

### Advanced Antioxidant SuperNutrient

NutraGenesis presents PureWay-C®, the patent pending Antioxidant Super Nutrient that is the absolute Gold Standard of Vitamin C ingredients. Vitamin C plays a critical role in human health and well-being but its use as a dietary supplement and in foods and beverages has previously been plagued by reduced bioavailability, rapid excretion from the body, and major stomach upset and diarrhea. Recently published scientific research has demonstrated that PureWay-C® is the most advanced, bioavailable form of Vitamin C antioxidant yet developed, with enhanced absorption, distribution, and cellular uptake kinetics relative to other forms of Vitamin C currently sold. And it provides these benefits without any adverse effects, including stomach upset.

#### New Benchmark for Measuring Vitamin C Effectiveness

The secret behind PureWay-C's enhanced Vitamin C bioavailability lies in its unique composition. PureWay-C® is manufactured using a completely novel, proprietary process that combines ascorbic acid with several types of natural lipid metabolites and bioflavonoids. The lipid metabolites, which are fats derived from vegetable sources, are vital components of cell membranes and are pivotal in the regulation and control of cellular function. In PureWay-C®, the lipid metabolites acts as ascorbic acid carriers to increase intestinal absorption and vascular distribution of Vitamin C and enhance cellular uptake kinetics which allows ascorbic acid to enter cells more quickly in a safe and effective manner. The bioflavonoids increase the antioxidant capability of PureWay-C® relative to ascorbic acid on its own, and also enhance absorption in the intestinal tract. The result is a superior alternative to other Vitamin C formats that are either less functional or more expensive, or both.

Because of its increased bioavailability, PureWay-C® provides superior beneficial effects not only as an antioxidant but also in other areas of metabolic activity that are important for maintaining optimal health of the body. Laboratory analytical testing and a recently completed human clinical trial demonstrate that, compared to other forms of Vitamin C, PureWay-C® promotes more rapid absorption and greater retention by cells, increased antioxidant and free radical scavenging activity, increased stimulation of healthy neuron growth and wound healing, better immune system support, more sustained anti-inflammatory protection, as well as enhanced cardiovascular support.



## Numerous Product Applications

PureWay-C® has numerous product applications, including dietary supplements, functional foods and beverages, and cosmetics, and is available in a variety of product delivery formats, including an exciting new time-release product.

## Safety and Stability

PureWay-C® has an exceptional safety and stability profile. It provides all of these benefits without any adverse effects, including stomach upset. It is stable for three years.

## Unprecedented Product Claims

GRAS-affirmed PureWay-C® features potent, substantiated structure/function and functional food claims designed to address a wide range of product categories. These claims are in accordance with the requirements of the Dietary Supplement Health and Education Act of 1994, and have been submitted to the Food and Drug Administration accordingly. The physiological wellness benefits afforded by PureWay-C® can be applied to the following claim areas:

### *Immune Function*

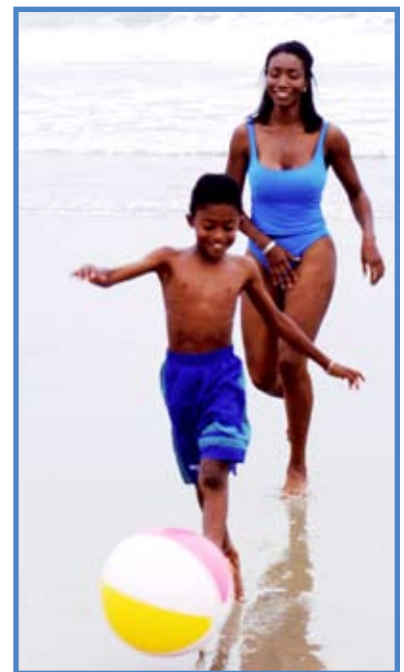
- Helps promote healthy immune function\*
- Helps maintain healthy immune function\*
- Boosts immunity of stressed individuals\*
- Helps support immuno-modulatory functions in the human body\*

### *Antioxidant*

- Helps prevent free radical-initiated chemical reactions\*
- Helps to protect cellular and tissue health\*
- Helps inhibit cellular oxidative stress\*

### *Anti-Aging*

- Helps slow the effects of aging by inhibiting oxidative damage to cells and tissues\*
- Helps protect against the effects of aging by protecting against free radical damage to cells\*
- Supports collagen biosynthesis, a vital factor in maintaining healthy looking skin\*



## Features and Benefits

- Proprietary – Patent Pending
- Clinically proven in *ex vivo* and *in vitro* testing, as well as an *in vivo* human clinical trial
- Substantiated Structure/Function and Functional Food Claims
- More rapidly absorbed than other forms of Vitamin C
- Greater retention in the body than other forms of Vitamin C
- Time-Release Option Available
- Safe- Stomach Friendly
- Stable
- Water Soluble
- GRAS Affirmed
- Vegetarian
- Kosher

PureWay-C® may be utilized as either a stand-alone ingredient or as a complementary ingredient in various formulations. Due to the breadth and strength of the claims support for PureWay-C®, the ingredient can serve as the “workhorse” in multiple-ingredient formulations.

