

## Oily Skin: Plant Derived Molecules to the Rescue

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### Abstract

Oily skin is an unaesthetic phenomenon that afflicts young and old, women and men. Causes for hyperseborrhea are numerous, but conversion of testosterone to DHT by 5- $\alpha$  reductase is one of the key factors. To diminish the amount of sebum produced, to eliminate shiny skin and to reduce visible pore size takes a concerted approach by complementary activities. Oleanolic acid, extracted and purified from olive leaves, was found to specifically inhibit the 5- $\alpha$  reductase enzyme, thus decreasing sebaceous gland activity. Protoberberines, molecules purified from *Enantia chloranta*, an African plant, were shown in an innovative protocol to decrease sebocyte proliferation. These *in vitro* results translate into measurable and visible effects in clinical trials where reduced seborrhoea, diminished shine and perceivable pore size reduction are demonstrated quantitatively and qualitatively.

### Introduction

“Oily” skin results in a shiny appearance of the skin and dilated pores. Indeed, it is a frequent and increasing problem at all ages and during all seasons in both men and women. People with oily skin tend to “exfoliate” their skin in the erroneous belief that they will thus reduce the shine whereas, on the contrary, they excite the sebaceous glands, which, in reaction, produce excess sebum over the following hours. Independently of genetic predisposition, exacerbating phenomena such as lifestyle, diet and smoking are known to increase seborrhea. In this context, there does not appear to be any difference between the African, Asian and European types of skin(1).

Combination skin is often shiny in the appropriately named “T” zone where the sebaceous glands are most active: forehead, nose and each side of the nose, in general. The main disadvantage of shiny skin is aesthetic. However, for women, impaired make-up adhesion over the day constitutes a further disadvantage. For those reasons, effective cosmetic

care has to enable mild re-equilibration of the activity of the sebaceous glands while targeting the physiological causes of impaired regulation.



Figure 1. Illustration T-Zone

### The Production of Sebum

Sebum is produced by the activity of the sebaceous glands. The glands are located about 1 mm from the skin surface and are closely associated with the hair shafts in that the two components constitute the “pilosebaceous unit”. The sebaceous gland consists of a bundle of acini consisting of clumps of sebocytes opening into a sebaceous canal. The sebaceous canals flow into the infundibular canal, which constitutes the exit towards the hair shaft (see below).

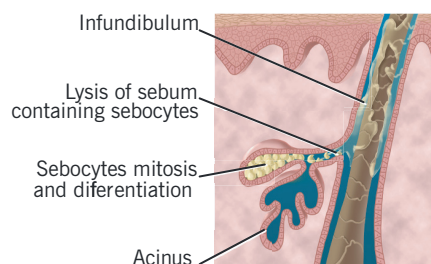


Figure 2 The pilosebaceous unit