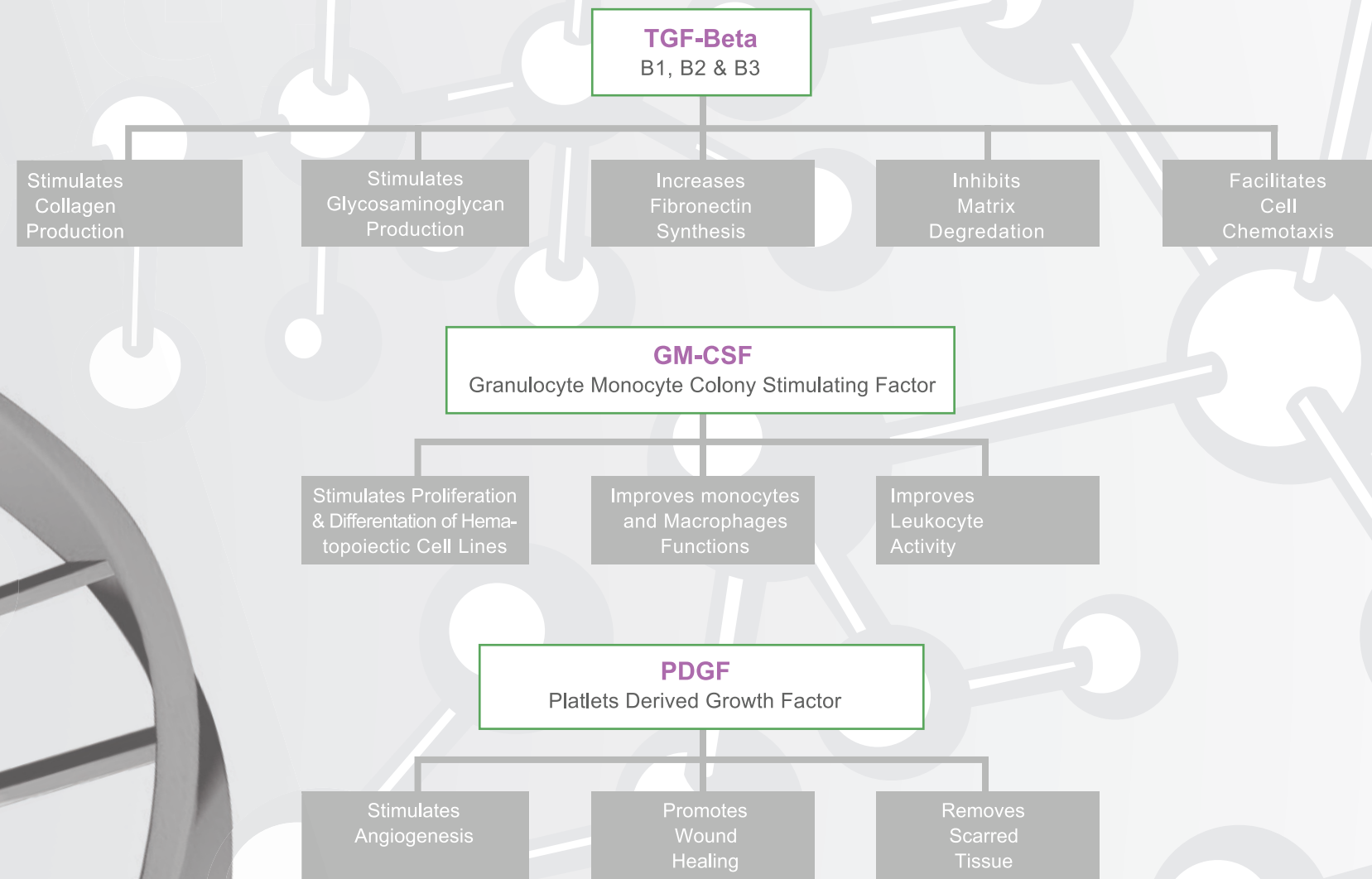


# What is GF?

## Growth Factor Technology



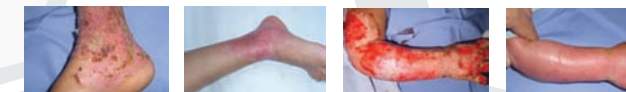
### GF TECHNOLOGY

GF-technology refers to AQ's advanced, cutting edge methods of producing human growth factors and utilizing them in topical skin care products. Growth factors (GF) are found in many different cell types in the human body. They are a group of specialized proteins with many functions, the most important being the activation of cellular proliferation and differentiation. Growth factors turn essential cellular activities "on" and "off," and they play a role in increasing cell production, cell division, blood vessel production, and collagen and elastin production. In recent decades, scientific research into GF biological functions has shown that medical GF-technology is related to resolving many cell developmental diseases. But GF-technology has many other applications to human health and can also help people achieve a more youthful and vibrant look without expensive plastic surgery or Botox treatments. It can even help people obtain healthy, fuller-looking hair without the side effects of drugs.

