Where Cosmeceuticals and Nutraceuticals are going

Pierfrancesco Morganti
Secretary General of the International Society of Cosmetic Dermatology, Roma - Italy
Professor of Applied Cosmetic Dermatology, II University of Naples - Italy

Received: February, 2002

Key words: Cosmeceutical; Nutraceutical; Nutri-cosmeceutical; Clinically correct cosmetics; Skin barrier; Mucous membranes; Skin absorption; Botanicals; Alternative medicine;

Summary

With the improvement of the average lifestyle during the last fifty years, no one wants to look or be old anymore. "What is beautiful is good". Attractiveness in the elderly is really equated with youthfulness. Facial appearance, in fact, is one of the most powerful factors influencing interaction in many situations. Therefore, the modern cosmetic is to ameliorate and enhance the more positive aspects of appearance, while the aim of diet supplements and healthy nutrition is to improve our general well-being.

Cosmetic products (cosmeceuticals) and diet supplements (nutraceuticals) occupy today a grey area since the real activity they may have is not well defined.

Cosmeceuticals cover a wide range of products such as those aimed at diminishing wrinkles, acne marks, blotches, scars and brown spots.

Nutraceuticals cover products for reducing sugar, caffeine, salt intake, for eating less, reducing calories, stopping/reducing junk/fast food, stopping/reducing alcohol or/and fried foods. However they represent the reality of products necessary to generally prevent pathological diseases.

For these reasons it would be necessary to clearly define with appropriate laws the meaning to be given to functional dietetic products and to active cosmetics, better regulating their production and distribution, showing their real efficacy and safety carrying out more in vitro and in vivo studies.

Riassunto

Con il miglioramento dello stile di vita avvenuto negli ultimi 50 anni nessuno vuole più apparire o essere vecchio. Bello è buono e attrarre l'attenzione per una persona della terza età equivale ad essere giovane.

L'apparire sani e belli rappresenta un fattore fondamentale nelle interazioni e nei contatti sociali. Perciò, compito di un moderno cosmetico, è di migliorare ed esaltare gli aspetti positivi dell'apparire, mentre l'integratore alimentare deve esaltare lo stato di salute del corpo.

I prodotti cosmetici (cosmeceutici?) e gli integratori alimentari (nutraceutici?) occupano oggi un'area cosiddetta grigia non ancora ben definita nelle funzioni che realmente svolgono o possono svolgere categorie di prodotti che nella realtà sembrano in grado di prevenire lo sviluppo di alcune patologie oltre che migliorare l'aspetto generale dell'apparire.
I cosmeceutici sono così in grado di alleviare e migliorare patologie quali l'acne, o ridurre l'impatto negativo di cheloidi e smagliature. I nutriceutici possono sostituire l'uso di zuccheri riducendo la quantità di calorie assunte con l'alimentazione e spesso sono anche in grado di migliorare le funzioni della cute, modulare riportando alla norma la barriera alterata da patologie quali la dermatite atopica o la psoriasi. Per tutti questi motivi sarebbe necessario dimostrare sia l'efficacia che l'innocuità dei cosmeceutici e dei nutriceutici conducendo un maggior numero di studi sia in vitro che in vivo, come sarebbe anche opportuno definirne meglio le funzioni mediante nuove e più chiare normative.
Under the high Patronage of the Senate of the Italian Republic, the Ministry of Health, the National High Institute of Health and Regione Lazio, in the prestigious location of the CNR there took place the following international conference: "Nutri-cosme-ceuticals: a challenge for the future?" (Fig. 1).

Organized by the International Society of Cosmetic Dermatology together with the Faculty of Medicine of the University “Tor Vergata”, the Faculty of Pharmacy of the University “La Sapienza” of Rome and the Accademia di Storia dell’Arte Sanitaria, this conference was chaired by Professor Renato Lauro, dean of the Faculty of Pharmacy in Rome (Fig. 2), and was attended by researchers from 16 different countries and 110 speakers for a total attendance of about 500-600 participants.

