



## 茶綠精華素 Tegreen97®



獲台灣 2002 年國家生技醫療品質獎  
Won Taiwan National Biotechnology & Medical Care Quality Award 2002

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G20080228，肯定其抗氧化之功效  
Received Health Food License (G20080228) from State Food and Drug Administration that ensure its benefit on anti-oxidation

兒茶素及其成分比例於治療人體癌症或實體性腫瘤獲兩項美國專利 (美國專利編號：US 6,410,061及US 6,410,052)  
Received two US patents on the effectiveness as cancer specific proliferation inhibitors of catechins and formulations (US Patent no.: US 6,410,061 & US 6,410,052)

獲評為2010年度上海保建品行業名優產品  
Awarded as the Famous Products of Quality of year 2010 from Shanghai Healthcare Products



茶綠精華素是透過獨有程序製成的標準化專有配方，確保多酚類濃度一致高達 97%，並蘊含逾 65% 天然抗氧化成分兒茶素，如 EGCg 及 EGC 等，發揮最佳的天然抗氧化保健功效。每粒茶綠精華素的綠茶多酚類含量相等於七杯綠茶。

Tegreen97 is a proprietary preparation of green tea leaf extract from *Camellia sinensis*, that is standardized through proprietary methods to ensure a consistently high concentration of 97% polyphenols. It guarantees 65% catechins such as EGCg and EGC, which are among the most potent natural antioxidants. Polyphenol content found in Tegreen97 is equivalent to 7 cups of green tea.



### 膠囊形式為吸收綠茶營養素之最理想形式

一份名為「服用綠茶、紅茶及綠茶營養補充品後的生物利用率及黃酮類的抗氧化活性」之研究，以隨機及互換的方式，讓30名來自美國洛杉磯加州大學之研究人員服用以膠囊形式製成的營養補充品樣本 — Pharmanex茶綠精華素。此項研究已刊載於 <美國臨床營養學期刊> 中。

**研究結果 |** 研究指出綠茶中的生物利用率若以膠囊形式較傳統綠茶飲料高。刊載於研究中之摘錄：「相比紅茶或綠茶飲料，茶葉多酚類若以膠囊形式製成營養補充品，可增加黃酮類之吸收，以及顯著增加血漿抗氧化劑的活性」。研究負責人David Heber更指出綠茶營養補充品另一好處是，能保存綠茶之有益成分，並能免卻綠茶飲料含咖啡因之副作用。

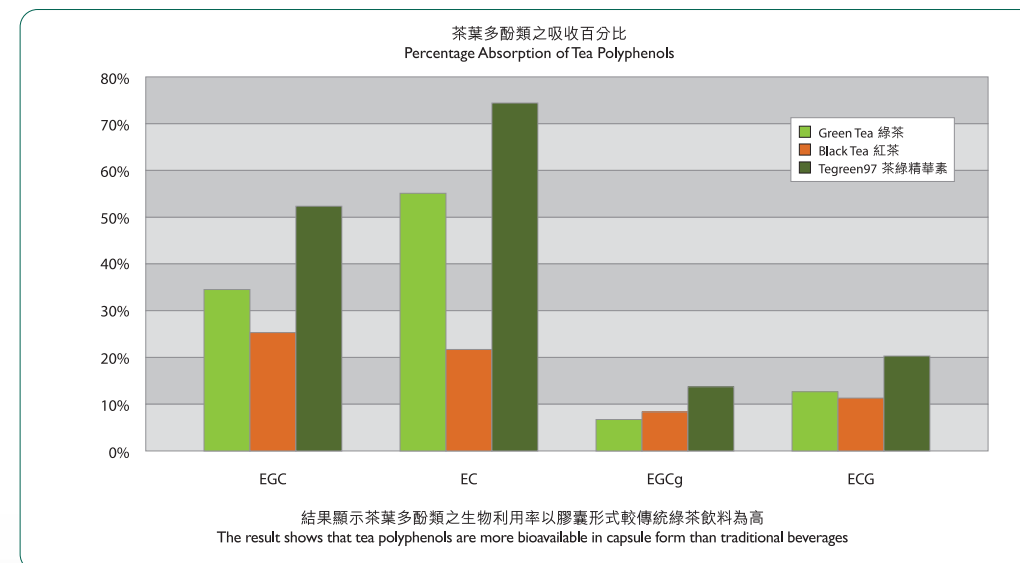
近年，綠茶經已成為多項研究之重點項目。綠茶其有效抗氧化複合物更被認為能維持正常細胞健康及功能，以及促進心臟健康。

