



A CLEAR VISION OF

Ralph Waldo Emerson once wrote: "People only see what they are prepared to see." Unfortunately, when it comes to vision health, consumers are only prepared when it's too late. "Although one third of Americans will develop eye problems during his or her lifetime, a surprising number don't realize an adverse condition exists," said Matt Phillips, president of Cyvex Nutrition, Inc. (Irvine, CA).

The market for vision health supplements was estimated at \$223 million in 2007 based on Natural Marketing Institute's reports, and is expected to grow through 2008 and 2009. While the category has been predominantly focused on the concerns of age-related diseases, such as AMD (age-related macular degeneration) and cataracts, there has been a rising concern of "quality of life issues" and daily stressors, widening the market to include younger consumers along with older generations.

"More people seem to be having vision inadequacy," said Phillips, who points to products like Restasis for bringing chronic dry eye to the forefront. "These may be symptomatic of hours spent reading on a computer or small screen, such as a Blackberry, all which stress the eye. The [vision health] market is steady and has the potential to grow, if we can convince consumers that they should be taking vision dietary supplements like a multivitamin, as a preventative measure."

"A trend we have noticed within the vision category for supplements is the growing demand for what I would call 'quality of life' products," explained

Charles DePrince, president of Fuji Health Sciences (Burlington, NJ). "This would include issues that immediately affect the consumer, such as dry eye and eye fatigue (asthenopia). Although the vision market for supplements is currently focused on supporting concerns of future disease, we see a growing demand for products supporting the more immediate issues."

And this presents a unique opportunity to ingredient and finished product manufacturers of vision supplements, to increase sales without cannibalizing existing sales.

Focusing on Older Eyes

AMD still ranks as the No. 1 vision problem, according to Philip Gowaski, sales and marketing manager with Chrysantis (West Chicago, IL), as it is the most common cause of visual disability and blindness in people over 60 years old and accounts for more than 50 percent of blindness in the United States.

"As senior populations continue to grow, what were once relatively unknown vision issues have gained prominence—glare, night blindness and visual acuity," he said. "Given the fact that there is no cure for AMD, prevention is the only way to go; and carotenoid supplementation has been demonstrated to help in preventing the onset of AMD."

Abhijit Bhattacharya, chief operating officer of OmniActive Technologies, Ltd. (Short Hills, NJ), offered an Eye Disease Control Study that showed that higher serum levels and dietary intake of individual carotenoids, especially lutein, were associated with a statistically significant reduction in the risk of certain

forms of AMD. "Studies show that the more lutein and zeaxanthin consumed, the lower the chance of developing AMD and cataracts. Why? Because lutein and zeaxanthin selectively accumulate in the macula of the eye, where they act as a protective shield against damaging ultra-violet (UV) rays," he said.

"There has been sustained growth in the lutein and zeaxanthin categories, which indicates the strength of the vision health market overall," added Bhattacharya.

Lutein has long been OmniActive's flagship ingredient. In fact, Bhattacharya pointed out, the company is the world's first complete source for the entire range of macular xanthophylls for food fortification and dietary supplementation including Lutemax® Free Lutein, Lutemax® Lutein Esters and the patent-pending range of specialized zeaxanthin products.

"Since humans do not have the capacity for synthesis of lutein or zeaxanthin within the body, they are entirely dependent on dietary sources like green leafy vegetables, colored fruits, egg yolks and animal fats to meet nutritional requirements, which is difficult to do," he explained. "Enter supplementation. The most potent source of lutein is the petal of the marigold flower, from which OmniActive derives its branded lutein ingredient, Lutemax."

Regarding Lutemax specifically, OmniActive's lutein ingredients are manufactured under a fully integrated supply chain process that starts with the cultivation of marigold flowers and continues through the extraction and manufacturing of beadlets, oils and powders. The company has established a

www.niemagazine.com ■ November 2009

As the population ages and becomes more technology-driven, more consumers are seeking relief from vision problems. Ingredient suppliers see clearly the market potential in aiding both young and old.

BY KATE QUACKENBUSH

O C U L A R H E A L T H

dedicated group of farmers in India that grow marigolds with no use of feed-grade additives and preservatives or pesticides such as ethoxyquin. This vertically integrated process helps to enhance quality, purity and performance of the raw material.

Once harvested, the marigolds are dehydrated and extracted into oleoresins in dedicated facilities under food-grade standards. Lutein is then isolated and purified from the marigold oleoresin using GRAS solvents in the company's cGMP, HACCP and ISO-22000 certified facility. The Lutemax line is based on internationally patented manufacturing technologies that yield lutein forms with enhanced functionality, stability and bioavailability for improved benefit delivery.

"Studies indicate that OmniActive's vegetarian beadlets are far superior to conventional gelatin-based beadlets for withstanding compression force during the tableting process and effective disintegration, dissolution and release in the body for improved absorption and bioavailability," said Bhattacharya.

"Because OmniActive's unique oil suspension and beadletting systems

deliver higher concentrations of lutein, finished goods manufacturers can easily include efficacious amounts of lutein in their tablets and capsules."

All natural zeaxanthin and lutein have been part of Chrysantis' program since its inception five years ago. They have evolved from oil suspensions to include beadlets for tablets, capsules and fortified foods.

"Chrysantis has made sure its ingredient offerings fit into GMP guidelines," said Gowaski. "Our natural zeaxanthin has an NDI with extensive safety data on file with the FDA, GRAS status has been achieved and a 60 person clinical study—The Zeaxanthin and Visual Function (ZVF) Study—is complete with results to be published in 2010."

Free Radical Management

According to the National Eye Institute, diabetic retinopathy is the most common diabetic eye disease and a leading cause of blindness in American adults. It is caused by changes in the blood vessels of the retina. In some people with diabetic retinopathy, blood vessels may swell and leak fluid. In other peo-

ple, abnormal new blood vessels grow on the surface of the retina.

i.BioCeuticals, Inc. (Eastham, MA) is most known for its Masquelier's OPCs, which Linda Sparrow, the company's marketing director, pointed out provide a full-spectrum of benefits to the eye. "Masquelier's OPCs supports anti-aging; supports leakage and nutrient delivery to the eyes; responds positively to reduce the risk of diabetic retinopathy and other ophthalmic abnormalities," she said.

More specifically, Masquelier's OPCs strengthens the essential micro-capillaries improving microcirculation in the eyes, and prevents capillary leakage. It also significantly improves visual adaptation into different light by supporting the function of essential blood vessels that supply vitamin A and other key nutrients to the eye. And free radicals are neutralized and eye tissues are protected because Masquelier's OPCs provides superior antioxidants.

Cyvex's Phillips offered that his company has also developed antioxidant-rich products that can make a valuable contribution to this important area—BerryVin™ and Euro Black Currant—which contain potent, all-natural extracts that may have a positive impact on eye focus and retinal response to darkness.

"BerryVin combines the most potent in antioxidant activity berries—blueberries, blackberries, strawberries and cranberries, along with grape and pomegranate extracts—in a concentrated high ORAC, high antioxidant capacity formulation helpful in neutralizing free radicals," said Phillips. "Euro Black Currant is a dark-colored berry which is an excellent source of minerals, vitamins and anthocyanins. Our Euro Black



Marigold flower petals are a potent source of lutein.

Courtesy of OmniActive