Cosmeceuticals and nutraceuticals occupy today a grey area and can only claim on the packaging that they help to relieve certain symptoms. However they represent the reality of products necessary to generally prevent pathological diseases.

Cosmeceuticals cover a wide range of products such as those aimed at diminishing wrinkles, acne and stretch marks, blotches, scars and brown spots. Moreover they may be used to complement aesthetic dermatology and surgery, combining both medical and cosmetic necessities.

On the other hand, nutraceuticals cover products for reducing sugar, caffeine, salt intake for eating less, reducing calories, stopping/reducing junk/fast food, stopping/reducing alcohol or/and fried foods.

But the structure of skin is quite complex, being composed of several layers, each of which is equipped with its own arsenal of defence molecules, and the various systems differ from each other on the bases of layer’s susceptibility to oxidative stress and its function.

In particular, human stratum corneum (SC), shows specific antioxidant activity, against oxidative environment injuries, including UV radiation, chemical and biochemical oxidants of exogenous and endogenous origin, air pollution and anaerobic organisms. Therefore it is generally agreed that one of the major contributions to skin aging, skin disorders and inflammatory skin diseases, involve a interconnected redox-sensitive pathways, based on reactive oxygen species (ROS).

This is what described in a clear way from Prof. Stefano Manfredini from Pharmaceutical Science Dept. University of Ferrara, Italy. Small variations in the basal level of ROS, play a role not only in the context of damage to biomolecules and cells, but also in inducing more complex responses such as the activation of cellular si-
gnalling pathway, culminating in modulated gene expression, as well as post translational modification of proteins. This is the reason because of detailed analysis and systematical classification of the proteins synthesized in the various organs, along with their functions, their mechanism of action and their reciprocal interactions, have always been an objective of the medical science.

In fact, the skin performs its barrier function also by mechanisms of active defense, aimed at eliminating potentially dangerous agents. These mechanisms require the synthesis of a wide spectrum of proteins, some acting directly (lytic enzymes), some acting as a part of intra- and intercellular metabolic processes that allow cells to achieve complex activities (like phagocytosis).

Moreover, like all biologic interface structures, skin is used to acquire "information" from the external environment, useful for the activation of proper reactions. Thus, cutaneous cells are able to produce proteins fit for receiving different "signals" from the environment, elaborating, and transducing them. For example, an uninterrupted exchange of biochemical signals occurs between skin cells and the immune system, both in physiological conditions and in the event of an alteration of the barrier function, and this plays a remarkable role in the homeostasis of body organic defenses.

This was another interesting theme treated from Prof. Biagio Guarneri, Head of Dermatological Dept., University of Messina, Italy.

**THE ANTIOXIDANT NETWORK**

Redox sensitive events in the skin involve direct interaction with specific receptor, and/or redox-activation of members of signalling pathways such as protein kinases, protein phosphatases, transcription factor, cytokines, adhesion molecules, and T-lymphocyte receptor. A better comprehension of the mechanisms involved in skin oxidation, and regulation of cell response to antioxidant treatments, would be of help in the development of more powerful pharmaceutical and cosmeceutical antioxidant strategies to prevent or modulate skin disorders. Skin is therefore an efficient barrier aggressed by both external and internal perturbations caused by oxidative stress. The antioxidant defence of the skin is constructed to face these two types of aggressions.

The external damage is determined by UV irradiation and by atmospheric pollution. The defence from these agents is mainly accomplished by a barrier of lipids and corneocytes which form the stratum corneum. The oxidation of the lipids of this stratum reduces the efficiency of the barrier causing a more pronounced water loss, and a reduction of the defence against possible infections. The antioxidant defence system in skin was the topic of Prof. Umberto Cornelli from Loyola University Medical School of Chicago, USA (Fig. 3).

Since the enzymatic systems is not efficiently operating in corneocytes, squalene is considered to be the most powerful natural antioxidant in this compartment.

The mechanism and modern therapy for vitiligo
was another interesting topic presented at the meeting by Prof. Yon Kee Park, President of Korean Society of Cosmetic Dermatology.