### Capsule is an Ideal Delivery Form of Green Tea Supplements

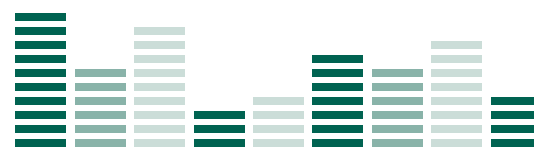
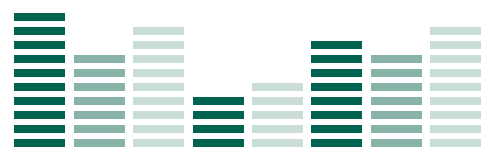
A study of "Bioavailability and antioxidant activity of tea flavonols after consumption of green tea, black tea and a green tea supplement". This study used a randomized and crossover method on 30 researchers from the University of California, Los Angeles chose to use Pharmanex Tegreen 97 as the capsule delivery method for green tea in supplement form. This study has been published in the research journal "American Society for Clinical Nutrition".

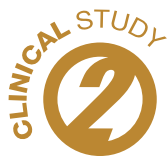
**Results |** The study indicates that tea polyphenols are more bioavailable in capsule form than when taken as a traditional beverage. An excerpt of the study from the American Journal of Clinical Nutrition stated, "Tea polyphenols are more bioavailable in capsule form than taken as a traditional beverage, black tea and green tea. The capsule form can also increase the flavonoid absorption and increase the plasma antioxidant activity." Principal investigator David Heber also stated that another benefit of the green tea supplement is to retain the beneficial effects of green tea without providing the side effects of caffeine that are associated with beverages.

Green tea has been the focus of much research in recent years and its powerful antioxidant compounds are associated with maintaining normal cell health and function, as well as promoting heart health.



資料來源Source : Henning Susanne M, Niu Yantao, Lee Nicolas H, Thames Gail D, Minutti Rosario R, Wang Hejing, Vay Liang W, Go, Heber David. Bioavailability and antioxidant activity of tea flavonols after consumption of green tea, black tea, or a green tea extract supplement. Am J Clin Nutr 2004;80: 1558-64

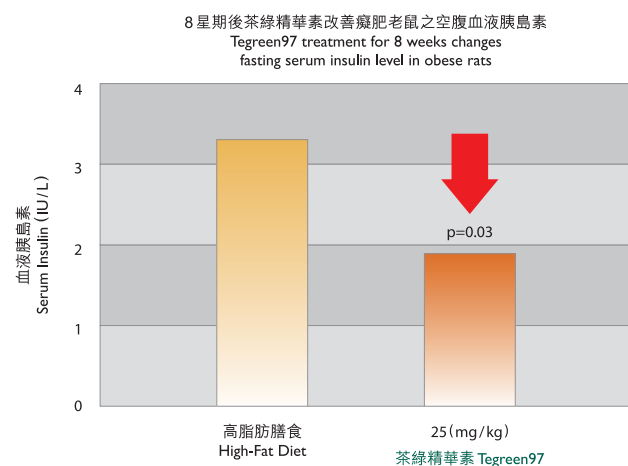




## 茶綠精華素對代謝異常候群症的幫助之研究結果 於美國生理學會年會發表及選載於其新聞稿中

由Pharmanex北京臨床及藥理中心就有關茶綠精華素對代謝異常候群症<sup>#</sup>進行的研究結果很榮幸能於美國生理學會\*年會中發表。美國生理學會年會為業界權威性的盛會，參予者乃來自世界各地超過1萬位頂尖科學家，而於會中發表的數千份研究報告中，只有少於5%的最優秀研究結果會被選載於其發表之新聞稿中，而Pharmanex茶綠精華素的研究很榮幸能成為其中一份被選載於新聞稿中的報告，再次證實Pharmanex背後的強大科研實力。

