

# AGINGMATTERS™

## MAGAZINE

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The IAS private members club magazine

## In the Spotlight

# MSH

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### In this issue:

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**MSH is not just  
for tanning**

An interview with  
Thierry Hertoghe  
MD

**Free radicals in  
aging**

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Lippman, Ph.D.

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progesterones'  
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importance of a  
healthy mouth**

– by Brian  
Halvorsen, BDS

# Testimonials



SUZANNE SOMERS

*"The Aging Matters™ magazine is spectacular, very readable and chock full of the latest and greatest. It's the magazine I wait for and anticipate."*

AUBREY DE GREY Ph.D

*"IAS has shown great vision and leadership as an organization focused mainly on the provision of contemporary medical interventions against aging, and in also supporting the SENS Foundation efforts to hasten the development of much more powerful future interventions."*



JONATHAN V. WRIGHT M.D.

*"Every adult has the right to take care of his or her own personal health as he or she chooses. In the 21st century this universal human right has been nearly obliterated by an ocean of nanny state regulations and deliberate suppression of information by bureaucracies, with hidden and not-so hidden agendas. International Antiaging Systems is a beacon of useful health care information and a literal island of freedom of health care product choice in our otherwise unfree health care world."*

NICHOLAS PERRICONE M.D.

*"IAS is an outstanding resource for the finest, most up-to-date news and information on healthy aging. They also offer products of the highest integrity and efficacy. In fact, IAS is the world's greatest source, (often the only source) for the most cutting-edge and advanced nutrients to ensure optimum health span and maximum life span."*



THIERRY HERTOGE, M.D.

*"Every adult has the right to take care of his or her own personal health as he or she chooses. In the 21st century this universal human right has been nearly obliterated by an ocean of nanny state regulations and deliberate suppression of information by bureaucracies, with hidden and not-so hidden agendas. International Antiaging Systems is a beacon of useful health care information and a literal island of freedom of health care product choice in our otherwise unfree health care world."*

WALTER PIERPAOLI, M.D.

*"I have known IAS for many years' and they are a qualified group who provide for me, my family and my patients. Their skill and professional capacity have liberated me from all sorts of problems concerning the search for guaranteed and often rare supplements, or anything which is available but problematic to find. Their service goes far beyond duty and helps in many ways to maintain optimal health."*



FRANK SHALLENBERGER M.D.

*"The tools that are available today to treat the aging process are truly amazing. Thanks to IAS the field of antiaging medicine has expanded to the point that feeling and functioning 10-20 years younger is easily achievable. Their information and product services are regularly used by my patients."*

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## Welcome

We start 2021 with an issue of the Aging Matters™ magazine full of articles written by doctors, all of whom are experts in their field.

Firstly, we have the well-known Thierry Hertoghe, M.D. from Belgium. A gentleman who travels the world lecturing on the use of hormones for antiaging, and his books are renowned for their ability to act as reference guides, packed as they are with how-to-do-it knowledge in the field of endocrinology.

In this interview, Dr. Hertoghe talks about MSH, a hormone known for its tanning ability, but here we discover so much more about it, including its libido enhancement for men and women, a treatment for ED and even an ability to help darken grey hair!

Dr. Richard Lippman, originally from Sweden, discusses his in-vivo research for free radicals and how after 228 experiments, the most unique and multifunctional free radical scavenger ACF228® was born.

As we age, protecting against free radicals deleterious effects, (which are mostly created-under normal circumstances- just through the act of breathing) becomes ever more important.

Then, Dr. Nyjon Eccles, a breast cancer specialist based in London, delves into the use of progesterone for women.

Dr. Eccles helps to dispel the myths around progesterone, pointing out the important differences between the synthetic and natural forms, and what difference it makes whether they are applied topically or orally.

I believe any lady interested in HRT and especially those concerned with breast cancer will want to know the information in this article.

Lastly, our dentist friend from England, Dr. Brian Halvorsen rummages through the research to discover the links between dental health and holistic health.

It may be hard to believe that bad mouth hygiene can affect so much more inside the body, but Dr. Halvorsen will guide you through those issues here.

We hope there is something here to suit all tastes.

**Phil Micans, MS, PharmB**  
Editor, Aging Matters™ Magazine

**Ward Dean, M.D.**  
Medical Director, IAS Group

**Declaration:** The IAS Aging Matters™ magazine is intended for IAS private club members (and therefore is not intended for the public). It focuses on the latest international nutritional, hormonal and drug therapies to help combat the signs of aging. These signs include the physical, mental and internal changes consisting of the diseases and disorders such as cancer, arthritis and senile dementias etc. However, the focus is upon the prevention of such aging diseases and disorders for the 'healthy-aging' individual.

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**[www.aging-matters.com](http://www.aging-matters.com)**

# CAN METFORMIN REDUCE MORTALITY RATES IN COVID-19?

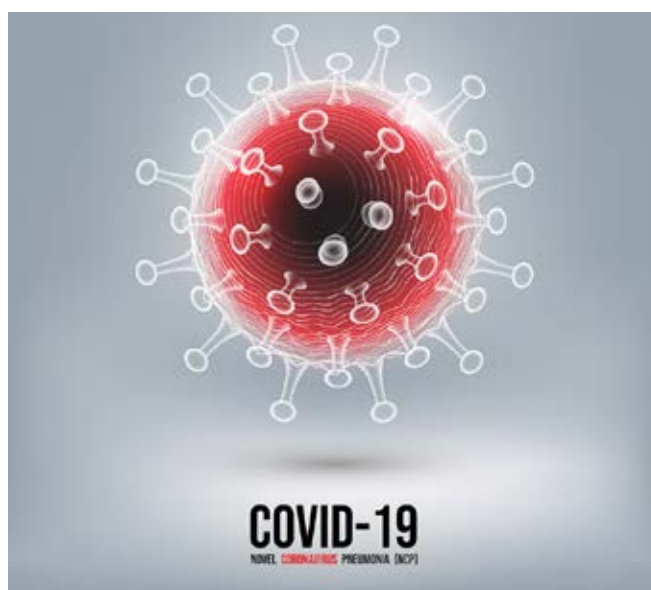
*The medicine Metformin has been significantly associated with reduced mortality rates in Covid-19. Highly contagious and lethal, the respiratory and vascular damaging coronavirus has swept across the world and scientists have constantly and intensely studied the pandemic.*

Now, more than a year after the discovery of the virus, vaccines have been rolled out in a lot of countries and important discoveries have been made. Over 150 vaccines are currently in development and headline research has revealed that Metformin, an FDA approved medicine, can potentially reduce mortality rates in Covid-19.

Metformin is commonly prescribed for type 2 diabetes and anti-aging, it has been documented that its properties can also suppress virus growth. Therefore, those people who contract Covid-19 whilst they have been taking Metformin potentially have a higher rate of survival. However, specialists have said that more in depth research and testing needs to be carried out. Metformin has been used as an anti-inflammation, antithrombotic and anti-viral drug which could explain their findings and emphasis has been put on the fact that Metformin acts as an mTOR inhibitor.

The Coronavirus is named after its crownlike spikes that protrude from its surface. The virus enters the body through the nose, mouth or eyes then attaches to cells in the airway that produce a protein called ACE2.

The virus latches onto and infects the cells, once inside a cell, the virus releases a snippet of genetic material called RNA.



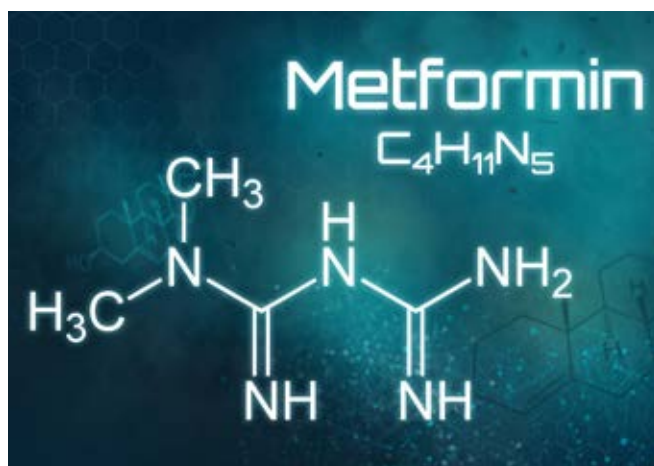
The infected cell reads the RNA and begins making proteins that will keep the immune system at bay and help the virus replicate.

Studies have revealed that as an mTOR inhibitor, Metformin can play a role in blocking pathways leading to doorways for Covid-19 viral replication and growth.

The inhibitor suppresses cell proliferation and interrupts viral translation decreasing the possibility of the deadly virus spreading further into the body.

If the virus can't be blocked it will create thousands and millions of copies that will go on a journey of mass destruction leading to severe symptoms, long term organ damage or sadly death.





Investigations into the use of Metformin as a barrier from Covid-19 have resulted in some experts believing that if a person has been taking Metformin for some time before contracting the virus it can reduce the likelihood of death.

### What scientific evidence is there?

A report in the Journey of Medical Virology concluded that the literature surrounding potential therapeutic targets for Covid-19 is continuously evolving as understanding the pathogenesis and viral cycle of SARS-CoV-2 improves.

They explained that there is growing evidence for the role of mTOR pathway in cellular response to SARS-CoV-2.

Scientists from around the world will continue studying the viral life cycle of Covid-19 and its mutations. The experts will develop new therapies and repurpose existing drugs such as Metformin. Through their intense and rapid testing and high-speed discoveries the scientists will hopefully have the ability to prevent the next pandemic before it starts.

For more information about Metformin head over to our website:

[www.antiaging-systems.com](http://www.antiaging-systems.com)

### References

1. mTOR inhibitor in COVID-19: A commentary and review of efficacy in RNA viruses. Basil A. Karam MD. Et, Al. First published: 12 December 2020.

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# TRY NOT TO BE SAD

*SAD (Seasonal Affective Disorder) was named, described and documented by Norman Rosenthal of the National Institute of Mental Health in 1984. People often refer to his book 'Winter Blues' for research purposes. SAD is a seasonal form of depression; it has a seasonal behavioural pattern. Like other forms of depression, it can make you feel like you are living under a black cloud.*

According to the World Health Organization, currently, 264 million people suffer from depression. That includes documented cases, there will be plenty more people out there who don't seek help – the silent sufferers. Depression is the leading cause of disability worldwide with over 800,000 suicides last year. It is the second leading cause of death for 15-29-year-olds. HSE.gov.uk states that 828,000 workers in 2019/2020 had reported time off due to depression, stress and anxiety and 17.9 million working days were lost.

## **SAD is a mood-changing disorder that can affect adults and children.**

In the USA, studies revealed that SAD sufferer's makeup 1.4% of the population in Florida and 9.9% in Alaska, proving that weather affects people's state of mind. The average autumn temperatures range from a high of 72.7 degrees Fahrenheit (22.6 degrees Celsius) in Florida to a low of 26.7 °F (-2.9 °C) in Alaska.

For most SAD sufferers, their symptoms begin in autumn and improve when spring arrives, however, there are cases of people who are affected through other seasons too.

## **How would you feel if you suffered from SAD?**

Most people's moods are affected by the weather to some degree, the thought of going outside into the pouring rain is

enough to annoy the happiest of people. But when the days get shorter and night longer most SAD sufferers start to experience more intense negative feelings. A strong feeling that you want to withdraw from the world and start to show a display of depressive behaviour including some of the following:

- Low moods lasting for long periods
- A lack of energy
- Lack of interest in things
- Ongoing self-conflict
- Difficulty to concentrate
- Struggle to stick to a routine
- Be indecisive
- Feel in a sluggish or agitated state
- Feel hopeless or worthless
- Cry at the tiniest thing
- Have no passion to do things
- Have thoughts of suicide
- Gain weight
- Experience problems with sleeping

Whilst those symptoms can be linked to many disorders, the difference is, they are season related.



### **What causes someone to suffer from SAD?**

Doctors still don't know the exact cause of the disorder. They know that it relates to how your body reacts to daylight, light stimulates a part of the brain called the hypothalamus and a lack of light can prevent that area of the brain working properly.

The brain contains a chemical called serotonin which plays an important role in mood, appetite and sleep. Sometimes there are abnormally low levels of serotonin in the brain in winter which in turn can cause mood changes.

Too much of the hormone melatonin in the brain can cause an irresistible urge to sleep or be sluggish.

### **Living with SAD**

SAD can make personality traits change and

reduce a person's productivity at work so it shouldn't be ignored. A common treatment for SAD is phototherapy which is a form of light therapy and medication can be prescribed too.

If you are suffering from the disorder, the best thing you can do is be prepared and know your symptoms. No matter what form of depression you have, there is a temptation to 'hibernate', become housebound and be antisocial.

Isolation isn't good for you and it has become very evident since the two lockdowns we have experienced due to the Coronavirus pandemic, sadly suicide rates have gone up.

Mixing with people is very important for mental health and that has been difficult to do since March of this year.



## Fight SAD by having a battle plan and embracing autumn and winter, here's how you can do it...

- Plan activities you can do that time of year.
- Take a winter holiday.
- Make the most of natural light.
- Have an exercise plan.
- Create upbeat music playlists.
- Make your home comfortable, somewhere inviting where you want to be.
- Use the dark evenings productively – tidy drawers, do filing, take unwanted clothes to a charity shop, have a clear-out and see what you could sell online.
- Make your bed every day and keep your living space bright and tidy.
- Using a 'lightbox' is an effective way to deal with the symptoms of SAD. The bright light encourages the body to make certain chemicals and hormones to boost your mood. A proper SAD light is specifically designed for the purpose – it's bright enough to replicate natural sunlight with no UVs (ultraviolet). It is recommended to do 30 minutes a day but not after 5 pm and it should make a difference to moods after one to two weeks.
- Use a dawn simulation clock which mimics a normal sunrise.
- Medication can be prescribed such as Selective Serotonin Reuptake Inhibitors (SSRIs)
- Try CBT (Cognitive Behavioural Therapy) it is a talking therapy that can change the way you think. It can change the way you look at the world and other people. How you feel about your thoughts, how you behave to your thoughts and feelings
- Cook healthy meals because our mental health can be affected by what we eat. Try to eat more fatty fish, nuts, avocados, eggs, red meats, or mushrooms.
- Don't drink too much alcohol, give up smoking and recreational drugs.
- Do regular exercise and drink more water.
- Be kind to yourself and take pride in your appearance.
- Socialize
- Sit by a window when you are at work to maximise your exposure to daylight.
- We recommend taking vitamin D, (specifically that's vitamin D3) to boost your vitamin D levels. D3 plays a key role in maintaining overall health and wellbeing by supplementing the body's natural resources. Vitamin D supplements are particularly beneficial as we age because our body cannot easily produce vitamin D naturally through diet and sunlight, adult doses are between 2000 IU and 5000 IU daily.

It's important to remember that no winter lasts forever, look for inspiration and we have some great quotes to share with you.

