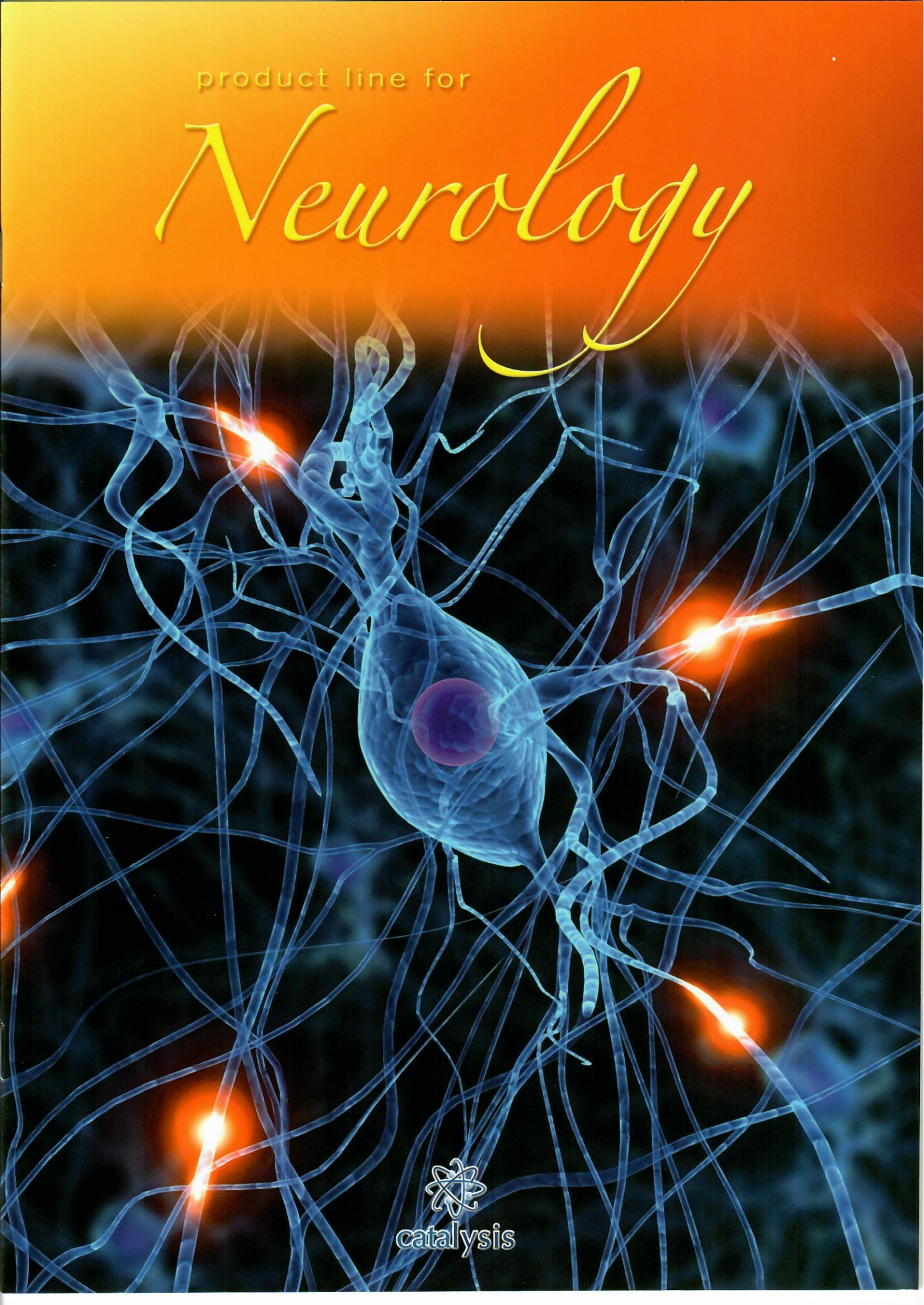
product line for

Neurology



catalysis

catalysis

Committed to health

Catalysis, S.L. was born as a private and independent company that dedicates its efforts to research and the development of products in the pharmaceutical, cosmetic, and dietary fields.

OUR MAIN ACTIVITY IS RESEARCH

A team of scientists works at the search of new remedies to relieve the suffering caused by widespread diseases such as **psoriasis, diabetes, asthma, osteoporosis, arthritis, genital and oral herpes, immunodepression (AIDS), cancer, tuberculosis, hepatitis, etc.**

The aim of our research is to discover treatments without the use of aggressive medicines that, all too often, produce terrible side effects.

Our products are harmless and based on the latest discoveries of the beneficial effects that ANTIOXIDANTS have on FREE RADICALS in our organism as well as on the stimulation of the body's immune system.

Manufactured by pharmaceutical laboratories equipped with the most advanced technologies, our products undergo the most rigorous controls that the European Union imposes by law on all the manufacturers of pharmaceutical, cosmetic, and dietary products that operate within its frontiers.

DISTRIBUTION THROUGHOUT THE WORLD

- **Europe**
  Albania, Belarus, Croatia, Cyprus, Czech Republic, Estonia, France, Hungary, Latvia, Lithuania, Moldova, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Turkey, United Kingdom, and Ukraine.

