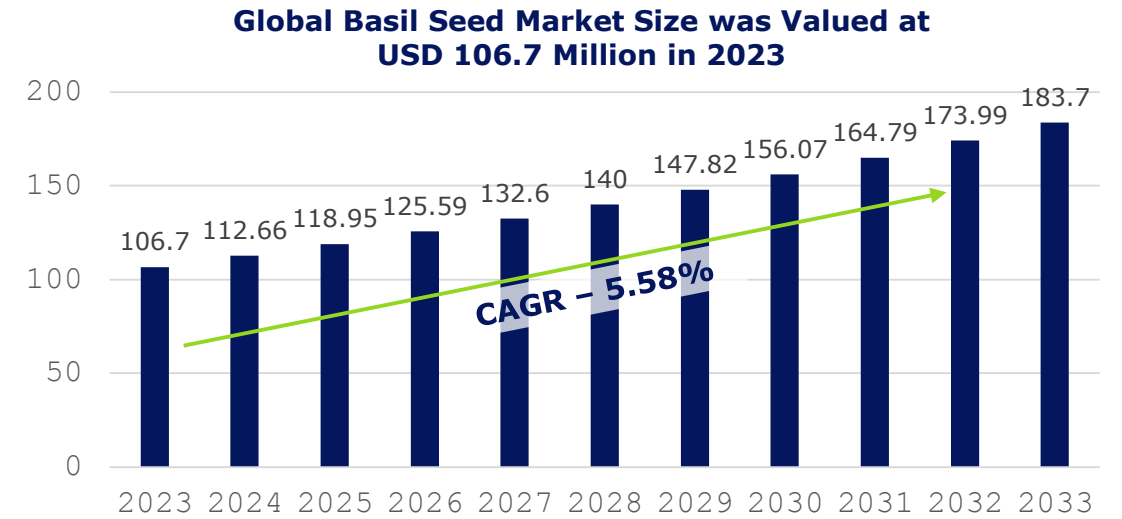
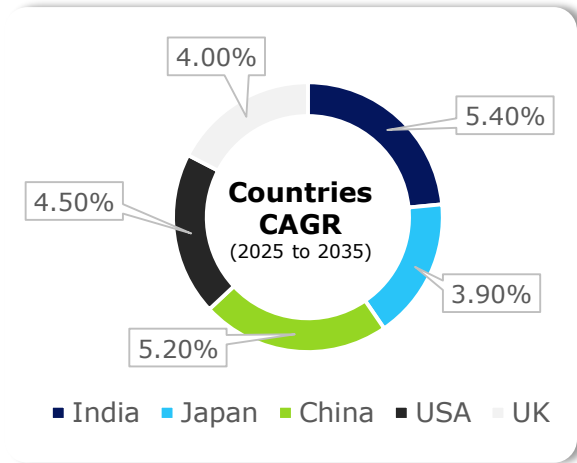
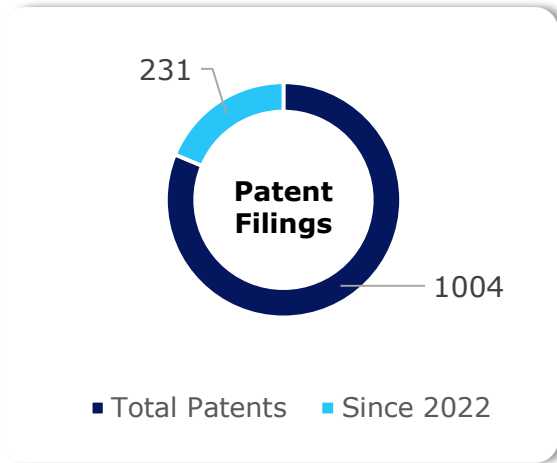
1. Early Phase 1 (0)
2. Phase 1 (0)
3. Phase 2 (3)
4. Phase 3 (9)
5. Phase 4 (2)
6. Not Applicable (18)

- **September 2024, New Chapter Launches Organic Holy Basil Booster Powder.** The new supplement is the company's first-ever Regenerative Organic Certified product.
- **June 2024, Organic India launches Regenerative Organic Certified tulsi supplement, tea.**



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.

# HOLY BASIL (TULSI)



## MARKET PLAYERS



### Market Drivers

- The pandemic stimulated the demand for basil extract due to its ability to improve immunity levels

### Market Opportunities

- Stress and Mental Wellness Market
- Pet Wellness Products

### Market Restraints

- Supply chain disruptions
- Stringent food safety and labeling regulations

### Market Challenges

- Scientific Validation

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

# LION'S MANE

(1/2)

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<b>Hericium erinaceus</b>	Native to North America, Europe, and Asia	Fruiting body and Mycelium	Hericenones, Erinacines	Help reverse stress-related changes to neurotransmitters, including dopamine and serotonin	Lion's Mane mushroom extract powder - FSSAI approved	2024 - Australia recalls mushroom gummies after hospitalisations

