# SABINSA CORPORATION



- Pharmaceuticals
- Phytochemicals
- Fine Chemicals
- Herbal Extracts
- Cosmeceuticals
- Specialty Chemicals

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www.sabinsa.com

#### COSMETICS CORNER

#### pTeroWhite®

A natural skin lightening ingredient containing 90% Pterostilbene from a natural source, Pterocarpus marsupium.

Pterostilbene (3,5-dimethoxy-4-hydroxy-*trans*-stilbene) is a stilbenoid derivative and is a structural analog of Resveratrol.



With significant antioxidant and anti-inflammatory effects, pTeroWhite<sup>®</sup> also shows marked anti aging effects. Its UV protection potential is comparable to that of Resveratrol.

**lero**₩ pterostilbene

kojic

Laboratory studies revealed its healthful role in offering protection against damage by ultraviolet radiation. The antioxidant activities of pTeroWhite®, resveratrol and acid were comparable by DPPH (2,2-Diphenyl-1-Picrylhydrazyl)) method. pTeroWhite®

pTeroWhite® has niche specialty for use in cosmetic and personal care applications that involve anti-oxidant, anti-inflammatory, skin lightening and anti-aging potentials.

pTeroWhite® is safe for use in cosmeceutical compositions. The primary skin irritation potential was found to be zero, validating the safety of pTeroWhite<sup>®</sup> for topical use. At 0.1 - 0.5% w/w in cosmetic compositions, pTeroWhite® is more efficacious than Resveratrol, in supporting skin texture and tone.

for more visit : www.sabinsa.com/pterowhite

also perceptly inhibits melanin formation.

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# Sabinsa On Wheels (SOW) One day seminar on Inflammation

In continuation of our tradition, this year Sabinsa Australia hosted Sabinsa on Wheels (SOW) program in Sydney, against beautiful backdrop of Manly beach at Novotel, on 26th October 2011.

Delegates at the Sabinsa on Wheels

This one day session was attended by delegates from a cross section of Australian Health industry. The guiding theme for this year's program was Inflammation. The panel of Speakers included Dr. Majeed, Founder and Managing Director of Sami/ Sabinsa group, Dr. Luis Vitetta Associate Professor & Director of Centre for Integrative Clinical and Molecular Medicine, Queensland University, Dr. Kalyanam and Anurag from Sabinsa NJ and Dr. Golombick from St. George Hospital, Sydney (NSW). The delegates and speakers were welcomed by Sabinsa Australia team including Mr. John Tilyard, Mr. Vijay Rane, Ms. Deborah Guimaraes & Janet Gong.



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"Sabinsa on Wheels" was opened by Dr. Vitetta with a thought provoking lecture on inflammation as the underlying cause of numerous disease conditions. This was followed by Dr. Majeed's account of the recent developments and innovations at Sabinsa through his corporate presentation. He particularly emphasized on Sabinsa's commitment towards sustainable cultivation of medicinal plants to save them from extinction. Dr. Kalyanam provided an interesting look into anti-inflammatory activity of Curcumin  $C^3$  Complex, followed by Dr. Golombick, who spoke on possible role of Curcumin C<sup>3</sup> Complex in MGUS patients under clinical setting.

Post lunch session opened with Dr. Kalyanam's presentation on Boswellin as a powerful alleviator of chronic inflammation. Dr. Anurag spoke about possibilities of food fortification with anti-inflammatory nutrients which elicited interesting participation from the attentive audience. Dr. Majeed provided the audience an insight to the research and analytical capabilities of Sabinsa group and showcased some of the most advanced research tools in the field used by scientists working at Sabinsa.

This year's Australian SOW was a success in delineating the science behind the successful ingredients.



Dr. Kalyanam explaining the benefits of Curcumin to the udience



**OUR INNOVATION IS** YOUR ANSWER® info@sabinsa.com

#### SABINSA SHOWS

**America's Beauty Show** January 3-5 Illinois, USA

> Nutracon January 7-8 Anaheim, USA

Natural Products **Expo West** January 9-11 Anaheim, U.S.A

**Beauty International** January 9-11 Dűsseldorf, Germany

> **In-Cosmetics** April 17-19 Barcelona, Spain



#### Visit Sabinsa's Websites

www.sabinsa.com www.aguasolextracts.com www.bacopin.com www.bioperine.com www.boswellin.com www.curcuminc3complex.com www.forslean.com www.gugulipid.com www.garcitrin.com www.lactospore.com www.saberry.net www.seleniumselect.com www.silbinol.com www.tetrahydrocurcuminoids.com www.venocin.com

#### PRESS RELEASES

# Sabinsa At Supplyside West: New Products Featured, Sustainable Coleus Cultivation Highlighted

*October 11, 2011-* Sabinsa Corporation highlighted innovative products at SupplySide West, at the Sands Expo Center, Las Vegas October 12 - 13, 2011.