- **America**
  Argentina, Bolivia, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, USA, and Venezuela.

- **Africa**
  Algeria, Botswana, Egypt, Ghana, Ivory Coast, Kenya, Lesotho, Malawi, Nigeria, Sierra Leone, South Africa, and Tanzania.

- **Middle East**
  Bahrain, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia, and United Arab Emirates (U.A.E.).

- **Asia**
  Armenia, Azerbaijan, Bangladesh, China, Georgia, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Malaysia, South Korea, Taiwan, Thailand, Turkmenistan, Uzbekistan, and Vietnam.

Our secret?

Molecular activation

The biocatalytic process of MOLECULAR ACTIVATION considerably improves the biological activity and the biochemical reactivity of all antioxidant molecules.

This method of MOLECULAR ACTIVATION is much more effective when applied to a far wider range of hydrosoluble and liposoluble molecules.

We know the answer to this ACTIVATION in numerous antioxidants of all kinds and also the mechanism by which the accumulated electrons are able to reduce the free radicals of oxidant molecules.

In this mechanism, we have observed greater synergy between some antioxidants used that are capable of considerably increasing their overall antioxidant capacity.

Many factors can influence the ACTIVATION of all antioxidants.

Amongst the most important chemical factors are the molecular structure, the active functional groups, specific antioxidant catalysts, the molecular weight, the pH, double carbon bonds, their solubility coefficient, etc., as well as the antioxidant capacity of each molecule.

The duration and the intensity of MOLECULAR ACTIVATION are amongst the most influential and important physical factors.

Not all antioxidants require the same ACTIVATION time to reach their maximum antioxidant capacity. The most important parameter for the control of better performance is their optimization. Once their highest antioxidant capacity is at its most favourable peak, ACTIVATION must be suspended because, after that maximum peak, their antioxidant capacity normally starts to diminish gradually and progressively.

When there is a mixture of two or more antioxidants, the optimal ACTIVATION time is previously calculated for each preparation separately, and this fixed parameter is always respected.

Bioassay on rabbit cornea

Vilas P. et al. (1989): Antiviral activity of a D-glucosamine derivate against herpetic ulcers (HSV type 2) in rabbit cornea. Acta ophthalmologica 67:55-60.

Control of HSV-2 virus
with non-activated glucosamine
4 days after viral infection

Control of HSV-2 virus
with non-activated glucosamine
14 days after viral infection

Treatment of HSV-2 virus
with activated glucosamine
4 days after viral infection

Treatment of HSV-2 virus
with activated glucosamine
14 days after viral infection

Treatment of HSV-2 virus
with acyclovir
4 days after viral infection

Treatment of HSV-2 virus
with acyclovir
14 days after viral infection

These results demonstrate that MOLECULAR ACTIVATION is essential and necessary to increase biological activity and obtain this way the greatest effectiveness in the treatment of diseases which directly or indirectly produce free radicals.

ALZER® + VIUSID®

• Alzheimer's • Parkinson's

The antiviral action of **VIUSID®**, coupled with the antioxidant capacity of the ingredients contained in **ALZER®,** results in a complementary therapy that is very effective in treating ***Alzheimer's*** and ***Parkinson's***.

ALZER® contains:

- **Ginkgo Biloba and Germanium.**
  At the New York Institute for Medical Research the effects of **EGB761** were evaluated. This is a standardized extract of **Ginkgo Biloba**, which has been studied with the aim of improving and motivating the mechanism of nervous transmission, demonstrating that anti-reactive oxygen metabolites (antioxidants) stimulate electrical activity signals, catalysed by **Germanium**, for the treatment of ***Alzheimer's***.[1]

- **Acetyl-L-carnitine.**
  It reduces the damage to mitochondrial function related to age.[2]
  The oxygen-reactive metabolites damage neurons and accelerate their ageing process. However, antioxidant compounds produce beneficial effects in patients with ***Alzheimer's***.

- **Dry Lettuce Extract.**
  Among many other qualities, this extract has the capacity to relax the nervous system and avoid nervous excitation in the brains of patients with neurodegenerative disorders.[3]

ALZER®

1. **Improves oxygenation of neurons**
2. **Is an excellent neuroprotective agent**
3. **Decreases the oxidative stress responsible for neuronal damage**