## Clinical Trials

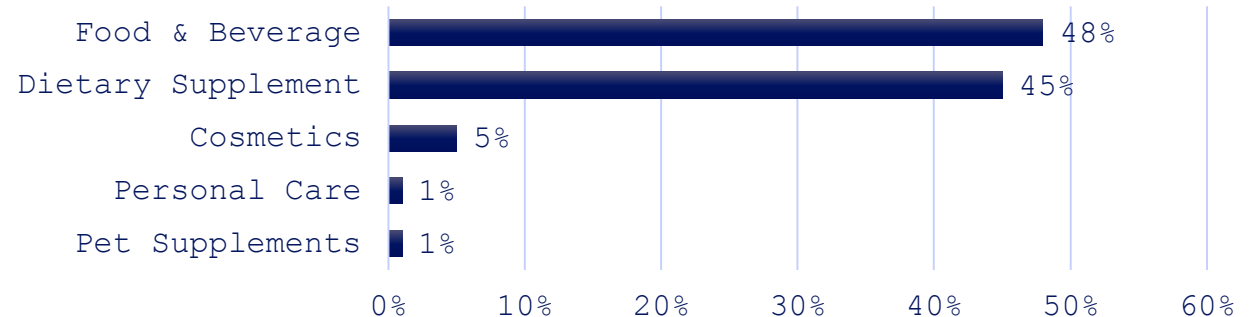
## RECENT DEVELOPMENTS



### STUDY PHASE

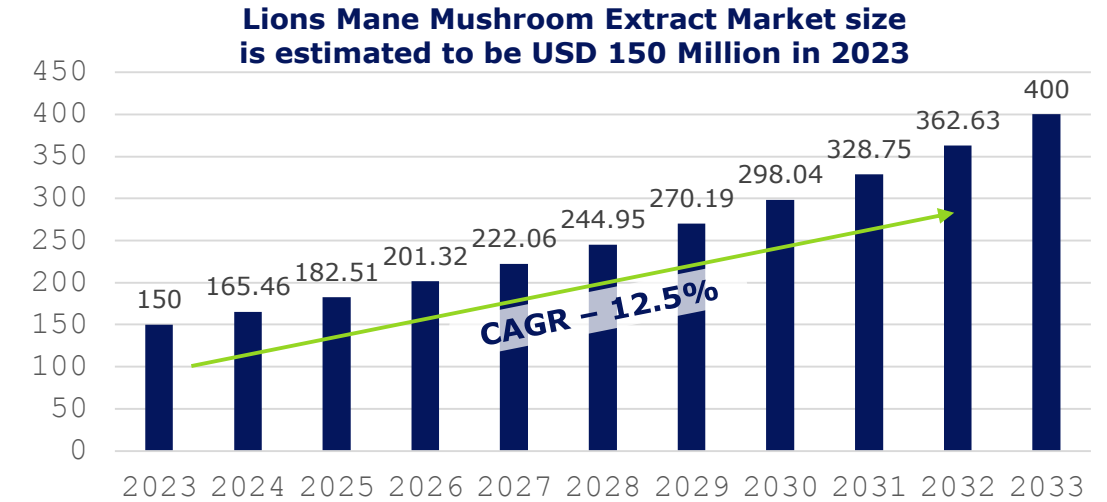
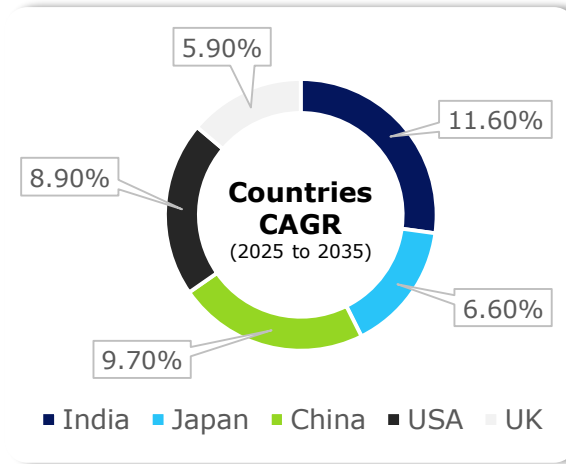
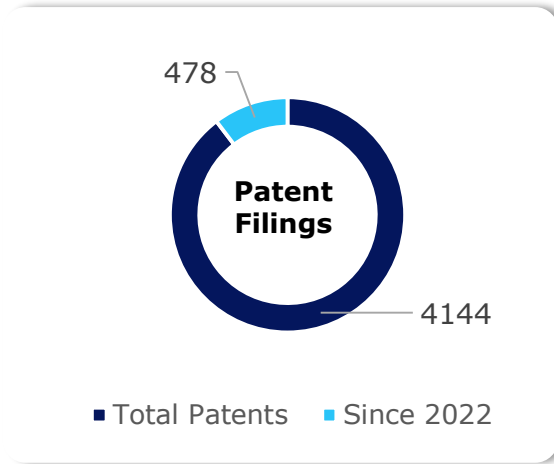
1. Early Phase 1 (0)
2. Phase 1 (0)
3. Phase 2 (0)
4. Phase 3 (0)
5. Phase 4 (0)
6. Not Applicable (8)

- **April 2025, Happiee enters functional foods category with 'easy-cook' lion's mane mushroom chunks.**
- **September 2024, Mushroom Madness: CBD Life Sciences launches Reishi, Lion's Mane and ashwagandha root powder**
- **In July 2024, Applied Food Sciences (AFS) has launched MycoThrive Lion's Mane, a mushroom extract clinically studied for its impact on cognitive performance and well-being.**



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.

