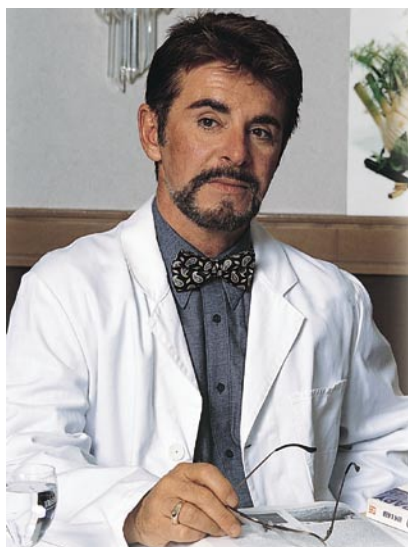


Ingredient Inquisition

By Danné Montague-King



Confused by those "miracle" ingredients in skin care products? Danné Montague-King demystifies them, tells you what they are, what they do and whether they work.

I was recently asked, upon returning from a lecture tour of Russia, whether there is any difference between the Russian approach to aesthetics and that of the US. I replied that they were like night and day! The Americans market beauty therapy goods and treatments based on the merits of a single ingredient or machine — as if each new "breakthrough" was a one-off miracle.

I have suffered through (and fought) the acid craze years, the AHA phenomenon, the micro-dermabrasion blitz, the vitamin C controversy, all of which my colleagues and team members have utilised and even helped to pioneer for nearly 40 years. My suffering springs from the fact there is no one single ingredient or device that will fix all problems in the skin. The fight has been to put every tool in nature's pharmacopoeia into its proper perspective.

The Russians, on the other hand, seem to realise that concepts and philosophies of science are more important than products or equipment, the latter being merely tools to work with. But then a great many Russian beauty therapists are "dermatologists" (medical doctors) who discovered at the end of the Cold War that more money could be made pushing beauty treatments than practicing socialised medicine. The Americans, on the other hand, have been taught to look for the "quick fix", the end-all product that will do all the work for them without the bother of endless education and actual research. To be fair, there are a few exceptions. Arising from this morass of "what's the newest thing selling" are a plethora of self-styled gurus and even some physicians waving their MDs as a banner of validation and assurance. Their products are hawked to the little beauty therapists whose money goes towards paying for the doctor's new Porsche.

To cut to the chase, it is the duty, nay, the obligation of eccentric scientists such as myself, who have somehow managed to get journalistic privileges and (gasp) a large audience of readers over the years, to search for the truth.

Speaking of years, I look back on all 60 of them and realise I have seen everything in beauty therapy come and go and return again — the same old half-baked theories just tarted up in new, high-tech drag. I used to ponder this phenomenon and wonder that while we all know oxygen crèmes (as one example) are fake, then why are they on sale again.

The answer being, of course, that new therapists are being born every year, and they just don't know!

As I totter into antiquity, as the professionals' advocate I feel compelled to take a closer view into the world of so-called "breakthroughs" and "new" ingredients in order to at least partially arm the discriminating therapist with enough knowledge to wade through increasingly murky waters of a "cosmeceutical" world.

COSMECEUTICALS

MediLift, Cosmedics, Physicians Formula — do these names sound familiar? These products may indeed have a medical doctor who has at least invested in the range, but in no way must they be taken as better or more effective than any other well-formulated product. The medical profession does not endorse these products or companies in general and even the word "cosmeceutical" is not recognised by any governing medical body.

It is, in fact, a word coined to describe products or treatments that border on medical but still come under the cosmetic blanket, as far as most regulatory bodies are concerned. This does not mean treatments described in this manner are not good or effective to some degree. In my opinion it is misleading and if not dishonest to lead therapists and doctors to believe that such products are backed by some bona fide medical body.

PARAMEDICAL AESTHETICIAN

This title is not so bad and, in fact, describes any licensed or qualified therapist who has been trained to perform treatments that are alternative and adjunctive to medical procedures. Many such therapists are working alongside physicians or referring back and forth with a doctor. It is a growing field that still needs

Ingredient Inquisition

more regulation and education.