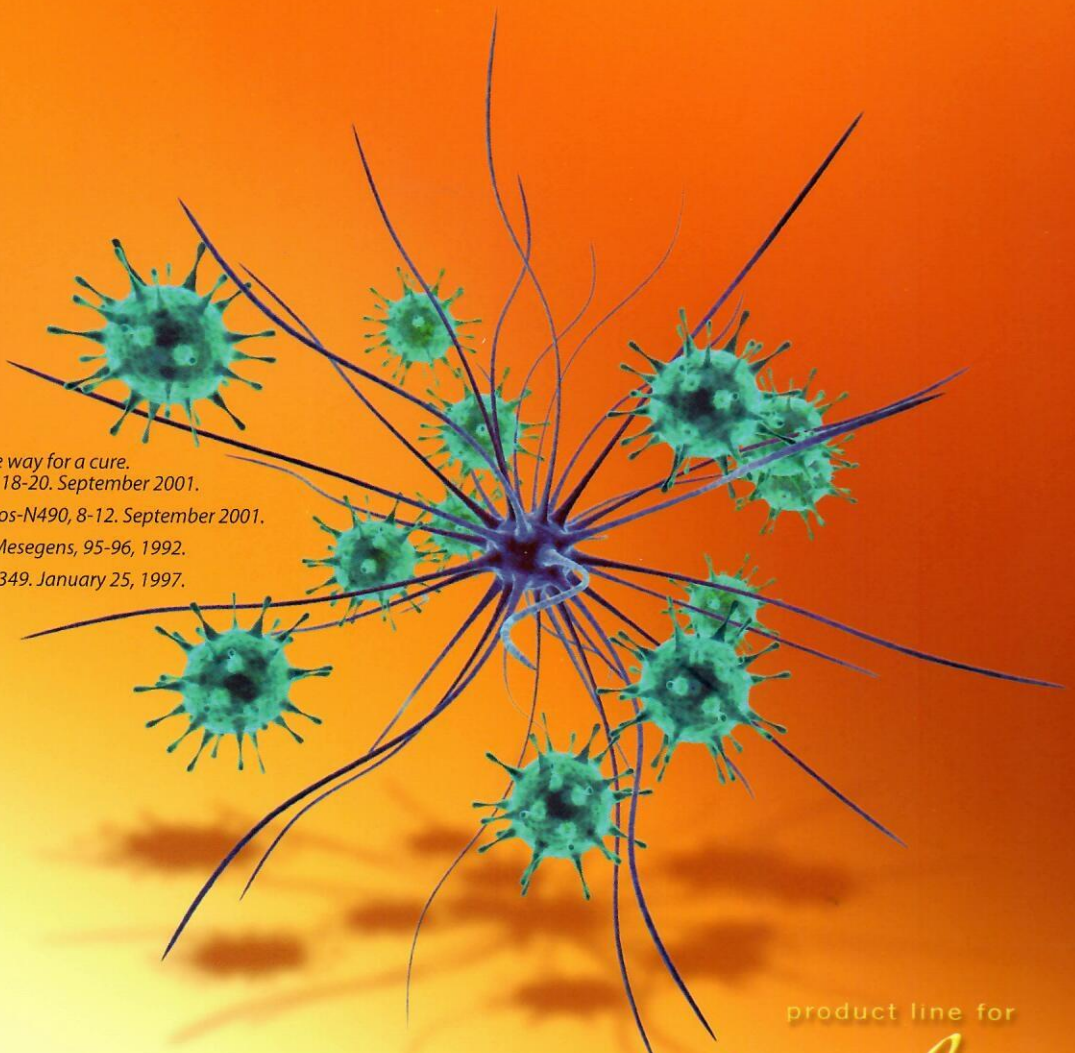
Two complem
in the treatment of neu

Ingredients of ALZER®:
Carnitine, Lipoic Acid, Ginkgo Biloba, Dry Lettuce Extract, and Germanium 132.

Apolipoprotein E-ε4 (APOE-ε4) is a risk factor in ***Alzheimer's disease***, but it is not enough for the disease to develop. Using a PCR test, the ***herpes simplex virus type 1 (HSV1)*** has been detected, in latent form, in the brains of people of an advanced age.

The combination of the presence of the HSV1 virus in the brain and the expansion of apolipoprotein is a high risk factor for the development of ***Alzheimer's disease***, while each factor does not involve such a risk individually.[4]

As a result, the combined treatment with VIUSID®, a powerful antiviral agent, is essential for the rapid and effective stabilization of Alzheimer's patients.



(1) *Alzheimer: new research leads the way for a cure. Manufacturing Chemist. V72, N8, 18-20. September 2001.*