In vitiligo-involved patients, it may causes disruption of normal social life especially in colored people. The use of the right cosmetics may be of fundamental help.

The nutri-cosmeceutical market even if criticized from some trade and/or consumer's associations nevertheless has an important ongoing annual increase of about 20%.

This increase is due to the promises this market often keeps thanks to the scientific progress both of new discovered active principles and innovative carriers able to penetrate the skin strata and/or the mucous membranes. For these reasons there is also the need to reassess the existing cosmetic and food laws and its interpretation in order to facilitate the communication of beneficial, scientifically valid information to consumers in terms they can understand.

And this was the scope of the round table "The international rules in the cosmetic and dietetic field: status quo and future prospective", organized during the Multidisciplinary Symposium on Nutri- cosmeceuticals.

EUROPEAN RULES

The round table focused on the European Union’s legislation on cosmetic and dietetic products and the possible perspectives and changes that can be expected for the future.

While I stressed once again that cosmetic and dietetic products must be carefully and clinically tested before they can be defined effective and safe, Senator Riccardo Pedrizzi (Fig. 4) underlined that also in Italy there is a need for a cosmetic surveillance that may monitor – on a national level – a business sector that reached the considerable sum of 8500 million Euro in Italy this year.

All the leading members of the cosmetic and dietetic field, from both the Ministry of Health and the High National Institute of Health, had their say during the Round Table for different reasons. Dr Colella (Fig. 5) and Dr Guidarelli from the Ministry of Health (Fig. 6) underscored how the present European legislation rightly protects and safeguards consumers although a stricter cosmetic supervision is felt as necessary. Such supervision ought to be organized through a closer collaboration among all the people involved, i.e. representatives of the cosmetic business, dermatologists, pharmacists and consumers, of course.
As much was claimed by Professor Giuseppe Salvatore, who coordinates the various laboratories of the National Institute of Health that are given the task of controlling cosmetic products. Professor Aureli and Professor Gagliardi stressed once again the need for a greater harmony among the different rules and the application of laws allowing the member states to easily control both the dietetic products and foods unifying the methods that the producing industries should put into market. Dr Gramiccioni (Fig. 7) pointed out how medical devices, such as some injectable and non-invasive products ought to be strictly evaluated too, bearing in mind their use associated with the topic application of cosmetic product. The use of hyaluronic acid as a skin filler is an example.

Dr Papadia from the Committee for a Fair Competition in Trade and Dr Leopardi, who is chairman of FOFI (Federation of the Italian Pharmacists) underlined the need for a stricter control on advertising that unfortunately very often, especially in the past, turned out to be deceiving for the consumers (Fig. 8).

At the conclusion of the discussion between all the speakers and participants, Prof. Giuseppe Salvatore suggests to take in Italy following initiatives:
- census of cosmetic manufacturing, packaging and exporting industries in each region;
- drawing up of a notified ingredients form;
- drawing up of a product form;
- setting up of a method to report all undesired side effects (family doctor, dermatologist, chemist, center for antidotes) through an adequate form for data collection;
- definition of an interregional pilot program of cosmetic surveillance.

**BOTANICALS AND PHYTO-COSMETICS**

But other important observations came out about the need to scientifically prove the global effectiveness of herbal extracts. Therefore, declared Prof. Salvatore (Fig. 9), the following requirements are fundamental for phytocosmetics:
- the main herb used must contain substances, which are functional in cosmetics. They must be contained in adequate quantities also in their extracts;
- the solvent and process (according to cases referred to by ratio Extracts/Crude Drug, or Solvent/Crude Drug), must be suitable in order to dissolve the active ingredients (or the
To make an extract that can be practically used (tincture; fluid, soft or dry watery or hydroalcoholic extracts; generic glycolic, butyl or greasy extracts; supercritical extracts);

- the prepared extract must be chemically characterized and standardized in order to meet specific requirements for a constant chemical composition, a chemical and microbiological purity and stability to be used in large quantities for phytocosmetic preparations.

