



Your Monthly Update

Dear Colleague

Welcome to the March 2011 newsletter from Pure Bio Ltd.

Did you know:

Scientists at Ohio State University have found that Indole-3-Carbinol can inhibit the growth of breast cancer cells. (Around half of all breast cancer patients have abnormally high levels of a phosphatase molecule that is believed to be associated with the disease; and I3C can break down these molecules) (*Cancer Prev Res. 2010; 3: 818-28*)

The chosen topic for this month is:

Vitiligo

Protocol Summary

Ranking	Nutritional Supplements	Botanical Medicine
Primary		
Secondary	Alpha lipoic acid Folic acid Vitamin B12 Phenylalanine	Ginkgo Khella Picrorhiza
Other	Betaine Hydrochloride B-Complex Vitamin D	

Primary – Reliable and relatively consistent scientific data showing a substantial health benefit.

Secondary – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.

Other – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.

Vitiligo is a skin condition in which there is loss of pigment (colour) from areas of skin, resulting in irregular white patches that feel like normal skin.

Causes

Vitiligo appears to be an acquired condition and may appear at any age. There is an increased rate of the condition in some families.

The cause of vitiligo is unknown, but autoimmunity may be a factor. Vitiligo is associated with three systemic diseases:

- Pernicious anaemia
- Hyperthyroidism
- Addison's disease

The condition affects about 1% of the population.

Vitiligo seems to be somewhat more common in people with certain autoimmune diseases, including hyperthyroidism, adrenocortical insufficiency (where the adrenal glands do not produce enough corticosteroid), alopecia areata (patches of baldness), and pernicious anaemia (a low level of red blood cells caused by the failure of the body to absorb vitamin B₁₂). Scientists do not know the reason for the association between vitiligo and these autoimmune diseases. However, most people with vitiligo have no other autoimmune disease.

Vitiligo may also be hereditary.

Signs & Symptoms

Vitiligo is more noticeable in darker skinned people because of the contrast of white patches against dark skin.

There is a sudden or gradual appearance of flat areas of normal-feeling skin with complete pigment loss. Lesions appear as flat areas with no pigment and with a darker border. The edges are sharply defined but irregular.

Frequently affected areas are the face, elbows and knees, hands and feet, and genitalia.

Diagnosis & Tests

Examination is usually sufficient to confirm the diagnosis. In some cases, a skin biopsy may be needed to rule out other causes of pigment loss. Blood tests may also be performed to check the levels of thyroid or other hormones, and vitamin B12 levels.

Treatment

Vitiligo is difficult to treat. Early treatment options include the following:

- Light therapy (exposure to controlled intense ultraviolet light in a hospital)
- Medicines taken orally such as trimethylpsoralen (Trisoralen)
- Medicines applied topically such as:
 - Corticosteroid creams
 - Immunosuppressants such as pimecrolimus (Elidel) and tacrolimus (Protopic)
 - Repigmenting agents such as methoxsalen (Oxsoalene)

Skin may be grafted or removed from normal areas and placed onto areas of pigment loss.

Several manufacturers produce cover-up makeup or skin dyes to mask vitiligo. In extreme cases when most of the body is affected, the remaining pigmented skin may be depigmented. This is a permanent change and is a last resort.

It is important to remember that skin without pigment is extremely susceptible to the sun's damaging effects and a high-SPF sunblock should be used against sun exposure.

Prognosis

The course of vitiligo varies. Some areas may regain pigmentation, but other new areas may appear. Loss of pigment may be progressive.

Complications

Depigmented areas are more likely to sunburn or develop certain skin cancers.

Additional therapies

People with vitiligo have occasionally improved using hypnosis along with other treatments.

Nutritional Supplement Treatment Options

[Alpha Lipoic Acid](#) – *100mg daily*. In a double-blind trial, supplementation with antioxidants for two months before and for six months during treatment with narrowband ultraviolet B light increased the effectiveness of the ultraviolet light therapy. The antioxidant supplement contained daily 100 mg of alpha-lipoic acid, 100 mg of vitamin C, 40 IU of vitamin E, and 100 mg of cysteine.