(2) *Mercedes López. Siete días-Médicos-N490, 8-12. September 2001.*

(3) *Guía de Plantas Medicinales, Jo. Mesegens, 95-96, 1992.*

(4) *Ruth F. Itzhaki et al. The Lancet. V349. January 25, 1997.*

product line for

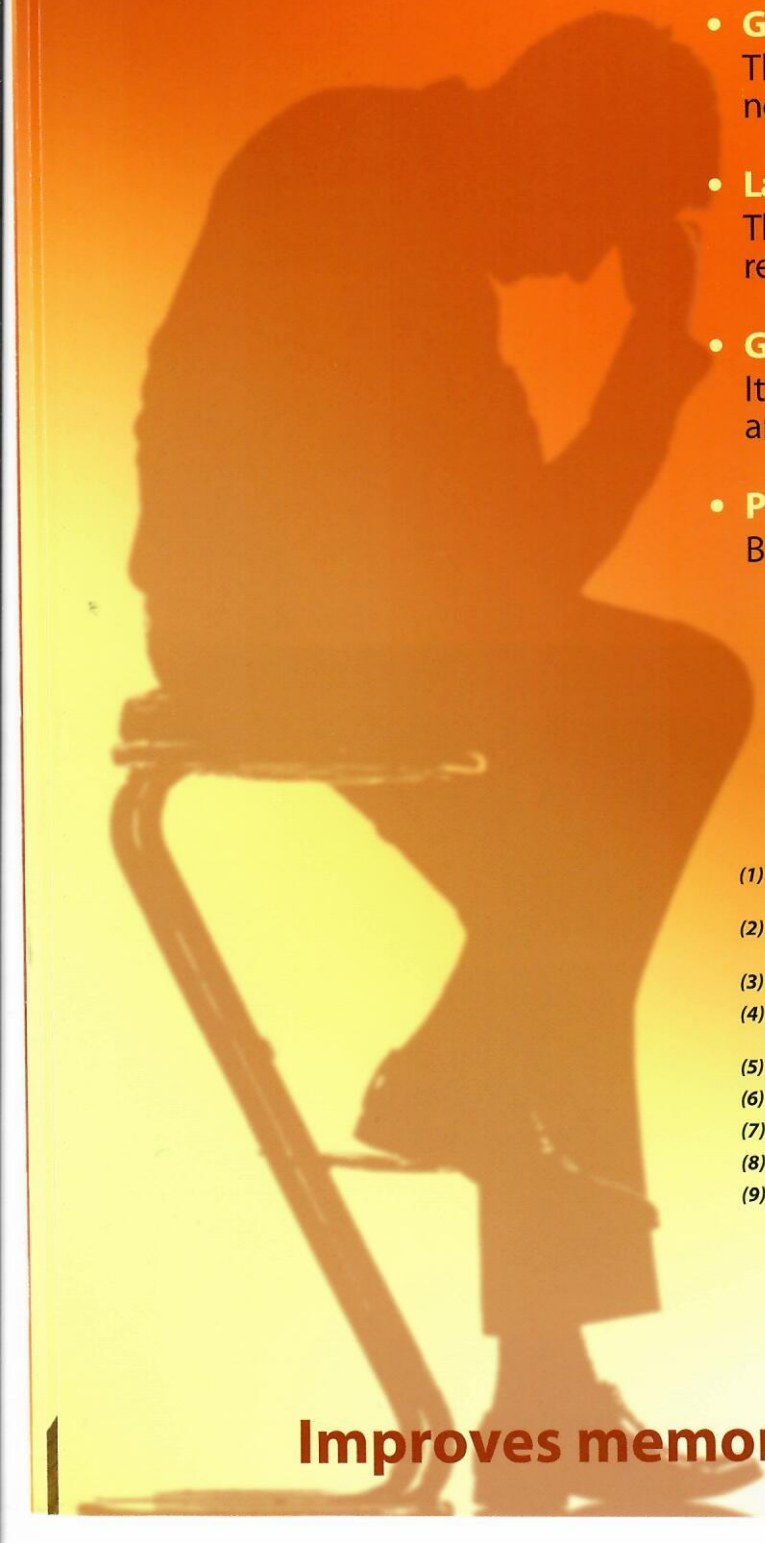
Neurology

ntary products
odegenerative diseases

DEPREXIL®

- depression

Many diseases that manifest with an alteration of calcium homoeostasis produce depressive effects in the central and peripheral nervous system.[1, 2, 3, 4] **DEPREXIL®** helps normalize the levels of serotonin and dopamine, neurotransmitters of vital importance in the stabilization and correction of depressive disorders, while at the same time favouring calcium homoeostasis.



DEPREXIL® contains:

- **Ginkgo Biloba, Lipoic Acid and Carnitine.**
  They improve neuronal metabolism, stabilizing the neuronal membrane and favouring oxygenation.[5, 6, 7, 8]
- **Lactobacillus acidophilus, Selenium and Antioxidants.**
  They regulate calcium homoeostasis controlling bone resorption.[9]
- **Gamma-aminobutyric Acid (GABA).**
  It regulates serotonin and dopamine levels, calming and reducing neuronal activity.
- **Pyridoxine and Folic Acid.**
  Both are active natural antidepressants.

(1) *Bohrer T et al. Depression as a manifestation of latent chronic hypoparathyroidism. World J Biol Psychiatry. 2007; 8 (1).56-9.*

(2) *Wilhelm SM et al. Major depression due to primary hyperparathyroidism: a frequent and correctable disorder. Am Surg. 2604; 70 (2): 175-9.*

(3) *Brown SW et al. Mania in case of Hyperparathyroidism. Psychosomatics. 2007; 48 (3): 265-8.*

(4) *Weller EB et al. Impact of depression and its treatment on the bones of growing children. Curr Psychiatry Rep. 2007; 9 (2): 94-8.*

(5) *Ruth F et al. Herpes simplex virus type 1 in brain and risk of Alzheimer's disease. January 25; 1997.*

(6) *Alzheimer: new research leads the way for a cure. Manufacturing Chemist. V72, N8, 18-20; 2001.*