*"Nothing is impossible, even the word itself say 'I'm possible!'"* – Audrey Hepburn

*"With every new day comes new strength and new thoughts"* – Eleanor Roosevelt

*"The best preparation for tomorrow is doing your best today"* –H. Jackson Brown, Jr. *"It is during our darkest moments that we must focus to see the light"* – Aristotle



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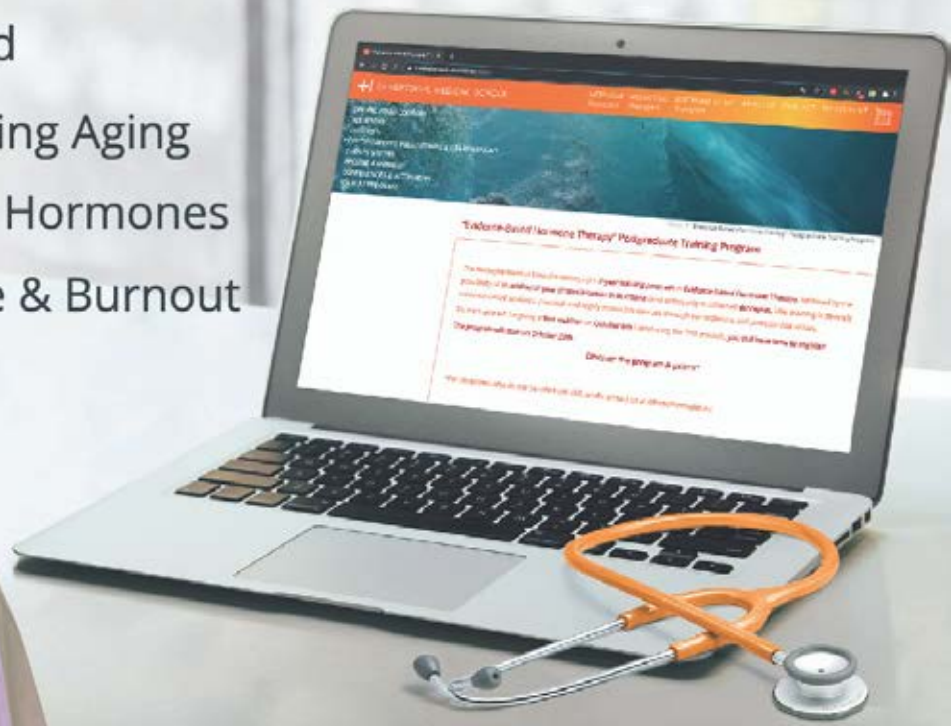
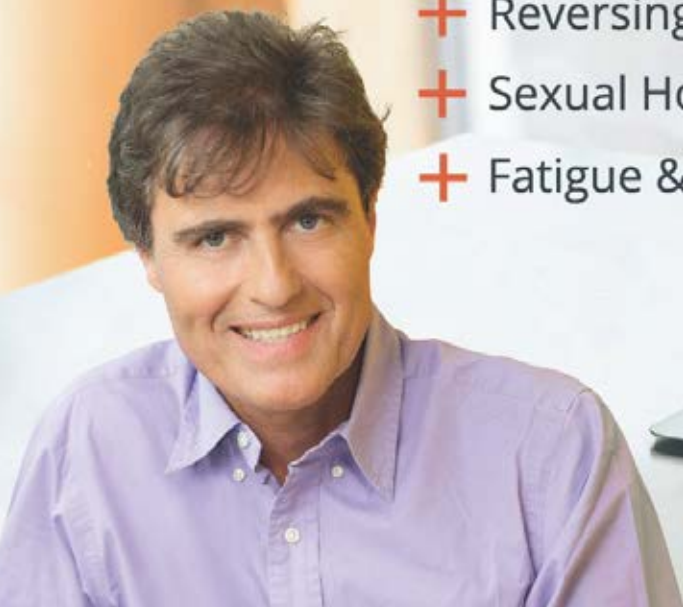
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# MSH, IT'S NOT JUST FOR TANNING

*An interview with Thierry Hertoghe, M.D. by Phil Micans, MS, PharmB*

**The following is a discussion between Thierry Hertoghe (TH) and Phil Micans (PM)**

**PM:** “Dr. Hertoghe, I do appreciate you taking time from your always busy schedule to talk with us today about MSH2.”

**TH:** “Always a great pleasure Phil.”

**PM:** Many of our readers will already be aware that you are one of the world's leading hormone experts and a passionate devote of preventative and regenerative medicine.”

**TH:** “Yes, indeed Phil, I travel the world lecturing about these subjects, although recently this has been more webinar-based, and I have written many books. I say books, but many of them are reference guides, very practical and beyond theory.”

**PM:** “I agree, in fact we shall mention your books and your webinar programs at the end of this interview.

Today I'd like to talk about MSH2, which I shall begin by describing it as a ‘strange’ hormone, by which I mean it does seem quite distinct. For example, I saw graphs of its quantity vs. age relationship, and it looked like a flat line to me. Am I wrong, or is this another hormone that declines with age?”

**TH:** “MSH2, or to give its full name melanocyte stimulating hormone type 2, also called melanotan 2 is in fact, a synthetic derivative of MSH, the natural hormone in our body. MSH itself is not accessible as it is short-lived, too short action for use in medicine. MSH2 has more prolonged and effective beneficial effects. Checking if the levels of MSH decline with age is a difficult task as MSH is secreted



Dr Thierry Hertoghe is a Belgium-based physician who has gained international reputation as an expert in hormone therapies. His expertise has grown to be particularly effective in treating difficult conditions often due to unsuspected hormone deficiencies and imbalances. Among these conditions are chronic fatigue and burnout syndromes, and treatment-resistant depressive and anxiety disorders. Also, difficult-to-treat physical disorders of brain, heart, gastrointestinal system, and joints, are part of his interests and success.

His books in the field of hormone and nutritional therapies are accepted as classics by physicians. He is the president of the International hormone society (more than 3000 physicians) and the World society of anti-aging medicine (over 7,000 physicians throughout the world). He has recently set up an Evidence-based hormone therapy training program for physicians and health professionals through live webinars and prerecorded videos, with in-depth practical information, including how to prevent and treat with success in COVID19 infections.

when needed, for example with sun exposure, when the skin needs to darken to block ultraviolet light from penetrating too deeply into the skin and damaging the tissues. To check if there is a decline with age, we need to have volunteers of various ages exposed to sun and measure the increase in MSH to see such a stimulation, to my knowledge this has not yet been done.

It seems likely to me that it will show that younger individuals secrete more MSH when exposed to ultraviolet radiation than older people, thus, demonstrating an age-related decline in MSH secretion.”

PM: “People who know about MSH2 are aware that it tans the skin, would you care to comment on that?”

TH: “MSH can quickly tan the skin in a short time, even without sun exposure. *With one week of daily treatment with MSH2, the skin may darken sufficiently to make sun creams unnecessary for skin protection, at least in people who respond well to MSH2.*

Red or blond hair persons whose milk-white skin was (before using MSH2) unable to tan, always needed a strong skin protection by clothes or sun creams. The tanning usually remains modest, such as a light brown, but certainly enough for neighbors and friends to recognize the change.

In laboratory experiments on melanoma cells--which is the deadliest and most rapidly proliferating of all types of skin cancers--MSH derivatives such as PSH2 reduce the proliferation of melanoma cells, meaning they oppose the development of melanoma.

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Designed for health professionals, this book has the keys to safe hormone therapies, how to do it and how to solve therapy problems, many tabloidized facts, along with lab ranges and published references. This reference guide contains 833 pages of details for all the following hormones:

- |                    |                  |
|--------------------|------------------|
| 1. Aldosterone     | 11. Melatonin    |
| 2. Androstenedione | 12. MSH          |
| 3. Calcitonin      | 13. Oxytocin     |
| 4. Cortisol        | 14. Parahormone  |
| 5. DHEA            | 15. Pregnenolone |
| 6. Estrogens       | 16. Progesterone |
| 7. Glucocorticoids | 17. Testosterone |
| 8. Growth Hormone  | 18. Thyroid      |
| 9. IGF-1           | 19. Vasopressin  |
| 10. Insulin        |                  |

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**The patient hormone handbook by**  
**Dr. Thierry Hertoghe**

Designed for patients, it contains the keys to safe hormone therapies and how to cooperate with your physician. It details the following hormones and includes details on nutritional support in its 310 pages.

- |                    |                   |
|--------------------|-------------------|
| 1. Aldosterone     | 7. Growth hormone |
| 2. Androstenedione | 8. Melatonin      |
| 3. Cortisol        | 9. Pregnenolone   |
| 4. DHEA            | 10. Progesterone  |
| 5. Estrogens       | 11. Testosterone  |
| 6. Glucocorticoids | 12. Thyroid       |

  
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However, I still suggest that people with sensitive skin take MSH2 to protect their skin but also continue putting sun creams on their skin when they go in the sun to optimize skin protection. MSH2 does not offer a total protection against ultraviolet rays.”

**PM: “And how should it be dosed/used?”**

**TH:** “There are two ways of efficiently administering MSH2--by subcutaneous injections or the more comfortable and less invasive way by intranasal sprays. The intranasal method consists of spraying a solution of MSH2s through each nostril every morning.

The dose differs depending on the skin sensitivity of an individual. People whose very white skin is poorly responsive to MSH2 need higher quantities (around 0.5mg per day), whereas most subjects whose skin easily darkens may need very low doses, between 0.05 to 0.1 mg per day or even less, every 2-3 days.

Higher doses are necessary for intranasal solutions than for subcutaneous injections, as less is absorbed through the mucosa. It is easy to compensate for this by simply increasing the dose to get the same results.

A dose of MSH2 that is two to three times higher dose than the ones mentioned above are usually enough to obtain satisfaction.”

**PM: “Are there any individuals where this tanning effect will be ineffective?”**

**TH:** “Normally, as I mentioned before, people with very white skin and who cannot normally tan in the sun, may finally get skin darkening with MSH2, although people with the lightest Caucasian skin color class will tan less and only get a light brown tan of their skin.”



**PM:** “I suppose I must ask, that whilst MSH2 starts to create an overall tan, and that continued use makes the skin darken further. What happens if one stops using it?”

**TH:** “A return to ‘normal’ skin color in 3-months’ time. In some people even quicker.”

**PM:** “Does MSH2 have any applications in ‘orthodox’ medicine?”

**TH:** “Yes, its sister molecule, MSH1 or melanotan 1 has similar efficacy for skin tanning, although it is not as good as MSH2, but it has been officially approved by the European Medicines Agency, and, thus, authorized for the whole European Union in 2014.

In 2019 in the USA it was approved by the FDA (Food and Drug Administration) for treatment of erythropoietic protoporphyria, a rare disease that causes intolerance and pain to light.”

**PM:** “And outside of that, what are its off-label uses?”

**TH:** *“MSH2 is far more than just a skin tanner. It is in my experience, the most potent stimulator of erections in men.*

Men with erectile dysfunction who get 3 minutes of erection with typical stimulators of erection like phosphodiesterase-5 / PDE5 inhibitors will get 20 minutes with its MSH2 combination. That’s 5 to 10 times longer erections!

*Used alone, MSH2 often works well enough, bringing back to men over 60 the erectile function they had at age 25 years old,*

*which makes the use of sexual enhancers less necessary. In women, some of my patients are sexologists and they claim that MSH2 is by far the greatest sexual enhancer of all: making every area of the skin sexually sensitive to sexual touch. Some women claim it drives them sexually ‘wild’ and are very happy about it.*

Other effects of MSH2 are darkening of the hair. This may seem very exciting, but although white hair may become less whitish with PSH2 the remaining brown hair becomes so dark black that the contrast between colored hair and gray or white hair becomes stronger than before and may give the impression the patient’s hair is graying more than before.

MSH also has weak anti-inflammatory effects, moderately increasing the secretion of the anti-inflammatory cortisol. MSH2 can also increase skin scent, an effect that is most noticeable with overdoses. And some patients claim it makes their sagging inner sides of the thighs firmer.”

**PM:** “My goodness, that is quite a list, I guess it goes to show once again that a single hormone has many uses within the body. Do you advise your patients to use MSH2 in a different way to achieve these kinds of effects- I mean different from those who want to tan?”

**TH:** Yes, for patients who need to protect themselves more efficiently against sun rays and those whose sexuality has not been sufficiently improved by other treatments.”



**PM:** “At this point, I should ask what contraindications and side effects have been seen with MSH2 use?”

**TH:** “There are basically three side effects that may form contraindications. They mostly appear at overdosage which means that a decrease in dose may avoid having them.

First side effects are nausea, and for men excessive strong and persistent erection (priapism), almost always the consequence of overdosing. In this case, use lower doses (up to 5 to 10 times lower) to avoid these signs.

Secondly, some people get much more hyperpigmented spots when they use MSH derivatives. Once you get them, it takes about 9 months to lose these pigment spots after stopping the treatment. In my experience, the underlying cause is untreated adrenal deficiency. Correcting this adrenal deficiency with the necessary cortisol and DHEA, considerably reduces this type of irregular pigmentation. Also, taking much lower doses helps.

Thirdly, allergic skin rashes may occur, also mainly due in my experience to untreated adrenal-deficiency. I almost never get this reaction in my patients because I am very attentive to correct any adrenal deficiency in them, knowing how much burden it is to the quality of life and health to suffer from adrenal deficiency.

However, when the underlying adrenal deficiency is not treated, MSH2 may cause allergies as testified by sexologists who prescribe MSH2 for sexual enhancement but do not usually treat adrenal deficiency.

I sometimes wonder if the allergy may not be due to some additives caused by the impurity of preparations bought on untrustworthy websites with no quality control. So, that is why I highly recommend only to use well-controlled pure MSH2 of pharmaceutical grade.”

**PM:** “As usual, Dr. Hertoghe, it’s all fascinating information. For those people who want to go deeper into this subject, or for that matter into other hormones, which of your books do you recommend?”

**TH:** “The best and most practical information is in my Hormone Handbook, second edition, as it has all the practical how to do in information on the 18 most frequently used hormone treatments, including all the useful information on the use of MSH derivatives, and its most potent one, MSH2.

This book also contains all scientific references for the health professionals who need that type of information. Additionally, I recommend the Atlas of Endocrinology for Hormone Therapy, which has more than 650 pictures on 20 hormone deficiencies and 19 hormone excesses, including MSH deficiency and overtreatment. Enlightening!

For those who want to live long and remain or become younger the reference book to buy is *Reversing Physical Aging*, volume 1, which focuses on the head and the senses.

With its 1100 pages it has all the information, physicians and patients need on how to reverse scalp hair and face aging with hormone and nutritional therapies, to get more youthful and obtain a healthy outlook.

The *Reversing Physical Aging* textbook also contains how to rejuvenate efficiently the decline with age of eyesight, hearing, taste, smell and touch.”

**PM:** “And you are now hosting free public webinars, as well as your medical school for health professionals. Where can people go to find out about these?”

