Narrowband UVB phototherapy for Clinically Isolated Syndrome: Delivering the benefits of all UVB-induced molecules

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Background: Trials of vitamin D supplementation have to date lacked definitive outcomes in MS patients. Narrowband UVB can induce vitamin D production, but also other important immunomodulatory molecules.

Methods: Nineteen individuals with CIS have been recruited with 53% of them given narrowband UVB phototherapy or Placebo within 120 days of enrolment. All 19 participants were supplemented when necessary with vitamin D to 25(OH)-vitamin D levels of approximately 80 nmol/L. MRI was performed after 3, 6 and 12 months, with extensive blood cell phenotyping at 1, 2, 3, 6 and 12 months after recruitment. No participant was taking any disease modifying drugs at recruitment. All participants provided written informed consent.

Primary endpoint: Progression to definite multiple sclerosis by McDonald criteria (new lesion on MRI).

Secondary endpoints: (1) Identification of biomarkers/cells in blood indicative of development of multiple sclerosis (new lesion on MRI);

Results: Clinical significance of the conversion rate from CIS to MS; comparison to the CHAMPS study of Interferon Beta-1a (Leknes et al. NEJM 2001; 343:898-904).

CONCLUSIONS
1. These interim results suggest UVB affects slowing the progression of individuals with CIS to MS with only 8 weeks of therapy.
2. The PhoCIS trial provides a fresh approach to re-defining the reported associations of 25(OH)-vitamin D levels with MS development and progression.
3. The outcomes suggest that UBV-irradiation of skin is immunomodulatory independent of Vitamin D, and can regulate CIS to MS progression.

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REFERENCES
- Trend et al. Serum immunoglobulins profiles and conversion from Clinically Isolated Syndrome to Multiple Sclerosis. In preparation.