In August of 1997, Melaleuca introduced a new product that would quickly prove itself one of the most powerful dietary supplements on the market. A unique combination of natural ingredients paired with an exclusive enzyme blend to promote absorption, PROVEXCV has shown great promise in helping to protect one of the most important systems in the body: the cardiovascular system. In fact, early results in scientific testing have researchers very excited about the protective abilities of PROVEXCV.

It all began with a simple goal: to create a natural product that would both inhibit LDL cholesterol oxidation and regulate platelet activity. Science has found that controlling these two important factors can have a major effect on maintaining cardiovascular health. In 1997, PROVEXCV proved itself—through both in vitro (test tube) and in vivo (human) testing—to be effective at accomplishing both facets of this original goal. Then, in 1998-99, PROVEXCV became even better with a refined formula and a new extraction process that made it an even more powerful ally in the fight to preserve cardiovascular health.*

Why Does the Heart Need Protection?

The heart, combined with the lungs, arteries, veins, and capillaries, is responsible for supplying our tissues and organs with the oxygen and nutrients necessary to function efficiently. Besides the fact that it must work without rest, the heart faces modern adversities such as increasing amounts of pollution, environmental toxins, medications, processed foods, and conveniences that often lead to sedentary lifestyles. These factors can all contribute to creating an unhealthy cardiovascular system. Consequently, organizations such as The American Heart Association recommend eating a diet low in saturated fat and high in fiber, exercising regularly, maintaining a healthy weight, and avoiding cigarette smoke and excess alcohol—all lifestyle habits that can help ensure optimal health of the cardiovascular system as we age. However, now we can do even more. Armed with the knowledge we have gained from new research in beneficial plant compounds, we can utilize these compounds to further promote cardiovascular health—specifically in the areas of inhibiting LDL cholesterol oxidation and regulating platelet activity.*

How Do Cholesterol Oxidation and Platelet Activity Affect the Cardiovascular System?

LDL cholesterol is always present in the blood. However, tiny, toxic compounds called free radicals can turn this cholesterol into something that is harmful to an artery. Much as air will cause an apple to turn brown, free radicals “oxidize” LDL cholesterol particles, altering their makeup and causing them to negatively affect cardiovascular health.

Fortunately, beneficial compounds called antioxidants—which are made in the body itself and also come from food sources like fruits and vegetables—can help neutralize free radicals before they cause damage. Yet according to government surveys, many people do not consume enough antioxidants in their diets.1

Blood platelets—blood cells vitally important to the blood-clotting process—can also adversely affect the cardiovascular system. Under certain conditions, their hyperactivity can negatively affect the normal functioning of blood circulation through the arteries of the heart. Research has found that beneficial compounds called flavonoids (found in fruits, vegetables, wine, some fruit juices, and tea) can help regulate platelet activity, thus helping to maintain normal circulation. These compounds have also proved to be powerful antioxidants.

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**Flavonoids: The Protective Components**

In 1990 a concept called the French Paradox started to receive great attention. It was observed that the French eat a lot of high-fat and high-cholesterol foods, smoke many cigarettes, and have high blood-cholesterol levels compared to Americans, yet they have healthier cardiovascular systems. This apparent paradox was attributed to the fact that most French people drink more red wine than Americans, and it became theory that the red wine had some impact in maintaining cardiovascular health.

Subsequent studies found that red wine is rich in flavonoids (which originate in the grapes used to make the wine). After further testing, it was determined that these flavonoids have a direct impact on cardiovascular health. In 1995, purple grape juice—which contains grape flavonoids similar to those in red wine—was tested in experimental procedures. These tests gave further evidence that it was, indeed, the flavonoids that contained health benefits. Consequently, researchers soon asked the question: Could a dietary supplement of a flavonoid-rich source help protect the cardiovascular system? The answer was yes!

