



WEB OF SCIENCE

## INTRAVENOUS LOW LEVEL LASER THERAPY OR INTRACELLULAR THERAPY

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### Abstract

Soviet researchers E.N. Meschalkin and V.S. Sergiewski first introduced intravenous low laser therapy – IVLLT, about 40 years ago. This therapy has been used worldwide since 2005 due to the large number of studies reporting positive effects on human health. Exposing the blood to a low-power laser beam, with a maximum power of 5 mW, is based on the idea of energising the blood flow, using the different colours of the sunlight spectrum as well as ultraviolet and infrared rays. IVLLT is a minimal invasive and non-medical technique for generating a photochemical response in the cells of dysfunctional or damaged tissues. This type of treatment facilitates applications of laser light, i.e. radiation of different wavelengths available, in precise doses, over a well established period of time, at a recommended frequency. In this therapy, ultraviolet rays, visible light rays and infrared rays are used; depending on the type of laser radiation used, specific results with therapeutic application are obtained in addition to general results. The deeper idea behind introducing the full spectrum of colours into the body is to stimulate the mitochondria. These are the energy factories in the body and it is in the mitochondria that the vital energy, Adenosine triphosphate - ATP, is produced. Inside the mitochondria, at the inner membrane, there are different complexes where ATP is created, and these complexes are stimulated by light waves of different wavelengths and colours. If it is possible to keep the mitochondria in power, it is also available to maintain the body energetic and active, so this type of therapy is probably one of the best therapies against ageing. The possibility of laser light treatments of different wavelengths and the setting of different laser frequencies opens up the possibility of distinct treatment strategies as well as a new area of research that is not yet completely assessable.