# LION'S MANE



## MARKET PLAYERS



### Market Drivers

- Increasing prevalence of cognitive health issues, including memory loss.

### Market Opportunities

- Demand for functional foods

### Market Restraints

- Lack of standardization in the production and extraction processes.

### Market Challenges

- Lion's Mane extract (especially in powdered form) is sensitive to moisture and heat, which can degrade active compounds and affect shelf stability

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

# SHATAVARI

(1/2)

BOTANICAL NAME	GEOGRAPHIC PRESENCE	PART USED	ACTIVE COMPOUNDS	BENEFITS (AS AN ADAPTOGEN)	REGULATORY COMPLIANCE	SAFETY / TOXICITY
<b>Asparagus racemosus</b>	All across the world, primarily in the Himalayas, India, and Sri Lanka	Roots	Steroidal saponins like Shatavarins I-IV   Flavonoids like quercetin, rutin, hyperoside   Other compounds like diosgenin and quercetin-3-glucuronide	Anti-depressant   Antioxidant	-----	January 2025 - New York Wholesale Group recalled Zaarah Herbals shatavari powder because of potential lead contamination

## Clinical Trials

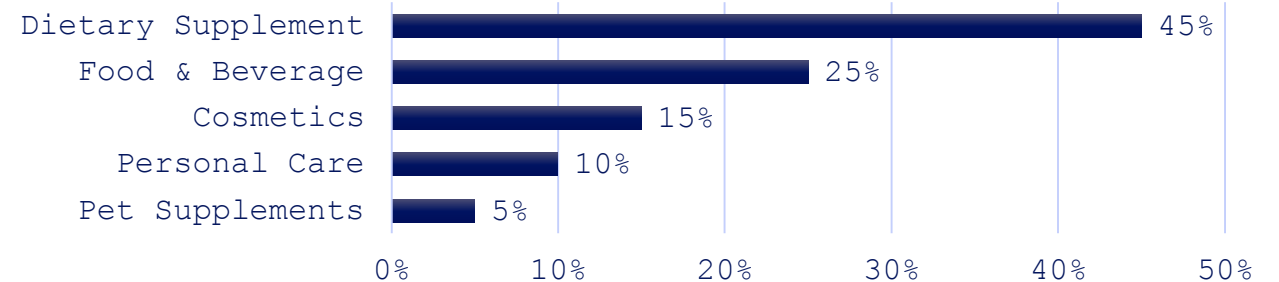
## RECENT DEVELOPMENTS



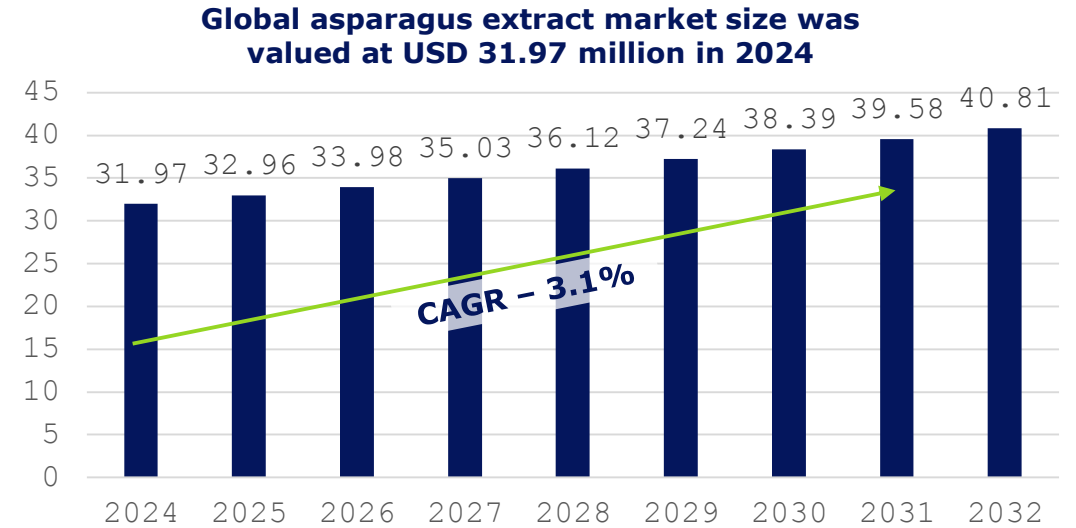
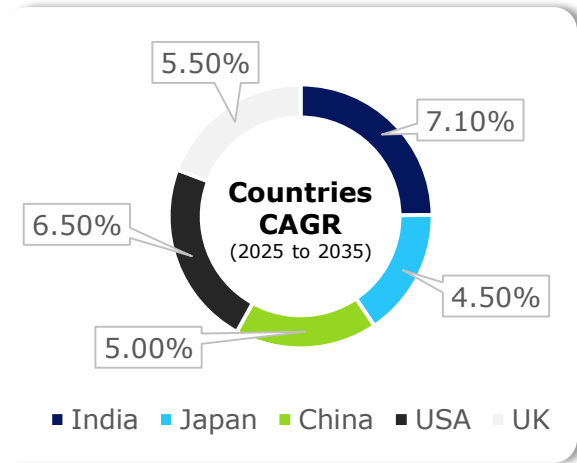
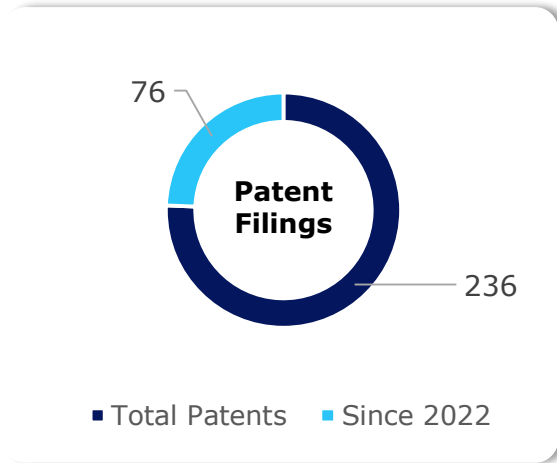
### STUDY PHASE