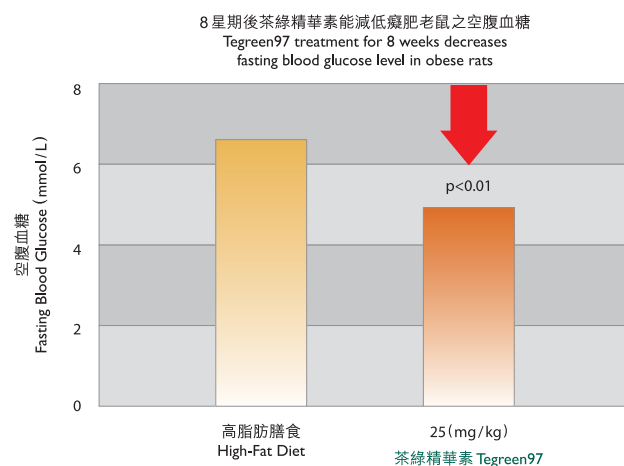
**研究結果 |** 吸取過量卡路里是導致代謝異常候群症的主因。醫生普遍建議從減肥、運動及均衡飲食三方面進行有關治療。然而，實驗證明，服用萃取自綠茶葉、含65%以上天然抗氧化兒茶素之茶綠精華素能有效促進葡萄糖及脂質代謝、增強胰島素敏感度、調節脂肪儲存及脂肪燃燒代謝，以減低導致代謝異常候群症之病根。



## Study of Tegreen97's Help on Metabolic Syndrome X Presented at APS's Annual Conference & Press Release

A Tegreen97 Study, "Tegreen97 improves glucose and lipid metabolism in obese rats have features similar to Metabolic Syndrome X<sup>#</sup>", conducted by Pharmanex Beijing Pharmacology Center was honored to be presented at The American Physiological Society's (APS)\* annual conference. The conference was attended by 10,000 scientists around the world. Furthermore, among the thousands of studies submitted for presentation at the conference, only the best studies (less than 5%) were selected for a press release and we are proud to be one of the studies covered in their press release. These credentials once again proved the strong scientific backup of Pharmanex.

**Results |** Excessive calorie intake is one of the root causes of Metabolic Syndrome X. Consequently, Physicians usually prescribe weight loss, exercise and a healthy diet to combat it. A new weapon might eventually be added to the arsenal: consumption of Tegreen97, a tea polyphenols product containing over 65% tea catechins, derived from the green tea leaf. This study reveals that Tegreen97 is capable of improving glucose and lipid metabolisms, enhancing insulin sensitivity, balancing the metabolic rate of fat deposit and fat burning, presumably touching one of the pathological root causes of this potential deadly syndrome.



<sup>#</sup>代謝異常候群症指一般會導致心臟病之危險因素，包括腹部脂肪積聚、低密度膽固醇偏高、高血壓及葡萄糖代謝失調；這些危險因素有機會導致死亡。  
Metabolic Syndrome X, a term used to describe a group of heart disease risk factors, including high levels of abdominal fat, bad cholesterol, high blood pressure, and abnormal glucose metabolism, can kill.

\*美國生理學會(APS)於1887年成立，乃全球最權威之醫生及科學家組織，致力研究人類之生理過程、身體功能及疾病。至目前為止，APS已擁有超過1萬位會員，並每年於14份同業期刊中發表超過3,800份文章及報告。

The American Physiological Society (APS) founded in 1887 is one of the world's most prestigious organizations for physiological scientists. These researchers specialize in understanding the processes and functions underlying human health and disease. It has more than 10,000 members and publishes over 3,800 articles in its 14 peer-reviewed journals each year.

