

# ZO GROWTH FACTOR SERUM (GFS)

*Dr Sobia Ali and Dr Nestor Demosthenous discuss why growth factors are an invaluable component in any anti-ageing skincare regime*



Ageing skin is a multifactorial process, triggered by extrinsic and intrinsic changes which affect tissue structure and function. Extrinsic factors, such as sun exposure, pollution and lifestyle changes lead to a cascade of free radical formation and induction of matrix metalloproteinases, which damage tissue at a structural and cellular level. Intrinsically, there is a reduction in fibroblastic activity, resulting in collagen and elastin degradation, which leads to a depletion in skin's firmness and density. Despite their morphological and pathophysiological differences, it is the combination of these intrinsic and extrinsic factors that manifest in skin laxity, lines, discoloration and textural changes.

There is good clinical evidence that agents such as sun protection factor, retinol, hyaluronic acid and anti-oxidants are fundamental in skin protection, repair and renewal. In recent years however, new and exciting research has identified the benefits of topically applied growth factors. Growth factors are fundamental to skin health and repair. Here we discuss why they are an invaluable component to any anti-ageing skin care regime.

## What are growth factors?

Growth factors are proteins that act as chemical messengers and are secreted by every living cell, where they regulate cellular growth, proliferation and differentiation. Within the epidermis and dermis,

growth factors are secreted by fibroblasts, keratinocytes and melanocytes and stimulate the formation of collagen, elastin and glycosaminoglycans, thereby inducing and strengthening the skin's extracellular matrix, providing the skin with firmness and elasticity.

Growth factors are therefore essential in maintaining healthy skin structure and function through the years. As the production of growth factors significantly declines with age, there is a resulting loss of skin volume, elasticity and texture. Re-instating growth factors therefore plays a key role in the management of the ageing process.

## ZO Growth Factor Serum

A 12 week clinical study was undertaken on forty one females with Fitzpatrick skin types II – IV with moderate to severe lines and wrinkles, to assess the efficacy of ZO Growth Factor Serum in improving fine lines and wrinkles, skin density, firmness and elasticity. All participants cleansed twice daily, applied growth factor serum twice daily and applied SPF30 daily. Evaluation methods included instrumental assessment, clinician grading and subject self reported grading.

The appearance of fine lines and wrinkles was measured using the Antera 3D camera. 92% of participants reported an improvement in the appearance of fine lines and wrinkles at 12 weeks when compared to baseline. Participants noticed a

significant reduction in the appearance of crow's feet, with this continuing throughout the study. Skin density was measured using DermalScan c ultrasound, which demonstrated a 31% improvement in dermal thickness at the four week interval when compared to baseline. 78% reported that their skin appeared firmer and tighter at 12 weeks. This was also demonstrated using a cutometer (however the study did not elaborate on specifics). Overall, 95% of participants noticed a significant improvement in all areas at the 12-week interval. This study is yet to be published and therefore has not been subject to peer review. Many of the measured parameters in this study were subjective, however have demonstrated statistically significant improvement from baseline measures.

ZO Growth Factor Serum (GFS) improves skin density, firmness and elasticity, and by doing so, reduces the appearance of fine lines and wrinkles. It contains a combination of plant based (lactilobacillus ginseng root extract) and enzymatically derived (disodium acetyl glucosamine phosphate) growth factors which are stable and carry a safe clinical profile. These growth factors stimulate the extracellular matrix to promote the production of collagen, elastin and hyaluronic acid.

ZO Growth Factor Serum also contains ZPRO, an anti-oxidant which reduces cellular DNA damage and collagen degradation, enabling a synergistic effect when combined with growth factor.

## Summary

Skin is subject to unpreventable, complex processes which lead to a decline in its structure and function. The clinician must be able to address these pathophysiological changes with a multi-faceted approach. ZO's Growth Factor Serum mimics skin's chemical messengers to activate the pathway of neocollagenesis.

It is beneficial for all skin types with moderate signs of ageing. It is a lightweight, highly tolerable and effective anti-ageing agent which has synergistic effects on the epidermis and dermis when combined with SPF, retinol and anti-oxidants.