**TH:** “Yes, almost monthly my team organizes free webinars with me as the speaker. These international free webinars are overviews of fascinating medical topics. On February 2, 2021 it was on female hormone therapies, all the practical tips for an optimal treatment of even the most difficult medical conditions for women, including solid and reassuring info on breast cancer and female hormone therapies. Next, in March, chronic fatigue and burnout.

With the tiresome Covid 19 crisis and its stress, it's an absolute not to be missed webinar as it offers reliable information on how to get your energy levels high again! After that, there will be an in-depth review of thyroid therapy, as probably never explained before. Afterward, there follows a unique free webinar on melatonin, followed by testosterone therapy in men and then testosterone in women.

I strongly recommend physicians to register to the whole program of this formation as it will open a lot of doors in their practice.

It will make them able to solve various medical and psychological disorders which previously were hopeless.

You can find all this information regarding my webinars at: [www.hertoghemedicalschool.eu](http://www.hertoghemedicalschool.eu) and all the videos of my webinar are online on my YouTube channel Dr. Hertoghe.”

**PM:** “Dr. Hertoghe thank you for all your work. Sometimes I wonder if you sleep! Since apart from your clinical work, you find time to travel, to lecture and pursue your medical school and publish incredible hormone guides. So, we do appreciate you talking today about MSH2 rather than taking a well-deserved nap!”

**TH:** “Ha Ha Ha... I also want to thank you, Phill, for giving me the occasion to talk to your well-informed public by you and International Antiaging Systems. You are doing a great job in making hard-to-find medical information and products available to those who need them. Continue doing this great job!”



# FREE RADICALS IN AGING

*By Richard Lippman, Ph.D.*

Today, we know that free radicals aren't activists out on bail. But many decades ago, when I was doing research in Sweden, most people thought free radicals was hippie politics!

No one knew then that these molecules had devastating effects on the human body, nor of their role in aging. Indeed, even just 20 years ago, free radical chemistry and its toxic effects on the human body were unknown to much of the public and even many doctors and medical researchers.

I first learned about the free radical theory of aging as an undergraduate student at the Royal Institute of Technology in Stockholm, Sweden.

After I began doing graduate research work in cell biology, myself and my colleagues held meetings and conferences at the University of Uppsala to discuss the exciting findings of Professor Denham Harman, whose experimental work at the University of Nebraska in the 1950's showed mice life spans could be extended 50 percent with antioxidant supplementation. And the response of the press was? So, what!

## Raising funds for research

I wanted to take Harman's work one-step further and explore the relationship between free radicals and aging. I turned to the famous Professor Sven Brolin, chair of the University of Uppsala's Department of Medical Cell Biology, and to Professor Gunnar Wettermark, chair of the Royal Institute of Technology's Department of Physical Chemistry, for assistance in raising funds for research.

Eventually, I received significant medical and chemical grants from the Swedish Research Council to develop antiaging strategies based on Harman's groundbreaking discovery of the action of free radicals and the role of antioxidants to inhibit them.

That research took us into the role that free radicals play in the breakdown of aging human bodies and led to the development of one of the most potent antioxidant combinations yet known, a unique multilevel antioxidant cocktail called ACF228® (ACF = Aging Control Formula).

This remarkable work resulted in a US patent, number 4,695,590 (1) and encouraged the publication of the book *Stay 40* (2) as well as many scientific articles in leading medical journals (3, 4, 5).

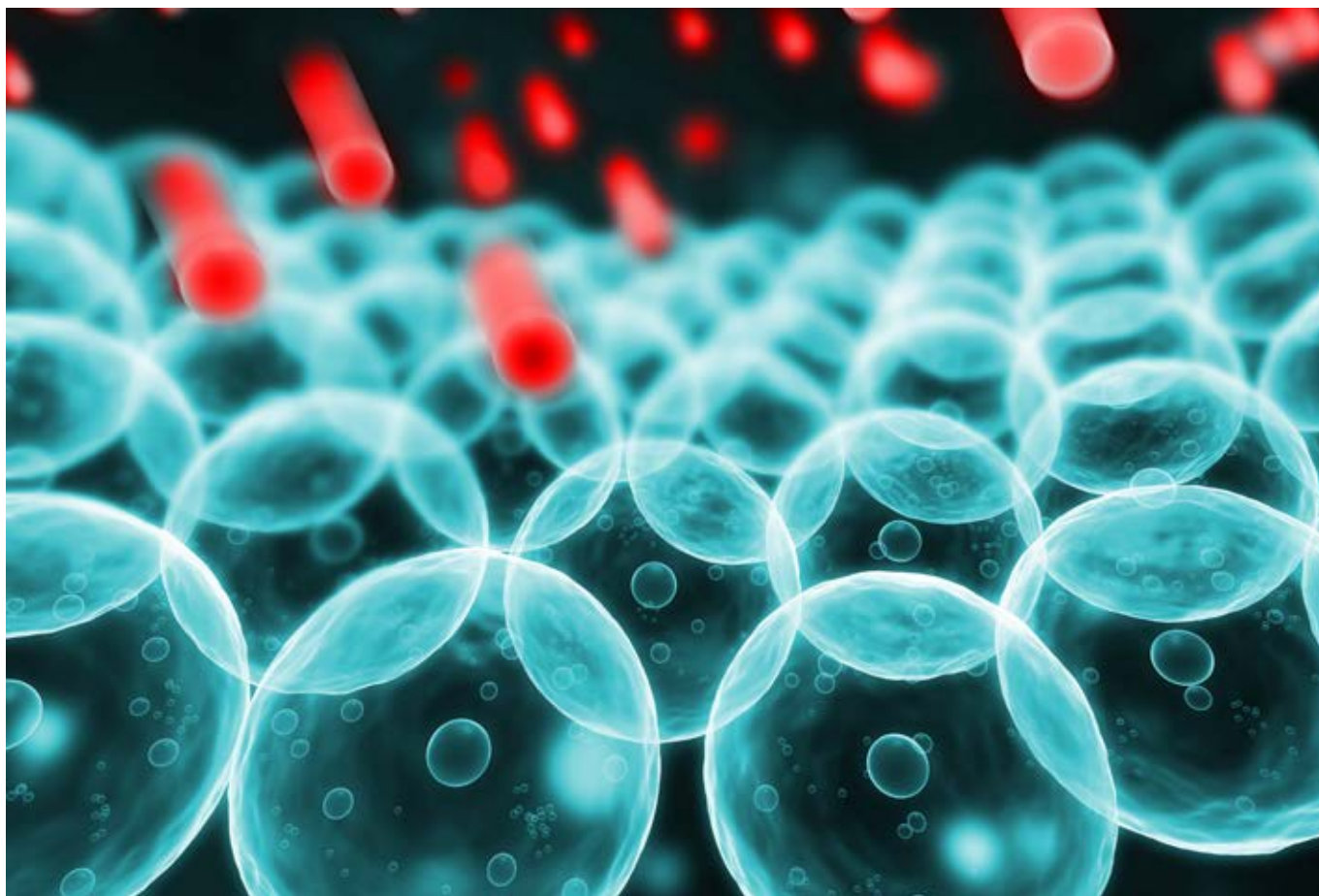
## A cellular model

The first task of the research team was to find a cellular model rather than an animal model to test for life extension, since the Harman model of waiting for mice to grow old and die was costly and took years of patience.

At the department of Medical Cell Biology, the team had access to many different types of living cells in culture; cells of the heart, brain, liver, and central nervous system and I invented some special probes that would penetrate the cell interiors without harming them.

The first probe, called CML (carnitinylnmaleate luminol), measured superoxide radicals in live human liver cells (3, 4). We went on to test many different





combinations of regenerative nutrients and hormones as was later reflected in ACF228®.

We were able to measure ATP activity down to femtogram (ten to the minus fifteen) amounts in actively respiring individual human cells (4). From these instruments, and others, such as a unique near-infrared spectrometer that measured lipid peroxides in volunteers without drawing their blood, the research allowed us to measure free radical activity in vivo and non-invasively in people, plus their antioxidant status that defended against these radicals.

Subsequently, the cell cultures were impregnated with special CML probes and incubated with different mixtures of vitamins, hormones, and known regenerative nutrients.

Eventually, 228 different mixtures were tested to find an optimal mixture,

which encouraged longevity-promoting characteristics. Thus, formula 228 was found to work best, and this was tested further in vivo in mice, dogs, and humans.

The cumulation of US patent number 4,695,590 is the only patent granted by the US Patent Office with claims to slow human aging.

Furthermore, note that other promoters of antioxidant products have not tested their product in vivo.

Instead, they were only tested in vitro that means ‘in a test tube.’ Indeed, it was discovered that vitamins are often too weak to effectively quench (render harmless) free radicals and reactive oxygen species.

For this reason, we tested and patented the exceptionally strong antioxidant nordihydroguaiaretic acid (NDGA) found within ACF228®.

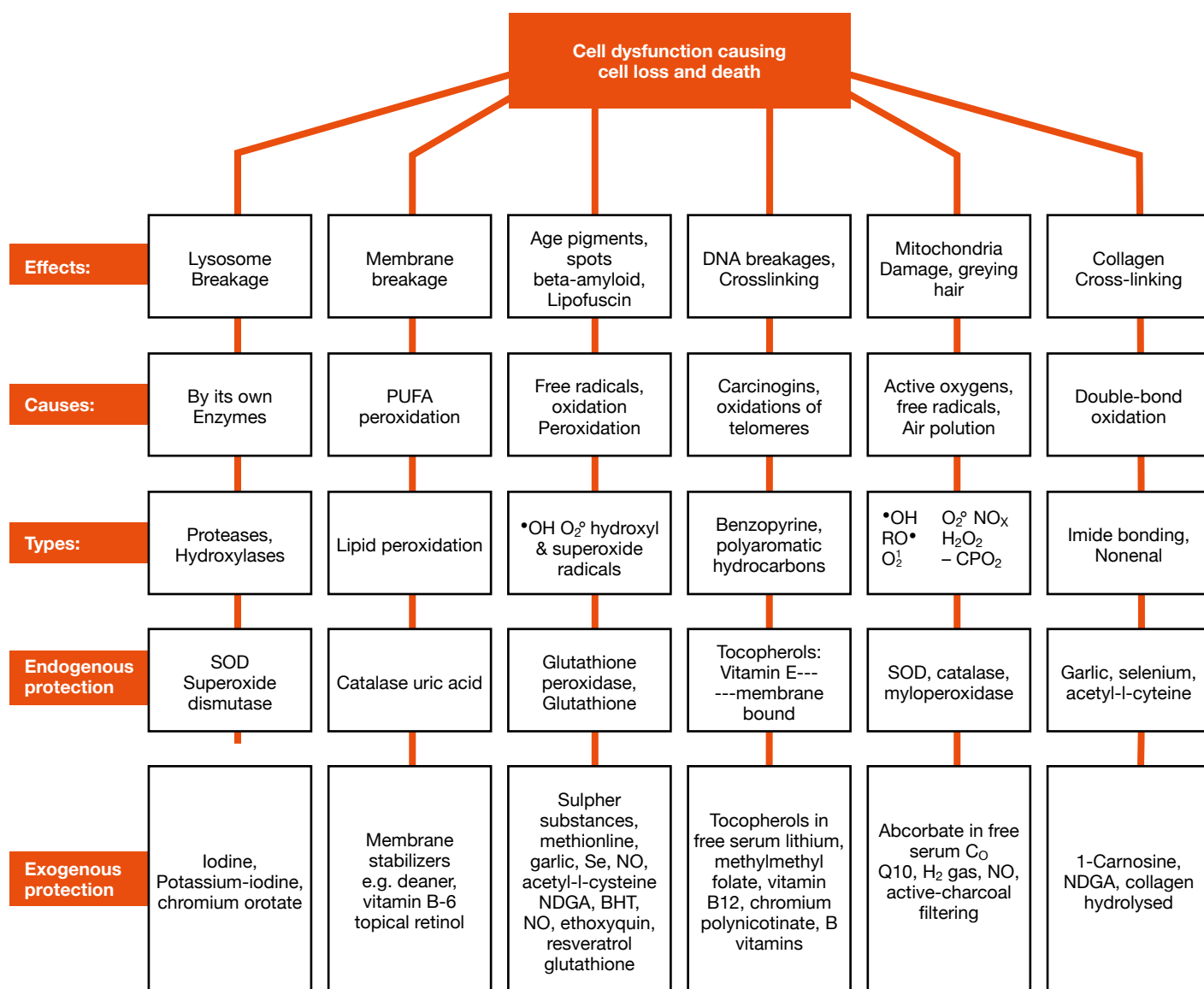


Figure 1: A diagram of the multilevel effects of aging caused by free radicals and active oxygens as well as their natural and supplemental quenchers and destructors. Unfortunately, epigenetic modifications and hormone replacement therapies do not solve free radical damages causing aging. Both have their limitations in slowing and reversing aging.

The final formulation was later tested by three US government laboratories under the auspices of the National Institute on Aging (NIA) in Washington, D.C. In 2003, **the NIA concluded that ACF228® increased mice longevity by an average of 12 percent.**

**How does ACF228® prevent aging?**  
Every day we breathe kilograms of oxygen that is converted into grams of free radicals and downstream reactive oxygen byproducts.

We have natural defenses to render harmless this ongoing cascade of damages resulting in many aspects of aging. For example, our three natural defenses are:

- The enzyme catalase that destructs hydrogen peroxide to harmless water and oxygen.
- The body's primary antioxidant, glutathione, that destructs hydroxyl radicals to harmless hydroxy byproducts.
- Superoxide dismutase, that destructs superoxide to oxygen.

In other words, free radical cascades flood into our cells like bombs, and the long-term collateral damages are significant. We call these ongoing collateral damages ‘aging.’

### **Free radicals, aging and Alzheimer's**

Age spots are usually caused by oxidation or peroxidation of proteins and oils, and we notice them as discolored brown spots on the skin of seniors. If seniors consume a balanced and multilevel variety of antioxidants such as those contained in ACF228®, age spots will often disappear, at least temporarily, until newly oxidized or peroxidized waste products and their odd smell again appear on the skin.

To help understand the chemical process that cause these spots, consider the browning of apples and bananas. They gradually become brown when exposed to the oxygen in the air.

Another example of this browning process is found in the progressive rancidness of nuts if they are not vacuum packed.

Nuts exposed to the open air become rancid, and this process is exactly what is occurring in our bodies, that is if a balanced diet of antioxidants is not consumed in the form of sensible food and a variety of supplements.

### **Toxic byproducts in our skin caused by aging**

During aging and especially after the age of forty, our skin emits tiny amounts of a smelly and rancid oil called nonenal that is unpleasant to inhale. Nonenal is an aldehyde related to formaldehyde, an embalming fluid.

Another disgusting aldehyde is acetaldehyde that emits a pungent and nasty smell. It is easily detected when in the same room with a sleeping person who has consumed excessive amounts of alcoholic beverages.



Historically, perfumes and skin lotions were invented to hide aldehyde smells that occur because of aging and dysbiosis.