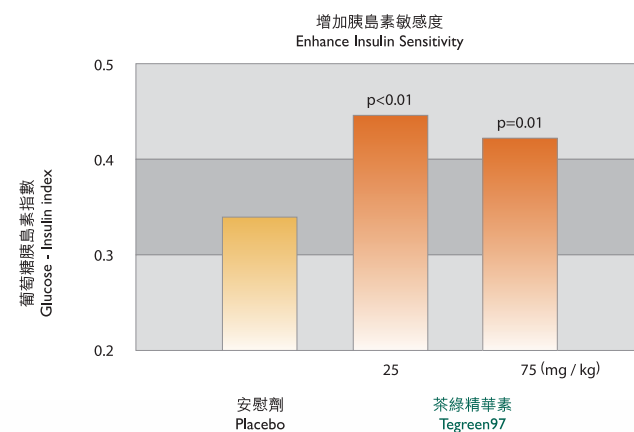
資料來源 Source: Jia Shi ZHU, et al. FASEB J. 2003; 17(4):A318



## 研究發現Pharmanex茶綠精華素有助改善葡萄糖脂質新陳代謝

一項由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，測試有關Pharmanex茶綠精華素對胰島素敏感度及改善葡萄糖脂質新陳代謝，以及綠茶營養補充品對減重、減少腹部脂肪及抑制血管之形成與分化的影響，已於美國華盛頓舉行之美國心臟協會第6屆年會上發表。血管之形成與分化乃引致不正常細胞形成的主要過程，以及被認為是導致體重過重的重要因素。

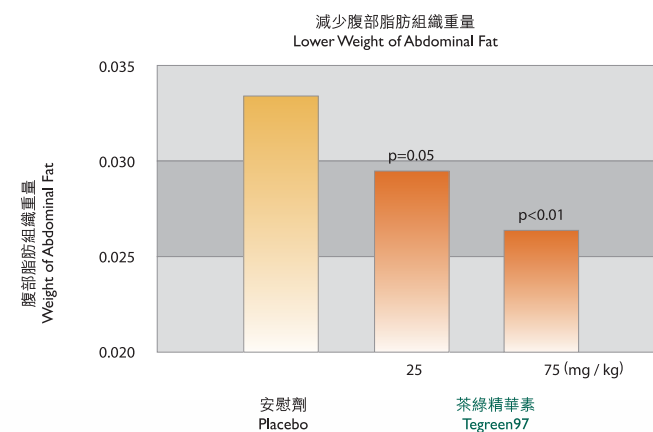
**研究結果 |** 研究結果發現，Pharmanex茶綠精華素可有效增加胰島素敏感度、控制血糖水平、及加速脂肪燃燒以減少腹部脂肪積聚。研究更再次證實綠茶兒茶素具有保護細胞以促進心血管及腦部健康之功效。



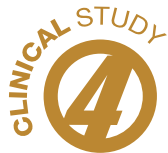
## Study Finds Pharmanex Tegreen97 May Improve Glucose-Lipid Metabolism

A research conducted by Dr. Josh Zhu, Senior Director of Clinical Affairs and Pharmacology & Director of Beijing Clinical and Pharmacology Center, examined the effects of Tegreen97 in enhancing insulin sensitivity and improving glucose-lipid metabolism. In addition, the research examined the effects of the proprietary green tea supplement in lowering body weight, reducing abdominal fat and inhibiting angiogenesis, which is the formation and differentiation of blood vessels, a key pathological process in the development of abnormal cells. Angiogenesis is also hypothesized to play an important role in being overweight. The findings were presented at the American Heart Association's Sixth Annual Conference in Washington D.C..

**Results |** The study found that Pharmanex Tegreen 97 can increase insulin sensitivity, control blood glucose level and promote thermogenesis in order to reduce abdominal fat accumulation. It also reiterated the cell protection benefits of green tea catechins in promoting cardiovascular and brain health.







#### 兒茶素有助抑制異常細胞增長

一項以Pharmanex茶綠精華素作樣本之研究 — 「兒茶素抑制細胞增長因子NADH Oxidase及異常細胞之生長」，證實兒茶素有助抑制異常細胞的增長，提供了更多綠茶對身體健康具有裨益的實證。這項研究已刊登於一份權威之生物化學及藥理期刊 ( Biochemical Pharmacology ) 中。

**研究結果 |** 於這項研究，茶綠精華素分別加入正常細胞系(MCF-10A)及基因突變細胞系(BT-20及HeLa)中。**研究結果指出綠茶中的兒茶素EGCg通過抑制細胞增長因子NADH Oxidase，從而促進基因突變細胞的死亡，但仍能維持正常細胞的健康及功能。**

#### EGCg Helps Inhibit Proliferation of Abnormal Cells

A study, "Preferential Inhibition by (-)-Epigallocatechin-3-Gallate of the Cell Surface NADH Oxidase and Growth of Transformed Cells in Culture", that using **Pharmanex Tegreen97 as study materials demonstrated that EGCg helps inhibit the proliferation of abnormal cells**, and has provided more evidences showing the health benefits of green tea. This study has published in the research journal, "Biochemical Pharmacology".