1. Early Phase 1 (0)
2. Phase 1 (0)
3. Phase 2 (0)
4. Phase 3 (0)
5. Phase 4 (0)
6. Not Applicable (5)

- In February 2025, health ingredient provider NXT USA announced the launch of Xeya Shatavari 15% at Natural Products Expo West. The new ingredient is intended to support women’s hormonal health at various stages in life.
- As of December 2023, Cepham, an ingredient supplier specializing in Ayurvedic herbs, has developed SheVari4, a patent-pending ingredient derived from the roots of Asparagus racemosus (Shatavari) roots.



Note\* - "Not Applicable" indicates that the study phase classification does not apply currently.



**MARKET PLAYERS**

CHI HEALTH  
S.A. HERBAL BIOACTIVES LLP  
svagro  
HERBO NUTRA extract pvt. ltd.  
SAVA HEALTHCARE  
Allpure Organics  
"Blessing of Ayurveda"

**Market Drivers**

- Increased health awareness

**Market Opportunities**

- Increasingly popular as a women's health tonic

**Market Restraints**

- Paucity of knowledge regarding the dosage

**Market Challenges**

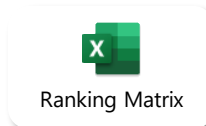
- Regulatory Complexity
- Risk of adulterated or contaminated raw material

Note\* - The presented IP data is specifically derived from the Title and Independent Claims

# Ranking Matrix

RANKING MATRIX								
WEIGHTAGE >>>		10%	30%	10%	20%	20%	10%	TOTAL SCORE (OUT OF 8.5)
S. NO.	INGREDIENTS	REGULATORY DETAILS	WELL-BEING	IP ACTIVITY	MARKET STATUS	APPLICATIONS	SAFETY / TOXICITY	
1	LICORICE ROOT	2	11	7	9	5	3	7.3
2	CHINESE GINSENG	3	12	5	8	4	3	7.1
3	ASHWAGANDHA	2	9	2	6	6	2	5.7
4	REISHI MUSHROOM	2	5	8	8	5	3	5.4
5	BRAHMI	1	8	2	4	6	3	5
6	MORINGA	1	4	5	10	5	2	5
7	ARCTIC ROOT	3	5	7	2	4	3	4
8	HOLY BASIL	2	4	4	3	6	3	3.9
9	LION'S MANE	2	1	5	4	5	2	3
10	SHATAVARI	1	1	2	1	4	2	1.8

[For Detailed Understanding of the Ranking Matrix >>>](#)