#### Pterostilbene and Curcumin are two ingredients whose demand is heating up, fueled by positive research into their health benefits:

- Pterostilbene: In response to customer request, synthetic 99% pterostilbene from Sabinsa is now available. Silbinol<sup>®</sup>, Sabinsa's natural version, will continue to be available for customers who prefer naturally sourced ingredients. Visit the booth to see Sabinsa's Sustainability Document, describing the company's sustainable, natural source of pterostilbene.
- Sabinsa's Curcumin C<sup>3</sup> Complex<sup>®</sup> is often referred to as the most superior of curcumin extracts. The name  $C^3$  Complex reflects its three main chemical compounds - Curcumin, Demethoxycurcumin and Bisdemethoxycurcumin - collectively known as Curcuminoids. Research shows C<sup>3</sup> Complex, patented for its unique composition ratio and use, offers consumers a wide range of health benefits. Due to its broad positive impact on many physiological activities in the body,  $C^3$  Complex is the first of its kind in a category of nutrients Sabinsa described in 1995 as a "Bioprotectant." Perhaps better understood as a "Super Anti-oxidant," C<sup>3</sup> Complex provides optimal protection and integrity to biological systems. With its self-affirmed GRAS status,  $C^3$  Complex enters the functional food market with defined categories.

# In the probiotic + fiber category, Sabinsa showcases its synbiotic:

 LactoWise<sup>®</sup> is a synbiotic, a proprietary composition containing beneficial human intestinal microorganisms and a source of dietary fiber for promoting gastrointestinal health. LactoSpore<sup>®</sup>, Sabinsa's shelf-stable probiotic, is combined with Fenumannans<sup>®</sup>, the soluble fiber fraction from the dietary fiber component of Fenugreek seeds. In a set of experiments, sporulation of LactoSpore<sup>®</sup> was noticed within 45 hours of incubation in the presence of Fenumannans<sup>®</sup> as the carbon source. On the other hand, there was no sporulation noticed even after 138 hrs of incubation with GOS as the carbon source.

 Sabinsa Manufacturing, a division of Sabinsa Corporation, now offers an innovative selection of Integrated Nutritional Composites<sup>™</sup> (INC): bi-layered, multi-release nutritional compositions targeting specific health maintenance needs. Carefully formulated, these compositions deliver stable dosage forms of actives that may not otherwise be compatible, or are difficult to formulate. These ready-made formulations, many of which include Sabinsa's science-based patented ingredients, are available in high demand categories such as weight management, heart health and joint support.

#### Cosmeceuticals are growing in popularity globally, and Sabinsa has been a category innovator since the beginning. Products featured include:

- SabiWhite<sup>®</sup> skin whitener and antioxidant 95% Tetrahydrocurcumin, supported by a clinical study.
- pTeroWhite<sup>®</sup> At a suggested level of 0.1-0.5% w/w in cosmetic formulations, pTteroWhite<sup>®</sup> offers antioxidant and anti-inflammatory (anti-aging) support, lightens skin tone; supports dyschromia management, and is a valuable adjunct to sun-care and after sun-care compositions. Laboratory studies revealed its healthful role in offering protection against damaging ultraviolet radiation.

**Sabinsa's Coleus Sustainability Program:** A slide was presented describing Sabinsa's extensive cultivation programs for growing the highest quality coleus. Sabinsa pioneered the use of coleus when the company introduced ForsLean<sup>®</sup> nearly a decade ago, and owns a number of patents on it. Sabinsa has developed partnerships with farmers in several parts of the world in order to ensure product supply will meet customer demand while improving the quality of life of farmer partners and their families.

