

A DUAL-ACTING CHEMO-PREVENTIVE AND CHEMO-THERAPEUTIC COMPOUND FOR UV-INDUCED CARCINOGENESIS

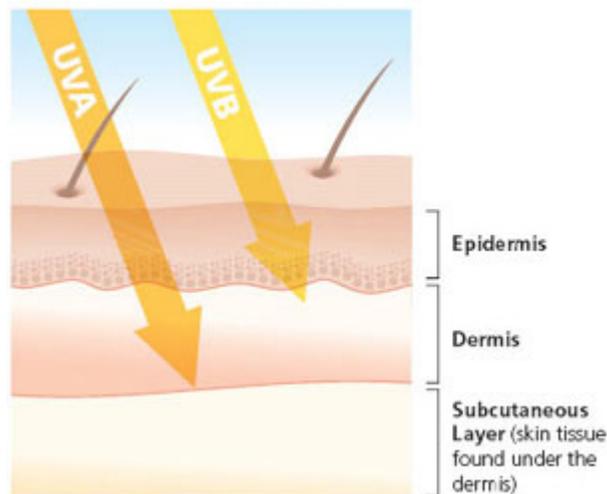
OU ID: #16009

Overview

According to the Skin Cancer Foundation, more than 3.3 million people were treated for non-melanoma skin cancer in the U.S. in 2012 and there will be over 196,000 new cases of melanoma diagnosed in 2020. Approximately 90% of non-melanoma skin cancers and 86% of melanomas are associated with UV radiation from the sun¹. Therefore, it is imperative that people take the necessary precautions to minimize their UV radiation exposure. The Skin Cancer Foundation recommends seeking shade, preventing sun burns, avoid tanning booths, covering up with clothing, and using adequate amounts of broad spectrum UVA/UVB sunscreen with an SPF 15 or higher every day and SPF 30 or higher for extended outdoor activities².

Scientists at Ohio University have discovered a naturally occurring compound that is effective at inhibiting UV-induced skin cancer formation by reducing DNA damage. This compound may also be used as a chemoprevention measure due to its ability to sensitize pre-cancer cells to UV radiation, eliminating them before they become cancerous.

UV Radiation and the Skin



Commercial Application

This compound has the potential for multiple uses. As a consumer product, it could be included as an ingredient in sunscreens and daily-use cosmetic lotions to prevent damage from everyday UV exposure. It could also be used clinically as part of a therapeutic regimen to treat patients at risk for developing skin cancer.



OHIO
UNIVERSITY

Benefits

Unlike the ingredients that are currently approved by the FDA for use in sunscreens, this compound has the dual capability of protection and prevention. While chemical sunscreens absorb and physical sunscreens reflect UV radiation, the novelty of this compound lies in its ability to perform two functions at once. The compound absorbs UV radiation upon contact with the skin and then breaks down into sub-components that are DNA protective. In addition, it is extracted from rosemary and is therefore naturally-occurring and environmentally friendly.

About the Inventor

Dr. Shiyong Wu is a professor of chemistry and biochemistry in the College of Arts and Sciences at Ohio University. He has dedicated many years to studying cancer and ultraviolet light radiation. Other titles include reviewer of numerous journals such as Cancer Prevention Research and Cancer Chemotherapy and Pharmacology, as well as member of notable professional societies, including American Association of Cancer Research.

References

¹Skin Cancer Facts and Statistics. <http://www.skincancer.org/skin-cancer-information/skin-cancer-facts>

²Prevention. <http://www.skincancer.org/prevention>

Image courtesy of Skin Cancer Foundation. <http://www.skincancer.org/prevention/uva-and-uvb>

Contact Us

Korie Counts, Ph.D.

Technology Commercialization Manager

P: 740-593-0977

E: counts@ohio.edu

<http://www.tto.ohiou.edu/>



OHIO
UNIVERSITY