

Clinical Project:

New ways of prevention and treatment of diseases with innovative Helio-Therapy (solar-therapy) using select sun-rays in dermatology.

Climate changes as well as changing environmental and living conditions lead to an increase in specific diseases, ever-rising costs of healthcare and to a decrease in productivity and quality of life. Illnesses like skin cancer, allergies, skin diseases, heart and cardiovascular diseases, osteoporosis, diabetes and other wide-spread diseases are increasing at an alarming and steady rate.

The humane use of sunlight has the potential to affect this trend in a positive way. Thousands of years ago, sunlight, without which there would be no life, and its unique quality, was used for therapeutic purposes to aid in healing of numerous illnesses like tuberculosis and rickets, in the treatment of war-related wounds, to stabilize the immune systems and to increase the over-all well being and digestion of patients. We know that in ancient Egypt they had specially built rooms where patients received spectrally diffused sunlight according to their ailments. In ancient Greece, they gave the sunlight treatment a name; they called it "heliotherapy". Modern phototherapy is successfully treating skin problems like psoriasis, eczema, and acne with ultraviolet rays. Because of the risks that come with excessive UV and IR exposure which can interact with medications taken by the patient, these therapies are limited. For highly effective treatment with natural sunlight, patients are often transferred to medical establishments on the Dead Sea because of the unique and natural sun filtration there.

Through modern technology sunlight can purposely, without known risks like sunburn, skin cancer, premature aging of the skin, allergic reactions, etc., be directed at problem areas by filtering the sunlight with nanometer accuracy before it reaches skin, hair or eyes. The innovative **HelioVital® – we are selective® – Technology** provides the necessary basis through targeted prevention of sun-exposure risks. This technology offers new potentials for the use of highly effective natural sunlight as a gentle accompaniment to traditional therapy or by itself. It is also very effective in sun-deficiency treatments. Sunlight has the potential to aid in diagnosing the origins of illnesses, preventing diseases, aiding in the body's own regeneration process, like the production of the vital natural Vitamin D₃, and offers explanations to many correlations. The use of targeted sunlight gives the patient a lasting and total benefit which in turn lowers the costs of healthcare.

This is the ambitious goal of **Klaus Lang** who holds a Master of Business and Engineering (FH) and **Dr. Winfried Baehring, Ph.D.** (inventors and initiators of HelioVital-Innovation) in association with the University Hospital in Tuebingen and their Dermatology Clinic which has already begun with the first studies. They found qualified partners in the United Arab Emirates: **Dr. Adnan Kaddaha** (Chairman of CEDARS Jebel Ali International Hospital in Dubai which works in collaboration with the hospital in Stuttgart) and **Prof. Dr. Guenther Kieninger**, Medical Director of CEDARS JAIH.

A two-phase procedure is planned, so patients can benefit from parts of the HelioVital potential immediately. For this, the use of sunlight with the HelioVital-Technology is not only targeting diverse skin diseases, but also chronic diseases and will aid in healing and recuperation processes while it is being researched and optimized.

Phase one is a small dermatology unit for treatments as well as clinical tests, research and development in the newly constructed addition to CEDARS Jebel Ali International Hospital in which practical experiences are being collected.

Phase two is the, unique for Germany, clinical-cooperation-project “Academic Teaching Hospital and Medical Technical Park in Dubai” which will have a dermatology section with HelioVital-Innovation and is planned as a “Center of Excellence”. This university hospital and medical-technical park project are in the planning stages and are backed by the state of Baden-Württemberg, Medical Center Stuttgart, the state capital of Stuttgart and the University Clinic of Tübingen.

“Dubai is perfect for a project for human medical use of sunlight and research for several reasons”, says **Klaus Lang** (HelioVital). Undoubtedly, the reliability of natural sunlight, which is also available in other parts of the world, is a deciding factor here. Especially conducive, just to mention some important factors, are the infrastructure in Dubai and the willingness and energy to constantly improve. Crucial are also the openness and willingness to cultivate and advance new innovations. This is done with the highest standards and only the best quality will assure lasting health tourism. Dubai allows for many Schwabian virtues to become reality. The bases are already in place from a scientific, medical and technical view. The only thing that needs to be worked on is the financial requirement, so the potentials can be quickly and purposeful realized.” **Klaus Lang** continues: “The amount and availability determines how the enormous potential will be used and how many additional medical and technical partners we can include. The safe utilization of the sun with HelioVital high-tech filtering is a key-technology with blockbuster quality.”

“We expect to gain insights and explanations to many medical correlations and show huge benefits to the patients by the use of selectively filtered sunlight” says **Dr. Winfried Baehring**. “The increased development of skin diseases (six to eight million citizens of the German Federal Republic suffer from atopic dermatitis, at present 140.00 Germans annually contract various forms of skin cancer already) make new preventive measures and treatments as well as further research a necessity. There are also scientifically proven correlations between lack of sunlight and some diseases which make us take a second look and realize the need for a natural approach to science. In phase-one of the clinical projects we introduce photo-therapy and optimize other therapies that have only been offered on the Dead Sea until now.”