[Folic Acid](#), [vitamin B12](#), [vitamin C](#) – *according to practitioner prescription*. A clinical report describes the use of vitamin supplements in the treatment of vitiligo. Folic acid and/or [vitamin B12](#) and vitamin C levels were abnormally low in most of the 15 people studied. Supplementation with large amounts of folic acid (1–10 mg per day), together with [vitamin C](#) (1 gram per day) and IM vitamin B12 injections (1,000 mcg

every two weeks), produced marked re-pigmentation in eight people. These improvements became apparent after three months, but complete repigmentation required one to two years of continuous supplementation. In another study of people with vitiligo, oral supplementation with folic acid (10 mg per day) and vitamin B12 (2,000 mcg per day), combined with sun exposure, resulted in some repigmentation after three to six months in about half of the participants. This combined regimen was more effective than either vitamin supplementation or sun exposure alone.

[Phenylalanine](#) - *50 mg daily per 2.2 lbs (1 kg) of body weight, with ultraviolet light exposure.* Supplementation with the amino acid L-phenylalanine (LPA) may have value when combined with ultraviolet (UVA) light therapy. Several clinical trials, including one double-blind trial, indicated that LPA (50 mg/kg body weight per day—3,500 mg per day for an 11 stone person—or less) increased the extent of re-pigmentation induced by UVA therapy. LPA alone also produced a more modest re-pigmentation in some people. A study of vitiligo in children reported that LPA plus UVA was an effective treatment in a majority of the children.

A group of Spanish doctors reported on their experience using LPA over a six-year period. Some of the 171 people with vitiligo received LPA (50 or 100 mg/kg body weight per day) for up to three years. Between April and October of each year, participants also applied a 10% LPA gel, prior to exposing their skin to the sun for 30 minutes. Some improvement was seen in 83% of participants, and the results were rated as good in 57% (75% improvement or better).

[Betaine Hydrochloride](#) - In one report, lack of stomach acid (achlorhydria) was associated with vitiligo. Supplementation with dilute hydrochloric acid before meals resulted in gradual repigmentation of the skin (after one year or more). *Betaine HCl should be taken only under the supervision of a doctor.*

[Vitamin D](#) - When used topically in combination with sun exposure, a pharmaceutical form of vitamin D, called *calcipotriol*, may be effective in stimulating re-pigmentation in children with vitiligo. In a preliminary study, children applied a cream containing calcipotriol daily and exposed themselves to sunlight for 10–15 minutes the following morning. After 11 months, marked to complete re-pigmentation occurred in 55% of the children, moderate re-pigmentation occurred in 22%, and little or no improvement was seen in 22%. None of the children developed new areas of vitiligo. The first evidence of re-pigmentation occurred within 6 to 12 weeks in the majority of the children. All participants tolerated the cream well, with approximately 17% complaining of mild, transient skin irritation. It is not known whether vitamin D as a dietary supplement has any effect on vitiligo.

Botanical Treatment Options

[Ginkgo](#) - *120 mg daily of a standardized extract.* In a double-blind study of 52 people with slowly spreading vitiligo, supplementation with ***Ginkgo biloba*** extract (standardized to contain 24% ginkgoflavonglycosides), at a dose of 40 mg TD for up to six months, resulted in marked to complete re-pigmentation in 40% of cases, compared with only 9% among those receiving a placebo.

Khella -120 to 160 mg of a khellin herbal extract daily. An extract from khella (**Ammi visnaga**) may be useful in re-pigmenting the skin of people with vitiligo. Khellin, the active constituent, appears to work like psoralen drugs—it stimulates re-pigmentation of the skin by increasing sensitivity of remaining melanocytes to sunlight. Studies have used 120–160 mg of khellin per day.

Picrorhiza - 400 and 1,500 mg of powdered rhizome. In preliminary trial, Picrorhiza, in combination with the drug methoxsalen and sun exposure, was reported to hasten recovery in people with vitiligo compared with use of methoxsalen and sun exposure alone. Between 400 and 1,500 mg of powdered, encapsulated picrorhiza per day has been used in a variety of studies.

For further information, contact:

Tracy S Gates

Director, PURE BIO LTD.

01403 730342

info@purebio.co.uk