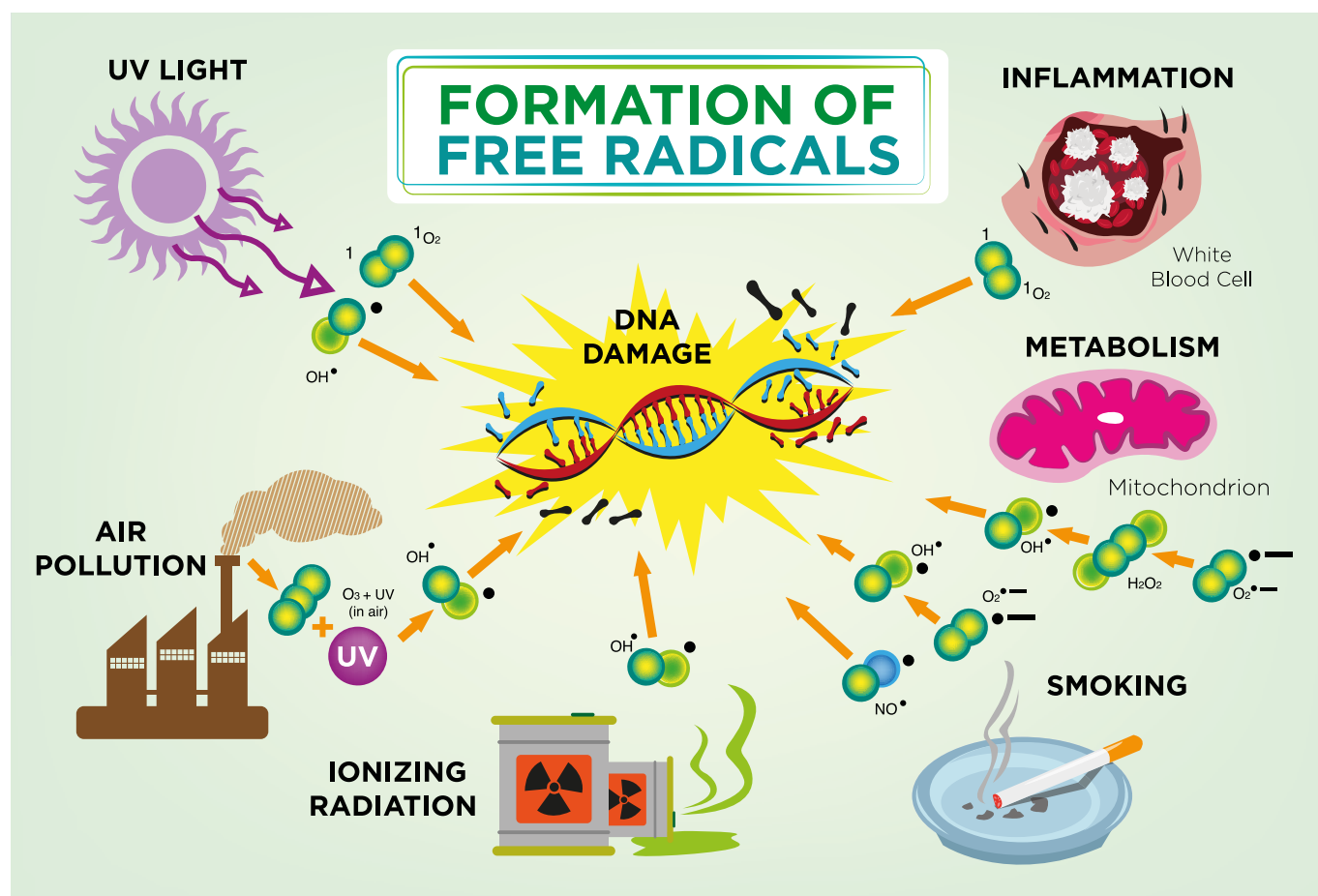
Before we emit nonenal odors during our forties and older, we are naturally producing odiferous sex hormones such as testosterone in men and estradiol in women.

Men notice women with high levels of estradiol, and women notice men with high levels of testosterone. This effect causes attraction between the sexes and procreation of humanity.

However, when pungent smelling nonenal enters the picture after age forty, the attraction smells of sex hormones are blunted. Perhaps this was Mother Nature's way of promoting procreation among the young but not among the old?

You may wonder how we can identify nonenal? Nonenal is noticeable if you ever visit a nursing home where it is referred to as ‘old-people smell.’ Consuming L-carnosine and acetyl-L-carnitine at bedtime will neutralize and prevent the skin's formation of nonenal.

Your skin will appear and smell normal and sex-hormone youthful again without the need for perfume.



### A smell test for identifying premature aging

Let us consider the ACF228® smell test. On the day of testing, do not consume alcohol. Before bedtime, clean the backs of your ears with rubbing alcohol. Consume one or two capsules of ACF228®. The following morning you should not detect the smell of nonenal behind your ears or anywhere else on your person. ACF228® has quenched and eliminated the rancid smells of aging.

In conclusion, people with nonenal odors emitting from their bodies are aging prematurely, and free radicals and their downstream oxidation/ peroxidation toxins cause it.

### What are the underlying causes of free radicals?

I have explored this topic in detail during many decades of research since my first scientific publication on free radicals in 1978. Interestingly, if you are generating

the free radical, superoxide from heavy exercise, your mitochondrial respiratory chain is often overwhelmed, and you are leaking a large amount of this deleterious free radical into your body, including the skin.

Furthermore, there is a double whammy effect occurring internally. According to researcher Nathan S. Brown, PhD, superoxide also shuts down the production of NO or nitric oxide that is critical for the expansion and health of our arteries.

In addition, there is even a third negative side effect when NO reacts with superoxide. If we restore NO production through gut bacteria or consuming beets, we will attenuate superoxide production and subsequent oxidation/ peroxidation events such as age spots and other browning spots on our skin, and perhaps, even in our brains. (6,7).



## Alzheimer's and Tau proteins in the brain

All these effects during aging brings us to another important topic: How does Alzheimer's disease develop in relation to oxidation/ peroxidation processes occurring continually throughout our bodies and especially in our brains?

It's a well-documented fact that Tau proteins break down in the brain to lipofuscin and beta amyloid.

They consist of a brown residue chemically related to brown spots on the exterior of our skin as we age. Tau proteins are three-dimensional cage-like proteins held together by several disulfide bridges.

These disulfide bridges are easily damaged chemically causing folding in the Tau protein because their S-S bonds are very weak and susceptible to oxidation/ peroxidation. In summary, these disulfide bridges are easily damaged chemically, and the Tau protein cage structure folds or collapses into a mushy, foul-smelling toxin called beta amyloid.

Two-time Nobel Prize winner Linus Pauling discussed this effect personally with me and in his prize-winning book, *The Nature of The Chemical Bond*, 3rd Ed. 1960, Cornell University Press. He was convinced of the weakness of the Tau protein's disulfide bonds, and their subsequent misfolding or collapse was a result of oxidation/ peroxidation (8).

I have always believed him to be correct, and thus, I embarked on a course of experiments to discover the antioxidant and prooxidant properties of vitamin C. My research was twice presented at the Pauling Institute in California. I found that 300 mg or less of C acted as an antioxidant, and this unique knowledge was included into the ACF228® formula.

On the other hand, 1,000 mg or more of C acted as a prooxidant. Therefore, this is exactly why I recommend consuming 1,000 mg of C every four hours and during the onset of the common cold. Symptoms disappear overnight when my four-hour protocol is strictly followed because the prooxidant properties of excessive C kill rhinoviruses, and cold symptoms are ameliorated. On the other hand, 300 mg or less of C helps to hold in check oxidation of proteins and oils.

In recent years, Dr. Forlenza and his research group have recommended a second method that uses microdoses of the light metal lithium to preserve the Tau protein structure. Three hundred micrograms of lithium daily is recommended to avoid Alzheimer's and cognitive impairment. (7)

## The surprising truth about greying hair

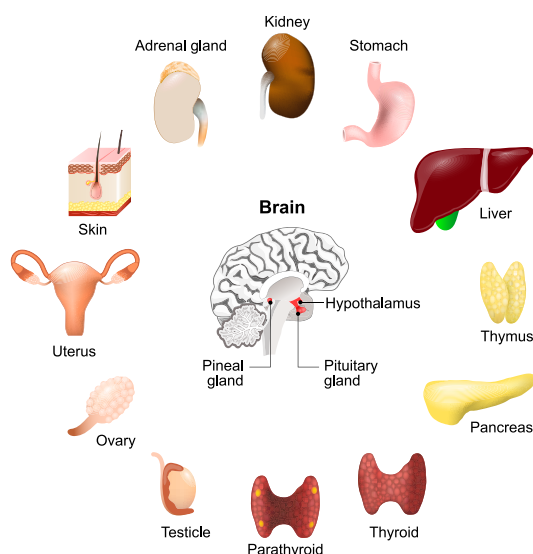
If you want an example of peroxidation damage, try pouring a tiny amount of hydrogen peroxide on your finger. After a few minutes, the skin on your finger will turn a sickly white.

Then imagine that hydrogen peroxide is being produced in every cell in your body 24/7. It is often countered and rendered harmless by our large enzymatic supply of catalase (contained in ACF228®).

But when catalase is lacking due to aging, one effect is the greying and whitening of our hair. And according to prominent medical authorities such as Ward Dean, MD, hair whitening is strongly correlated with our biological aging except for people who grey prematurely.

In other words, when you lose your large supply of catalase during aging, your hair turns first grey and then white. ACF228® counters this whitening and damaging effect at the cellular level.

## ENDOCRINE SYSTEM



Second, at the arterial level, it prevents the hardening of our arteries. At the systemic level, it generally prevents our organs and skin from deteriorating prematurely.

ACF228® prevents us from oxidizing internally and externally. A simple test for determining your oxidation status is to examine daily the color of your stools. Light brown stools indicate low oxidation/ peroxidation status. Dark brown or black stools indicate high oxidation/ peroxidation as well as a high free radical status in your body. Thus, if your goal is optimal health, ACF228® can assist.

### An optimistic and optimal health future

We should all be able to live to 120 and perhaps even beyond in optimal and exceptional health. Unfortunately, we do not receive optimal and exceptional health today from Medicare--- also known as mediocre care--- either from the US government or British National Health Service.

One reason we don't live to extreme age in good condition is because of the free radical damage that our cellular systems sustain.

During aging, our brain's shrink 30 percent, our arteries become hardened, our liver

and other organs functionally decline, and much of this is due to free radical pathology, loss of nutrient absorption, and hormonal decline. When our key endocrine glands shrink, we become less able to repair damages from free radicals and active oxygens.

These two phenomena are what we often call the effects of aging. Unfortunately, epigenetic modifications and hormone replacement therapies do not solve free radical damages causing aging. Both have their limitations in slowing and reversing aging.

**Aging is the enemy of health and the ultimate disease and ACF228® with its unique blend of antioxidants, radical scavengers, membrane preservatives and nutrients can help people prevent aging's premature onset.**

Today, I continue my medical research focusing on improved methods of repair using nutrition, peptides, and hormone corrective therapies that also include DIM, carnosine, and resveratrol.

Repairing the body after free radical damage is the second half of the equation that allows us to slow and reverse our aging.

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L-Methionine .....	100mg	*	(providing) Iodine.....	1.5mg	1000%
DIM (Di-indolylmethane).....	83mg	*	Methylfolate.....	800mcg	200%
L-Carnosine .....	83mg	*	Chromium (Polynicotinate) .....	120mcg	342%
Deodorized Garlic .....	50mg	*	Selenium.....	100mcg	181%
Resveratrol (trans-version).....	17mg	*	Vitamin B12 (Cyanocobalamin).....	10mcg	416%
Vitamin B6 (pyridoxine).....	17mg	1307%	Catalase .....	0.025mcg	*
NDGA (Nordihydroguaiaretic acid) .....	3mg	*			

\*% Daily Value not established

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# NOT ALL PROGESTERONES' ARE CREATED EQUAL

*A review of progesterone and breast cancer risk by*

*Dr. Nyjon K Eccles, BSc MBBS MRCP PhD*

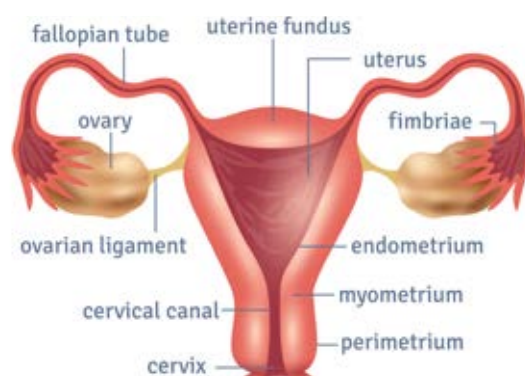
I am indebted to the commentary and detailed review published by Dr. Kent Holtorf in 2009. Much of his article is so pertinent to this discussion that I have pasted in some sections of it. Some of this is detailed science for those who have the appetite for it, but I have also highlighted the key conclusion points for patients in the summary at the end.

A lot of confusion abounds on this topic, and in my experience most doctors are confused about this. As with all truth seeking, this can only come from a critical look at the published data and not from mainstream media or expressed opinions that do not reference the published science. The addition of synthetic progestins to estrogen in HRT for menopausal symptoms, increases the risk of breast cancer more than estrogen alone (1).

In breast cancer survivors, progestin use is associated with an increased breast cancer risk compared with its non-use (2). However, outside pregnancy, natural progesterone whether endogenously

produced or exogenously administered does not have a cancer-promoting effect on breast tissue. In postmenopausal women, progesterone is added to prevent the carcinogenic effect of estrogen on the uterus (3). In premenopausal women, the potency of the progestin in most oral contraceptive pills appears adequate to provide a protective effect against endometrial cancer.

Progestagens counteract the adverse effect of estrogens on the endometrium (see figure 1), the effect being greater the more days every month that they are added to estrogen and the more obese that women are (3).