But the best way to make the active principles efficacious is represented by a vehicle which must have chemical-physical requisites to enhance stability, efficacy and to control the degree of penetration through the skin layers.

Therefore Delivery System affect the efficacy of cosmetics and and/or functional food and they should be considered clinically correct, when their efficacy has been proven by biological and clinical correct methodologies. At this purpose the development of novel or more active cosmetics (cosmeceuticals?) or functional food (nutraceuticals?) is one of the most exciting and promising way in which the future food and cosmetics may address the human health needs and well being and a more strict collaboration between expert researchers from both university and industry seems to be necessary.

This was the leit motive discussed during this International and Multidisciplinary meeting in the session on Percutaneous and Mucous Absorption chaired from Prof. Howard Maibach, famous dermatologist of the University of San Francisco, USA (Fig. 10).

The efficacy of cosmetic products, then, can be determined by the relationship established between the permeability coefficients of the SC and the structure features of the penetrants, such as the cosmetic carrier and the active principles used.

The optimization of the concentration of the active principle and its degree of activity in the right cutaneous area will make the beauty product efficacious, especially if the product has a pleasant aspect and it is easy to apply.

According with Prof. Maibach, it is tacitly assumed that one mechanism of action of cosmeceutical relates to the delivery of one or more "actives" into one of more skin compartments: stratum corneum, viable epidermis, dermis, eccrine / apocrine / sebaceous glands and hair follicles. For these reasons two of the main problems confronting chemists and dermatologists have been always to obtain the right absorption of cosmetic product through the skin layer, and to prove their clinical efficacy.
CLINICALLY CORRECT COSMETICS

At this purpose the so-called clinically correct cosmetics, are beginning to be sold i.e., products whose efficacy have been demonstrated and proven safe. In fact, the interference caused by all the products topically applied to the skin, mainly on the intercellular lipids of the stratum corneum (SC) but also on the cellular membrane of all the viable skin layers, determines both the minor or major efficacy of the cosmetic principles used and, of course, the eventual undesirable side effects that might arise. These were the opinions of the research group of Mavi during this meeting. The same opinions were also expressed from the dermatologist Prof. Giuseppe Fabrizi, Catholic University of Rome, Prof. Cesare Bruno, physiologist from University of Urbino and Prof. Bruno Berra (Fig. 11), Dept. of Biochemistry-University of Milan.

The increasing significance given to appearance in human relationships has also increased the demand for facial rejuvenation procedures. This was the topic of a round table chaired by Prof. Roberto Bracaglia, Prof. Luigi Rusciani from Catholic University of Rome together with Prof. Paolo Palombo, Head of Plastic and Reconstructive Surgery, S. Eugenio Hospital of Rome (Fig. 12A, 12B).

Fig. 12A From the left: Prof. P. Palombo and Prof. R. Bracaglia

Face lift, agespots, keloids and scars were the most interesting topics treated. Nowadays, pulsed dye laser may totally eliminate pigmented lesions as well as laser resurfacing may reduce wrinkling giving a better reconstructed derma. About scars there are a variety of usable techniques such as filler injections, serial excisions or epithelial abrasion, as stated by Prof. Palombo and Prof. Marawali Harahap from the Dept. of Dermatology, University of North Sumatra, Indonesia (Fig. 13). Moreover a new therapeutic approach seems also to be the use of antithrombotic drugs as reported by Dr. Nicola Dell'Edera from Rome to define the quality of the active principles, to regulate their absorption and consequently to verify the efficacy of the cosmetic products and/or the diet supplement is necessary.
a closer collaboration between industry and university. The latter should furthermore organize special medical courses devoted to study and validate novel clinical non-invasive methodologies.

**Fig. 13 Prof. M. Harahap - Univ. of North Sumatra**

**MASTER DEGREE IN COSMETIC DERMATOLOGY**

At this regard Prof. Lauro announced an innovative European Master-degree in Cosmetic Dermatology and Aesthetic Medicine which will start contemporary in five Italian Universities in the Academic year 2002/2003 (Fig. 14).

