



The Protective Effect of Equol on Radiation Exposure

BYU #2019-011

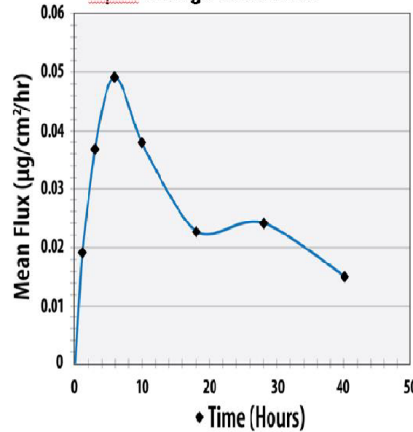
DESCRIPTION

The invention covers the method for delivery of equol (racemic or non-racemic), equol analogs, and the combination of racemic equol/different percentage of equol isomers and equol analogs with other polyphenolic compounds like resveratrol for the prevention and treatment of radiation exposure. Equol is an isoflavonoid or botanical active ingredient that has applications for cosmetic products.

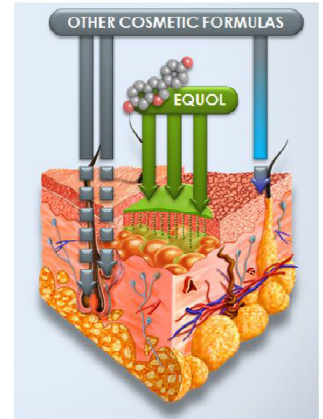
PROBLEM SOLVED

Various types of radiation exposure can cause many different illnesses depending on the amount and length of exposure. Equol and equol analogs have exceptional properties that through chemical, biological and molecular actions provide a protective effect for the treatment of radiation exposure. The invention can be administered in multiple ways: topical (lotion, spray), oral (tablet, liquid, capsule), injectable, pharmacological.

A Percutaneous absorption profile of Equol through human skin



B Cartoon: 'pooling' of Equol forming "natural reservoir"



KEY ADVANTAGES

- » Stimulates Nrf2 to increase detoxifying enzymes and other antioxidant proteins
- » Decreases reactive oxygen species and oxidative stress
- » Protects DNA and enhances nerve and tissue repair
- » Increases efficacy for topical and oral absorption
- » Acts as a powerful antioxidant

APPLICATIONS

This technology has many applications including: medical/dental, environmental work exposure to routine low-dose and extraordinary high-doses radiation that can cause many types of cancer, DNA mutations, radiation burns, radiation sickness, premature aging, and other disorders and diseases such as heart disease, stroke, cellular and tissue hypoxia, inflammation and oxidative stress, impairment of memory and cognitive function, neurodegenerative conditions and metabolic and endocrine illnesses.

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