**PROVEXCV: The Proof in the Studies**

Vitamin E has been a well-known standard in reducing LDL cholesterol oxidation for many years. Prior to its release in 1997, however, PROVEXCV—with its unique formulation of ingredients (see chart on later page)—demonstrated through *in vitro* tests with human LDL cholesterol to be *more than twice* as potent an antioxidant as compared to equivalent amounts of vitamin E.*

During that same time frame, *in vivo* (living organism) tests showed that PROVEXCV accomplished a 40% reduction in platelet activity* without being negatively affected by adrenaline—a chemical that is released when an individual experiences fear, stress, or rigorous exercise.* In similar tests, aspirin (another powerful platelet inhibitor) also showed a 40% reduction, but aspirin’s anti-platelet properties were significantly reduced by adrenaline. These preliminary studies suggest that people who experience high levels of adrenaline could still benefit from the antiplatelet properties of PROVEXCV. Other dietary supplements that claim to have cardiovascular benefits must, like PROVEXCV, show concrete results in reliable scientific testing.*

**Continuing Studies**

Since its August 1997 release, PROVEXCV has continued to undergo tests. The results are threefold: first, a new formula that supplies the same ingredients in levels that have been fine-tuned to provide more advanced cardiovascular protection; second, an exclusive new extraction process that uses key findings in flavonoid research to ensure optimal delivery of the active flavonoids; and finally, validation of the new product’s increased effectiveness.*

In human blood tested *in vitro* (test tube), PROVEXCV again proved to be more than two times as effective as vitamin E in inhibiting LDL cholesterol oxidation—in some tests, as much as *three* times as effective. Yet when researchers tested the new formula for its effectiveness in regulating platelet activity, they were excited to find that not only did it perform at an even higher level than before, but it accomplished reduction against a variety of different platelet-stimulators.*

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Four Different Platelet Tests

To test the new PROVEXCV for its platelet-inhibiting abilities, researchers took blood samples from human subjects, subjected the samples to various platelet-stimulators and measured the amount of platelet activity. The human subjects then took PROVEXCV for 7-14 days, and researchers repeated the tests.

In each of the blood samples, blood platelets were stimulated by four different substances: first, with collagen. Collagen is a connective tissue found throughout the body (including the walls of blood vessels) and a known platelet-stimulator. In this test, PROVEXCV reduced platelet activity by more than 50%. (In similar tests, aspirin performed at 40%).

Next, the platelets were stimulated in several other ways. First, with adenosine diphosphate (ADP), a chemical that is released when platelets are activated, stimulating them to become even more active. The result was a 40% reduction in platelet activity with PROVEXCV. Then researchers combined both ADP and adrenaline (epinephrine)—significantly increasing the platelet stimulation—and still PROVEXCV significantly reduced platelet activity.

Finally, PROVEXCV was subjected to yet another test using PMA. This is a powerful platelet-stimulator as well as a test that allows researchers to further study how flavonoids go about reducing platelet activity. Even against this powerful test, PROVEXCV reduced platelet activity. These new studies give PROVEXCV a definite edge over any similar product, as PROVEXCV may be the only such natural dietary supplement to have undergone any human tests, let alone to have performed at these levels.*

What Makes PROVEXCV Different?

Over the past several years, it has been discovered that when it comes to testing platelet activity, products that test well in vitro (in test tubes) do not necessarily work as well or even at all in vivo (in humans). It has also been established that although the flavonoids may be present in plant extracts, they may not all be easily “bioavailable.” In other words, the body may not be able to absorb them sufficiently, even though they appear effective in the test tube. Consequently, without supportive studies, the truth is that many of the flavonoid products that claim cardiovascular benefits may not live up to these claims in real-life situations. There are many commercial flavonoid preparations on the market claiming various cardiovascular benefits; however, if they haven’t proved themselves through reliable scientific tests on living organisms, their claims may well prove to be false.