# WHEN TWO

...they work in unison. Sabinsa offers a selection of carefully formulated, sustained release, bilayered nutrient compositions targeting specific preventive health maintenance needs. Integrated Nutritional Composites™ (INC) technology delivers stable dosage forms of actives that may otherwise be incompatible in co-formulation or difficult to formulate. Contact Sabinsa for more information on ready made formulations, such as weight management, heart health and joint support. INC will bring everything together.

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# WHEN TWO BECOME ONE



for human nutrition and one in which people could be deficient.

L-selenocysteine is the 21st natural amino acid, a selenium containing amino acid, that is a constituent amino acid in several important enzymes including anti-oxidant enzymes such as glutathione peroxidases in the body. The selenium containing nutrients contribute to the biosynthesis of selenoenzymes in the body and selenoamino acids have anti-cancer and other useful properties.

The small peptides disclosed in the patent are more water soluble and practically devoid of smell. They are expected to have medicinal and cosmeceutical uses modulating the activities enzymes like vascular endothelial growth factor and 5-alpha reductase etc. Some of the selenium containing peptides described in the patent also occurs naturally in plant kingdom.

A leading player in selentium research and sales of selenium based products for many years, Sabinsa continues to innovate and introduce new selenium products in nutrition and cosmetics. The other major products include SeleniumSeLECT<sup>®</sup>, SelenoForce<sup>®</sup>, and Methyselene<sup>®</sup>. The newer products PeptiSeLect<sup>®</sup> & PeptiSelene<sup>®</sup> (http://www.sabinsa.com/products/ nutritional-fine-chemicals/peptiseLect/) will add versatility to Sabinsa's selenium products range.

#### Sabinsa's BioPerine<sup>®</sup> Validated In Resveratrol Pre-Clinical Study

August 16, 2011- A study published in the August Volume of Molecular Nutrition & Food Research (Special Issue: Resveratrol - Current Status and Outlook) entitled Enhancing the bioavailability of resveratrol by combining it with piperine, found that the absorption of resveratrol was significantly increased when combined with piperine (black pepper extract) in lab mice. The resveratrol used in the study was Sabinsa's Resvenox® and the piperine used was Sabinsa's patented ingredient BioPerine®.

Poor bioavailability and rapid metabolism of resveratrol, one of the most touted natural compounds for human

health and nutrition in recent times, is considered a major barrier in humans receiving the significant health benefits of resveratrol that have been found in mouse studies, with prohibitively large amounts needed for humans to realize the health promoting effects.

The study, conducted at the University of Wisconsin by Jeremy J. Johnson, Minakshi Nihal, Imtiaz A. Siddiqui, Cameron O. Scarlett, Howard H. Bailey, Hasan Mukhtar and Nihal Ahmad found that piperine significantly increases the bioavailability of Resveratrol by 229%. The maximum serum concentration for Resveratrol occurs at 0.25h with piperine and it is enhanced by 1544%. These results have led the researchers to speculate that this bioavailability enhancing effect of piperine will translate into lower amounts of Resveratrol being needed. These results have encouraged the researchers to plan a Phase I study using Resveratrol-Piperine combination. While piperine enhances the bioavailability of resveratrol, it decreases slightly the bioavailability of its major metabolite.

# Sabinsa Awarded Damages By **US District Court:**

#### Creative Compounds Ordered To Pay

#### For ForsLean<sup>®</sup> Trademark Infringement

August 08, 2011- Sabinsa Corporation has been awarded damages for Creative Compound's ForsLean® trademark infringement by the US District Court of New Jersey. Creative Compounds was ordered to disgorge its profit of \$139,388.40 from their sales of the infringing product and to pay those disgorged profits to Sabinsa.



On January 10, 2011, the US Supreme Court denied Creative Compounds' request to review the July 2010 decision of the Third Circuit Court in Sabinsa's favor. The Third Circuit ruled that Creative Compounds infringed Sabinsa's "Forslean" trademark because Creative Compounds created a likelihood of confusion between ForsLean and Creative Compounds' Forsthin, both of which refer to Coleus forskohlii extract.

James H. Hulme, Esquire of Arent Fox LLP in Washington, DC, who represented Sabinsa in this case, said "The district court's final order requiring Creative Compounds to disgorge all of its profit from its sale of 'Forsthin' should serve as a warning to those who are tempted to trade upon Sabinsa's good name and intellectual property. At the end of the day, infringers will have to pay for their infringement. The court's order demonstrates that ultimately there is no profit in being an infringer."