We do not question if heliotherapy works, but under which circumstances we can use this photo-therapy optimally and how we can tailor it to the individual disease pattern and course of disease. **Prof. Dr. Peter Wolf, MD** (University Hospital Graz) welcomed the innovative attempt to reduce exposure to high amounts of UV rays and has, after thorough assessment of the HelioVital-filter-foils, endorsed the treatment without restrictions and has noticed an anti-carcinogenic effect. The usage vs. risk factor is definitely positive and even as a preventive measure shows great benefit.

Some positive results of the HelioVital-Innovation are not completely clear to some dermatologists. Surprisingly, a clinical study **by Prof. Dr. Peter Wolf, MD** on patients (in-vivo) measured sun protection factors (SPF) is light-years above the theoretical (in-vitro) SPF. This phenomenon in the protective effect shows that there is great potential for research and treatment. One possible explanation is: through selective filtration of damaging rays with the HelioVital-filter-foils the body’s own repair mechanism is successfully activated and the monochromatic energy needed for creation of free radicals is absorbed into the filter foils, i.e. reflected off the foils.

“Interestingly, the HelioVital-filter-foils fall prey to a similar monochromatic dependency as the human skin; it too is affected by aging, damage, and partial regeneration processes. The filter foils basically sacrifice themselves for the skin and they do this without side effects for the patient. Contact allergies are unlikely and have not been observed so far. General allergic reactions to interactions are greatly reduced by the HelioVital-Innovation, almost prevented, because selective rays are filtered from the light spectrum” says **Dr. Winfried Baehring**. “The spectacular ability to select filtration to a nanometer separates HelioVital-Therapy from all other common heliotherapies.”

With this unique protection, the basis for human medical use of sun energy and naturally scientific, gentle, new, selective heliotherapy is created. Because of the unresolved dispute about the positive and negative effects from sun rays, closely situated wave lengths, heightened by interaction of medicines, heliotherapies have been risky, sometimes ineffective and/or very expensive. “We have a great need for photo therapies, highly effective naturally scientific heliotherapies (i.e. Dead Sea therapies), not only because of their effectiveness, but also because many drugs have lost their effect due to the patients’ resistance or because of undesirable side effects. Also many of the drugs only treat the symptoms and not the cause of the illness.” says **Klaus Lang**.

The correct administration of heliotherapies with HelioVital and the necessary clinical tests can be developed and quickly administered in Dubai. Typical **skin diseases** treatable by heliotherapy are:

- Psoriasis vulgaris
- Atopic dermatitis
- Vitiligo (skin depigmentation, piebald skin)
- Chronic eczema of the hands
- Pityriasis lichenoides et varioliformis acuta and pityriasis lichenoides chronica
- Pityriasis rosea
- Lichen planus
- Pruritus, (itching)
- Localized Scleroderma (morphea)
- Necrobiosis lipoidica (specific forms)
- Granuloma anulare
- Cutaneous T-cell lymphoma
- Urticaria pigmentosa
- GvHD (Graft versus Host Disease)

“With our experiences, substantiated by the newest discoveries from cell research, we believe in a distinctly positive benefit of the photo therapy with HelioVital-filter-foils. The skin is the largest organ and has a crucial function in the prevention, alleviation and treatment of numerous ailments; not only skin ailments. Skin plays a very important role in our total health, far beyond dermatological diseases; we need much more research in this area. HelioVital-Therapy opens up a whole new area in several specialty fields of medicine, not only skin diseases.” Treatment with selectively filtered sunlight is (as a conventional supporting “gentle therapy”) also proven to be a great benefit in the treatment of a number of other diverse ailments in which the lack of sunlight has been scientifically proven (often in connection with a Vitamin D deficiency).

Heliotherapy can aid in the treatment of the following diseases:

- Diabetes
- Osteoporosis
- Arterial Sclerosis
- Cardio-Vascular disease
- Hypertension (high blood pressure)
- Asthma
- Tuberculosis
- Several cancers, i.e. intestinal, breast and prostate cancers
- Multiple Sclerosis
- SAD (Seasonally Affected Disorder)

“The project in Dubai is not only a chance to develop and administer gentle therapies for millions of people who suffer from skin diseases, but also to give them a better quality of life. The experiences we gather flow directly back into the development of our functional sun care products for preventive protection from damaging rays and the use of sunshine and our medical wellness products for a longer and better life for everyone. The prevention of UV and IR induced skin damage and associated health problems, i.e. deficiencies, are the most cost effective and important ways to sustain our health, productivity and attractiveness” says **Klaus Lang**. “The technical prerequisites to realize this highly adequate, selective and cost efficient high-tech-filter and the medical basis for further research for illness-specific adaptation are in place. The risks are not in medical efficiency and technical realism, but in the factor of time. All projects are at the starting positions. Long-winded financial talks and a dragging investment performance in Germany are delaying the realization of the project. In our global world, it is of the utmost importance to utilize the scientific edge, to build on it and to strengthen it” says **Dr. Winfried Baehring**.

