

## Natural Folates Help Battle Major Diseases

University of South Alabama



Although for many years folate has been used to treat anemia and prevent birth defects, it is now clear that deficiency in this critical vitamin is also related to the risk of colon cancer, Alzheimer's disease and vascular diseases. Folate can be obtained from dark green leafy vegetables and many fruits, but until now supplements have incorporated folic acid, a synthetic form that does not occur to a significant extent in fresh natural foods.

Scientists at the University of South Alabama have discovered that the folates found in nature have many advantages over synthetic folic acid, and have developed technologies to further the healthpromoting benefits of this vitamin. For example, before synthetic folic acid can support any functions of the body, it must first be converted into the fully reduced natural folates.

“ Research at the University of South Alabama has shown that humans have very low levels of the enzyme that performs this role.

As a result, folic acid doses greater than the U.S. Food and Drug Administration's Daily Value of 400 micrograms (and even the DV for some individuals) are not efficiently converted into active folate. Conversely, 5-methyltetrahydrofolate, the form that is most abundant in blood and many tissues, is very rapidly absorbed from the intestinal tract and is already active. Moreover, this folate (but not folic acid) can be transported into the brain.

The South Alabama Medical Science Foundation has licensed some of this technology to Merck, KGaA, and major products are now available in the U.S. and Europe in the areas of cardiovascular disease, cognitive function and prenatal vitamins. In addition, recent research has demonstrated that the natural folates can protect against damage by ultraviolet and ionizing radiation. These technologies are being further developed and licensed.

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