#### **PEOPLE's CORNER**

#### Enkhmart Dudleenamjil, M.D., Ph.D.



August 17, 2011- Sabinsa Corporation announces Enkhmart (Michelle) Dudleenamjil M.D., Ph.D. has joined the company as Manager -Technical Services. She will be based in the Sabinsa, Utah office.

Michelle obtained her Doctor of Medicine degree from the Health Sciences University of Mongolia in Ulaanbaatar. She received her Ph.D. in Microbiology from Brigham Young University, Utah. Michelle worked as an Assistant Professor at the Health Sciences University of Mongolia. Her studies were conducted in virology, including epidemiological studies of endemic viral infections in Mongolia and virus uptake by the host cell. As part of Sabinsa's Scientific Research team, she will be involved in designing and developing new products and

sources, and presentingSabinsa's innovative, proprietary ingredients to the Nutraceutical and Cosmetics community.

"Michelle's education and experience will be an excellent addition to the Sabinsa scientific team," said Sabinsa Founder Dr. Muhammed Majeed. "We look forward to introducing her to our customers at trade shows and company science presentations."

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"This battle has taken a very long time to resolve, but we were confident that the courts would indeed confirm our ownership of this trademark and the similarity of the infringing company's mark," said Sabinsa founder Dr. Muhammed Majeed. "We will always stand firmly behind our intellectual property to protect our investment and that

that

# of our customers."

#### Reza Kamarei, Ph.D.



August 10, 2011- Sabinsa Corporation announces that Dr. Reza Kamarei has joined the company as Vice President of Science & Technology. He will be based in the New Jersey office.

Dr. Kamarei received his M.S. and Ph.D. in food science & technology from Massachusetts Institute of Technology (MIT). He has worked for companies such as Clintec Nutrition (a Joint Venture between Nestle and Baxter) and National Starch in R&D management capacities. Dr. Kamarei was Senior Manager, Nutritional Juices and Product and Ingredient Sciences with Coca-Cola North America where he developed neutralized fruit juice technology which was the basis of Coca-Cola's 2008 top R&D prize for innovative products. From March 2009 until joining Sabinsa, Dr. Kamarei provided R&D and management consulting services to national & global companies in the areas of functional ingredients, nutraceuticals, nutritional foods & beverages, dietary supplements and medical foods. Dr. Kamarei is inventor and co-inventor of more than twenty patents and author of numerous peer-reviewed papers.

"We are pleased to have Dr. Kamarei on our scientific staff, not only for his educational background but for his track record of innovation and experience in all of the sectors in which Sabinsa's products are sold," said Sabinsa Founder Dr. Muhammed Majeed.

## Sabinsa introduces Integrated Nutritional Composites<sup>™</sup> (inc) Bilayered Tablets

*August 02, 2011-* Sabinsa Manufacturing, a division of Sabinsa Corporation, now offers an innovative selection of Integrated Nutritional Composites<sup>TM</sup> (INC): bilayered, multi release nutritional compositions targeting specific health maintenance needs.

Carefully formulated, these compositions deliver stable dosage forms of actives that may not otherwise be

compatible or are difficult to formulate. These ready-made formulations, many of which include Sabinsa's science based patented ingredients, are available in high demand categories such as weight



management, heart health and joint suppot.

INC offers great flexibility in that customers can work with Sabinsa's expert staff to tweak the existing formulas, come up with brand new formulas for the INC's, or launch the existing offerings "right out of the box." Those include:

- Blood Sugar Support INC Actives: Silbinol<sup>®</sup> (pterostilebene 5%, 30% or 90%), Cinnamon extract, Zinc Monomethionine, BioPerine<sup>®</sup> (blackpepper extract)
- Weight Management INC Actives: ForsLean<sup>®</sup> (coleus forskohlii), GarCitrin<sup>®</sup> (Garcinol, Garcinia cambogia), BioPerine<sup>®</sup> (black pepper extract)
- Heart Health INC Actives: Policosanol, Niacin
- Health Health + INC Actives: L-Carnitine, Beetroot Extract, Policosanol, Niacin
- NiLitis<sup>™</sup> SR INC Actives: Boswellin<sup>®</sup> (Boswellia serrata), Curcumin C<sup>3</sup> Complex<sup>®</sup> (curcuminoids 95%), Ginger extract

For more information please visit: www.sabinsa.com/inc

#### Terminalia arjuna Extract for Heart Health

A natural cardiovascular support ingredient containing 0.5% Arjunolic acid, a triterpenoid saponin obtained from *Terminalia arjuna* bark.