However, beware of any course that offers paramedical aesthetic training and does not thoroughly cover concept, theory, chemistry, anatomy and physiology. We might add immunology to this, considering the new mutations of virus currently swarming the globe.

VITAMIN C

Forty years ago, a mentor pointed out the importance of vitamin C in skin to me. Pulling out a huge copy of Gray's Anatomy, he showed me a picture of the fibroblast cell making collagen fibres like a little factory. The boss of this factory was Mr Vitamin C.

Over the years, we have expanded on this fact both in formula and research. In a way, we were voices crying in a wilderness (except for Nobel prize winner Linus Pauling) and little attention was paid to vitamin C in the cosmetics industry. Since I did not invent vitamin C I can only say that what is real and what works will eventually come out.

However, in an effort to outsell competitors touting this common and generic vitamin, many cosmetic entrepreneurs claim to have a better or more stable vitamin C. Then there is the mysterious "designer" vitamin C called Ester C or C'Ester. This is the funniest scam of all because the ester of ascorbic acid (vitamin C) is common ascorbyl palmitate, well known to the food industry for years, but scorned by the naïve cosmetic industry decades ago because it has a bad habit of turning crèmes slightly yellowish.

I never cared about the colour of crèmes only their therapeutic effects, so I always included ascorbyl palmitate in any vitamin C formula. Recently an American dermatologist, known for writing a wrinkle book, hawking goods on the Internet and eating salmon several

times a day to stay young, tried to sue a cosmetic company using ascorbyl palmitate. He claimed to have "discovered" its topical use, but when confronted by some heavy duty medical researchers called by the defendants, the suit was withdrawn.

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Here's the truth about vitamin C. The word unstable is not a bad word to a chemist, only to a psychiatrist. Many times an unstable ingredient may be the most powerful. It denatures quickly when exposed to oxygen or does not "stay in solution" (chemspeak for things that will not stay dissolved).

Plain old L-ascorbic acid is such an ingredient. It's unstable but is also the most powerful vitamin C of them all. The much advertised stable vitamin C's are weaker but last longer in a product. Crèmes keep vitamin C longer due to their lipid base while gels or serums, often water-based, lose the strength of vitamin C quicker, once opened.

The most used "stable" C's are ascorbyl magnesium phosphate and old fashioned ascorbyl palmitate. Forty years ago, I just thought I would mix all three together for maximum protection and surround them with a calcium ion like horses in a corral! It seemed logical chem-

istry to me at the time so you can imagine my shock at all the hoopla over these "special" vitamin C products popping up years later!

DHEA

Dehydroepiandrosterone is a hormone without a function and the most abundant steroid in our body. Laboratory tests on rats show it will suppress some tumour formations, guard against diabetes, obesity and some immune and heart diseases. But as a topical hormonal anti-aging ingredient for the skin? Not a chance!

DMEA

Dimethylaminoethanol is still under investigation as an oral supplement even while it is being sold like crazy as an anti-aging miracle (along with eating salmon). The nature of its complex transference through the cells of the body is not duplicated through the skin from the outside. Like the theophyllin thigh crème of yesteryear, DMEA crèmes start out active at the lab, but quickly denature before reaching the market.

I think the anti-aging brainstorm properties "discovered" by the US dermatologist was loosely based on the fact that DMEA converts in the body to choline. This stimulates neurotransmitters, or brain energy in other words. Choline also forms phosphatidylcholine which is a primary phospholipid of cell membranes — hence the alleged skin rejuvenation myth.

SUPER ANTIOXIDANTS

Most of our cells manufacture their own antioxidants which transform oxygen radicals into something less harmful. The antioxidants we produce are super oxide dismutase (SOD) glutathione, glutathione peroxidase and catalase. Unless there is a gross deficiency of these enzymes in our systems, taking them as supplements is like carrying

Ingredient Inquisition

coals to Newcastle. They certainly do nothing for the skin when they are topically applied. Antioxidant defences made by our bodies are not the same as antioxidants we get from food.