In the fall of 1997, Melaleuca promised to continue to broaden the supportive research behind PROVEXCV via several human tests, hoping to demonstrate that this product will meet or exceed the two specific goals of our research; the human tests of 1998 are the first exciting steps in fulfilling this promise. The new formula paired with the new results have made PROVEXCV a dietary supplement that stands alone in its uniqueness: a more powerful, more efficient, more protective product for the cardiovascular system. PROVEXCV will continue to undergo tests, research, scientific studies and more tests as researchers pursue the task of gathering more information to support this product’s effectiveness in humans. As the evidence continues to mount, Melaleuca customers reap the benefits of having at their disposal a natural, powerful, and promising supporter of cardiovascular health.*

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PROVEXCV:
Where Science and Nature Unite

THE EXCLUSIVE EXTRACTION PROCESS
Grape Seed:
Getting All the Antioxidants
• Most companies that produce flavonoid extracts use grape skin and seeds that have gone through fermentation to make wine
  • Any flavonoid that is lost during the fermentation process (transferred from the grapes to the wine) will no longer be available in an extract made from the same grape seeds and skin
  • The grape seeds and skin which make up the extracts in PROVEXCV don’t experience any wine fermentation; therefore, the extracts contain higher quality flavonoid compounds

Grape Skin: No Sulfur Dioxide
• Most grape skin extracts on the market use sulfur dioxide (SO₂) in their extraction processes
• Sulfur dioxide (SO₂) can cause allergic reactions in some people—foods containing more than 10 parts per million are required, by the FDA, to state this on the product label
• Unlike many grape skin products, PROVEXCV does not use SO₂ in its extraction process

GRAPE SEED:
A Leading Source of Proanthocyanidins
• A powerful antioxidant, scavenging free radicals before they can cause damage*5,6
• More powerful than vitamin E, which is the current leading antioxidant*
• In vivo studies show that these flavonoids regulate platelet activity*7,8
• Fortifies capillary wall structure, improving circulation*

GRAPE SKIN:
• A leading source of anthocyanins, another group of beneficial flavonoids
• Provides specific antioxidant and platelet-inhibiting activity*7,8

GINKGO BILOBA:
• The leaves contain many flavonoids that help regulate blood flow*9
• Studies suggest these flavonoids help control LDL cholesterol oxidation⁹ and have antiplatelet properties*10

BILBERRY:
• Contains flavonoids that generate a protective activity on small blood vessels*
• These flavonoids also have a strong free-radical-scavenging action and a significant platelet-inhibiting property*

QUERCETIN:
• Another type of flavonoid found in grape juice, red wine, hops, malt, barley, and other plants
• Has powerful platelet-regulating abilities when processed properly*11

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PROVEXCV: Where Science and Nature Unite

THE NEW PRELIMINARY HUMAN STUDIES
In Human Blood Samples:
• PROVEXCV inhibited collagen-stimulated platelet activity by over 50%. (In similar tests, aspirin performed at 40%).*
• PROVEXCV inhibited ADP-stimulated platelet activity by 40%.*
• Even when platelet activity was stimulated with ADP and epinephrine, PROVEXCV still significantly reduced platelet activity.*
• Unlike aspirin, PROVEXCV’s platelet-inhibiting properties were not significantly reduced by elevated adrenaline in the blood.*
• PROVEXCV proved (in vitro) to be more than two times as effective (in some tests, as much as three times) as vitamin E in inhibiting LDL cholesterol oxidation.*

Further Tests Are Already Underway!

Researchers are still hard at work putting PROVEXCV through its paces. More tests are underway to further evaluate the product’s effectiveness in protecting cardiovascular health. Future studies will gather more evidence of PROVEXCV’s abilities to inhibit platelet activity and to reduce LDL cholesterol oxidation. As these studies are completed, Melaleuca will provide up-to-date reports as the information becomes available. In the meantime, Melaleuca consumers have at their disposal a product that has been shown, through true scientific data, to be a leader in the market of flavonoid supplementation and cardiovascular protection.

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References:


4. New studies quoted here were presented by Dr. J.D. Folts in a poster presentation at Biomedicine '98 (May 2, 1998) in conjunction with the scientific abstract entitled “Commercial Mixture of Flavonoids, PROVEXCV™, Inhibits *In Vivo* Thrombosis and *Ex Vivo* Platelet Aggregation in Dogs and Humans.”