(7) *López M. Siete Días Médicos N490, 8-12; 2001.*

(8) *Mesegens Jo. Guía de Plantas Medicinales. 95-7; 1992.*

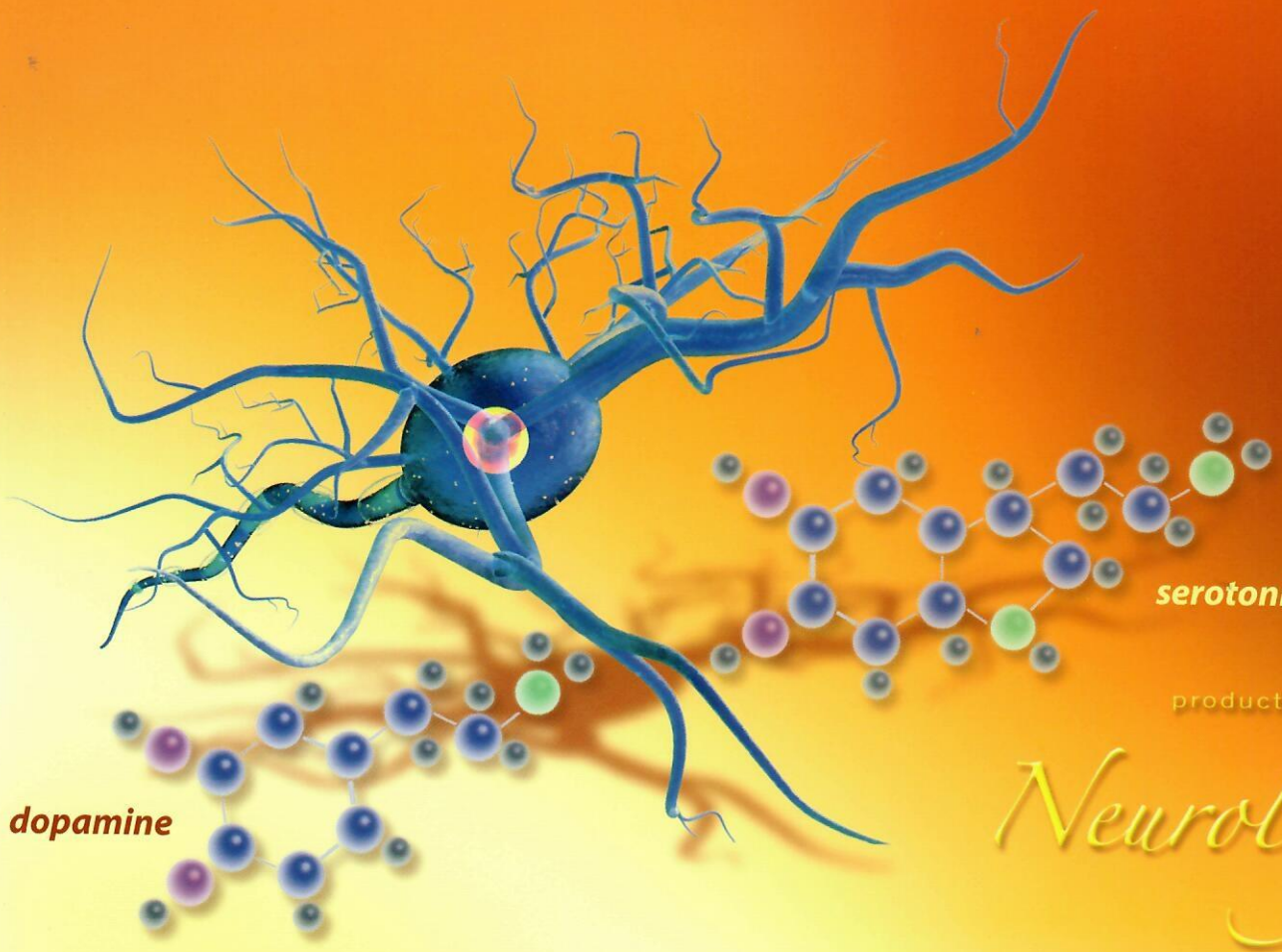
(9) *Haas Ul et al. Selenoproteins in mitochondria and cytosol of sacharomyces uranum alter growth in sodium selenite supplemented media. J. Trace Elem Electrolytes Health Dis. 6 (2): 71-4. 1992.*

Improves memory, volition and mood

Ingredients of DEPREXIL®:
Ginkgo Biloba, Calcium Citrate, Magnesium Citrate, Arginine, Lactobacillus acidophilus, Gamma-aminobutyric Acid, Malic Acid, Carnitine Fumarate, Ascorbic Acid, Lipoic Acid, Pyridoxine, Folic Acid and Sodium Selenite.

DEPREXIL®

1. Improves neuronal metabolism
2. Regulates calcium homoeostasis
3. Normalizes serotonin and dopamine levels
4. Reduces anxiety levels



product line for

Neurology

ESKIZOX®

- schizophrenia

In major mental illnesses such as schizophrenia, it has been demonstrated that there are nutritional deficiencies at the cellular level.
ESKIZOX® provides the body with essential amino acids that normalize the activity of neurotransmitters and neutralize the metabolites present in ***schizophrenia***.

