Auburn University is seeking a development partner for this hydroxytyrosol formulated cream that enhances delivery through human skin.

**Hydroxytyrosol** is found in olives and is one of the most potent antioxidant agents in nature. It’s antioxidant activity may confer anticancer, cardio-protective, neuroprotective and anti-inflammatory benefits. However, it is poorly absorbed through the skin, reducing consumer benefit when used in standard creams. This new cream is formulated to enhance hydroxytyrosol absorption and could be a new product offering in the botanicals or skin care market.

**Advantages:**
- **EFFICIENT** - Enhances hydroxytyrosol absorption through human skin.
- **INEXPENSIVE** - Uses common ingredients, keeping product costs low.
- **EASY TO APPLY** - Application to the skin is quick and simple like a standard hand cream.

**Description:** Hydroxytyrosol (HT) shows many protective effects against skin and joint-related disorders. This is largely due to its protection against UVB-induced DNA damage, antitumor effects against cancers like melanoma, and anti-inflammatory action against arthritis. This suggests that topical delivery of HT may be beneficial for chemoprevention and anti-aging in skin. However, HT is not easily absorbed by the skin. To address this problem, proniosomes of HT were formulated, optimized, and evaluated for transdermal delivery across human cadaver skin. This newly developed cream allows HT to be absorbed much faster and easier through the skin, increasing its retention by 8 to 10 times compared to HT solution alone. This formulation could be the basis for a new skin care product with proven delivery of HT.

**Status:**
- A provisional patent application has been filed.
- Absorption tested on human cadaver skin; formulation ready for scale-up.
- This technology is available for licensing or co-development.

![Hydroxytyrosol retention in human cadaver skin after 24 hour permeation studies. P1, P2, and P5 are proniosomes without lecithin. P3, P4, and P6 are proniosomes with lecithin. *p< 0.05](image-url)