Vitamin E is the primary antioxidant that is needed internally and for topical application. Like little lipid soldiers, the tocopherol army (vitamin E) wards off attack from fierce free radicals which have already robbed many healthy cells of their electrons.

Standing behind the E soldiers should be vitamin C, not a primary antioxidant as often thought, but a free radical scavenger ready to grab any little monster that breaks the E line.

Then we have the air force! Super antioxidants called proanthocyanidines. These come from pine bark (one known as pycnogenol), grape pips and even red wine. However, red wine has as many free radicals as antioxidants which enhance histamine in the wine. Take an antihistamine to ward off a wine hangover! All of these antioxidants really are necessary to preserve cell life against the rusting and anti-aging effects of free radicals and can be topically applied as well. Sun screens could theoretically be included on this list as help to protect the skin from forming lipofuchin from the sun, a yellowish free radical "soup" found in skin.

BETA GLUCANS

Here is an ingredient that we can get our teeth into! Or at least our Langerhans cells like to get their teeth into beta glucans. It makes them as strong as Popeye the sailor on spinach and they can lash out with their long dendrite arms with those hungry little macrophage mouths on the end and gobble up anything that is not supposed to be in the skin.

For many reasons beta glucans are nature's miracle. Gleaned from yeast cell wall extracts, these expensive little healers can reduce inflammation from severe sunburn in less than 30 minutes. You should see what they can do on post-surgery scars and second-degree burns. We are researching slowing down the plaque-like lesions of psoriasis using beta glucans. The reason would surprise you because it has nothing whatsoever to do with beta glucans' healing power.

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ESSENTIAL FATTY ACIDS (EFAS)

EFAs are number one on my list of things that really do work on the skin from inside out.

The research and proof of the powers of EFAs are massive and irrefutable. A great portion of the very matrix in which all our cells float is made of EFAs. Also the thickness of skin, especially the bounce and turgidity we enjoy in youth, is due to the presence of EFAs. This decreases with time and the skin becomes thin and crepey. Like any other "essential", these fatty acids can only be ingested into the body through foods or supplements. Topical application of EFAs does nothing for the skin. Pure and powerful EFAs help to relieve acne due to the hormonal regulatory aspects of many of these

oils, principally Evening Primrose oil. Psoriasis and eczema are also treated this way with great results. I have been increasing my daily dose of Evening Primrose Oil since age 55 and have noticed that not only is the skin on the backs of my hands younger and smoother, but my hair and nails seem to explode into volume and length almost overnight!

But not all Evening Primrose oils are full strength and pure. After exhaustive investigation, I discovered a source of Evening Primroses grown in the rich volcanic soil of the Canterbury Plains in New Zealand. A fabulous golden oil is extracted with a special process that retains 100% of its remarkable properties.

LYCOPENE

This final "latest breakthrough" is comic relief, leaving me to shake my head with disbelief over how far some cosmetics companies will go to make a dollar.

The primary source of lycopene comes from tomatoes and one company actually used a photo of a big, red tomato as being the latest anti-aging breakthrough.

Fortunately for the intrepid researcher, there is the CTFA International Buyers' Guide, which is US FDA-controlled. This reference guide to the personal care products industry includes all ingredients allowed in the formulation of cosmetics, the nature of the ingredients and the safety data. Lycopene is listed only as an orange colorant.

To be sure, there is solid evidence that lycopene is a prophylactic against male prostate cancer, but that is a long way from treating skin on the face! Although, it is sometimes as hard to tell the difference with some of my clients.

In summary, be skeptical about any new breakthrough treatment that hinges on a single ingredient. Learn what the differences are be-

Ingredient Inquisition

tween “essential” chemicals, natural or otherwise, and what our body already produces on its own. Familiarise yourself with delivery systems into the skin and know which ingredients can be topically applied with a chemical reaction that takes place and which ingredients must be taken orally.

Probably the ideal crème would be a mixture of salmon, DMEA, vitamin C, antioxidants and beta glucans, with a pinch of lycopene for colour. Then spread it on toast like Vegemite and eat it three times a day! ■■

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