Growth factors are vital to maintaining a youthful appearance. The skin and scalp contain multiple growth factors that regulate natural cellular renewal and damage repair processes to keep skin healthy and to maintain a normal hair growth cycle. These growth factors are responsible for helping to reverse the visible effects of chronological aging and premature aging due to environmental factors. The consequences of environmental exposure and the normal processes of aging lead to excessive free radical damage of skin and scalp cellular components, resulting in the breakdown of collagen and elastin networks in the dermis and producing the effect of visible facial aging. This same type of damage eventually impairs growth factor function, so they are less able to repair oxidative damage, and the damage becomes permanent.

Advances in GF-technology are providing help for reversing the signs of aging. Growth factors can now be produced in a laboratory for topical use. In multiple clinical studies, topically applied GF have been shown to reduce the signs of skin aging, including statistically significant reductions in fine lines and wrinkles and increases in dermal collagen synthesis. GF-technology is also being used successfully for encouraging healthy hair growth, reducing the appearance of scars, supporting the skin during post-procedure healing, and shortening the healing time of burn wounds.

### Before & After



### HISTORY & EFFICIANCY

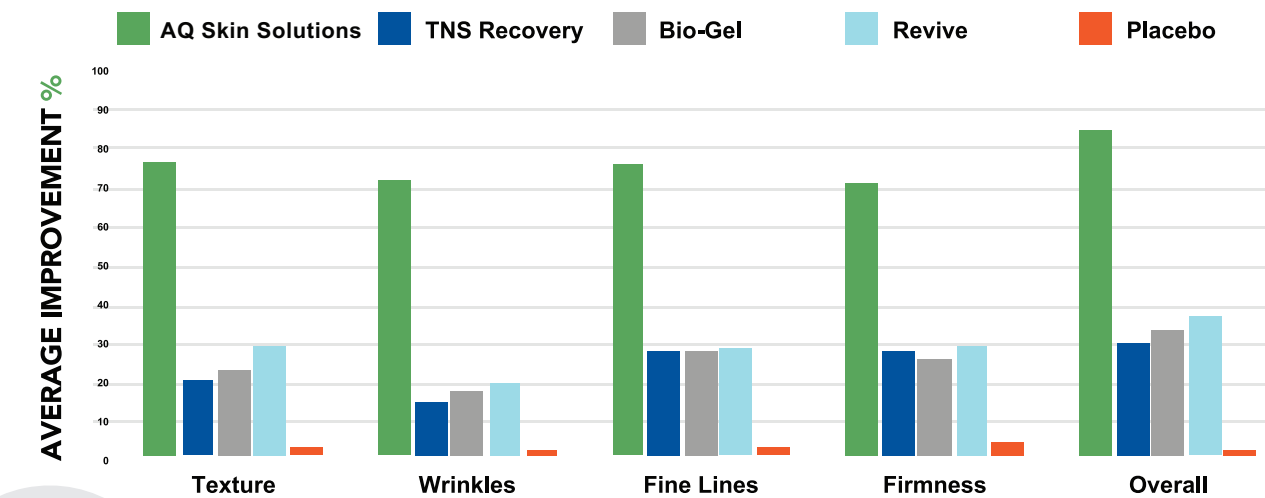
The science of growth factors as an anti-aging skin technology moved forward a great deal through the work of scientists Stanley Cohen and Rita Levi-Montalcini, who were awarded the Nobel Prize in Medicine in 1986 for advancing understanding of the role of Epidermal Growth Factor (EGF) in cell biology. Other researchers continued studying EGF, leading to current clinical applications of EGF for skin conditions and reversing the signs of aging. EGF is known to considerably increase skin cell regeneration, and studies have shown that it significantly aids in the healing of skin wounds.

Since the work of Cohen and Levi-Montalcini, scientific research has built a knowledge base of types and functions of other major GF, including TGF-b (Transforming Growth Factor), PDGF (Platelet Derived Growth Factor), GM-CSF (Granulocyte-Macrophage Colony-Stimulating Factor), and IL (Interleukins). Medical research has found that GF can speed and improve healing when applied to areas of the human body damaged in surgery, burns, wounds, or accidents. The mechanism behind the benefits is facilitation of changes at the cellular level to revert damaged cells to a younger state, healing the damaged skin in the process.

Some researchers wondered if the same GF-technology that was bringing such remarkable healing results to skin injuries could bring about cosmetic benefits as well. Scientists found that GF-technology had the potential to reverse the cell aging process, fade scars, improve healing, and renew the hair follicles on the scalp to help people with thinning hair. GF-technology is now being shown to improve the appearance of aging and sun-damaged skin and to help restore normal hair growth. Cosmetic patents of early GF-technology were first issued in 1994.

In 2001, two independent double-blind studies testing topical creams containing either natural or bio-engineered GF were presented to the Society of Investigative Dermatology. The results were surprising—when applied to skin twice a day for four to six weeks, both types of creams produced better results than Botox! Each study showed significant increases in production of collagen, hyaluronic acid, elastin, fibroblasts, and epidermal thickness.

Now, AQ has made another major advance in GF-technology by developing unique serums for the skin and scalp that contain the ideal type and combinations of GF to produce maximum anti-aging and hair restoration results.



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