**Figure 1: The position of the endometrium in a woman's uterus.**



**Dr. Nyjon Eccles is known as 'the natural doctor' and practices from Harley Street in London, England and is one of the UK's leading Integrated Medicine doctors with a special interest in breast cancer.**

**His article is a summary of some of the evidence surrounding the use of natural progesterone vs. synthetic forms and it seeks to clarify the debate as to whether all types of progesterone have the same physiological and clinical effects, or whether there is indeed evidence to suggest that the synthetic progesterone's (progestins) differ in effect to progesterone in its native molecular form.**

**Note: From herein progestins will refer to the synthetic form and progesterone to the natural form.**



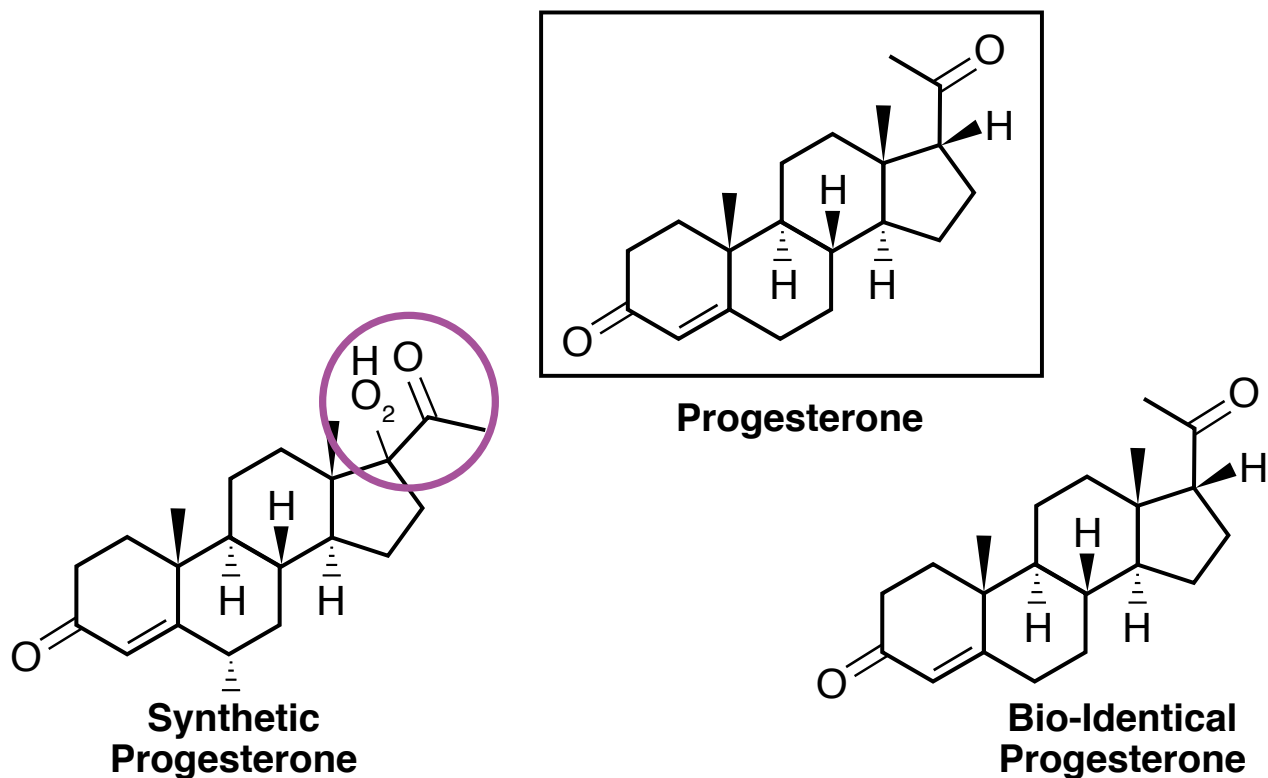


Figure 2: The difference between a synthetic progesterone (progestin) and a natural (or bioidentical) progesterone.

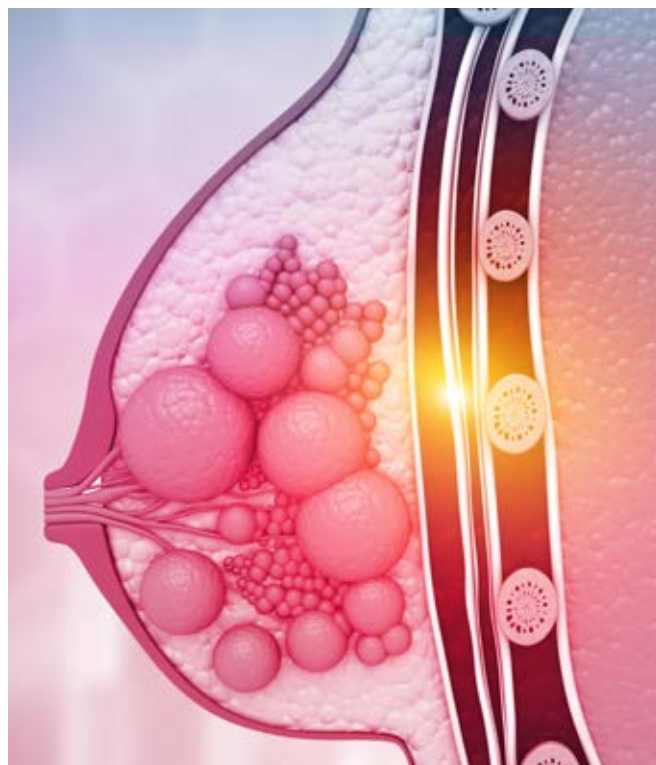
The notion that progesterone may increase breast cancer risk is based on a secondary follow-up of a French study (4) investigating breast cancer incidence in approximately 80,000 women who had estrogen and various progestogens for hormone replacement therapy. It was suggested that progesterone increases breast cancer risk, contrary to popular thinking that this hormone is safe and protective against breast cancer.

Fournier et al's (5) original study looked at the relationship of different progestogens (any molecule with a structure like the natural hormone progesterone that binds to and activates intracellular progesterone receptors), in combination with estrogens, on the risk of developing breast cancer. In their first study they found that **of all the progestogens studied, natural progesterone had the lowest risk**, and that this risk was **a lower risk than no treatment at all**. (2)

Their second study (5) in the same patient population as the first study (80,391 postmenopausal women), showed that the risk with estrogen plus progesterone is less than the risk of estrogen alone (1.7 vs 2.1, respectively), and that of all the progestogens, natural progesterone has the lowest risk.

This study did not look at the effect of natural progesterone by itself--only estrogen plus progesterone. A more accurate commentary on their data is that natural progesterone decreased the risk of breast cancer caused by long-term use of estrogens (i.e., risk 2.1 to 1.7).

These studies were based on the use of oral progesterone. Women who have an excess of estrogen relative to progesterone (low progesterone/estradiol ratio), are more likely to have atypical benign breast disease which carries increased risk of developing into breast cancer. (6)



Cross section of female breast

Low endogenous luteal progesterone levels in premenopausal women (much more prevalent in peri-menopausal woman), have also been associated with increased breast cancer risk (7). One small study (8) looked at the risk of breast cancer with topical progesterone (10-30 mg progesterone daily).

**This showed the breast cancer risk to be reduced by half in those using topical progesterone for 3 years or more.**

### Estrogen and progesterone receptor positive cancers

About 70% of breast cancers are ER+ (estrogen receptor-positive), and most of these breast cancers (about 87%) are also PR+ (progesterone receptor-positive). Hormone receptor status is a significant factor in considering breast cancer treatment. There is a general view that having a breast cancer that is both ER+ and PR+ may be worse than having ER+ alone.

Paradoxically, women with high levels of both estrogen and progesterone receptors

(high ER+ and PR+ status) often have the best chance of surviving. Alas, this information is often not passed on to patients. Whereas estrogen can promote a tumor's growth, progesterone slows growth. Estrogen and progesterone receptors are proteins found in many of our cells, including cells in the breasts.

Both receptors are directly involved in switching some 470 genes on and off, thereby affecting cell behaviour. While estrogen activates its receptor, turning on genes that stimulate cells to keep dividing, driving tumor growth, sufficient progesterone on the other hand will slow down the estrogen-fuelled growth and division of these cells.

The late Dr. John Lee, MD, author of *What Your Doctor May Not Tell You About Breast Cancer*, detailed this years ago. He maintained that when activated by progesterone, the progesterone receptors attach themselves to the estrogen receptors, stopping estrogen from turning on genes that promote the growth of the cancer cells. Progesterone activates genes that promote death of cancer cells (apoptosis) and the growth of healthy, normal cells.

**A failure to grasp this important concept has led to many doctors 'villainizing' progesterone and progesterone status.**

A study published in the highly respected scientific journal *Nature*, led by Cambridge-based Cancer Research U.K. researcher Dr. Jason Carroll of the University of Adelaide in Australia, brought more awareness to the benefits of progesterone and progesterone receptor-status, (3) and is a reminder that the presence of both ER and PR status has typically been considered an indication of how good a woman's chances of surviving were. The belief being that these cancers were more 'treatable' than hormone receptor-negative cancers.

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## Summary

- The use of synthetic progestins in breast cancer survivors is associated with increased risk of recurrence, whereas natural progesterone use does not increase risk.
- The addition of progesterone to estrogen negates the increased risk of breast cancer seen with estrogen alone.
- Women who have an excess of estrogen relative to progesterone (low progesterone/estradiol ratio), are more likely to have atypical benign breast disease and increased risk of developing breast cancer.
- Women with breast cancers with high levels of estrogen receptors and progesterone receptors have the best chance of survival.
- Sufficient progesterone will slow down the estrogen-fuelled growth and division of breast cancer cells.
- Natural progesterone, (but not synthetic progestins), activate genes that promote death of cancer cells (apoptosis) and the growth of healthy, normal cells. Carroll's study published in Nature in 2015 showed that progesterone acts as a suppressor of estrogen stimulated breast cancer cells.
- P53 is a repair gene, which protects cells from cancerous change if natural progesterone can attach itself to progesterone receptors. This effect is not seen with progestins.

Carroll's study found that progesterone – via the progesterone receptor – moderates how the estrogen receptor works.

They found that the progesterone receptor, in effect, 're-programs' the estrogen receptor, changing the genes that it influences. (For further details see Nature, volume 523, pages 313–317, 16 July 2015).

This study highlights an important function for the PR receptor in modulating the behaviour of the ER in breast cancer. It confirms the previously published work that has suggested the same effect.

**It is most important to note that the overall effect of progesterone on cancer cells was to cause the cells to stop growing as quickly.**

Carroll's findings clarify why women who have both ER+ and PR+ potentially have a better outlook than those with just ER+ or receptor-negative cancers; assuming, that is, that progesterone forms part of their treatment regime.

**Progesterone and HER2 in Breast Cancer** HER2 and progesterone seem to be important in controlling metastatic dissemination of tumor cells prior to the detection of a primary tumor.

Researchers have known for some time that synthetic progestins, unlike natural progesterone, do not stimulate activation of the tumor suppressor gene p53 when it attaches to progesterone receptors. (4) P53 is a repair gene, which protects cells from cancerous change if progesterone can attach itself to progesterone receptors.



Maintaining healthy natural progesterone levels, avoiding synthetic progesterones and the downregulation of HER2 seems to be a desirable treatment objective, and whilst Herceptin® is the drug of choice for HER2, one author has noted that daily consumption of 25 grams of flaxseed has been shown to decrease HER2 expression by 71%, which appears to outperform the drug, without the side effects of the drug.

Yet, despite all these positive facts, the addition of natural progesterone to estrogen receptor modulation is not currently standard oncological practice.

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# A HEALTHY MOUTH FOR A HEALTHY BODY

*By Brian Halvorsen, BDS, LDS, RCS*

As a dentist I have been extremely active in general wellbeing, antiaging and detoxification. In over 45 years of General Practice, most with a holistic and preventative approach, I have cared for thousands of patients that have joined my Practice as children and have themselves become parents and even grandparents!

I soon realised how general health was often related to dental health. Poor diet, (I also include smoking, narcotics, and alcohol) and negative life stress contributes to gum disease and tooth decay by reducing a person's immune system and triggering inflammatory responses.

Over many years, through observations, careful monitoring, and specific research, I noted the relationship between good dental health and general health.

So, I ask these questions; "can good mouth health improve our overall health and wellbeing? Can poor oral health contribute to greater disease in our body and mind?" And I answer both these questions with an unequivocal-"Yes!"

Many well respected and World-renowned health practitioners and researchers claim

that **between 50% and 80% of all disease originates from the mouth**. If this seems incredible, in a recent interview with one of the World's most esteemed consultant periodontists, Professor Iain Chapple; he disclosed, that in countries where healthcare is provided privately, **when people over the age of 50 years have excellent oral health, their medical bills are often reduced by as much as 40%! (1)**

The question becomes; "If oral health does play such an important role in our overall health and well-being, then what are the biological mechanisms and processes involved?"

## Background

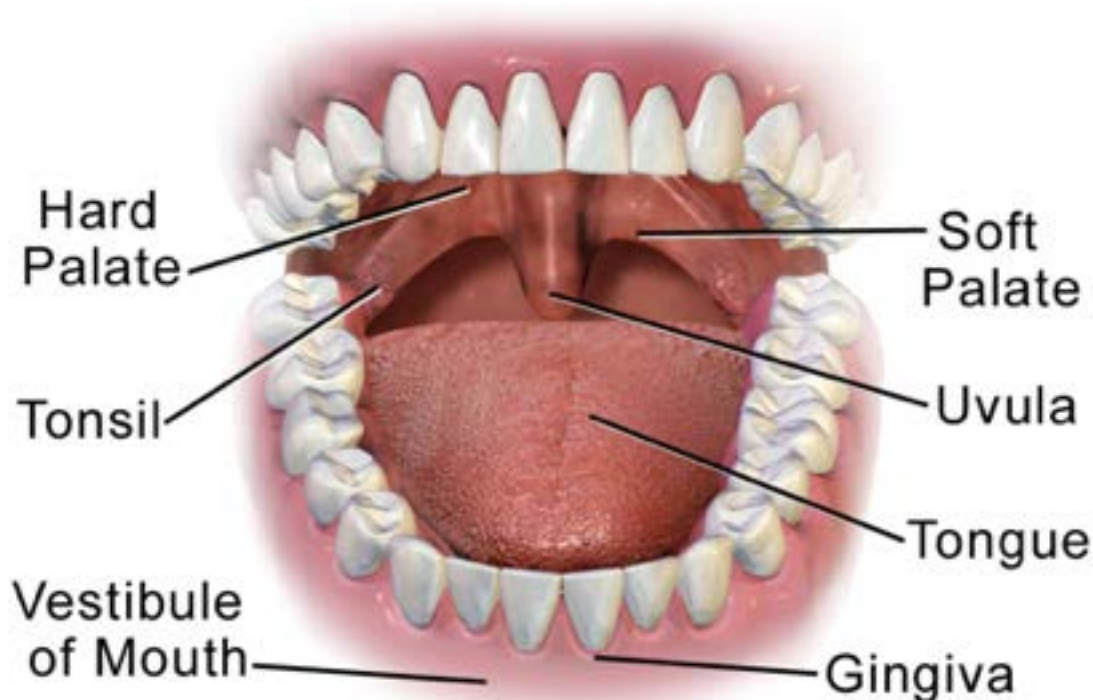
A healthy body is covered in an unbroken protective 'skin' which prevents unwanted chemicals entering our bloodstream and tissues.

In the mouth, our teeth have grown through this 'skin.' There is a join where part of the tooth structure stands above the jawbone/ gum.

The gap between the root and the gum is the gingival crevice and is referred to by dental professionals as the 'pocket'.



**Dr. Brian Halvorsen has been practising dentistry for over forty years and has provided holistic and preventative dental care for 35 years. His book 'great teeth for life' explains his views on holistic and preventative health and forms a dental education for every generation. Based in London, England, Dr. Halvorsen provides holistic integrated advice and treatments under the slogan that; "a healthy toxic free mouth contributes to a healthy body and mind."**



If the health and integrity of the junction between root, gum and jawbone becomes diseased, systemic inflammation occurs.