ESKIZOX® contains:

- **D-alanine, D-serine and Glycine.**
  Two D-amino acids with an affinity toward glycine sites (endogenous ligand) of NMDA receptors.[1, 2, 3, 4, 5]

- **N-acetylcysteine.**
  It increases the levels of intracellular glutamate through the cysteine/glutamate antiporter.

- **Niacidamine and Pyridoxal.**
  They are involved in the metabolic routes of tryptophan degradation toward the formation of serotonin.

- **L-theanine, Ginkgo Biloba and Vitamin C.**
  Improve the positive symptoms of activation, anxiety, stress and tardive dyskinesia.[6, 7, 8]

- **Tyrosine**
  It is the precursor of catecholamines, among which dopamine is of capital importance as a neurotransmitter in the brain.

(1) *D'Souza et al. Feasibility, Safety, and Efficacy of the Combination of D-Serine and Computerized Cognitive Retraining in Schizophrenia: An International Collaborative Pilot Study. Neuropsychopharmacology 38 (3): 492Đ503. 2012.*

(2) *Weiser M, Heresco-Levy et al. A Multicenter, Add-On Randomized Controlled Trial of Low-Dosed-Serine for Negative and Cognitive Symptoms of Schizophrenia. The Journal of Clinical Psychiatry 73 (6). 2012.*

(3) *Lane HY et al. Sarcosine or D-Serine Add-on Treatment for Acute Exacerbation of Schizophrenia. Archives of General Psychiatry 62 (11). 2005.*

(4) *Lane HY et al. A randomized, double-blind, placebo-controlled comparison study of sarcosine (N-methylglycine) and d-serine add-on treatment for schizophrenia. The International Journal of Neuropsychopharmacology 13 (4): 451Đ460. 2010.*

(5) *Tsai GE et al. D-Alanine Added to Antipsychotics for the Treatment of Schizophrenia. Biological Psychiatry. 2006.*

(6) *Ritsner MS et al. L-theanine relieves positive, activation, and anxiety symptoms in patients with schizophrenia and schizoaffective diserder. Journal of Clinical Psychiatry 72 (1). 2011.*

(7) *Zhang X et al. The effects of classic antipsychotic haloperidol plus the extract of ginkgo biloba on superoxide dismutase in patients with chronic refractory schizophrenia. Department of Biochemistry, Institute of Mental Health, Beijing Medical University, Beijing 100083, China.*

(8) *Dakhale GN et al. Supplementation of vitamin C with atypical antipsychotics reduces oxidative stress and improves the outcome of schizophrenia. Psychopharmacology 182 (4): 494-498. 2005.*

Inhibits the biochemical factors involved in schizophrenia

Ingredients of ESKIZOX®:
D-alanine, D-serine, Glycine, N-acetylcysteine, Niacidamine, L-theanine, Ginkgo Biloba, Ascorbic Acid, Magnesium Citrate, Tyrosine, and Pyridoxal.

ESKIZOX®

1. Improves neuronal metabolism
2. Removes toxic metabolites such as hydroxykynurenine
3. Increases serotonin and dopamine levels
4. Significantly improves positive symptoms
5. Reduces anxiety levels

product line for

Neurology

VIUSID®

- multiple sclerosis

VIUSID® is the strongest antioxidant with antiviral properties on the market. It acts against the intestinal bacteria that produce toxic metabolites. According to the latest studies, these metabolites are responsible for myelin decreases and, therefore, the main cause of ***multiple sclerosis***.

VIUSID® contains:

- **Glycyrrhizinic Acid.**
  It alters latent herpes virus infections by deregulation in the expression of the latency-associated nuclear antigen (LANA) and the increase in the production of viral cyclin, which induces the selective death of virus-infected cells as a result of the reactivation of p53 and the activation of mitochondrial apoptosis.[1, 2]