# Implementation Potential

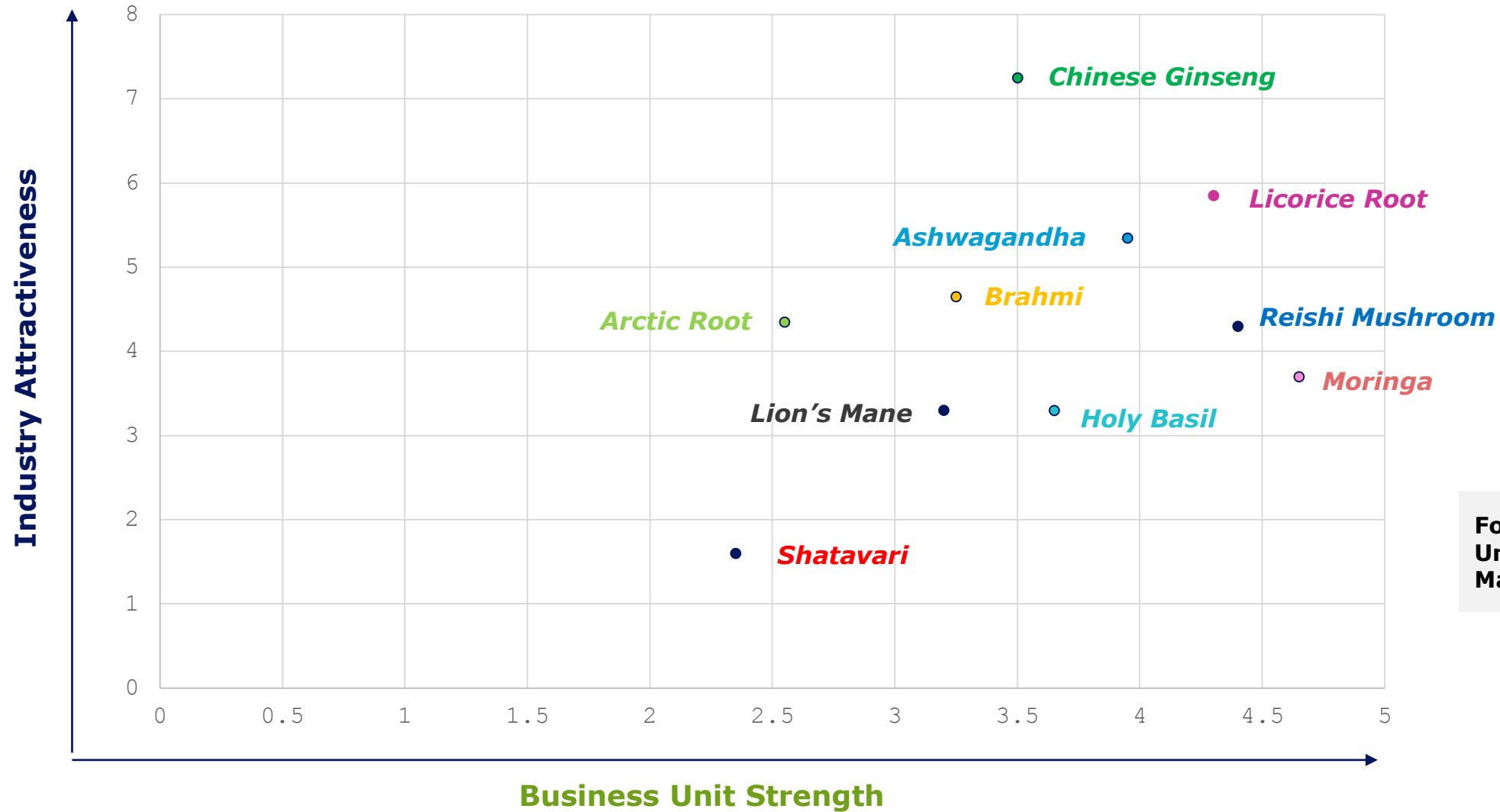
*In light of the available data*

	F & B	DIETARY SUPPLEMENTS	COSMETICS	ANIMAL FEED	AROMATHERAPY	SLEEP SUPPORT
LICORICE ROOT	✓	✓	✓	✓	✓	X
CHINESE GINSENG	✓	✓	✓	✓	X	X
ASHWAGANDHA	✓	✓	✓	✓	✓	✓
REISHI MUSHROOM	✓	✓	✓	✓	✓	X
BRAHMI	✓	✓	✓	✓	✓	✓
MORINGA	✓	✓	✓	✓	✓	X
ARCTIC ROOT	✓	✓	✓	✓	X	X
HOLY BASIL	✓	✓	✓	✓	✓	✓
LION'S MANE	✓	✓	✓	✓	✓	X
SHATAVARI	✓	✓	✓	✓	X	X

Note\* - Aromatherapy includes Scented Candles, Mood Elixirs, Fragrances, etc. & Sleep Support includes Mattresses or Pillow-infusions with Adaptogens

# Investment Prioritization Matrix

(1/2)