**Fig. 14 From the left: P. Morganti, R. Lauro.**

The main objective of this two-year master is to lay the theoretic and practical basis of Cosmetic Dermatology and Medical Aesthetics as a new clinically oriented science. This Consortium of five primary Universities will be also able to organize and standardize new medical technologies useful for controlling the efficacy both of cosmetics and functional food.

Other objectives of this Consortium is also to establish more stable link with the European Industrial Compartment for developing new delivery nanometric-scale systems to utilize as carrier for skin and or mucous membranes.

Blue or marine cosmetics stands out as the latest novelty, in terms of time, that appeared on the cosmetic market following natural cosmetics, botanical cosmetics, mineral water and mad-based cosmetics.

However, can the present technological progress to be found in all fields of trade truly define these various kinds of cosmetic products or are these latter diversified for a marketing reason only? Do we really have the products and the techniques allowing us to evaluate and verify the differences – as long as there are differences – between a cosmetic product so called natural and another one deemed normal?

Are homeopathic, Chinese and ayurvedic cosmetics real categories of cosmetic products that differ from the standard?

At any rate it is sure that the use of *clinically correct cosmetics* together with a balanced diet and less "stressful" and closer to nature way of life stands as the basis for the real well being of our organism. All these fascinating topics were discussed in the course of this interesting conference whose aim was also to clarify the meaning of the following two terms: nutri/nutrecteicals and cosmeceuticals.

**ACNE AND PHOSPHATIDYLCHOLINE**

Thus, it has been shown, from Dr. Desanka Raškovic from IDI Hospital in Rome (Fig. 15), Italy, a significant decrease in the levels of linoleic acid in sebum of patients affected by acne and a contemporary and abnormal increase of squalene and oleic acid. This unbalance may be reported at normal levels by the use of an innovative nano-colloidal cosmetic gel, patented by
MAVI Co. The squalene concentration decreases drastically since the second week of treatment, while at the same time it can be noted a regular increase of the linoleic acid present in the stratum corneum lipids.

Based on the combined activity of phosphatidyl-choline-linoleic acid rich and azelaoyl-diglycinate, this nano-colloidal gel was also able to strongly decrease the superficial skin lipids and the presence both of corinebacterium-acne and ROS, normally present in people affected by acne juvenile, contemporary increasing skin hydration. In fact, according with U. Moser, from Roche Vitamins Europe Ltd, skin hydration and transdermal waterloss seems mostly due to the linoleic acid content in the skin. What is interesting to underline is the complete absence of side-effects recovered by the use of this gel after a three months use of the cosmetic formulation, also in presence of sun-light.

Moreover today, consumer needs for creams have dramatically changed in comparison to some years ago. Prevention gets more and more important as life conditions have changed as well as unlimited youth via repair is the dream of many people.

THE MEDITERRANEAN DIET

More active cosmetics, more efficient functional food and a better way of eating and, generally, leaving, was another live motive of this multidisciplinary meeting. It is necessary to remember, in fact, that more than 50% of adults in the United States are overweight and one in five is obese, according to the Center for Disease Control and Prevention – approximately 25% of women and 19.5% of men. These adults have a 50-100% increased risk of death from cardiovascular diseases such as diabetes, heart disease, and stroke. Genetics may account for 40-50% of obesity, but some of the environmental factors that influence obesity include attitudes toward unbalanced diet and exercise. At this purpose Prof. Publio Viola (Fig. 16) and Prof. Bruno...
Berra from University of Milano, spoke about the solid biological role of the so-called Mediterranean Diet (MD) useful to live in a better way. Moreover fruits, vegetable and olive oil represent the base of MD, rich in antioxidant compounds. Moreover extra-virgin olive oil contains not only a balanced quantity of omega-3 and omega-6 poly-unsaturated fatty acids, but also anti-oxidants compounds such as tocopherols, polyphenols and squalene in high quantity, necessary to prevent the overall cellular oxidative damage. Furthermore topical application and oral intake of olive oil and/or carotenoids suppress UV-induced carcinogenesis and may thus be useful for the skin photo-protection. This is the typology of natural and clinically correct cosmetic products that may be defined “cosmeceuticals” or at least cosmetic products of the new generation.

