

靈芝,這個擁有神秘色彩的古老養生珍品,正被現代科技不斷揭開其各項功能。近二十多年來的科學研究均證實,靈芝具有癌病、免疫系統、發炎、敏感症狀、肝臟、血糖及血壓等有一定功效。世界各國關於靈芝的研究報告亦達數百篇,這些研究結果都顯示,靈芝的養生功效,已逐一獲得科學上的證實。

Reishi has been acclaimed for its health enhancing properties since ancient times. It is believed that regular use of this herb brings longevity. Reishi has been widely used by the Chinese and Japanese for over four thousand years. Li Shi Zhen of the Ming Dynasty, China's great master of medicine, recorded in Ben Cao Gan Mu, "extended use of reishi will ensure rejuvenation, enjoying longevity like an immortal....." The Materia Medica Classic of Shengnong (Shan 1997) had also rated reishi as the crème de la crème of medicinal herb. In other words, the most majestic and noble medicinal herb with no side effects. Extended and regular consumption of reishi will greatly enhance the natural resistance of the body and result in optimum, health and longevity.

In recent years, with the help of modern technology, the therapeutic actions of this mysterious elixir trusted and loved for centuries are being uncovered. Scientific researches over the past twenty years prove that reishi has benefits on cancers, immune system, inflammation, allergies, liver, blood glucose and blood pressure. There are hundreds of research releases on reishi. As demonstrated by the consensus of these reports, the health enhancing benefits of reishi are gradually recognized by science.

#### Reference

- 1. Kenneth Jones, ed., Reishi: Ancient Herb for Modern Times, Sylvan Press, 1991, 1-33
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- Ronghua Cao, et al, Study on the antitumor activity of Ganoderma Lucidum polysaccharides, Acta Academia Medicine Shangdong 30(3): 203-206, 210, 1992
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#### 1. 較高的靈芝活性成份的生物利用率

#### Higher Bioavailablity of Reishi Active Ingredients

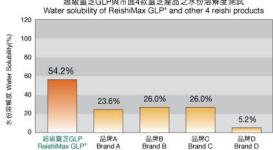
由Pharmanex上海科研中心就有關市面上靈芝產品(包括Phamanex超級靈芝GLP)進行之水 份溶解度及酒精溶解度測試,以比較所蘊含的靈芝活性成份(多醣體及三萜類)之生物利用 率,研究顯示Pharmanex 超級靈芝GLP的水份溶解度及酒精溶解度均比市面其他4款產品 為高,表示其具有更佳的靈芝之生物利用率保證。

Phamanex Shanghai Research & Development Center conducted a water and Ethanol solubility test on ReishiMax GLP® and other Reishi products on the market to compare the bioavailability of Polysaccharids and Triterpenes. According to the test results, Pharmanex ReishiMax GLP® exhibits higher water and ethanol solubility and therefore higher Polysaccharids / Triterpenes bioavailablity than the other 4 competitive products.

#### 多醣體 Polysaccharides

多醣體是由單糖結合在一起的高分子複合物,這些單糖分子透過不同的組合方式結合在一 起,形成種類繁多的多醣分子。從靈芝萃取過程中,可得到大量及不同種類的多醣體。而 這些不同結合方式的多醣體在促進人體的生理機能上均扮演著重要的角色。

Polysaccharides are compounds made up of many monosaccharides. These monosaccharide molecules bond in different ways to form a wide range of polysaccharides. When extracting reishi, different types of polysaccharides can be obtained in great numbers. Since these molecules are bonded together in different ways, they play different important roles in enhancing physiological functions.



超級靈芝GLP與市面4款靈芝產品之水份溶解度測試 Water solubility of ReishiMax GLP\* and other 4 reishi products

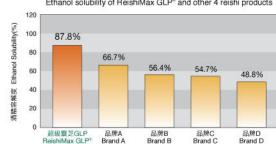
結果顯示Pharmanex超級靈芝GLP之水份溶解度(54.2%)比其他產品(5.2% - 26%)為高。多醣體屬水溶性活性成分,其水分 溶解度越高,表示其靈芝多醣體的生物利用率愈高。

Result shows that Pharmanex ReishiMax GLP\* exhibits higher water solubility (54.2%) than other competitive products (5.2% - 26%). Polysaccharides are water-soluble ingredients. Higher the water-solubility, the higher is the bioavailability of the reishi product.