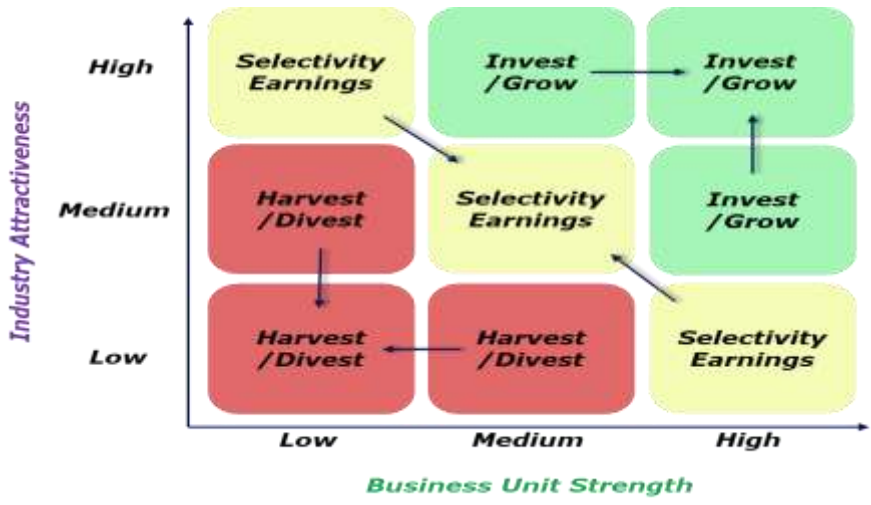
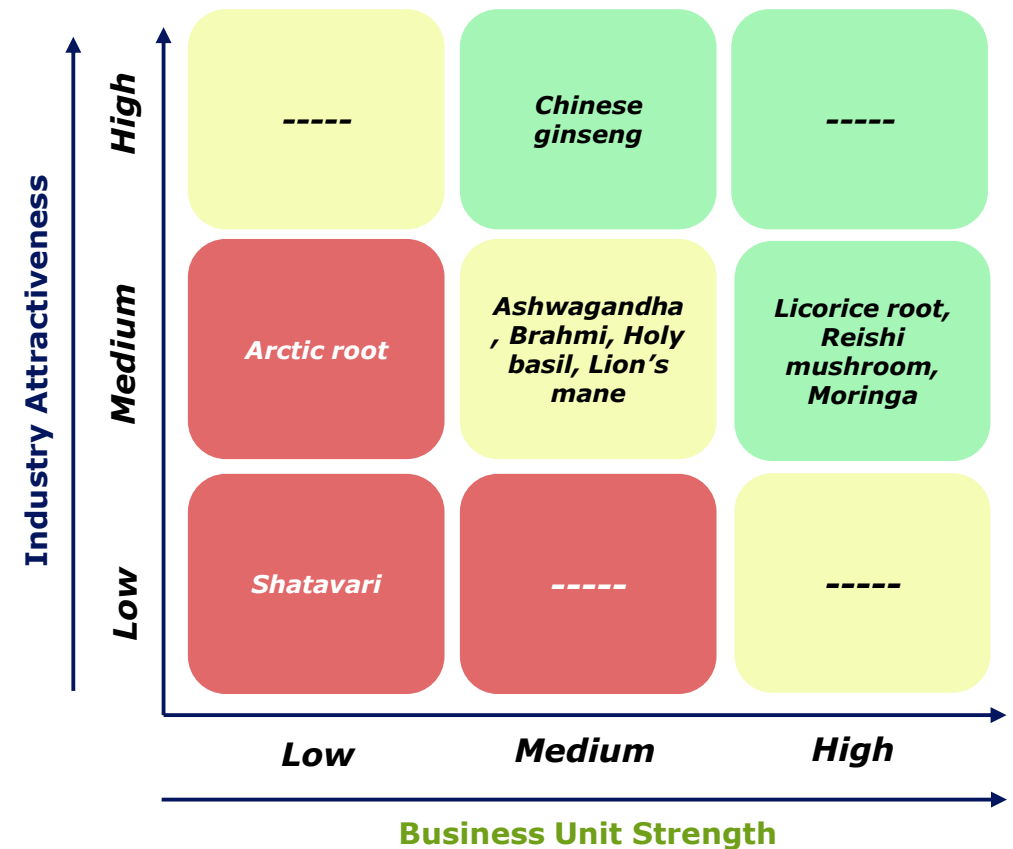
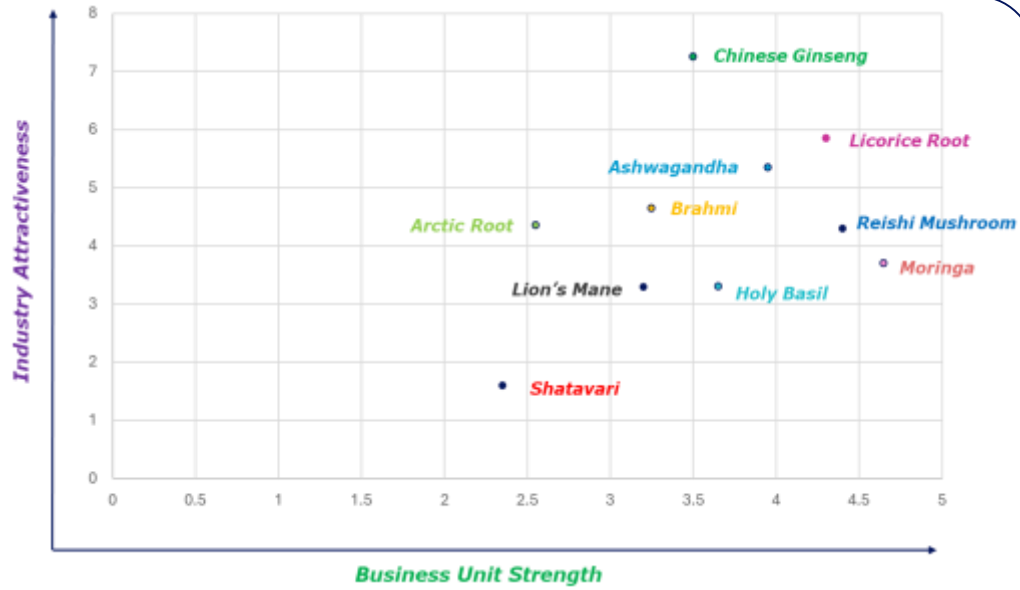


For Detailed Understanding of the Matrix >>>



# Investment Prioritization Matrix

(2/2)



**For Industry Attractiveness**

**Low** : Less than 3  
**Medium** : 3 – 6  
**High** : More than 6

**For Business Unit Strength**

**Low** : Less than 3  
**Medium** : 3 – 4  
**High** : More than 4

# Recommendations

**Chinese Ginseng** represents a high-value investment segment, supported by its strong alignment with health and wellness trends, extensive scientific validation, regulatory favorability, competitive market dynamics, and a clear shift in consumer preferences