**Results |** In this study, Tegreen97 was added to mammary epithelial cell (MCF-10A) and transformed cells (BT-20 and HeLa). **Results showed that EGCg from green tea is capable to inhibit the growth of transformed cells and retain the health and function of healthy cells through the inhibition of NADH Oxidase.**

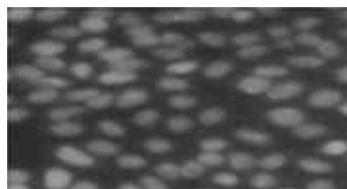
不加茶綠精華素  
Without adding Tegreen97

加茶綠精華素  
Adding Tegreen97

MCF-10A  
(正常細胞系)



BT-20  
(基因突變細胞系)



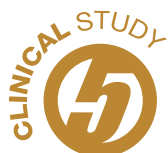
HeLa  
(基因突變細胞系)



**結果發現兒茶素EGCg有助促進基因突變細胞的死亡，但仍能維持正常健康細胞之功能**

Study showed that EGCg from green tea is capable to inhibit the growth of transformed cells and retain the function of healthy cells

資料來源 Source: Morre James, Bridge Andrew, Wu Lian-Ying, Morre Dorothy M. Preferential Inhibition by (-)-Epigallocatechin-3-Gallate of the Cell Surface NADH Oxidase and Growth of Transformed Cells in Culture. Biochemical Pharmacology, Vol.60, pp. 937-946, 2000.



#### 研究證實茶綠精華素有效增加皮膚彈性組織含量

一項由美國史丹福大學醫學院主導，就有關口服及外用綠茶精華對皮膚質素的影響進行研究。研究以隨機及雙盲的方式，將40位女性分為2組。第一組女性連續8星期每天使用含有10%綠茶成分之潤膚霜及服用300毫克Pharmanex茶綠精華素，第二組則為安慰劑組別。

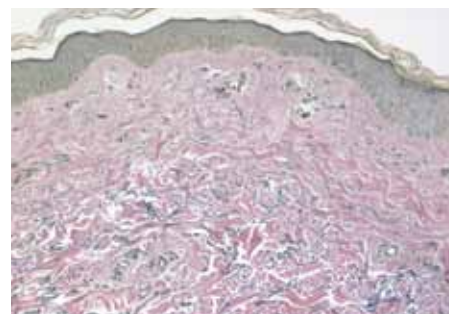
**研究結果 |** 研究結果顯示，使用蘊含綠茶成分護膚品及營養補充品的組別，其皮膚彈性組織含量評級平均增加 0.2。而安慰劑組別，其皮膚彈性組織含量評級則平均下降了0.55。此項研究證實，Pharmanex茶綠精華素有效增加皮膚彈性組織含量、預防彈性蛋白的流失，從而預防肌膚老化。

#### Study Finds Tegreen97 Can Increase Skin Elastic Tissue Content

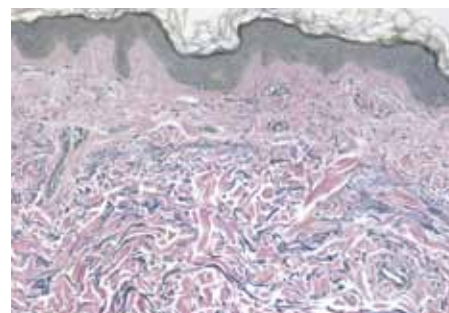
A clinical study about green tea extract can improve the skin elastic tissue content was conducted by Medicine Faculty of Stanford University. The study was performed as a double-blinded, placebo controlled trial. 40 healthy women were assigned to 2 different groups. The first group was assigned to use 10% green tea extract cream and take 300mg Pharmanex Tegreen97 daily for 8 weeks. The second group was placebo group.