#### 三萜類 Triterpenes

三萜類是導致靈芝具有苦味的主要物質。目前已發現大約有二百多種三萜類存在於靈芝中。 其他植物中亦含有三萜類,但是靈芝含有特殊三萜類(特稱為「靈芝酸」),為其他植物 所沒有。

Triterpenes give reishi its bitter taste. To date, over 200 types of triterpenes have been found in reishi, including a special type of triterpenes, Ganoderic acid, unique to reishi.



超級靈芝GLP與市面4款靈芝產品之酒精溶解度測試 Ethanol solubility of ReishiMax GLP<sup>®</sup> and other 4 reishi products

結果顯示Pharmanex超級靈芝GLP之酒精溶解度(87.8%)比其他產品(48.8% - 66.7%)為高。三萜類屬脂溶性活性成分(能於 酒精中溶解),其酒精溶解度越高,表示其靈芝三萜類的生物利用率越高。

Result shows that Pharmanex ReishiMax GLP\* exhibits higher ethanol solubility (87.8%) than other competitive products (48.8% - 66.7%), Triterpenes are oil-soluble ingredients (can be dissolves in ethanol). Higher the ethanol-solubilty, the higher is the bioavailability of Triterpenes of the reishi product.

資料來源 Source: Pharmanex上海科研中心 Shanghai Research & Development Center



#### 2. 提昇人體免疫系統功能

#### Promote a Healthy Immune System

超級靈芝GLP經台灣國立大學醫學院臨床研究中心以管餵食雌鼠方法,就服食超級靈芝GLP與未有服食超級靈芝GLP組別,在六週後 於免疫功能相關指標的差異性進行多項測試,包括先天性免疫反應及特異生免疫反應能力評估。

Several animal studies had been done on ReishiMax GLP® by the Medical Institute at National Taiwan University. One group of tested mice was tube-fed with ReishiMax GLP® extract and another group fed with placebo. Their nonspecific and specific immune responses were measured and investigated after 6 weeks of treatment.

研究結果顯示超級靈芝GLP有助促進整體免疫系統功能,包括:

Results showed that ReishiMax GLP® could enhance the overall immune functions including:

- 1. 促進巨噬細胞活性
- 2. 促進自然殺手細胞活化(見圖1)
- 促進B細胞增生,促進抗體形成(見圖2)
- 4. 調節T細胞增生,調節T細胞功能(見圖3)
- 5. 促進干擾素-γ分泌(見圖4)

- 1. Enhances phagocyte activity
- Promotes natural killer cell activity (Chart 1)
- 3. Promotes B-cells proliferation, enhances antibody formation (Chart 2)
- 4. Promotes T-cells proliferation, modulates T-cells functions (Chart 3)
- Promotes Interferon Y secretion (Chart 4)

0.6

0.4

0.2

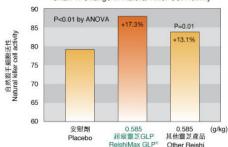
0.0

安慰劑

Placebo

免疫球蛋白 um lgG (mg/ml)

圖1:自然殺手細胞活性的改變 Chart 1: Change In Natural Killer Cell Activity



结果顯示,服用超級靈芝 GLP後,雌鼠的自然殺手細胞 活性比對照組增加17.3%; 結果亦較其他台灣靈芝產品

In relation to natural killer cell activity, ReishiMax GLP® was 17.3% more effective than placebo and was also more effective than the leading Reishi competitor in Taiwan.

Chart 2: Change in Serum Immunoglobulin G 1.6 P<0.01 by ANOVA 1.4 P=0.01 1.2 +25% 1.0 0.8

超級靈芝GLP

ReishiMax GLF

圖4:干擾素-ア分泌的改變

0.585 其他靈芝產品

Other Reishi

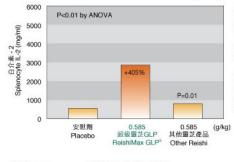
Other Reishi

圖2:免疫球蛋白的改變

結果顯示、服用超級靈芝 GLP後,雌鼠血清中的免疫 球蛋白比對照組增加25%; 而其他台灣靈芝產品亦有相 若結果。

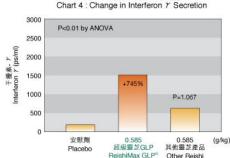
In relation to serum IgG, ReishiMax GLP\* was 25% more effective than placebo, and just as effective as the leading Reishi competitor in Taiwan.