**Lion's Mane** presents an opportunity for strategic investment in research and innovation, given its emerging potential in the adaptogen space. Additionally, **Ashwagandha** demonstrates strong growth potential, supported by its alignment with key health benefits and scientific evidences

**Chinese Ginseng**, followed by **Licorice Root**, holds the highest volume of scientific evidence supporting its efficacy as an adaptogen

**Chinese Ginseng** and **Arctic Root** are the most regulatory-favored adaptogens

**Licorice Root** and **Chinese Ginseng** enjoy exceptionally high levels of awareness, being widely recognized and extensively marketed in the adaptogen and wellness sectors.

**Chinese Ginseng** and **Moringa** exhibit the highest levels of competitive intensity within the Dietary supplements and F & B sectors.

**Moringa** regarded as a high-value investment opportunity, driven by its strong market share, cost-efficiency, and significant innovation potential. These attributes position it favorably for strategic growth and long-term value creation

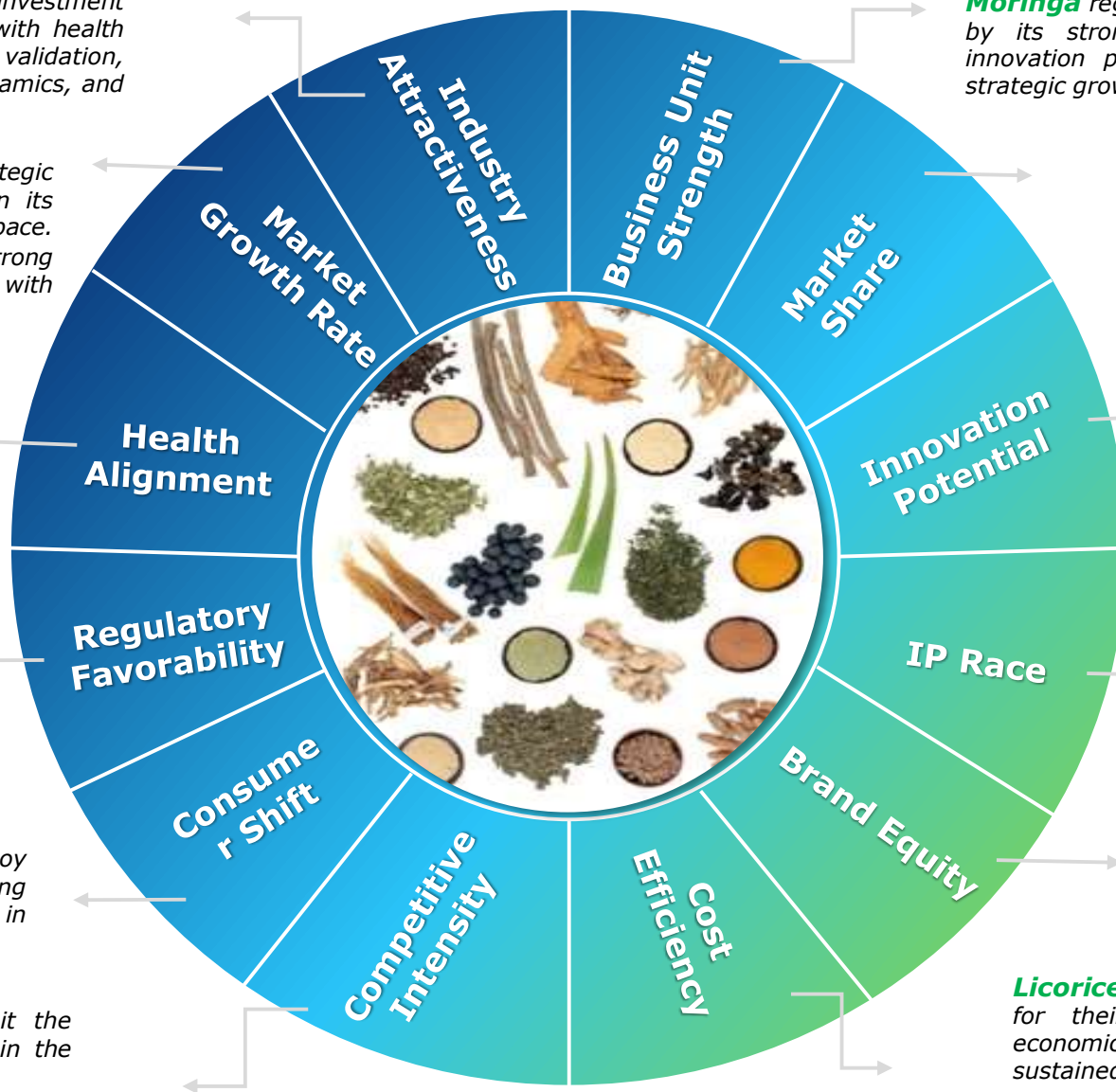
**Moringa**, followed by **Licorice Root** and **Reishi Mushroom**, holds the largest share of the adaptogen market

**Ashwagandha**, **Brahmi**, and **Holy Basil** have demonstrated significant versatility, with established potential across a diverse range of applications, enhancing their value in both existing and emerging product segments

**Reishi Mushroom**, followed by **Licorice Root**, leads in IP activity

**Chinese Ginseng**, **Ashwagandha**, **Reishi Mushroom**, and **Lion's Mane** are widely recognized as mainstream adaptogenic ingredients, with high consumer acceptance and strong presence across health and wellness brands.