Do we also have the bases to define and distinguish from a scientific viewpoint those cosmetic and dietetic natural products that are an alternative to the “normal and dietetic products”? Did we define the necessary markers to control the uniformity in time and in the different lots of the phytotherapeutical extracts?

Do we have the analytical and pharmacological methods that allow us to verify the “infinitesimal” dosage and the clinical effectiveness of dietetic and homeopathic products?

Many of the researchers who attended the conference tried to give a clear answer to all these questions. Particularly interesting was the view given by Dr Anthony Dweck on the main plants and active principles having a vegetal origin that are used worldwide. Dr Dweck is president of the UK Society of Cosmetic Scientists (Fig. 17).

Dr Dweck highlighted the use of plants to soothe dryness of the skin and the cases of erythema caused by aggressive environmental factors and by the sun to whose rays, both positive and negative, we expose ourselves perhaps too often.

THE UNCONVENTIONAL Medicine

The number of people who turn to unconventional medicine and natural products increases with each passing year in Western world to the extent average rate, of about 40%.

We increasingly turn to biological products and, together with homeopathy, Chinese medicine as well as with Ayurvedic Indian medicine are more and more widespread. These latter have a rightful place among alternative and complementary therapies.
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The significance and the role of aromatherapy and aromachology were clearly demonstrated by Prof. Carla Scesa, from University of Siena (Fig. 18).

The cosmetic scientists carefully analyze the potential cosmetic use of all the smelling substances able to act on the most important issue related to the achievement and conservation of the human physical and psychical well being. The smelling molecules, in fact, not only are absorbed through the skin but also succeed in hitting the vital centres of our brain. Dr. V. Badaeva, from Sabinsa - USA, talked about the effectiveness of the nutraceuticals based on methods connected with the ancient Tibetan traditions whereas Dr De Monte, who is a scholar of Ayurvedic Indian medicine, took us back in time to six hundred years ago showing how, along with our allopathic medicine, there exist other ways to "cure" pathologies that were healed thousands of years ago through therapeutic means that take into greater consideration our "personality".

In this session of works it was inevitable for professor Francesco Negro, who is a well-referred Italian homeopathist, to intervene, stressing once again how important the homeopathic dilutions are in curing even very serious pathologies. It was once again underscored how the absence of side effects makes homeopathic medicine a safe medicine. However, the safety and effectiveness of both the cosmetic and dietetic products also depend on their rate of absorption, which is connected with the use of vehicles studied precisely for this purpose. The penetration of environmental polluting substances, topical drugs and cosmetic products through the skin layers is indeed connected with a number of factors among which stand out, of course, the state of health of the skin itself and thus of the "cutaneous barrier", as well as the chemical-physical characteristics of the carriers used to this end. We have a similar problem with the absorption through the mucous membranes that concerns especially the whole digestive tract that is involved in absorbing all the products that we intake with our diet. Consequently, the activity and the efficacy of cosmetic and dietetic products is connected with both the selection and the control of the active principles that are used because they are deemed more suitable for the goal we aim at, but also and mostly because they are inserted into suitable vehicles or carriers that allow them to reach and act in the right part of the body.

UV PROTECTION

For instance, in the case of a sun product, the screens to be used must remain stable and "active" on the horny layer because they are necessary to neutralize the negative effects of UVB and UVA rays, which hit our skin exposed to the sun or the sun-lamp.

As a matter of fact, a deeper skin absorption may cause toxic effects that are never to be underestimated. For these technical motivations professor P.U. Giacomoni from Clinique-New York presented: The Photosomes (Fig. 19). These particular micro-particles have the ability to slowly yield solar filters and anti-oxidants to the skin as they are being exposed to the light.
In a similar way, all active substances making up the anti-oxidant network of our skin and/or our organism must, to the contrary, penetrate more deeply through the different layers of our skin or mucous membranes to counter the damages caused by the environmental polluting substances in excess, which cause the formation of free radicals.