PureWay-C® heightens the proprietary status of a wide variety of product applications including:

- Multivitamin/minerals, antioxidant formulations
- Seniors, gender specific formulas, anti-aging and skin health complexes
- Immune and heart health formulations

## PureWay-C® A Clinically Proven Form of Vitamin C

PureWay-C® has been shown in *ex vivo* and *in vitro* testing as well as an *in vivo* human clinical trial to provide faster and greater beneficial effects than other traditional forms of Vitamin C.

The improved absorption and cellular uptake kinetics of PureWay-C® have been confirmed in both an *ex vivo* study of human T-lymphocytes and a human clinical trial. Researchers at Adelphi University compared cellular uptake of several forms of Vitamin C and found that two hours after treatment with the vitamin, human T-lymphocytes treated with PureWay-C® contained higher Vitamin C levels than any other treatment group evaluated (Fig. 1). At the University of Miami School of Medicine, healthy volunteers went on a two week long Vitamin C-restricted diet and then received a single 1,000 mg supplement of Vitamin C, taking either PureWay-C® or one of several other Vitamin C forms. Analysis of volunteers’ blood showed that the average serum Vitamin C level in the group taking PureWay-C® was higher for the 24 hour period following intake than the level for any other group in the same period (Fig. 2).

# Product Summary

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The University of Miami School of Medicine researchers also determined that the level of C-reactive protein and oxidized low density lipoprotein (LDL) decreased when healthy volunteers took PureWay-C®. C-reactive protein is a marker of systemic inflammation in the body and oxidized LDL is associated with increased cardiovascular risk. The researchers found that 24 hours after intake of PureWay-C®, the serum level of C-reactive protein decreased 15.6% and oxidized LDL dropped 8.4%. PureWay-C® outperformed all other versions of Vitamin C tested (Fig. 3). The reduction in C-reactive protein suggests that PureWay-C® contributes to increased anti-inflammatory protection while the reduction in oxidized LDL suggests that PureWay-C® contributes to cardiovascular support.

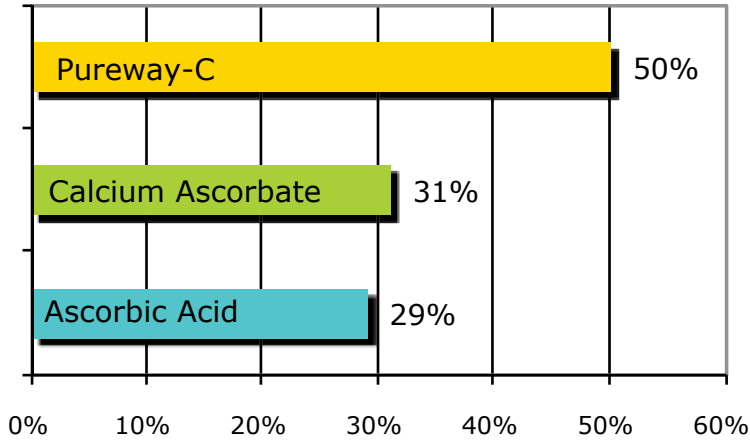
PureWay-C® has been found to outperform other Vitamin C forms in metabolic functions where Vitamin C is known to play a role, as well as in antioxidant activity. Adelphi University researchers found that in *ex vivo* studies, PureWay-C® stimulates neurite outgrowth, improves fibroblast adhesion during wound healing, and protects the immune system from inflammation substantially better than the other forms of Vitamin C evaluated. PureWay-C® also was subject to *in vitro* DPPH and ORAC free radical scavenging assays to determine the level of antioxidant activity. In both tests, PureWay-C® outperformed other Vitamin C forms.

## Conclusion

NutraGenesis is pleased to present PureWay-C®, the new Gold Standard of Vitamin C ingredients. With improved absorption, distribution, and retention kinetics, PureWay-C® represents a superior alternative to other forms of Vitamin C on the market in terms of physiological effectiveness. The breadth of substantiated structure/function and functional food claims featured by PureWay-C® in immune function, antioxidant, and anti-aging categories is based on the strength of its supportive science. For these reasons, PureWay-C® stands out as the new benchmark by which other Vitamin C products will be measured.