圖3:白介素 - 2的改變 Chart 3 : Change in PHA-Induced Secretion of Splenocyte IL-2



結果顯示,服用超級靈芝 GLP後,雌鼠的T細胞激素 (白介素-2)比照組增加405%; 结果亦读超出其他台灣靈芝 產品。

In relation to IL-2, ReishiMax GLP® was 405% more effective than placebo, and was also more effective than the leading Reishi competitor in Taiwan.



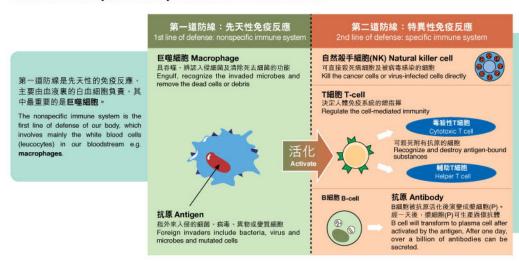
結果顯示,服用超級靈芝 GLP後,雌鼠的干擾素-ア比 對照組增加745%:結果亦 遠超過其他台灣靈芝產品。

In relation to Interferon - 7 ReishiMax GLP® was 745% more effective than placebo and was also more effective than the leading Reishi competitor in Taiwan

資料來源 Source: 台灣國立大學醫學院 Medical Institute at National Taiwan University

### 人體的免疫系統: 主要可分為兩道防線

Human Immune System: mainly divided into 2 lines of defense



第二道防線則是特異性免疫反應,是诱過淋巴細 胞來發揮免疫作用。淋巴細胞可分為兩大類別:T 細胞和B細胞。當我們被外來病原菌入侵時,首先 啟動的是先天性免疫反應,然後再誘發特異性免 疫反應,一旦先天性和特異性免疫系統同時運作 後,就可把入侵的病原一舉消滅。

Specific immune system is the second line of defense that relies on our lymphatic system comprising of two major s of lymphatic cells (lymphocytes), namely, T-cells and B-cells. When foreign microbes invade our body, nonspecific immune responses will be activated and are followed by specific immune responses. Both systems work together synergistically to get rid of the invaders.

#### 3. 有助保護肝臟功能

#### Help to Protect Liver Function

由台灣中國中醫藥學院進行有關保護肝臟的研究顯示,Pharmanex超級靈芝GLP能有助減輕小鼠肝臟受損及肝纖維化程度,有效保護肝臟。

The liver protection study conducted by Taiwan Chinese Medical Pharmaecutical University showed that ReishiMax GLP® can reduce the level of liver damage & fibrosis of mice, help protecting liver function.

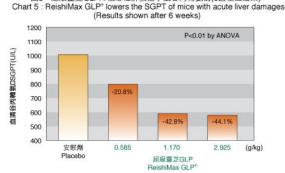
研究結果顯示,在肝臟受到損傷時,超級靈芝GLP:

The result showed that, during liver damage, ReishiMax GLP® can help to:

- 1. 可降低血清谷丙轉氨酶(GPT),保護肝臟細胞(見圖5)
- 2. 可增加血清白蛋白和肝臟蛋白質含量,增強肝臟功能(見圖6)

圖5:超級靈芝GLP降低急性肝損傷小鼠谷丙轉氨酶(6週後之結果)#

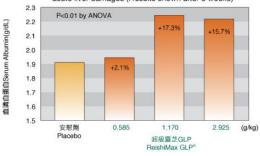
- 3. 可降低肝臟纖維化程度,使慢性肝臟受損的程度降到最低
- 1. Lower GPT in order to protect liver cells, hepatocytes (Chart 5)
- 2. Increase serum albumin to promote healthy liver functions (Chart 6)
- 3. Reduce fibrosis to minimize further chronic liver damages



#血清谷丙轉氨酶是氨基酸轉移過程中的一種酵素,其於血清內的濃度可用於診斷及研究 急性肝臟疾病。

Serum Glutamate Pyrueate Transferase is an enzyme that involved in the transamination of amino acids. High levels of this enzyme are found in the liver, and measurement of GPT in the serum (serum GPT, SGPT) is of use in the diagnosis and study of acute liver disease.