It is an emerging phytonutritional approach to support normal cardiovascular functions, with a history of traditional use in single and mixed formulations.

The alcoholic extract of the bark powder of *Terminalia arjuna* in rabbit induces myocardial heat shock protein (HSP) 72 and augments myocardial endogenous antioxidants, without causing any cellular injury and offers better cardioprotection against oxidative stress associated with myocardial Ishchemia-reperfusion injury. Heat shock proteins (HSP) are a group of inducible or constitutive proteins with well established cardioprotective properties.

*Terminalia arjuna* extract (500 mg daily for two weeks) when administered orally, was found to significantly modulate endothelial functions in smokers.

On oral administration of ethanolic extract of *Terminalia* arjuna bark administered at 500mg/kg body weight in rats for 30 days, there was significant decrease of blood glucose from 302.67mg/dL  $\pm 22.35$ mg/dL to 82.50mg/dL  $\pm 04.72$ mg/dL, decrease in the activities of fructose-1,6-disphosphatase, glucose-6-phosphatase, aldolase and an increase in the activities of phosphoglucoisomerase and hexokinase in tissues, when the orally.

Arjunolic acids are known to have anti-inflammatory properties with a potentially beneficial role in healthy aging, in internal use as well as topical (cosmeceutical) applications.

# Sabinsa Receives Top Pharmexcil Award

**October 5, 2011-** Sabinsa Corporation has received the top Pharmexcil Patent Award for 2010 - 2011 in the Herbals, Ayurveda Nutraceuticals category. The Award was presented during the "Pharma CEOs Conclave" organized by the Phaemaceuticals Export Promotion Council (Pharmexcil) and sponsored by Department of Commerce Industry, Government of India.

Pharmexcil is a ministry set up by the Government of India as a gateway to global pharma trade. The awards honor those companies that excel in developing proprietary products that are granted patents throughout the world. Since the company's founding, Sabinsa Corporation has secured nearly 70 patents globally.

"It's an honor to be commended by this Phaemexcil award," said Sabinsa founder Dr. Muhammed Majeed. "We appreciate this recognition of Sabinsa's success in securing patents for the products we've innovated and developed."

# Sabinsa Corporation International Food Standard Certification Reissued

#### international featured



September 22, 2011- Sabinsa Corporation's Utah facility has been audited and International Food Standard (IFS) certified by Det Norske Veritas (DNV) for the second year. This certification is part of Sabinsa's program to meet their customer's QA needs, wherever in the world they may be located.

Benoit LeGall (Ph.D., MBA), the Quality Control Manager for Sabinsa's Utah Facility, said "We are proud of this achievement which demonstrates the high standards of the Sabinsa Utah team. This also illustrates Sabinsa's commitment to our customers that we will not compromise on quality and we will deliver the very best." The IFS certification is a leading global food safety and quality standard for auditing food processing facilities and facilities that pack loose food products. The IFS standard was developed by the retailers in Europe to define the common needs of food safety at both the retailer and supplier level and is now used around the world. A practical, yet stringent standard, IFS is widely accepted by retailers in North and South America, Europe, Africa and Asia including Wal-Mart, Carrefour, Metro, and others.

# Sabinsa Global Expansion Continues: Opens Offices In Korea

September 21, 2011- Sabinsa continues the company's global expansion with the opening of offices in Seoul, South Korea. The new office joins Sabinsa locations covering much of the world including Sabinsa Europe, China, Australia, South Africa, Japan, two US offices and seven facilities in India devoted primarily to R&D and manufacturing.

Sabinsa founder Dr. Muhammed Majeed said "South Korea is a growing marketplace for health and nutrition, and we are confident that this new location will continue Sabinsa's rapid global expansion."

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# Sabinsa Granted Patent: Selenium Containing Dipeptides

September 07, 2011- The US patent (# 8,003,614 B2) deals with the process of manufacturing pharmaceutical and cosmeceutical applications of small peptides incorporating selenium. New products, namely selenodipeptides, based upon the patent will greatly expand the applications of selenium, an essential element