**Licorice Root**, **Moringa**, and **Holy Basil** are recognized for their cost-efficiency and high yield, making them economically viable options for large-scale production and sustained market supply.



## Recommendations

---

- Analysis of the Investment Prioritization Matrix indicates that **Shatavari** demonstrates the lowest levels of **industry attractiveness and business unit strength**. As a result, *it is recommended that divestment from this adaptogen segment be considered*.
- **Arctic root**, characterized by low business unit strength and moderate industry attractiveness, *warrants a selective and cautious approach. Strategic focus should be placed on critical areas with identifiable potential, such as regulatory favorability, to determine targeted opportunities for value extraction*.
- **Ashwagandha, Brahmi, Holy Basil**, and **Lion's Mane** exhibit moderate levels of both industry attractiveness and business unit strength, *indicating suitability for selective investment strategies. Within this group, Holy Basil and Lion's Mane may warrant more cautious investment, given their relatively lower industry attractiveness, primarily due to a limited volume of supporting scientific evidence*.
- **Licorice Root, Reishi Mushroom**, and **Moringa** demonstrate high business unit strength coupled with moderate industry attractiveness, *indicating strong potential for continued investment aligned with growth opportunities. Their elevated business unit strength is driven by factors such as substantial market share, high innovation potential, cost efficiency, and IP activity*.
- **Chinese Ginseng**, characterized by moderate business unit strength and high industry attractiveness, *presents a compelling case for strategic investment driven by strong growth potential. This positioning is supported by factors such as a robust body of scientific evidence, high competitive intensity, shifting consumer preferences, and favorable regulatory conditions*.

# Closing Overview

## White-Space

- ✓ As indicated by the Implementation Potential of Adaptogens, **Chinese Ginseng**, **Arctic Root**, and **Shatavari** currently **show no presence in the aromatherapy segment, based on available data. This absence may be attributed to their lack of inherent aromatic properties.** Consequently, this represents a white space opportunity, which could potentially be addressed through formulation innovations or enhancements to their aromatic profiles, enabling future integration into this segment.
- ✓ **The sleep support segment, encompassing products such as wellness mattresses and adaptogen-infused pillows, represents a promising area for future business expansion. Current evidence of application is limited to only three adaptogens - Ashwagandha, Brahmi, and Holy Basil - which reinforces the investment potential in this emerging category and highlights opportunities for targeted innovation and portfolio diversification.**

## Top Adaptogens

Based on a comprehensive analysis of the ranking matrix, **Licorice root** emerges as the top-performing adaptogen, followed by **Chinese ginseng, Ashwagandha, Reishi mushroom, Brahmi, and Moringa.**



The higher ranking of these ingredients compared to other adaptogens can be attributed to several key factors, including **higher number of scientific evidences, higher volume of IP filings, strong market growth rates and revenue share, broad spectrum of applications,** and a **recognized safety profile.**

# Why US?

---

**1**

**Our Holistic approach covers full spectrum of disruptive technologies**

**2**

**We deliver actionable insights, not merely data**

**3**

**We offer predictive analysis to proactively address potential challenges**

**4**

**Interactive Presentation with visual story-telling**

**5**

**We tailor each report for industry-specific insights**

**6**

**Future Proofing to adapt changing market conditions**

**7**

**Deep Market Intelligence & Competitive Benchmarking to uncover opportunities**

**8**

**360-degree approach for a comprehensive technology landscape**

**9**

**Distinguished Clarity and Simplicity of Report**

**10**

**We force strategic thinking, not just analysis**



## USA

99 S Almaden Blvd, Suite  
600, San Jose, CA

Ph: 13474802054



## Germany

Hahnstrasse 70,  
Frankfurt am main, 60528

Ph: 49 335 2773 4678



## India

207-208 Welldone TechPark, Sohna Road  
Sector 48, Gurugram, Haryana 122018

Ph: +91-124-429-4218



## Japan

1-12-14 Jinnan, 6F/7F/8F Shibuya  
Miyata Bldg, Shibuya-ku, Tokyo

Ph: 1 302 450 1418



## USA

8 The Green, Suite B, Dover,  
DE 19901, Delaware

Ph: 1 302 450 1418



## Our Presence

Information provided in this document is for information purposes only. Ingenious e-Brain Solutions is not by means of this presentation rendering any professional advice or services. Under no circumstances will Ingenious e-Brain Solutions or its personnel be liable or responsible for any direct, indirect, incidental, consequential, special, exemplary, punitive, or other damages, arising out of or in any way relating to the information contained herein or its interpretation thereof.



[services@iebrain.com](mailto:services@iebrain.com)  
[www.iebrain.com](http://www.iebrain.com)