Fig. 19 Prof. U. Giacomoni - Clinique

Dr. I.R. Scott (Fig. 20) and C. Harding, well known English researchers who have been collaborating with Unilever's research centers for years, have pointed out how important the role of NMF (natural moisture factor) is to keep the skin moisturized at the level of the horny layer.

Fig. 20 from the Left: H.I. Maibach, I.R. Scott.

Dr. Blume, a German researcher, and Professor Touitou from the University of Jerusalem (Fig. 21), have talked in very precise terms about the possibility of modulating the trans-cutaneous penetration of what is applied on the skin in terms of particular liposomes or micro and nano-capsules.

Fig. 21 Prof. E. Touitou - Univ. of Jerusalem

Professor Lee instead, from the Korean University of Yonsei (Fig. 22), talked about the importance of the role played by the calcium ion in regulating the skin barrier.

Perturbation of the epidermal barrier leads to the loss of normal calcium gradients and barrier recovery is parallel to the restoration of the calcium gradient in the epidermis.

Fig. 22 Prof. Lee - Korean Soc. of Cosmetic Dermatology

THE PROTECTIVE CAROTENOIDS

Among the topics of the conference much emphasis was given to the so called functional
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foods of the third generation, i.e. those dietary supplements that can play an important role especially in preventive medicine. Consequently betacarotene or carotenoids were talked about mostly by Dr. Gerritsen, and Professor Fabrizi.

The use of carotenoids, especially if well balanced among them and associated with vitamin E and C, are apparently able to greatly decrease the free radicals that can be found in bulk, for instance, in the blood of those people who smoke heavily.

These controls have been obtained lately in a new non-invasive test that allows us to define the so called “protection factor against free radicals” (RPF).

HAIR LOSS

Another topic of the conference focused on the activity carried out by the dosed extracts of Seroenoa Repens with regards to the alpha reductases that can be found at the level of the sebum on the scalp of those patients affected by androgenetic alopecia.

The Italian biologist Dr. Fasulo and Professor Argenziano, a dermatologist from the University of Naples, talked about the topic and/or systemic effectiveness of such phytotherapeutic extract.

According to Dr. Fasulo, the combined used of topical friction and dietetic products based on Seroenoa Repens and gelatin-cystine are apparently able to greatly improve those patients affected by androgenetic baldness.

Professor Lanzone, from Gynaecology Department of the Catholic University of Roma, talked about the beneficial effects that phytoestrogens may have in the various pathologies that are hormone-dependent (Fig. 23).

Fig. 23 Prof. A. Lanzone - Catholic Univ. of Roma

Such phytoestrogens if taken orally as dietetic products are surely beneficial during the premenopause period thus allowing a reduction in drugs taking having an estrogenic activity.

It is necessary, however, to clearly define with the appropriate laws the meaning to be given to
functional dietetic products and to active cosmetics, better regulating their production and distribution. It is necessary also to show their real efficacy and safety and to define the qualities that are ascribed to them by an increasingly aggressive – but not always truthful – marketing about their real effects.

For the cosmetic and dietetic products exotic and during product performance claims have become, in fact the essence of many companies’ marketing plans. To be defined clinically correct or cosmeceuticals and/or nutriceuticals, it would thus appear necessary the use of the right active principles and vehicles calibrated and stable in time. It is necessary to carry out more thorough clinical studies on the end product in order to show its real effectiveness.

These and other interesting topics were presented and discussed from 120 researchers coming from universities and industries world wide during this two and half meeting, organized in a prestigious location: the Italian National Research Centre (C.N.R.) in Rome.

During the sessions coffee breaks were offered the original Italian espresso by Caffè d’autore Morganti, and the delicious typical pastry by the Community of Monti Cimini. Least but not last the exquisite red and white wine produced in the region of Lazio by the company Pietra Pinta were offered during the brunches.
VIEW OF THE CONGRESS LOCATIONS

Exhibition Area

Room A

Room B

Press Conference

MS. A. Lebovich Scientific Books Corner

Scientific Secretariat

Hostesses