圖6:超級靈芝GLP增加急性肝損傷鼠血清白蛋白(8週後之結果)\* Chart 6: ReishiMax GLP\* increases the serum albumin of mice with acute liver damages (Results shown after 8 weeks) 2.3 2.2 +17.3% +15.7%



\*血清白蛋白乃血漿中維持血液正常渗透壓的重要元素。白蛋白於肝細胞中合成,白蛋白 無法合成是慢性肝疾病的顯微。

Serum Albumin is found in blood plasma and is important for the maintence of plasma volume. Albumin is synthesized in the liver; the inability to synthesize it is a prominent feature of chronic liver disease

資料來源 Source: Lin WC, Wu YW, Xie MC, Zhu JS. ReishiMax GLP® protects the liver and improves liver functions in an experimental hepatitis model. FASEB 2004.

#### 改善身體葡萄糖代謝機能

#### Help to improve Glucose Metabolism

由Pharmanex臨床事務及藥理中心資深總監暨北京臨床及藥理研究中心總監朱佳石博士主導,一項有關Pharmanex超級靈芝GLP對胰島素敏 感度及葡萄糖代謝的影響之研究,顯示出Pharmanex超級靈芝能有效改善身體葡萄糖代謝機能。

A research conducted by Dr. Josh Zhu, Senior Director of Clinical Affairs and Pharmacology & Director of Beijing Clinical and Pharmacology Center, examined about the effects of Phamanex ReishiMax GLP® on insulin sensitivity and glucose metabolism, showed that Reishi Max GLP® can help to improve Glucose Metabolism.

研究結果顯示,超級靈芝GLP:

The result showed that ReishiMax GLP® can help to:

- 1. 增加胰島素敏感度 (見圖7)
- 2. 改善口服糖耐量,調節血糖水平(見圖8)
- 調節高血糖水平人士之空腹血糖水平 (見圖9)
- 1. Enhance insulin sensitivity (Chart 7)
- 2. Improve oral glucose tolerance and regulate blood glucose level (Chart 8)
- 3. Lower the fasting blood glucose level of hyperglycemic people (Chart 9)

圖7:超級靈芝GLP增強胰島素敏感度 Chart 7 ReishiMax GLP® can increase insulin sensitivity

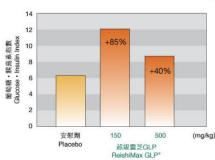


圖8:超級靈芝GLP能改善口服糖耐量 Chart 8 : ReishiMax GLP® can improve oral glucose tolerance

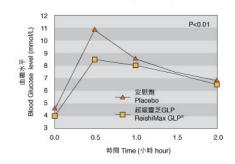
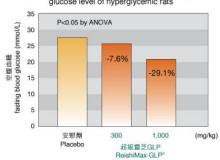


圖9:超級靈芝GLP能調節高血糖水平小鼠之空腹血糖水平 Chart 9 : ReishiMax GLP\* can regulate the fasting blood glucose level of hyperglycemic rats



資料來源 Source: Pharmanex 北京藥理及臨床研究中心 Beijing Clinical & Pharmacology Center



超級靈芝GLP乃選用透過椴木栽培法培植之上等赤芝(Ganoderma lucidum)及100%全破壁靈芝孢子精製而成。每粒超級靈芝GLP蘊含標準化13.5%多醣體及6%三萜類成分,經多項動物及臨床研究證實其卓越功效。

ReishiMax GLP® is proprietary blended with red reishi mushroom (Ganoderma lucidum) which cultivated through solid wood log cultivation and 100% reishi broken-spores. Each capsule of ReishiMax GLP® contains standardized 13.5% polysaccharides and 6% triterpenes, there are animal & clinical studies proved its exceptional benefits.