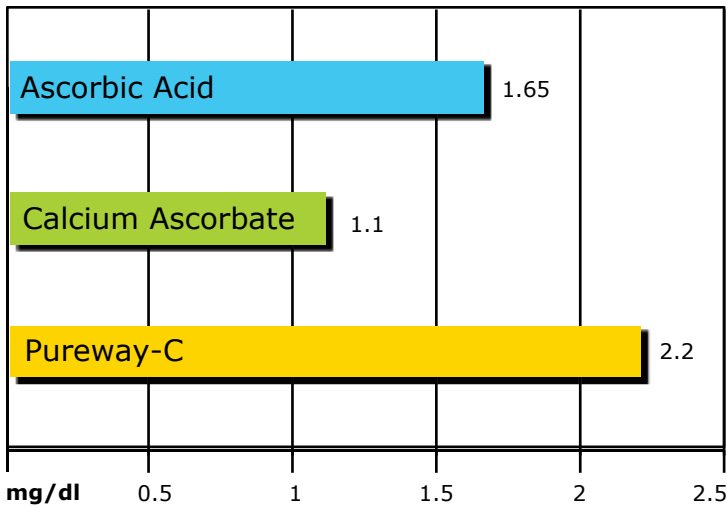


**Figure 1. Vitamin C Uptake in Human T-Lymphocytes 2 Hours After Treatment<sup>1</sup>**



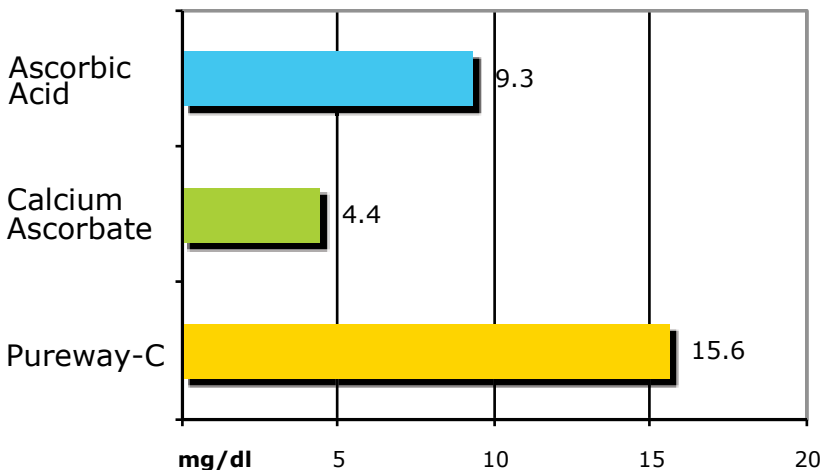
<sup>1</sup> Study performed at Adelphi University; Weeks and Perez, 2007

**Figure 2. Vitamin C Serum Levels 24 Hours Post Intake<sup>2</sup>**



<sup>2</sup> Study performed at the University of Miami School of Medicine; Pancorbo et al. (in press)

**Figure 3. Decrease in C-Reactive Protein<sup>3</sup>**



<sup>3</sup> Study performed at the University of Miami School of Medicine; Pancorbo et al. (in press)

This human study demonstrates that **PureWay-C<sup>®</sup>** is more rapidly absorbed by the body and retained for longer periods of time than any other Vitamin-C formulation. Further, as a consequence of enhanced uptake and retention, **PureWay-C<sup>®</sup>** has a greater beneficial effect on cardiovascular health, as judged by reduction of plasma oxidized low density lipoproteins and C-reactive protein levels after **PureWay-C<sup>®</sup>** supplementation. In this regard, **PureWay-C<sup>®</sup>** is the Vitamin-C formulation of choice for those seeking the health benefits of Vitamin-C supplementation. Consumption of **PureWay-C<sup>®</sup>** increases plasma Vitamin-C as well as decreases oxidative stress and biomarkers of inflammation, which indicates that the protective effect of **PureWay-C<sup>®</sup>** may extend beyond their antioxidant capability.

—Research conducted at the University of Miami



## About Us

Located in the Connecticut River Valley area of Southern Vermont, NutraGenesis is a diversified nutraceutical product marketing company dedicated to the development and commercialization of proprietary, scientifically researched, health-promoting ingredients. NutraGenesis strives to develop strong, mutually beneficial strategic alliances with its customers by providing proprietary nutraceutical products addressing today's most pressing health issues.

# Corporate Profile

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# NUTRAGENESIS

Innovations in Functional Nutrition<sup>SM</sup>

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\* These statements have not been evaluated by the Food and Drug Administration.

This product is not intended to diagnose, treat, cure or prevent any disease.



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