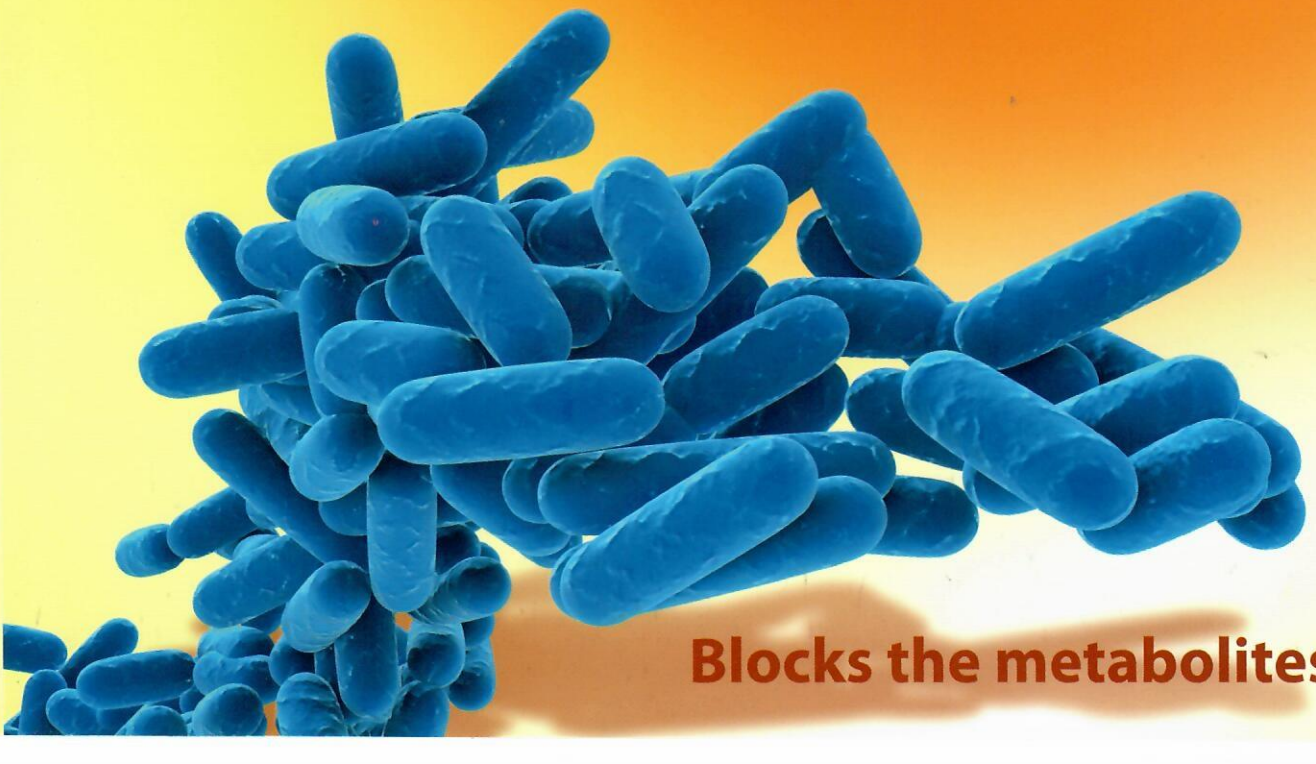
  It stimulates the production of interleukin-12 in macrophages, which facilitates the development of helper T-lymphocytes in cell-mediated immune response.[3]

  It induces the production of interferons, which promotes the activation of macrophages and, as a consequence, an increase in their phagocytic and microorganism-destruction properties.[3]

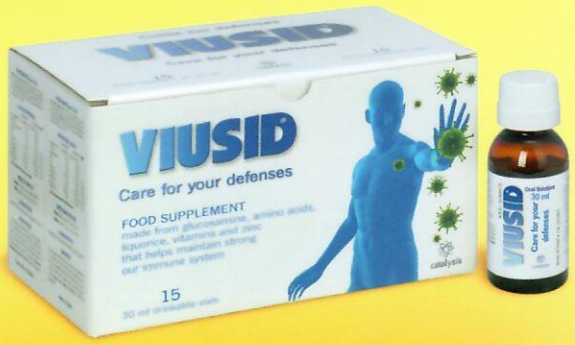
(1) *Cohen JI. Licking latency with licorice. The Journal of Clinical Investigation 115 (3), 591-593, 2005.*

(2) *Dai JH et al. Glycyrrhizin enhances interleukin-12 production in peritoneal macrophages. Immunology 103(2):235-243, 2001.*

