Injuv® : Internal Rejuvenation for Beautiful Skin

Soft Gel Technologies, Inc., California, USA

Introduction – Face Value

Women are willing to do whatever they need to, by whatever means necessary to keep their youthful appearance. Both the pharmaceutical and cosmetic industries have capitalized on this ever growing market of those searching for the Fountain of Youth. These industries are bringing in billions of dollars every year doing just that.

The nutritional supplement industry has fallen way behind… until now. Injuv® is here! It is the only low molecular weight oral hyaluronic acid (HA) available.

With its amazing absorptive capabilities, Injuv® can moisturize from the inside out. It helps to alleviate the appearance of fine lines, improves joint health and the quality of the synovial fluid. The active ingredient in Injuv® may also aid in wound healing, while diminishing the severity of keloid scars. Sound too good to be true? Read on!

Discovery of HA

In 1934, Karl Meyer isolated a formerly unknown glycosaminoglycan from the vitreous humour of the bovine eye. It differed from any of the other previously

discovered glycosaminoglycans in that it did not contain sulphur. With its distinctive structure, its function within the body was unique. It was named hyaluronan and further scientific study ensued. At the time of its discovery, the new compound took on two names: hyaluronan when referring to its endogenous synthesis (*in vivo*) and hyaluronic acid when discussing research conducted outside of the body – human or animal (in vitro). Today hyaluronan is commonly referred to as hyaluronic acid, regardless of the context in which it is spoken.

Structure

Glycosaminoglycans (GAG) are linear, unbranched, high molecular weight polysaccharides containing a repeating disaccharide unit (D-glucuronic acid and N-acetyl glucosamine). HA, in its natural state, weighs anywhere from 1.2 – 1.5 million daltons. Its weight lends itself to high viscosity and excellent lubrication within the body. The other glycosaminoglycans in the body include chondroitin sulphate, keratin sulphate, dermatan sulphate, and heparin sulphate.

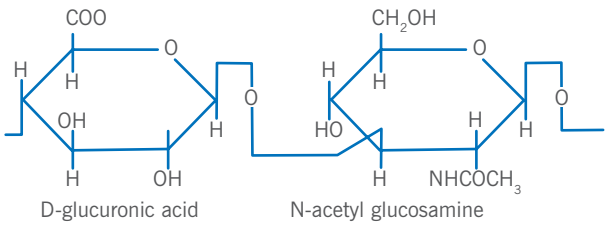

Figure 1.

Location

Hyaluronic acid has been difficult to detect until the recent advances in science. It is now known that HA is a large constituent of the extracellular matrix (ECM).

Extracellular Matrix

The components of the ECM are produced within the cells and then secreted to the extracellular space. The ECM is comprised of structural proteins, specialized proteins and proteoglycans. It is the proteoglycans in conjunction with hyaluronic acid that trap huge amounts of water within the ECM. The ECM is found throughout the skin, connective tissue and cartilage.

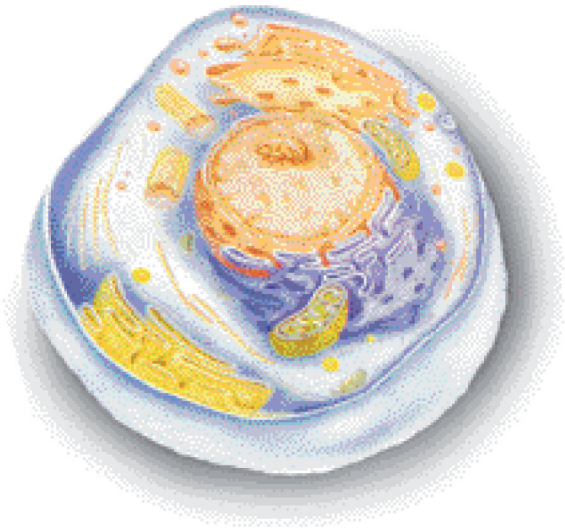

Figure 2.