The partners in Dubai are in agreement with this. “By utilizing the healing energy of the sun with HelioVital-Technology, we see effective, yet gentle treatment possibilities which are in-line with the high aspirations of our hospital. With these innovative treatment possibilities we can retain the leading position of CEDARS Jebel Ali International Hospital and reinforce them beyond the borders of Dubai” says **Dr. Adnan Kaddaha**. “The human medical use of the sun is a positive influence on the health tourism in Dubai. This advantage benefits tourists and locals alike. We can see how successful even relatively non-specific Heliotherapies can be by looking at the achievements at the Dead Sea. The real possibility alone that selective sunlight can ease, even cure the common disease, Diabetes, hints at limitless possibilities of gentle and natural healing. Actual studies show the relevance between Vitamin D₃ levels and diabetes and encourage the medical community to take quick action.”

“In the use of sunlight, we see holistically through all clinical departments and envision lasting benefits to all patients, especially as accompanying therapy and follow-up care. It is well known that sunlight has a positive impact on the healing of wounds and bone growth. With human medical use of selective sunlight, we stand at the start of promising therapies. We are proud to be among the first to use and optimize these possibilities” says **Prof. Dr. Guenther Kieninger**.

Old knowledge about healthy life, optimized with the newest scientific and medical discoveries, for a modern society is the aspiration and the goal of HelioVital. The first groundbreaking steps have been taken.

What is HelioVital?

HelioVital (a registered trademark of LANG Industrial Services, GmbH from Empfingen) has made it a goal to utilize the vital sunlight for the benefit of mankind. HelioVital has the vision to become the leader in the life-science businesses of **sun-protection** and **sun-utilization** systems in the areas of lifestyle, medical wellness and medical technology. HelioVital is an innovative high-tech film composite for nanometer exact, selective filtration/reduction of optic rays (especially the natural UV and IR rays of the sun), specifically coordinated for health and medicinal needs. HelioVital is unique in the world and unequalled in its effectiveness, quality and relevance. HelioVital products meet the already high expectations of a medical device, uniquely by filtration foils.

HelioVital is not only bridging a gap between science and economy in the area of sunlight utilization for people (for body, soul and mind) successfully, it also bridges the road to settle the conflicts between positive and negative effects of sunlight with high dermatological risks like sunburn, sun-allergies, skin cancer and premature aging of the skin. This conflict has to date inhibited many from trying medical uses of sunlight. The latest scientific discoveries show that the risks are all but eliminated. The HelioVital-Innovation has a one-of-a-kind positive users' potential, in effect but also in costs. HelioVital is a key technology for the human use of sun energy to retain good health and to attain better health.

- **HelioVital® functional sun-care**, the lifestyle product offers unique, selective and medicinal protection for skin, hair and eyes. It includes new qualities for sunbathing, cosmetic tanning with prevention of UV and IR induced skin damage as well as increasing vitality, wellbeing and good looks. HelioVital stands for ultimate sunshine pleasure with the goals of rehabilitation, recreation, and prevention as well as glowing good looks with the use of natural, highly effective sunlight without side effects.
- **HelioVital® medical-wellness**, products to be used mostly by clinics, enable new applications of selective and highly effective heliotherapies (solar therapy) and also show that through HelioVital we can improve on the basic Roman and Greek heliotherapies.
- **HelioVital® dermal-healthcare**, products for use under medical supervision offer new medical perspectives for prevention and rehabilitation. These products provide effective as well as gentle medicinal therapies for numerous skin ailments and other diseases and deficiencies by which sunlight spurs or supports the body own healing process.

For further questions please contact:

HelioVital®
dermal-healthcare

Concerning the collaboration between HelioVital www.heliovital.com
and the Dermatology Clinic of the University of Tuebingen
www.hautklinik-tuebingen.de



Mr. Klaus Lang
- Managing Director -

LANG Industrieservice GmbH - HelioVital® -

Zollernring 32 • 72186 Empfingen • Germany • Telephone: 49-7485-9996-0 • Fax: 49-7485-9996-33
E-mail: lang@heliovital.com

Concerning CEDARS Jebel Ali International Hospital Dubai www.cedars-jaih.com
and

CEDARS International www.cedarsinternationalgroup.com



Ms. Anne-Susann Becker
- International Marketing Manager -
CEDARS Jebel Ali International Hospital

P.O. Box 17666 • Jebel Ali • Dubai • U.A.E. • Telephone: +971-4-881 4000 • Fax: +971-4-881 4001
E-mail: anne.becker@cedars-jaih.com

Photo material:



Klaus Lang
(HelioVital® - Empfingen)



Dr. Winfried Baehring
(HelioVital® - Empfingen)



Dr. Adnan Kaddaha
(CEDARS International - Dubai)



Prof. Dr. Guenther Kieninger
(CEDARS International - Dubai)



Extension building of CEDARS Jebel Ali International Hospital currently under construction



Perspective of planned Academic Teaching Hospital and Medical Technical Park: CEDARS International