#### 成人用法

#### **Directions for Adult Use**

每天服用2次。維持正常健康人士,每次服用1粒。如欲加強免疫功能人士,則每次服用2粒。請隨飲食服用。

Take twice daily with meals. 1 capsule each time for health maintenance or 2 capsules each time for immune modulation.

#### 超級靈芝GLP的功效 Benefits of ReishiMax GLP®

- 有效促進人體免疫系統功能 Supports healthy immune system
- 有助保護肝臟功能
  Helps to protect liver functions
- 維持正常血糖水平
  Maintains novamal blood glucose level
- 有效改善睡眠質素
  Supports normal, restful sleep
- 促進身體健康
  Enhances overall well-being





#### 獲台灣2002年國家生技醫療品質獎

Won Taiwan National Biotechnology & Medical care Quality Award 2002



獲台灣行政院衛生署頒發健康食品功效認可證(衛署健康食字第A00023號), 肯定其維持人體免疫系統及保護肝臟之功效。

Received the health product license (A00023) from Taiwan Department of Health that ensure its benefits on supporting healthy immune system and Liver protection



獲中國國家食品藥品監督管理局頒發功能食品證書 – 國食字第G20050452, 肯定其增強免疫力之功效。

Received Health Food Licence (G20050452) from State Food and Drug Administration that ensures its benefit on enhancing immune system





# 常問題 Frequently Asked Questions

#### 1. 什麼是靈芝孢子?

靈芝孢子是靈芝的種子,儲存著靈芝的所有精華,然而其外 壁堅硬,不易被人體吸收,因此Pharmanex採用專有「破壁」 技術,讓靈芝孢子有效被人體吸收。

#### What is Reishi spores?

Reishi spores are seeds of the reishi and contain all the beneficial ingredients of the plant. Since they are protected by an extremely hard shell, it is difficult to be absorbed by the body. As a result, Pharmanex uses the exclusive cracking technique to break the spores so that it can be absorbed by the body.

#### 顯微鏡下放大3,000倍 Magnified 3,000 times under microscope





未破壁靈芝孢子 Non-broken reishi spores

全破壁靈芝孢子 100% broken reishi spores

#### 2. 如何選購靈芝產品?

靈芝的主要活性成分為多醣體及三萜類。然而市面上的靈芝產品由於成分濃縮及所含活性成分不同,價格上亦有所差異,所以消費 者在選購產品時,除了需要考慮靈芝種類、栽種技術及生產商的信譽外,更要比較其多醣體及三萜類等有效成分的含量及標準化成 份保證。

#### How to choose reishi products on the market?

Reishi's key ingredients are polysaccharides and triterpenes. The reishi available on the market today vary in their active ingredients' concentration. Therefore, they also vary greatly in price. When choosing a reishi product, other than the type of reishi, the cultivation method and the integrity of manufacturers, consumers should also carefully compare the standardization process as well as amount of polysaccharides and triterpenes contained in the products.

#### 3. 超級靈芝GLP比自行購買原材料在家中用水煎有什麼優點?

- 1. 方便服用
- 2. 質量保證 產品含標準化活性成分,絕不含重金屬
- 3. 蘊含100%全破壁孢子,提供最多有效成份
- 4. 具科學實證支持

#### What are the advantages of ReishiMax GLP® over traditional self-made reishi soup?

- 1. Ease of use
- 2. Quality guaranteed Standardized active ingredients and free of heavy metals
- 3. Guarantee of 100% broken-spores for optimal benefits
- 4. Supported by scientific studies

## Pharmanex「6S品質保證措施」

Pharmanex致力為消費者提供以科學方法標準化的營養補充品,為確保每一粒營養補充品皆為安全及有效,Pharmanex制 訂了嚴謹的「6S品質保證措施」,以嚴謹的製藥標準開發營養補充產品。



Pharmanex devotes to provide scientifically standardized nutritional products of proven efficacy and unsurpassed quality by applying the "6S Quality Process". It is the basis of the company's pharmaceutical approach to product development in order to maintain tight quality controls through all stages of product development.



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To learn more about the Pharmanex line of natural healthcare products, contact your Pharmanex Distributors or call Business Support Hotline at 2837 7500.

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