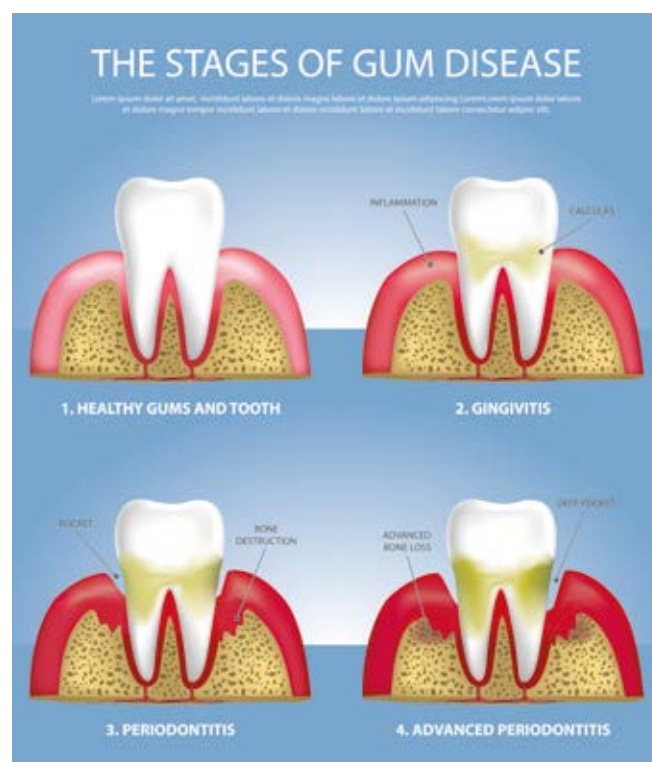
In a healthy mouth, with healthy gums, the seal around the tooth is mainly unbroken. Even so, in healthy mouths, there will always be areas where small amounts of inflammation can occur (known as localised gingivitis).

Where there is gingivitis, the seal is broken, allowing entry to the bloodstream of inflammatory products, such as chemicals from food, bacteria, viruses, yeasts, toxins etc.

In mild gum disease the body's defences [Immune system] can cope with these inflammatory invaders, quickly and effectively, so these bugs can be mopped up and are not allowed to spread around the body.

Severe, and prolonged gum disease [periodontitis] often leads to chronic inflammation of our entire body. This has serious health implications. Current

evidence-based research implicates gum disease with increased risk of Cardio-vascular disease, type-2 Diabetes, many Cancers, sepsis, neuro- degenerative disease, such as Alzheimer's and an exceptionally long list of inflammatory diseases including rheumatoid and osteo arthritis. (2)







Bacteria around the tooth

Oral bacteria are subject to a great deal of research. Already certain strains have been discovered that may impact Alzheimer's, specifically *Porphyromonas gingivalis*, the bacteria present in the most serious form of gum disease.

Researchers found this bacterium can travel from the mouth to the brain, creating toxins called gingipains that cause damage to human proteins and destroy brain cells and nerves, and is more common in the brains of people with Alzheimer's than those without.

*Porphyromonas gingivalis* is present in many people but, like other types of bacteria, it becomes a problem when it overgrows. This is how periodontitis happens, with inflamed, eroding, bleeding gums, and just chewing can spread bugs into the bloodstream.

If somebody has a genetic predisposition to Alzheimer's, then good dental health may be a part of a preventative regime. Same

goes for those with rheumatoid arthritis, since *Porphyromonas gingivalis* may also play a role in the progression of that disease as well. (6)

And this is just one type of bacteria! There are thousands upon thousands of species present in the human mouth and consequently the body, impacting all areas of it.

When I was an undergraduate over 40 years ago, dental students were taught, and still are, that another bacterial strain, *Streptococcus mutans* can escape from the mouth and infect faulty heart valves, leading to a profoundly serious infection – sub-acute bacterial endocarditis [SBE]. If not treated appropriately SBE is likely to be fatal.

This is one of the reasons why dentists ask, in detail, about your medical history. It could be stated that first line of whole-body preventative health starts with good oral hygiene and a healthy mouth.

### **The connection between the mouth, gut, and brain**

Again, another area of research is the microbiome and human health. Gut bacteria can influence neurotransmitter activity and neurodegenerative diseases like Alzheimer's and Parkinson's and the source of gut bacteria and its ecology comes from the mouth. Although nutrition has a huge influence on gut microbiome, the mouth is where digestion starts, and where food influences both growth and composition of oral microbes. Reproduction rate of oral bugs is phenomenal. It has been estimated that over 3 billion bugs grow in a 24-hour period and are swallowed into the digestive system thus having a huge influence on the health and ecology of the gut microbiome.

At the root of the problem [excuse the pun] is the person's immune system. When bugs,



toxins and foreign bodies invade our body via the oral tissues, especially the gums, our white cells are stimulated (it is an inflammatory response).

Even brushing our teeth and gums in a healthy mouth will push some bugs etc. into the bloodstream. Immuno-compromised people such as uncontrolled diabetes, cancer patients on chemotherapy and those suffering long-term debilitating illnesses may find difficulty coping with a mild attack of gingivitis. Conversely, people with a compromised immune system have greater difficulty maintaining a healthy mouth as healing response is reduced. The health of the body cannot be separated from the health of the mouth and vice versa.

Therefore, it is vitally important to see a dentist and /or hygienist if you have general health problems. Patients often ask why there is so much emphasis on giving medical, lifestyle, nutritional and psychological history before a dental examination/ consultation. By taking a holistic approach many seemingly unrelated health issues can be influenced by mouth health and vice versa.

### **Back in the mouth**

If the gums bleed occasionally, especially on brushing, please do not believe the adverts suggesting that your teeth will fall out next week! Mild gingivitis/ bleeding is reversible; but do see your dentist/ hygienist. In most cases the number of bugs entering the bloodstream is likely to be comparatively small and are likely to be mopped up immediately. Again, following a cleaning with a dental hygienist, a higher number of bugs will enter the bloodstream [transient bacteraemia].

**A patient who is in ‘generally good health’ i.e. with a non-compromised immune system, should be able to prevent pathogens spreading to other**

**parts of the body**, following routine oral hygiene procedures. Always check with the dentist/hygienist on the risk/benefit of any clinical treatment.

With the reducing effectiveness of antimicrobials, it is essential to maintain good oral health. Sepsis kills thousands, and there has been little research into identifying where these highly toxic bugs originated. To me, the mouth would appear to be high on the suspect list of sites of origin.

In ecological terms, a diseased mouth with gum disease, is a mouth with a predominance of pathogenic [disease causing] bacteria.

### **Prevention**

Given the undisputed relationship between maintaining a healthy oral environment and the effect on overall good health, are there any regimes that can ensure long term mouth health and optimising overall health and wellbeing?

### **Nutrition**

The mouth is the portal for most of our nutrition and is the initial and important part of our digestion.

Sugar, refined carbohydrates, and most over processed food and drink we know will lead to inflammation and disease processes. Most of the dental profession relate this diet to increased risk of tooth decay, but holistically, a poor diet has far more serious consequences for increasing the risk of gum disease and the consequential effects on overall health.

The research to find if a ‘healthy diet’ can improve gum health is scant. Woelber JP et al., has shown diet can improve periodontal health in a paper; ‘An oral health optimised diet can reduce gingival and periodontal inflammation in humans – a randomised control study’. (7)

## Comment

Can you believe that such an obvious relationship between diet and gum health has not been extensively investigated?

An obvious example: Early signs of Scurvy, a clinical lack of Vitamin C, is swollen bleeding gums! (Whilst working for a large dental corporate body I was told not to discuss with patients the benefits of taking supplements as there was no 'evidence-based research' to back up this advice')

Essential fatty acids, vitamin D, vitamin K2, Coenzyme Q10, zinc, magnesium and vitamin C have all been shown to improve oral health. (In combatting gum disease, the dose is important to have a therapeutic effect). With our nutrient poor diet, there a strong case to take supplements to improve gum health.

## Oral hygiene

Correct mechanical cleaning of teeth and gums, especially the vital junction where gum joins the tooth root/ jawbone [the periodontal membrane] is essential.

Remember, this junction still exists where gums may have receded and is where pathogens and toxins can enter directly into the bloodstream.

Spend time with a good dental hygienist / therapist and don't just have your teeth cleaned but take time to learn how to clean your teeth and gums effectively and efficiently. Remember, it is not the total time spent, it is the effectiveness and efficiency.

By seeing the hygienist regularly our oral hygiene technique will improve with time. We are all creatures of habit, and cleaning our teeth is no exception, so maintaining a healthy mouth can become an autonomic habit like driving a car.

## Dental 'cleaning aids'

Get expert advice from your hygienist, i.e., on the types of toothbrushes, floss, interspace cleaners etc. We are all individuals, and our techniques need to be adapted to our individual mouth anatomy.

Regarding toothpaste, in my experience, most of the 'popular brands' are much the same, but none address a way of healing/ repairing the vital junction, [periodontal membrane] despite their claims!

As with both toothpastes and mouthwashes, most proprietary brands claiming that their ingredients 'kill' bugs and are, by definition, altering the ecology of the mouth.

In my opinion, leading to unknown systemic effects. Except for 'oil pulling' with organic oils such as coconut, I have been reluctant to recommend any of the mainstream toothpastes and mouthwashes.

## OralTidePro™

For many years now, patients have asked me when they can have a new tooth in their mouth grown by stem cells. Although research is ongoing, there appears to be a while to go before it will become clinically available.

When I was asked to review a new peptide repair gel and its mouthwash called OralTidePro™, which uses a similar technology, my interest was piqued.

**My basic principals with any product before either using or recommending either to myself, my family and patients are as follows:**

1. **'First, does it do no harm?' In my estimation, a product needs not only to be nontoxic, but also eco-friendly.**
2. **Does it maintain a healthy microbiome?'**
3. **'Does it work?'**

In these respects, OralTidePro™ has no fluoride, no alcohol, no chlorhexidine, and no potassium nitrate and nor does not unbalance the microbiome, plus its list of positive benefits from its regular use is impressive- OralTidePro™:

1. Repairs periodontal connective tissue.
2. Repairs gingival recession.
3. Protects the dentin.
4. Consolidates the teeth structure.
5. Improves enamel demineralization.

I am possibly a bit 'old fashioned'; since I have where possible, tried things out on myself and any willing members of my family, (especially dental products and nutritional supplements), and I can therefore report that my wife and I have both used OralTidePro™ mouthwash and the repair gel regularly for over 6 months.

We both like the taste and have noticed that our mouths feel healthy.

Being a scientist, as well as a dentist, the proceeding statement is subjective, but together with the scientific data I have seen, along with its lack of known toxins, I recommend OralTidePro™.

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# OraltidePRO™

We introduce the latest dental care range that contains peptides for mouth health. Its unique peptide formula guards against gingivitis, halitosis, and receding gums, all whilst strengthening teeth enamel.

The mouthwash is a concentrate, so only 1 ml. need be placed into water and gargled and then spat out. The repair gel need only be used once a week. It is placed into a provided gum shield and worn for 15-minutes. Afterward the teeth may be brushed and cleaned with water as normal.

**OraltidePro™**  
**mouthwash**  
**concentrate 60 ml**  
**bottle \$39.99.**

**SPECIAL OFFER:**  
Save \$5.00 at \$34.00  
plus buy 3+ at just  
£30.00 each.



**OraltidePro™**  
**50 ml repair**  
**gel kit \$34.99**

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Save \$5.00 at  
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buy 3+ at just  
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Credit card payments available





# Nature's Marvels™

Described by scientists as “**Nature’s gene switches**” that could replace stem cells

Professor Khavinson’s Peptide Bioregulators



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 **PROFOUND**  
PRODUCTS

## 1<sup>ST</sup> LINE™ (OSCN) *Fighting the flu season*

*1st Line™ is literally the ‘first line’ of immune defence.*

**1<sup>ST</sup> LINE™ KIT \$79.99**  
**MULTI-PACK SPECIAL OFFER**  
**BUY 3 + \$70.00 EACH.**

The world’s first OSCN supplement is a four part kit that is easily and quickly made in a glass of water for immediate use- plus it has no taste nor smell.



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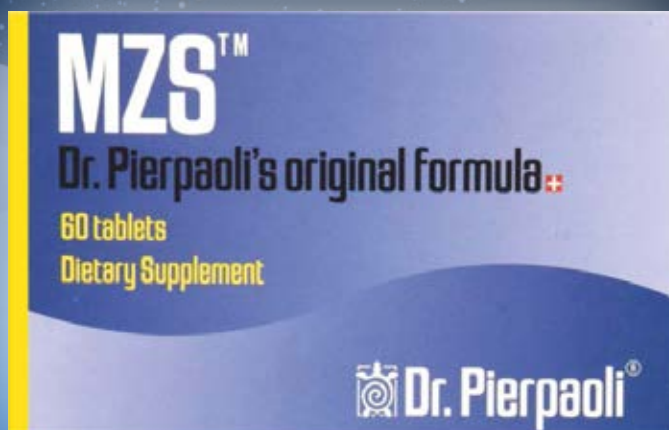


For further information visit:  
**[www.antiaging-systems.com](http://www.antiaging-systems.com)**

# World's best melatonin's

Dr. Walter Pierpaoli's unique time release melatonin, designed to mimic the natural night peak of melatonin between 1am and 3am- when the tablet is taken on an empty stomach between 9pm and 11pm. (Also contains the synergistic agents of zinc and selenium).

**MZS™** 60x 3mg tablets  
**\$19.99**



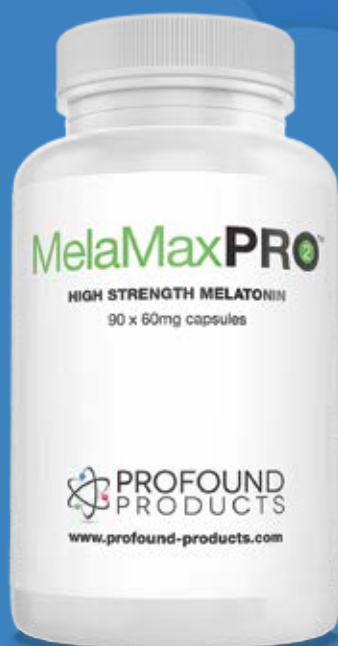
## **SPECIAL OFFER:**

Use voucher **SLEEPAMFS** at checkout and save **\$4.99** per pack

melatonin  
selenium  
zinc



***“I get my MZS and TRH from IAS”***  
**Suzanne Somers**



**MelaMaxPRO™**  
High Strength Melatonin  
90x 60 mg capsules  
**\$39.99**

This contains very high strength pure melatonin; it is designed for those who have the need to take such doses.

## **SPECIAL OFFER:**

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# SPOTLIGHTS



## 1ST LINE™ - the first line of immunity

*Professor Paul Clayton reported in the Aging Matters magazine No1, 2012, that 'the age of antibiotics is coming to an end.' This has been a concern for some time as antibiotics becomes less effective and can't be relied upon as they were in the past. What's more, antibiotics do not destroy viruses, and when it comes to effective antivirals there are very few choices indeed.*

### OSCN

A British chemist by the name of Richard Steed was concerned how chlorine was being in food- as it is sprayed onto salads. It kept the vegetables free of bacteria, but it is hardly a healthy option for the consumers.

