

## **Nerves, Neuropeptides, and Repigmentation in Vitiligo**

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In this study we set out to answer the following questions:

1. Are nerves and the expression of two major neuropeptides called Substance P and Calcitonin Gene Related Peptide normal in vitiligo skin as compared to normal control skin matched for age, sex, and body region affected with vitiligo?
2. Does the expression of nerves and neuropeptides Substance P and Calcitonin Gene Related Peptide in the skin change when vitiligo lesions are successfully treated with the topical application of a strong topical steroid such as Ultrvate or Temovate ointment?

To answer these questions, we recruited 13 patients with vitiligo to our study. These patients include 11 females and 2 males who range in age from 21 to 70 years. We selected specific vitiligo lesions and performed two 4mm (about the size of an eraser on a pencil) biopsies and after the biopsy sites healed, asked that the patient apply a topical steroid such as Ultrvate Ointment or Temovate Ointment to the sites. Patients were seen again after six weeks of therapy to see if they were tolerating the medication and then again after 12 weeks of therapy. At this time, two additional 4mm punch biopsies were taken from the treated sites. Eleven of the 13 patients have completed the 12 week study and all but two have demonstrated repigmentation in the treated areas. We have also recruited and biopsied 9 normal, healthy controls. The sites affected with vitiligo which were biopsied on the patients and on their matched controls include the following body regions: knee, upper leg, elbow, forearm, wrist and neck.

The samples obtained have all been fixed and are in stage of being processed and analyzed. We are using a special microscope called a confocal microscope to study the nerves in the epidermis where the pigment cell is predominantly found. We anticipate to complete our analyses of the normal control and vitiligo skin samples obtained before and after therapy in the next six months. We look forward to sharing what we find with you in another newsletter.