**Results |** Result showed that the group which used green tea extract cream and supplement had a 0.2 increment in the elastic tissue content grading. Conversely, the elastic tissue content grading of the placebo group decreased 0.55. This study proves that Pharmanex Tegreen97 can increase the elastic tissue content and prevent elastin degradation in order to help fighting the aging process from inside out.

皮膚彈性蛋白含量  
Skin Elastin Content



使用前  
Before



使用後  
After

資料來源 Source: Annie Chiu, BS<sup>1</sup>; Wingfield E. Rehmus, MD<sup>1</sup>; Dale Kern, BS<sup>2</sup>; Sabine Kohler, MD<sup>1</sup>; Alexa B. Kimball, MD, MPH<sup>1</sup> Stanford University<sup>1</sup>, Nu Skin International, Inc.<sup>2</sup>

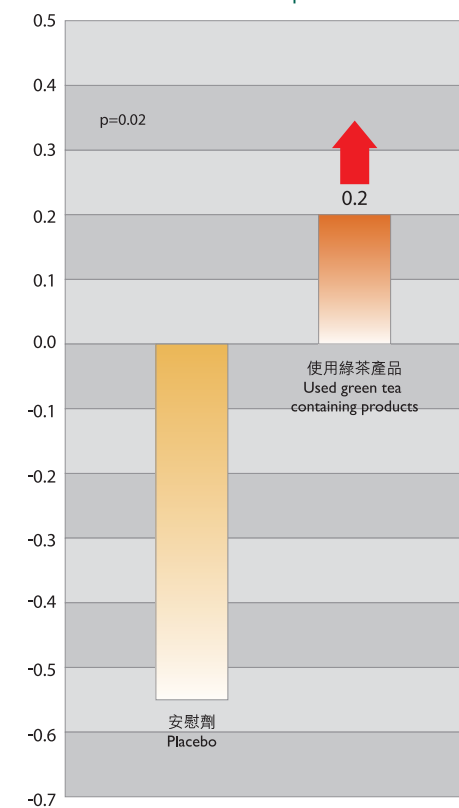


#### 研究證實茶綠精華素有效促進皮膚健康

一項由Nu Skin科研團隊與美國史丹福大學醫學院皮膚學系及病理學系的科學家主導，就綠茶對肌膚光致老化問題的影響進行歷時兩年的研究，讓56名年齡介乎25 至 75 歲的女性於兩年內每天服用2粒茶綠精華素或安慰劑，並由皮膚科醫生觀察其肌膚的健康狀態。研究結果已刊載於＜皮膚學外科期刊＞中。

**研究結果 |** 研究結果發現，47%服用茶綠精華素人士組別的皮膚光致老化問題獲得中至高度改善。另外，長期補充茶綠精華素的人士，肌膚狀況明顯改善，顯示茶綠精華素之成分可有助收細毛孔、提升肌膚均勻度、減低小血管於肌膚表面的明顯度及日光傷害度。

皮膚彈性組織含量級別  
Mean Elastic Tissue Improvement Grade



#### EGCg Helps Inhibit Proliferation of Abnormal Cells

A 2-year clinical study about green tea can improve photoaging skin was conducted by Nu Skin Scientific Research team and Department of Dermatology & Department of Pathology of Stanford School of Medicine. 56 healthy women aged from 25 to 75 consumed 2 capsules of Tegreen97 or placebo daily for a two-year period and a Dermatologist had monitored their facial skin condition. This study is published on "Dermatological Surgery Journal".

**Results |** Results show that 47% of individuals within the Tegreen97 group had moderate to great improvements in photoaging. Besides, individuals under long term Tegreen97 supplementation have significant skin condition improvement including reduction in pore size, increased skin evenness, reduced visibility of small blood vessels on the skin surface and decreased solar damage.

臨床研究使用前後照對比  
Clinical Study Before / After Photography Comparisons



圖一：肌膚所受的日光傷害度減低  
Chart 1 : Reduced solar damage on skin



圖二：肌膚上的紅斑及表面小血管明顯度減低  
Chart 2 : Reduced erythema and visibility of small blood vessels on skin surface

