



## Non-Ionizing Radiation & Children's Health

International Joint Workshop  
18 - 20 May 2011, Ljubljana, Slovenia

PLATFORM PRESENTATION ☒

### The Challenges Of UV-Induced Immunomodulation For Children's Health

Mary Norval

*University of Edinburgh Medical School, Edinburgh, Scotland*

Exposure to solar ultraviolet radiation is recognised to have both beneficial and harmful effects on human health. With regard to immune responses, it can lead to suppression of cell-mediated immunity and to the synthesis of vitamin D, a hormone that can alter both innate and adaptive immunity. The consequences in children of such UV-induced changes are considerable: first there are positive outcomes including protection against some photoallergic ( for example polymorphic light eruption) and T cell mediated autoimmune diseases ( for example multiple sclerosis) and asthma, and secondly there are negative outcomes including an increased risk of skin cancer (squamous cell carcinoma, basal cell carcinoma and cutaneous malignant melanoma) and less effective control of several infectious diseases. Many uncertainties remain regarding the amount of sun exposure that would provide children with the most effective responses against the variety of immunological challenges that they are likely to experience.