He investigated nature and found that oxythiocynate ions, otherwise known as OSCN are present in tears, saliva and mother's milk and appear to destroy many pathogens including viruses, since OSCNs are literally the first line of immune defence.

Thereafter, he created the world's first supplement containing OSCN molecules. Soon it was realised that they also had massive health implications.

### An OSCN kit

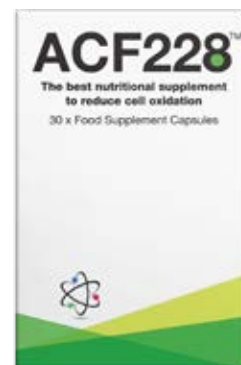
An OSCN kit OSCNs have a very short half-life, something like 30 minutes, which is why you have never seen them presented in a supplement before.

But 1ST LINE™ is different because it is a kit containing the active and 3 enzymes to make up the supplement in a glass of water for consumption straight away. It is easy to use, simply add the 4 agents in the right order (marked 1-2-3-4), stir and drink. 1st Line™ has no smell or flavor.

Doing so creates 25 mg of OSCN, the equivalent to what a healthy body produces in a day.

### How to use

*Obviously, there are a plethora of infections out there, but on a simple level take a 1st Line™ dose at the first sign of infection and repeat the dose for a day or two afterward, as necessary. For maintenance, some individuals like to take one dose of 1st Line every month in order to keep the 'body burdens' low.*



## ACF228® - the ultimate free radical scavenger

*The ACF abbreviation means 'antioxidant complete formula' and 228 because it was Dr. Richard Lippman's 228th formula that proved to be very effective. Dr. Richard Lippman was nominated for the Nobel Prize in medicine for his work in measuring free radical activity in-vivo; in other words what happens within the human body. The result of that work led to the incredibly comprehensive formula known as ACF228®.*

### Free radicals

Free radicals are unstable molecules that can be created 'naturally' within the body and they



can 'disorganise' healthy cells by crashing around- a bit like bumper cars at a fayre. The free radical theory of aging was first proposed by Professor Denham Harman in the late 1950s and it helps to explain the degenerative processes that occur during aging.

### Hierarchy

There are several levels of free radicals, and the worst of them are the superoxide and the hydroxyl free radicals. Neutralisation of 'higher level' free radicals can create a plethora of lower level free radicals, so it is important to try and impact every stage, but of course to particularly target the most destructive free radicals.

### Potency

In the ACF228® formula there are numerous unique molecules like catalase and especially NDGA within ACF228®.

### Synergy

ACF228® has numerous synergistic agents that have been designed to help neutralise every level of free radicals, no other single product has been in-vivo designed- each ACF228® capsule contains:

Ingredients	Quantity
N-acetylcysteine	100 mg
L-methione	100 mg
Di-indole-methane	83 mg
L-carnosine	83 mg
Deodorised garlic	50 mg
Trans resveratrol	17 mg
Vitamin B6	17 mg
NDGA	3 mg
Potassium iodide	3 mg
Iodine	2.5 mg
Methylfolate	800 mcg
Chromium picolinate	120 mcg
Selenium	100 mcg
Vitamin B12	10 mcg
Catalase	0.025 mg

### Dose

ACF228® has been designed as a one capsule per day formula.

## BEC5® curaderm - a truly amazing skin cream

*The story of BEC5® cream is remarkable. When it is told people often can't believe it- and when they realise the cream has been available for decades, they become flabbergasted!*

*How so? Because this naturally derived skin cream has been shown to be virtually 100% effective in removing basal and squamous cell skin cancers (sic).*



### History

It all starts on the island of Vanuatu in the South Pacific, when a young man by the name of Bill Edward Cham (BEC) walked around the fields and noticed horses and cows rubbing themselves against a local plant called the Devil's Apple, (a member of the eggplant family).

Asking the farmers why they did this, he learnt that the animals had skin lesions and the rubbing helped clear them up. As Dr. Cham was training to be a biochemist this fascinated him and over 20+ years his research revealed a remarkable secret.

### Skin cancers

He identified that the active ingredient was

solasdines and that it 'ate away' a ribose coating on cancer cells that isn't present on healthy cells. The result is that the cancer cells are exposed to the immune system as 'non-self' cells, then the natural process of apoptosis is induced and then the body rids itself of the cancer cells.

### Documented history

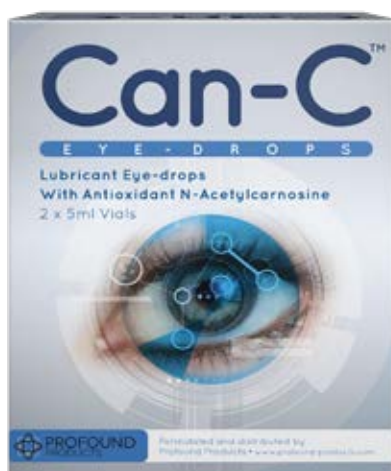
Many journals, particularly those in Australasia have published these studies and numerous magazines around the world have divulged this. Two excellent books on this subject are; the eggplant cancer cure and Curaderm a non-invasive medication for skin cancer.

### Application

BEC5® cream is applied topically to SCC and BCC lesions twice a day and covered with a micropore. The typical treatment time is between 6 to 12 weeks. So why hasn't this cream, (that avoids the need for surgery in most cases) not become famous and mainstream? The answer is simple, the active agent is natural and can't be patented and therefore the current medical system will not promote it.

### Note

BEC5® is not suitable for melanoma cancers.



## CanC™ Eye-drops - a breakthrough for cataract

*Can-C™ eye-drops are the original formula containing n-acetylcarnosine (NAC), a natural di-peptide that has potent anti-glycating and antioxidant properties to prevent lipid peroxidation.*

### Clinicals

Patients who placed 2-drops of Can-C™ into their eyes twice daily for a 5/6-month period reported:

- An improvement in their visual acuity (90%)
- An improvement in the clarity of their lens (88.9%)

There have been numerous reports of cataract shrinkage and even disappearance with documented evidence that Can-C™ eye-drops remain effective (and safe) more than 24-months later.

### Actuals

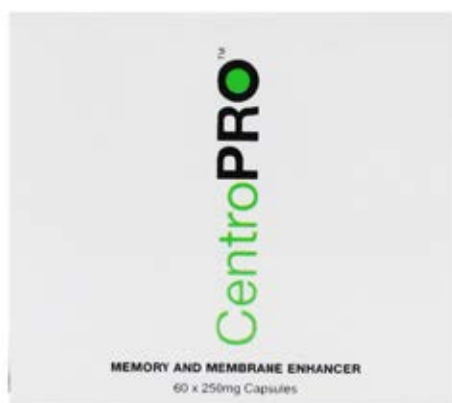
The most commonly expressed initial reports are that glare is significantly improved, (for example night driving is easier) and color perception is enhanced.

Most importantly, is an ability to read eye charts clearer, due to the better transmissivity of the lens.

### Broad spectrum

Evidence is mounting that Can-C™ is efficacious for many conditions including:

- Cataracts (particularly the senile version) for both humans and dogs
- Glaucoma
- Presbyopia
- Eye strain
- Ocular inflammation
- Blurred vision
- Vitreous opacities and lesions
- Diabetes mellitus complications
- Contact lens comfort
- Dry eye syndrome



## Centro-PRO™ - improving mental recall speed

*Centro-Pro™ capsules contain centrophenoxine, (pronounced, centrow-fen-ox-in) and it is a classic ‘nootropic.’*

### History

- Centrophenoxine can increase acetylcholine levels in the brain.
- It is also very effective in reducing lipofuscin levels, this component is part of Alzheimer brain plaques.
- Accordingly, this reduction of membrane toxins like lipofuscin aids cellular communication. This is a key feature of the membrane hypothesis of aging- which has been published by Professor Nagy.
- Thus, centrophenoxine is useful for those concerned about Alzheimer's, but in addition, centrophenoxine has been noted to help enhance and protect the performance of an healthy, aging individual.

### General cognitive benefits

*Classifying the precise benefits of the various nootropics can be tricky. Many people simply refer to their ailing cognitive facilities as “memory loss.” However, a quick breakdown of that statement requires further evaluation- in order to determine the precise nature of the problem.*

*In such a case, centrophenoxine is perhaps best suited to the issue of recall speed. So, If your speech appears to be full of “ums” and “ers” (whilst your brain tries to catch up with*

*your mouth), then it is likely that centrophenoxine will be an aid; helping to bring clarity and flow to speech and thought.*

### Doses

A typical dose for the ‘average’ person is 250 mg once or twice daily.



## Dep-PRO™ - for focus and concentration

*Dep-Pro™ contains deprenyl (also known as selegiline), it was created in the 1960s by Professor Joseph Knoll to treat Parkinson's patients since deprenyl improves dopamine levels.*

### Significant longevity studies

Professor Knoll's experiments with rats also produced the most incredible longevity benefits. When the animals were fed deprenyl in their food, they lived so much longer that even after the last nontreated rat died, the first of the deprenyl treated rats was yet to die! (Note: importantly, these results were verified independently in another study not undertaken by Professor Knoll).

Based on this research, Dean, Fowkes and Morgenthaler, published in the book, Smart Drugs and Nutrients, that the loss of dopamine in aging humans can be mapped against both the development of Parkinson's and even death.



### Mode of action

For a long time deprenyl has been described as a MAO-b inhibitor, that it to say that is prevents this enzyme from destroying dopamine, leading to its improvement.

Later, Professor Knoll noted that deprenyl also raises PEA levels and catecholamine sensitivity.

### Typical responses

Deprenyl can assist:

- The treatment of Parkinson's and other dementias.
- Male libido enhancement.
- Boost mental energy levels especially focus and attention.
- Life expectancy, at least in animals.

### Dosing

Parkinson's patients use high doses, but healthy aging adults typically use 1 mg to 3 mg per day, this is dependent on age and need.

### Note

These doses do not consider synergy with other dopamine enhancing agents and, in such cases, would have to be adjusted accordingly.

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## GHRPS - an alternative to growth hormone injections

*Dr. Daniel Rudman's research in the late 1980s concluded that elderly patients using Growth Hormone (GH) could reverse their*

*biological age-markers by as much as 20-years! Specifically, he noted that they had improved the patients' skin, hair, muscle mass, decreased fat levels and enhanced levels of stamina, strength and well-being.*

*The issue with GH, (other than its expense), is that it does have to be injected to be effective; this is because it is a 191-chain of aminoacids so it simply can't be absorbed via any other route.*

*Furthermore, many countries have classified GH injections as a controlled substance, partly because of its anabolic actions.*

### GHRPs

Thankfully, Dr. Walker's research has shown that the use of GHRPs, (growth hormone releasing peptides) have a much safer profile whilst enjoying many of the same benefits.

GHRPs can be sublingually and intranasally, and thus avoid the need for needles.

- The GHRP feedback loop means that they cannot cause the pituitary to down-regulate production of GH.
- GHRPs are not controlled substances.
- Rather than inducing a spike of GH in the blood, GHRPs augment GH naturally into the blood.

### Synergy

The main GHRP is GHRP2 which can be used sublingually, in addition there is also intranasal Sermorelin- this is the precursor to GH, (the first 29-aminoacids). Its function is to release existing stores of GH from the pituitary, rather than encourage more production. Dr. Walker suggests that combining sermorelin with GHRP2 can elicit up to a 5x greater quantity of GH into blood.

### Summary

GHRPs have created a genuine alternative to GH injections; they are simpler and easier to use and at the same time they have a safer profile.

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## Met-PRO™ - improving the insulin sensitivity

*Met-Pro™ contains metformin, a diabetes type-2 treatment that has been used for many decades. Metformin differs from other insulin medications, since rather than increasing the production of insulin from the pancreas, it improves the sensitivity of the receptor site to insulin; in other words you 'get more bang for your buck' by improving the performance of insulin to peripheral tissues, (like muscles).*

*This has interesting implications for aging since the neuroendocrine theory of aging teaches us that it is the loss of sensitivity at receptors that is a major 'fault' in aging.*

### Weight loss

Persons who utilise metformin, (even those who may be pre-diabetic or otherwise not affected), have often noted that it helps them to maintain a healthy weight with lower fat levels etc.

### Antiaging

Dr. Ward Dean has stated that; "metformin is one of the most promising antiaging, life-extending drugs available."

It's a profound statement, but it is predicated on the amazing range of metformin's clinical effects which include:

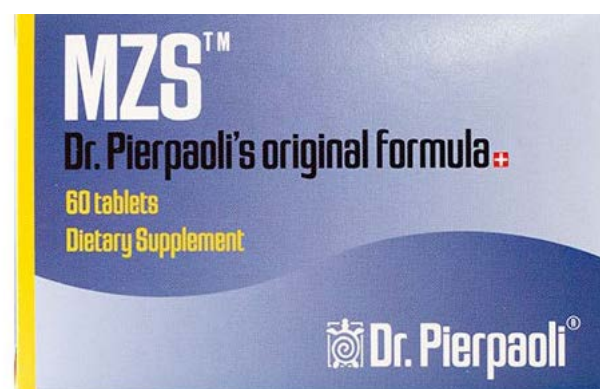
- Lowering the blood cholesterol, triglycerides and beta lipo-proteins.
- Reducing the development of atherosclerosis.
- Reducing insulin levels.
- Increasing hypothalamo-pituitary sensitivity.
- Improving the cellular immunity.
- Enhancing the activity of anti-cancer drugs.
- Suppressing the growth of some tumors.
- Increasing the maximum life span of animals.

### Miles

Metformin is a milestone, since it is the first medicine in the world to be granted an FDA approved study for antiaging titled; metformin in longevity study.

### Note

Metformin does inhibit the uptake of vitamin B12, so in order to counter potential side-effects it is recommended to supplement with B12 at the same time.



## MZS™ - because not all melatonins are created equal

*Melatonin is produced at night by the pineal gland to help regulate the circadian rhythm. As we age, the amount of melatonin we produce declines and it results in many persons having a lower quality of sleep.*

*MZS™ has been formulated by the world's foremost melatonin expert- Dr. Walter Pierpaoli, his MZS™ (melatonin, plus zinc and selenium),*

*is totally unique since it is designed to mimic the natural night peak of melatonin- leaving you refreshed and alert the following day.*

### What does melatonin do?

Melatonin is vital to protect our hormonal system, regulate immunity and repair our body's cells. It is commonly used by shift workers and to treat jet-lag and age-related sleep disorders, but its abilities go far beyond its sleep improvement properties.

### Antioxidant effects

Melatonin is an extremely effective antioxidant; in fact, on a molecule to molecule basis, melatonin has proved to be more efficient in neutralizing toxic hydroxyl-radicals than the two well-known free radical scavengers, glutathione and mannitol.

