## Title: Study of mesotherapy methods and their effectiveness in the aesthetic biorejuvenation of the skin

## Introduction

Mesotherapy is defined as the injection of substances into the middle skin. It has been used in medicine for over half a century and was discovered by the French physician Dr Michael Pistor. Historically, mesotherapy is not a new technique but it has its roots in antiquity. Specifically, Hippocrates in 400 BC to improve the shoulder pain of a shepherd from the island of Kos he used a cactus leaf on the skin. His technique is reminiscent of one of the current applications of mesotherapy known as nappage. The Chinese, on the other hand, used the same technique for 2000 years, using pointed hammers. The Chinese then invented the hollow needle used to inject substances. But the one who reintroduced it into the medical community and developed it is the now famous French physician Dr Michel Pistor who in 1952 used it as a technique for treating pain and of vascular disorders. With mesotherapy we achieve the penetration of cosmetics into the skin to deal with problems such as aging, acne, dehydration, cellulite, relaxation and local thickness. It is a non-invasive method applied without hospitalization in contrast to surgical methods, in cosmetic laboratories, in the offices of dermatologists and plastic surgeons. Its application techniques are constantly evolving and gaining the interest of many scientists active in the field of Aesthetics and Medicine. The idea is to inject a very small amount of active substances (hyaluronic acid, vitamins, antioxidants, enzymes, etc.) into the superficial skin in order to stimulate the biosynthetic capacity of fibroblasts, increase collagen and elastin production and stimulate production of key molecules that make up the environment of fibroblasts. Mesotherapy is divided into 2 main categories: autologous and heterologous. Autologous mesotherapy is applied by injecting blood plasma into the superficial skin. Platelet-rich plasma therapy is commonly known as PRP.

## Purpose of the research

As life expectancy increases, the need to maintain our external image for a long time through bio-rejuvenation and biostimulation of the skin while the application of Aesthetic mesotherapy is evolving rapidly due to its effectiveness in facial aesthetic problems in healthy individuals. We understand that mesotherapy is a new field of therapeutic applications in dermatology. All the knowledge he uses derives from the medical application. Most importantly, however, no comparative research has been done on the effectiveness of the two methods in these aesthetic problems. The present research will try to fill this gap in the literature. Specifically, he will study problems that appear on the face (discolorations, scars, wrinkles) with both methods of mesotherapy and will compare the results. The results will contribute significantly to the more effective application and selection of the respective methods.

## **Research methodology**

An extensive bibliographic review will be conducted in both international and Greek bibliography which will be the basis of the research. Specifically, the subject of mesotherapy is the subject of a study with a large volume of studies, mainly in the medical field. Then mesotherapy will be applied to a specific sample of the population with all methods of application (autologous - heterologous) and the corresponding data will be produced. The application will be done in aesthetic laboratories, in plastic surgery clinics as well as in dermatological centers by graduate professional Aesthetics-Cosmetologists with preparations that are widely used for such treatments.