

## Barking Up the Right Tree (or Vine) with

**B**iochemist Albert Szent-Györgyi carried out pioneering work in flavonoids and vitamin C, earning him the Nobel Prize in 1937. Szent-Györgyi, who worked with vitamin C extracted from lemons, was said to have discovered flavonoids after helping a friend with bleeding gums.

Szent-Györgyi understood that it was not the vitamin C but something else in the lemon extract that was providing a healing benefit. He then went on to isolate flavonoids, a group of compounds he called “vitamin P” because of its ability to lower the permeability (increase the strength and integrity) of blood vessels.

It is known today that flavonoids are natural pigments that give fruits and flowers their colors and bestow a bevy of health benefits to those who consume them. Pine bark and grapes are high in flavonoids, particularly in a flavonoid group known as oligomeric proanthocyanidins (OPCs). One of the most notable properties of OPCs is their role as free-radical (antioxidant) scavengers.

A body of research in the 1940s and 1950s by professor Jack Masquelier at the University of Bordeaux, in France, focused on two well characterized active ingredients, MASQUELIER'S® French Pine Bark Complex and MASQUELIER'S® Original OPCs (ANTHOGENOL®).

The Netherlands-based International Nutrition Company (INC) has been carrying forward Masquelier's scientific work. According to the company, in 1989 “INC began to focus its activities entirely on the products now known worldwide as MASQUELIER'S®. Thus, INC became the exclusive worldwide supplier of the MASQUELIER'S® products.

“Invented by Prof. Em. Jack Masquelier, and under his exclusive permission and authority, INC markets the MASQUELIER'S® branded products around the world.” According to Gary Senecal, Eastham, MA-based Integrated BioCeuticals, is the exclusive distributor for MASQUELIER'S® Original OPCs in the North American market.

# OPCS

BY JAMES J. GORMLEY

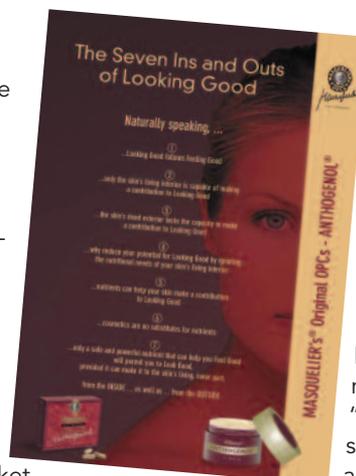
In an exclusive *NIE* interview Bert Schwitters, said: “Even the terms ‘OPC’ and ‘OPCs’ provide little or no guidance for the industry or consumers when used to distinguish products. Unless accompanied by some explicit indication about the origin of such ‘OPCs’ there is no guarantee whatsoever that a product that is presented as containing OPCs does indeed contain” them.

“There is no material on the market that contains only OPCs,” added Schwitters. “Even the best industrial method to isolate OPCs cannot avoid co-isolating the single forms of OPCs, called flavanols or catechins. Because OPCs are also flavanols, INC defines its product as ‘single and oligomeric flavanols.’ ”

According to the company, INC today uses complex phytonutrient authentication (CPA)—a combination of nuclear magnetic resonance spectroscopy—“to establish the MASQUELIER'S cluster” and distinguish it from competing ones.

### Inflammation and Heart Health

People with cardiovascular disease (CVD), or a family history of CVD, are among those who can benefit most



from supplementing with OPCs. Since OPCs trap free radicals, these nutrients can reduce damage caused by the oxidative process.

According to Geetha Achanta, PhD, science communicator for INC: “Evidence for the strong antioxidant activity of

MASQUELIER'S Original OPCs and for their role in maintaining healthy blood vessel function, and in preventing vascular disorders, comes from several *in vitro*, animal and human intervention studies. The scientific basis for the numerous health-promoting effects of MASQUELIER'S Original OPCs including its antioxidant activity and vasculo-protective effects have been reviewed in a monograph published by the Longwood Herbal Taskforce Group comprising of the Massachusetts College of Pharmacy, the Boston Children's Hospital and the Dana Farber Cancer Institute (Kemper, 1999) and in a peer-reviewed monograph published in *Alternative Medicine Review (Oligomeric Procyanidins Monograph, 2003).*”

Related to heart health is, of course, peripheral vascular circulation. With this in mind, Ann Arbor, MI-based Berg



Imports began to exclusively distribute the DiosVein™ brand of diosmin in the US. Made from diosmin, which is derived from sweet orange, DiosVein is available in finished products designed to, according to the company, "promote strong veins, healthy legs and sound circulation." Examples of products on the US market include: Venous PF from Jarrow Formulas, Diosmin/Hesperidine Complex from Swanson Health and Veinfactors from Futurebiotics.

### Pycnogenol: Keep the Bark, Hold the Cones

In early 2006, Ronald Watson, PhD, and others were able to establish a synergistic effect of a combination of pine bark extract Pycnogenol® (distributed by Hoboken, NJ-based Natural Health Science) and coenzyme Q10 (CoQ10) in promoting cardiovascular health.

Another study the same year, this one conducted in Germany, showed benefits of Pycnogenol in "preventing harmful inflammation" caused by immune system (over)response. In late 2006, two Italian studies supported this ingredient's role in reducing diabetic leg ulcers and related diabetic microangiopathy. Another study, this in October 2006, found that sup-

plementation with Pycnogenol reduced antihypertensive medication-caused edema (swelling) by 36 percent in patients taking those meds.

### Antioxidant Benefits

A 2003 study found that InterHealth's OptiBerry® (manufactured by Benicia, CA-based InterHealth Nutraceuticals) ingredient has anti-angiogenic properties that hold back the growth of unwanted blood vessels involved in the formation of tumors and varicose veins. In 2006, researchers from Ohio State University Medical Center and Creighton University Medical Center (Omaha, NE) published their results on OptiBerry, with findings, as they put it, that support the ingredient's role in providing "whole-body antioxidant protection."

According to INC's Achanta: "The evidence that the protection against oxidative stress offered by MASQUELIER's Original OPCs is due to free radical scavenging and antioxidant functions came from *in vitro* studies. Investigations demonstrated that MASQUELIER's Original OPCs efficiently scavenge superoxide radicals (Masquelier, 1988; Meunier, 1989) generated *in vitro*, inhibit lipid peroxida-

tion in cells induced by various pro-oxidants (Bos et al, 1996; Meunier et al, 1989, de Haan et al, 2006b) and protect vascular endothelial cells from oxidative stress-induced cell death (de Haan et al, 2006a). Additionally, MASQUELIER's Original OPCs were shown to effectively scavenge free radicals generated by activated leucocytes during the inflammatory process (Barbier et al, 1988), to have a sparing effect on vitamin C by protecting it from oxidation (Masquelier, 1951), and to exhibit high antioxidant capacity or ORAC values (independent analyses conducted by ESA Inc., Chelmsford, USA and by ORAC Europe BV, Utrecht, The Netherlands."

All in all, then, your customers will surely be able to tap into an array of powerful, health-enhancing benefits if they start to supplement with select, research-backed compounds from berries, fruits and bark. **NIE**

### FORMOREINFORMATION:

- Berg Imports, (734) 997-9261
- Futurebiotics, (800) 645-1721
- INC, +31-35-655 00 88
- Integrated BioCeuticals, (508) 240-5773
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