- Lowering the blood cholesterol, triglycerides and beta lipo-proteins.
- Reducing the development of atherosclerosis.
- Reducing insulin levels.
- Increasing hypothalamo-pituitary sensitivity.
- Improving the cellular immunity.
- Enhancing the activity of anti-cancer drugs.
- Suppressing the growth of some tumors.
- Increasing the maximum life span of animals.

### Melatonin and longevity

Melatonin's effect on longevity is well documented. Laboratory tests on animals have demonstrated that melatonin increased their lifespans by 20%.

### MZS™ and ARMD

Age related macular degeneration comes in two forms, wet and dry and it is a notoriously difficult disorder to treat- linked to blindness. In a 24-month study, (NY Academy of Science, 2005, 1057:384-392) on 100 patients showed that after 3 months, the majority of patients taking 3 mg of MZS™ nightly had halted the progression of their ARMD and at 6 months many reversed their ARMD.

Remarkably this was true for both the wet and dry forms!

### Dr. Pierpaoli's melatonin

Dr. Pierpaoli's MZS™ formula mimics the pineal gland's release of melatonin when it is taken between 9-11 PM because it releases between 1-3 AM, the natural night-peak of melatonin in blood.



### Nature's Marvels™ - how peptide bioregulators in food are gene switches

*Professor Vladimir Khavinson is the President of the European Academy of Gerontology and Geriatrics. In the 1980's he was a Colonel in the Soviet Union military medical corps. He and his team were approached by Kremlin who wanted a way to protect their troops from various problems. The research uncovered a remarkable link between short-chain peptides and DNA. Basically, short-chain peptides- in food act as gene specific switches; they termed them 'peptide bioregulators.'*

*This former military secret is now available and to-date 21 have been identified to assist various organs, glands and tissues. These peptides, unlike proteins, can enter through the stomach and a comprehensive list of patents, confirms that each of the peptide bioregulators interact with DNA - activating repair and regenerative processes.*

### Original materials from the trials

Nature's Marvels™ are the English packaged and approved peptide bioregulators from Professor Khavinson, (all bovine sourced).



Here is the complete list:

1. Adrenal
2. Bladder
3. Blood vessels
4. Bone marrow
5. Brain (CNS)
6. Cartilage
7. Heart
8. Kidney
9. Liver
10. Lung
11. Muscle
12. Ovaries
13. Pancreas
14. Parathyroid
15. Pineal
16. Prostate
17. Retina
18. Stomach
19. Testes
20. Thymus
21. Thyroid

### Dosing

A typical program is as follows:

- Start with an intensive course of 2-capsules once a day for 30-days.
- Thereafter, use 2-capsules once a day for 10-days, repeat every 1, 2 or 3 months.



## Natural Estrogens and Progesterone for women - nHRT is the right kind of 'HRT'

*When estrogens were discovered in the 1920s they had to be derived from pregnant mare urine- all because a laboratory solution was too expensive to synthesize. But today everything has changed, yet this ancient practice continues! These facts have been pointed out by Jonathan Wright, M.D. in his book; 'Don't let your doctor give you horse urine!'*

### Esnatri™- a unique tri-estrogen

Esnatri™ is a bioidentical triple estrogen cream. It comes directly from the work of Dr. Jonathan Wright who has highlighted that most women produce estrogens in the ratios of 90% estriol, 7% estrone and 3% estrone.

Usually, tri-estrogen preparations attempt to replicate the human hormones estriol, estradiol and estrone, in the ratio of 80:10:10. Some bi-estrogens entirely overlook estriol, claiming it is a 'weak' estrogen. However, women naturally produce high levels of estriol since it is considered to have anti-carcinogenic effects.

Horse estrogens are, as you would expect, not identical to human. Yet some physicians still prescribe them, even though bioidentical estrogens can now be easily produced. Some people believe that the known side-effects from 'HRT' are because the correct natural human hormones are not utilised. In other words, women should be using 'nHRT.'

### Progest-Pro™

Progest-Pro™ is a 5% bioidentical progesterone cream and it is a counterbalance to estrogens. For whilst women can significantly decline in estrogen levels during menopause, they rarely reach zero production levels, whereas progesterone can sometimes not be measured at all.

It is also the low level of progesterone that significantly impacts bone strength, leading onto osteoporosis.

So, there are numerous reasons to ensure that

progesterone is taken alongside estrogen in an nHRT program.

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## Oxy-PRO™ - for passion and sex

*Oxy-Pro™ contains oxytocin, a hormone produced by the hypothalamus but excreted via the pituitary gland. Its orthodox role is to help women give birth, since the large dose that's injected helps relax the uterus and alleviates the passage of the child.*

*Meanwhile, Dr. Thierry Hertoghe's book; 'passion, sex and longevity, the oxytocin adventure'- has shown it to have many other roles.*

### The love hormone

Oxytocin has been dubbed 'the love hormone'. This is because oxytocin can induce feelings of bonding and care. Not just between individuals, but even with animals too!

Oxytocin measurements have been taken between lovers, friends, relatives, parents and their children etc. From those results, it has been noted that oxytocin levels are higher when they are in their presence.

Mothers naturally bond with their children, but even men, (especially those who experience the live birth), express their emotions as wanting to care and protect their offspring, these effects may be attributable to the release of oxytocin, hence triggering the bond.

On the other side of the coin, psychopaths are notoriously low in their oxytocin levels, which may be a cause of their uncaring feelings towards other humans.

### The pain and orgasm connection

Fibromyalgia can be a very debilitating disorder with a lot of pain, sometimes constant for those who suffer with it.

In women with fibromyalgia it was noted that when they were experiencing an orgasm, they felt no pain at all. Later, it transpired that women undergo a burst of oxytocin during orgasm.

Trials were undertaken to see if oxytocin supplementation could alleviate the pain of fibromyalgia, there was some success, but the side effect noted was that those women now enjoyed multiple orgasms! This was a fact picked up on by the popular press and is probably singularly the action most responsible for bringing oxytocin into the public gaze.

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## Pira-PRO™ - the original nootropic

*Nootropic is a term meaning 'towards the mind' and they were originally designed for senile dementias, but now they have become popular for aiding individuals to enhance their mental*

and cognitive processes.

Ward Dean, M.D. has highlighted these facts in his 'Smart Drug' series of books; ever since then the term 'smart drugs' has become mainstream.

### Piracetam, the original

Pira-Pro™ contains piracetam and piracetam was the first nootropic developed by Dr. Giurgea at UCB in the 1960s. Originally, it was used for travel and altitude sickness, but shortly afterward people realised that piracetam had positive effects on cognition.

### What does piracetam do?

Piracetam is used for a wide range of conditions. For example, it has been shown to improve attention levels and memory retention. Piracetam can slow down 'senile involution.' In other trials, piracetam has improved memory consolidation in those suffering from 'age-related memory impairment.' Piracetam has aided patients recovering from strokes, in-particular improving post stroke speech impairment (aphasia).

Another use has been for acute and chronic cerebral ischaemia, (decreased blood flow to the brain). Piracetam has even increased neuronal activity in the brain when measured with EEG.

For normal individuals, piracetam can enhance idea creation and the ability to 'see things through.' In other words, to have ideas and then be able to bring them to fruition. The level of clarity piracetam induces is often described as; "the fog has lifted."

### How does piracetam work?

Piracetam's key method of action is upon the Corpus Callosum, the region of the brain that links the two hemispheres.

Many experts believe this enables piracetam users to channel greater brain potential by connecting the logical side of the brain with the creative side. This could be described as a Yin and Yang effect.



## Publications for antiaging, preventative and regenerative health enthusiasts



[www.thelongevity.store](http://www.thelongevity.store)





## Thyroids - supporting the hypothyroid epidemic

*Dr. Broda Barnes estimated that 40% of adults are deficient in thyroid hormones. As the thyroid gland is of pivotal importance, a lack of its function can affect a wide variety of age-related health disorders. Ergo, supplementation can have many positive effects.*

### The thyroid gland

The thyroid controls the body's metabolism, (the rate at which it burns calories for energy) and the body's utilization of fat; so a decline in thyroid function, can result in poor concentration, confusion, memory problems, cold hands and feet and weight gain. Other conditions triggered by an underactive thyroid are painful musculoskeletal issues that affect tendons, muscles and ligaments.

### Do I need a thyroid supplement?

A doctor can check your blood levels, but a simple method is to take your body temperature when you wake in the morning. It should be in the range of 97.8 to 98.2 degrees Fahrenheit. If it is regularly lower than 97.8 F you could be hypothyroid and if regularly higher than 98.2 F then hyperthyroid.

### Synthetic vs. natural thyroids

Synthetic thyroids typically only contain T3 or T4, but natural thyroids (like Armour® etc.) are of porcine origin and contain the full spectrum of T1, T2, T3 and T4 thyroid hormones.

### Converting between the two

The table provides a helpful guide to the conversion rates for those wishing to switch from synthetic thyroids to natural versions. As always, we recommend consulting with a physician before making changes to your health program.


Dose of Desiccated Thyroid (Grains)	Equivalents (mg)	Dose of T3 (Liothyronine) (mcg)	Dose of T4 (Levothyroxine) (mcg)
0.5	32	12.5	50
1	65	25	100
2	130	50	200
3	200	75	300
4	260	100	400
5	325	125	500



## COMING SOON IVERMECTIN 100x 3 mg tablets

further details at:  
[www.antiaging-systems.com](http://www.antiaging-systems.com)

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A special weekend event is being arranged at the 5-star resort of Luton Hoo in Bedfordshire, England.

Taking place between **April 1-3, 2022** it is designed as an intimate and comfortable event, one where we learn the details about peptides, and how they can be applied to improve and optimize long-term health.



**Several world experts from Russia, America and Europe will be converging to explain their clinical results.**

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**[www.profound-health-summit.com](http://www.profound-health-summit.com)**

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**Currently the site covers topics related to all the following products:**

## BOOKS

- Atlas of Endocrinology V2 by Thierry Hertoghe, MD
- Great Teeth for Life by Brian Halvorsen, BDS
- Passion, Sex & Oxytocin by Thierry Hertoghe, MD
- Peptides in the Control of Ageing by Prof. Khavinson
- Testosterone Therapy for Real Gentlemen by Dr. Hertoghe
- Cataract Cure by Marios Kyriazis, MD
- Melatonin, the Key of Life by Walter Pierpaoli, MD
- Patient Hormone Handbook by Thierry Hertoghe, MD
- Physician Hormone Hand-book V2 by Thierry Hertoghe, MD
- Eyesight Saviors by Marios Kyriazis, MD
- Natural Skin Cancer Treatments by Bill Cham, PhD
- Peptide Bioregulator Revolu-tion by Dr. Kyriazis
- Reversing Physical Aging V1 by Thierry Hertoghe, MD

## DIAGNOSTICS

- Bio-Clip™ CUFF
- Foodsafe®

## GHRPs (growth hormone releasing peptides)

- GHRP2 (GHRP2-Pro™)
- Sermorelin (Serm-Pro™)

## HORMONES

- Aldosterone (AldoPro™)
- Estrogens (Esnatri™)
- Melatonin (MZS™)
- Pregnenolone (PregPro™)
- TRH (Abaris™)
- Desmopressin (Minurin®)
- HCG (HCGPro™)
- MSH2 (MSH2Pro™)
- Progesterone (ProgestPro™)
- Vasopressin (VasoPro™)
- DHEA (DHEAPro™)
- Hydrocortisone (HydrocortPro™)
- Oxytocin (OxyPro™)
- Thyroids (natural, T3, etc.)

## NUTRITION

- 1st Line™ (OSCN)
- Boluoque® (lumbrokinase)
- DIMPro™
- LongevityPro™
- NitricPro™
- StressPro™
- TestoXLR8Pro™
- ACF228®
- BoostPro™
- EnergyPro™
- NADH
- Novisyn® (hyaluronan)



- Symprove®
- VigorPro™
- BloodSugarPro™

- Can-C™ Plus
- LacticPro™
- NADPro™

- PaynePro™
- TA65®
- ViralPro™

### PEPTIDE BIOREGULATORS (Nature's Marvels™)

- |                             |                            |                             |
|-----------------------------|----------------------------|-----------------------------|
| ■ Adrenal (Glandokort®)     | ■ Bladder (Chitomur®)      | ■ Blood Vessels (Ventfort®) |
| ■ Bone Marrow (Bonomarlot®) | ■ Cartilage (Sigumir®)     | ■ CNS/ Brain (Cerluten®)    |
| ■ Heart (Chelohart®)        | ■ Kidney (Pielotax®)       | ■ Liver (Svetinorm®)        |
| ■ Lungs (Taxorest®)         | ■ Muscle (Gotratix®)       | ■ Ovaries (Zhenoluten®)     |
| ■ Pancreas (Suprefort®)     | ■ Parathyroid (Bonothyrc®) | ■ Pineal (Endoluten®)       |
| ■ Prostate (Libidon®)       | ■ Retina (Visoluten®)      | ■ Stomach (Stamakort®)      |
| ■ Testes (Testoluten®)      | ■ Thymus (Vladonix®)       | ■ Thyroid (Thyreogen®)      |

### SMARTS

- |                                |                        |                          |
|--------------------------------|------------------------|--------------------------|
| ■ Adrafinil (AdraPro™)         | ■ Picamilone (PicPro™) | ■ Modafinil (ModaPro™)   |
| ■ Hydergine® (HyPro™)          | ■ Idebenone            | ■ Reminyl® (Galantamine) |
| ■ Centrophenoxine (CentroPro™) | ■ Piracetam (PiraPro™) |                          |
|                                | ■ Deprenyl (DepPro™)   |                          |

### SPECIALIST (INCLUDING MEDICINES)

- |                             |                              |                               |
|-----------------------------|------------------------------|-------------------------------|
| ■ 4MU (4MUPro™)             | ■ Acarbose (Glucobay®)       | ■ Bromocriptine (Parlodel®)   |
| ■ Anastrozole (Arimidex®)   | ■ B17Pro™ (amadaylin)        | ■ DMSA (DMSAPro™)             |
| ■ Cabergoline (Dostinex®)   | ■ Dasatinib (DasaPro™)       | ■ EDTA (EDTAPro™)             |
| ■ Doxycycline               | ■ Dutasteride (Avodart®)     | ■ Metformin (MetPro™)         |
| ■ Finasteride (Proscar®)    | ■ GH3Pro™ (Gerovital-H3®)    | ■ Sildenafil (SildenafilPro™) |
| ■ Naltrexone (NalPro™)      | ■ Rapamycin (RapaPro™)       |                               |
| ■ Tadalafil (TadalafilPro™) | ■ Aminoguanidine (AminoPro™) |                               |

### TOPICALS

- |                        |                        |                    |
|------------------------|------------------------|--------------------|
| ■ BEC5® Curaderm cream | ■ Oraltide™ mouthwash  | ■ Joint-Pro™ cream |
| ■ Oraltide™ repair gel | ■ Oraltide™ repair gel | ■ Youth Gems®      |
| ■ Can-C™ eye-drops     |                        |                    |



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