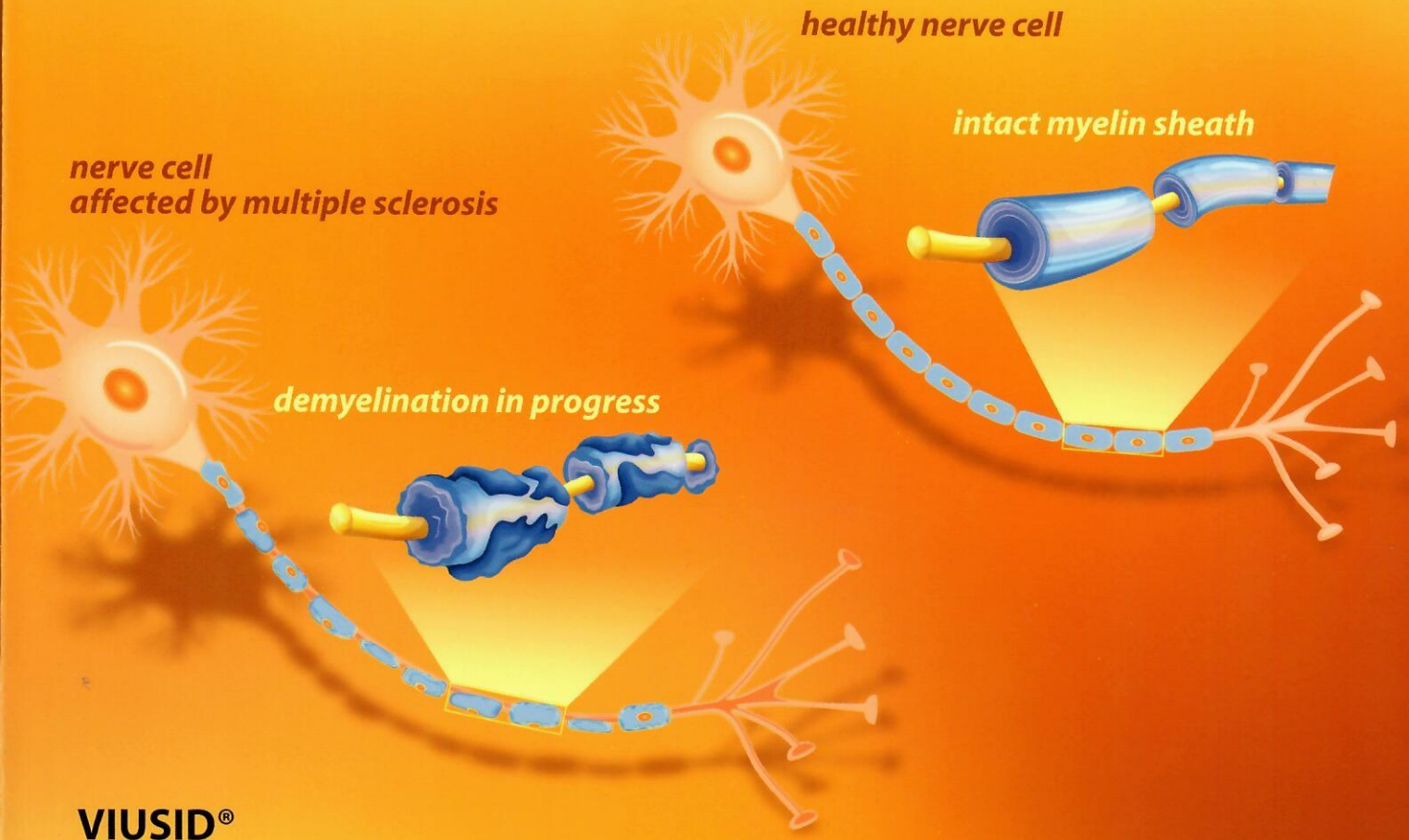
(3) *Rowlands CG, Danby FW. Histopathology of psoriasis treated with zinc pyrithione. Am J Dermatopathol. 2000 Jun; 22(3):272-6*



Blocks the metabolites respons



Ingredients of VIUSID®:
Glucosamine, Malic Acid, Glycyrrhizinic Acid, Zinc Sulphate, Arginine, Glycine, Ascorbic Acid, Calcium Pantothenate, Vitamin B_6, Folic Acid, Vitamin B_{12}, Honey, Lemon, Mint, Neohesperidin, and Guar Gum.



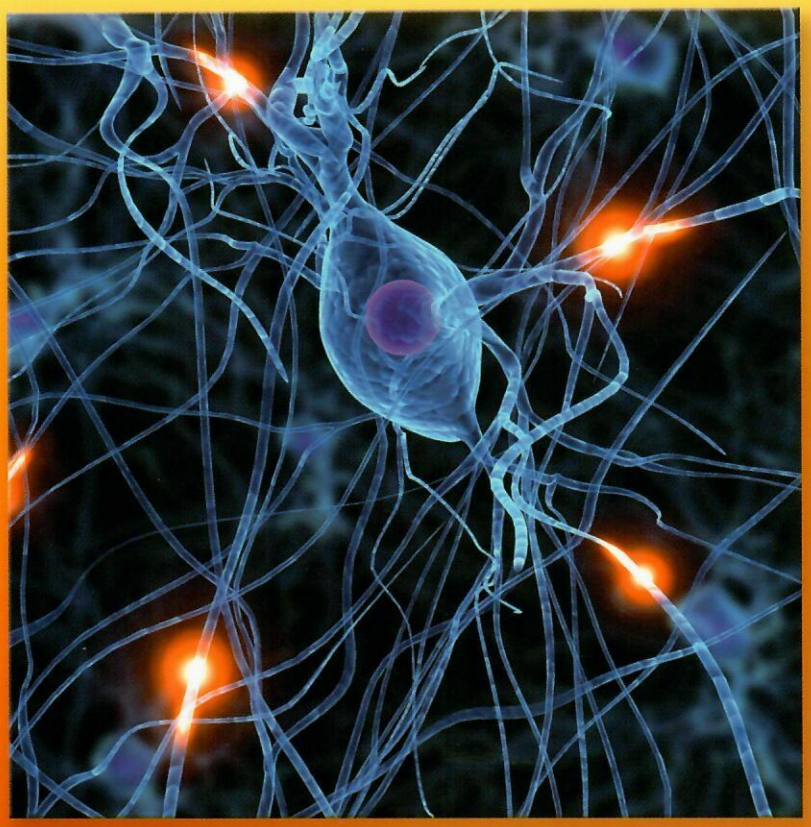
VIUSID®

1. **Increases immunological defences**
2. **Reduces the oxidative stress present in all neurodegenerative processes**
3. **Reduces viral load**

product line for

Neurology

ible for neuronal deterioration



product line for

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